

अनुसंधान प्रयोगों का सारांश

Summary of Research Experiments

2024-25



भा.कृ.अनु.प. - अखिल भारतीय समन्वित बाजरा अनुसंधान परियोजना
जोधपुर, राजस्थान - 342 304

ICAR - All India Coordinated Research Project on Pearl Millet
Jodhpur, Rajasthan - 342 304



(For Official Use Only)

Summary of Research Experiments

2024-25



**Project Coordinating Unit
ICAR-AICRP on Pearl Millet
Agriculture University
Jodhpur, Rajasthan – 342 304**



ICAR-All India Coordinated Research Project on Pearl Millet

Summary Tables of Experiments

2024-25

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LOCATION CODES OF AICRP ON PEARL MILLET TRIALS
KHARIF/ SUMMER 2024

	Zone A₁ and A		Zone A₁ and A
Abbreviation	Locations	Abbreviation	Locations
	RAJASTHAN		JHARKHAND
MDR	Mandor	RNC	Ranchi (BAU)
JDR	Jodhpur (ICAR-CAZRI)		JAMMU & KASHMIR
BKR	Bikaner (SKRAU)	IMU	Jammu (SKUAST)
SDR	Samdari (AUJ)		
LWS	Lalawas (J K Seed)		Zone B
MSR	Molasar (Bayer)	Abbreviation	Locations
TBJ	Tabiji (SKNAU)		MAHARASHTRA
JPR	Jaipur (SKNAU)	ABD1	Aurangabad (NARP) (VNMKV)
JPR1	Jaipur (Seed Works)	ABD2	Aurangabad (Nath Biogene)
JPR2	Jaipur (Corteva)	ABD3	Aurangabad (Ajeet Seed)
ALW	Alwar (Corteva)	ABD4	Aurangabad (DevGen)
ALW1	Alwar (Seed Works)	ABD5	Aurangabad (Bayer)
ALW2	Alwar (BioSeed)	ABD6	Aurangabad (Crystal)
ALW 3	Alwar (JK)	ABD7	Aurangabad (Seed works)
ALW4	Alwar (Rallis)	ABD 8	Aurangabad (GK)
ALW5	Alwar (GK)	PTN	Paithan (Nath Biogene)
ALW6	Alwar (Kaveri)	DHL	Dhule (MPKV)
BHP	Bharatpur(Nuzividdu)	NPD	Niphad (MPKV)
BHR	Behror (Bayer)	JLN	Jalna (Mahodaya Seed)
BSR	Bansur (Spriha)	JLN1	Jalna (Mahyco)
JLR	Jalore (AUJ)	JLG	Jalgaon (JK Seeds)
JSR	Jaisalmer (ICAR-CAZRI)	GDG	Godegaon (Pioneer)
MKR	Malakhera (Hytech)	PCR	Pachora (Nirmal Seed)
JBR	Jobner (SKNAU)	GNG	Gangapur (Ganga Kaveri)
FTR	Fatehpur Shekhawati (SKNAU)	BUL	Buldana (PDKV)
NGR	Nagaur (AUJ)	GNW	Ganewadi (Krishidhan Seed)
DAS	Dausa (Rasi)	MPR	Malkapur (Ankur Seed)
TJR	Tijara (Rallis)		KARNATAKA
PTA	Pavta (Limagrain)	VYP	Vijayapur (UAS, Dharwad)
	GUJARAT	MYS	Mysore (UOM)
KTR	Kothara (SDAU)	MLR	Malnoor (UAS, Raichur)
SKN	S.K. Nagar (Dessa) (SDAU)	DHR	Dharwad (UAS, Dharwad)
AND	Anand (AAU)	DHR 1	Dharwad (KSSCL)
JMR	Jamnagar (JAU)		ANDHRA PRADESH
TLJ	Talaja (JAU)	APR	Ananthapuram (ANGRAU)
AHD	Ahmedabad (Biostadt)	PMP	Perumallapalle (ANGRAU)
NSD	Narsanda (Navbharat)	VZN	Vizianagaram (ANGRAU)
PNR1	Palanpur (Pioneer)		TELANGANA
PNR2	Palanpur (Ajeet)	MBD	Manoharabad (Zuari Seed)
DNR	Dhanera (JK Seeds)	MBD1	Manoharabad (Crystal)
DEG	Dehgam (Metahelix)	PLM	Palem (PJ TSAU)
DEG1	Dehgam (Kaveri)	HBD1	Hyderabad (BISCO)
DSA1	Deesa (Bioseed)	HBD2	Hyderabad (Nuziveedu)
DSA2	Deesa (Ajeet)	HBD3	Hyderabad (Kaveri Seed)
DSA3	Deesa (JK)	HBD4	Hyderabad (Nu Gene)
DER	Deodar (Bayer)	PTR	Patancheru
TKR	Thakarwara (Hytech)	MDC 1	Medchal (Ganga Kaveri)
KHD	Kheda (Shakti Vardhak)	MDC 2	Medchal (Godrej)
VSN	Visnagar (Apex Seed)	RLK1	Ravalkol (Spriha)
	UTTAR PRADESH	RLK2	Ravalkol (Hytech)
KLI	Kalai	WRL	Wargal (Kaveri)
ELS	Eglas (Bioseeds)	TPN	Toopran, Madak (Nu Genes)
AGR	Agra (Krishna)		TAMIL NADU
AGR1	Agra (Kartik Seed)	CBE	Coimbatore (TNAU)
AGR2	Agra (Mahindra Seed)		ODISHA
HTR	Hathras (Ganga Kaveri)	SMG	Semiliguda (OUAT)
ALR	Aligarh (Hytech)		
JNS	Jhansi (RLBCAU)		
BCR	Bichpuri (Kaveri)		
MTR	Mathura (Kamadgiri)		
	HARYANA		
HSR	Hisar (CCSHAU)		
BWL	Bawal (CCSHAU)		
SPR	Shikohpur (ICAR-IARI-KVK)		
SHN	Sohana (Nuziveedu)		
ANR	Arya Nagar (Shakti Vardhak)		
GUG	Gurugram (Tierra)		
	MADHYA PRADESH		
GLR	Gwalior (RVSKVV)		
MRN	Morena (RVSKVV)		
	PUNJAB		
LDA	Ludhiana (PAU)		
	DELHI		
NDL	New Delhi (ICAR-IARI)		

CHAPTER I

PLANT BREEDING

BREEDING

Based on climatic conditions, production constraints and differential requirement of various crop growing regions, the pearl millet cultivation in the country is divided in three major zones – A₁, A and B and is used for effective evaluation of the pearl millet breeding materials. The details of pearl millet growing states included in these zones are given below:

Zone(s)	Area (m.ha)* (2020-21)	State(s)
Zone A ₁ : less than 400 mm rainfall	3.78	Western Rajasthan and drier parts of Gujarat and Haryana
Zone A: North - Western zone	2.85	Rajasthan, Gujarat, Haryana, plains of Uttar Pradesh, New Delhi, Madhya Pradesh (Bhind, Morena, Gwalior and adjoining areas) Punjab, Jharkhand and Jammu & Kashmir
Zone B: South - Central zone	1.02	Maharashtra, Andhra Pradesh, Telangana, Karnataka, Tamil Nadu and Odisha
Summer	0.41	Gujarat and Uttar Pradesh

*(<https://des.agri.gov.in>)

The coordinated hybrid/ varietal trials under ICAR-All India Coordinated Research Project on Pearl Millet (ICAR-AICRP on Pearl Millet) were conducted during summer and kharif 2024 as per details given below:

Coordinated trials	Mode of operation
Initial Hybrid Trial (Early) - IHT (E)	Zone A ₁ with early hybrids
Initial Hybrid Trial (Medium) - IHT (M)	Zone A and B with common hybrids
Initial Hybrid Trial (Late) - IHT (L)	Zone A and B with common hybrids
Advanced Hybrid Trial (Medium) - AHT (M)	Zone B with different advanced hybrids
Advanced Hybrid Trial (Late) - AHT (L)	Zone A and B with different advanced hybrids
Population Trial - PT	Zone A and B with common initial and different advanced populations
Advanced Hybrid and Population Trial (Early) - AHPT (E)	Zone A ₁ with early hybrids and populations
Released Hybrids and Varieties Trial - RHVT	Zone A and B with released entries of respective zone
Summer Hybrid Trial - SHT	Summer areas of zone A and B with common initial and advanced hybrids

CHAPTER I: BREEDING

The bases of non-inclusion of test location to work out zonal means are:

- 1) Coefficient of variation (C.V.) - More than 30%
- 2) The average grain yield of test location is less than the state average yield except in Zone A₁ trials.

The average grain yield based on the ten years data (2012-13 to 2021-22) in different states is as follows:

	States	Average grain yield
i)	Rajasthan	970 kg/ha
ii)	Karnataka	1095 kg/ha
iii)	Maharashtra	786 kg/ha
iv)	Andhra Pradesh	1772 kg/ha
v)	Telangana	936 kg/ha
vi)	Gujarat (Kharif)	1386 kg/ha
vii)	Gujarat (Summer)	2664 kg/ha
viii)	Madhya Pradesh	2166 kg/ha
ix)	Haryana	1992 kg/ha
x)	Tamil Nadu	2388 kg/ha
xi)	Uttar Pradesh	2008 kg/ha
xii)	Delhi	2236 kg/ha
xiii)	Punjab	824 kg/ha
xiv)	Jammu & Kashmir	595 kg/ha
xv)	Odisha	616 kg/ha
xvi)	Jharkhand	581 kg/ha

Coordinated Trials and Test centres

The ICAR-AICRP on Pearl Millet hybrids/populations yield evaluation trials were organized during kharif /summer 2024 at 12 test locations in Zone A₁, 33 in Zone A and 19 in Zone B. Status of test centres where trials were conducted successfully and trials conducted but failed are given in Table I.1. Key to experimental hybrids and varieties included in various trials are given in Tables I.2 to I.5. The data on grain yield, quality and ancillary characters are given in Tables I.6 to I.213. The weather data of the test locations are given in Appendix I. State-wise positions for successful conduct of trials are given below:

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Zone	State	Trials x Location Combinations		
		Allotted	Successfully conducted	Percent success
Zone A₁	Rajasthan	26	22	85
	Gujarat	3	0	0
	Haryana	3	3	100
	Total	32	25	78
Zone A	Rajasthan	18	18	100
	Gujarat	23	19	83
	Uttar Pradesh	12	10	83
	Haryana	7	7	100
	Madhya Pradesh	7	7	100
	Punjab	5	5	100
	Delhi	2	2	100
	Jharkhand	1	1	100
	Total	75	69	92
Zone B	Maharashtra	31	29	93
	Karnataka	11	11	100
	Andhra Pradesh	12	12	100
	Telangana	6	6	100
	Tamil Nadu	7	7	100
	Odisha	3	3	100
	Total	70	68	97
	G. Total	177	162	91

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Table I.1 Details of Centres and Trials Conducted During Kharif 2024/Summer 2024 in Zone A₁ and A

LOCATIONS	IHT (E)	IHT (M)	IHT (L)	AHPT (E)	AHT (L)	PT	RHVT	SHT
ZONE A₁								
RAJASTHAN								
Mandor (ICAR-AICRP)	*	*F		*				*
Mandor (ARS AU Jodhpur)						*	*	
Jodhpur (ICAR-CAZRI)	*			*				
Bikaner (SKRAU)	*	*		*		*	*	
Fathehpur Shekhawati (SKNAU)	*			*				
Samdari (AU Jodhpur)	*			*				
ARS, Jalore (AU Jodhpur)	*			*				
Nagaur (AU Jodhpur)	*			*				
Jobner (COA SKNAU)	*						*	
Gudhamalani (ICAR-IIMR)	*F			*F			*F	
GUJARAT								
Kothara (SDAU)	*F	*F		*F				
HARYANA								
Bawal (CCSHAU)	*	*		*				
Total Trials Zone A₁	11	4	0	10	0	2	4	1
ZONE A								
RAJASTHAN								
Jaipur (SKNAU)		*	*		*	*	*	
Jaipur (Seed works)			*		*			
Jaipur (Corteva)		*						
Tabiji (SKNAU)		*						
Paota (Limagrains)			*					
Alwar (Rallis)			*					
Alwar (Ganga Kaveri)			*					
Alwar (Corteva)			*		*			
Alwar (Kaveri Seed)		*						
Dausa (Rasi Seeds)		*	*					
Bharatpur (Nuziveedu)			*					
GUJARAT								
Talaja (JAU)		*						
Anand (AAU)		*						*
Jamnagar (JAU)		*	*		*	*	*	*
Deesa (SDAU)	*	*		*				*
Ahmedabad (Nandi)			*					*
Dhanera (JK Seed)		*F	*F		*F			
Dehgam (Rallis)								*
Dehgam (Kaveri Seeds)			*		*			
Palanpur (Corteva)								*
Deesa (J.K.)								*F
UTTAR PRADESH								
Jhansi (RLBCAU)		*				*	*	
Aligarh (Hytech)			*		*			
Agra (Kartik Bio Seeds)		*F	*F					*
Agra (Mahindra)					*			
Bichpuri (Kaveri Seeds)					*			
Mathura (Kamagiri)		*	*					
HARYANA								
Hisar (CCS,HAU)	*	*	*	*	*	*	*	
MADHYA PRADESH								
Gwalior (RVSKVV)		*	*		*	*	*	
Morena (RVSKVV)						*	*	
PUNJAB								
Ludhiana (PAU)		*	*		*	*		*
DELHI								
New Delhi (ICAR-IARI)		*				*		
JHARKHAND								
Ranchi (BAU)							*	
Total Trials Zone A	2	17	18	2	12	8	7	9

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Table I.1 Details of Centres and Trials Conducted During Kharif 2024/Summer 2024 in Zone B

LOCATIONS	IHT (M)	IHT (L)	AHT (M)	AHT (L)	PT	RHVT	SHT
MAHARASHTRA							
Aurangabad (NARP)	*	*	*	*	*	*	*
Aurangabad (Ajeet Seed)		*		*			
Aurangabad (Seed works)		*		*			*
Paithan (Nath BioGenes)	*	*					
Niphad (MPKV)			*	*	*		
Dhule (MPKV)	*	*	*	*	*	*	*
Jalna (Mahyco)		*F					*
Pachora (Nirmal Seed)	*	*	*				*F
Gangapur (Ganga Kaveri)		*					
KARNATAKA							
Vijayapur (UAS Dharwad)	*	*	*	*	*	*	
Malnoor (UAS, Raichur)	*		*		*	*	
Dharwad (KSSC Ltd)	*						
ANDHRA PRADESH							
Ananthapuram (ANGRAU)	*	*	*	*	*	*	
Perumallapalle (ANGRAU)	*				*		*
Vizianagaram (ANGRAU)			*		*	*	
TELANGANA							
Palem (PJ TSAU)	*		*		*	*	*
Toopran, Medak (NU Genes)		*					
TAMIL NADU							
Coimbatore	*	*	*	*	*	*	*
ODISHA							
Semiliguda (OUAT)	*				*	*	
Total Trials Zone B	12	12	10	8	11	9	8

*=Conducted successful, *F=Conducted but failed

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Table I.2: Key to Pearl Millet Hybrids (Kharif 2024)

Test Code	Project No.	Identity	Pedigree	Origin
Entries completed one year of testing				
IHT 101	MH 2811	Pusa Hybrid Bajra 2401	411A x PPMI 1321	ICAR-IARI, New Delhi
IHT 102	MH 2812	DHBH-24152	DHLB-14A x DHLBI-1825	ICAR-ICAR-AICRP-PM, Dhule
IHT 104	MH 2813	DHBH-24154	DHLB-36A x DHLBI-1825	ICAR-ICAR-AICRP-PM, Dhule
IHT 105	MH 2814	NBBH 2215	NB 21001A1 x NBBR-294	Nath Bio Genes (I) Ltd, Hyderabad
IHT 106	MH 2815	RVBH-2363	ICMA 96222 x RBR-225	ICAR-AICRP-PM, RVSKVV, Gwalior
IHT 107	MH 2816	RVBH-2364	ICMA 97111 x RBR-220	ICAR-AICRP-PM, RVSKVV, Gwalior
IHT 108	MH 2817	BHB 2401	ICMA 93333 x BIB 100386	ICAR-AICRP-PM, SKRAU, Bikaner
IHT 109	MH 2818	BHB 2402	ICMA 843-22 x BIB 100385	ICAR-AICRP-PM, SKRAU, Bikaner
IHT 111	MH 2819	CZH 272	ICMA 15222 x CZI 2021/3	ICAR-CAZRI, Jodhpur
IHT 112	MH 2820	CZH 273	ICMA 04999 x CZI 2020/9	ICAR-CAZRI, Jodhpur
IHT 113	MH 2821	BHB 2403	ICMA 98222 x BIB 23894	ICAR-AICRP-PM, SKRAU, Bikaner
IHT 114	MH 2822	BHB 2404	ICMA 98222 x BIB 23	ICAR-AICRP-PM, SKRAU, Bikaner
IHT 115	MH 2823	BHB 2405	ICMA 843-22 x BIB 441446	ICAR-AICRP-PM, SKRAU, Bikaner
IHT 117	MH 2824	CZH 274	ICMA 843-22 x CZI 2020/2	ICAR-CAZRI, Jodhpur
IHT 118	MH 2825	CZH 275	ICMA 843-22 x CZI 2021/3	ICAR-CAZRI, Jodhpur
IHT 119	MH 2826	CZH 276	CZ-ICMA 19222 x CZI 2019/17	ICAR-CAZRI, Jodhpur
IHT 121	MH 2827	RHB-277	ICMA 93333 x RIB 15177	ICAR-AICRP-PM, SKNAU, Jaipur
IHT 122	MH 2828	RHB-278	ICMA 04888 x RIB 15177	ICAR-AICRP-PM, SKNAU, Jaipur
IHT 123	MH 2829	RHB-279	ICMA 02333 x RIB 3135-18	ICAR-AICRP-PM, SKNAU, Jaipur
IHT 124	MH 2830	GHB 1350	JMSA1 20208 x J-2643	ICAR-AICRP-PM, JAU, Jamnagar
IHT 125	MH 2831	MPMH 48	ICMA 04999 x MIR 710	ICAR-AICRP-PM, PC Unit, Jodhpur
IHT 126	MH 2832	MPMH 49	ICMA 96333 x MIR 710	ICAR-AICRP-PM, PC Unit, Jodhpur
IHT 127	MH 2833	MPMH 50	ICMA 04999 x MIR 915	ICAR-AICRP-PM, PC Unit, Jodhpur
IHT 201	MH 2834	US7512	SWM05A x SWM51R	Seed Works Int. Pvt. Ltd., Hyderabad
IHT 202	MH 2835	Pusa Hybrid Bajra 2402	PPMA 991 x PPMI 1320	ICAR-IARI, New Delhi
IHT 203	MH 2836	DHBH-24151	DHLB-34A x DHLBI-1825	ICAR-ICAR-AICRP-PM, Dhule
IHT 204	MH 2837	DHBH-24158	DHLB-32A x DHLBI-1825	ICAR-ICAR-AICRP-PM, Dhule
IHT 205	MH 2838	DHBH-24162	ICMA 98222 x DHLBI-1825	ICAR-ICAR-AICRP-PM, Dhule
IHT 206	MH 2839	DHBH-21075	DHLB-23A x DHLBI-1825	ICAR-ICAR-AICRP-PM, Dhule
IHT 207	MH 2840	NBBH 2311	NB 2201A x NB-19098R-1	Nath Bio Gene (S) Int. Ltd., Hyderabad
IHT 208	MH 2841	9050D761-01	9PTMT78 x 9PDEV20R	Corteva Agriscience, Hyderabad
IHT 210	MH 2842	9057D741-01	9PKUP14A x M477R	Corteva Agriscience, Hyderabad
IHT 211	MH 2843	MBH-2401	MBJ-2A x MBJ-9R	MSSCL, Akola
IHT 212	MH 2844	IIMR PH10	269A x 1458R	ICAR-IIMR, Hyderabad
IHT 213	MH 2845	IIMR PH9	ICMA 04999 x 1012R	ICAR-IIMR, Hyderabad
IHT 214	MH 2846	PBH-2403	ICMA 1508 x PBR 542	PJTSAU, Palem
IHT 216	MH 2847	PBH-2404	ICMA 04999 x PBR 598	PJTSAU, Palem
IHT 217	MH 2848	Pusa Hybrid Bajra 2403	PPMA 086 x PPMI 1320	ICAR-IARI, New Delhi
IHT 218	MH 2849	Pusa Hybrid Bajra 2404	PPMA 142 x PPMI 1221	ICAR-IARI, New Delhi

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Test Code	Project No.	Identity	Pedigree	Origin
IHT 219	MH 2850	RHB 280	ICMA 96666 x RIB15177	ICAR-AICRP-PM, SKNAU, Jaipur
IHT 221	MH 2851	RHB 281	ICMA 00444 x RIB192	ICAR-AICRP-PM, SKNAU, Jaipur
IHT 222	MH 2852	RHB 282	ICMA 1508 x RIB 15188	ICAR-AICRP-PM, SKNAU, Jaipur
IHT 223	MH 2853	RHB 283	ICMA 1508 x RIB 15189	ICAR-AICRP-PM, SKNAU, Jaipur
IHT 224	MH 2854	KPH6112	KP22SA044 x KP22SR045	Kaveri Seeds Co. Ltd., Secunderabad
IHT 225	MH 2855	HHB 348	ICMA 04999 x HR-1023	ICAR-AICRP-PM, CCSHAU, Hisar
IHT 226	MH 2856	HHB 349	ICMA 02333 x HR-1037	ICAR-AICRP-PM, CCSHAU, Hisar
IHT 228	MH 2857	AHB-1717	ICMA 98222 x AUBI 2006	ICAR-AICRP-PM, NARP, Aurangabad
IHT 229	MH 2858	AHB-1813	ICMA 98222 x AUBI 2005	ICAR-AICRP-PM, NARP, Aurangabad
IHT 230	MH 2859	AHB-1980	ICMA 1508 x AUBI 2007	ICAR-AICRP-PM, NARP, Aurangabad
IHT 231	MH 2860	TNBH 2118	ICMA 04111 x PT 6679	ICAR-AICRP-PM, TNAU, Coimbatore
IHT 232	MH 2861	VPMH-24	ICMA 96666 x PRLN-229	ICAR-AICRP-PM, Vijayapur
IHT 233	MH 2862	VPMH-25	ICMA 03999 x PRLN 221	ICAR-AICRP-PM, Vijayapur
IHT 234	MH 2863	KGBH-2853	KGA-2001 x KR-7722	Kamadgiri Crop Sci. Pvt. Ltd., Agra
IHT 301	MH 2864	SUPER-75	ICMA 96222 x 20105R	Super Seeds Pvt. Ltd., Hisar
IHT 302	MH 2865	SUPER-80	SPMS-18 x 15883R	Super Seeds Pvt. Ltd., Hisar
IHT 303	MH 2866	NPH-6685	NPA-378 x NPR-1547	Nirmal Seeds Pvt. Ltd., Pachora
IHT 304	MH 2867	HT 424316	PM0174A x PM0412R	Hytech Seed India Pvt. Ltd., Medchal
IHT 305	MH 2868	DHBH-24156	DHLB-30A x DHLBI-1825	ICAR-ICAR-AICRP-PM, Dhule
IHT 307	MH 2869	DHBH-24157	DHLB-31A x DHLBI-1825	ICAR-ICAR-AICRP-PM, Dhule
IHT 308	MH 2870	DHBH-24159	DHLB-33A x DHLBI-1825	ICAR-ICAR-AICRP-PM, Dhule
IHT 310	MH 2871	DHBH-24161	DHLB-37A x DHLBI-1825	ICAR-ICAR-AICRP-PM, Dhule
IHT 311	MH 2872	PHB 3821	PB 605 A x PIB 616	ICAR-AICRP-PM, PAU, Ludhiana
IHT 312	MH 2873	VNR-110	VNRF-97 x VNRBB-1563	VNR Seeds Pvt., Ltd., Hyderabad
IHT 314	MH 2874	VNR-3233	VNRF-106 x VNRBB-1370	VNR Seeds Pvt., Ltd., Hyderabad
IHT 315	MH 2875	9056D750-01	9PQGP98A x M164R	Corteva Agriscience, Hyderabad
IHT 316	MH 2876	ADV20-0526	APH105A x APH105R	Adventa Enterprises Ltd., Hyderabad
IHT 317	MH 2877	BLPMH 114	BLPMA002 x BLPMR3034	Limagrains India Pvt. Ltd., Hyderabad
IHT 318	MH 2878	NBH 6048	NB107A x NB227R	Nuziveedu Seeds Pvt. Ltd., Hyderabad
IHT 319	MH 2879	NBH 6061	NB1121A x NB2214R	Nuziveedu Seeds Pvt. Ltd., Hyderabad
IHT 321	MH 2880	IIMR PH12	291A x 23S62	ICAR-IIMR, Hyderabad
IHT 322	MH 2881	IIMR PH13	269A x 23S62	ICAR-IIMR, Hyderabad
IHT 323	MH 2882	IIMR PH11	269A x 1449R	ICAR-IIMR, Hyderabad
IHT 324	MH 2883	MP7290	MP18P069A x PM23S0105R	Rallis India Ltd., Hyderabad
IHT 325	MH 2884	HHB 350	HMS 74A x HR-1013	ICAR-AICRP-PM, CCSHAU, Hisar
IHT 326	MH 2885	GHB 1384	JMSA1 20209 x J-2584	ICAR-AICRP-PM, JAU, Jamnagar
IHT 327	MH 2886	GHB 1398	ICMA1 15666 x J-2652	ICAR-AICRP-PM, JAU, Jamnagar
CHECKS				
		PB 1756 (2018)	PSP91 x PP107	Crystal Crop Protection Ltd., Hyderabad
		RHB 223 (2018)	ICMA 96666 x RIB 3135-18	ICAR-AICRP-PM, SKNAU, Jaipur
		HHB 67 (Imp.) (2005)	ICMA 843-22 x H 77/833-2-202	ICAR-AICRP-PM, CCSHAU, Hisar
		MPMH 35 (2022)	ICMA1 94555 x MIR 1252	ICAR-AICRP-PM, PC Unit, Jodhpur

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Test Code	Project No.	Identity	Pedigree	Origin
		86M94 (2022)	9PHGF39A x M444R	Pioneer Overseas Corp., Hyderabad
		PB1852 (2019)	PSP 95 x PP 110	Crystal Crop Protection Ltd., Hyderabad
		DHBH 1397 (2019)	DHLB 16A x DHLBI 1035	ICAR-ICAR-AICRP-PM, Dhule
		AHB 1269 (2019)	ICMA 98222A1 x AUBI 1105	ICAR-AICRP-PM, NARP, Aurangabad
		86M01 (2015)	M096F x M149R	Pioneer Overseas Corp., Hyderabad
		Pratap (2012)	NB 101A x NB 152R	Nuziveedu Seeds Pvt. Ltd., Hyderabad
		MP 7878 (2018)	MP14P030A x MP15P038R	Metahelix Life Science Ltd., Bangalore
		86M84 (2016)	M162F x M172R	Pioneer Overseas Corp., Hyderabad
		KBH 108 (2014)	KMPS-74A x KPR-9288R	Krishna Seeds Pvt. Ltd., Agra
		NBH 4903 (2018)	NB 105A x NB 98R	Nuziveedu Seeds Pvt. Ltd., Hyderabad
		Kaveri S. Boss (2012)	KBMS 329 x KBR 621	Kaveri Seed Co. Ltd., Hyderabad
		86M86 (2012)	M128F x M138R	Pioneer Overseas Corp., Hyderabad
		AHB 1200 (2018)	ICMA 98222 A1 x AUBI 1101	ICAR-AICRP-PM, NARP, Aurangabad
Entries completed two years of testing				
AHPT 807	MH 2743	MPMH 45	ICMA 97111 x MIR 2001	ICAR-AICRP-PM,PC Unit, Jodhpur
AHPT 808	MH 2744	MPMH 46	ICMA 92777 x MIR 525	ICAR-AICRP-PM,PC Unit, Jodhpur
AHPT 809	MH 2746	CZH 269	ICMA 07555 x CZI 2000/13	ICAR-CAZRI, Jodhpur
AHPT 810	MH 2747	CZH 270	ICMA 08333 x CZI 2020/2	ICAR-CAZRI, Jodhpur
AHPT 812	MH 2748	CZH 271	ICMA 15222 x CZI 2020/9	ICAR-CAZRI, Jodhpur
AHPT 813	MH 2749	IIMRPH4	843-22A x 129R	ICAR-IIMR, Hyderabad
AHPT 814	MH 2754	BHB 2303	ICMA 88004 x BIB-63	ICAR-AICRP-PM, SKRAU, Bikaner
AHPT 816	MH 2758	HHB 347	ICMA 93333 x HR-22-23	ICAR-AICRP-PM, CCSHAU, Hisar
AHT 404 B	MH 2767	Shalimar (9818)	SGB 902 A x SGB 981 R	Sona Genetic Pvt. Ltd., Ahmedabad
AHT 405 B	MH 2773	PB1988	PSP137 x PP110	Crystal Crop protection Pvt. Ltd., Aurangabad
AHT 406 B	MH 2775	NPH-6358	NPA-378 x NPR-1740	Nirmal Seeds Pvt. Ltd., Pachora
AHT 408 B	MH 2777	DHBH-21002 (R)	DHLB-32A x DHLBI-1035	ICAR-ICAR-AICRP-PM, Dhule
AHT 409 B	MH 2784	PB1937	PSP99 x PP110	Crystal Crop protection Pvt. Ltd., Aurangabad
AHT 505 A	MH 2796	HT 423158	PM0140A x PM0410R	Hytech Seed India Pvt. Ltd., Medchal
AHT 507 A	MH 2797	APH-44	APA-2283 x APR-1038	Ajeet Seeds Pvt. Ltd., Hyderabad
AHT 508 A	MH 2798	US7722	SWM05A x SWM11R	Seed Works Int. Pvt. Ltd., Hyderabad
AHT 510 A	MH 2801	BLPMH 113	BLPMA223 x BLPMP1519	Limagrain India Pvt. Ltd., Hyderabad
AHT 512 A	MH 2806	KPH6288	KP19SA001 x KP20SR025	Kaveri Seeds Co. Ltd., Secunderabad
AHT 514 A	MH 2808	PB1987®	PSP137 x PP123	Crystal Crop Protection Ltd., Aurangabad
AHT 503 B	MH 2795	VNR-109	VNRF-105 x VNRBB-1459	VNR Seeds Pvt., Ltd., Hyderabad
AHT 505 B	MH 2798	US7722	SWM05A x SWM11R	Seed Works Int. Pvt. Ltd., Hyderabad
AHT 507 B	MH 2808	PB1987®	PSP137 x PP123	Crystal Crop Protection Ltd., Aurangabad
Entries completed three years of testing				
AHPT 802	MH 2672	CZH 267	CZ-ICMA 19111 x CZI 2019/16	ICAR-CAZRI, Jodhpur
AHPT 803	MH 2673	RHB-273	RMS 30A x RIB 3135-18	ICAR-AICRP-PM, SKNAU, Jaipur
AHPT 804	MH 2675	GHB 1305	ICMA1 15777 x J-2571	ICAR-AICRP-PM, JAU, Jamnagar
AHPT 806	MH 2678	HHB 344	ICMA 93333 x HR-21-166	ICAR-AICRP-PM, CCSHAU, Hisar

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Test Code	Project No.	Identity	Pedigree	Origin
AHT 402 B	MH 2682	APHB-126	ICMA 92333 x 4115	ICAR-AICRP-PM, ANGRAU, Anantapuram
AHT 501 A	MH 2709	MP7173	PM21S1087A x MP16P050R	Rallis India Ltd., Hyderabad
AHT 502 A	MH 2712	VNR-106	VNRF-12 x VNRBB-1368	VNR Seeds Pvt., Ltd., Hyderabad
AHT 503 A	MH 2717	US7773	SWM03A x SWM11R	Seed Works Int. Pvt. Ltd., Hyderabad
AHT 501 B	MH 2717	US7773	SWM03A x SWM11R	Seed Works Int. Pvt. Ltd., Hyderabad
		CHECKS		
		PB 1756 (2018)	PSP91 x PP107	Crystal Crop Protection Ltd., Hyderabad
		RHB 223 (2018)	ICMA 96666 x RIB 3135-18	ICAR-AICRP-PM, SKNAU, Jaipur
		HHB 67 (Imp.) (2005)	ICMA 843-22 x H 77/833-2-202	ICAR-AICRP-PM, CCSHAU, Hisar
		MPMH 35 (2022)	ICMA1 94555 x MIR 1252	ICAR-AICRP-PM, PC Unit, Jodhpur
		86M86 (2012)	M128F x M138R	Pioneer Overseas Corp., Hyderabad
		86M84 (2016)	M162F x M172R	Pioneer Overseas Corp., Hyderabad
		KBH 108 (2014)	KMPS-74A x KPR-9288R	Krishna Seeds Pvt. Ltd., Agra
		MP 7878 (2018)	MP14P030A x MP15P038R	Metahelix Life Science Ltd., Bangalore
		AHB 1269 (2019)	ICMA 98222A1 x AUBI 1105	ICAR-AICRP-PM, NARP, Aurangabad
		86M01 (2015)	M096F x M149R	Pioneer Overseas Corp., Hyderabad
		Pratap (2012)	NB 101A x NB 152R	Nuziveedu Seeds Pvt. Ltd., Hyderabad
		Kaveri S. Boss (2012)	KBMS 329 x KBR 621	Kaveri Seed Co. Ltd., Hyderabad
		NBH 4903 (2018)	NB 105A x NB 98R	Nuziveedu Seeds Pvt. Ltd., Hyderabad
		AHB 1200 (2018)	ICMA 98222 A1 x AUBI 1101	ICAR-AICRP-PM, NARP, Aurangabad

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Table I.3: Key to Pearl Millet Hybrids (Summer 2024)

Test Code	Project No.	Identity	Pedigree	Origin
Entries completed one year of testing				
SHT 104	MSH 414	KPH 6311	KP19SA017 x KP22SR039	Kaveri Seeds Co. Ltd., Secunderabad
SHT 105	MSH 415	AHB 1200	ICMA 98222 x AUBI-1101	ICAR-AICRP-PM, NARP, Aurangabad
SHT 106	MSH 416	9055D732-01	9PFBA07A x 9PHQE75R	Corteva Agriscience, Hyderabad
SHT 108	MSH 417	9058D405-01	M286F x 9PUGL83R	Corteva Agriscience, Hyderabad
SHT 109	MSH 418	GHB 1353	ICMA1 14222 x J-2645	ICAR-AICRP-PM, JAU, Jamnagar
SHT 110	MSH 419	GHB 1379	ICMA1 14222 x J-2651	ICAR-AICRP-PM, JAU, Jamnagar
SHT 112	MSH 420	MP7104	MP13P025A x MP20P082R	Metahelix Life Science Ltd., Hyderabad
SHT 113	MSH 421	NBBH-1016	NB224 A x NBR 111	Navbharat Seeds Pvt. Ltd., Hyderabad
SHT 114	MSH 422	NBH 5933	NB1122A x NB2042R	Nuziveedu Seeds Pvt. Ltd., Hyderabad
SHT 115	MSH 423	DHBH 1774	DHLB 30A x DHLBI 1035	ICAR-AICRP-PM, MPKV, Dhule
SHT 117	MSH 424	DHBH 1925	DHLB 23A x DHLBI 1035	ICAR-AICRP-PM, MPKV, Dhule
SHT 118	MSH 425	DHBH 22117	DHLB 23A x DHLBI 1603	ICAR-AICRP-PM, MPKV, Dhule
SHT 119	MSH 426	DHBH 22119	DHLB 31A x DHLBI 1603	ICAR-AICRP-PM, MPKV, Dhule
SHT 120	MSH 427	DHBH 22122	DHLB 37A x DHLBI 1603	ICAR-AICRP-PM, MPKV, Dhule
SHT 121	MSH 428	US 7370	SWM04A x SWM52R	Seed Works Intern. Pvt. Ltd., Ahmedabad
Entries completed two years of testing				
SHT 101	MSH 406	US7307	SWM03A x SWM10R	Seed Works Intern. Pvt. Ltd., Hyderabad
SHT 102	MSH 407	NBH 5922	NB 107 A x NB 2123 R	Nuziveedu Seeds Pvt. Ltd., Hyderabad
Entries completed three years of testing				
Nil				
CHECKS				
		86M22 (2024)	M461F x M458R	Pioneer Overseas Corp., Hyderabad
		Proagro 9444 (2004)	PSP 41 x PP 29	Bayer Biosciences Pvt. Ltd., Hyderabad
		86M64 (2011)	M096F x M117R	Pioneer Overseas Corp., Hyderabad
		Nandi 75 (2013)	NMS 24 A x NMP 95	New Nandi Seeds Corp., Ahmedabad
		MP 7366 (2021)	MP14P028A x MP15P035R	Metahelix Life Science Ltd., Hyderabad

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Table I.4: Key to Pearl Millet Varieties (Kharif 2024)

Test Code	Project No.	Identity	Origin
Entries completed one year of testing			
PT 601 A	MP 640	GBL 10	ICAR-AICRP-PM, PAU, Ludhiana
PT 602 A	MP 641	BCB 2401	ICAR-AICRP-PM, SKRAU, Bikaner
PT 603 A	MP 642	ABV 08	ICAR-AICRP-PM, ANGRAU, Anantapuram
PT 606 A	MP 643	JPP 2024-1	ICAR-AICRP-PM, JAU, Jamnagar
PT 608 A	MP 644	JPP 2024-2	ICAR-AICRP-PM, JAU, Jamnagar
PT 609 A	MP 645	JPP 2024-3	ICAR-AICRP-PM, JAU, Jamnagar
PT 611 A	MP 646	VPMV-20	ICAR-AICRP-PM, Vijyapur
PT 612 A	MP 647	VPMV-21	ICAR-AICRP-PM, Vijyapur
PT 613 A	MP 648	VPMV-22	ICAR-AICRP-PM, Vijyapur
PT 614 A	MP 649	Pusa Composite 735	ICAR-IARI, New Delhi
PT 616 A	MP 650	Pusa Composite 736	ICAR-IARI, New Delhi
PT 618 A	MP 651	Pusa Composite 737	ICAR-IARI, New Delhi
PT 601 B	MP 640	GBL 10	ICAR-AICRP-PM, PAU, Ludhiana
PT 602 B	MP 641	BCB 2401	ICAR-AICRP-PM, SKRAU, Bikaner
PT 603 B	MP 642	ABV 08	ICAR-AICRP-PM, ANGRAU, Anantapuram
PT 604 B	MP 643	JPP 2024-1	ICAR-AICRP-PM, JAU, Jamnagar
PT 606 B	MP 644	JPP 2024-2	ICAR-AICRP-PM, JAU, Jamnagar
PT 607 B	MP 645	JPP 2024-3	ICAR-AICRP-PM, JAU, Jamnagar
PT 609 B	MP 646	VPMV-20	ICAR-AICRP-PM, Vijyapur
PT 612 B	MP 647	VPMV-21	ICAR-AICRP-PM, Vijyapur
PT 613 B	MP 648	VPMV-22	ICAR-AICRP-PM, Vijyapur
PT 614 B	MP 649	Pusa Composite 735	ICAR-IARI, New Delhi
PT 615 B	MP 650	Pusa Composite 736	ICAR-IARI, New Delhi
PT 617 B	MP 651	Pusa Composite 737	ICAR-IARI, New Delhi
Entries completed two years of testing			
PT 605 A	MP 637	Pusa Composite 732	ICAR-IARI, New Delhi
CHECKS			
		ICMV 221 (1993)	ICRISAT, Patancheru
		Pusa Comp. 701 (2016)	ICAR-IARI, New Delhi
		Dhanshakti (2014)	ICRISAT, Patancheru
		Pusa Comp. 383 (2001)	ICAR-IARI, New Delhi
		JBV 2 (1999)	ICAR-AICRP-PM, RVSKV, Gwalior
		Raj 171 (1992)	ICAR-AICRP-PM, SKNAU, Jaipur
		ABV 04 (2019)	ICAR-AICRP-PM, ANGRAU, Ananthapuram
		Pusa Comp. 612 (2011)	ICAR-IARI, New Delhi
		ICMV 155 (1991)	ICRISAT, Patancheru

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Table I.5: Key to Pearl Millet Released Hybrids and Varieties (Kharif 2024)

S. No.	Name of entry.	Year of release	Pedigree	Origin
Hybrids				
1	MPMH 42	2024	ICMA 92777 x MIR 519-1	
2	MPMH 35	2022	ICMA 94555 x MIR 1252	ICAR-AICRP-PM, Jodhpur
3	RHB 223	2018	ICMA 96666 x RIB 3135-18	ICAR-AICRP-PM, SKNAU, Jaipur
4	PB 1756	2018	PSP91 x PP107	Bayer Bio Science Hyderabad
5	HHB 272	2016	HMS 47A x AC 04/13	ICAR-AICRP-PM, CCS HAU, Hisar
6	GHB 719	2007	ICMA 95222 x J 2454	ICAR-AICRP-PM, JAU, Jamnagar
7	GHB 538	2005	ICMA 95444 x J-2340	ICAR-AICRP-PM JAU, Jamnagar
8	HHB 67 Improved	2005	ICMA 843-22 x H 77/833-2-202	ICAR-AICRP-PM, CCS HAU, Hisar
9	86M94	2022	9PHGF39A x M444R	Pioneer Overseas Corp., Hyderabad
10	DHBH 1397	2019	DHLB 16A x DHLBI 1035	ICAR-ICAR-AICRP-PM, Dhule
11	PB 1852	2019	PSP 95 x PP 110	Bayer Bio Science, Hyderabad
12	86M01	2015	M096F x M149R	Pioneer Overseas Corp., Hyderabad
13	GHB 905	2013	ICMA 04999 x J- 2454	ICAR-AICRP-PM JAU, Jamnagar
14	RHB 173	2011	ICMA 93333 x RIB 192S/99	ICAR-AICRP-PM, SKNAU, Jaipur
15	GHB 732	2008	ICMA 96222 x J 2340	ICAR-AICRP-PM, JAU, Jamnagar
16	GHB 744	2008	ICMA 98444 x J 2340	ICAR-AICRP-PM, JAU, Jamnagar
17	86M80	2022	M461F x M513R	Pioneer Overseas Corp., Hyderabad
18	MP 7878	2018	MP14P030A x MP15P038R	Metahelix Life Science Ltd.
19	86M84	2016	M162F x M172R	Pioneer Overseas Corp., Hyderabad
20	KBH 108	2014	KMPS-74A x KPR-9288R	Krishna Seeds Pvt. Ltd., Agra
21	Kaveri Super Boss	2012	KBMS 329 x KBR 621	Kaveri Seed Co. Ltd., Hyderabad
22	86M86	2012	M128F x M138R	Pioneer Overseas Corp., Hyderabad
23	RHB 233	2019	ICMA 99444 x RIB 15176	ICAR-AICRP-PM, SKNAU, Jaipur
24	RHB 234	2019	ICMA 02333 x RIB 15177	ICAR-AICRP-PM, SKNAU, Jaipur
25	AHB 1269	2019	ICMA 98222A ₁ x AUBI 1105	ICAR-AICRP-PM, NARP, Aurangabad
26	AHB 1200	2018	ICMA 98222 A ₁ x AUBI 1101	ICAR-AICRP-PM, NARP, Aurangabad
27	HHB 299	2018	ICMA 04888 x H 13/0001	ICAR-AICRP-PM, CCS HAU, Hisar
28	Mahabeej-1005	2017	MBJ-2A x MBI-1R	MSSCL, Akola
29	Pratap (MH 1642)	2012	NB 101A x NB 152R	Nuziveedu Seeds Pvt. Ltd., Hyderabad
30	NBH 4903	2018	NB 105A x NB 98R	Nuziveedu Seeds Pvt. Ltd., Hyderabad
Varieties				
28	Dhanshakti	2014	-	ICAR-AICRP-PM, MPKV, Dhule
29	ICMV 221	1993	-	ICRISAT, Patancheru
30	Pusa Comp. 701	2016	-	ICAR-IARI, New Delhi
31	Pusa Comp. 383	2001	-	ICAR-IARI, New Delhi
32	JBV 2	1999	-	ICAR-AICRP-PM, RVSKVV, Gwalior
33	RAJ 171	1992	-	ICAR-AICRP-PM, SKNAU, Jaipur
34	Pusa Comp. 612	2011	-	ICAR-IARI, New Delhi

Summary results of successfully conducted trials in Zones A₁, A and B**A. ICAR-AICRP on Pearl Millet Hybrid Trials****1. Initial Hybrid Trial (Early): IHT (E) ZONE A₁**

Initial Hybrid Trial (Early) was conducted at 11 locations in Zone A₁ i.e. eight in Rajasthan, two in Haryana and one in Gujarat in which 23 experimental hybrids along with five checks viz. RHB 223, PB 1756, MPMH 35, HHB 67 Imp and AHB 1200 (only for Fe and Zn comparison) were evaluated. Experimental hybrids showed differences in their performance within zone. Mean performance of experimental hybrids along with checks for grain yield, dry fodder yield, days to 50% flowering and days to maturity are given in Table I.6. Location-wise performance for grain yield and other ancillary characters are presented in Tables I.19 to I.32.

The mean grain yield of test hybrids ranged from 1490 kg/ha to 2325 kg/ha. Three hybrids, MH 2814 (2325 kg/ha), MH 2827 (2303 kg/ha) and MH 2829 (2244 kg/ha) recorded higher grain yield over the best check MPMH 35 (2157 kg/ha). Dry fodder yield ranged from 4769 kg/ha to 7114 kg/ha.

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Table I.6: MEAN PERFORMANCE: INITIAL HYBRID TRIAL (Early) KHARIF 2024 ZONE A₁

S.No.	Name of Entry	Grain Yield (kg/ha)	Dry Fodder Yield (kg/ha)	Days to 50% Flower	Days to Maturity	DM (%) 60 DAS	Blast (score)	Ergot (%)	Smut (%)	Rust (%)	Fe (ppm)	Zn (ppm)
1	MH 2814	2325	6740	50	79	0.9	2.3	0.0	0.8	0.0	45	37
2	MH 2827	2303	7114	49	80	2.9	1.3	0.0	5.5	0.0	50	38
3	MH 2829	2244	6320	45	76	1.3	3.5	0.0	8.0	0.0	47	37
4	MPMH 35 (C)	2157	6658	46	76	3.3	1.9	2.0	1.5	2.0	44	38
5	MH 2826	2131	6140	46	75	0.9	2.0	1.0	3.3	0.0	43	37
6	MH 2813	2118	6572	47	79	0.5	2.2	0.0	10.0	0.0	44	41
7	MH 2832	2116	6722	46	76	1.2	2.5	0.0	1.1	6.8	44	38
8	MH 2812	2109	6312	47	78	1.2	2.4	0.0	4.4	3.5	42	34
9	MH 2820	2095	6525	47	77	1.3	2.6	5.0	0.5	0.0	46	38
10	MH 2819	2075	5939	45	74	5.7	2.6	0.0	0.8	0.0	53	40
11	MH 2811	2040	5810	45	76	1.2	2.2	0.0	0.0	3.8	43	37
12	MH 2831	2039	6076	47	77	2.4	2.1	0.0	0.5	9.3		
13	MH 2833	2025	6016	48	78	0.0	2.3	1.0	0.5	8.3		
14	MH 2817	2006	5995	45	76	0.8	3.2	0.0	0.3	0.0		
15	MH 2830	1905	6152	45	76	1.2	2.9	0.0	0.1	0.0		
16	MH 2825	1901	5765	44	75	7.0	2.3	1.0	1.3	0.0		
17	MH 2816	1866	6453	47	79	1.0	3.2	0.0	1.3	0.0		
18	RHB 223 (C)	1863	5539	46	76	3.9	1.5	0.0	1.0	0.0	43	37
19	MH 2822	1857	5694	47	77	1.6	3.0	1.0	12.3	0.0		
20	MH 2818	1849	5380	47	76	2.5	3.3	0.0	2.3	0.0		
21	PB 1756 (C)	1801	5150	45	76	0.0	1.5	1.0	1.5	0.0	46	38
22	MH 2815	1797	5356	48	79	3.7	2.9	0.0	0.0	0.0		
23	MH 2821	1717	5521	46	77	1.6	2.9	0.0	6.0	0.0		
24	MH 2828	1714	5584	49	80	6.6	1.8	0.0	4.5	0.0		
25	MH 2824	1634	4769	44	74	1.6	2.8	0.0	3.8	0.0		
26	AHB 1200 (C)	1619	5165	47	78	0.5	2.8	0.0	1.3	0.0	48	39
27	MH 2823	1533	4887	44	76	8.0	2.9	0.0	2.8	0.0		
28	HHB 67 Imp. (C)	1490	5099	43	75	0.0	2.5	1.0	2.8	0.0	43	37
LOC. MEAN		1940	5909	46	77							

Promotion criteria as per 52nd Annual group meet : Grain yield = higher than best check or 10% higher over relevant check, Days to 50% flowering ≤ 45 days, A grace of one day in days to 50% flowering may be given to hybrids yielding grains 15% higher over HHB 67 Improved, Disease (Across all zones): Downy Mildew (60 DAS): ≤ 5%, Blast (score): ≤ 3 (0-9 scale), Ergot (% severity): ≤ 20%, Smut (% severity): ≤ 20%, Rust (% leaf area): ≤ 20%, Iron content: ≥ 42 ppm and Zinc content: ≥ 32 ppm.

2. Initial Hybrid Trial (Medium): IHT (M) ZONE A & B

Initial Hybrid Trial (Medium) was conducted at 17 locations in which 30 experimental hybrids were evaluated along with four checks viz., PB 1852, 86M94, DHBH 1397 and AHB 1200 (only for Fe and Zn comparison) in Zone A and at 12 locations with same test entries along with four checks viz. 86M01, Pratap, AHB 1269 and AHB 1200 (only for Fe and Zn comparison) in Zone B. Experimental hybrids showed differences in their performance between and within zones. The zone-wise results are given below:

Zone A

In Zone A, IHT (Medium) was conducted successfully at 17 locations i.e. six in Rajasthan, four in Gujarat, two each in Uttar Pradesh and Haryana and one each in Madhya Pradesh, Punjab and Delhi. Mean performance of experimental hybrids along with checks for grain yield, dry fodder yield, days to 50% flowering and days to maturity are given in Table I.7. Location-wise performance for grain yield and other ancillary characters are presented in Tables I.33 to I.46. The mean grain yield of test hybrids

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ranged from 2366 kg/ha to 3884 kg/ha. Three hybrids, MH 2863 (3884 kg/ha), MH 2842 (3798 kg/ha) and MH 2840 (3688 kg/ha) recorded higher grain yield over the best check 86M94 (3614 kg/ha). Dry fodder yield of test hybrids ranged from 6666 kg/ha to 10634 kg/ha.

Table I.7: MEAN PERFORMANCE: INITIAL HYBRID TRIAL (Medium) KHARIF 2024 ZONE A

S.No.	Name of Entry	Grain Yield (kg/ha)	Dry Fodder Yield (kg/ha)	Days to 50% Flower	Days to Maturity	DM (%) 60 DAS	Blast (score)	Ergot (%)	Smut (%)	Rust (%)	Fe (ppm)	Zn (ppm)
1	MH 2863	3884	10500	55	86	0.6	1.2	0.0	5.6	0.0	54	40
2	MH 2842	3798	10634	53	84	1.3	2.2	0.0	0.0	0.0	49	33
3	MH 2840	3688	10209	55	85	0.3	1.7	4.2	18.8	0.0	47	36
4	86M94 (C)	3614	9163	50	82	0.0	2.2	0.8	1.3	0.0	47	36
5	PB 1852 (C)	3533	9936	53	83	0.2	2.1	0.8	3.8	0.0	52	38
6	MH 2854	3524	9637	51	82	0.3	1.6	0.3	15.3	0.0		
7	MH 2841	3516	9200	48	81	1.3	2.2	0.0	0.0	0.0		
8	MH 2834	3455	8675	51	82	0.6	2.0	2.5	0.0	0.0		
9	MH 2839	3367	8682	55	87	0.0	2.0	3.3	11.8	0.0		
10	MH 2848	3367	10083	53	84	3.0	1.7	2.5	9.8	0.0		
11	DHBH 1397 (C)	3358	8925	47	80	1.4	2.6	0.3	6.0	0.0	53	41
12	MH 2838	3315	8634	49	81	1.2	1.7	0.0	22.5	0.0		
13	MH 2852	3300	9616	56	86	1.7	1.6	0.0	8.9	0.0		
14	MH 2846	3271	8706	56	86	0.6	1.6	0.8	5.9	0.0		
15	MH 2856	3218	8170	51	83	0.7	2.6	0.0	6.1	0.0		
16	MH 2844	3207	8023	52	85	0.9	1.7	0.0	1.5	0.0		
17	MH 2836	3166	7883	48	81	0.7	1.9	2.2	12.2	0.0		
18	MH 2851	3117	9631	46	78	3.2	2.1	0.0	6.9	0.0		
19	MH 2849	3064	8614	51	83	3.1	2.5	0.8	7.3	0.0		
20	MH 2850	3018	8459	48	80	1.1	3.2	0.3	13.4	0.0		
21	MH 2859	2956	8470	57	87	3.5	1.5	0.0	5.0	0.0		
22	MH 2847	2936	7903	51	82	0.7	2.0	1.7	2.1	0.0		
23	MH 2843	2913	9671	56	86	0.9	3.7	0.0	4.3	0.0		
24	MH 2837	2905	7459	49	82	1.5	1.9	4.5	23.5	0.0		
25	MH 2860	2897	7952	51	82	1.6	2.8	0.3	4.0	0.0		
26	MH 2853	2893	8582	53	83	0.5	1.6	0.3	6.3	0.0		
27	MH 2862	2833	8073	53	84	1.7	2.1	0.0	3.9	0.0		
28	MH 2857	2767	8906	48	80	0.6	3.1	0.7	7.1	0.0		
29	MH 2845	2695	8134	50	82	0.8	3.6	4.2	3.9	0.0		
30	MH 2835	2554	6666	50	83	1.5	1.5	0.0	1.8	2.5		
31	AHB 1200 (C)	2528	6982	47	78	0.3	3.6	0.0	0.6	0.0	67	39
32	MH 2858	2524	8745	49	80	2.8	3.7	0.0	6.6	0.0		
33	MH 2861	2421	6740	48	79	1.2	3.8	0.3	15.1	0.0		
34	MH 2855	2366	7067	54	84	0.5	1.2	2.3	1.9	0.0		
LOC. MEAN		3117	8669	51	83							

Promotion criteria as per 52nd Annual group meet: Grain yield = higher than best check or 10% higher over relevant check, Days to 50% flowering ≤ 50 days, A grace of one day in days to 50% flowering may be given to hybrids yielding grains 15% higher over relevant checks, Disease (Across all zones): Downy Mildew (60 DAS): ≤ 5%, Blast (score): ≤ 3 (0-9 scale), Ergot (% severity): ≤ 20%, Smut (% severity): ≤ 20%, Rust (% leaf area): ≤ 20%, Iron content: ≥ 42 ppm and Zinc content: ≥ 32 ppm.

Zone B

In Zone B, IHT (Medium) was conducted successfully at 12 locations viz. four in Maharashtra, three in Karnataka, two in Andhra Pradesh and one each in Telangana, Tamil Nadu and Odisha. Mean performance of experimental hybrids along with checks for grain yield, dry fodder yield, days to 50% flowering and days to maturity are given in Table I.8. Location-wise performance for grain yield and other ancillary characters are presented in Tables I.47 to I.60. Mean grain yield of test hybrids ranged from 2009 kg/ha to 4118 kg/ha. Six hybrids viz. MH 2842 (4118 kg/ha), MH 2840 (3853 kg/ha), MH 2863 (3791 kg/ha), MH 2852 (3707 kg/ha), MH 2859 (3496 kg/ha) and MH 2846 (3492 kg/ha) recorded

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higher grain yield over best check 86M01 (3438 kg/ha) with medium flowering (up to 50 days) except MH 2863 and MH 2846 (51 days). One hybrid MH 2840 having 52 days of flowering. Dry fodder yield of test entries ranged from 5223 kg/ha to 8858 kg/ha.

Table I.8: MEAN PERFORMANCE: INITIAL HYBRID TRIAL (Medium) KHARIF 2024 ZONE B

S.No.	Name of Entry	Grain Yield (kg/ha)	Dry Fodder Yield (kg/ha)	Days to 50% Flower	Days to Maturity	DM (%) 60 DAS	Blast (score)	Ergot (%)	Smut (%)	Rust (%)	Fe (ppm)	Zn (ppm)
1	MH 2842	4118	8018	50	84	1.0	0.6	0.8	0.0	7.3	44	32
2	MH 2840	3853	7596	52	86	0.5	0.0	0.5	0.0	1.6	46	33
3	MH 2863	3791	7879	51	84	0.8	1.3	2.0	0.0	8.1	56	36
4	MH 2852	3707	7179	49	84	2.1	0.9	0.0	0.0	5.6	56	37
5	MH 2859	3496	8606	50	85	2.1	1.8	0.0	0.0	5.6	55	36
6	MH 2846	3492	8858	51	85	1.4	0.9	1.0	0.0	5.9	65	40
7	86M01 (C)	3438	7213	47	81	1.3	3.4	2.0	0.0	3.3	52	35
8	MH 2843	3425	7928	50	85	1.9	2.5	2.1	0.0	7.3	53	39
9	MH 2853	3402	7199	49	83	1.5	1.1	0.9	0.0	9.1	58	34
10	MH 2847	3284	7384	49	84	1.6	2.5	1.3	0.0	4.9		
11	MH 2841	3226	7182	46	82	1.2	1.3	0.8	0.0	4.6		
12	MH 2837	3195	6700	47	83	2.7	1.4	0.3	0.3	9.1		
13	MH 2849	3137	7417	50	85	2.0	2.0	0.0	0.0	5.8		
14	MH 2854	3127	7511	46	80	1.0	0.9	0.0	0.0	6.6		
15	MH 2848	3038	7172	47	82	1.8	1.9	1.9	0.0	6.6		
16	MH 2839	2930	6677	49	85	0.8	1.9	1.3	0.0	8.6		
17	MH 2838	2918	6400	46	81	1.6	1.8	0.0	0.0	6.9		
18	MH 2836	2871	6292	48	83	2.7	1.5	2.8	0.3	8.3		
19	MH 2834	2839	6749	47	82	1.1	0.9	0.3	0.0	9.5		
20	MH 2844	2833	6416	48	82	1.6	0.8	0.9	0.0	6.5		
21	MH 2860	2810	6557	48	83	2.0	2.8	0.0	0.0	9.4		
22	MH 2856	2728	6720	47	82	2.7	2.0	0.0	0.0	9.1		
23	MH 2845	2684	6797	48	82	1.8	2.5	1.8	0.0	7.5		
24	MH 2858	2684	7351	47	82	10.4	2.5	2.0	0.0	10.3		
25	MH 2850	2633	7083	46	81	2.5	1.5	0.0	0.0	9.9		
26	AHB 1269 (C)	2594	6697	47	83	1.2	3.9	1.9	0.0	14.3	57	36
27	AHB 1200 (C)	2460	6228	46	81	2.3	4.0	0.0	0.0	12.4	67	40
28	MH 2857	2444	6782	47	81	5.1	2.4	0.0	0.0	8.4		
29	MH 2861	2409	6290	47	82	2.3	4.4	3.0	0.0	6.3		
30	MH 2862	2408	6548	48	83	2.7	3.0	0.0	0.0	4.8		
31	MH 2835	2391	5473	49	83	1.0	1.0	0.5	0.0	5.8		
32	MH 2855	2291	5476	50	84	1.1	1.1	0.8	0.0	0.0		
33	Pratap (C)	2115	5223	46	80	3.2	4.9	1.0	0.0	10.3	54	38
34	MH 2851	2009	5566	45	79	2.2	2.3	0.0	1.9	11.9		
LOC. MEAN		2964	6917	48	83							

Promotion criteria as per 52nd Annual group meet: Grain yield =higher than best check or 10% higher over relevant check, Days to 50% flowering ≤ 50 days, A grace of one day in days to 50% flowering may be given to hybrids yielding grains 15% higher over relevant checks, Disease (Across all zones): Downy Mildew (60 DAS): ≤ 5%, Blast (score): ≤ 3 (0-9 scale), Ergot (% severity): ≤ 20%, Smut (% severity): ≤ 20%, Rust (% leaf area): ≤ 20%, Iron content: ≥ 42 ppm and Zinc content: ≥ 32 ppm.

3. Initial Hybrid Trial (Late): IHT (L) ZONE A & B

In Initial Hybrid Trial (Late) 23 experimental hybrids were evaluated at 16 locations along with four checks viz., MP 7878, 86M84, KBH 108 and AHB 1200 (only for Fe and Zn comparison) in zone A and same entries at 11 locations along with four checks viz., NBH 4903, 86M86, Kaveri Super Boss and AHB 1200 (only for Fe and Zn comparison) in zone B. Experimental hybrids showed differences in their performance between and within zones. The zone-wise results are given below:

Zone A

In Zone A, Initial Hybrid Trial (Late) was conducted successfully at 16 locations i.e. eight in Rajasthan, two in Uttar Pradesh, three in Gujarat and one each in Haryana, Madhya Pradesh and Punjab. Mean performance of experimental hybrids along with checks for grain yield, dry fodder yield, days to 50% flowering and days to maturity are given in Table I.9. Location-wise performance for grain yield and other ancillary characters are presented in Tables I.61 to I.74. The mean grain yield of test hybrids ranged from 2284 kg/ha to 4323 kg/ha. Only one hybrid MH 2878 (4323 kg/ha) recorded higher grain yield over the best check MP 7878 (4125 kg/ha). Dry fodder yield of test hybrids ranged from 8156 kg/ha to 13405 kg/ha.

Table I.9: MEAN PERFORMANCE: INITIAL HYBRID TRIAL (Late) KHARIF 2024 ZONE A

S.No.	Name of Entry	Grain Yield (kg/ha)	Dry Fodder Yield (kg/ha)	Days to 50% Flower	Days to Maturity	DM (%) 60 DAS	Blast (score)	Ergot (%)	Smut (%)	Rust (%)	Fe (ppm)	Zn (ppm)
1	MH 2878	4323	13405	59	88	0.7	2.1	0.8	0.0	0.0		
2	MP 7878 (C)	4125	12038	56	86	1.8	3.3	0.0	0.0	0.0		
3	MH 2875	4028	11227	56	86	0.3	1.1	0.0	0.0	0.0		
4	86M84 (C)	3956	11750	58	87	0.4	2.6	0.8	4.4	0.0		
5	MH 2876	3881	11177	62	90	0.2	1.6	0.0	1.3	0.0		
6	MH 2866	3828	12894	62	90	1.2	2.2	2.8	8.8	0.0		
7	MH 2874	3747	11169	56	85	0.0	1.5	0.3	3.8	0.0		
8	MH 2879	3730	11828	60	90	1.4	1.7	0.8	0.0	0.0		
9	MH 2883	3687	12049	54	83	0.4	1.7	0.0	2.4	0.0		
10	MH 2871	3677	10014	57	86	1.2	1.8	0.7	11.4	0.0		
11	MH 2867	3675	10789	55	84	1.3	1.3	0.8	15.6	0.0		
12	MH 2864	3603	10474	55	84	0.3	1.4	0.3	9.5	0.0		
13	MH 2880	3568	10370	57	86	1.1	1.2	0.3	0.9	0.0		
14	MH 2873	3565	11370	60	89	0.8	1.1	0.0	6.3	0.0		
15	MH 2885	3515	10996	58	87	0.3	2.5	0.8	3.6	0.0		
16	MH 2868	3443	9198	54	82	0.4	2.6	0.5	18.6	0.0		
17	MH 2881	3417	10074	62	91	1.0	1.2	0.3	0.1	0.0		
18	MH 2886	3404	9604	57	87	0.3	3.1	0.8	4.8	0.0		
19	MH 2877	3377	9446	57	86	0.5	2.1	0.0	5.1	0.0		
20	MH 2870	3320	8403	53	81	0.9	2.5	1.7	6.4	0.0		
21	MH 2869	3266	8442	52	81	1.8	3.2	0.3	10.5	0.0		
22	KBH 108 (C)	3266	10745	59	89	1.2	2.7	0.8	0.6	0.0		
23	MH 2882	3069	10226	57	86	0.4	1.6	0.8	0.6	0.0		
24	MH 2865	2983	8583	50	80	0.2	3.1	0.0	18.5	0.0		
25	MH 2884	2948	8156	60	89	1.6	2.9	0.8	2.0	0.0		
26	AHB 1200 (C)	2879	8222	51	80	0.3	3.6	0.0	0.6	0.0		
27	MH 2872	2284	11942	63	92	4.9	1.3	4.2	5.3	0.0		
LOC. MEAN		3502	10540	57	86							

Promotion criteria as per 52nd Annual group meet: Grain yield = higher than best check or 5% higher over relevant check, Disease (Across all zones): Downy Mildew (60 DAS): ≤ 5%, Blast (score): ≤ 3 (0-9 scale), Ergot (% severity): ≤ 20%, Smut (% severity): ≤ 20%, Rust (% leaf area): ≤ 20%, Iron content: ≥ 42 ppm and Zinc content: ≥ 32 ppm.

Zone B

In Zone B, Initial Hybrid Trial (Late) was conducted successfully at 11 locations viz. seven in Maharashtra and one each in Karnataka, Andhra Pradesh, Telangana and Tamil Nadu. Mean performance of experimental hybrids along with checks for grain yield, dry fodder yield, days to 50% flowering and days to maturity are given in Table I.10. Location-wise performance for grain yield and other ancillary characters are presented in Tables I.75 to I.88. Mean grain yield of test hybrids ranged

from 2445 kg/ha to 4040 kg/ha. Two hybrids namely, MH 2875 (4040 kg/ha) and MH 2876 (3804 kg/ha) recorded higher grain yield over the best check NBH 4903 (3750 kg/ha). Dry fodder yield of test hybrids ranged from 6070 kg/ha to 8827 kg/ha.

Table I.10: MEAN PERFORMANCE: INITIAL HYBRID TRIAL (Late) KHARIF 2024 ZONE B

S.No.	Name of Entry	Grain Yield (kg/ha)	Dry Fodder Yield (kg/ha)	Days to 50% Flower	Days to Maturity	DM (%) 60 DAS	Blast (score)	Ergot (%)	Smut (%)	Rust (%)	Fe (ppm)	Zn (ppm)
1	MH 2875	4040	8450	54	87	0.7	0.0	0.6	0.0	6.1	45	35
2	MH 2876	3804	8164	56	89	0.8	1.0	0.4	0.0	0.3	51	37
3	NBH 4903 (C)	3750	8265	55	88	2.5	3.3	0.6	0.0	9.8	47	39
4	Kaveri S Boss (C)	3721	7985	56	89	0.8	1.5	0.1	0.0	6.4	45	32
5	MH 2878	3718	8827	54	87	1.0	1.0	1.3	0.0	5.5		
6	MH 2866	3680	8365	55	87	1.4	1.1	0.0	0.0	5.5		
7	MH 2879	3645	8806	56	88	3.0	1.6	0.8	0.0	8.9		
8	MH 2881	3614	7136	54	87	0.8	0.8	0.0	0.0	7.4		
9	MH 2874	3598	8399	54	86	0.3	0.9	0.0	0.0	0.9		
10	MH 2880	3555	7914	54	86	1.9	0.5	0.5	0.0	5.8		
11	MH 2864	3503	6947	53	86	1.9	1.3	0.0	0.0	9.5		
12	MH 2867	3422	7410	53	86	0.8	1.9	0.0	0.3	5.6		
13	MH 2877	3371	7382	53	86	0.5	2.5	1.4	0.0	8.4		
14	MH 2886	3315	6797	53	86	0.5	2.4	0.3	0.0	5.9		
15	MH 2873	3187	7949	55	88	0.5	0.9	0.8	0.9	6.4		
16	MH 2885	3180	7879	53	86	1.7	1.8	0.0	0.0	4.1		
17	MH 2869	3173	6489	50	83	1.4	1.9	0.8	0.0	9.4		
18	MH 2882	3165	7257	54	86	0.8	2.1	0.0	0.0	6.5		
19	86M86 (C)	3147	6117	54	87	2.3	1.0	3.3	0.0	8.3	56	38
20	MH 2868	3126	6609	50	83	1.2	1.5	1.0	1.5	6.9		
21	MH 2883	3033	7214	50	83	0.5	2.0	0.0	0.0	6.0		
22	MH 2871	3023	6135	51	84	1.9	0.5	0.0	0.0	7.4		
23	MH 2870	2898	6789	51	84	1.0	2.1	1.5	0.0	9.9		
24	MH 2872	2673	8267	57	89	1.5	0.9	0.0	0.0	3.8		
25	MH 2865	2637	6487	47	81	1.8	1.8	0.4	0.9	6.5		
26	AHB 1200 (C)	2610	6070	50	82	2.3	4.0	0.0	0.0	12.4	74	40
27	MH 2884	2445	6115	56	88	1.1	3.9	1.0	0.0	5.9		
LOC. MEAN		3298	7416	53	86							

Promotion criteria as per 52nd Annual group meet: Grain yield =higher than best check or 5% higher over relevant check, Disease (Across all zones): Downy Mildew (60 DAS): $\leq 5\%$, Blast (score): ≤ 3 (0-9 scale), Ergot (% severity): $\leq 20\%$, Smut (% severity): $\leq 20\%$, Rust (% leaf area): $\leq 20\%$, Iron content: ≥ 42 ppm and Zinc content: ≥ 32 ppm.

4. Advanced Hybrid Trial (Medium): AHT (M) ZONE B

In Advanced Hybrid Trial (Medium), 06 experimental hybrids along with four checks viz., Pratap, AHB 1269, 86M01 and AHB 1200 (only for Fe and Zn comparison) were evaluated at 10 locations in Zone B. Experimental hybrids showed differences in their performance between and within zones. The zone-wise results are given below:

Zone B

In Zone B, AHT (Medium) was conducted successfully at 10 locations viz., four in Maharashtra, two each in Karnataka and Andhra Pradesh and one each in Telangana and Tamil Nadu. Mean performance of experimental hybrids along with checks for grain yield, dry fodder yield, days to 50% flowering and days to maturity are given in Table I.11. Location-wise performance of grain yield, grain quality and other ancillary characters are presented in Tables I.89 to I.102. The mean grain yield of hybrids tested

ranged from 2320 kg/ha to 3050 kg/ha. Six hybrids namely, MH 2775 (3050 kg/ha), MH 2682 (3017 kg/ha), MH 2773 (2986 kg/ha), MH 2767 (2966 kg/ha), MH 2784 (2931 kg/ha) and MH 2777 (2808 kg/ha) recorded higher grain yield over best check 86M01 (2639 kg/ha). Dry fodder yield of test hybrids ranged from 4762 kg/ha to 6869 kg/ha.

Table I.11: MEAN PERFORMANCE: ADVANCED HYBRID TRIAL (Medium) KHARIF 2024 ZONE B

S.No.	Name of Entry (Years of testing)	Grain Yield (kg/ha)	Dry Fodder Yield (kg/ha)	Days to 50% Flower	Days to Maturity	DM (%) 60 DAS	Blast (score)	Ergot (%)	Smut (%)	Rust (%)	Fe (ppm)	Zn (ppm)
1	MH 2775 (2 nd)	3050	5877	48	82	0.4	2.0	2.0	0.0	8.4	56	33
2	MH 2682 (3 rd)	3017	5970	48	83	1.4	1.1	0.0	0.0	4.5	49	33
3	MH 2773 (2 nd)	2986	6157	50	85	0.5	1.1	0.2	0.5	6.7	49	32
4	MH 2767 (2 nd)	2966	6869	51	87	1.0	1.3	0.2	0.0	8.9	43	32
5	MH 2784 (2 nd)	2931	5913	50	85	0.4	1.5	0.5	0.0	6.5	48	32
6	MH 2777 (2 nd)	2808	5957	48	83	0.6	2.2	0.8	0.0	7.9	51	33
7	86M01 (C)	2639	5586	47	82	2.2	3.7	1.0	0.0	4.2	48	34
8	AHB 1200 (C)	2469	5298	47	81	2.4	3.3	0.5	0.2	9.8	70	36
9	AHB 1269 (C)	2462	5153	46	79	1.0	3.3	0.5	0.0	8.0	64	39
10	Pratap (C)	2320	4762	46	80	3.2	4.9	1.5	0.0	3.8	49	36
LOC. MEAN		2765	5754	48	83							

Promotion criteria as per 52nd Annual group meet: Grain yield = higher than best check or 10% higher over relevant check, Days to 50% flowering ≤ 50 days, A grace of one day in days to 50% flowering may be given to hybrids yielding grains 15% higher over relevant checks, Disease (Across all zones): Downy Mildew (60 DAS): ≤ 5%, Blast (score): ≤ 3 (0-9 scale), Ergot (% severity): ≤ 20%, Smut (% severity): ≤ 20%, Rust (% leaf area): ≤ 20%, Iron content: ≥ 42 ppm and Zinc content: ≥ 32 ppm.

5. Advanced Hybrid Trial (Late): AHT (L) ZONE A & B

In Advanced Hybrid Trial (Late), nine experimental hybrids along with five checks viz. KBH 108, 86M86, 86M84, MP 7878 and AHB 1200 (only for Fe and Zn comparison) were evaluated at 11 locations in Zone A and four experimental hybrids along with four checks viz. Kaveri Super Boss, NBH 4903, 86M86 and AHB 1200 (only for Fe and Zn comparison) were evaluated at 8 locations in Zone B. Experimental hybrids showed differences in their performance between and within zones. The zone-wise results are given below:

Zone A

In Zone A, Advanced Hybrid Trial (Late) was conducted successfully at 11 locations viz., three each in Rajasthan and U.P., two in Gujarat and one each in Haryana, Madhya Pradesh and Punjab. Mean performance of experimental hybrids along with checks for grain yield, dry fodder yield, days to 50% flowering and days to maturity are given in Table I.12. Location-wise performance of grain yield, grain quality and other ancillary characters are presented in Tables I.103 to I.117. The mean grain yield of hybrids tested ranged from 2173 kg/ha to 3912 kg/ha. Seven experimental hybrids viz., MH 2806 (3912 kg/ha), MH 2798 (3819 kg/ha), MH 2717 (3785 kg/ha) MH 2709 (3745 kg/ha), MH 2796 (3637 kg/ha), MH 2808 (3476 kg/ha) and MH 2797 (3441 kg/ha) recorded higher grain yield over the best check MP 7878 (3441 kg/ha). Dry fodder yield of test hybrids ranged from 7393 kg/ha to 12082 kg/ha.

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Table I.12: MEAN PERFORMANCE: ADVANCED HYBRID TRIAL (Late) KHARIF 2024 ZONE A

S.No.	Name of Entry (Year of testing)	Grain Yield (kg/ha)	Dry Fodder Yield (kg/ha)	Days to 50% Flower	Days to Maturity	DM (%) 60 DAS	Blast (score)	Ergot (%)	Smut (%)	Rust (%)	Fe (ppm)	Zn (ppm)
1	MH 2806 (2 nd)	3912	10989	55	86	1.0	2.5	0.8	1.9	0.0	43	32
2	MH 2798 (2 nd)	3819	11434	56	86	0.9	0.8	0.0	0.0	0.0	45	36
3	MH 2717 (3 rd)	3785	11688	54	85	0.3	2.3	0.0	0.0	0.0	49	37
4	MH 2709 (3 rd)	3745	10499	54	85	1.7	1.9	0.8	4.1	0.0	54	39
5	MH 2796 (2 nd)	3637	11449	55	86	0.0	1.4	0.0	5.1	0.0	53	36
6	MH 2808 (2 nd)	3476	10853	59	90	0.8	1.5	0.8	6.9	0.0	45	35
7	MH 2797 (2 nd)	3441	10925	57	88	2.8	1.8	4.2	8.8	0.0	43	34
8	MP 7878 (C)	3441	11736	56	87	0.5	1.9	0.8	0.1	0.0	54	41
9	86M84 (C)	3402	10480	57	87	0.3	2.6	1.7	0.0	0.0	51	36
10	MH 2712 (3 rd)	3305	10708	58	88	0.8	1.1	3.5	6.9	0.0	59	41
11	MH 2801 (2 nd)	3215	12082	59	90	1.1	0.8	3.3	1.3	0.0	59	38
12	86M86 (C)	3040	9665	56	86	0.8	2.5	0.0	0.8	0.0	61	40
13	KBH 108 (C)	2796	9647	57	89	1.3	3.1	0.0	0.0	0.0	46	32
14	AHB 1200 (C)	2173	7393	51	82	4.3	3.3	0.0	7.5	0.0	70	41
LOC. MEAN		3370	10682	56	87							

Promotion criteria as per 52nd Annual group meet: Grain yield =higher than best check or 5% higher over relevant check, Disease (Across all zones): Downy Mildew (60 DAS): ≤ 5%, Blast (score): ≤ 3 (0-9 scale), Ergot (% severity): ≤ 20%, Smut (% severity): ≤ 20%, Rust (% leaf area): ≤ 20%, Iron content: ≥ 42 ppm and Zinc content: ≥ 32 ppm.

Zone B

In Zone B, Advanced Hybrid Trial (Late) was conducted successfully at 8 locations viz. five in Maharashtra, one each in Andhra Pradesh, Karnataka and Tamil Nadu. Mean performance of experimental hybrids along with checks for grain yield, dry fodder yield, days to 50% flowering and days to maturity are given in Table I.13. Location-wise performance of grain yield, grain quality and other ancillary characters are presented in Tables I.118 to I.131. The mean grain yield of hybrids tested ranged from 2327 kg/ha to 3517 kg/ha. Hybrid MH 2798 (3517 kg/ha) recorded higher grain yield over the best check NBH 4903 (3356 kg/ha). Dry fodder yield of test hybrids ranged from 5455 kg/ha to 7943 kg/ha.

Table I.13: MEAN PERFORMANCE: ADVANCED HYBRID TRIAL (Late) KHARIF 2024 ZONE B

S.No.	Name of Entry (Year of testing)	Grain Yield (kg/ha)	Dry Fodder Yield (kg/ha)	Days to 50% Flower	Days to Maturity	DM (%) 60 DAS	Blast (score)	Ergot (%)	Smut (%)	Rust (%)	Fe (ppm)	Zn (ppm)
1	MH 2798 (2 nd)	3517	7481	53	87	0.4	1.7	0.5	0.0	12.1	44	38
2	NBH 4903 (C)	3356	7810	54	89	1.8	2.3	0.0	0.0	7.6	49	40
3	MH 2808 (2 nd)	3278	7943	56	91	0.4	1.8	0.0	0.0	7.3	47	34
4	MH 2717 (3 rd)	3230	7454	53	87	0.3	2.5	0.8	0.2	10.8	44	35
5	Kaveri S Boss (C)	2992	7082	56	90	1.2	2.2	0.0	0.0	6.9	45	33
6	MH 2795 (2 nd)	2892	7195	54	87	0.3	1.0	0.0	0.0	8.8	56	39
7	86M86 (C)	2614	5836	55	89	0.5	2.1	0.2	0.0	7.1	60	41
8	AHB 1200 (C)	2327	5455	49	84	2.4	3.3	0.5	0.2	9.8	73	41
LOC. MEAN		3026	7032	54	88							

Promotion criteria as per 52nd Annual group meet: Grain yield = higher than best check or 5% higher over relevant check, Disease (Across all zones): Downy Mildew (60 DAS): $\leq 5\%$, Blast (score): ≤ 3 (0-9 scale), Ergot (% severity): $\leq 20\%$, Smut (% severity): $\leq 20\%$, Rust (% leaf area): $\leq 20\%$, Iron content: ≥ 42 ppm and Zinc content: ≥ 32 ppm.

B. ICAR-AICRP on Pearl Millet Varietal (Population) Trials

1. Population Trial: PT ZONE A & B

Population trial comprising of common initial entries of first year testing and advanced entries of second year testing was conducted in zone A and zone B separately. Population trial in zone A consisting of 13 experimental populations along with six checks viz. JBV 2, Pusa Composite 701, Pusa Composite 383, ICMV 221, Raj 171 and Dhanshakti was conducted at 10 locations while Population trial in zone B consisting of 12 experimental populations along with six checks viz. ABV 04, Pusa Composite 612, ICMV 221, Raj 171, ICMV 155 and Dhanshakti was conducted at 11 locations. Test entries showed differences in their performance between and within zones. The zone-wise results are given below:

Zone A

In zone A, Population Trial was conducted successfully at 10 locations viz. three in Rajasthan, two in Madhya Pradesh and one each in Gujarat, Punjab, Haryana, U.P and Delhi. Mean performance of experimental populations along with checks for grain yield, dry fodder yield, days to 50% flowering and days to maturity are given in Table I.14. Location-wise performance for grain yield, grain quality and other ancillary characters are presented in Tables I.132 to I.145. The mean grain yield of test varieties ranged from 1526 kg/ha to 2641 kg/ha. None of the population recorded higher grain yield over best check Pusa Comp. 701 (2641 kg/ha). Dry fodder yield of test entries ranged from 5517 kg/ha to 8460 kg/ha.

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Table I.14: MEAN PERFORMANCE: POPULATION TRIAL - KHARIF 2024 ZONE A

S.No.	Name of Entry (Year of testing)	Grain Yield (kg/ha)	Dry Fodder Yield (kg/ha)	Days to 50% Flower	Days to Maturity	DM (%) 60 DAS	Blast (score)	Ergot (%)	Smut (%)	Rust (%)	Fe (ppm)	Zn (ppm)
1	Pusa Comp. 701 (C)	2641	8460	52	86	2.3	2.4	0.0	6.4	0.0	49	43
2	MP 649	2479	7984	52	84	2.7	3.3	1.2	4.6	0.0	53	44
3	MP 640	2384	7730	54	87	0.0	2.4	0.0	2.5	0.0	50	41
4	JBV 2 (C)	2357	7986	54	85	2.2	2.6	1.5	3.4	0.0	53	43
5	MP 641	2341	8134	52	86	2.1	3.0	0.0	1.6	0.0		
6	MP 637 (2 nd)	2283	7483	53	87	1.6	2.5	1.7	4.4	0.0	53	43
7	MP 647	2259	6971	55	88	1.3	2.5	0.3	3.8	0.0		
8	MP 648	2212	6891	53	87	1.5	2.1	1.7	2.0	0.0		
9	Pusa Comp. 383 (C)	2178	7153	53	87	1.5	2.6	1.3	3.4	0.0	58	44
10	MP 651	2143	7336	55	87	0.9	1.4	1.5	8.6	0.0		
11	Raj 171 (C)	2133	6873	50	84	2.1	3.0	0.0	4.2	0.0	50	44
12	MP 650	2113	7460	53	86	2.7	2.0	1.7	5.0	0.0		
13	MP 646	2032	8204	57	89	2.0	2.4	1.2	7.1	0.0		
14	Dhanshakti (C)	1876	6276	47	83	2.5	3.4	0.8	2.6	0.0	69	44
15	ICMV 221 (C)	1728	6660	45	82	1.5	3.5	0.4	2.8	0.0	68	48
16	MP 642	1607	6309	58	89	1.3	2.9	0.8	1.9	0.0		
17	MP 643	1592	5517	56	89	2.1	3.1	0.0	2.4	0.0		
18	MP 645	1530	6229	57	89	1.9	1.8	0.8	3.5	0.0		
19	MP 644	1526	6053	58	89	2.2	2.0	0.8	4.0	0.0		
LOC. MEAN		2074	7143	53	87							

Zone B

In Zone B, Population Trial was conducted successfully at 11 locations i.e. three each in Maharashtra and Andhra Pradesh and two in Karnataka and one each in Telangana, Tamil Nadu and Odisha. Mean performance of experimental populations along with checks for grain yield, dry fodder yield, days to 50% flowering and days to maturity are given in Table I.15. Location-wise performance for grain yield and other ancillary characters are presented in Tables I.146 to I.158. Mean grain yield of test populations ranged from 1576 kg/ha to 2712 kg/ha. Three populations viz., MP 647 (2712 kg/ha), MP 640 (2711 kg/ha) and MP 648 (2655 kg/ha) recorded higher grain yield over the best check Pusa Composite 612 (2438 kg/ha). Fodder yield of test populations ranged from 3642 kg/ha to 6106 kg/ha.

Table I.15: MEAN PERFORMANCE: POPULATION TRIAL - KHARIF 2024 ZONE B

S.No.	Name of Entry (Year of testing)	Grain Yield (kg/ha)	Dry Fodder Yield (kg/ha)	Days to 50% Flower	Days to Maturity	DM (%) 60 DAS	Blast (score)	Ergot (%)	Smut (%)	Rust (%)	Fe (ppm)	Zn (ppm)
1	MP 647	2712	6106	48	82	2.9	2.4	1.1	0.0	7.1	62	38
2	MP 640	2711	5497	50	84	0.5	2.0	0.4	0.0	9.6	53	34
3	MP 648	2655	5946	48	83	4.1	2.5	0.9	0.0	6.5	58	40
4	Pusa Comp. 612 (C)	2438	5152	47	81	1.6	2.4	2.8	0.0	10.3	50	36
5	ABV 04 (C)	2379	5043	51	84	1.0	1.9	1.0	0.0	4.5	50	36
6	MP 646	2369	5529	51	86	4.0	2.4	2.8	0.0	6.6		
7	MP 650	2319	5715	48	81	2.4	2.5	1.1	0.0	10.5		
8	MP 651	2318	5060	48	83	1.6	2.1	1.0	0.3	9.1		
9	Raj 171 (C)	2283	5324	48	81	2.2	2.0	2.5	0.0	9.5	51	39
10	MP 642	2266	5863	52	85	1.0	1.8	0.9	0.0	5.4		
11	MP 649	2251	5403	47	82	3.5	1.9	1.0	0.0	12.9		
12	MP 641	2212	4848	47	81	2.1	2.6	0.9	0.0	7.6		
13	ICMV 221 (C)	2163	5549	45	80	1.0	3.8	2.1	0.0	16.9	65	41
14	MP 645	2145	5549	50	84	12.7	2.1	1.1	0.0	10.6		
15	MP 643	1947	4752	52	86	1.8	2.6	0.8	1.3	7.6		
16	MP 644	1941	4905	50	84	3.6	1.8	1.0	0.6	8.0		
17	Dhanshakti (C)	1754	5312	44	79	2.0	3.5	1.3	0.0	8.3	71	43
18	ICMV 155 (C)	1576	3642	46	80	2.2	3.1	0.1	0.9	2.5	47	35
LOC. MEAN		2247	5289	48	83							

C. ICAR-AICRP on Pearl Millet Hybrid and Population Trials:**Advanced Hybrid and Population Trial: AHPT ZONE A₁**

AHPT was constituted comprising entries promoted from IHT (Early) and early populations of Population Trial Zone A based on mean of locations from A₁ Zone comprising of low rainfall areas (<400 mm) of western-Rajasthan, drier parts of Haryana and Gujarat. The trial was conducted successfully at 10 locations viz., seven in Rajasthan, two in Haryana and one in Gujarat. In this trial, 17 test entries including 12 experimental hybrids along with four early maturing hybrid checks viz., RHB 223, PB 1756, HHB 67 Improved, MPMH 35 and one high Fe & Zn hybrid check viz., AHB 1200 were evaluated. Mean performance of experimental hybrids and varieties for grain yield, dry fodder yield, days to 50% flowering and days to maturity are given in Table I.16. Location-wise performance for grain yield, grain quality and other ancillary characters are given in Tables I.159 to I.173. Nine early maturing hybrids viz. MH 2673 (2493 kg/ha) MH 2744 (2376 kg/ha), MH 2678 (2358 kg/ha), MH 2743 (2352 kg/ha), MH 2672 (2319 kg/ha), MH 2758 (2222 kg/ha), MH 2747 (2155 kg/ha), MH 2675 (2114 kg/ha) and MH 2754 (2003 kg/ha) recorded higher grain yield over the best check MPMH 35 (1958 kg/ha). Hybrid MH 2744 recorded highest dry fodder yield (6298 kg/ha).

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Table I.16: MEAN PERFORMANCE: ADVANCED HYBRID AND POPULATION TRIAL (Early) KHARIF 2024 ZONE A₁

S.No.	Name of Entry (Year of testing)	Grain Yield (kg/ha)	Dry Fodder Yield (kg/ha)	Days to 50% Flower	Days to Maturity	DM (%) 60 DAS	Blast (score)	Ergot (%)	Smut (%)	Rust (%)	Fe (ppm)	Zn (ppm)
1	MH 2673 (3 rd)	2493	5989	44	76	0.0	2.1	0.0	0.0	0.0	45	38
2	MH 2744 (2 nd)	2376	6298	44	76	0.0	2.2	2.5	1.3	0.0	43	38
3	MH 2678 (3 rd)	2358	5238	44	76	0.0	1.9	1.5	2.0	0.0	44	39
4	MH 2743 (2 nd)	2352	5576	45	76	1.5	1.8	4.0	0.0	0.0	44	36
5	MH 2672 (3 rd)	2319	5870	44	76	1.6	2.4	3.0	0.0	0.0	44	38
6	MH 2758 (2 nd)	2222	5611	45	76	0.7	2.3	0.0	0.0	0.0	45	37
7	MH 2747 (2 nd)	2155	5439	45	77	2.1	2.5	7.5	8.3	0.0	43	37
8	MH 2675 (3 rd)	2114	5897	45	77	0.5	1.7	2.5	2.5	0.0	47	38
9	MH 2754 (2 nd)	2003	5331	45	75	0.8	3.3	2.5	1.3	0.0	50	43
10	MPMH 35 (C)	1958	5601	45	76	1.3	2.2	0.0	0.0	0.0	44	37
11	PB 1756 (C)	1914	5295	44	77	0.6	2.6	0.0	0.0	0.0	45	38
12	MH 2748 (2 nd)	1911	5124	44	74	1.3	2.5	6.5	0.0	0.0	57	40
13	RHB 223 (C)	1888	4969	47	78	2.3	2.2	0.0	0.0	0.0	46	37
14	MH 2749 (2 nd)	1877	5465	45	77	1.1	2.3	0.0	0.8	0.8	48	40
15	AHB 1200 (C)	1771	5060	47	77	0.9	2.8	0.0	1.3	0.0	61	40
16	MH 2746 (2 nd)	1761	4435	45	76	0.0	2.5	6.5	4.3	0.0	53	38
17	HHB 67 Imp. (C)	1569	4865	44	76	0.6	2.8	4.0	1.5	0.0	47	41
LOC MEAN		2061	5415	45	76							

Promotion criteria as per 52nd Annual group meet : Grain yield =higher than best check or 10% higher over relevant check, Days to 50% flowering ≤ 45 days, A grace of one day in days to 50% flowering may be given to hybrids yielding grains 15% higher over HHB 67 Improved, Disease (Across all zones): Downy Mildew (60 DAS): ≤ 5%, Blast (score): ≤ 3 (0-9 scale), Ergot (% severity): ≤ 20%, Smut (% severity): ≤ 20%, Rust (% leaf area): ≤ 20%, Iron content: ≥ 42 ppm and Zinc content: ≥ 32 ppm.

D. Released Hybrids and Varieties Trial: RHVT ZONE A₁, A and B

In addition to evaluation of experimental hybrids in coordinated trials, the Released Hybrids and Varieties Trial was conducted in both the zones. New hybrids and varieties released specifically for respective zones were evaluated in this trial. The zone-wise results are given below:

Zones A₁ and A

Twenty seven hybrids and six populations released for zone A₁ and A were tested at ten locations viz. four in Rajasthan, two in Madhya Pradesh and one each in Gujarat, Haryana, U.P and Jharkhand. Mean performance of released hybrids and populations for grain yield, dry fodder yield, days to 50% flowering and days to maturity are given in Table I.17. Location-wise data on grain yield and other ancillary characters are presented in Tables I.174 to I.186. Among hybrids, MPMH 35 (2431 kg/ha), DHBH-1397 (2994 kg/ha), Kaveri Super Boss (2877 kg/ha) and AHB 1269 (2432 kg/ha) recorded maximum grain yield in early, medium, late maturity and high Fe & Zn group, respectively. Among populations JBV 2 recorded maximum grain yield (2169 kg/ha) as compared to other populations. Among the hybrids, 86M80 (8447 kg/ha) and among the populations Pusa Composite 701 (7238 kg/ha) were found superior in fodder yield over other cultivars.

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Table I.17: MEAN PERFORMANCE: RELEASED HYBRIDS AND VARIETIES TRIAL KHARIF 2024 ZONE A₁ and A

S.No.	Name of Entry (Year of release)	Grain Yield (kg/ha)	Dry Fodder Yield (kg/ha)	Days to 50% Flower	Days to Maturity	DM (%) 60 DAS	Blast (score)	Ergot (%)	Smut (%)	Rust (%)
Early										
1	MPMH 35 (2022) E	2431	6545	44	76	1.2	1.5	1.5	12.5	0.0
2	GHB 719 (2007) E	2430	5964	48	80	2.9	2.0	1.3	7.0	0.0
3	MPMH 42 (2024) E	2384	5837	45	77	0.7	1.8	0.0	2.0	0.0
4	PB 1756 (2018) E	2218	5635	45	78	0.0	1.7	1.3	2.5	0.0
5	HGB 272 (2016) E	2158	5891	45	76	0.0	2.3	1.3	10.0	0.0
6	RHB 223 (2018) E	1877	5028	47	77	5.3	2.2	0.0	13.4	0.0
7	HGB 67 Imp. (2005) E	1847	5459	43	75	2.3	3.7	1.3	4.2	0.0
8	GHB 538 (2005) E	1727	4957	47	79	2.3	3.1	4.5	5.1	0.0
Medium										
9	DHBH 1397 (2019) M	2994	7217	50	81	0.3	1.7	0.0	7.3	0.0
10	86M94 (2022) M	2958	6748	52	82	0.0	2.5	0.0	0.6	0.2
11	PB 1852 (2019) M	2874	7860	55	84	1.0	2.7	0.0	5.3	0.0
12	86M01 (2015) M	2773	7545	52	82	2.3	3.4	1.0	0.0	0.0
13	GHB 732 (2008) M	2573	6695	50	82	2.7	2.2	0.0	13.4	0.0
14	GHB 905 (2013) M	2313	6927	47	79	1.2	2.6	0.5	7.0	0.0
15	GHB 744 (2008) M	2264	6265	50	83	0.3	2.0	0.0	5.5	0.0
16	RHB 173 (2011) M	729	2624	50	79	2.6	2.3	0.0	5.1	0.0
Late										
17	Kaveri Super Boss (2012) L	2877	7431	55	85	2.1	2.6	0.0	1.0	0.0
18	MP 7878 (2018) L	2639	6491	55	85	0.8	2.5	0.0	0.0	0.0
19	86M84 (2016) L	2411	7787	55	83	0.3	2.0	0.0	0.0	2.2
20	86M80 (2022) L	2283	8447	56	86	0.3	2.0	0.0	0.9	0.0
21	KBH 108 (2014) L	2113	6968	54	84	0.7	2.5	0.0	0.0	0.0
22	86M86 (2012) L	2051	6451	53	83	1.1	2.5	0.0	0.6	0.0
High Iron & Zinc										
23	AHB 1269 (2019) M - FeZn	2432	6741	48	80	3.7	3.4	3.0	7.9	0.0
24	AHB 1200 (2018) M - FeZn	2182	5743	48	80	1.0	3.0	1.0	10.0	0.0
25	HGB 299 (2018) M - FeZn	1968	5818	49	81	0.3	1.9	0.5	7.9	0.0
26	RHB 234 (2019) M - FeZn	1870	4487	49	83	1.7	2.3	1.0	13.5	0.0
27	RHB 233 (2019) M - FeZn	1716	5328	48	81	0.2	2.0	1.8	4.0	0.0
Populations										
28	JBV 2 (1999) M	2169	6283	50	79	2.6	2.4	0.5	6.6	0.0
29	Pusa Composite 383 (2001) M	2069	6270	50	81	1.9	2.2	0.5	10.3	0.0
30	Pusa Composite 701 (2016) M	2058	7238	49	81	5.6	3.0	0.0	3.5	0.8
31	Raj 171 (1992) L	1642	5219	47	78	3.9	2.8	1.3	21.5	0.0
32	Dhanshakti (2014) E	1460	5139	45	78	1.3	3.8	0.5	2.9	0.0
33	ICMV 221 (1993) E	1327	5179	45	77	2.4	3.2	0.0	7.1	0.0
LOC. MEAN		2218	6298	49	80					

Zone B

Eleven hybrids and four populations released for Zone B were evaluated at nine locations viz. two each in Maharashtra, Karnataka and Andhra Pradesh and one each in Telangana, Tamil Nadu and Odisha. Mean performance of released hybrids and populations for grain yield, dry fodder yield, days to 50% flowering and days to maturity are given in Table I.18. Location-wise mean performance of grain yield and other ancillary characters are presented in Tables I.187 to I.198. Hybrids HHB 299 (2901 kg/ha), 86M01 (3071 kg/ha) and NBH 4903 (3771 kg/ha) observed to be superior over all other hybrids in high Fe & Zn, medium and late maturity group, respectively. Among the populations, Pusa Composite 612 (2193 kg/ha) recorded maximum grain yield. Highest dry fodder yield was recorded Kaveri Super Boss (6176 kg/ha) and Pusa Comp. 612 (4884 kg/ha) among all hybrids and populations, respectively.

Table I.18: MEAN PERFORMANCE: RELEASED HYBRIDS AND VARIETIES TRIAL KHARIF 2024 ZONE B

S.No.	Name of Entry (Year of release)	Grain Yield (kg/ha)	Dry Fodder Yield (kg/ha)	Days to 50% Flower	Days to Maturity	DM (%) 60 DAS	Blast (score)	Ergot (%)	Smut (%)	Rust (%)
High Fe & Zn hybrids										
1	HHB 299 (2018) M FeZn	2901	5134	47	83	0.3	1.1	0.0	1.3	9.9
2	AHB 1200 (2018) M FeZn	2629	4833	46	82	2.8	2.6	0.1	0.0	9.1
3	RHB 233 (2019) M FeZn	2524	4838	47	83	1.3	1.0	0.0	0.0	9.6
4	AHB 1269 (2019) M FeZn	2518	5199	47	82	2.6	3.3	1.3	0.0	4.9
5	RHB 234 (2019) M FeZn	2284	4340	49	85	1.6	2.3	0.0	0.0	4.5
Medium hybrids										
6	86M01 (2015) M	3071	5746	49	85	1.6	2.9	1.6	0.0	4.3
7	Mahabeej 1005 (2017) M	2772	4983	48	84	0.9	3.5	1.3	0.0	4.8
8	Pratap (MH 1642) (2012) M	2610	4782	46	82	2.6	4.3	1.9	0.0	5.1
Late hybrids										
9	NBH 4903 (2018) L	3771	6068	50	86	2.1	2.0	0.0	0.0	3.4
10	Kaveri Super Boss (2012) L	3439	6176	52	87	1.2	1.3	0.0	0.0	4.9
11	86M86 (2012) L	2906	5414	50	86	0.8	1.0	0.0	0.0	7.0
Populations										
12	Pusa Comp. 612 (2011) M	2193	4884	47	82	2.5	2.5	0.6	0.0	13.5
13	ICMV 221 (1993) E	1983	4171	44	81	2.6	2.6	0.8	0.0	10.8
14	Raj 171 (1992) L	1967	4396	46	81	2.8	1.3	0.0	0.0	14.4
15	Dhanshakti (2014) E	1828	4083	44	80	3.3	3.1	1.0	0.0	7.4
LOC. MEAN		2626	5003	47	83					

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Table I.19: INITIAL HYBRID TRIAL (Early) KHARIF 2024 EXPERIMENTAL DETAILS ZONE A₁

Locations	Soil	pH	Sowing date	Harvesting date	Interculture date	Irrigation date	Fertilizers			Insecticide
							N	P	K	
RAJASTHAN										
Mandor (ICAR- AICRP)	SL	8.2	19.7.24	17.10.24	09.8.24	Nil	40	20	0	Nil
Jodhpur (CAZRI)	SL	7.6	-	-	-	Nil	40	20	0	Nil
Bikaner (SKRAU)	S	8.0	8.7.24	25.10.24	10.8.24	25.9.24	40	20	0	Nil
Fathehpur (SKNAU)	SL	8.0	15.7.24	As Per Maturity	As Per Pop	Nil	As Per Pop	As Per Pop	As Per Pop	Nil
Samdari (ARSS, AU Jodhpur)	SL	8.3	9.7.24	15.10.24	6.8.24	Nil	40	20	0	Nil
ARS, Jalore (AU, Jodhpur)	-	-	22.7.24	As Per Maturity	-	Nil	-	-	-	Nil
Nagaur (AU, Jodhpur)	SL	7.9	16.7.24	As Per Maturity	10.8.24	1	40	20	0	Nil
Jobner (SKNAU)	-	-	11.7.24	As Per Maturity	-	Nil	-	-	-	Nil
GUJARAT										
Deesa (SDAU)	SL	-	30.6.24	4.10.24	26.7.24	Nil	80	40	0	Nil
HARYANA										
Bawal (CCSHAU)	LS	8.2	10.7.24	As Per Maturity	6.8.24	Nil	40	20	30	Atrazine
Hisar (CCSHAU)	SL	-	11.7.24	25.10.24	-	28.8.24	40	20	0	Nil

SL = Sandy Loam, S = Sandy, LS = Loamy Sand.

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Table I.20: INITIAL HYBRID TRIAL (Early) KHARIF - 2024 GRAIN YIELD (kg/ha) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	JBR	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	IHT 101	MH 2811	1273	2000	1806	1160	639	2524	1463	1898	1595	2203	4079	3392	3735	2040	11
2	IHT 102	MH 2812	1366	2644	1481	1456	713	3354	1741	1620	1797	1647	3574	3609	3591	2109	8
3	IHT 103	PB 1756 (Check)	1037	1236	1250	1415	856	2569	1593	1574	1441	2319	3475	2488	2981	1801	21
4	IHT 104	MH 2813	1241	1560	2106	1305	375	2454	2130	2315	1686	2245	4037	3528	3782	2118	6
5	IHT 105	MH 2814	1273	2435	1551	1350	310	3310	1944	2222	1799	2864	4299	4014	4157	2325	1
6	IHT 106	MH 2815	1343	1056	1273	1208	380	2353	1296	1991	1362	1962	3250	3654	3452	1797	22
7	IHT 107	MH 2816	1134	1569	1690	1358	208	2843	1204	1991	1500	1899	3159	3473	3316	1866	17
8	IHT 108	MH 2817	1250	1593	1620	2141	319	2685	1556	2269	1679	1636	3382	3609	3496	2006	14
9	IHT 109	MH 2818	1250	1565	1574	1318	509	2444	1537	2083	1535	1647	2758	3656	3207	1849	20
10	IHT 110	RHB 223 (Check)	1042	1810	1782	1037	769	1715	1056	2130	1417	1490	3942	3723	3832	1863	18
11	IHT 111	MH 2819	1134	2250	1944	1009	829	2345	2216	2222	1744	1500	3410	3970	3690	2075	10
12	IHT 112	MH 2820	1620	2028	1921	880	699	2467	1889	2037	1693	2098	3785	3624	3705	2095	9
13	IHT 113	MH 2821	1296	1481	1574	1576	755	1268	1111	2269	1416	1490	3371	2695	3033	1717	23
14	IHT 114	MH 2822	954	1917	2014	1500	796	1356	1574	2130	1530	1752	3458	2981	3219	1857	19
15	IHT 115	MH 2823	1250	1815	1319	1025	565	1500	1074	1991	1317	1605	2271	2449	2360	1533	27
16	IHT 116	HHB 67 Imp. (Check)	1042	1208	1227	1028	431	1639	1093	2176	1230	1657	2514	2371	2443	1490	28
17	IHT 117	MH 2824	1065	866	2014	1544	509	1944	1074	1991	1376	1563	2793	2616	2705	1634	25
18	IHT 118	MH 2825	995	1611	1829	1305	468	2710	1944	1528	1549	1657	3112	3750	3431	1901	16
19	IHT 119	MH 2826	1352	1356	2431	1598	671	2778	1685	2315	1773	1878	3633	3745	3689	2131	5
20	IHT 120	AHB 1200 (Check)	1134	713	1042	1157	694	2201	2370	1528	1355	1563	2919	2491	2705	1619	26
21	IHT 121	MH 2827	1157	1750	2338	1308	884	2657	1093	2361	1694	3043	4442	4301	4371	2303	2
22	IHT 122	MH 2828	1389	1384	1134	1079	384	2685	1074	2176	1413	1380	3240	2931	3085	1714	24
23	IHT 123	MH 2829	1310	2148	2639	1711	1093	2883	2000	1944	1966	1521	3711	3719	3715	2244	3
24	IHT 124	MH 2830	1255	1384	1597	1488	509	2718	1648	2269	1608	2119	3096	2872	2984	1905	15
25	IHT 125	MH 2831	1574	1833	2037	1163	708	2850	1241	2407	1727	2151	3087	3383	3235	2039	12
26	IHT 126	MH 2832	1296	1935	1759	1231	667	3635	1074	2222	1727	1993	3614	3854	3734	2116	7
27	IHT 127	MH 2833	1852	2060	1852	1553	583	3057	1074	2361	1799	1487	2499	3897	3198	2025	13
28	IHT 128	MPMH 35 (Check)	1157	1597	2153	1567	750	3118	1870	2315	1816	1819	3453	3931	3692	2157	4
		LOC. MEAN	1251	1672	1749	1338	610	2502	1522	2083	1591	1864	3370	3383	3377	1940	
		C.D. (5%)	443	514	334	254	136	1183	189	383	337	378	381	834	747	304	
		C.D. (1%)	590	684	445	338	181	1576	251	510	445	504	507	1111	1009	400	
		C.V. (%)	21.6	18.8	11.7	11.6	13.6	28.9	7.6	11.2	21.5	12.4	6.9	15.1	10.8	18.6	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	
		PLOT SIZE (m ²)	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	-	5.40	7.20	7.20	-	-	

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Table I.21: INITIAL HYBRID TRIAL (Early) KHARIF - 2024 DRY FODDER YIELD (kg/ha) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	JBR	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	IHT 101	MH 2811	2685	4730	7722	4676	3750	5741	3867	4018	4649	6179	8508	12037	10272	5810	16
2	IHT 102	MH 2812	2569	7343	7417	4630	3704	9259	4652	3438	5377	8216	8023	10185	9104	6312	9
3	IHT 103	PB 1756 (Check)	2639	3214	6111	4861	5000	5556	3932	3346	4332	5228	8433	8333	8383	5150	25
4	IHT 104	MH 2813	2722	4139	9259	5231	2917	5833	5901	4904	5113	7123	11304	12963	12134	6572	5
5	IHT 105	MH 2814	2940	6719	6898	4861	2593	8102	5341	4730	5273	8556	10904	12500	11702	6740	2
6	IHT 106	MH 2815	3148	3111	7176	5046	2546	4861	2914	4240	4130	5364	8931	11574	10253	5356	23
7	IHT 107	MH 2816	2708	4673	7639	5926	3870	6167	3040	4216	4780	10926	8855	12963	10909	6453	7
8	IHT 108	MH 2817	3102	4387	7222	4676	2546	5417	4085	4829	4533	8080	9106	12500	10803	5995	14
9	IHT 109	MH 2818	2963	3902	5509	3796	3009	5185	4144	4440	4119	7401	7715	11111	9413	5380	22
10	IHT 110	RHB 223 (Check)	2315	5700	5648	3333	3472	4537	2738	4517	4032	5062	10645	12963	11804	5539	20
11	IHT 111	MH 2819	2801	6212	6435	3889	2685	5093	6230	4724	4759	4481	9080	13704	11392	5939	15
12	IHT 112	MH 2820	3472	5114	6528	4722	4042	5532	5570	4307	4911	9846	8288	14352	11320	6525	6
13	IHT 113	MH 2821	3194	4121	5139	2931	3704	5139	3059	4842	4016	9475	8898	10231	9565	5521	21
14	IHT 114	MH 2822	2870	5128	5278	4722	3056	4907	4407	4517	4361	8623	8478	10648	9563	5694	18
15	IHT 115	MH 2823	2755	4772	5370	5139	2917	3241	3083	4240	3939	6790	6197	9259	7728	4887	27
16	IHT 116	HHB 67 Imp. (Check)	3241	3488	5185	4722	2083	3671	2816	4614	3728	7944	6282	12037	9160	5099	26
17	IHT 117	MH 2824	2593	2497	5741	4583	3241	4259	2604	4221	3717	4346	7544	10833	9188	4769	28
18	IHT 118	MH 2825	2523	4499	6296	4537	3009	5741	5427	3244	4409	7062	9276	11806	10541	5765	17
19	IHT 119	MH 2826	3426	3795	7963	6481	3241	7269	4743	4928	5231	6111	8932	10648	9790	6140	11
20	IHT 120	AHB 1200 (Check)	2731	2072	5556	3426	1944	4907	5998	3258	3737	7673	7673	11574	9624	5165	24
21	IHT 121	MH 2827	3241	4856	8843	7222	5093	5972	2865	5025	5389	10710	10075	14352	12213	7114	1
22	IHT 122	MH 2828	3009	4242	6343	3287	4167	6204	2645	4623	4315	4698	7859	14352	11106	5584	19
23	IHT 123	MH 2829	3495	5694	6296	4861	2546	6681	5512	4119	4901	6994	9896	13426	11661	6320	8
24	IHT 124	MH 2830	3611	3759	5463	6019	4167	6852	4337	4818	4878	6722	8039	13889	10964	6152	10
25	IHT 125	MH 2831	3264	5422	6806	4398	3009	6389	3023	5117	4678	9710	8122	11574	9848	6076	12
26	IHT 126	MH 2832	3380	5394	6157	6620	3009	8241	2743	4724	5034	7130	10343	16204	13273	6722	3
27	IHT 127	MH 2833	4005	5144	7269	5972	3102	6806	2694	4715	4963	8488	7338	10648	8993	6016	13
28	IHT 128	MPMH 35 (Check)	3315	4243	7685	6111	2870	6713	5130	4943	5126	7741	9675	14815	12245	6658	4
		LOC. MEAN	3026	4585	6605	4881	3260	5867	4054	4416	4587	7381	8729	12196	10463	5909	
		C.D. (5%)	820	1700	1188	527	942	2524	653	811	903	1328	1021	3825	2362	922	
		C.D. (1%)	1092	2265	1582	702	1254	3362	870	1081	1191	1769	1360	5094	3189	1214	
		C.V. (%)	16.6	22.7	11.0	6.6	17.6	26.3	9.9	11.2	20.0	11.0	7.2	19.2	11.0	18.6	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	
		PLOT SIZE (m ²)	7.20	7.20	7.20	7.20	7.20	7.20	5.40	7.20	-	5.40	7.20	7.20	-	-	

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Table I.22: INITIAL HYBRID TRIAL (Early) KHARIF - 2024 DAYS TO 50% FLOWERING ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR*	FTR	SDR	JLR	JBR*	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	IHT 101	MH 2811	45	45	45	49	43	45	51	50	46	40	42	46	44	45	20
2	IHT 102	MH 2812	46	46	54	49	44	50	57	44	46	48	50	51	51	47	6
3	IHT 103	PB 1756 (Check)	44	46	46	48	42	50	52	44	46	43	44	43	44	45	21
4	IHT 104	MH 2813	46	46	53	47	43	48	53	46	46	48	52	48	50	47	8
5	IHT 105	MH 2814	46	46	57	54	46	45	50	56	49	50	55	54	55	50	1
6	IHT 106	MH 2815	45	45	53	52	44	45	55	47	46	52	52	51	51	48	4
7	IHT 107	MH 2816	46	46	55	51	45	44	56	42	46	49	52	51	51	47	7
8	IHT 108	MH 2817	45	46	45	47	46	42	51	48	46	42	43	46	44	45	19
9	IHT 109	MH 2818	45	46	45	50	46	45	49	50	47	45	45	47	46	47	13
10	IHT 110	RHB 223 (Check)	45	47	51	44	46	43	50	45	45	48	47	49	48	46	16
11	IHT 111	MH 2819	44	47	46	48	44	43	43	53	47	40	39	42	41	45	23
12	IHT 112	MH 2820	44	46	51	51	46	44	54	55	48	43	46	46	46	47	10
13	IHT 113	MH 2821	45	46	45	47	47	45	52	50	47	42	46	46	46	46	17
14	IHT 114	MH 2822	46	47	45	43	44	45	51	51	46	47	47	48	48	47	12
15	IHT 115	MH 2823	44	46	45	42	45	45	48	44	44	42	43	46	44	44	25
16	IHT 116	HHB 67 Imp. (Check)	44	45	46	42	44	45	51	42	43	43	41	43	42	43	27
17	IHT 117	MH 2824	45	46	46	45	46	43	46	43	45	43	40	44	42	44	26
18	IHT 118	MH 2825	44	44	48	46	43	47	47	44	45	44	42	44	43	44	24
19	IHT 119	MH 2826	45	46	48	47	44	44	48	56	47	45	44	45	44	46	15
20	IHT 120	AHB 1200 (Check)	46	47	54	49	47	44	54	41	46	51	51	47	49	47	9
21	IHT 121	MH 2827	46	46	57	52	45	46	56	44	46	51	54	55	55	49	3
22	IHT 122	MH 2828	45	46	57	52	45	44	57	48	47	54	55	52	54	49	2
23	IHT 123	MH 2829	46	46	45	48	45	44	49	46	46	38	44	45	45	45	22
24	IHT 124	MH 2830	45	47	53	46	42	45	54	43	45	45	46	45	45	45	21
25	IHT 125	MH 2831	45	46	50	49	44	45	52	57	48	43	45	46	46	47	11
26	IHT 126	MH 2832	45	46	48	47	45	43	48	55	47	41	43	46	45	46	18
27	IHT 127	MH 2833	45	46	50	48	46	44	55	55	47	45	49	50	50	48	5
28	IHT 128	MPMH 35 (Check)	45	46	47	50	44	43	45	52	47	43	46	48	47	46	14
		LOC. MEAN	45	46	50	48	45	45	51	48	46	45	46	47	47	46	
		C.D. (5%)	1.0	1.0	3.0	4.0	3.0	2.0	3.0	2.0	3.0	4.0	2.0	2.0	3.0	3.0	
		C.D. (1%)	2.0	2.0	3.0	5.0	4.0	3.0	4.0	3.0	4.0	5.0	3.0	2.0	4.0	3.0	
		C.V. (%)	1.8	2.0	3.2	4.6	4.0	3.3	3.6	2.7	5.5	5.5	3.2	2.4	3.3	6.1	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.183	0.000	0.000	0.000	0.000	0.000	

*LOCATION REJECTED DUE TO DELAYED FLOWERING IN CHECKS

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Table I.23: INITIAL HYBRID TRIAL (Early) KHARIF - 2024 DAYS TO MATURITY ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	BKR	FTR	SDR	JLR	JBR	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	IHT 101	MH 2811	76	74	76	75	72	77	82	76	75	72	76	74	76	19
2	IHT 102	MH 2812	77	81	74	76	74	83	80	78	75	82	80	81	78	8
3	IHT 103	PB 1756 (Check)	76	76	74	75	74	79	85	77	71	76	73	75	76	15
4	IHT 104	MH 2813	77	82	74	77	76	80	81	78	72	83	81	82	79	5
5	IHT 105	MH 2814	78	85	81	76	71	79	80	79	75	86	84	85	79	3
6	IHT 106	MH 2815	78	82	79	76	70	84	76	78	76	83	80	82	79	5
7	IHT 107	MH 2816	77	84	78	76	76	84	75	79	72	83	82	83	79	4
8	IHT 108	MH 2817	76	79	74	77	73	82	76	77	69	73	77	75	76	16
9	IHT 109	MH 2818	77	78	77	75	80	75	77	77	73	75	77	76	76	13
10	IHT 110	RHB 223 (Check)	75	81	71	75	68	80	75	75	73	78	81	79	76	19
11	IHT 111	MH 2819	75	76	75	78	68	75	78	75	68	70	74	72	74	25
12	IHT 112	MH 2820	75	80	78	75	72	86	74	77	72	76	77	77	77	12
13	IHT 113	MH 2821	76	80	74	76	74	84	75	77	75	77	78	77	77	9
14	IHT 114	MH 2822	75	80	70	76	74	82	78	76	75	77	81	79	77	10
15	IHT 115	MH 2823	75	77	73	78	76	78	81	77	70	73	76	75	76	17
16	IHT 116	HHB 67 Imp. (Check)	75	76	71	74	71	80	81	75	72	72	74	73	75	24
17	IHT 117	MH 2824	75	76	73	75	70	75	75	74	70	72	76	74	74	26
18	IHT 118	MH 2825	75	77	73	76	76	77	74	75	75	73	77	75	75	22
19	IHT 119	MH 2826	76	78	74	76	73	76	75	75	71	75	76	76	75	23
20	IHT 120	AHB 1200 (Check)	78	81	76	76	80	82	72	78	77	82	80	81	78	6
21	IHT 121	MH 2827	78	84	79	75	78	85	82	80	71	85	87	86	80	1
22	IHT 122	MH 2828	77	83	79	75	76	87	81	80	73	86	82	84	80	2
23	IHT 123	MH 2829	78	76	75	76	75	79	77	77	72	75	74	74	76	21
24	IHT 124	MH 2830	77	81	73	75	72	83	75	76	69	76	76	76	76	20
25	IHT 125	MH 2831	77	80	76	75	69	81	84	77	73	77	77	77	77	11
26	IHT 126	MH 2832	76	78	74	75	71	78	81	76	74	74	76	75	76	18
27	IHT 127	MH 2833	76	80	75	76	70	85	84	78	76	80	80	80	78	7
28	IHT 128	MPMH 35 (Check)	77	77	77	77	73	77	75	76	76	76	77	76	76	14
		LOC. MEAN	76	79	75	76	73	80	78	77	73	77	78	78	77	
		C.D. (5%)	2.0	3.0	4.0	2.0	2.0	3.0	2.0	3.0	3.0	3.0	4.0	6.0	2.0	
		C.D. (1%)	3.0	3.0	6.0	3.0	2.0	4.0	3.0	3.0	4.0	4.0	6.0	9.0	3.0	
		C.V. (%)	1.6	2.0	3.6	1.8	1.3	2.5	1.9	3.0	2.2	2.1	3.3	4.2	3.5	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.071	0.000	

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Table I.24: INITIAL HYBRID TRIAL (Early) KHARIF - 2024 PLANT HEIGHT (cm) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	JBR	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	IHT 101	MH 2811	187	205	219	188	151	182	130	180	180	167	197	236	216	186	6
2	IHT 102	MH 2812	179	178	192	187	134	179	154	171	172	140	216	221	219	177	16
3	IHT 103	PB 1756 (Check)	183	186	201	178	141	169	151	175	173	183	208	237	223	183	10
4	IHT 104	MH 2813	175	198	211	195	133	187	151	181	179	181	193	245	219	186	5
5	IHT 105	MH 2814	185	187	201	185	137	193	156	165	176	195	223	272	248	191	2
6	IHT 106	MH 2815	180	207	209	192	139	176	143	184	179	177	211	249	230	188	4
7	IHT 107	MH 2816	172	231	205	191	133	183	142	181	180	172	207	256	231	188	3
8	IHT 108	MH 2817	171	198	194	174	131	166	137	172	168	149	190	209	200	172	25
9	IHT 109	MH 2818	166	198	190	179	144	146	150	179	169	146	199	219	209	174	21
10	IHT 110	RHB 223 (Check)	176	204	188	158	158	188	149	183	175	149	201	245	223	182	11
11	IHT 111	MH 2819	153	164	182	157	128	149	131	164	154	129	181	225	203	160	28
12	IHT 112	MH 2820	169	186	182	166	148	148	154	177	166	151	194	227	211	173	24
13	IHT 113	MH 2821	182	199	181	178	138	175	147	185	173	171	194	217	206	179	15
14	IHT 114	MH 2822	180	203	197	182	158	182	144	166	177	169	207	240	224	184	9
15	IHT 115	MH 2823	180	178	192	176	137	183	132	200	172	182	201	237	219	182	12
16	IHT 116	HHB 67 Imp. (Check)	173	192	198	163	144	176	122	156	166	153	204	246	225	175	20
17	IHT 117	MH 2824	168	172	193	152	142	188	137	197	169	151	186	218	202	173	22
18	IHT 118	MH 2825	177	180	191	167	136	193	152	179	172	146	170	243	207	176	18
19	IHT 119	MH 2826	187	197	211	174	137	164	158	183	176	153	198	229	214	181	13
20	IHT 120	AHB 1200 (Check)	163	164	179	159	120	171	151	164	159	167	188	201	194	166	27
21	IHT 121	MH 2827	184	205	210	191	140	157	182	174	180	187	230	271	250	194	1
22	IHT 122	MH 2828	165	171	194	174	124	155	137	185	163	164	192	220	206	171	26
23	IHT 123	MH 2829	164	162	189	175	140	170	122	199	165	153	195	233	214	173	23
24	IHT 124	MH 2830	178	182	188	176	148	177	155	179	173	169	200	231	216	180	14
25	IHT 125	MH 2831	180	165	197	181	146	170	146	177	170	163	194	229	212	177	17
26	IHT 126	MH 2832	173	166	201	174	140	171	153	165	168	161	193	233	213	176	19
27	IHT 127	MH 2833	181	184	213	196	131	164	142	171	173	180	207	268	238	185	7
28	IHT 128	MPMH 35 (Check)	176	184	203	180	143	187	144	176	174	169	210	261	235	185	8
		LOC. MEAN	175	187	197	177	139	173	145	177	171	163	200	236	218	179	
		C.D. (5%)	14.0	19.0	12.0	23.0	20.0	25.0	19.0	4.0	10.0	6.0	17.0	28.0	21.0	9.0	
		C.D. (1%)	18.0	25.0	17.0	30.0	27.0	33.0	26.0	6.0	14.0	8.0	22.0	38.0	28.0	12.0	
		C.V. (%)	4.8	6.2	3.9	7.9	8.9	8.8	8.1	1.5	6.2	2.1	5.2	7.3	4.6	6.1	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	

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Table I.25: INITIAL HYBRID TRIAL (Early) KHARIF - 2024 PRODUCTIVE TILLERS (No./Plant) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	JBR	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	IHT 101	MH 2811	1.8	3.3	1.3	3.8	1.4	1.7	2.0	3.7	2.4	1.7	2.1	3.7	2.9	2.4	12
2	IHT 102	MH 2812	1.4	2.7	1.2	2.7	1.7	1.7	1.1	3.6	2.0	2.0	1.5	3.5	2.5	2.1	25
3	IHT 103	PB 1756 (Check)	1.5	3.0	1.2	2.8	1.5	1.4	1.1	4.1	2.1	1.5	1.7	2.8	2.2	2.1	27
4	IHT 104	MH 2813	1.3	3.7	1.2	3.2	1.9	2.1	1.2	4.7	2.4	1.7	1.8	3.2	2.5	2.4	17
5	IHT 105	MH 2814	1.3	3.7	1.2	2.7	1.8	2.5	1.4	4.2	2.3	1.6	2.2	3.2	2.7	2.3	19
6	IHT 106	MH 2815	1.3	2.7	1.3	3.2	1.6	2.5	1.0	3.5	2.1	1.5	1.9	3.2	2.6	2.2	24
7	IHT 107	MH 2816	1.2	3.0	1.2	2.7	1.9	2.5	1.1	4.4	2.3	1.7	2.0	4.3	3.1	2.4	16
8	IHT 108	MH 2817	1.7	3.7	1.4	3.2	1.8	2.4	1.5	3.3	2.4	1.6	2.5	2.8	2.6	2.3	19
9	IHT 109	MH 2818	1.9	3.0	1.5	2.8	1.9	2.3	1.8	3.4	2.3	1.9	2.0	4.2	3.1	2.4	11
10	IHT 110	RHB 223 (Check)	1.5	2.7	1.3	3.3	2.3	2.4	1.4	4.3	2.4	2.1	2.7	3.3	3.0	2.5	8
11	IHT 111	MH 2819	1.9	2.7	1.7	2.7	2.3	2.3	2.0	3.5	2.4	1.5	2.6	4.0	3.3	2.5	9
12	IHT 112	MH 2820	2.1	3.0	1.6	2.3	1.7	2.5	2.2	2.5	2.2	1.7	2.2	3.2	2.7	2.3	21
13	IHT 113	MH 2821	1.4	3.3	1.3	2.7	1.5	2.2	2.3	4.3	2.4	1.5	1.8	3.5	2.7	2.3	18
14	IHT 114	MH 2822	1.6	3.0	1.3	4.2	1.9	2.1	1.4	3.7	2.4	2.0	2.3	2.7	2.5	2.4	15
15	IHT 115	MH 2823	1.5	2.7	1.4	3.3	1.6	2.2	1.9	3.6	2.3	1.7	2.2	2.9	2.6	2.3	22
16	IHT 116	HHB 67 Imp. (Check)	1.6	3.3	1.4	3.2	1.5	2.3	2.3	3.5	2.4	1.9	2.9	3.6	3.2	2.5	7
17	IHT 117	MH 2824	1.9	3.0	1.5	2.8	2.0	2.1	1.9	3.0	2.3	2.0	2.3	3.8	3.0	2.4	13
18	IHT 118	MH 2825	1.9	2.3	1.4	4.3	2.2	2.3	2.3	3.5	2.5	2.3	2.4	4.0	3.2	2.6	3
19	IHT 119	MH 2826	2.1	3.3	1.5	4.7	2.1	2.2	1.7	4.3	2.7	2.5	2.9	3.3	3.1	2.8	1
20	IHT 120	AHB 1200 (Check)	1.2	3.0	1.2	3.5	1.8	2.5	1.5	2.4	2.1	1.5	1.5	2.7	2.1	2.1	26
21	IHT 121	MH 2827	1.5	3.0	1.4	3.8	2.1	2.3	1.1	3.5	2.3	1.9	2.5	3.8	3.2	2.5	10
22	IHT 122	MH 2828	1.3	3.3	1.3	2.8	2.1	2.2	1.3	4.0	2.3	1.5	2.8	2.7	2.7	2.3	20
23	IHT 123	MH 2829	1.7	3.0	1.4	3.3	1.7	2.8	1.9	3.9	2.5	1.5	2.3	4.0	3.2	2.5	6
24	IHT 124	MH 2830	1.4	2.7	1.3	4.3	1.4	2.4	1.1	2.7	2.2	1.7	1.8	3.4	2.6	2.2	23
25	IHT 125	MH 2831	2.2	3.0	1.4	4.2	2.2	2.3	2.3	3.4	2.6	2.3	2.7	3.8	3.2	2.7	2
26	IHT 126	MH 2832	1.8	3.3	1.4	4.8	1.9	2.3	1.9	2.7	2.5	1.5	2.2	4.1	3.2	2.5	5
27	IHT 127	MH 2833	1.9	2.7	1.3	4.0	1.7	2.3	1.3	3.4	2.3	1.5	2.3	3.9	3.1	2.4	14
28	IHT 128	MPMH 35 (Check)	1.7	3.3	1.2	3.8	1.9	2.5	1.7	4.4	2.6	1.9	2.1	3.4	2.8	2.5	4
		LOC. MEAN	1.6	3.0	1.3	3.4	1.8	2.3	1.6	3.6	2.3	1.8	2.2	3.5	2.8	2.4	
		C.D. (5%)	0.3	0.9	0.2	0.6	0.5	0.6	0.3	0.4	0.4	0.3	0.5	0.8	0.9	0.3	
		C.D. (1%)	0.4	1.2	0.3	0.8	0.6	0.8	0.4	0.5	0.5	0.4	0.6	1.0	1.2	0.4	
		C.V. (%)	11.4	17.9	8.9	11.4	16.1	17.1	10.0	6.6	17.5	10.2	12.7	13.8	14.7	16.4	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.217	0.000	0.000	0.000	0.275	0.001	

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Table I.26: INITIAL HYBRID TRIAL (Early) KHARIF - 2024 PANICLE LENGTH (cm) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	JBR	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	IHT 101	MH 2811	24	26	25	23	24	25	19	27	24	23	24	24	24	24	4
2	IHT 102	MH 2812	22	26	25	24	20	25	21	29	24	24	24	23	24	24	3
3	IHT 103	PB 1756 (Check)	26	26	26	24	22	25	20	23	24	21	26	23	25	24	7
4	IHT 104	MH 2813	22	25	27	24	24	25	20	23	24	24	26	25	25	24	5
5	IHT 105	MH 2814	26	24	23	29	22	24	24	22	24	24	26	26	26	25	1
6	IHT 106	MH 2815	23	26	25	23	23	26	22	23	24	23	27	23	25	24	2
7	IHT 107	MH 2816	19	28	24	24	22	25	18	23	23	22	24	25	25	23	12
8	IHT 108	MH 2817	20	21	22	21	21	24	17	26	22	20	21	23	22	21	24
9	IHT 109	MH 2818	20	26	24	20	23	22	18	20	22	20	23	24	24	22	22
10	IHT 110	RHB 223 (Check)	24	28	25	23	25	22	20	25	24	22	24	25	24	24	6
11	IHT 111	MH 2819	20	20	22	23	21	22	17	20	21	20	20	22	21	21	27
12	IHT 112	MH 2820	22	23	23	22	24	22	21	20	22	21	23	23	23	22	18
13	IHT 113	MH 2821	19	22	20	22	22	22	20	22	21	20	20	24	22	21	25
14	IHT 114	MH 2822	23	26	26	26	24	22	21	20	24	21	24	25	25	24	8
15	IHT 115	MH 2823	21	26	25	25	22	23	18	24	23	21	24	24	24	23	13
16	IHT 116	HHB 67 Imp. (Check)	21	22	24	23	23	23	17	29	23	18	21	24	22	22	20
17	IHT 117	MH 2824	19	23	21	20	22	22	16	26	21	18	21	23	22	21	26
18	IHT 118	MH 2825	19	20	23	19	20	23	14	24	20	19	20	22	21	20	28
19	IHT 119	MH 2826	20	22	22	22	23	22	18	29	22	19	21	23	22	22	21
20	IHT 120	AHB 1200 (Check)	22	24	22	24	23	24	19	28	23	23	24	25	25	24	9
21	IHT 121	MH 2827	22	22	23	24	23	25	20	25	23	21	24	24	24	23	14
22	IHT 122	MH 2828	20	22	24	19	22	22	21	24	22	24	23	23	23	22	16
23	IHT 123	MH 2829	21	19	22	22	20	24	15	29	22	21	21	23	22	22	23
24	IHT 124	MH 2830	21	20	24	23	23	24	18	25	22	19	24	24	24	22	17
25	IHT 125	MH 2831	22	20	23	24	24	25	20	28	23	23	23	23	23	23	11
26	IHT 126	MH 2832	21	22	23	22	23	24	19	24	22	19	23	24	24	22	19
27	IHT 127	MH 2833	22	24	23	23	23	24	22	28	24	22	23	24	23	23	10
28	IHT 128	MPMH 35 (Check)	19	23	24	22	23	24	18	26	22	20	23	26	25	23	15
		LOC. MEAN	21	24	24	23	23	23	19	25	23	21	23	24	23	23	
		C.D. (5%)	3.0	3.0	2.0	2.0	3.0	2.0	2.0	2.0	2.0	4.0	3.0	2.0	3.0	1.0	
		C.D. (1%)	3.0	4.0	3.0	3.0	4.0	3.0	3.0	2.0	2.0	5.0	3.0	3.0	3.0	2.0	
		C.V. (%)	7.3	8.1	5.6	5.5	8.0	5.7	7.3	4.6	7.9	10.6	6.8	6.0	5.2	7.2	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.000	

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Table I.27: INITIAL HYBRID TRIAL (Early) KHARIF - 2024 PANICLE DIAMETER (cm) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	JBR	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	IHT 101	MH 2811	2.7	2.6	3.0	2.8	3.3	2.4	2.4	3.1	2.8	2.0	3.2	3.8	3.5	2.8	16
2	IHT 102	MH 2812	2.9	3.2	3.1	3.2	3.2	2.4	2.7	2.3	2.9	3.1	3.6	4.1	3.9	3.1	8
3	IHT 103	PB 1756 (Check)	2.7	2.7	3.0	3.1	2.9	3.2	2.8	2.3	2.8	2.6	3.3	3.7	3.5	2.9	11
4	IHT 104	MH 2813	2.9	2.5	3.2	3.3	3.4	2.4	3.4	3.6	3.1	2.8	3.9	4.1	4.0	3.2	4
5	IHT 105	MH 2814	2.8	2.9	3.1	3.6	3.2	4.3	3.4	2.4	3.2	3.0	3.6	4.2	3.9	3.3	3
6	IHT 106	MH 2815	2.6	2.2	3.0	3.2	2.9	2.4	3.0	2.6	2.7	2.7	3.2	3.8	3.5	2.9	14
7	IHT 107	MH 2816	2.8	2.6	3.2	2.5	2.8	1.9	2.6	3.3	2.7	2.7	3.5	3.8	3.7	2.9	15
8	IHT 108	MH 2817	2.4	2.2	2.7	2.5	2.8	2.4	2.6	3.1	2.6	2.3	2.7	3.5	3.1	2.7	24
9	IHT 109	MH 2818	2.4	2.4	2.8	2.5	2.9	2.9	2.5	2.5	2.6	2.0	2.8	3.7	3.3	2.7	23
10	IHT 110	RHB 223 (Check)	2.8	2.7	2.8	3.2	3.2	3.2	2.7	3.2	3.0	2.3	3.3	3.9	3.6	3.0	10
11	IHT 111	MH 2819	2.6	2.4	2.6	2.3	2.9	1.9	2.6	2.9	2.5	2.0	2.9	3.7	3.3	2.6	26
12	IHT 112	MH 2820	2.9	2.4	2.8	2.8	3.0	3.2	2.7	3.3	2.9	2.3	3.0	3.7	3.4	2.9	12
13	IHT 113	MH 2821	3.4	3.2	3.4	3.1	3.7	3.8	3.1	2.3	3.2	2.9	3.5	4.1	3.8	3.3	2
14	IHT 114	MH 2822	2.9	2.6	3.3	2.8	3.6	3.1	2.7	2.6	3.0	2.7	3.2	4.2	3.7	3.1	9
15	IHT 115	MH 2823	2.6	2.2	2.6	3.2	2.9	3.2	2.5	1.8	2.6	2.7	3.0	3.7	3.4	2.8	20
16	IHT 116	HHB 67 Imp. (Check)	3.9	2.4	2.4	2.2	2.8	3.0	2.1	2.5	2.7	2.0	2.7	3.5	3.1	2.7	22
17	IHT 117	MH 2824	2.5	2.3	2.5	2.3	3.0	2.7	2.3	2.5	2.5	2.0	2.8	4.0	3.4	2.6	25
18	IHT 118	MH 2825	2.4	2.1	2.4	2.5	2.7	2.7	2.5	2.3	2.5	2.1	2.9	3.5	3.2	2.5	28
19	IHT 119	MH 2826	2.6	2.6	2.6	3.1	3.0	3.3	2.4	2.2	2.7	2.3	3.1	3.7	3.4	2.8	18
20	IHT 120	AHB 1200 (Check)	3.1	3.3	3.4	3.7	3.4	3.4	3.2	2.8	3.3	2.6	3.8	4.2	4.0	3.4	1
21	IHT 121	MH 2827	3.1	2.6	3.1	3.1	3.2	3.1	2.9	2.7	3.0	2.8	3.5	3.7	3.6	3.1	7
22	IHT 122	MH 2828	2.7	2.9	3.1	3.1	3.2	3.1	2.8	2.7	3.0	2.9	3.6	3.8	3.7	3.1	6
23	IHT 123	MH 2829	2.6	2.8	2.9	3.1	3.1	2.6	2.7	2.5	2.8	2.5	3.4	3.7	3.6	2.9	13
24	IHT 124	MH 2830	2.9	2.7	3.1	3.2	3.5	3.4	2.7	2.4	3.0	2.8	3.6	4.0	3.8	3.1	5
25	IHT 125	MH 2831	2.5	2.4	2.7	2.7	2.9	3.7	2.5	2.7	2.8	2.5	2.9	3.5	3.2	2.8	17
26	IHT 126	MH 2832	2.6	2.2	2.7	2.5	3.2	3.0	2.5	2.5	2.7	2.1	3.1	4.0	3.6	2.8	19
27	IHT 127	MH 2833	2.5	2.1	2.4	2.6	2.8	2.1	2.6	2.7	2.5	2.3	2.7	3.9	3.3	2.6	27
28	IHT 128	MPMH 35 (Check)	2.5	2.3	2.5	2.4	2.9	3.0	2.3	3.1	2.6	2.2	2.8	3.8	3.3	2.7	21
		LOC. MEAN	2.8	2.6	2.9	2.9	3.1	2.9	2.7	2.7	2.8	2.5	3.2	3.8	3.5	2.9	
		C.D. (5%)	0.8	0.3	0.3	0.5	0.4	1.2	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.2	
		C.D. (1%)	1.1	0.5	0.4	0.6	0.5	1.7	0.4	0.4	0.4	0.5	0.4	0.5	0.6	0.3	
		C.V. (%)	18.1	8.1	6.7	9.9	7.0	26.0	7.0	6.4	11.3	9.6	5.2	6.4	5.7	9.8	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	

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Table I.28: INITIAL HYBRID TRIAL (Early) KHARIF - 2024 1000-SEED Wt.(g) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	JBR	NGR	RAJ MEAN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	IHT 101	MH 2811	8.6	10.2	8.0	8.8	7.3	6.4	6.8	6.2	7.8	11.9	11.5	11.7	8.6	8
2	IHT 102	MH 2812	8.4	9.9	8.8	9.4	6.8	6.6	6.9	5.2	7.8	9.8	10.8	10.3	8.3	16
3	IHT 103	PB 1756 (Check)	9.2	10.1	9.3	9.8	8.7	7.3	6.5	5.0	8.2	8.7	12.9	10.8	8.8	4
4	IHT 104	MH 2813	7.7	9.9	9.7	9.7	6.1	7.3	7.2	7.3	8.1	11.6	11.7	11.6	8.8	3
5	IHT 105	MH 2814	7.0	11.1	9.2	10.2	6.7	7.0	7.0	5.8	8.0	12.4	8.8	10.6	8.5	10
6	IHT 106	MH 2815	7.5	14.0	8.7	10.3	8.0	7.2	6.8	5.5	8.5	7.7	8.6	8.1	8.4	12
7	IHT 107	MH 2816	6.9	10.2	9.4	10.3	6.1	7.5	6.9	5.1	7.8	10.5	9.7	10.1	8.3	15
8	IHT 108	MH 2817	6.6	12.0	9.4	10.4	7.0	6.7	6.7	8.3	8.4	7.8	7.8	7.8	8.3	17
9	IHT 109	MH 2818	6.7	11.8	9.7	9.3	8.6	6.9	7.1	5.7	8.2	7.1	8.9	8.0	8.2	20
10	IHT 110	RHB 223 (Check)	7.8	13.4	8.5	10.0	6.6	6.6	6.7	8.1	8.5	11.0	9.7	10.4	8.8	2
11	IHT 111	MH 2819	8.3	14.0	9.6	10.5	6.2	6.8	7.2	7.8	8.8	9.0	10.5	9.7	9.0	1
12	IHT 112	MH 2820	6.6	12.3	8.5	10.0	8.3	7.0	6.9	6.8	8.3	9.1	6.8	8.0	8.2	18
13	IHT 113	MH 2821	8.1	10.6	9.1	9.2	7.3	7.4	6.6	6.4	8.1	7.2	9.7	8.5	8.2	22
14	IHT 114	MH 2822	6.4	9.0	9.4	10.3	6.6	6.6	7.1	4.7	7.5	9.4	10.5	10.0	8.0	25
15	IHT 115	MH 2823	8.9	10.5	8.9	10.4	6.5	7.3	6.8	5.6	8.1	10.6	11.5	11.1	8.7	5
16	IHT 116	HHB 67 Imp. (Check)	7.7	8.8	7.5	10.3	6.7	7.3	7.0	6.6	7.7	9.9	9.4	9.6	8.1	24
17	IHT 117	MH 2824	8.1	9.3	10.7	10.3	7.1	6.9	7.0	5.7	8.1	8.6	11.0	9.8	8.5	11
18	IHT 118	MH 2825	8.4	10.1	9.4	9.6	7.3	7.5	7.1	4.8	8.0	8.8	11.1	10.0	8.4	13
19	IHT 119	MH 2826	6.6	9.6	9.1	9.9	6.5	7.8	7.1	5.5	7.8	8.0	7.7	7.9	7.8	27
20	IHT 120	AHB 1200 (Check)	8.3	10.1	8.7	9.9	7.7	7.2	6.8	6.8	8.2	8.7	12.3	10.5	8.7	6
21	IHT 121	MH 2827	6.8	9.8	9.0	9.1	6.8	7.0	6.8	5.8	7.6	12.7	7.8	10.3	8.2	21
22	IHT 122	MH 2828	7.9	10.4	8.4	9.7	7.8	7.4	6.8	6.7	8.1	10.5	10.8	10.6	8.6	7
23	IHT 123	MH 2829	6.2	10.9	9.6	9.7	8.8	7.4	7.2	7.1	8.4	8.0	8.0	8.0	8.3	14
24	IHT 124	MH 2830	7.5	12.0	9.1	9.6	6.5	7.8	6.9	6.1	8.2	9.2	11.0	10.1	8.6	9
25	IHT 125	MH 2831	7.2	8.3	9.0	9.8	7.0	7.9	6.7	5.3	7.6	7.5	8.5	8.0	7.7	28
26	IHT 126	MH 2832	6.5	8.8	8.8	9.7	6.9	8.0	6.8	6.4	7.8	8.2	9.0	8.6	7.9	26
27	IHT 127	MH 2833	6.9	10.7	9.5	9.7	6.2	7.2	6.9	6.1	7.9	9.9	8.8	9.4	8.2	19
28	IHT 128	MPMH 35 (Check)	7.4	10.0	7.8	9.6	7.7	7.9	7.0	4.4	7.7	10.1	9.4	9.8	8.1	23
		LOC. MEAN	7.5	10.6	9.0	9.8	7.1	7.2	6.9	6.1	8.0	9.4	9.8	9.6	8.4	
		C.D. (5%)	1.3	0.4	1.3	0.7	0.9	0.7	0.3	0.3	0.8	0.8	1.5	0.8	0.9	
		C.D. (1%)	1.7	0.5	1.7	0.9	1.2	0.9	0.5	0.5	1.1	1.0	2.1	1.0	1.2	
		C.V. (%)	10.3	2.1	8.8	4.2	7.7	5.7	3.1	3.4	10.1	5.0	9.6	5.0	11.5	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.312	0.000	0.000	0.000	0.756	

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Table I.29: INITIAL HYBRID TRIAL (Early) KHARIF - 2024 POPULATION AT HARVEST (No./plot) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	JBR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	IHT 101	MH 2811	75	66	63	64	46	80	75	67	82	86	51	69	69	23
2	IHT 102	MH 2812	68	70	72	64	47	85	75	69	84	90	54	72	71	7
3	IHT 103	PB 1756 (Check)	74	64	74	64	51	93	73	70	82	79	53	66	71	11
4	IHT 104	MH 2813	77	67	70	64	56	84	76	71	82	84	49	67	71	5
5	IHT 105	MH 2814	70	71	63	64	48	86	74	68	86	91	52	72	71	12
6	IHT 106	MH 2815	76	64	67	64	47	86	73	68	80	82	49	66	69	24
7	IHT 107	MH 2816	71	67	69	64	47	83	74	68	83	91	54	73	70	13
8	IHT 108	MH 2817	83	65	69	64	49	72	73	68	82	90	51	71	70	21
9	IHT 109	MH 2818	87	70	75	64	48	70	75	70	85	83	52	67	71	8
10	IHT 110	RHB 223 (Check)	64	68	74	64	52	90	75	69	83	78	52	65	70	18
11	IHT 111	MH 2819	73	67	67	64	48	84	75	68	81	94	49	72	70	14
12	IHT 112	MH 2820	85	65	73	64	50	88	75	71	85	94	51	73	73	1
13	IHT 113	MH 2821	79	56	67	64	52	94	74	70	79	83	49	66	70	17
14	IHT 114	MH 2822	75	63	65	64	56	72	74	67	83	93	52	72	70	22
15	IHT 115	MH 2823	81	49	63	64	55	74	75	66	82	90	47	69	68	27
16	IHT 116	HHB 67 Imp. (Check)	78	68	66	64	51	75	75	68	80	90	51	71	70	19
17	IHT 117	MH 2824	78	68	65	64	52	80	75	69	84	90	52	71	71	9
18	IHT 118	MH 2825	73	58	69	64	50	87	75	68	80	89	52	71	70	20
19	IHT 119	MH 2826	85	66	63	64	49	91	75	70	87	97	52	74	73	2
20	IHT 120	AHB 1200 (Check)	65	54	67	64	56	87	75	67	84	78	51	64	68	26
21	IHT 121	MH 2827	72	64	65	64	51	87	74	68	86	92	50	71	71	10
22	IHT 122	MH 2828	72	68	67	64	49	81	74	68	85	76	48	62	68	25
23	IHT 123	MH 2829	78	68	65	64	48	83	75	69	82	90	48	69	70	15
24	IHT 124	MH 2830	71	69	67	63	51	91	74	70	82	93	50	71	71	4
25	IHT 125	MH 2831	78	72	62	64	55	70	76	68	89	94	50	72	71	6
26	IHT 126	MH 2832	80	64	60	64	54	86	75	69	80	90	49	70	70	14
27	IHT 127	MH 2833	83	62	65	64	54	88	75	70	82	89	53	71	71	3
28	IHT 128	MPMH 35 (Check)	77	62	62	63	46	91	76	68	82	90	51	71	70	16
		LOC. MEAN	76	65	67	64	51	84	75	69	83	88	51	69	70	
		C.D. (5%)	13.0	8.0	9.0	1.0	7.0	20.0	2.0	5.0	6.0	7.0	5.0	8.0	4.0	
		C.D. (1%)	18.0	11.0	13.0	2.0	9.0	27.0	2.0	6.0	7.0	9.0	6.0	11.0	5.0	
		C.V. (%)	10.7	7.8	8.6	1.3	8.4	14.9	1.5	6.6	4.1	4.6	5.7	4.7	6.2	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.963	0.000	0.000	0.000	0.235	0.860	

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Table I.30: INITIAL HYBRID TRIAL (Early) KHARIF - 2024 SEED SET (%) UNDER BAG ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	JBR	RAJ MEAN	HSR	ZONE MEAN	RANK
1	IHT 101	MH 2811	65	77	43	82	63	66	68	66	21
2	IHT 102	MH 2812	69	75	53	89	66	70	88	73	4
3	IHT 103	PB 1756 (Check)	78	80	40	81	68	70	85	72	7
4	IHT 104	MH 2813	76	78	52	84	74	73	75	73	5
5	IHT 105	MH 2814	82	75	48	78	68	70	93	74	2
6	IHT 106	MH 2815	80	72	40	82	65	68	68	68	18
7	IHT 107	MH 2816	78	68	42	88	64	68	90	72	9
8	IHT 108	MH 2817	74	73	47	83	68	69	85	72	10
9	IHT 109	MH 2818	78	70	50	84	66	70	72	70	12
10	IHT 110	RHB 223 (Check)	79	67	47	83	68	69	70	69	14
11	IHT 111	MH 2819	47	73	40	80	73	63	67	63	23
12	IHT 112	MH 2820	17	72	50	90	66	59	50	57	27
13	IHT 113	MH 2821	48	75	47	78	58	61	-	61	26
14	IHT 114	MH 2822	77	80	48	87	64	71	85	74	3
15	IHT 115	MH 2823	43	77	43	84	62	62	68	63	25
16	IHT 116	HHB 67 Imp. (Check)	65	77	43	82	63	66	77	68	19
17	IHT 117	MH 2824	61	73	52	80	60	65	83	68	17
18	IHT 118	MH 2825	64	70	48	87	67	67	75	69	15
19	IHT 119	MH 2826	82	70	60	78	70	72	88	75	1
20	IHT 120	AHB 1200 (Check)	72	67	45	86	75	69	60	68	20
21	IHT 121	MH 2827	85	68	40	77	63	67	91	71	11
22	IHT 122	MH 2828	77	70	45	86	59	67	73	68	16
23	IHT 123	MH 2829	-	68	40	84	61	63	-	63	24
24	IHT 124	MH 2830	82	70	43	82	58	67	82	69	13
25	IHT 125	MH 2831	80	70	43	80	63	67	77	69	14
26	IHT 126	MH 2832	70	75	47	89	68	70	87	73	6
27	IHT 127	MH 2833	77	80	48	83	62	70	82	72	8
28	IHT 128	MPMH 35 (Check)	67	75	45	81	64	66	48	63	22
LOC. MEAN			69	73	46	83	65	67	76	69	
C.D. (5%)			14.0	8.0	11.0	7.0	4.0	12.0	20.0	12.0	
C.D. (1%)			19.0	11.0	15.0	10.0	5.0	16.0	26.0	16.0	
C.V. (%)			12.3	6.6	14.8	5.5	3.5	12.7	15.9	12.7	
F (Prob)			0.000	0.000	0.000	0.000	0.000	0.736	0.000	0.736	

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Table I.31: INITIAL HYBRID TRIAL (Early) KHARIF - 2024 ZONE A₁
GRAIN QUALITY: IRON CONTENT (ppm)

S.No.	TEST CODE	ENTRY	MDR	JDR	FTR	NGR	SKN	BWL	HSR	ZONE MEAN	RANK
1	IHT 101	MH 2811	30	30	33	34	43	73	61	43	8
2	IHT 102	MH 2812	32	23	38	39	49	52	64	42	9
3	IHT 103	PB 1756 (Check)	29	37	40	37	56	53	72	46	5
4	IHT 104	MH 2813	29	35	39	38	56	54	58	44	7
5	IHT 105	MH 2814	33	30	48	38	61	55	51	45	6
6	IHT 110	RHB 223 (Check)	33	27	32	43	55	52	62	43	8
7	IHT 111	MH 2819	37	29	43	46	74	60	81	53	1
8	IHT 112	MH 2820	29	31	50	29	64	52	64	46	5
9	IHT 116	HHB 67 Imp. (Check)	33	28	41	38	48	45	67	43	8
10	IHT 119	MH 2826	31	39	43	36	50	46	59	43	8
11	IHT 120	AHB 1200 (Check)	34	32	31	42	64	64	71	48	3
12	IHT 121	MH 2827	36	44	43	51	54	53	67	50	2
13	IHT 123	MH 2829	31	26	42	42	70	47	72	47	4
14	IHT 126	MH 2832	29	33	47	33	49	43	74	44	7
15	IHT 128	MPMH 35 (Check)	29	36	42	40	48	42	69	44	7

Table I.32: INITIAL HYBRID TRIAL (Early) KHARIF - 2024 ZONE A₁
GRAIN QUALITY: ZINC CONTENT (ppm)

S.No.	TEST CODE	ENTRY	MDR	JDR	FTR	NGR	SKN	BWL	HSR	ZONE MEAN	RANK
1	IHT 101	MH 2811	34	41	34	34	39	32	42	37	5
2	IHT 102	MH 2812	39	32	30	34	34	30	41	34	6
3	IHT 103	PB 1756 (Check)	33	41	30	30	43	43	46	38	4
4	IHT 104	MH 2813	35	46	35	32	51	40	45	41	1
5	IHT 105	MH 2814	37	40	29	33	43	40	40	37	5
6	IHT 110	RHB 223 (Check)	40	36	26	40	42	37	39	37	5
7	IHT 111	MH 2819	37	37	43	35	45	35	49	40	2
8	IHT 112	MH 2820	36	37	38	35	45	37	37	38	4
9	IHT 116	HHB 67 Imp. (Check)	40	33	34	34	39	36	43	37	5
10	IHT 119	MH 2826	37	43	21	33	39	37	46	37	5
11	IHT 120	AHB 1200 (Check)	35	36	31	33	48	40	50	39	3
12	IHT 121	MH 2827	35	45	27	32	42	37	49	38	4
13	IHT 123	MH 2829	35	37	28	34	46	32	45	37	5
14	IHT 126	MH 2832	36	38	33	35	40	36	47	38	4
15	IHT 128	MPMH 35 (Check)	35	41	34	36	41	31	46	38	4

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Table I.33: INITIAL HYBRID TRIAL (Medium) KHARIF 2024 EXPERIMENTAL DETAILS ZONE A

Locations	Soil	pH	Sowing date	Harvesting date	Interculture date	Irrigation date	Fertilizers			Insecticide
							N	P	K	
RAJASTHAN										
Bikaner (SKRAU)	S	8.0	10.7.24	25.10.24	10.8.24	25.9.24	40	20	0	Nil
Jaipur (SKNAU)	SL	-	8.7.24	9.10.24	24.7.24	Nil	40	30	0	Nil
Jaipur (Corteva)	L	7.5	7.7.24	28.10.24	30.8.24	Life Saving	88	60	0	Dantotsu-Clothianidin, Cypermethrin
Tabiji (SKNAU)	L	8.8	2.7.24	1.10.24	5.9.24	Nil	60	30	0	Nil
Alwar (Kaveri Seed)	S	7.6	8.7.24	6.10.24	1.8.24	Nil	75	46	45	Chloropyriphos Cypermethrine
Dausa (Rasi Seeds)	SL	-	26.6.24	25.9.24	12.7.24	Nil	10	10	2	Nil
GUJARAT										
Talaja (JAU)	MB	-	20.7.24	10.10.24	16.8.24	Nil	80	40	0	Nil
Anand (AAU)	SL	-	6.7.24	22.10.24	19.7, 2.8.24	Nil	80	40	0	Emamectin, Quinalphos
Jamnagar (JAU)	MB	7.6	18.7.24	16.10.24	28.7, 2.8, 9.8, 17.8.24	Nil	80	40	0	Nil
Deesa (SDAU)	SL	-	30.6.24	4.10.24	26.7.24	Nil	80	40	0	Nil
UTTAR PRADESH										
Jhansi (RLBCAU)	R	8.0	5.7.24	27.10.24	15.8.24	25.8.24	80	40	40	Nil
Mathura (Kamadgiri)	SL	-	11.7.24	8.10.24	-	Nil	80	40	40	Chloropyriphos Cypermethrine
HARYANA										
Hisar (CCSHAU)	SL	-	11.7.24	25.10.24	-	28.8.24	100	40	0	Nil
Bawal (CCSHAU)	LS	8.2	10.7.24	As Per Maturity	6.8.24	Nil	40	20	30	Atrazine
MADHYA PRADESH										
Gwalior (RVSKVV)	SL	7.1	18.7.24	15.10.24	10.8.24	25.7.24	60	40	20	Nil
PUNJAB										
Ludhiana (PAU)	SL	-	9.7.24	15.11.24	31.7, 2.9.24	30.7, 31.8, 2.10.24	100	60	0	Nil
DELHI										
New Delhi (ICAR-IARI)	SL	7.8	2.7.24	15.10.24	-	Nil	60	40	40	Nil

SL = Sandy Loam, MB = Medium Black, S = Sandy, LS = Loamy Sand, L = Loam, R = Red.

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Table I.34: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 GRAIN YIELD (kg/ha) ZONE A

S.No.	TEST CODE	ENTRY	BKR	JPR	JPR2	TBJ	ALW6	DAS	RAJ MEAN	TLJ	AND	JMR	SKN	GUJ MEAN
1	IHT 201	MH 2834	1644	3472	6642	4206	3683	3815	3910	1994	4116	2051	2133	2574
2	IHT 202	MH 2835	1227	2094	3942	3061	2919	3720	2827	1806	2102	1329	1590	1707
3	IHT 203	MH 2836	1296	3533	4151	2850	3222	3784	3139	2711	3858	2083	1551	2551
4	IHT 204	MH 2837	1181	3367	4625	2533	3261	3932	3150	2683	2021	1954	1358	2004
5	IHT 205	MH 2838	1389	2983	5226	4500	3700	3602	3567	2728	3356	2046	1469	2400
6	IHT 206	MH 2839	1088	2822	4660	4589	3939	3892	3498	3344	3906	2588	2165	3001
7	IHT 207	MH 2840	1250	3167	6705	4711	4361	3877	4012	2317	4541	2903	2143	2976
8	IHT 208	MH 2841	1296	4028	6709	4883	3556	3735	4034	2444	2485	2667	2472	2517
9	IHT 209	86M94 (Check)	1296	3911	4756	5639	3728	3617	3824	3100	3603	3028	1993	2931
10	IHT 210	MH 2842	1319	4328	6101	2656	4039	3914	3726	3056	5679	3347	2035	3529
11	IHT 211	MH 2843	1157	3533	2447	2300	2883	3736	2676	1650	4290	2917	2074	2733
12	IHT 212	MH 2844	1250	4256	5260	4633	4083	3654	3856	2322	2954	2421	1906	2401
13	IHT 213	MH 2845	1088	3233	3075	2372	3033	3582	2731	1717	3182	2032	1831	2191
14	IHT 214	MH 2846	1088	2850	3798	3878	2950	4491	3176	2461	5509	3222	2457	3412
15	IHT 215	PB 1852 (Check)	1065	3778	4574	4172	3828	3926	3557	2244	5603	3194	3101	3536
16	IHT 216	MH 2847	903	2678	3437	2194	2944	3540	2616	3056	4862	2796	1383	3024
17	IHT 217	MH 2848	1065	2939	4542	3017	4428	3574	3261	2389	4737	2528	2543	3049
18	IHT 218	MH 2849	1181	3044	3862	4006	3600	3673	3228	1628	2509	2653	1580	2092
19	IHT 219	MH 2850	926	4150	2616	3422	3000	3596	2952	1956	5181	2144	1451	2683
20	IHT 220	DHBH 1397 (Check)	1435	3217	4977	2183	3622	3491	3154	2861	3066	2231	2249	2602
21	IHT 221	MH 2851	1458	3350	4059	3044	3689	3998	3266	2583	3762	1458	1657	2365
22	IHT 222	MH 2852	1134	3533	4315	2589	3706	4191	3245	2522	4578	3347	3063	3378
23	IHT 223	MH 2853	1111	2522	4683	2033	3711	3522	2930	2894	2060	2866	2259	2520
24	IHT 224	MH 2854	1111	3194	5604	3033	4194	4519	3609	2289	5874	1435	2568	3041
25	IHT 225	MH 2855	1157	2683	1452	2233	1806	4354	2281	1656	4468	1597	1538	2315
26	IHT 226	MH 2856	1065	3228	4623	5111	3533	4517	3680	2206	2652	1958	2267	2271
27	IHT 227	AHB 1200 (Check)	949	2922	2958	2183	2139	4213	2561	2350	2752	1755	1933	2198
28	IHT 228	MH 2857	1134	1928	3868	2456	2922	4483	2799	2350	2181	2032	1499	2016
29	IHT 229	MH 2858	1065	2567	3193	2306	2383	3609	2520	1950	2033	1824	1898	1926
30	IHT 230	MH 2859	1134	2872	3573	2983	3000	3626	2865	2072	2644	3792	2123	2658
31	IHT 231	MH 2860	1042	3194	4219	4156	2761	3679	3175	1950	2138	2407	2259	2189
32	IHT 232	MH 2861	1273	1828	2449	2106	2244	4574	2412	2317	2036	1338	2131	1955
33	IHT 233	MH 2862	1042	3183	2948	2333	2778	4370	2776	1889	3548	2282	1847	2391
34	IHT 234	MH 2863	1181	2983	5111	3411	4428	4380	3582	2756	5896	3694	1916	3565
		LOC. MEAN	1176	3158	4269	3288	3355	3917	3194	2360	3652	2409	2013	2609
		C.D. (5%)	264	926	981	583	502	370	756	357	705	487	434	972
		C.D. (1%)	350	1230	1303	774	667	491	998	475	937	646	576	1286
		C.V. (%)	13.8	18.0	14.1	10.9	9.2	5.8	20.8	9.3	11.8	12.4	13.2	26.6
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
		PLOT SIZE (m ²)	7.20	6.00	5.40	6.00	6.00	5.40	-	6.00	6.00	7.20	5.40	-

Contd..

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Table I.34: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 GRAIN YIELD (kg/ha) ZONE A

S.No.	TEST CODE	ENTRY	JNS***	MTR	UP MEAN	BWL	HSR	HAR MEAN	GLR***	LDA	NDL	ZONE MEAN	RANK
1	IHT 201	MH 2834	2194	2117	2117	4016	3370	3693	1947	3541	5022	3455	8
2	IHT 202	MH 2835	1628	1133	1133	3339	3590	3465	1919	3482	2974	2554	30
3	IHT 203	MH 2836	1450	2206	2206	4400	3991	4196	2236	4763	3096	3166	17
4	IHT 204	MH 2837	1142	2061	2061	4279	4052	4166	1988	3294	2978	2905	24
5	IHT 205	MH 2838	1306	2589	2589	4440	3898	4169	2338	4548	3252	3315	12
6	IHT 206	MH 2839	1678	2217	2217	4145	3775	3960	2034	4120	3256	3367	9
7	IHT 207	MH 2840	1011	2511	2511	4986	4580	4783	2197	3299	3974	3688	3
8	IHT 208	MH 2841	1989	3006	3006	4208	3686	3947	2581	4065	3496	3516	7
9	IHT 209	86M94 (Check)	2572	2894	2894	5025	3872	4448	2075	3800	3952	3614	4
10	IHT 210	MH 2842	989	2433	2433	4966	4942	4954	2278	3864	4289	3798	2
11	IHT 211	MH 2843	1394	2228	2228	3388	3706	3547	2119	4477	2904	2913	23
12	IHT 212	MH 2844	872	1961	1961	3600	3159	3379	2333	3957	2693	3207	16
13	IHT 213	MH 2845	1772	2078	2078	4041	2658	3349	1966	3679	2830	2695	29
14	IHT 214	MH 2846	983	1761	1761	3977	3461	3719	1769	3266	3900	3271	14
15	IHT 215	PB 1852 (Check)	1261	2456	2456	3957	3377	3667	2146	3236	4485	3533	5
16	IHT 216	MH 2847	1039	2417	2417	4265	2965	3615	1812	3005	3600	2936	22
17	IHT 217	MH 2848	2028	2183	2183	4617	4055	4336	1808	4107	3781	3367	10
18	IHT 218	MH 2849	803	2239	2239	4181	3229	3705	2122	4610	3970	3064	19
19	IHT 219	MH 2850	564	2117	2117	3764	3175	3469	1883	3914	3859	3018	20
20	IHT 220	DHBH 1397 (Check)	994	2917	2917	4625	3921	4273	1418	4999	4578	3358	11
21	IHT 221	MH 2851	1381	2283	2283	3997	3829	3913	1717	4314	3274	3117	18
22	IHT 222	MH 2852	1419	2178	2178	3835	2334	3085	1794	4816	3359	3300	13
23	IHT 223	MH 2853	2506	2383	2383	3728	3606	3667	1961	3467	2548	2893	26
24	IHT 224	MH 2854	1826	2511	2511	3738	4361	4049	2053	4052	4381	3524	6
25	IHT 225	MH 2855	789	2067	2067	3356	2856	3106	1871	2883	1385	2366	34
26	IHT 226	MH 2856	1217	1900	1900	4134	3657	3896	2117	4672	2744	3218	15
27	IHT 227	AHB 1200 (Check)	1156	2011	2011	3338	2599	2969	1317	3438	2381	2528	31
28	IHT 228	MH 2857	1111	2067	2067	3760	3331	3545	2089	4356	3131	2767	28
29	IHT 229	MH 2858	267	1956	1956	3690	3184	3437	1789	3488	2722	2524	32
30	IHT 230	MH 2859	744	2444	2444	3863	3290	3576	1939	3527	3389	2956	21
31	IHT 231	MH 2860	483	2200	2200	3656	3386	3521	1778	2868	3541	2897	25
32	IHT 232	MH 2861	429	2033	2033	3627	2603	3115	1311	2819	2933	2421	33
33	IHT 233	MH 2862	464	2089	2089	3538	2664	3101	1168	3270	4719	2833	27
34	IHT 234	MH 2863	1917	3489	3489	5331	3935	4633	2674	5214	4541	3884	1
		LOC. MEAN	1276	2269	2269	4053	3503	3778	1957	3859	3469	3117	
		C.D. (5%)	322	341	341	727	943	685	319	266	552	450	
		C.D. (1%)	428	453	453	966	1253	920	424	354	733	592	
		C.V. (%)	15.5	9.2	9.2	11.0	16.5	8.9	10.0	4.2	9.8	20.1	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		PLOT SIZE (m ²)	6.00	6.00	-	7.20	6.00	-	6.00	6.00	9.00	-	

***TEST LOCATION REJECTED DUE TO LOW AVERAGE YIELD (1276 & 1957 kg/ha), THAN THE STATE AVERAGE YIELD (2008 & 2166 kg/ha) TAKEN OVER 10 YEARS

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Table I.35: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 DRY FODDER YIELD (kg/ha) ZONE A

S.No.	TEST CODE	ENTRY	BKR	JPR	JPR2	TBJ	ALW6	DAS	RAJ MEAN	TLJ	AND	JMR	SKN	GUJ MEAN
1	IHT 201	MH 2834	4352	8222	9727	8050	8800	6880	7672	6111	8318	6023	5975	6607
2	IHT 202	MH 2835	4306	4667	6333	5483	5633	10741	6194	5222	4347	2894	4753	4304
3	IHT 203	MH 2836	3843	6389	6567	5733	6594	7019	6024	5722	8146	4134	8759	6690
4	IHT 204	MH 2837	4491	4889	6595	5100	7039	7235	5891	5389	5233	4208	5981	5203
5	IHT 205	MH 2838	4352	6778	8149	7067	7589	8435	7062	7500	8417	5370	6963	7063
6	IHT 206	MH 2839	4352	7556	9112	7783	9306	8383	7749	6500	7800	4694	6247	6310
7	IHT 207	MH 2840	4815	5444	14996	8283	10667	8735	8823	6833	9089	6523	8636	7770
8	IHT 208	MH 2841	4444	5111	11014	8100	10300	10302	8212	6333	5908	5083	8710	6509
9	IHT 209	86M94 (Check)	3935	7944	6820	7150	9028	10840	7619	6722	7944	5866	5926	6615
10	IHT 210	MH 2842	4907	8556	13133	8067	10961	7859	8914	5889	12024	8148	8148	8552
11	IHT 211	MH 2843	3750	4556	12962	7017	8678	11012	7996	5611	8645	6625	8691	7393
12	IHT 212	MH 2844	4815	9611	9427	6150	7889	7741	7605	4889	6353	4704	6796	5686
13	IHT 213	MH 2845	5139	8889	8644	5167	7211	10679	7622	5222	6632	5181	7284	6080
14	IHT 214	MH 2846	4537	7333	7619	8217	6083	9630	7236	7222	11609	5542	6389	7690
15	IHT 215	PB 1852 (Check)	4398	6556	13340	7800	12139	10917	9191	9611	10988	7269	8759	9157
16	IHT 216	MH 2847	4537	5556	5900	5250	7056	8701	6166	5778	9849	5380	8056	7265
17	IHT 217	MH 2848	4259	9333	9151	7000	13117	8562	8570	6278	9897	5722	8284	7545
18	IHT 218	MH 2849	4352	7000	11079	6167	8539	10438	7929	6556	6479	5870	4753	5915
19	IHT 219	MH 2850	3889	8222	6654	5983	7922	10688	7227	5333	10750	4343	4444	6218
20	IHT 220	DHBH 1397 (Check)	3843	8778	8379	4817	7717	11241	7462	5278	6544	6306	5025	5788
21	IHT 221	MH 2851	5139	6056	8849	5950	9794	9852	7607	7722	8865	4644	8506	7434
22	IHT 222	MH 2852	4861	6611	9807	5883	10044	9556	7794	6722	8917	6806	11204	8412
23	IHT 223	MH 2853	3565	6667	8206	6383	8222	8441	6914	6778	5083	5870	5309	5760
24	IHT 224	MH 2854	3611	8333	9880	5733	10983	10340	8147	8111	11127	5519	7333	8022
25	IHT 225	MH 2855	3796	4944	6488	5383	5900	7506	5670	5111	9691	3356	7605	6441
26	IHT 226	MH 2856	4259	6056	7533	8017	7511	8410	6964	4944	5479	4806	6926	5539
27	IHT 227	AHB 1200 (Check)	4537	5333	5652	5517	5372	6886	5549	6333	6000	3940	4957	5307
28	IHT 228	MH 2857	4444	4833	9241	7000	7972	10605	7349	5722	4908	5352	8272	6063
29	IHT 229	MH 2858	4537	6222	7905	5817	6672	10710	6977	5889	4919	5028	7395	5808
30	IHT 230	MH 2859	4722	4889	10230	7683	7411	8444	7230	6722	5722	6403	7741	6647
31	IHT 231	MH 2860	4120	6778	6204	6133	5639	8133	6168	5389	4529	4940	8438	5824
32	IHT 232	MH 2861	4444	7389	5775	4550	5439	7049	5774	5278	4493	3625	7593	5247
33	IHT 233	MH 2862	4259	6556	8775	6067	7078	8543	6880	6667	7672	6069	8765	7293
34	IHT 234	MH 2863	5093	4611	11026	7917	9722	11821	8365	8111	11226	6407	5500	7811
		LOC. MEAN	4374	6667	8858	6542	8236	9186	7310	6279	7753	5372	7180	6646
		C.D. (5%)	845	1369	2093	1006	1461	914	1589	890	1488	1216	1461	1895
		C.D. (1%)	1122	1818	2781	1337	1941	1215	2097	1183	1977	1616	1941	2509
		C.V. (%)	11.8	12.6	14.5	9.4	10.9	6.1	19.1	8.7	11.8	13.9	12.5	20.3
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		PLOT SIZE (m ²)	7.20	6.00	5.40	6.00	6.00	5.40	-	6.00	6.00	7.20	5.40	-

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Table I.35: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 DRY FODDER YIELD (kg/ha) ZONE A

S.No.	TEST CODE	ENTRY	JNS	MTR	UP MEAN	BWL	HSR	HAR MEAN	GLR	LDA	NDL	ZONE MEAN	RANK
1	IHT 201	MH 2834	5294	9489	7392	10556	9444	10000	7222	9800	23219	8675	17
2	IHT 202	MH 2835	3206	5000	4103	8961	15000	11981	6944	7867	11959	6666	34
3	IHT 203	MH 2836	4361	11156	7758	11821	13944	12883	7778	11000	11043	7883	29
4	IHT 204	MH 2837	2222	10094	6158	9152	15556	12354	7500	8222	17896	7459	30
5	IHT 205	MH 2838	5244	11967	8606	10931	14222	12577	8889	10172	14733	8634	18
6	IHT 206	MH 2839	3194	9322	6258	10707	14778	12742	9444	10372	18041	8682	16
7	IHT 207	MH 2840	4117	10344	7231	14090	17222	15656	9444	11144	23170	10209	3
8	IHT 208	MH 2841	6100	11133	8617	10731	15000	12866	8333	13556	16241	9200	10
9	IHT 209	86M94 (Check)	3922	11494	7708	12023	18889	15456	9722	11517	16022	9163	11
10	IHT 210	MH 2842	6817	12333	9575	12166	20000	16083	8889	12444	20439	10634	1
11	IHT 211	MH 2843	6244	12539	9392	8594	15556	12075	6944	11972	25004	9671	6
12	IHT 212	MH 2844	2367	11606	6986	11833	12222	12028	6389	8706	14893	8023	26
13	IHT 213	MH 2845	9467	11344	10406	10255	7500	8877	6111	9328	14230	8134	24
14	IHT 214	MH 2846	3006	10994	7000	12857	12833	12845	7222	7606	19311	8706	15
15	IHT 215	PB 1852 (Check)	3956	8950	6453	10138	14444	12291	7500	11528	20622	9936	5
16	IHT 216	MH 2847	2906	10022	6464	11232	13889	12561	7778	7011	15452	7903	28
17	IHT 217	MH 2848	6294	11494	8894	12260	18667	15463	5278	13661	22148	10083	4
18	IHT 218	MH 2849	4961	10728	7844	11881	12411	12146	5556	10722	18952	8614	19
19	IHT 219	MH 2850	6033	11633	8833	12038	7778	9908	6111	13617	18365	8459	22
20	IHT 220	DHBH 1397 (Check)	6678	11150	8914	13472	17778	15625	6667	11689	16370	8925	12
21	IHT 221	MH 2851	7906	11494	9700	11346	19444	15395	6111	12411	19637	9631	8
22	IHT 222	MH 2852	8522	13067	10794	13325	7222	10274	6944	12650	21333	9616	9
23	IHT 223	MH 2853	8872	13622	11247	10185	15222	12704	6667	8261	18533	8582	20
24	IHT 224	MH 2854	7583	11117	9350	11484	15222	13353	5833	10350	21267	9637	7
25	IHT 225	MH 2855	3456	11072	7264	9120	6111	7616	5556	7261	17785	7067	31
26	IHT 226	MH 2856	4317	11744	8031	12222	14000	13111	5556	11972	15130	8170	23
27	IHT 227	AHB 1200 (Check)	5128	13072	9100	10559	10556	10557	5000	8656	11204	6982	32
28	IHT 228	MH 2857	4733	12667	8700	12169	14333	13251	6944	12433	19765	8906	13
29	IHT 229	MH 2858	4450	12639	8544	11506	19111	15308	5556	10928	19381	8745	14
30	IHT 230	MH 2859	2861	12072	7467	12685	13333	13009	6944	7906	18226	8470	21
31	IHT 231	MH 2860	2972	12294	7633	11625	14056	12840	6667	7767	19496	7952	27
32	IHT 232	MH 2861	2200	11872	7036	9815	7778	8796	5000	7578	14706	6740	33
33	IHT 233	MH 2862	3611	10511	7061	11082	11111	11097	5556	8533	16389	8073	25
34	IHT 234	MH 2863	4794	13450	9122	16845	16111	16478	11667	13667	20530	10500	2
LOC. MEAN			4935	11279	8107	11461	13845	12653	7051	10362	17985	8669	
C.D. (5%)			1273	1978	2937	2052	5250	5263	1747	970	2393	1171	
C.D. (1%)			1691	2627	3945	2727	6975	7070	2320	1289	3179	1541	
C.V. (%)			15.8	10.8	17.8	11.0	23.3	20.4	15.2	5.7	8.2	20.1	
F (Prob)			0.000	0.000	0.019	0.000	0.000	0.149	0.000	0.000	0.000	0.000	
PLOT SIZE (m ²)			6.00	6.00	-	7.20	6.00	-	6.00	6.00	9.00	-	

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Table I.36: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 DAYS TO 50% FLOWERING ZONE A

S.No.	TEST CODE	ENTRY	BKR*	JPR	JPR2*	TBJ	ALW6	DAS*	RAJ MEAN	TLJ	AND	JMR	SKN*	GUJ MEAN
1	IHT 201	MH 2834	61	52	54	52	53	57	52	48	42	48	56	46
2	IHT 202	MH 2835	53	52	51	50	51	56	51	49	44	49	54	47
3	IHT 203	MH 2836	60	50	55	51	50	55	50	49	45	48	56	47
4	IHT 204	MH 2837	62	51	56	52	50	58	51	50	45	48	54	48
5	IHT 205	MH 2838	54	48	50	53	52	55	51	50	42	48	54	46
6	IHT 206	MH 2839	66	54	62	58	60	63	57	49	52	52	59	51
7	IHT 207	MH 2840	64	55	61	58	58	58	57	48	54	55	57	52
8	IHT 208	MH 2841	54	46	52	50	49	55	49	48	41	47	52	45
9	IHT 209	86M94 (Check)	62	49	54	52	52	57	51	48	44	49	51	47
10	IHT 210	MH 2842	54	53	62	58	54	55	55	47	52	52	55	50
11	IHT 211	MH 2843	65	52	63	59	61	66	57	49	54	54	61	52
12	IHT 212	MH 2844	61	53	56	55	57	60	55	48	52	49	61	50
13	IHT 213	MH 2845	57	53	57	53	51	57	52	48	43	49	58	47
14	IHT 214	MH 2846	58	54	62	60	59	57	57	50	53	53	61	52
15	IHT 215	PB 1852 (Check)	61	53	60	57	52	55	54	47	52	53	58	51
16	IHT 216	MH 2847	57	47	57	53	52	57	51	49	49	48	55	48
17	IHT 217	MH 2848	61	53	56	56	57	58	55	48	52	48	55	49
18	IHT 218	MH 2849	61	49	59	57	51	55	52	47	53	52	56	51
19	IHT 219	MH 2850	59	46	49	49	50	52	49	47	42	46	55	45
20	IHT 220	DHBH 1397 (Check)	60	45	55	51	49	52	48	48	43	48	54	46
21	IHT 221	MH 2851	53	48	50	47	50	52	48	47	43	45	51	45
22	IHT 222	MH 2852	63	52	62	58	60	60	57	48	54	54	60	52
23	IHT 223	MH 2853	60	52	56	57	55	57	55	48	49	51	56	50
24	IHT 224	MH 2854	61	49	53	54	50	51	51	48	47	48	53	48
25	IHT 225	MH 2855	60	54	57	54	53	54	54	47	51	53	55	50
26	IHT 226	MH 2856	61	51	55	53	51	55	52	47	47	49	54	48
27	IHT 227	AHB 1200 (Check)	51	44	51	49	48	52	47	48	46	48	53	47
28	IHT 228	MH 2857	54	47	54	51	51	55	50	49	46	48	54	47
29	IHT 229	MH 2858	54	45	54	52	51	57	49	49	44	48	52	47
30	IHT 230	MH 2859	62	53	62	60	61	61	58	49	55	53	59	52
31	IHT 231	MH 2860	57	50	55	53	53	58	52	47	45	49	52	47
32	IHT 232	MH 2861	57	52	48	49	49	54	50	50	43	48	57	47
33	IHT 233	MH 2862	64	50	55	52	55	57	52	52	47	50	58	50
34	IHT 234	MH 2863	61	54	61	60	58	59	57	50	54	54	59	53
LOC. MEAN			59	51	56	54	53	56	53	48	48	50	56	49
C.D. (5%)			3.0	2.0	2.0	1.0	1.0	2.0	3.0	1.0	2.0	1.0	3.0	4.0
C.D. (1%)			4.0	3.0	2.0	1.0	2.0	3.0	4.0	1.0	3.0	2.0	4.0	5.0
C.V. (%)			3.2	2.3	1.8	0.8	1.4	2.5	3.5	1.2	2.4	1.6	3.3	5.0
F (Prob)			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*LOCATION REJECTED DUE TO DELAYED FLOWERING IN CHECKS

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Table I.36: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 DAYS TO 50% FLOWERING ZONE A

S.No.	TEST CODE	ENTRY	JNS	MTR	UP MEAN	BWL	HSR*	HAR MEAN	GLR	LDA	NDL	ZONE MEAN	RANK
1	IHT 201	MH 2834	51	50	51	53	56	53	49	58	54	51	18
2	IHT 202	MH 2835	51	50	51	54	56	54	49	44	53	50	23
3	IHT 203	MH 2836	50	45	48	51	52	51	44	47	51	48	27
4	IHT 204	MH 2837	51	49	50	51	49	51	44	45	51	49	25
5	IHT 205	MH 2838	47	47	47	51	52	51	46	50	50	49	26
6	IHT 206	MH 2839	58	52	55	58	57	58	48	57	58	55	7
7	IHT 207	MH 2840	57	53	55	56	57	56	56	54	57	55	6
8	IHT 208	MH 2841	50	47	49	50	52	50	45	50	51	48	30
9	IHT 209	86M94 (Check)	53	49	51	52	56	52	49	49	53	50	22
10	IHT 210	MH 2842	55	50	53	55	54	55	50	56	56	53	9
11	IHT 211	MH 2843	55	52	54	56	58	56	56	55	63	56	4
12	IHT 212	MH 2844	38	52	45	57	58	57	53	55	57	52	14
13	IHT 213	MH 2845	51	49	50	52	53	52	50	51	53	50	21
14	IHT 214	MH 2846	59	54	57	58	60	58	57	59	59	56	3
15	IHT 215	PB 1852 (Check)	53	49	51	52	55	52	54	56	55	53	12
16	IHT 216	MH 2847	55	48	52	52	53	52	52	50	52	51	19
17	IHT 217	MH 2848	54	49	51	56	55	56	49	52	57	53	13
18	IHT 218	MH 2849	51	49	50	52	54	52	47	50	54	51	16
19	IHT 219	MH 2850	47	50	49	50	53	50	46	51	55	48	28
20	IHT 220	DHBH 1397 (Check)	47	43	45	50	51	50	44	47	52	47	32
21	IHT 221	MH 2851	37	48	42	49	51	49	44	45	52	46	33
22	IHT 222	MH 2852	57	56	57	59	61	59	56	60	61	56	2
23	IHT 223	MH 2853	52	52	52	56	58	56	49	58	57	53	10
24	IHT 224	MH 2854	55	51	53	51	54	51	46	52	55	51	20
25	IHT 225	MH 2855	55	49	52	55	56	55	55	59	57	54	8
26	IHT 226	MH 2856	54	50	52	53	56	53	50	54	53	51	15
27	IHT 227	AHB 1200 (Check)	47	45	46	50	47	50	42	49	50	47	32
28	IHT 228	MH 2857	52	46	49	51	48	51	43	45	50	48	29
29	IHT 229	MH 2858	56	49	53	52	50	52	49	46	49	49	24
30	IHT 230	MH 2859	63	55	59	59	62	59	56	60	61	57	1
31	IHT 231	MH 2860	56	52	54	54	52	54	49	51	54	51	17
32	IHT 232	MH 2861	49	45	47	50	51	50	41	49	49	48	31
33	IHT 233	MH 2862	56	51	53	55	57	55	55	55	56	53	11
34	IHT 234	MH 2863	57	52	55	57	61	57	53	56	56	55	5
LOC. MEAN			52	50	51	53	55	53	49	52	54	51	
C.D. (5%)			7.0	2.0	7.0	2.0	2.0	2.0	1.0	1.0	2.0	2.0	
C.D. (1%)			10.0	2.0	9.0	3.0	3.0	3.0	1.0	2.0	2.0	2.0	
C.V. (%)			8.6	2.1	6.3	2.6	2.6	2.6	1.0	1.6	2.0	4.6	
F (Prob)			0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

*LOCATION REJECTED DUE TO DELAYED FLOWERING IN CHECKS

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Table I.37: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 DAYS TO MATURITY ZONE A

S.No.	TEST CODE	ENTRY	BKR	JPR	TBJ	ALW6	DAS	RAJ MEAN	TLJ	AND	JMR	SKN	GUJ MEAN
1	IHT 201	MH 2834	89	80	73	79	81	80	78	74	78	94	81
2	IHT 202	MH 2835	83	82	72	78	81	79	80	77	78	89	81
3	IHT 203	MH 2836	90	79	72	78	80	80	81	78	78	90	82
4	IHT 204	MH 2837	91	80	79	78	80	82	80	77	78	89	81
5	IHT 205	MH 2838	84	76	80	79	77	79	81	74	76	90	81
6	IHT 206	MH 2839	96	87	80	85	87	87	81	84	81	90	84
7	IHT 207	MH 2840	92	83	80	83	84	85	78	86	84	92	85
8	IHT 208	MH 2841	84	78	79	77	79	80	79	73	77	89	79
9	IHT 209	86M94 (Check)	92	78	79	79	81	82	78	76	78	89	80
10	IHT 210	MH 2842	84	85	79	80	81	82	77	84	82	90	83
11	IHT 211	MH 2843	94	80	80	85	89	86	79	86	82	90	84
12	IHT 212	MH 2844	91	85	79	82	84	84	78	84	78	91	83
13	IHT 213	MH 2845	87	86	77	78	81	82	78	75	78	90	80
14	IHT 214	MH 2846	87	84	83	85	84	85	81	85	82	90	85
15	IHT 215	PB 1852 (Check)	90	85	80	80	79	83	78	84	82	91	84
16	IHT 216	MH 2847	87	76	75	77	81	79	79	81	77	84	80
17	IHT 217	MH 2848	90	82	76	81	83	83	79	84	77	87	82
18	IHT 218	MH 2849	91	80	77	77	79	81	78	85	80	84	82
19	IHT 219	MH 2850	89	75	78	77	75	79	77	74	75	79	76
20	IHT 220	DHBH 1397 (Check)	89	77	80	77	76	80	79	75	76	80	78
21	IHT 221	MH 2851	83	75	74	77	76	77	76	75	74	81	77
22	IHT 222	MH 2852	91	86	80	85	83	85	79	86	82	88	84
23	IHT 223	MH 2853	89	86	79	80	80	83	78	81	79	84	81
24	IHT 224	MH 2854	90	79	79	76	78	81	78	79	77	87	80
25	IHT 225	MH 2855	90	81	79	78	78	81	77	83	82	85	82
26	IHT 226	MH 2856	90	81	77	79	79	81	77	79	78	87	80
27	IHT 227	AHB 1200 (Check)	81	77	78	77	74	77	78	78	77	83	79
28	IHT 228	MH 2857	84	75	79	77	76	78	79	78	77	86	80
29	IHT 229	MH 2858	84	74	77	77	76	78	79	76	77	86	80
30	IHT 230	MH 2859	90	78	81	84	83	83	80	87	82	86	84
31	IHT 231	MH 2860	87	78	77	80	81	80	77	77	78	78	78
32	IHT 232	MH 2861	86	78	76	75	76	78	80	75	78	80	78
33	IHT 233	MH 2862	90	80	79	80	81	82	82	79	79	80	80
34	IHT 234	MH 2863	91	86	81	82	84	85	80	86	83	86	84
		LOC. MEAN	88	80	78	80	80	81	79	80	79	87	81
		C.D. (5%)	3.0	1.0	0.0	2.0	2.0	3.0	1.0	3.0	1.0	1.0	3.0
		C.D. (1%)	4.0	2.0	1.0	2.0	3.0	4.0	1.0	3.0	1.0	2.0	4.0
		C.V. (%)	2.0	1.0	0.4	1.4	1.7	2.9	0.9	2.0	0.8	1.0	3.0
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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Table I.37: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 DAYS TO MATURITY ZONE A

S.No.	TEST CODE	ENTRY	JNS	MTR	UP MEAN	BWL	HSR	HAR MEAN	GLR	LDA	NDL	ZONE MEAN	RANK
1	IHT 201	MH 2834	85	77	81	84	87	86	81	94	82	82	19
2	IHT 202	MH 2835	90	77	84	86	87	87	81	105	82	83	15
3	IHT 203	MH 2836	79	72	76	83	82	83	80	96	81	81	25
4	IHT 204	MH 2837	88	77	82	84	81	83	72	94	78	82	23
5	IHT 205	MH 2838	84	74	79	84	82	83	82	95	78	81	27
6	IHT 206	MH 2839	86	80	83	90	88	89	82	101	87	87	1
7	IHT 207	MH 2840	83	80	82	89	88	89	80	96	86	85	7
8	IHT 208	MH 2841	88	74	81	83	82	83	81	92	81	81	26
9	IHT 209	86M94 (Check)	87	76	82	84	87	86	76	94	84	82	18
10	IHT 210	MH 2842	87	77	82	87	87	87	80	95	83	84	11
11	IHT 211	MH 2843	88	80	84	88	89	88	81	101	91	86	3
12	IHT 212	MH 2844	87	79	83	90	89	89	78	100	86	85	8
13	IHT 213	MH 2845	83	77	80	84	85	85	80	94	83	82	20
14	IHT 214	MH 2846	83	81	82	91	93	92	80	101	87	86	5
15	IHT 215	PB 1852 (Check)	75	76	75	85	87	86	81	101	82	83	13
16	IHT 216	MH 2847	84	76	80	85	83	84	76	101	82	82	24
17	IHT 217	MH 2848	87	78	83	89	85	87	75	100	87	84	10
18	IHT 218	MH 2849	84	77	80	85	85	85	78	99	82	83	17
19	IHT 219	MH 2850	86	77	82	82	86	84	72	99	84	80	28
20	IHT 220	DHBH 1397 (Check)	87	70	79	82	82	82	68	93	82	80	31
21	IHT 221	MH 2851	86	75	80	82	83	82	67	92	79	78	34
22	IHT 222	MH 2852	81	82	82	91	95	93	78	106	89	86	4
23	IHT 223	MH 2853	86	79	82	89	90	90	70	99	85	83	14
24	IHT 224	MH 2854	89	78	83	84	85	85	72	99	84	82	21
25	IHT 225	MH 2855	87	76	82	88	89	89	76	101	87	84	12
26	IHT 226	MH 2856	87	77	82	86	88	87	77	94	84	83	16
27	IHT 227	AHB 1200 (Check)	78	73	75	82	82	82	67	94	77	78	33
28	IHT 228	MH 2857	86	73	80	83	80	82	68	94	78	80	30
29	IHT 229	MH 2858	85	77	81	85	82	84	67	96	81	80	29
30	IHT 230	MH 2859	89	82	86	93	94	94	81	101	91	87	2
31	IHT 231	MH 2860	84	79	82	86	87	87	81	99	82	82	22
32	IHT 232	MH 2861	87	72	79	82	81	82	70	99	76	79	32
33	IHT 233	MH 2862	87	78	82	88	88	88	81	101	88	84	9
34	IHT 234	MH 2863	83	77	80	89	91	90	81	101	88	86	6
		LOC. MEAN	85	77	81	86	86	86	77	98	84	83	
		C.D. (5%)	9.0	2.0	8.0	3.0	5.0	2.0	1.0	2.0	2.0	2.0	
		C.D. (1%)	12.0	2.0	11.0	4.0	6.0	3.0	2.0	3.0	3.0	3.0	
		C.V. (%)	6.4	1.4	4.5	2.2	3.4	1.4	1.0	1.3	1.5	3.2	
		F (Prob)	0.000	0.000	0.752	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

CHAPTER I: BREEDING

Table I.38: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 PLANT HEIGHT (cm) ZONE A

S.No.	TEST CODE	ENTRY	BKR	JPR	JPR2	TBJ	ALW6	DAS	RAJ MEAN	TLJ	AND	JMR	SKN	GUJ MEAN
1	IHT 201	MH 2834	192	186	205	214	238	185	203	174	185	167	150	169
2	IHT 202	MH 2835	170	192	207	175	252	232	205	180	175	160	171	171
3	IHT 203	MH 2836	173	174	203	198	238	208	199	181	196	160	168	176
4	IHT 204	MH 2837	172	197	208	211	242	233	211	189	186	166	177	180
5	IHT 205	MH 2838	175	158	208	193	255	243	206	192	185	157	159	173
6	IHT 206	MH 2839	178	183	228	198	267	232	214	189	188	171	178	182
7	IHT 207	MH 2840	180	205	238	232	275	227	226	198	216	191	178	196
8	IHT 208	MH 2841	182	195	223	227	263	225	219	201	213	173	182	192
9	IHT 209	86M94 (Check)	185	206	217	226	267	232	222	210	206	182	177	194
10	IHT 210	MH 2842	188	225	230	216	258	237	226	218	201	193	173	196
11	IHT 211	MH 2843	180	256	232	238	293	295	249	209	208	214	198	207
12	IHT 212	MH 2844	189	207	220	215	260	230	220	189	188	192	173	186
13	IHT 213	MH 2845	189	190	207	197	275	242	217	190	196	180	181	187
14	IHT 214	MH 2846	177	193	228	238	282	270	231	211	212	210	200	208
15	IHT 215	PB 1852 (Check)	192	207	235	259	268	242	234	215	218	197	200	208
16	IHT 216	MH 2847	178	167	223	216	273	240	216	208	203	178	166	189
17	IHT 217	MH 2848	178	203	238	232	290	273	236	196	209	187	179	193
18	IHT 218	MH 2849	183	184	208	210	248	235	211	190	173	162	178	176
19	IHT 219	MH 2850	188	187	203	227	263	230	217	198	207	155	171	183
20	IHT 220	DHBH 1397 (Check)	170	204	203	195	243	233	208	193	185	159	168	176
21	IHT 221	MH 2851	183	245	198	201	260	247	222	167	198	138	170	169
22	IHT 222	MH 2852	197	225	245	231	293	277	245	239	217	213	201	218
23	IHT 223	MH 2853	197	216	227	231	275	277	237	215	196	195	188	198
24	IHT 224	MH 2854	187	147	217	238	267	250	218	179	189	163	199	183
25	IHT 225	MH 2855	157	198	138	149	175	255	179	157	168	135	166	157
26	IHT 226	MH 2856	178	174	205	220	243	228	208	188	184	167	173	178
27	IHT 227	AHB 1200 (Check)	177	186	187	208	238	215	202	193	190	156	156	174
28	IHT 228	MH 2857	175	239	230	221	278	247	232	215	195	189	177	194
29	IHT 229	MH 2858	201	198	225	222	272	247	227	249	212	190	184	209
30	IHT 230	MH 2859	177	285	242	225	258	265	242	227	201	207	188	206
31	IHT 231	MH 2860	202	177	223	225	283	255	228	220	198	190	198	202
32	IHT 232	MH 2861	165	219	183	200	237	235	207	188	195	152	155	172
33	IHT 233	MH 2862	188	196	235	221	268	250	226	211	202	197	189	200
34	IHT 234	MH 2863	165	188	223	239	277	267	226	219	207	200	188	204
LOC. MEAN			181	200	216	216	261	243	220	200	197	178	178	188
C.D. (5%)			12.0	10.0	15.0	15.0	9.0	14.0	19.0	9.0	10.0	12.0	9.0	15.0
C.D. (1%)			16.0	13.0	20.0	20.0	12.0	19.0	25.0	12.0	13.0	16.0	11.0	19.0
C.V. (%)			4.2	2.9	4.2	4.3	2.2	3.5	7.6	2.9	3.1	4.2	2.9	5.5
F (Prob)			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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Table I.38: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 PLANT HEIGHT (cm) ZONE A

S.No.	TEST CODE	ENTRY	JNS	MTR	UP MEAN	BWL	HSR	HAR MEAN	GLR	LDA	NDL	ZONE MEAN	RANK
1	IHT 201	MH 2834	199	214	207	189	212	200	219	170	198	194	33
2	IHT 202	MH 2835	209	219	214	189	220	205	218	178	201	197	32
3	IHT 203	MH 2836	204	222	213	211	228	220	220	190	187	198	30
4	IHT 204	MH 2837	185	236	210	206	240	223	245	190	204	205	24
5	IHT 205	MH 2838	198	248	223	193	211	202	221	218	197	201	28
6	IHT 206	MH 2839	188	239	214	212	263	237	230	227	210	211	22
7	IHT 207	MH 2840	225	259	242	228	238	233	240	205	224	221	12
8	IHT 208	MH 2841	208	243	226	229	241	235	244	193	219	215	16
9	IHT 209	86M94 (Check)	201	252	227	224	247	236	244	212	230	219	14
10	IHT 210	MH 2842	200	235	218	217	242	230	247	213	227	219	13
11	IHT 211	MH 2843	242	268	255	227	274	251	262	220	240	239	1
12	IHT 212	MH 2844	209	235	222	213	259	236	229	223	201	214	17
13	IHT 213	MH 2845	215	233	224	214	247	230	225	220	225	213	18
14	IHT 214	MH 2846	208	260	234	222	266	244	235	215	233	227	4
15	IHT 215	PB 1852 (Check)	231	250	240	223	255	239	228	197	209	225	8
16	IHT 216	MH 2847	213	246	230	218	242	230	206	223	220	213	19
17	IHT 217	MH 2848	215	253	234	199	251	225	257	232	224	225	9
18	IHT 218	MH 2849	216	227	222	217	219	218	216	188	213	204	26
19	IHT 219	MH 2850	220	258	239	210	226	218	216	217	215	211	20
20	IHT 220	DHBH 1397 (Check)	216	238	227	228	236	232	213	200	202	205	25
21	IHT 221	MH 2851	222	251	237	206	234	220	224	213	211	210	23
22	IHT 222	MH 2852	278	276	277	231	242	237	229	220	220	237	2
23	IHT 223	MH 2853	232	267	249	217	247	232	241	202	227	226	5
24	IHT 224	MH 2854	246	240	243	209	238	224	223	192	202	211	21
25	IHT 225	MH 2855	157	166	161	148	162	155	174	157	152	165	34
26	IHT 226	MH 2856	181	239	210	202	229	216	220	205	183	201	27
27	IHT 227	AHB 1200 (Check)	231	244	237	193	219	206	184	192	183	197	31
28	IHT 228	MH 2857	235	262	248	215	258	237	229	213	219	223	10
29	IHT 229	MH 2858	278	257	268	222	257	239	242	227	216	229	3
30	IHT 230	MH 2859	198	258	228	225	254	240	222	203	210	226	7
31	IHT 231	MH 2860	200	259	230	223	255	239	244	200	225	222	11
32	IHT 232	MH 2861	192	236	214	193	213	203	198	218	205	199	29
33	IHT 233	MH 2862	194	242	218	225	243	234	211	207	215	217	15
34	IHT 234	MH 2863	249	251	250	222	260	241	243	227	224	226	6
		LOC. MEAN	215	244	229	212	239	225	227	206	211	213	
		C.D. (5%)	55.0	9.0	29.0	21.0	20.0	18.0	9.0	13.0	10.0	9.0	
		C.D. (1%)	73.0	12.0	39.0	28.0	27.0	25.0	13.0	17.0	14.0	12.0	
		C.V. (%)	15.7	2.3	6.2	6.1	5.2	4.0	2.6	3.8	3.0	6.4	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.39: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 PRODUCTIVE TILLERS (No./Plant) ZONE A

S.No.	TEST CODE	ENTRY	BKR	JPR	JPR2**	ALW6	DAS	RAJ MEAN	TLJ	AND	JMR	SKN	GUJ MEAN
1	IHT 201	MH 2834	1.5	1.9	1.3	1.2	3.0	1.9	1.7	3.3	1.7	1.8	2.1
2	IHT 202	MH 2835	1.4	1.1	1.3	1.2	2.0	1.4	2.7	3.1	1.6	1.3	2.2
3	IHT 203	MH 2836	1.4	1.9	1.3	1.3	2.0	1.7	1.7	3.3	1.6	1.3	2.0
4	IHT 204	MH 2837	1.4	1.2	1.0	1.4	2.3	1.6	1.7	3.0	1.6	1.5	2.0
5	IHT 205	MH 2838	1.4	2.0	2.7	1.3	2.3	1.7	2.3	3.1	1.6	1.3	2.1
6	IHT 206	MH 2839	1.4	1.2	1.3	1.3	2.7	1.6	1.7	3.3	1.7	1.3	2.0
7	IHT 207	MH 2840	1.4	1.1	2.0	1.2	2.3	1.5	2.3	2.9	1.5	1.3	2.0
8	IHT 208	MH 2841	1.7	1.6	2.0	1.3	2.7	1.8	2.0	2.9	1.4	1.3	1.9
9	IHT 209	86M94 (Check)	1.4	1.2	1.0	1.3	2.0	1.5	1.7	2.9	1.6	1.3	1.9
10	IHT 210	MH 2842	1.4	1.5	1.7	1.3	2.7	1.7	1.7	3.6	1.7	1.3	2.1
11	IHT 211	MH 2843	1.4	1.1	1.3	1.2	2.3	1.5	2.3	3.1	1.6	1.3	2.1
12	IHT 212	MH 2844	1.4	1.9	2.3	1.2	2.3	1.7	2.0	3.0	1.7	1.3	2.0
13	IHT 213	MH 2845	1.2	1.1	1.0	1.3	2.3	1.5	2.7	3.3	1.8	1.3	2.3
14	IHT 214	MH 2846	1.3	1.9	1.3	1.1	2.7	1.7	2.0	3.4	1.6	1.7	2.2
15	IHT 215	PB 1852 (Check)	1.4	2.7	1.7	1.4	2.3	2.0	2.3	3.5	1.5	1.4	2.2
16	IHT 216	MH 2847	1.7	2.8	1.7	1.2	2.7	2.1	2.3	2.9	2.3	1.3	2.2
17	IHT 217	MH 2848	1.6	2.2	1.3	1.4	2.3	1.9	2.3	3.3	1.5	1.4	2.1
18	IHT 218	MH 2849	1.5	3.8	2.0	1.3	2.3	2.3	3.3	3.5	1.7	1.4	2.5
19	IHT 219	MH 2850	1.4	2.1	1.3	1.5	2.3	1.8	3.3	3.8	1.9	1.3	2.6
20	IHT 220	DHBH 1397 (Check)	1.5	2.5	1.3	1.3	2.0	1.8	2.3	3.6	1.5	1.4	2.2
21	IHT 221	MH 2851	1.8	3.0	3.0	1.6	2.3	2.2	4.7	3.7	2.0	1.4	2.9
22	IHT 222	MH 2852	1.3	1.1	1.3	1.3	3.0	1.7	2.3	3.2	1.6	1.3	2.1
23	IHT 223	MH 2853	1.5	1.5	1.3	1.3	2.3	1.7	2.3	3.5	1.6	1.5	2.2
24	IHT 224	MH 2854	1.5	1.1	2.7	1.4	3.0	1.7	3.3	3.3	1.9	1.6	2.5
25	IHT 225	MH 2855	1.5	2.3	1.0	1.4	2.0	1.8	2.3	4.3	1.6	1.5	2.4
26	IHT 226	MH 2856	1.6	1.4	1.7	1.2	3.0	1.8	2.3	2.9	1.6	1.6	2.1
27	IHT 227	AHB 1200 (Check)	1.4	1.1	1.7	1.2	2.0	1.4	2.3	3.0	1.5	1.1	2.0
28	IHT 228	MH 2857	1.4	1.7	1.0	1.3	2.3	1.7	2.7	2.7	1.8	1.7	2.2
29	IHT 229	MH 2858	1.5	2.2	1.3	1.3	2.7	1.9	2.7	3.8	1.5	1.5	2.4
30	IHT 230	MH 2859	1.3	2.1	2.0	1.2	2.0	1.7	1.7	3.1	1.5	1.3	1.9
31	IHT 231	MH 2860	1.5	1.3	1.3	1.2	2.7	1.7	2.3	3.3	1.5	1.7	2.2
32	IHT 232	MH 2861	1.3	2.5	1.3	1.2	3.0	2.0	1.7	2.5	1.5	1.5	1.8
33	IHT 233	MH 2862	1.7	1.4	1.7	1.2	3.0	1.8	2.3	3.5	1.9	1.5	2.3
34	IHT 234	MH 2863	1.3	1.0	1.7	1.3	3.0	1.6	2.3	3.9	1.7	1.7	2.4
		LOC. MEAN	1.5	1.8	1.6	1.3	2.5	1.7	2.3	3.3	1.6	1.4	2.2
		C.D. (5%)	0.2	0.4	1.1	0.2	0.7	0.6	0.9	0.6	0.3	0.3	0.5
		C.D. (1%)	0.3	0.5	1.4	0.3	1.0	0.8	1.2	0.8	0.4	0.4	0.7
		C.V. (%)	9.8	12.7	41.4	9.7	18.2	24.8	23.4	10.6	11.1	13.6	15.8
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.036

**LOCATION REJECTED DUE TO HIGH C.V. (i.e. > 30%): JPR2 41.4%

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Table I.39: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 PRODUCTIVE TILLERS (No./Plant) ZONE A

S.No.	TEST CODE	ENTRY	JNS	MTR	UP MEAN	BWL	HSR	HAR MEAN	GLR	LDA	NDL	ZONE MEAN	RANK
1	IHT 201	MH 2834	2.2	1.1	1.7	2.4	3.4	2.9	1.8	2.2	3.0	2.1	6
2	IHT 202	MH 2835	3.1	1.4	2.3	2.8	2.6	2.7	2.1	2.3	3.0	2.1	10
3	IHT 203	MH 2836	1.7	1.1	1.4	2.1	2.1	2.1	2.0	2.2	2.9	1.9	26
4	IHT 204	MH 2837	1.5	1.1	1.3	1.9	2.3	2.1	2.1	2.3	2.8	1.9	29
5	IHT 205	MH 2838	2.3	1.2	1.7	2.4	3.0	2.7	1.8	1.6	3.0	2.0	15
6	IHT 206	MH 2839	2.6	1.2	1.9	2.1	2.7	2.4	2.0	2.4	2.8	2.0	16
7	IHT 207	MH 2840	1.3	1.1	1.2	2.0	2.8	2.4	1.7	1.2	2.9	1.8	33
8	IHT 208	MH 2841	1.4	1.2	1.3	2.0	2.3	2.2	1.9	1.5	2.8	1.9	30
9	IHT 209	86M94 (Check)	1.3	1.1	1.2	1.9	2.2	2.1	1.8	1.2	2.9	1.7	34
10	IHT 210	MH 2842	1.9	1.2	1.6	1.8	2.1	2.0	2.4	2.2	2.9	2.0	20
11	IHT 211	MH 2843	2.1	1.1	1.6	1.8	2.2	2.0	2.2	1.4	2.8	1.9	31
12	IHT 212	MH 2844	1.5	1.1	1.3	2.3	2.3	2.3	2.0	1.7	2.8	1.9	28
13	IHT 213	MH 2845	2.3	1.2	1.8	2.2	2.9	2.6	1.7	1.4	2.9	2.0	21
14	IHT 214	MH 2846	1.4	1.1	1.3	3.0	2.3	2.7	1.7	1.3	2.8	2.0	24
15	IHT 215	PB 1852 (Check)	1.2	1.2	1.2	2.9	2.5	2.7	1.8	2.2	2.7	2.1	11
16	IHT 216	MH 2847	2.1	1.2	1.6	2.2	2.4	2.3	1.7	2.3	2.8	2.1	7
17	IHT 217	MH 2848	1.6	1.2	1.4	2.8	2.2	2.5	1.9	1.6	2.7	2.0	17
18	IHT 218	MH 2849	1.3	1.2	1.3	3.2	2.6	2.9	1.9	1.6	2.8	2.2	3
19	IHT 219	MH 2850	1.2	1.2	1.2	2.9	2.4	2.7	1.9	2.2	2.8	2.2	4
20	IHT 220	DHBH 1397 (Check)	1.5	1.2	1.4	2.3	2.5	2.4	1.9	2.2	2.9	2.1	14
21	IHT 221	MH 2851	1.5	1.3	1.4	2.9	3.1	3.0	2.3	3.0	3.0	2.5	1
22	IHT 222	MH 2852	1.4	1.2	1.3	1.9	2.8	2.3	2.1	2.1	2.8	2.0	23
23	IHT 223	MH 2853	1.7	1.1	1.4	2.4	2.8	2.6	1.9	1.8	2.7	2.0	19
24	IHT 224	MH 2854	2.1	1.2	1.7	2.9	2.7	2.8	1.9	1.6	2.8	2.1	5
25	IHT 225	MH 2855	2.4	1.3	1.8	2.4	3.0	2.7	3.2	2.1	3.0	2.3	2
26	IHT 226	MH 2856	2.3	1.1	1.7	2.5	2.4	2.5	1.9	2.2	2.9	2.1	13
27	IHT 227	AHB 1200 (Check)	1.3	1.1	1.2	2.4	2.4	2.4	1.4	2.1	2.7	1.8	32
28	IHT 228	MH 2857	1.4	1.2	1.3	2.5	2.6	2.6	1.1	1.6	2.8	1.9	25
29	IHT 229	MH 2858	1.3	1.1	1.2	2.6	2.8	2.7	1.9	2.1	2.9	2.1	8
30	IHT 230	MH 2859	1.7	1.1	1.4	2.5	2.3	2.4	1.4	2.3	3.0	1.9	27
31	IHT 231	MH 2860	1.6	1.1	1.3	2.1	2.3	2.2	1.9	2.2	2.8	2.0	22
32	IHT 232	MH 2861	1.7	1.0	1.4	2.8	2.8	2.8	1.8	1.5	2.9	2.0	18
33	IHT 233	MH 2862	1.4	1.1	1.2	2.7	2.5	2.6	1.9	2.2	2.8	2.1	12
34	IHT 234	MH 2863	1.4	1.2	1.3	2.3	2.8	2.6	2.0	3.1	2.7	2.1	9
LOC. MEAN			1.7	1.2	1.4	2.4	2.6	2.5	1.9	2.0	2.9	2.0	
C.D. (5%)			0.4	0.1	0.7	0.6	0.7	0.5	0.8	0.3	0.5	0.3	
C.D. (1%)			0.6	0.2	1.0	0.8	1.0	0.7	1.0	0.4	0.6	0.3	
C.V. (%)			15.5	7.7	22.4	15.1	17.2	14.4	25.2	10.5	9.8	17.9	
F (Prob)			0.000	0.000	0.605	0.000	0.000	0.291	0.000	0.000	0.000	0.000	

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Table I.40: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 PANICLE LENGTH (cm) ZONE A

S.No.	TEST CODE	ENTRY	BKR	JPR	JPR2	TBJ	ALW6	DAS	RAJ MEAN	TLJ	AND	JMR	SKN	GUJ MEAN
1	IHT 201	MH 2834	25	22	23	19	23	20	22	21	22	20	20	21
2	IHT 202	MH 2835	27	18	26	20	25	24	23	24	24	23	21	23
3	IHT 203	MH 2836	26	21	23	18	21	22	22	22	23	22	19	21
4	IHT 204	MH 2837	23	22	24	18	23	24	22	23	25	22	20	23
5	IHT 205	MH 2838	26	20	25	21	25	24	24	23	24	22	19	22
6	IHT 206	MH 2839	24	21	23	18	24	26	23	23	29	23	27	26
7	IHT 207	MH 2840	24	21	26	20	25	22	23	23	26	26	23	24
8	IHT 208	MH 2841	23	21	26	20	26	23	23	24	24	23	24	24
9	IHT 209	86M94 (Check)	24	24	23	21	25	24	24	24	25	24	22	24
10	IHT 210	MH 2842	24	23	23	20	24	24	23	22	25	25	23	24
11	IHT 211	MH 2843	27	30	28	21	28	28	27	25	27	27	24	26
12	IHT 212	MH 2844	24	23	25	21	25	24	23	26	26	25	22	25
13	IHT 213	MH 2845	23	22	23	20	24	24	23	23	26	22	22	23
14	IHT 214	MH 2846	21	28	26	22	26	26	25	26	29	27	25	27
15	IHT 215	PB 1852 (Check)	22	20	22	21	23	24	22	21	28	22	23	24
16	IHT 216	MH 2847	25	24	25	20	24	24	24	22	27	24	22	24
17	IHT 217	MH 2848	25	27	26	23	26	25	25	23	26	23	21	23
18	IHT 218	MH 2849	20	22	23	18	21	25	22	20	27	20	21	22
19	IHT 219	MH 2850	27	20	22	22	25	25	24	22	27	22	23	24
20	IHT 220	DHBH 1397 (Check)	23	26	22	21	22	25	23	21	23	20	19	21
21	IHT 221	MH 2851	23	25	24	22	24	24	23	22	25	21	20	22
22	IHT 222	MH 2852	24	25	24	22	24	24	24	22	28	23	23	24
23	IHT 223	MH 2853	26	23	27	23	26	26	25	27	28	26	26	27
24	IHT 224	MH 2854	24	22	24	22	26	25	24	21	27	19	22	22
25	IHT 225	MH 2855	22	20	21	20	21	24	21	20	26	22	20	22
26	IHT 226	MH 2856	25	20	24	21	23	23	23	24	24	20	21	22
27	IHT 227	AHB 1200 (Check)	24	20	23	20	22	24	22	23	27	25	22	24
28	IHT 228	MH 2857	24	25	25	20	22	25	23	22	26	22	19	22
29	IHT 229	MH 2858	24	28	22	18	22	24	23	22	25	22	21	22
30	IHT 230	MH 2859	23	31	27	21	26	26	26	24	26	26	23	25
31	IHT 231	MH 2860	31	19	28	25	30	28	27	32	28	35	25	30
32	IHT 232	MH 2861	21	22	25	20	20	24	22	21	27	20	22	23
33	IHT 233	MH 2862	25	24	25	22	27	26	25	26	27	25	22	25
34	IHT 234	MH 2863	23	20	22	18	24	25	22	24	26	23	23	24
LOC. MEAN			24	23	24	21	24	24	23	23	26	23	22	24
C.D. (5%)			3.0	2.0	3.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	3.0	2.0
C.D. (1%)			4.0	2.0	4.0	3.0	2.0	2.0	3.0	1.0	3.0	3.0	4.0	3.0
C.V. (%)			7.8	4.3	7.3	6.1	3.8	4.3	7.6	2.5	4.9	6.4	8.0	6.5
F (Prob)			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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Table I.40: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 PANICLE LENGTH (cm) ZONE A

S.No.	TEST CODE	ENTRY	JNS	MTR	UP MEAN	BWL	HSR	HAR MEAN	GLR	LDA	NDL	ZONE MEAN	RANK
1	IHT 201	MH 2834	25	24	25	27	26	27	25	24	24	23	27
2	IHT 202	MH 2835	29	26	28	30	27	29	26	25	28	25	9
3	IHT 203	MH 2836	24	24	24	27	27	27	25	24	24	23	26
4	IHT 204	MH 2837	25	23	24	27	27	27	27	26	26	24	20
5	IHT 205	MH 2838	24	25	24	28	28	28	26	26	27	24	15
6	IHT 206	MH 2839	24	24	24	25	27	26	25	26	27	24	13
7	IHT 207	MH 2840	23	25	24	30	27	28	23	26	29	25	11
8	IHT 208	MH 2841	24	27	25	29	28	29	25	27	25	25	10
9	IHT 209	86M94 (Check)	23	25	24	27	27	27	26	26	27	25	11
10	IHT 210	MH 2842	24	24	24	27	27	27	25	25	26	24	16
11	IHT 211	MH 2843	23	26	25	29	28	29	29	29	28	27	2
12	IHT 212	MH 2844	26	25	25	28	27	28	26	28	25	25	8
13	IHT 213	MH 2845	21	24	22	24	26	25	25	21	27	23	24
14	IHT 214	MH 2846	22	27	25	29	28	29	27	27	28	26	5
15	IHT 215	PB 1852 (Check)	23	23	23	24	26	25	24	20	23	23	28
16	IHT 216	MH 2847	23	23	23	27	27	27	26	23	24	24	17
17	IHT 217	MH 2848	23	25	24	29	26	27	27	28	25	25	7
18	IHT 218	MH 2849	20	22	21	25	27	26	21	25	24	22	32
19	IHT 219	MH 2850	23	28	25	27	26	27	24	29	24	25	12
20	IHT 220	DHBH 1397 (Check)	23	22	22	24	27	26	23	22	24	23	29
21	IHT 221	MH 2851	22	22	22	27	28	28	25	22	25	23	21
22	IHT 222	MH 2852	23	26	25	26	27	27	25	26	23	24	14
23	IHT 223	MH 2853	22	27	25	30	27	29	26	31	28	27	3
24	IHT 224	MH 2854	22	25	23	26	27	27	24	27	27	24	18
25	IHT 225	MH 2855	22	22	22	25	27	26	24	28	23	23	31
26	IHT 226	MH 2856	24	22	23	28	26	27	26	23	24	23	22
27	IHT 227	AHB 1200 (Check)	22	24	23	28	27	27	22	21	23	23	23
28	IHT 228	MH 2857	23	22	23	27	26	26	29	23	26	24	19
29	IHT 229	MH 2858	23	24	23	26	27	26	21	23	22	23	25
30	IHT 230	MH 2859	24	27	26	29	28	28	29	31	28	26	4
31	IHT 231	MH 2860	25	31	28	37	27	32	29	32	28	29	1
32	IHT 232	MH 2861	23	22	22	25	27	26	23	22	24	23	30
33	IHT 233	MH 2862	23	24	24	30	26	28	25	30	24	25	6
34	IHT 234	MH 2863	23	28	26	27	27	27	26	26	25	24	16
		LOC. MEAN	23	25	24	27	27	27	25	26	25	24	
		C.D. (5%)	4.0	1.0	3.0	3.0	2.0	3.0	2.0	2.0	2.0	1.0	
		C.D. (1%)	5.0	1.0	4.0	3.0	3.0	5.0	2.0	3.0	2.0	2.0	
		C.V. (%)	10.3	2.3	6.5	5.8	5.3	6.1	3.7	5.5	4.1	7.0	
		F (Prob)	0.000	0.000	0.058	0.000	0.000	0.259	0.000	0.000	0.000	0.000	

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Table I.41: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 PANICLE DIAMETER (cm) ZONE A

S.No.	TEST CODE	ENTRY	BKR	JPR	JPR2	ALW6	DAS	RAJ MEAN	TLJ	AND	JMR	SKN	GUJ MEAN
1	IHT 201	MH 2834	2.9	3.3	3.6	3.5	3.3	3.3	3.7	3.8	3.0	2.3	3.2
2	IHT 202	MH 2835	2.9	2.9	3.0	3.3	3.3	3.1	3.1	3.4	2.7	2.4	2.9
3	IHT 203	MH 2836	2.9	3.3	3.3	3.2	2.9	3.1	3.4	3.0	3.1	2.2	2.9
4	IHT 204	MH 2837	2.9	3.2	3.1	3.1	3.4	3.2	3.8	2.8	2.9	2.4	3.0
5	IHT 205	MH 2838	2.8	2.7	3.2	3.3	3.4	3.1	3.4	3.6	3.0	2.3	3.1
6	IHT 206	MH 2839	3.1	3.0	3.2	3.4	3.2	3.2	3.6	3.3	3.1	3.3	3.4
7	IHT 207	MH 2840	2.8	3.3	3.4	3.3	3.2	3.2	3.3	3.5	3.2	2.8	3.2
8	IHT 208	MH 2841	2.8	3.2	3.3	3.3	3.6	3.2	3.5	3.0	3.0	3.0	3.1
9	IHT 209	86M94 (Check)	3.0	2.6	3.2	3.2	3.2	3.1	3.5	3.5	2.9	2.9	3.2
10	IHT 210	MH 2842	3.0	3.3	3.3	3.4	3.2	3.3	3.5	2.9	3.3	2.9	3.2
11	IHT 211	MH 2843	2.6	3.4	3.2	3.2	3.5	3.2	3.3	3.2	3.1	3.1	3.2
12	IHT 212	MH 2844	3.1	3.3	3.3	3.5	3.6	3.4	3.8	3.0	3.4	2.8	3.3
13	IHT 213	MH 2845	2.7	3.1	3.1	3.1	2.9	3.0	3.2	3.8	2.7	2.9	3.2
14	IHT 214	MH 2846	2.9	3.5	3.1	3.4	3.4	3.3	3.8	3.3	3.2	3.3	3.4
15	IHT 215	PB 1852 (Check)	2.7	3.2	3.4	3.2	3.0	3.1	3.6	2.8	3.1	3.2	3.2
16	IHT 216	MH 2847	2.5	2.9	2.9	3.0	3.4	2.9	2.9	3.6	2.6	3.1	3.0
17	IHT 217	MH 2848	2.8	3.2	3.1	3.3	3.0	3.1	3.3	3.4	2.7	2.9	3.1
18	IHT 218	MH 2849	2.8	2.3	3.3	3.3	3.4	3.0	3.3	3.5	3.2	2.9	3.2
19	IHT 219	MH 2850	2.8	3.3	2.9	2.9	2.9	3.0	3.2	3.1	2.4	3.3	3.0
20	IHT 220	DHBH 1397 (Check)	2.5	2.7	3.0	3.2	3.5	3.0	3.2	3.4	2.8	2.8	3.1
21	IHT 221	MH 2851	2.5	2.7	2.8	2.7	3.4	2.8	2.4	3.7	2.2	3.0	2.8
22	IHT 222	MH 2852	2.5	3.9	2.9	3.0	3.1	3.1	3.4	3.1	2.7	3.4	3.2
23	IHT 223	MH 2853	2.7	3.5	3.1	3.1	3.1	3.1	3.4	3.9	2.5	3.8	3.4
24	IHT 224	MH 2854	2.8	3.3	3.1	3.3	3.3	3.2	3.1	3.5	2.6	3.3	3.1
25	IHT 225	MH 2855	2.8	3.2	2.8	3.1	3.2	3.0	3.2	3.6	2.9	3.2	3.2
26	IHT 226	MH 2856	2.8	3.1	3.3	3.4	3.5	3.2	3.5	3.6	2.8	3.2	3.3
27	IHT 227	AHB 1200 (Check)	2.5	2.5	3.0	3.1	3.0	2.8	3.6	3.2	2.8	3.4	3.3
28	IHT 228	MH 2857	2.8	2.9	3.2	3.0	3.1	3.0	3.6	3.5	2.7	3.1	3.2
29	IHT 229	MH 2858	2.8	3.2	2.7	3.0	3.7	3.1	3.5	3.5	2.8	3.3	3.3
30	IHT 230	MH 2859	3.1	3.2	3.2	3.4	4.0	3.4	3.7	3.9	3.7	3.6	3.7
31	IHT 231	MH 2860	2.5	4.1	2.4	2.6	3.1	3.0	3.0	3.2	2.5	3.9	3.1
32	IHT 232	MH 2861	2.9	3.6	3.3	3.0	3.2	3.2	3.6	2.9	2.6	3.6	3.2
33	IHT 233	MH 2862	2.8	3.2	3.1	3.1	3.0	3.0	3.3	3.9	2.8	3.5	3.4
34	IHT 234	MH 2863	2.8	2.8	3.1	3.5	3.5	3.2	3.8	3.3	3.3	3.7	3.5
		LOC. MEAN	2.8	3.2	3.1	3.2	3.3	3.1	3.4	3.4	2.9	3.1	3.2
		C.D. (5%)	0.2	0.3	0.4	0.2	0.3	0.3	0.2	0.2	0.3	0.1	0.4
		C.D. (1%)	0.3	0.3	0.5	0.3	0.4	0.5	0.2	0.2	0.5	0.2	0.5
		C.V. (%)	4.6	5.0	8.1	4.4	5.2	8.0	2.9	3.1	7.3	2.8	8.4
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.056	0.000	0.000	0.000	0.000	0.023

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Table I.41: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 PANICLE DIAMETER (cm) ZONE A

S.No.	TEST CODE	ENTRY	JNS	MTR	UP MEAN	BWL	HSR	HAR MEAN	GLR	LDA	NDL	ZONE MEAN	RANK
1	IHT 201	MH 2834	2.5	3.7	3.1	3.7	4.3	4.0	3.2	3.5	3.5	3.4	7
2	IHT 202	MH 2835	2.6	3.5	3.0	3.6	4.0	3.8	2.8	3.5	3.5	3.1	25
3	IHT 203	MH 2836	2.5	3.8	3.2	3.8	4.3	4.1	3.2	3.9	3.0	3.2	16
4	IHT 204	MH 2837	2.2	3.6	2.9	3.4	4.1	3.8	3.3	3.7	3.3	3.2	21
5	IHT 205	MH 2838	2.7	3.8	3.3	3.7	4.3	4.0	3.1	3.3	3.4	3.3	15
6	IHT 206	MH 2839	2.9	3.7	3.3	3.5	4.3	3.9	3.1	3.9	3.4	3.4	5
7	IHT 207	MH 2840	2.5	3.7	3.1	3.7	4.2	4.0	2.4	3.4	3.5	3.3	14
8	IHT 208	MH 2841	2.5	3.7	3.1	3.8	4.1	3.9	3.1	3.6	3.3	3.3	11
9	IHT 209	86M94 (Check)	2.7	3.6	3.1	3.7	4.4	4.1	3.2	3.6	3.5	3.3	10
10	IHT 210	MH 2842	2.4	3.8	3.1	4.0	4.4	4.2	3.3	3.9	3.4	3.4	6
11	IHT 211	MH 2843	2.4	4.1	3.3	3.6	4.2	3.9	3.0	3.7	3.5	3.3	9
12	IHT 212	MH 2844	2.5	3.5	3.0	3.8	4.3	4.1	3.1	4.0	3.4	3.4	3
13	IHT 213	MH 2845	2.3	3.5	2.9	3.3	4.1	3.7	2.5	3.1	3.3	3.1	29
14	IHT 214	MH 2846	2.5	4.1	3.3	4.1	4.5	4.3	3.1	3.4	3.7	3.5	2
15	IHT 215	PB 1852 (Check)	2.5	3.6	3.1	3.5	4.3	3.9	2.5	3.4	3.4	3.2	19
16	IHT 216	MH 2847	2.1	3.7	2.9	3.4	3.9	3.7	2.5	3.4	3.0	3.0	31
17	IHT 217	MH 2848	2.5	3.3	2.9	3.5	4.1	3.8	2.5	3.6	3.1	3.1	28
18	IHT 218	MH 2849	2.0	3.7	2.9	3.9	4.1	4.0	2.6	3.7	3.4	3.2	20
19	IHT 219	MH 2850	2.2	3.5	2.9	3.1	3.7	3.4	2.5	3.4	2.6	3.0	32
20	IHT 220	DHBH 1397 (Check)	2.2	3.9	3.0	3.7	4.3	4.0	2.5	3.6	3.5	3.2	23
21	IHT 221	MH 2851	2.3	3.5	2.9	3.2	4.1	3.7	2.4	2.9	2.4	2.9	33
22	IHT 222	MH 2852	2.4	3.3	2.9	3.4	4.0	3.7	2.5	3.5	3.0	3.1	27
23	IHT 223	MH 2853	2.7	3.9	3.3	3.4	4.1	3.8	2.4	3.8	3.0	3.3	13
24	IHT 224	MH 2854	2.7	3.6	3.1	3.4	3.9	3.7	2.6	3.5	3.1	3.2	22
25	IHT 225	MH 2855	2.5	3.5	3.0	3.6	4.1	3.9	2.0	3.6	3.0	3.1	26
26	IHT 226	MH 2856	2.3	3.7	3.0	3.9	4.1	4.0	3.1	3.6	3.4	3.3	8
27	IHT 227	AHB 1200 (Check)	2.5	3.3	2.9	3.9	4.1	4.0	2.7	3.4	3.3	3.1	26
28	IHT 228	MH 2857	2.4	3.7	3.1	3.4	4.3	3.8	2.8	3.2	3.0	3.2	24
29	IHT 229	MH 2858	2.2	3.7	3.0	3.6	3.9	3.8	2.6	3.7	3.2	3.2	18
30	IHT 230	MH 2859	2.3	4.2	3.3	4.3	4.4	4.4	3.3	4.3	3.4	3.6	1
31	IHT 231	MH 2860	2.4	3.9	3.1	3.4	4.0	3.7	2.5	3.1	2.7	3.1	30
32	IHT 232	MH 2861	2.2	3.7	3.0	3.9	4.2	4.1	3.3	3.5	3.0	3.3	12
33	IHT 233	MH 2862	2.0	3.8	2.9	3.5	4.2	3.8	2.6	3.6	3.2	3.2	17
34	IHT 234	MH 2863	2.1	3.9	3.0	3.8	4.2	4.0	3.3	4.0	3.1	3.4	4
		LOC. MEAN	2.4	3.7	3.1	3.6	4.2	3.9	2.8	3.6	3.2	3.2	
		C.D. (5%)	0.4	0.2	0.7	0.4	0.4	0.4	0.2	0.4	0.4	0.2	
		C.D. (1%)	0.5	0.3	1.0	0.5	0.5	0.5	0.3	0.5	0.5	0.2	
		C.V. (%)	10.1	3.4	13.0	6.3	5.6	4.9	4.8	6.9	7.6	7.9	
		F (Prob)	0.000	0.000	0.796	0.000	0.000	0.005	0.000	0.000	0.000	0.000	

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Table I.42: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 1000- SEED Wt.(g) ZONE A

S.No.	TEST CODE	ENTRY	BKR	JPR	JPR2	ALW6	DAS	RAJ MEAN	TLJ	JMR	GUJ MEAN
1	IHT 201	MH 2834	9.8	7.8	10.2	10.3	8.2	9.3	12.0	11.4	11.7
2	IHT 202	MH 2835	9.1	11.0	8.9	9.7	12.2	10.2	13.5	12.2	12.8
3	IHT 203	MH 2836	9.6	9.1	7.3	7.3	13.2	9.3	14.2	11.4	12.8
4	IHT 204	MH 2837	8.6	7.2	8.2	8.0	11.1	8.6	14.5	11.8	13.2
5	IHT 205	MH 2838	9.6	8.6	8.8	9.0	10.2	9.2	12.3	11.3	11.8
6	IHT 206	MH 2839	8.2	7.2	7.3	9.7	8.5	8.2	11.9	10.3	11.1
7	IHT 207	MH 2840	8.7	8.6	10.5	11.3	12.1	10.3	12.0	11.2	11.6
8	IHT 208	MH 2841	9.2	8.5	8.3	9.7	10.5	9.2	12.5	11.8	12.2
9	IHT 209	86M94 (Check)	10.0	8.7	8.2	9.0	11.4	9.5	13.1	10.9	12.0
10	IHT 210	MH 2842	9.6	8.6	10.2	9.7	9.7	9.5	12.0	10.7	11.3
11	IHT 211	MH 2843	7.9	10.4	9.9	10.0	10.1	9.7	13.1	12.2	12.7
12	IHT 212	MH 2844	9.1	7.6	9.1	10.3	9.2	9.1	12.4	10.3	11.4
13	IHT 213	MH 2845	8.7	7.8	8.2	8.7	10.3	8.7	9.9	10.0	10.0
14	IHT 214	MH 2846	7.7	9.1	7.6	10.3	10.6	9.1	12.7	11.6	12.2
15	IHT 215	PB 1852 (Check)	9.2	10.0	8.8	10.3	10.4	9.7	12.7	11.3	12.0
16	IHT 216	MH 2847	8.8	8.6	8.0	8.7	11.7	9.2	13.4	10.4	11.9
17	IHT 217	MH 2848	8.8	8.8	8.0	10.3	11.4	9.5	11.0	10.9	10.9
18	IHT 218	MH 2849	8.6	9.8	8.4	10.0	10.5	9.5	10.2	9.8	10.0
19	IHT 219	MH 2850	8.8	10.8	8.9	9.7	12.6	10.1	12.4	10.5	11.5
20	IHT 220	DHBH 1397 (Check)	9.1	8.8	9.5	8.7	12.4	9.7	12.8	10.6	11.7
21	IHT 221	MH 2851	8.8	9.3	8.6	8.0	10.1	9.0	11.7	9.0	10.4
22	IHT 222	MH 2852	8.4	8.6	8.2	9.0	9.8	8.8	11.5	10.3	10.9
23	IHT 223	MH 2853	8.5	9.8	7.2	9.7	8.3	8.7	12.0	9.4	10.7
24	IHT 224	MH 2854	9.0	9.6	9.0	9.3	9.2	9.2	10.3	9.7	10.0
25	IHT 225	MH 2855	8.4	7.1	8.0	6.7	7.6	7.6	12.4	7.6	10.0
26	IHT 226	MH 2856	8.3	7.2	8.5	7.7	8.9	8.1	10.5	9.0	9.7
27	IHT 227	AHB 1200 (Check)	9.0	7.3	7.8	8.0	11.3	8.7	12.2	10.8	11.5
28	IHT 228	MH 2857	8.9	7.0	8.3	9.0	9.8	8.6	11.7	10.2	11.0
29	IHT 229	MH 2858	8.3	6.7	8.2	8.0	9.6	8.2	11.7	9.6	10.7
30	IHT 230	MH 2859	8.8	7.6	8.5	10.7	10.4	9.2	12.4	11.6	12.0
31	IHT 231	MH 2860	8.9	6.9	7.1	8.0	8.6	7.9	11.5	10.1	10.8
32	IHT 232	MH 2861	8.5	7.6	7.5	7.3	9.6	8.1	10.6	10.1	10.4
33	IHT 233	MH 2862	8.4	7.8	8.4	8.3	11.6	8.9	10.2	10.3	10.2
34	IHT 234	MH 2863	9.8	7.0	8.9	10.3	9.8	9.2	11.2	10.4	10.8
		LOC. MEAN	8.9	8.4	8.5	9.1	10.3	9.0	12.0	10.6	11.3
		C.D. (5%)	1.4	0.7	1.3	1.0	0.3	1.2	0.5	0.9	2.0
		C.D. (1%)	1.9	0.9	1.7	1.3	0.4	1.5	0.6	1.1	2.7
		C.V. (%)	9.8	5.1	9.3	6.8	1.8	9.5	2.3	4.9	8.8
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.013

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Table I.42: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 1000- SEED Wt.(g) ZONE A

S.No.	TEST CODE	ENTRY	MTR	BWL	HSR	HAR MEAN	GLR	LDA	NDL	ZONE MEAN	RANK
1	IHT 201	MH 2834	11.0	11.7	11.2	11.4	11.5	12.9	12.6	10.8	7
2	IHT 202	MH 2835	10.6	11.2	12.8	12.0	11.1	10.8	12.3	11.2	2
3	IHT 203	MH 2836	10.1	11.1	13.5	12.3	11.0	11.8	12.7	10.9	3
4	IHT 204	MH 2837	10.4	10.8	14.8	12.8	11.1	12.5	11.7	10.8	5
5	IHT 205	MH 2838	12.0	11.5	12.2	11.8	10.5	12.8	11.5	10.8	8
6	IHT 206	MH 2839	10.4	10.0	9.7	9.9	11.2	12.2	11.4	9.9	25
7	IHT 207	MH 2840	10.3	12.1	12.2	12.2	11.4	12.5	13.0	11.2	1
8	IHT 208	MH 2841	10.1	9.4	12.2	10.8	11.3	10.8	10.5	10.4	17
9	IHT 209	86M94 (Check)	11.1	12.4	12.5	12.5	11.8	11.1	10.5	10.8	6
10	IHT 210	MH 2842	10.2	12.9	11.5	12.2	11.3	11.9	10.4	10.7	14
11	IHT 211	MH 2843	9.9	9.1	11.3	10.2	11.5	13.0	11.4	10.8	11
12	IHT 212	MH 2844	9.9	9.8	10.4	10.1	11.7	13.3	9.8	10.2	20
13	IHT 213	MH 2845	10.5	11.1	9.5	10.3	11.6	8.7	11.1	9.7	30
14	IHT 214	MH 2846	10.3	10.0	12.5	11.3	12.1	13.5	11.7	10.8	9
15	IHT 215	PB 1852 (Check)	10.4	10.1	12.2	11.2	10.7	11.7	11.2	10.7	12
16	IHT 216	MH 2847	10.3	10.9	11.8	11.3	11.5	11.1	8.8	10.3	18
17	IHT 217	MH 2848	10.1	10.3	12.4	11.3	11.2	13.3	10.4	10.5	15
18	IHT 218	MH 2849	10.7	10.5	12.1	11.3	11.3	10.5	10.7	10.2	19
19	IHT 219	MH 2850	10.3	9.8	12.3	11.1	11.2	10.3	11.0	10.7	13
20	IHT 220	DHBH 1397 (Check)	10.6	9.7	12.1	10.9	11.3	13.3	12.1	10.8	4
21	IHT 221	MH 2851	11.1	9.8	9.6	9.7	11.1	10.3	8.9	9.7	28
22	IHT 222	MH 2852	10.8	10.2	11.2	10.7	11.5	9.5	9.3	9.9	23
23	IHT 223	MH 2853	10.3	10.4	11.2	10.8	12.0	9.9	9.3	9.8	26
24	IHT 224	MH 2854	10.6	9.8	10.5	10.1	12.0	11.3	10.2	10.0	22
25	IHT 225	MH 2855	10.6	9.8	10.0	9.9	11.2	8.9	9.4	9.0	34
26	IHT 226	MH 2856	10.9	8.8	10.0	9.4	11.9	10.0	8.8	9.3	33
27	IHT 227	AHB 1200 (Check)	10.5	8.7	11.8	10.2	12.0	14.0	9.2	10.2	21
28	IHT 228	MH 2857	10.3	10.0	11.2	10.6	11.0	10.1	10.6	9.9	24
29	IHT 229	MH 2858	10.0	9.8	10.7	10.3	11.5	10.6	10.6	9.6	31
30	IHT 230	MH 2859	10.6	8.8	12.8	10.8	11.7	13.4	12.7	10.8	10
31	IHT 231	MH 2860	10.7	10.6	11.7	11.1	11.7	10.9	10.6	9.8	27
32	IHT 232	MH 2861	10.3	9.1	11.8	10.4	10.9	12.3	9.4	9.6	32
33	IHT 233	MH 2862	10.4	8.4	10.9	9.7	11.2	10.4	9.9	9.7	29
34	IHT 234	MH 2863	10.6	12.2	11.5	11.9	11.7	10.6	10.8	10.4	16
LOC. MEAN			10.5	10.3	11.6	11.0	11.4	11.5	10.7	10.3	
C.D. (5%)			0.3	0.8	1.7	0.9	1.3	0.6	1.3	0.8	
C.D. (1%)			0.4	1.1	2.3	1.1	1.8	0.8	1.8	1.1	
C.V. (%)			1.9	4.8	9.2	4.9	7.1	3.0	7.7	9.1	
F (Prob)			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.43: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 POPULATION AT HARVEST(No./plot) ZONE A

S.No.	TEST CODE	ENTRY	BKR	JPR	JPR2	ALW6	DAS	RAJ MEAN	TLJ	AND	JMR	SKN	GUJ MEAN
1	IHT 201	MH 2834	71	85	128	78	79	88	60	70	85	86	75
2	IHT 202	MH 2835	70	34	128	70	80	77	60	71	66	86	71
3	IHT 203	MH 2836	72	58	135	77	75	83	54	67	102	85	77
4	IHT 204	MH 2837	65	80	141	76	78	88	56	71	107	86	80
5	IHT 205	MH 2838	63	75	129	80	77	85	64	70	103	81	79
6	IHT 206	MH 2839	67	64	136	79	79	85	56	67	101	83	77
7	IHT 207	MH 2840	66	82	134	79	81	88	55	69	103	89	79
8	IHT 208	MH 2841	69	79	137	77	77	88	54	73	107	86	80
9	IHT 209	86M94 (Check)	64	90	129	79	79	88	59	70	110	87	82
10	IHT 210	MH 2842	72	102	137	79	74	93	57	75	106	93	83
11	IHT 211	MH 2843	67	84	129	77	79	87	56	70	102	90	80
12	IHT 212	MH 2844	73	84	125	80	76	88	62	73	103	86	81
13	IHT 213	MH 2845	67	61	138	77	77	84	53	70	108	88	80
14	IHT 214	MH 2846	65	54	140	73	81	83	54	73	100	88	79
15	IHT 215	PB 1852 (Check)	63	78	134	80	77	86	52	67	98	81	74
16	IHT 216	MH 2847	66	55	137	78	81	84	55	72	105	87	80
17	IHT 217	MH 2848	67	74	133	76	75	85	58	70	106	88	81
18	IHT 218	MH 2849	69	71	140	80	79	88	61	71	100	85	79
19	IHT 219	MH 2850	65	78	128	72	81	85	56	71	90	86	76
20	IHT 220	DHBH 1397 (Check)	66	76	139	80	78	88	58	70	103	87	80
21	IHT 221	MH 2851	66	76	131	79	78	86	63	74	81	82	75
22	IHT 222	MH 2852	69	54	139	78	77	84	54	70	91	83	75
23	IHT 223	MH 2853	65	81	140	72	77	87	56	69	90	89	76
24	IHT 224	MH 2854	64	90	118	79	77	86	68	70	91	88	79
25	IHT 225	MH 2855	64	68	132	69	78	82	53	71	107	85	79
26	IHT 226	MH 2856	64	74	137	75	79	86	53	69	109	81	78
27	IHT 227	AHB 1200 (Check)	65	57	125	72	77	79	51	71	102	80	76
28	IHT 228	MH 2857	64	73	131	75	80	85	52	67	99	89	77
29	IHT 229	MH 2858	63	72	136	72	75	84	52	70	108	83	78
30	IHT 230	MH 2859	67	47	113	77	74	76	58	70	102	89	80
31	IHT 231	MH 2860	69	78	139	78	80	89	62	74	112	90	85
32	IHT 232	MH 2861	65	61	123	77	77	81	54	69	101	88	78
33	IHT 233	MH 2862	63	87	116	72	78	83	54	68	101	88	78
34	IHT 234	MH 2863	67	66	135	79	78	85	59	72	111	89	83
		LOC. MEAN	67	72	132	76	78	85	57	70	100	86	78
		C.D. (5%)	7.0	25.0	15.0	7.0	5.0	11.0	9.0	7.0	22.0	7.0	8.0
		C.D. (1%)	9.0	33.0	20.0	9.0	6.0	15.0	12.0	9.0	29.0	10.0	10.0
		C.V. (%)	6.1	21.3	7.1	5.3	3.7	9.1	9.6	5.8	13.2	5.3	7.2
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.222	0.000	0.000	0.000	0.000	0.788

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Table I.43: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 POPULATION AT HARVEST(No./plot) ZONE A

S.No.	TEST CODE	ENTRY	JNS	MTR	UP MEAN	BWL	HSR	HAR MEAN	GLR	LDA	NDL	ZONE MEAN	RANK
1	IHT 201	MH 2834	57	83	70	82	48	65	59	82	85	77	14
2	IHT 202	MH 2835	52	38	45	74	53	64	16	82	79	66	30
3	IHT 203	MH 2836	59	85	72	98	50	74	53	81	81	77	19
4	IHT 204	MH 2837	55	82	69	97	47	72	59	81	78	79	8
5	IHT 205	MH 2838	69	88	79	91	49	70	70	81	81	79	5
6	IHT 206	MH 2839	41	78	60	96	50	73	70	82	76	76	22
7	IHT 207	MH 2840	57	85	71	102	50	76	74	81	71	80	2
8	IHT 208	MH 2841	61	86	74	83	47	65	82	80	71	79	6
9	IHT 209	86M94 (Check)	54	88	71	94	47	71	62	81	66	79	9
10	IHT 210	MH 2842	54	87	71	88	50	69	78	81	81	82	1
11	IHT 211	MH 2843	54	81	67	86	51	68	59	81	72	77	15
12	IHT 212	MH 2844	49	84	67	84	49	67	65	81	84	79	9
13	IHT 213	MH 2845	43	88	66	81	49	65	72	80	74	77	21
14	IHT 214	MH 2846	52	82	67	96	44	70	42	81	80	75	25
15	IHT 215	PB 1852 (Check)	61	89	75	91	47	69	64	80	71	77	17
16	IHT 216	MH 2847	55	88	71	95	49	72	67	80	71	78	12
17	IHT 217	MH 2848	40	88	64	86	49	68	58	80	81	77	18
18	IHT 218	MH 2849	51	89	70	101	47	74	75	80	75	80	4
19	IHT 219	MH 2850	46	80	63	82	49	66	57	80	83	75	26
20	IHT 220	DHBH 1397 (Check)	57	89	73	93	49	71	52	80	70	78	11
21	IHT 221	MH 2851	51	82	67	88	49	69	73	80	76	77	20
22	IHT 222	MH 2852	56	84	70	101	40	71	55	80	85	76	24
23	IHT 223	MH 2853	53	89	71	81	43	62	70	80	79	77	16
24	IHT 224	MH 2854	44	85	64	79	48	64	65	80	81	77	21
25	IHT 225	MH 2855	46	89	68	90	49	69	63	80	78	76	23
26	IHT 226	MH 2856	57	89	73	92	51	71	72	81	80	79	7
27	IHT 227	AHB 1200 (Check)	55	87	71	83	49	66	74	80	71	75	27
28	IHT 228	MH 2857	61	87	74	83	51	67	67	81	78	77	13
29	IHT 229	MH 2858	46	84	65	80	48	64	73	81	83	77	21
30	IHT 230	MH 2859	54	84	69	80	48	64	51	80	80	73	29
31	IHT 231	MH 2860	45	87	66	92	45	69	57	81	71	79	10
32	IHT 232	MH 2861	36	88	62	81	46	64	57	80	71	73	29
33	IHT 233	MH 2862	48	82	65	80	49	64	44	80	81	75	28
34	IHT 234	MH 2863	60	88	74	89	48	68	85	80	71	80	3
LOC. MEAN			52	84	68	88	48	68	63	81	77	77	
C.D. (5%)			12.0	7.0	12.0	6.0	7.0	13.0	16.0	1.0	5.0	5.0	
C.D. (1%)			16.0	9.0	16.0	9.0	9.0	18.0	21.0	2.0	7.0	6.0	
C.V. (%)			14.2	5.0	8.4	4.5	9.1	7.6	15.4	0.9	4.4	8.6	
F (Prob)			0.000	0.000	0.792	0.000	0.000	0.023	0.000	0.000	0.000	0.000	

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Table I.44: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 SEED SET (%) UNDER BAG ZONE A

S.No.	TEST CODE	ENTRY	BKR	JPR	JPR2	ALW6	DAS	RAJ MEAN	JMR	JNS	MTR	UP MEAN
1	IHT 201	MH 2834	50	93	98	63	98	81	75	100	68	84
2	IHT 202	MH 2835	47	97	88	73	98	81	67	100	55	78
3	IHT 203	MH 2836	40	98	43	40	97	64	-	100	58	79
4	IHT 204	MH 2837	52	95	37	17	95	59	-	100	80	90
5	IHT 205	MH 2838	48	92	92	50	92	75	53	100	78	89
6	IHT 206	MH 2839	40	100	50	10	98	60	-	100	13	57
7	IHT 207	MH 2840	42	100	97	47	97	76	61	100	68	84
8	IHT 208	MH 2841	47	97	97	63	95	80	63	100	64	82
9	IHT 209	86M94 (Check)	50	93	98	60	95	79	69	100	77	88
10	IHT 210	MH 2842	47	92	99	53	95	77	73	100	77	88
11	IHT 211	MH 2843	40	97	95	57	100	78	54	100	39	70
12	IHT 212	MH 2844	50	95	100	63	95	81	69	100	58	79
13	IHT 213	MH 2845	47	100	92	60	98	79	65	100	37	68
14	IHT 214	MH 2846	48	95	91	70	93	80	65	100	68	84
15	IHT 215	PB 1852 (Check)	43	93	95	30	90	70	74	100	65	83
16	IHT 216	MH 2847	43	90	99	57	90	76	62	100	63	82
17	IHT 217	MH 2848	52	87	95	60	100	79	66	100	73	87
18	IHT 218	MH 2849	48	92	93	43	97	75	64	100	43	71
19	IHT 219	MH 2850	60	93	-	8	98	65	-	100	55	78
20	IHT 220	DHBH 1397 (Check)	45	92	83	57	98	75	29	100	68	84
21	IHT 221	MH 2851	40	87	92	60	100	76	21	93	60	77
22	IHT 222	MH 2852	45	90	97	73	95	80	75	100	58	79
23	IHT 223	MH 2853	40	92	98	57	92	76	68	100	72	86
24	IHT 224	MH 2854	43	100	98	73	100	83	69	100	79	90
25	IHT 225	MH 2855	43	78	-	-	97	73	-	100	6	53
26	IHT 226	MH 2856	43	87	92	67	95	77	67	100	68	84
27	IHT 227	AHB 1200 (Check)	53	88	73	47	98	72	39	100	57	78
28	IHT 228	MH 2857	40	83	97	60	95	75	26	100	56	78
29	IHT 229	MH 2858	52	83	73	40	88	67	34	100	57	79
30	IHT 230	MH 2859	48	92	92	63	100	79	73	100	43	71
31	IHT 231	MH 2860	40	90	100	70	98	80	69	100	48	74
32	IHT 232	MH 2861	42	77	82	57	95	70	37	100	58	79
33	IHT 233	MH 2862	48	87	93	53	70	70	63	100	76	88
34	IHT 234	MH 2863	40	100	100	67	98	81	80	100	79	90
		LOC. MEAN	46	92	88	54	95	75	60	100	60	80
		C.D. (5%)	11.0	5.0	10.0	16.0	16.0	15.0	17.0	3.0	11.0	-
		C.D. (1%)	15.0	6.0	13.0	21.0	22.0	20.0	23.0	4.0	14.0	-
		C.V. (%)	14.9	3.1	6.8	18.1	10.4	15.0	17.3	2.0	10.9	-
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000

Contd..

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Table I.44: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 SEED SET (%) UNDER BAG ZONE A

S.No.	TEST CODE	ENTRY	HSR	GLR	LDA	NDL	ZONE MEAN	RANK
1	IHT 201	MH 2834	96	100	73	94	84	3
2	IHT 202	MH 2835	92	100	67	91	81	8
3	IHT 203	MH 2836	23	73	75	35	62	32
4	IHT 204	MH 2837	82	90	70	58	70	29
5	IHT 205	MH 2838	92	100	72	62	77	19
6	IHT 206	MH 2839	83	100	67	43	64	31
7	IHT 207	MH 2840	85	100	70	85	79	14
8	IHT 208	MH 2841	95	100	72	78	81	10
9	IHT 209	86M94 (Check)	93	100	82	85	84	5
10	IHT 210	MH 2842	95	100	77	95	84	4
11	IHT 211	MH 2843	86	87	67	88	76	24
12	IHT 212	MH 2844	91	100	92	87	83	6
13	IHT 213	MH 2845	75	100	60	80	76	22
14	IHT 214	MH 2846	95	100	62	87	81	9
15	IHT 215	PB 1852 (Check)	82	100	63	82	76	21
16	IHT 216	MH 2847	90	100	60	87	78	16
17	IHT 217	MH 2848	88	87	72	92	81	11
18	IHT 218	MH 2849	92	100	60	80	76	23
19	IHT 219	MH 2850	28	63	65	17	59	33
20	IHT 220	DHBH 1397 (Check)	96	87	72	92	77	20
21	IHT 221	MH 2851	91	100	60	88	74	25
22	IHT 222	MH 2852	98	100	60	90	82	7
23	IHT 223	MH 2853	97	83	52	83	78	17
24	IHT 224	MH 2854	90	100	72	90	85	2
25	IHT 225	MH 2855	-	73	62	10	59	34
26	IHT 226	MH 2856	93	100	65	72	79	15
27	IHT 227	AHB 1200 (Check)	78	100	53	72	72	27
28	IHT 228	MH 2857	62	77	67	68	69	30
29	IHT 229	MH 2858	85	100	60	87	72	28
30	IHT 230	MH 2859	96	100	65	94	80	12
31	IHT 231	MH 2860	87	100	63	90	80	13
32	IHT 232	MH 2861	83	83	83	83	73	26
33	IHT 233	MH 2862	95	100	58	87	78	18
34	IHT 234	MH 2863	96	100	62	93	85	1
LOC. MEAN			85	94	67	77	76	
C.D. (5%)			19.0	7.0	5.0	12.0	8.0	
C.D. (1%)			25.0	9.0	7.0	16.0	11.0	
C.V. (%)			13.5	4.3	4.8	9.8	11.1	
F (Prob)			0.000	0.000	0.000	0.000	0.001	

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Table I.45: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 ZONE A

GRAIN QUALITY: IRON CONTENT (ppm)																		
S.No.	TEST CODE	ENTRY	JPR	JPR2	ALW6	DAS	TLJ	AND	JMR	SKN	MTR	BWL	HSR	GLR	LDA	NDL	ZONE MEAN	RANK
1	IHT 207	MH 2840	33	37	43	43	54	40	40	46	55	63	58	55	36	57	47	6
2	IHT 209	86M94 (Check)	38	38	39	33	38	53	53	41	49	49	60	53	49	62	47	6
3	IHT 210	MH 2842	30	40	44	32	53	50	50	43	46	50	66	64	58	61	49	5
4	IHT 215	PB 1852 (Check)	39	45	55	41	55	46	46	48	55	57	68	63	53	59	52	4
5	IHT 220	DHBH 1397 (Check)	37	37	43	46	60	55	55	47	58	49	76	59	51	67	53	3
6	IHT 227	AHB 1200 (Check)	49	52	72	51	63	71	71	61	74	58	75	92	70	75	67	1
7	IHT 234	MH 2863	38	44	48	40	57	59	59	53	53	53	65	64	53	68	54	2

Table I.46: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 ZONE A

GRAIN QUALITY: ZINC CONTENT (ppm)																		
S.No.	TEST CODE	ENTRY	JPR	JPR2	ALW6	DAS	TLJ	AND	JMR	SKN	MTR	BWL	HSR	GLR	LDA	NDL	ZONE MEAN	RANK
1	IHT 207	MH 2840	32	35	31	24	29	54	35	39	20	37	48	40	37	39	36	5
2	IHT 209	86M94 (Check)	32	40	30	20	28	38	43	38	22	46	50	35	47	40	36	5
3	IHT 210	MH 2842	26	34	25	16	23	53	37	36	18	32	51	32	48	32	33	6
4	IHT 215	PB 1852 (Check)	32	36	34	24	30	55	40	41	20	39	56	45	43	36	38	4
5	IHT 220	DHBH 1397 (Check)	37	43	35	26	33	60	39	40	21	44	62	46	47	40	41	1
6	IHT 227	AHB 1200 (Check)	34	43	25	21	33	63	44	40	20	44	56	39	41	37	39	3
7	IHT 234	MH 2863	44	42	28	22	31	57	46	46	21	35	55	38	51	49	40	2

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Table I.47: INITIAL HYBRID TRIAL (Medium) KHARIF 2024 EXPERIMENTAL DETAILS ZONE B

Locations	Soil	pH	Sowing date	Harvesting date	Interculture date	Irrigation date	Fertilizers			Insecticide
							N	P	K	
MAHARASHTRA										
Aurangabad (NARP)	MB	7.5	13.7.24	6.11.24	Nil	Nil	60	30	30	Nil
Paithan(Nath BioGenes)	BCS	-	8.7.24	21.10.24	Nil	Nil	-	-	-	Nil
Dhule (MPKV)	MB	8.6	4.7.24	15.10.24	28.7.24	Nil	60	30	0	Nil
Pachora(Nirmal Seed)	MB	7.6	1.7.24	3.10.24	29.7.24	1.7.24	100	50	50	Nil
KARNATAKA										
VIjayapur (UAS, Dharwad)	SB	8.7	6.7.24	25.10.24	16.8.24	Nil	50	25	0	Nil
Malnoor (UAS, Raichur)	S	7.5	12.7.24	27.11.24	31.7.24	Nil	50	50	0	Emamectin Benzoate
Dharwad (KSSC Ltd)	SRS	-	18.8.24	3.12.24	Nil	Nil	100	50	25	Nil
ANDHRA PRADESH										
Ananthapuram (ANGRAU)	A	6.7	9.8.24	As Per Maturity	5.9.24	As Per Required	60	30	20	Nil
Perumallapalle (ANGRAU)	SCL	7.3	6.7.24	9.10.24	10.8.24	As Per Required	80	40	30	Nil
TELANGANA										
Palem (PJ TSAU)	RSL	7.0	9.7.24	25.10.24	27.4,12.8.24	Nil	60	40	40	Nil
TAMIL NADU										
Coimbatore(TNAU)	CL	7.8	29.6.24	6.10.24	Nil	29.6, 17.7, 12.8, 3.9, 18.9, 1.10.24	80	40	40	Nil
ODISHA										
Semiliguda (OUAT)	SL	-	3.7.24	As Per Maturity	Nil	Nil	60	30	30	Nil

SB=Shallow Black, MB=Medium Black, CL=Clay Loam, SCL=Sandy Clay Loam, SL=Sandy Loam, SRS=Shallow Red Soil, A=Alfisols, S=Shallow, BCS=Black Cotton Soil

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Table I.48: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 GRAIN YIELD (kg/ha) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	PTN	DHL	PCR	MS MEAN	VYP	MLR	DHR1***	KS MEAN	APR	PMP	AP MEAN	PLM	CBE	SMG	ZONE MEAN	RANK
1	IHT 201	MH 2834	2466	3164	3147	3252	3007	2959	2867	743	2913	2305	2559	2432	3678	2969	1867	2839	19
2	IHT 202	MH 2835	2079	2776	2162	2087	2276	2961	1958	558	2459	2467	2462	2465	2414	3854	1078	2391	31
3	IHT 203	MH 2836	2333	4012	2035	3712	3023	3238	2284	983	2761	2459	2506	2483	3167	2596	3233	2871	18
4	IHT 204	MH 2837	2550	4665	2680	3318	3303	3305	2726	931	3015	2228	1988	2108	3239	4283	4167	3195	12
5	IHT 205	MH 2838	2767	3467	2350	3207	2948	3115	2411	969	2763	1996	2726	2361	2600	4881	2578	2918	17
6	IHT 206	MH 2839	3040	4242	2526	3727	3384	2511	1863	878	2187	2221	3367	2794	2583	3119	3033	2930	16
7	IHT 207	MH 2840	2969	6467	3586	3874	4224	3681	3191	1717	3436	2554	3576	3065	3889	4453	4144	3853	2
8	IHT 208	MH 2841	3182	4189	2706	3787	3466	3429	3042	952	3236	1812	4066	2939	3278	3883	2111	3226	11
9	IHT 209	AHB 1269 (Check)	2699	2655	1819	3219	2598	2967	2657	646	2812	1712	2972	2342	2733	3144	1956	2594	26
10	IHT 210	MH 2842	3358	6428	3881	4441	4527	2831	3341	1363	3086	2773	4751	3762	4000	3538	5956	4118	1
11	IHT 211	MH 2843	2491	4046	3145	3195	3219	2758	2830	1021	2794	2515	4376	3445	2375	3791	6156	3425	8
12	IHT 212	MH 2844	3042	3878	2450	3012	3095	2849	2843	829	2846	2063	3614	2838	2150	3567	1700	2833	20
13	IHT 213	MH 2845	2660	3341	2497	3207	2926	2618	3730	570	3174	1307	2566	1936	2244	3141	2217	2684	23
14	IHT 214	MH 2846	3192	4232	3239	4733	3849	3162	2543	677	2853	1659	3613	2636	4211	3196	4633	3492	6
15	IHT 215	86M01 (Check)	3508	3926	2885	4210	3632	2894	3737	1325	3315	2578	4006	3292	3114	3108	3856	3438	7
16	IHT 216	MH 2847	3354	2839	2926	4610	3432	3300	3643	1242	3472	2085	2268	2176	3656	2656	4789	3284	10
17	IHT 217	MH 2848	3380	3822	3077	4111	3598	2854	2841	795	2848	2142	2443	2293	3214	3054	2478	3038	15
18	IHT 218	MH 2849	3258	4154	3072	3333	3454	3188	3172	1781	3180	1926	2474	2200	3286	2753	3889	3137	13
19	IHT 219	MH 2850	2512	3036	2562	2883	2748	2630	2501	848	2565	2262	3595	2928	2583	3058	1344	2633	25
20	IHT 220	Pratap (Check)	2159	1722	1754	2012	1912	2985	2579	745	2782	2361	2382	2372	2008	2566	739	2115	33
21	IHT 221	MH 2851	2007	2314	1844	2270	2109	2472	2443	316	2458	1515	1197	1356	2031	2758	1244	2009	34
22	IHT 222	MH 2852	3025	5387	3435	4670	4129	3670	2752	1443	3211	2589	3062	2825	3903	4465	3822	3707	4
23	IHT 223	MH 2853	2758	4693	2834	3697	3495	2864	3056	1163	2960	2758	3886	3322	3019	4749	3111	3402	9
24	IHT 224	MH 2854	1994	3168	3089	3282	2884	3333	3102	921	3218	2437	3841	3139	3228	4170	2756	3127	14
25	IHT 225	MH 2855	2258	2143	1840	1754	1999	3325	3206	2312	3265	1709	1933	1821	2125	2925	1989	2291	32
26	IHT 226	MH 2856	2598	3422	2431	2763	2803	3463	2807	439	3135	1647	3055	2351	2769	2892	2167	2728	22
27	IHT 227	AHB 1200 (Check)	2146	2194	4302	2228	2718	2808	2219	150	2514	1811	2404	2107	2094	2504	2344	2460	27
28	IHT 228	MH 2857	2520	3369	1671	2682	2560	2723	2792	1505	2758	1408	2604	2006	2383	3036	1700	2444	28
29	IHT 229	MH 2858	2517	2913	1763	3057	2563	2650	2778	551	2714	1615	3655	2635	2431	3047	3100	2684	24
30	IHT 230	MH 2859	3079	4197	4050	4523	3962	3533	2500	1417	3017	1603	3184	2394	3867	4062	3856	3496	5
31	IHT 231	MH 2860	2442	3887	2981	3523	3208	2503	3036	420	2769	2604	2209	2407	2475	2968	2278	2810	21
32	IHT 232	MH 2861	2800	1808	4100	2327	2759	2440	2428	605	2434	1212	2117	1664	2203	3295	1767	2409	29
33	IHT 233	MH 2862	2750	3259	2369	2237	2654	2731	3033	1294	2882	1262	1212	1237	2172	2897	2572	2408	30
34	IHT 234	MH 2863	2846	5193	3965	4024	4007	3818	3348	2298	3583	2976	3480	3228	4025	2822	5200	3791	3
		LOC. MEAN	2728	3677	2799	3323	3132	3017	2831	1012	2924	2076	2946	2511	2916	3359	2936	2964	
		C.D. (5%)	398	923	692	1077	830	371	791	309	743	308	793	1082	693	500	810	516	
		C.D. (1%)	529	1226	919	1431	1099	493	1050	410	998	410	1054	1453	921	665	1076	680	
		C.V. (%)	9.0	15.4	15.2	19.9	18.9	7.6	17.1	18.7	12.5	9.1	16.5	21.2	14.6	9.1	16.9	20.8	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.096	0.000	0.000	0.008	0.000	0.000	0.000	0.000	
		PLOT SIZE (m ²)	6.00	7.20	5.55	5.55	-	6.00	6.00	7.02	-	6.00	6.00	-	6.00	6.00	6.00	-	

***TEST LOCATION REJECTED DUE TO LOW AVERAGE YIELD (1012 kg/ha), THAN THE STATE AVERAGE YIELD (1095 kg/ha) TAKEN OVER 10 YEARS

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Table I.49: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 DRY FODDER YIELD (kg/ha) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	PTN	DHL	PCR	MS MEAN	VYP	MLR	KS MEAN	APR	PMP	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	IHT 201	MH 2834	7944	5824	7808	8468	7511	7667	6333	7000	4157	5893	5025	8223	5174	6749	19
2	IHT 202	MH 2835	5000	5132	5826	4384	5086	8056	4111	6083	3597	7527	5562	5700	5394	5473	33
3	IHT 203	MH 2836	7889	4234	7387	8529	7010	5722	5333	5528	3907	7223	5565	7409	5284	6292	28
4	IHT 204	MH 2837	7944	4516	6787	8829	7019	6611	3667	5139	4182	10128	7155	7842	6495	6700	21
5	IHT 205	MH 2838	8056	4644	5405	7087	6298	6167	5111	5639	3587	10844	7216	6221	6881	6400	27
6	IHT 206	MH 2839	8167	5236	6486	8529	7104	6167	5111	5639	3159	10158	6659	6108	7651	6677	23
7	IHT 207	MH 2840	7944	5535	10751	9550	8445	7778	5667	6722	3846	7826	5836	9024	8036	7596	6
8	IHT 208	MH 2841	8944	6074	6306	8408	7433	5944	6000	5972	3698	10264	6981	7871	8311	7182	13
9	IHT 209	AHB 1269 (Check)	9111	5412	5646	9790	7490	6611	5667	6139	3175	8756	5966	6031	6771	6697	22
10	IHT 210	MH 2842	8000	6322	9189	12012	8881	8667	6667	7667	3042	11656	7349	9346	5284	8018	3
11	IHT 211	MH 2843	7167	8042	9489	11772	9117	7389	6444	6917	3609	14584	9097	5831	4954	7928	4
12	IHT 212	MH 2844	8333	7218	6547	7928	7506	5833	4778	5306	3557	9642	6600	5098	5229	6416	26
13	IHT 213	MH 2845	7556	5801	8348	8949	7663	6056	4889	5472	3715	11323	7519	5660	5670	6797	17
14	IHT 214	MH 2846	8167	7049	8949	13273	9359	6611	6222	6417	4672	15142	9907	10131	8367	8858	1
15	IHT 215	86M01 (Check)	9000	6120	8048	8625	7948	5889	5778	5833	3732	12808	8270	7064	5064	7213	11
16	IHT 216	MH 2847	8833	6007	6126	9369	7584	7667	4444	6056	3557	13119	8338	8773	5945	7384	9
17	IHT 217	MH 2848	8500	6734	7447	10631	8328	6611	4667	5639	3367	11447	7407	7253	5064	7172	15
18	IHT 218	MH 2849	8222	5431	8348	7327	7332	6111	5556	5833	4345	13792	9069	7334	7706	7417	8
19	IHT 219	MH 2850	7778	5690	6667	6426	6640	6444	6556	6500	3964	12632	8298	6303	8367	7083	16
20	IHT 220	Pratap (Check)	7444	3815	4925	5105	5322	5944	5778	5861	2685	6473	4579	4561	5504	5223	34
21	IHT 221	MH 2851	8111	3424	5886	7327	6187	6722	4000	5361	3944	6653	5298	4801	4789	5566	31
22	IHT 222	MH 2852	7889	6398	6366	6426	6770	9111	6889	8000	4599	8489	6544	9237	6385	7179	14
23	IHT 223	MH 2853	8056	6472	9489	3243	6815	7833	6444	7139	3962	13741	8851	7141	5614	7199	12
24	IHT 224	MH 2854	7833	5604	8168	8108	7428	6889	6000	6444	3744	13287	8516	7660	7816	7511	7
25	IHT 225	MH 2855	6889	7644	6787	4144	6366	6056	5222	5639	3803	4354	4078	5017	4844	5476	32
26	IHT 226	MH 2856	6556	5566	7327	7207	6664	6611	5667	6139	2884	13902	8393	6582	4899	6720	20
27	IHT 227	AHB 1200 (Check)	6000	5111	11532	5826	7117	5889	4778	5333	3857	8712	6284	4963	5614	6228	30
28	IHT 228	MH 2857	8611	5926	7508	8769	7703	6667	5111	5889	3985	11034	7510	5643	4568	6782	18
29	IHT 229	MH 2858	7833	6787	7928	8048	7649	7278	5222	6250	4109	12571	8340	5806	7927	7351	10
30	IHT 230	MH 2859	8389	8565	10691	13273	10229	9389	5667	7528	4016	10775	7396	8748	6551	8606	2
31	IHT 231	MH 2860	7944	5113	6667	7868	6898	6444	4222	5333	3359	12673	8016	5669	5614	6557	24
32	IHT 232	MH 2861	7722	4213	10871	6967	7443	6778	4000	5389	3167	9635	6401	4870	4678	6290	29
33	IHT 233	MH 2862	6833	5704	7327	9129	7248	7500	4444	5972	3544	8371	5958	5308	7321	6548	25
34	IHT 234	MH 2863	7167	6942	9369	8889	8092	7778	6444	7111	3441	13614	8528	9534	5614	7879	5
LOC. MEAN			7819	5832	7718	8242	7403	6908	5379	6144	3705	10560	7133	6846	6158	6917	
C.D. (5%)			1727	2398	2110	2715	1962	1013	1479	1552	491	2903	491	1874	939	1284	
C.D. (1%)			2294	3186	2803	3606	2597	1346	1964	2085	652	3856	652	2490	1247	1692	
C.V. (%)			13.6	25.2	16.8	20.2	18.9	9.0	16.9	12.4	8.1	16.9	8.1	16.8	9.4	19.8	
F (Prob)			0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.037	0.000	0.000	0.000	0.000	0.000	0.000	
PLOT SIZE (m ²)			6.00	7.20	5.55	5.55	-	6.00	6.00	-	6.00	6.00	-	6.00	6.00	-	

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Table I.50: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 DAYS TO 50% FLOWERING ZONE B

S.No.	TEST CODE	ENTRY	ABD1	PTN	DHL	PCR	MS MEAN	VYP	MLR	DHR1*	KS MEAN	APR	PMP	AP MEAN	PLM	CBE	SMG	ZONE MEAN	RANK
1	IHT 201	MH 2834	51	48	51	46	49	45	49	58	47	46	42	44	41	47	49	47	21
2	IHT 202	MH 2835	50	51	50	44	49	49	50	56	50	52	49	51	43	48	49	49	12
3	IHT 203	MH 2836	55	49	49	45	50	45	50	59	48	51	45	48	43	47	48	48	14
4	IHT 204	MH 2837	46	49	50	45	48	46	52	58	49	51	47	49	43	44	47	47	17
5	IHT 205	MH 2838	48	47	48	48	48	44	49	56	47	48	45	46	38	46	45	46	30
6	IHT 206	MH 2839	48	53	52	61	53	46	52	61	49	47	48	48	43	50	45	49	8
7	IHT 207	MH 2840	58	50	51	52	53	49	52	66	51	53	52	52	47	50	53	52	1
8	IHT 208	MH 2841	44	46	49	52	48	45	46	59	46	46	42	44	43	44	49	46	29
9	IHT 209	AHB 1269 (Check)	45	49	49	52	49	44	50	57	47	45	44	45	44	45	45	47	25
10	IHT 210	MH 2842	54	55	53	49	53	48	50	65	49	41	51	46	46	49	53	50	6
11	IHT 211	MH 2843	58	59	51	44	53	48	53	59	50	43	50	47	46	52	46	50	5
12	IHT 212	MH 2844	51	49	51	51	50	45	49	56	47	41	49	45	41	46	50	48	16
13	IHT 213	MH 2845	51	50	50	45	49	48	47	59	47	51	47	49	45	46	46	48	15
14	IHT 214	MH 2846	59	56	52	44	53	50	52	61	51	51	50	50	48	51	49	51	2
15	IHT 215	86M01 (Check)	52	49	50	46	49	45	48	58	47	45	46	46	43	41	50	47	20
16	IHT 216	MH 2847	54	53	51	50	52	48	48	59	48	47	46	46	45	49	49	49	10
17	IHT 217	MH 2848	52	53	50	53	52	45	49	55	47	43	41	42	42	44	49	47	18
18	IHT 218	MH 2849	56	53	51	45	51	48	50	59	49	53	49	51	48	48	48	50	5
19	IHT 219	MH 2850	49	46	47	52	49	44	49	54	46	40	47	44	40	46	50	46	27
20	IHT 220	Pratap (Check)	47	47	48	53	49	44	50	51	47	41	45	43	42	46	48	46	26
21	IHT 221	MH 2851	45	46	46	49	46	44	48	52	46	41	40	41	40	41	51	45	32
22	IHT 222	MH 2852	52	53	51	44	50	48	50	62	49	44	52	48	48	49	46	49	11
23	IHT 223	MH 2853	55	53	52	46	52	46	49	58	48	46	51	48	46	49	49	49	9
24	IHT 224	MH 2854	48	47	48	47	48	44	47	59	46	41	43	42	44	44	55	46	28
25	IHT 225	MH 2855	52	55	51	49	52	48	52	59	50	44	49	46	48	47	50	50	7
26	IHT 226	MH 2856	47	48	52	50	49	45	50	55	48	43	45	44	43	45	48	47	22
27	IHT 227	AHB 1200 (Check)	43	47	47	46	46	44	51	55	48	46	41	44	41	47	49	46	31
28	IHT 228	MH 2857	45	50	49	47	48	46	55	58	50	41	43	42	43	45	50	47	23
29	IHT 229	MH 2858	48	51	50	47	49	47	53	57	50	42	45	43	44	45	46	47	19
30	IHT 230	MH 2859	58	57	53	44	53	48	52	67	50	51	51	51	50	44	46	50	4
31	IHT 231	MH 2860	55	49	51	45	50	46	50	57	48	46	46	46	43	45	51	48	15
32	IHT 232	MH 2861	51	47	48	46	48	44	52	55	48	41	43	42	42	43	55	47	24
33	IHT 233	MH 2862	55	52	48	49	51	47	50	60	48	45	44	45	46	49	48	48	13
34	IHT 234	MH 2863	54	54	52	59	55	47	49	59	48	44	50	47	49	47	51	51	3
LOC. MEAN			51	51	50	48	50	46	50	58	48	46	46	46	44	46	49	48	
C.D. (5%)			1.0	3.0	3.0	3.0	5.0	1.0	2.0	3.0	3.0	2.0	2.0	6.0	2.0	1.0	2.0	2.0	
C.D. (1%)			2.0	4.0	3.0	4.0	6.0	2.0	3.0	4.0	4.0	2.0	2.0	8.0	3.0	2.0	3.0	3.0	
C.V. (%)			1.5	3.7	3.1	3.7	6.5	1.8	3.0	3.2	3.3	2.2	2.1	6.4	3.1	1.8	3.1	5.7	
F (Prob)			0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.067	0.000	0.000	0.017	0.000	0.000	0.000	0.000	

*LOCATION REJECTED DUE TO DELAYED FLOWERING IN CHECKS

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Table I.51: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 DAYS TO MATURITY ZONE B

S.No.	TEST CODE	ENTRY	ABD1	PTN	DHL	PCR	MS MEAN	VYP	MLR	DHR1	KS MEAN	APR	PMP	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	IHT 201	MH 2834	87	75	88	73	81	85	83	89	86	83	82	82	72	84	82	22
2	IHT 202	MH 2835	90	78	87	72	82	89	85	89	88	87	83	85	73	85	83	12
3	IHT 203	MH 2836	93	76	86	73	82	86	87	92	88	84	83	84	74	84	83	13
4	IHT 204	MH 2837	86	76	87	73	81	87	83	90	87	86	85	85	74	81	83	17
5	IHT 205	MH 2838	85	74	85	75	80	86	85	89	87	83	83	83	67	83	81	26
6	IHT 206	MH 2839	87	80	88	85	85	86	85	95	89	84	83	84	73	87	85	4
7	IHT 207	MH 2840	96	77	88	80	85	88	84	95	89	88	84	86	76	87	86	1
8	IHT 208	MH 2841	94	73	86	80	83	85	81	90	85	82	82	82	74	81	82	18
9	IHT 209	AHB 1269 (Check)	95	76	86	79	84	85	84	90	86	81	79	80	73	82	83	16
10	IHT 210	MH 2842	91	82	89	76	85	88	83	94	88	77	82	80	77	86	84	7
11	IHT 211	MH 2843	95	86	88	71	85	88	85	90	87	79	83	81	77	89	85	5
12	IHT 212	MH 2844	88	76	87	78	82	85	82	90	86	75	82	78	71	83	82	25
13	IHT 213	MH 2845	88	77	87	72	81	88	81	91	87	86	79	83	74	83	82	19
14	IHT 214	MH 2846	97	83	89	71	85	89	85	92	89	86	80	83	77	88	85	3
15	IHT 215	86M01 (Check)	88	76	87	73	81	86	83	90	86	82	79	80	74	78	81	27
16	IHT 216	MH 2847	91	80	88	77	84	87	82	91	87	83	81	82	78	86	84	8
17	IHT 217	MH 2848	89	80	87	80	84	85	82	89	85	79	78	79	71	81	82	20
18	IHT 218	MH 2849	96	80	88	72	84	88	82	93	88	88	81	85	78	85	85	6
19	IHT 219	MH 2850	87	73	84	79	81	85	81	89	85	75	81	78	71	83	81	29
20	IHT 220	Pratap (Check)	85	74	85	77	80	85	82	87	85	76	77	77	73	83	80	31
21	IHT 221	MH 2851	84	73	83	76	79	85	81	88	85	75	76	75	69	78	79	33
22	IHT 222	MH 2852	92	80	87	71	83	88	84	94	89	80	82	81	77	86	84	9
23	IHT 223	MH 2853	93	80	89	73	84	86	83	90	86	83	81	82	74	86	83	13
24	IHT 224	MH 2854	87	74	85	74	80	85	81	90	85	76	77	76	73	81	80	32
25	IHT 225	MH 2855	88	82	88	76	84	87	84	94	88	79	80	80	76	84	84	11
26	IHT 226	MH 2856	87	75	88	77	82	85	81	94	87	78	79	78	71	82	82	24
27	IHT 227	AHB 1200 (Check)	82	74	83	77	79	86	82	91	86	82	76	79	70	84	81	30
28	IHT 228	MH 2857	84	77	86	73	80	86	88	93	89	75	77	76	72	82	81	28
29	IHT 229	MH 2858	84	78	86	74	81	86	84	90	87	78	80	79	76	82	82	23
30	IHT 230	MH 2859	96	84	89	79	87	88	84	95	89	85	80	82	78	81	85	2
31	IHT 231	MH 2860	96	76	88	80	85	87	81	88	85	82	76	79	75	82	83	15
32	IHT 232	MH 2861	96	74	84	82	84	85	82	89	86	78	77	77	72	80	82	21
33	IHT 233	MH 2862	94	79	85	77	84	87	82	90	86	80	78	79	78	86	83	14
34	IHT 234	MH 2863	90	81	88	79	85	87	80	90	86	79	80	80	81	84	84	10
LOC. MEAN			90	78	87	76	83	86	83	91	87	81	80	81	74	83	83	
C.D. (5%)			1.0	3.0	3.0	3.0	4.0	1.0	1.0	2.0	2.0	1.0	3.0	5.0	4.0	1.0	2.0	
C.D. (1%)			2.0	4.0	3.0	3.0	6.0	2.0	2.0	3.0	3.0	2.0	3.0	7.0	5.0	2.0	3.0	
C.V. (%)			0.9	2.4	1.8	2.0	3.7	1.0	1.0	1.3	1.7	1.1	2.0	3.1	3.1	1.0	3.1	
F (Prob)			0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	

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Table I.52: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 PLANT HEIGHT (cm) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	PTN	DHL	PCR	MS MEAN	VYP	MLR	DHR1	KS MEAN	APR	PMP	AP MEAN	PLM	CBE	SMG	ZONE MEAN	RANK
1	IHT 201	MH 2834	163	182	205	188	185	176	159	130	155	126	177	151	160	156	186	167	25
2	IHT 202	MH 2835	152	175	215	183	181	168	169	119	152	115	176	146	171	170	180	166	28
3	IHT 203	MH 2836	147	179	218	196	185	176	166	116	153	121	196	159	158	178	179	169	24
4	IHT 204	MH 2837	160	185	216	181	185	175	158	117	150	115	183	149	159	173	178	167	27
5	IHT 205	MH 2838	145	166	203	181	174	171	160	117	149	121	163	142	160	172	175	161	31
6	IHT 206	MH 2839	148	200	219	197	191	168	166	120	151	138	191	165	163	176	182	172	21
7	IHT 207	MH 2840	170	211	235	212	207	191	174	141	169	127	201	164	195	173	189	185	12
8	IHT 208	MH 2841	172	191	223	206	198	185	170	129	161	125	204	164	170	183	187	179	17
9	IHT 209	AHB 1269 (Check)	185	201	238	227	213	180	170	125	158	126	201	163	176	195	182	184	13
10	IHT 210	MH 2842	198	209	231	224	215	188	181	141	170	117	201	159	200	169	215	189	9
11	IHT 211	MH 2843	187	217	256	263	231	211	200	126	179	121	218	169	214	208	267	207	2
12	IHT 212	MH 2844	157	182	224	192	189	182	172	122	159	124	187	156	150	187	179	172	22
13	IHT 213	MH 2845	173	204	221	224	205	182	179	131	164	131	210	171	184	194	215	187	10
14	IHT 214	MH 2846	212	233	249	235	232	209	205	134	183	136	219	178	203	187	246	206	3
15	IHT 215	86M01 (Check)	167	199	227	206	200	179	191	127	165	126	208	167	184	172	190	181	16
16	IHT 216	MH 2847	187	206	221	214	207	181	172	119	158	110	196	153	181	174	236	183	14
17	IHT 217	MH 2848	152	194	230	219	199	185	166	129	160	111	200	156	177	170	197	178	18
18	IHT 218	MH 2849	182	181	225	201	197	177	160	116	151	112	193	153	172	172	205	175	20
19	IHT 219	MH 2850	147	181	223	204	189	156	182	124	154	123	214	169	164	176	164	171	23
20	IHT 220	Pratap (Check)	147	166	204	204	180	159	159	106	142	124	190	157	154	171	177	163	30
21	IHT 221	MH 2851	150	165	216	184	179	153	152	117	141	112	191	152	150	159	171	160	32
22	IHT 222	MH 2852	220	230	261	249	240	214	201	139	185	138	230	184	218	213	229	212	1
23	IHT 223	MH 2853	200	214	238	196	212	200	200	136	179	126	208	167	184	202	234	195	6
24	IHT 224	MH 2854	152	183	233	200	192	173	179	120	157	123	204	164	174	171	191	175	19
25	IHT 225	MH 2855	100	128	160	169	139	141	124	107	124	102	141	121	141	135	129	131	34
26	IHT 226	MH 2856	157	176	218	197	187	182	168	117	156	107	182	145	157	161	185	167	26
27	IHT 227	AHB 1200 (Check)	147	181	208	190	181	157	157	123	146	120	190	155	164	165	187	166	29
28	IHT 228	MH 2857	148	192	218	232	198	181	173	131	162	123	223	173	195	179	197	183	15
29	IHT 229	MH 2858	147	230	248	247	218	203	180	145	176	128	214	171	181	180	223	194	7
30	IHT 230	MH 2859	192	221	248	216	219	197	183	129	170	131	214	173	174	210	240	196	5
31	IHT 231	MH 2860	172	216	237	218	211	209	182	140	177	128	207	168	195	183	231	193	8
32	IHT 232	MH 2861	117	191	212	209	182	162	145	110	139	93	176	135	129	149	180	156	33
33	IHT 233	MH 2862	197	221	236	197	213	193	170	135	166	117	227	172	206	196	273	197	4
34	IHT 234	MH 2863	167	205	241	216	207	196	183	124	168	117	206	162	198	173	214	187	11
		LOC. MEAN	165	195	225	208	198	181	172	125	160	121	198	160	175	177	200	179	
		C.D. (5%)	5.0	21.0	15.0	33.0	16.0	11.0	22.0	9.0	14.0	9.0	23.0	22.0	13.0	16.0	12.0	9.0	
		C.D. (1%)	7.0	27.0	20.0	44.0	22.0	15.0	29.0	11.0	18.0	13.0	30.0	30.0	17.0	21.0	16.0	12.0	
		C.V. (%)	2.0	6.5	4.1	9.7	5.9	3.8	7.7	4.2	5.2	4.8	7.0	6.8	4.6	5.5	3.7	6.5	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	

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Table I.53: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 PRODUCTIVE TILLERS (No./Plant) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	PTN	DHL	PCR	MS MEAN	VYP	MLR	DHR1	KS MEAN	APR	PMP	AP MEAN	PLM	CBE	SMG	ZONE MEAN	RANK
1	IHT 201	MH 2834	2.0	2.5	2.2	2.3	2.3	3.1	2.6	2.1	2.6	1.5	1.3	1.4	3.3	2.8	2.7	2.4	11
2	IHT 202	MH 2835	1.0	1.8	1.9	2.9	1.9	2.4	2.5	1.6	2.2	1.7	2.0	1.8	2.3	2.4	3.1	2.1	30
3	IHT 203	MH 2836	1.0	1.6	1.8	1.9	1.6	3.9	2.9	2.2	3.0	1.1	1.3	1.2	3.5	3.0	2.6	2.2	23
4	IHT 204	MH 2837	1.7	1.6	1.8	2.2	1.8	2.9	2.7	2.0	2.5	1.5	1.2	1.4	2.3	2.0	3.3	2.1	31
5	IHT 205	MH 2838	2.0	1.7	1.9	2.6	2.0	3.0	2.7	2.1	2.6	1.1	1.0	1.1	3.5	3.2	3.3	2.3	14
6	IHT 206	MH 2839	2.0	1.6	1.7	2.0	1.8	2.9	2.1	2.2	2.4	1.2	1.5	1.3	2.5	2.2	2.7	2.1	32
7	IHT 207	MH 2840	2.0	1.6	2.1	2.1	2.0	2.9	2.8	2.1	2.6	1.5	1.5	1.5	3.6	3.2	2.7	2.3	15
8	IHT 208	MH 2841	2.3	2.0	2.0	2.9	2.3	3.6	2.0	2.0	2.5	1.7	1.1	1.4	3.5	3.2	3.5	2.5	6
9	IHT 209	AHB 1269 (Check)	2.0	1.6	1.8	2.4	2.0	3.4	2.6	2.0	2.7	1.5	1.3	1.4	2.4	2.4	3.2	2.2	27
10	IHT 210	MH 2842	1.7	2.0	2.4	2.3	2.1	3.9	2.9	2.1	2.9	1.6	1.3	1.4	1.9	2.4	4.0	2.4	13
11	IHT 211	MH 2843	1.7	1.6	2.0	2.5	1.9	3.3	2.7	2.3	2.8	1.6	1.5	1.5	3.1	2.6	3.7	2.4	9
12	IHT 212	MH 2844	3.0	1.9	1.8	2.7	2.3	3.2	2.5	2.1	2.6	1.5	1.1	1.3	3.3	2.4	2.6	2.3	15
13	IHT 213	MH 2845	1.0	1.7	2.1	2.6	1.9	3.5	2.5	2.2	2.7	1.1	1.8	1.4	3.3	2.3	3.9	2.3	17
14	IHT 214	MH 2846	1.0	1.7	1.9	2.4	1.7	3.7	3.3	1.6	2.9	1.6	1.3	1.4	2.2	2.4	3.6	2.2	26
15	IHT 215	86M01 (Check)	1.7	1.9	1.9	2.2	1.9	2.8	3.5	2.1	2.8	1.6	1.9	1.8	2.6	2.8	3.1	2.3	15
16	IHT 216	MH 2847	1.0	1.8	2.3	2.4	1.9	3.7	2.7	2.1	2.8	1.4	1.4	1.4	3.6	3.2	2.9	2.4	10
17	IHT 217	MH 2848	2.7	1.9	2.2	2.3	2.3	3.5	3.5	2.7	3.2	1.7	1.4	1.5	2.6	2.4	3.9	2.6	5
18	IHT 218	MH 2849	2.7	1.8	2.2	3.0	2.4	3.5	3.0	3.0	3.2	1.4	1.6	1.5	2.4	3.4	3.3	2.6	4
19	IHT 219	MH 2850	2.0	2.2	2.4	2.9	2.4	4.1	3.3	2.9	3.5	1.8	1.9	1.8	3.2	3.6	3.6	2.8	1
20	IHT 220	Pratap (Check)	1.0	1.6	2.2	2.2	1.8	3.3	2.9	2.3	2.9	1.6	1.7	1.6	4.1	3.2	2.5	2.4	8
21	IHT 221	MH 2851	2.0	2.4	2.4	2.9	2.4	3.5	3.6	2.7	3.2	1.3	2.1	1.7	3.8	3.8	2.7	2.8	2
22	IHT 222	MH 2852	1.0	1.4	1.8	3.1	1.8	3.5	2.7	2.2	2.8	1.5	1.5	1.5	3.4	2.8	3.6	2.4	12
23	IHT 223	MH 2853	1.7	1.8	2.1	2.2	2.0	3.7	2.3	2.0	2.6	1.7	1.4	1.5	2.1	3.0	3.3	2.3	22
24	IHT 224	MH 2854	1.0	1.7	2.0	2.5	1.8	3.9	2.3	2.4	2.9	1.5	1.6	1.5	3.0	2.6	2.7	2.3	21
25	IHT 225	MH 2855	1.3	1.7	2.5	3.3	2.2	3.8	2.8	2.5	3.0	1.4	1.5	1.5	4.3	3.4	3.3	2.7	3
26	IHT 226	MH 2856	2.7	1.6	1.8	2.8	2.2	3.9	2.4	2.3	2.8	1.5	1.2	1.3	3.4	2.6	3.3	2.4	7
27	IHT 227	AHB 1200 (Check)	2.0	1.5	2.9	2.1	2.1	3.6	2.4	1.8	2.6	1.5	1.2	1.3	3.9	2.4	2.8	2.3	16
28	IHT 228	MH 2857	2.0	2.1	2.0	2.8	2.2	3.7	2.9	2.1	2.9	1.1	1.5	1.3	2.1	2.0	2.5	2.2	25
29	IHT 229	MH 2858	1.0	1.4	1.7	2.3	1.6	3.7	2.4	2.4	2.8	1.4	1.6	1.5	2.5	2.8	3.1	2.2	28
30	IHT 230	MH 2859	2.0	1.6	1.7	2.7	2.0	2.9	2.3	2.3	2.5	1.5	1.1	1.3	2.3	2.6	3.1	2.2	29
31	IHT 231	MH 2860	2.0	1.4	1.7	2.6	1.9	2.7	1.9	1.7	2.1	1.5	1.6	1.6	3.2	2.4	4.1	2.2	24
32	IHT 232	MH 2861	1.0	1.6	2.5	2.8	2.0	3.6	2.2	2.3	2.7	1.5	1.3	1.4	2.5	3.0	3.0	2.3	19
33	IHT 233	MH 2862	2.0	1.9	2.0	2.4	2.1	3.4	2.4	1.9	2.6	1.3	1.8	1.5	2.4	2.4	3.9	2.3	18
34	IHT 234	MH 2863	2.0	2.0	2.1	2.4	2.1	2.9	2.6	2.0	2.5	1.5	1.3	1.4	2.7	2.8	2.8	2.3	20
		LOC. MEAN	1.7	1.8	2.0	2.5	2.0	3.4	2.7	2.2	2.8	1.5	1.5	1.5	3.0	2.7	3.2	2.3	
		C.D. (5%)	0.5	0.6	0.2	1.0	0.5	0.8	1.0	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.8	0.3	
		C.D. (1%)	0.7	0.9	0.3	1.3	0.7	1.0	1.3	0.5	0.7	0.7	0.6	0.6	0.6	0.5	1.0	0.4	
		C.V. (%)	17.3	22.3	7.2	24.0	17.8	14.0	21.9	10.8	11.6	20.9	18.2	15.4	9.3	8.1	14.7	16.3	
		F (Prob)	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.002	0.000	0.000	0.474	0.000	0.000	0.000	0.000	

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Table I.54: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 PANICLE LENGTH (cm) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	PTN	DHL	PCR	MS MEAN	VYP	MLR	DHR1	KS MEAN	APR	PMP	AP MEAN	PLM	CBE	SMG	ZONE MEAN	RANK
1	IHT 201	MH 2834	25	23	26	27	25	25	21	17	21	25	26	26	25	26	22	24	20
2	IHT 202	MH 2835	23	27	27	33	28	25	21	18	22	25	30	28	22	24	23	25	9
3	IHT 203	MH 2836	22	24	25	27	25	24	24	16	22	29	26	27	26	23	22	24	22
4	IHT 204	MH 2837	24	25	26	30	26	26	26	18	23	27	26	27	24	23	23	25	14
5	IHT 205	MH 2838	23	24	26	29	26	26	23	18	22	25	25	25	28	23	22	24	17
6	IHT 206	MH 2839	24	23	26	27	25	23	20	18	20	25	25	25	25	24	22	24	25
7	IHT 207	MH 2840	23	27	29	29	27	23	20	21	22	27	25	26	28	23	24	25	10
8	IHT 208	MH 2841	26	25	27	30	27	25	20	21	22	29	27	28	26	26	21	25	8
9	IHT 209	AHB 1269 (Check)	24	25	25	27	25	24	19	18	20	26	25	26	26	27	22	24	21
10	IHT 210	MH 2842	23	27	29	29	27	24	20	22	22	25	23	24	29	21	23	25	15
11	IHT 211	MH 2843	24	27	28	31	28	28	24	19	23	23	35	29	25	23	28	26	5
12	IHT 212	MH 2844	25	26	26	29	27	25	24	20	23	28	27	27	28	18	22	25	11
13	IHT 213	MH 2845	25	24	26	30	26	26	24	20	23	28	27	28	31	21	23	25	7
14	IHT 214	MH 2846	25	29	26	35	29	30	24	21	25	30	30	30	25	23	28	27	2
15	IHT 215	86M01 (Check)	25	25	27	30	27	22	23	20	21	28	28	28	27	22	22	25	12
16	IHT 216	MH 2847	24	26	27	27	26	25	19	21	22	26	26	26	24	22	22	24	19
17	IHT 217	MH 2848	26	26	28	28	27	24	20	20	21	25	28	26	25	21	23	24	18
18	IHT 218	MH 2849	23	21	25	24	23	22	21	17	20	25	24	24	23	24	22	22	28
19	IHT 219	MH 2850	23	23	27	31	26	23	21	18	20	23	28	25	23	21	21	23	26
20	IHT 220	Pratap (Check)	19	21	23	22	21	21	17	16	18	24	24	24	25	20	20	21	32
21	IHT 221	MH 2851	22	20	23	25	22	21	20	18	20	26	26	26	26	19	19	22	31
22	IHT 222	MH 2852	23	25	26	29	26	25	22	20	22	28	25	27	28	25	22	25	13
23	IHT 223	MH 2853	26	28	29	33	29	28	25	22	25	25	31	28	24	24	24	27	4
24	IHT 224	MH 2854	20	23	26	27	24	25	21	18	21	24	27	25	22	20	22	23	27
25	IHT 225	MH 2855	22	21	23	25	23	24	20	18	21	24	22	23	29	18	21	22	30
26	IHT 226	MH 2856	23	25	25	29	26	25	19	18	21	27	26	27	27	22	23	24	19
27	IHT 227	AHB 1200 (Check)	23	26	30	31	27	24	20	19	21	27	26	27	29	21	23	25	13
28	IHT 228	MH 2857	23	21	25	28	24	25	21	19	22	25	26	26	28	22	21	24	23
29	IHT 229	MH 2858	22	23	25	30	25	27	18	20	22	25	24	24	26	22	21	24	24
30	IHT 230	MH 2859	26	27	28	32	28	27	22	22	24	28	30	29	30	25	25	27	3
31	IHT 231	MH 2860	40	38	33	39	38	34	29	27	30	28	38	33	34	45	32	35	1
32	IHT 232	MH 2861	20	24	26	28	24	22	19	16	19	23	23	23	23	22	22	22	29
33	IHT 233	MH 2862	26	28	28	28	27	26	22	20	23	26	27	26	31	22	23	26	6
34	IHT 234	MH 2863	23	26	27	27	26	24	23	19	22	28	25	26	26	23	24	25	16
LOC. MEAN			24	25	27	29	26	25	22	19	22	26	27	26	26	23	23	25	
C.D. (5%)			1.0	3.0	2.0	4.0	2.0	2.0	3.0	2.0	2.0	3.0	3.0	5.0	2.0	2.0	2.0	2.0	
C.D. (1%)			2.0	4.0	2.0	5.0	3.0	3.0	4.0	3.0	3.0	4.0	5.0	7.0	3.0	3.0	3.0	2.0	
C.V. (%)			3.6	7.0	4.2	8.3	5.9	5.1	9.1	6.3	6.9	7.1	7.9	9.0	4.8	5.5	5.3	7.6	
F (Prob)			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.160	0.000	0.000	0.000	0.000	

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Table I.55: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 PANICLE DIAMETER (cm) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	PTN	DHL	PCR	MS MEAN	VYP	MLR	DHR1	KS MEAN	APR	PMP	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	IHT 201	MH 2834	3.1	3.6	3.6	3.4	3.4	3.1	2.8	3.0	3.0	3.5	3.3	3.4	3.4	3.2	3.3	8
2	IHT 202	MH 2835	2.7	3.3	3.4	3.6	3.2	2.7	2.6	3.0	2.8	3.2	3.1	3.2	3.2	3.5	3.1	16
3	IHT 203	MH 2836	2.8	3.7	3.6	3.4	3.4	3.2	3.1	3.0	3.1	3.5	3.1	3.3	3.6	3.5	3.3	6
4	IHT 204	MH 2837	3.0	3.6	3.6	3.7	3.5	3.3	3.2	3.2	3.2	3.2	3.1	3.2	4.1	3.3	3.4	5
5	IHT 205	MH 2838	2.8	3.5	3.6	3.4	3.3	3.2	2.9	3.0	3.0	3.4	3.1	3.2	3.7	3.3	3.3	9
6	IHT 206	MH 2839	3.2	3.4	3.6	3.7	3.5	3.2	2.9	3.4	3.1	3.3	3.3	3.3	4.0	3.4	3.4	3
7	IHT 207	MH 2840	3.0	3.5	3.7	3.4	3.4	3.2	2.7	3.1	3.0	3.3	3.1	3.2	2.8	3.1	3.2	13
8	IHT 208	MH 2841	3.1	3.5	3.5	3.2	3.4	3.1	2.8	3.1	3.0	3.1	3.6	3.4	3.4	3.2	3.3	10
9	IHT 209	AHB 1269 (Check)	3.3	3.1	3.3	3.2	3.2	2.6	2.5	3.0	2.7	3.2	3.3	3.2	3.6	3.2	3.1	20
10	IHT 210	MH 2842	3.2	3.8	3.8	3.8	3.7	3.0	3.0	3.2	3.1	3.6	3.5	3.6	3.4	3.2	3.4	2
11	IHT 211	MH 2843	3.0	3.4	3.5	3.5	3.4	2.9	2.9	3.1	3.0	3.3	3.3	3.3	4.0	3.5	3.3	7
12	IHT 212	MH 2844	3.4	3.6	3.7	3.9	3.6	2.9	3.2	2.9	3.0	3.4	3.5	3.5	3.3	3.6	3.4	3
13	IHT 213	MH 2845	2.8	3.2	3.3	3.3	3.2	2.7	2.6	2.8	2.7	3.2	3.0	3.1	3.8	3.5	3.1	19
14	IHT 214	MH 2846	3.3	3.6	3.7	4.0	3.7	3.3	3.3	3.1	3.2	3.6	3.2	3.4	2.8	3.3	3.4	4
15	IHT 215	86M01 (Check)	2.9	3.3	3.4	3.6	3.3	2.7	2.6	3.0	2.8	3.5	3.0	3.3	3.7	3.2	3.2	14
16	IHT 216	MH 2847	2.7	3.2	3.5	3.2	3.2	2.6	2.7	3.0	2.8	3.1	2.7	2.9	3.1	3.2	3.0	26
17	IHT 217	MH 2848	2.9	3.3	3.4	3.2	3.2	3.0	2.7	3.0	2.9	3.2	3.1	3.2	3.1	3.0	3.1	22
18	IHT 218	MH 2849	2.8	3.2	3.6	3.4	3.3	2.7	2.8	2.7	2.7	3.7	3.2	3.4	3.0	3.2	3.1	17
19	IHT 219	MH 2850	2.9	3.0	3.4	3.0	3.1	2.4	2.5	2.7	2.5	3.5	2.9	3.2	2.9	3.9	3.0	27
20	IHT 220	Pratap (Check)	2.8	3.2	3.4	3.1	3.1	2.7	3.0	3.1	2.9	3.3	3.8	3.5	2.8	3.1	3.1	18
21	IHT 221	MH 2851	2.6	2.9	3.5	2.9	3.0	2.2	2.6	2.7	2.5	3.0	2.6	2.8	2.9	2.9	2.8	29
22	IHT 222	MH 2852	2.7	3.3	3.3	3.4	3.2	2.5	2.7	2.6	2.6	3.7	3.1	3.4	3.2	3.3	3.1	24
23	IHT 223	MH 2853	3.2	3.6	3.4	3.6	3.5	2.8	2.7	2.9	2.8	3.6	3.5	3.5	3.1	3.3	3.2	11
24	IHT 224	MH 2854	2.5	3.1	3.4	3.0	3.0	2.6	2.6	2.8	2.7	3.2	3.1	3.2	2.9	3.1	2.9	28
25	IHT 225	MH 2855	2.8	3.2	3.3	3.2	3.1	2.6	2.7	3.0	2.8	3.2	2.9	3.1	3.3	3.1	3.0	25
26	IHT 226	MH 2856	2.7	3.5	3.5	3.6	3.4	2.9	2.4	2.9	2.7	3.4	3.3	3.3	3.2	3.6	3.2	12
27	IHT 227	AHB 1200 (Check)	3.0	3.6	3.7	2.6	3.2	2.9	2.7	2.9	2.8	3.4	3.4	3.4	3.1	3.2	3.1	16
28	IHT 228	MH 2857	2.9	3.1	3.5	3.3	3.2	2.7	2.7	2.9	2.7	3.1	3.2	3.1	3.3	3.5	3.1	21
29	IHT 229	MH 2858	2.8	3.3	3.7	3.5	3.3	2.7	2.6	3.2	2.8	3.2	2.8	3.0	3.0	3.0	3.1	23
30	IHT 230	MH 2859	3.2	3.8	3.9	4.2	3.8	2.8	3.0	3.4	3.0	3.7	3.6	3.7	4.1	3.2	3.5	1
31	IHT 231	MH 2860	2.3	2.8	3.3	2.8	2.8	2.3	2.2	2.4	2.3	3.2	2.8	3.0	2.6	3.6	2.7	30
32	IHT 232	MH 2861	2.7	3.4	3.5	3.0	3.1	2.7	2.8	3.0	2.8	2.8	3.3	3.1	3.2	3.4	3.1	24
33	IHT 233	MH 2862	2.5	3.5	3.5	3.3	3.2	2.7	2.8	2.8	2.8	3.5	3.1	3.3	3.4	3.0	3.1	21
34	IHT 234	MH 2863	2.7	3.5	3.7	3.7	3.4	2.7	2.8	2.9	2.8	3.2	3.3	3.2	3.5	2.8	3.2	15
LOC. MEAN			2.9	3.4	3.5	3.4	3.3	2.8	2.8	2.9	2.8	3.3	3.2	3.3	3.3	3.3	3.2	
C.D. (5%)			0.1	0.4	0.2	0.5	0.3	0.3	0.5	0.2	0.2	0.4	0.4	0.4	0.3	0.3	0.2	
C.D. (1%)			0.2	0.5	0.3	0.7	0.3	0.4	0.6	0.3	0.3	0.5	0.5	0.6	0.4	0.3	0.2	
C.V. (%)			3.1	6.8	3.9	9.8	5.4	5.8	10.6	4.8	5.2	7.4	7.9	6.2	5.7	4.7	6.6	
F (Prob)			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.000	0.000	

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Table I.56: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 1000-SEED Wt.(g) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	PTN	DHL	PCR	MS MEAN	VYP	MLR	KS MEAN	CBE	ZONE MEAN	RANK
1	IHT 201	MH 2834	9.3	15.7	9.3	11.1	11.3	15.1	13.5	14.3	11.5	12.2	4
2	IHT 202	MH 2835	8.3	14.1	9.6	9.8	10.5	14.8	13.7	14.3	15.1	12.2	3
3	IHT 203	MH 2836	10.0	13.8	10.2	8.1	10.6	14.4	13.3	13.9	11.1	11.6	15
4	IHT 204	MH 2837	11.1	13.7	9.8	12.2	11.7	15.6	13.5	14.6	11.1	12.4	1
5	IHT 205	MH 2838	9.6	14.0	9.5	8.0	10.3	15.2	13.1	14.1	12.4	11.7	12
6	IHT 206	MH 2839	11.0	12.3	11.3	8.2	10.7	14.4	12.5	13.5	11.2	11.5	16
7	IHT 207	MH 2840	10.7	15.4	11.6	8.2	11.5	13.2	13.8	13.5	11.8	12.1	6
8	IHT 208	MH 2841	13.6	16.0	10.1	9.9	12.4	13.6	11.2	12.4	12.2	12.4	2
9	IHT 209	AHB 1269 (Check)	10.8	11.9	9.3	10.8	10.7	13.5	11.1	12.3	9.5	11.0	23
10	IHT 210	MH 2842	10.3	12.8	8.4	11.2	10.7	11.3	11.8	11.6	9.7	10.8	27
11	IHT 211	MH 2843	10.4	14.3	10.0	9.9	11.1	13.8	12.0	12.9	11.9	11.7	11
12	IHT 212	MH 2844	8.4	11.4	8.2	9.0	9.3	14.0	14.1	14.0	12.1	11.0	22
13	IHT 213	MH 2845	11.1	13.1	9.5	9.9	10.9	15.7	13.5	14.6	9.0	11.7	13
14	IHT 214	MH 2846	11.5	15.2	10.0	9.9	11.7	13.9	13.2	13.6	10.5	12.0	7
15	IHT 215	86M01 (Check)	13.5	13.7	7.7	7.9	10.7	13.5	12.1	12.8	11.4	11.4	17
16	IHT 216	MH 2847	9.3	12.8	9.0	11.2	10.6	13.4	12.2	12.8	10.8	11.2	19
17	IHT 217	MH 2848	9.6	13.1	9.6	9.1	10.4	14.5	11.6	13.0	10.9	11.2	20
18	IHT 218	MH 2849	11.4	12.5	9.0	7.5	10.1	12.6	12.0	12.3	11.2	10.9	24
19	IHT 219	MH 2850	12.8	13.6	9.8	11.6	12.0	13.3	12.8	13.0	9.4	11.9	8
20	IHT 220	Pratap (Check)	9.3	15.3	9.4	13.2	11.8	13.6	11.8	12.7	9.9	11.8	10
21	IHT 221	MH 2851	13.1	12.0	8.1	11.9	11.3	13.7	12.8	13.3	9.5	11.6	14
22	IHT 222	MH 2852	10.4	14.1	9.8	9.3	10.9	11.8	12.5	12.2	11.2	11.3	18
23	IHT 223	MH 2853	8.7	11.3	9.5	7.9	9.3	13.2	13.0	13.1	9.4	10.4	31
24	IHT 224	MH 2854	8.7	12.2	9.7	9.3	10.0	11.8	12.3	12.1	9.0	10.4	30
25	IHT 225	MH 2855	13.1	11.1	9.2	7.5	10.2	15.6	14.2	14.9	5.1	10.8	25
26	IHT 226	MH 2856	8.4	12.2	7.9	9.2	9.4	14.0	11.6	12.8	7.3	10.1	32
27	IHT 227	AHB 1200 (Check)	8.7	13.0	7.7	9.5	9.7	13.8	13.0	13.4	7.9	10.5	29
28	IHT 228	MH 2857	10.4	12.4	7.2	9.5	9.9	13.4	13.3	13.4	9.6	10.8	26
29	IHT 229	MH 2858	10.5	15.1	9.9	7.7	10.8	13.5	12.2	12.8	10.9	11.4	17
30	IHT 230	MH 2859	10.4	13.4	10.4	11.6	11.4	13.3	12.5	12.9	11.6	11.9	9
31	IHT 231	MH 2860	9.4	10.8	10.0	9.2	9.9	13.0	13.3	13.2	12.6	11.2	20
32	IHT 232	MH 2861	9.5	11.8	8.0	7.7	9.3	15.0	13.1	14.1	10.1	10.8	28
33	IHT 233	MH 2862	9.2	12.4	9.1	11.6	10.6	13.2	12.4	12.8	10.5	11.2	21
34	IHT 234	MH 2863	10.6	13.0	8.4	13.0	11.3	14.1	13.6	13.8	12.3	12.2	5
LOC. MEAN			10.4	13.2	9.3	9.8	10.7	13.8	12.7	13.3	10.6	11.4	
C.D. (5%)			0.4	1.9	1.0	0.3	1.8	0.5	1.1	1.4	0.9	1.4	
C.D. (1%)			0.6	2.5	1.3	0.4	2.4	0.7	1.5	1.9	1.2	1.8	
C.V. (%)			2.5	8.7	6.3	1.7	12.3	2.3	5.3	5.3	5.1	10.6	
F (Prob)			0.000	0.000	0.000	0.000	0.061	0.000	0.000	0.004	0.000	0.103	

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Table I.57: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 POPULATION AT HARVEST(No./plot) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	PTN	DHL	PCR	MS MEAN	VYP	MLR	DHR1	KS MEAN	APR	PMP	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	IHT 201	MH 2834	75	61	60	30	57	70	73	38	61	50	48	49	75	55	58	33
2	IHT 202	MH 2835	76	50	48	23	49	72	50	41	55	44	45	45	74	68	54	34
3	IHT 203	MH 2836	73	70	63	42	62	70	71	38	60	44	58	51	74	69	61	23
4	IHT 204	MH 2837	76	75	62	39	63	70	73	36	60	46	54	50	73	53	60	30
5	IHT 205	MH 2838	75	80	50	37	61	73	77	45	65	52	59	56	73	60	62	17
6	IHT 206	MH 2839	76	82	48	32	59	68	78	40	62	51	51	51	77	65	61	27
7	IHT 207	MH 2840	75	89	58	41	66	71	81	48	66	54	67	61	62	64	64	7
8	IHT 208	MH 2841	73	80	55	43	63	73	77	48	66	48	73	61	76	66	65	5
9	IHT 209	AHB 1269 (Check)	73	80	48	43	61	73	77	39	63	47	74	60	77	60	63	12
10	IHT 210	MH 2842	75	86	59	45	66	69	74	42	61	59	89	74	79	63	67	1
11	IHT 211	MH 2843	76	77	61	32	62	70	79	40	63	57	79	68	77	61	64	6
12	IHT 212	MH 2844	75	78	55	30	60	74	76	33	61	45	74	60	78	57	61	22
13	IHT 213	MH 2845	76	76	58	38	62	73	80	32	62	47	63	55	72	64	62	19
14	IHT 214	MH 2846	75	72	55	30	58	71	78	47	65	43	60	52	75	69	61	21
15	IHT 215	86M01 (Check)	76	72	60	30	60	70	75	43	62	51	57	54	74	65	61	24
16	IHT 216	MH 2847	72	80	62	38	63	70	77	42	63	49	67	58	76	69	64	9
17	IHT 217	MH 2848	75	81	56	42	63	69	73	53	65	59	59	59	77	53	63	11
18	IHT 218	MH 2849	73	71	61	30	59	71	77	46	65	51	66	58	77	55	62	20
19	IHT 219	MH 2850	71	83	63	32	62	72	74	40	62	41	55	48	75	59	60	28
20	IHT 220	Pratap (Check)	70	74	51	36	58	71	78	53	68	53	69	61	79	51	62	14
21	IHT 221	MH 2851	73	77	60	27	59	73	73	45	63	42	57	50	75	68	61	25
22	IHT 222	MH 2852	75	79	58	39	63	72	79	35	62	51	53	52	76	65	62	16
23	IHT 223	MH 2853	75	74	60	34	61	72	72	40	62	52	70	61	77	61	62	13
24	IHT 224	MH 2854	74	80	61	38	63	74	76	37	62	48	77	63	77	66	64	8
25	IHT 225	MH 2855	73	74	52	36	59	71	74	53	66	43	53	48	75	65	61	26
26	IHT 226	MH 2856	74	76	67	36	63	69	79	54	67	59	66	63	77	60	65	4
27	IHT 227	AHB 1200 (Check)	70	72	64	27	58	70	73	35	59	48	57	53	79	48	59	32
28	IHT 228	MH 2857	73	75	54	32	58	71	79	58	69	46	61	54	75	56	62	18
29	IHT 229	MH 2858	74	84	61	40	65	69	76	54	66	51	75	63	74	65	66	3
30	IHT 230	MH 2859	76	83	65	38	65	71	70	49	63	46	61	54	76	67	64	10
31	IHT 231	MH 2860	75	82	64	38	65	71	75	48	65	43	49	46	76	64	62	15
32	IHT 232	MH 2861	74	67	62	39	60	72	79	32	61	46	52	49	76	65	60	29
33	IHT 233	MH 2862	73	78	59	33	61	71	74	47	64	45	37	41	77	56	59	31
34	IHT 234	MH 2863	72	77	61	45	64	72	76	64	71	55	67	61	76	65	66	2
LOC. MEAN			74	76	58	36	61	71	75	44	63	49	62	55	75	62	62	
C.D. (5%)			4.0	13.0	9.0	11.0	7.0	2.0	6.0	9.0	9.0	7.0	16.0	14.0	5.0	7.0	5.0	
C.D. (1%)			6.0	17.0	12.0	15.0	9.0	3.0	8.0	11.0	12.0	9.0	21.0	18.0	7.0	9.0	6.0	
C.V. (%)			3.4	10.2	9.5	19.3	7.9	2.1	5.1	12.0	8.6	8.5	16.0	12.1	4.2	6.9	8.9	
F (Prob)			0.000	0.000	0.000	0.000	0.015	0.000	0.000	0.000	0.485	0.000	0.000	0.013	0.000	0.000	0.000	

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Table I.58: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 SEED SET (%) UNDER BAG ZONE B

S.No.	TEST CODE	ENTRY	ABD1	PTN	DHL	PCR	MS MEAN	PMP	PLM	CBE	ZONE MEAN	RANK
1	IHT 201	MH 2834	96	87	96	82	90	88	97	84	90	2
2	IHT 202	MH 2835	97	80	95	40	78	97	82	86	82	20
3	IHT 203	MH 2836	95	43	83	70	73	30	97	26	63	29
4	IHT 204	MH 2837	96	50	81	37	66	19	98	8	55	33
5	IHT 205	MH 2838	95	80	95	87	89	96	94	74	89	5
6	IHT 206	MH 2839	95	38	98	72	75	8	95	5	59	32
7	IHT 207	MH 2840	93	87	98	72	87	96	90	78	88	6
8	IHT 208	MH 2841	94	77	99	85	89	94	96	83	90	3
9	IHT 209	AHB 1269 (Check)	95	65	84	70	79	89	97	83	83	16
10	IHT 210	MH 2842	94	83	99	72	87	97	82	83	87	8
11	IHT 211	MH 2843	98	82	96	72	87	74	97	78	85	12
12	IHT 212	MH 2844	97	80	96	32	76	96	92	88	83	17
13	IHT 213	MH 2845	95	55	87	73	78	77	97	31	74	27
14	IHT 214	MH 2846	98	85	98	77	89	100	87	88	90	1
15	IHT 215	86M01 (Check)	99	77	93	80	87	95	96	69	87	9
16	IHT 216	MH 2847	95	80	93	78	87	88	82	63	83	18
17	IHT 217	MH 2848	98	75	94	73	85	84	82	85	84	15
18	IHT 218	MH 2849	95	53	93	72	78	83	97	64	80	24
19	IHT 219	MH 2850	98	48	91	72	77	4	95	17	61	30
20	IHT 220	Pratap (Check)	96	68	84	83	83	90	92	88	86	11
21	IHT 221	MH 2851	93	57	87	70	77	80	94	88	81	23
22	IHT 222	MH 2852	95	85	96	23	75	97	92	90	83	19
23	IHT 223	MH 2853	98	80	96	23	74	95	97	84	82	21
24	IHT 224	MH 2854	97	78	94	70	85	92	86	58	82	20
25	IHT 225	MH 2855	98	32	77	68	69	17	94	30	59	31
26	IHT 226	MH 2856	95	82	93	35	76	91	96	57	78	25
27	IHT 227	AHB 1200 (Check)	95	77	95	23	73	26	97	59	68	28
28	IHT 228	MH 2857	96	77	83	18	69	83	95	85	77	26
29	IHT 229	MH 2858	98	78	71	77	81	93	97	80	85	14
30	IHT 230	MH 2859	97	82	94	73	87	90	85	74	85	13
31	IHT 231	MH 2860	96	83	97	73	87	89	98	85	89	4
32	IHT 232	MH 2861	94	53	88	78	78	93	85	80	82	22
33	IHT 233	MH 2862	96	82	95	70	86	88	96	84	87	7
34	IHT 234	MH 2863	97	57	98	70	81	96	98	87	86	10
LOC. MEAN			96	70	92	64	80	77	93	68	80	
C.D. (5%)			4.0	33.0	11.0	7.0	19.0	11.0	5.0	6.0	19.0	
C.D. (1%)			6.0	43.0	15.0	9.0	25.0	14.0	6.0	8.0	25.0	
C.V. (%)			2.9	28.5	7.4	6.3	16.6	8.5	3.1	5.5	16.6	
F (Prob)			0.000	0.000	0.000	0.000	0.472	0.000	0.000	0.000	0.472	

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Table I.59: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 ZONE B
GRAIN QUALITY: IRON CONTENT (ppm)

S.No.	TEST	ENTRY	PTN	DHL	PCR	VYP	PMP	CBE	ZONE MEAN	RANK
1	IHT 207	MH 2840	40	62	46	43	40	49	46	10
2	IHT 209	AHB 1269 (Check)	56	61	58	54	59	56	57	4
3	IHT 210	MH 2842	39	50	42	44	52	38	44	11
4	IHT 211	MH 2843	53	63	59	49	56	42	53	8
5	IHT 214	MH 2846	65	72	69	40	75	68	65	2
6	IHT 215	86M01 (Check)	41	78	49	46	50	48	52	9
7	IHT 220	Pratap (Check)	49	69	57	42	54	54	54	7
8	IHT 222	MH 2852	46	69	52	48	70	48	56	5
9	IHT 223	MH 2853	51	83	52	48	65	48	58	3
10	IHT 227	AHB 1200 (Check)	63	76	69	46	85	66	67	1
11	IHT 230	MH 2859	48	84	61	44	54	40	55	6
12	IHT 234	MH 2863	53	68	49	50	63	51	56	5

Table I.60: INITIAL HYBRID TRIAL (Medium) KHARIF - 2024 ZONE B
GRAIN QUALITY: ZINC CONTENT (ppm)

S.No.	TEST	ENTRY	PTN	DHL	PCR	VYP	PMP	CBE	ZONE MEAN	RANK
1	IHT 207	MH 2840	30	32	30	33	29	41	33	8
2	IHT 209	AHB 1269 (Check)	41	33	33	36	28	45	36	5
3	IHT 210	MH 2842	39	31	30	27	34	33	32	9
4	IHT 211	MH 2843	36	39	39	41	40	41	39	2
5	IHT 214	MH 2846	42	42	36	37	39	45	40	1
6	IHT 215	86M01 (Check)	30	31	36	40	31	44	35	6
7	IHT 220	Pratap (Check)	37	39	34	35	35	49	38	3
8	IHT 222	MH 2852	35	39	33	36	39	41	37	4
9	IHT 223	MH 2853	33	37	29	34	35	38	34	7
10	IHT 227	AHB 1200 (Check)	40	36	37	36	38	50	40	1
11	IHT 230	MH 2859	39	37	34	35	35	37	36	5
12	IHT 234	MH 2863	38	32	33	35	32	45	36	5

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Table I.61: INITIAL HYBRID TRIAL (Late) KHARIF 2024 EXPERIMENTAL DETAILS ZONE A

Locations	Soil	pH	Sowing date	Harvesting date	Interculture date	Irrigation date	Fertilizers			Insecticide
							N	P	K	
RAJASTHAN										
Jaipur (SKNAU)	SL	-	8.7.24	9.10.24	24.7.24	Nil	40	30	0	Nil
Jaipur (Seed works)	MSL	7.1	8.7.24	10.10.24	24.7.24	8.7, 15.8, 20.9.24	80	60	40	Chloropyriphos, Coragen,
Paota (Limagrain)	-	-	27.6.24	15.10.24	29.7.24	Nil	50	30	30	Fem
Alwar (Rallis)	SL	-	29.7.24	11.5.24	18.8.24	Nil	60	30	30	Nil
Alwar (Corteva)	L	7.5	8.7.24	16.10.24	12.8.24	Life Saving	90	60	30	Chloropyriphos+Imidachlorpid
Alwar (Ganga Kaveri)	SL	7.0	13.7.24	21.10.24	9.8.24	13.7, 24.8.24	40	20	20	Coragen,
Dausa (Rasi Seeds)	SL	-	26.6.24	25.9.24	12.7.24	Nil	10	10	2	Nil
Bharatpur (Nuziveedu)	-	-	12.7.24	-	-	Nil	60	40	30	Nil
GUJARAT										
Jamagar (JAU)	MB	7.6	18.7.24	18.10.24	28.7, 2.8, 9.8, 17.8.24	Nil	80	40	0	Nil
Ahemdabad (Nandi)	SL	-	18.7.24	20.10.24	15.8, 25.8.24	Nil	80	40	0	Coragen
Dehgam (kaveri Seed)	SL	-	12.7.24	4.10.24	23.7, 14.8.24	12.7.24	128	92	0	Nil
UTTAR PRADESH										
Aligarh (Hytech)	SL	-	14.7.24	11.10.24	6.8, 23.8.24	14.7.24	60	25	15	Monocrotophos, Bavistin
Mathura (Kamadgiri)	SL	-	12.7.24	14.10.24	-	Nil	80	40	40	Chloropyriphos, Cypermethrin
HARYANA										
Hisar (CCSHAU)	SL	-	11.7.24	25.10.24	-	28.8.24	100	40	0	Nil
MADHYA PRADESH										
Gwalior (RVSKVV)	SL	7.1	11.7.24	14.10.24	11.8.24	26.7.24	60	40	20	Nil
PUNJAB										
Ludhiana (PAU)	SL	-	9.7.24	15.11.24	31.7, 2.9.24	30.7, 31.8, 2.10.24	100	60	0	Nil

SL = Sandy Loam, MB = Medium Black, MSL = Medium Sandy Loam, L=Loam .

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Table I.62: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 GRAIN YIELD (kg/ha) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	PTA	ALW4	ALW5**	ALW	DAS	BHP	RAJ MEAN	JMR	AHD	DEG1	GUJ MEAN	ALR	MTR	UP MEAN	HSR	GLR***	LDA	ZONE MEAN	RANK
1	IHT 301	MH 2864	2389	5383	4078	3778	1747	2331	4466	2517	3563	2037	5159	2823	3340	2481	2961	2721	4914	2376	5121	3603	12
2	IHT 302	MH 2865	2444	3867	3240	3575	2233	2825	4468	2256	3239	2347	3774	2143	2755	1983	2311	2147	4063	1847	2472	2983	24
3	IHT 303	MH 2866	3011	4594	3783	5100	1627	2339	4623	2611	3723	2981	8006	3169	4719	2442	2639	2541	3891	2097	4406	3828	6
4	IHT 304	MH 2867	2161	6167	3204	4449	1944	2667	4125	2639	3630	2829	6129	2998	3985	3007	2250	2628	4481	2046	4341	3675	11
5	IHT 305	MH 2868	2856	6006	3300	4461	2068	2969	3964	2733	3756	1907	5661	3064	3544	2116	2044	2080	2926	1814	4197	3443	16
6	IHT 306	MP 7878 (Check)	4572	6361	3286	4048	3021	2558	4438	2367	3947	3431	7758	3457	4882	3368	3272	3320	4241	2179	4599	4125	2
7	IHT 307	MH 2869	2700	5239	3623	4406	1859	2889	4020	2322	3600	2037	5732	2781	3516	1454	2039	1747	3060	1816	3416	3266	22
8	IHT 308	MH 2870	3039	5117	3448	4128	1979	2697	4008	2672	3587	2356	5967	2228	3517	2178	2561	2369	2502	1733	3576	3320	20
9	IHT 309	AHB 1200 (Check)	2361	4656	2147	3703	2139	2186	4565	2156	3111	1435	4645	2314	2798	1836	1967	1901	3126	1897	3205	2879	26
10	IHT 310	MH 2871	2528	6189	3350	4258	1284	3383	4407	2789	3844	2208	7676	3368	4417	2831	2094	2463	3478	1917	2912	3677	10
11	IHT 311	MH 2872	1839	2367	2441	2211	1200	1458	4267	1967	2364	1648	2375	1894	1972	1462	2606	2034	2757	1728	2688	2284	27
12	IHT 312	MH 2873	2828	6878	2941	5108	2091	2794	4178	2633	3909	2514	5864	2913	3764	3119	2167	2643	3429	2069	2541	3565	14
13	IHT 313	86M84 (Check)	2761	6167	3788	4983	1846	3775	3968	2861	4043	2468	7777	3411	4552	3064	2456	2760	4356	2514	3551	3956	4
14	IHT 314	MH 2874	3878	5322	3207	4733	2206	3364	4088	1883	3782	2505	7343	3403	4417	2886	2722	2804	3386	2229	3746	3747	7
15	IHT 315	MH 2875	3933	6544	3556	4639	2494	3283	4075	2589	4088	1944	8340	3799	4695	3547	3211	3379	3704	2400	3233	4028	3
16	IHT 316	MH 2876	3417	6722	4116	4450	1717	2858	3812	2167	3934	2958	7904	2644	4502	2434	2039	2237	3489	1917	5322	3881	5
17	IHT 317	MH 2877	3083	6000	2405	3767	2274	3033	3986	2172	3492	2046	5667	3403	3705	2473	2550	2512	3688	1375	2999	3377	19
18	IHT 318	MH 2878	2783	7450	4306	5106	2741	4383	3964	2972	4423	2718	7983	3932	4877	3702	2106	2904	4122	2144	5002	4323	1
19	IHT 319	MH 2879	3489	5939	2592	4031	1682	3231	4285	2539	3729	3551	6049	3438	4346	2038	2467	2252	3567	1542	5006	3730	8
20	IHT 320	KBH 108 (Check)	3106	5211	3506	4811	2059	1772	4172	2550	3590	2444	4939	3236	3540	1688	2006	1847	2708	2451	3570	3266	21
21	IHT 321	MH 2880	2472	6117	3481	5097	2314	1847	4502	2572	3727	4292	4909	2959	4054	2302	2633	2468	3914	2064	2852	3568	13
22	IHT 322	MH 2881	3317	6106	3144	4339	2442	2600	4009	2044	3651	1958	5156	3586	3566	2629	2600	2614	3700	2181	2650	3417	17
23	IHT 323	MH 2882	2717	4717	2874	3769	1938	1978	4327	2417	3257	2079	5416	2792	3429	1991	1911	1951	2646	2447	3339	3069	23
24	IHT 324	MH 2883	3356	6128	3124	4078	2027	4681	4462	2833	4095	2667	3678	2559	2968	2831	3228	3029	4068	1517	3928	3687	9
25	IHT 325	MH 2884	2422	4356	2019	2947	1183	2339	4180	2033	2899	1292	7220	1812	3441	2676	2156	2416	2305	2458	3511	2948	25
26	IHT 326	MH 2885	2600	6522	3746	5150	2902	3000	4165	2700	3983	2602	3615	3636	3284	1937	2494	2216	3354	1953	3694	3515	15
27	IHT 327	MH 2886	2683	5394	2496	4133	1804	2728	4544	2039	3431	2083	8087	2516	4229	2248	2350	2299	3099	2436	3253	3404	18
		LOC. MEAN	2916	5612	3230	4269	2030	2814	4225	2446	3644	2420	6031	2973	3808	2471	2438	2455	3518	2042	3672	3502	
		C.D. (5%)	707	640	403	782	1002	799	352	682	574	547	435	629	1572	287	478	834	840	419	292	480	
		C.D. (1%)	942	852	537	1042	1335	1065	469	908	758	729	579	838	2094	383	637	1128	1120	558	390	632	
		C.V. (%)	14.8	7.0	7.6	11.2	30.1	17.3	5.1	17.0	14.9	13.8	4.4	12.9	25.2	7.1	12.0	16.5	14.6	12.5	4.9	18.4	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.000	0.000	0.030	0.000	0.000	0.000	0.000	
		PLOT SIZE (m ²)	6.00	6.00	6.00	6.00	6.00	6.00	5.40	6.00	-	7.20	6.00	6.00	-	6.00	6.00	-	6.00	6.00	6.00	-	

***TEST LOCATION REJECTED DUE TO LOW AVERAGE YIELD (2042 kg/ha), THAN THE STATE AVERAGE YIELD (2166 kg/ha) TAKEN OVER 10 YEARS

**LOCATION REJECTED DUE TO HIGH C.V. (i.e. > 30%): ALW5 30.1%

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Table I.63: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 DRY FODDER YIELD (kg/ha) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	ALW4	ALW5	ALW	DAS	BHP	RAJ MEAN	JMR	AHD	DEG1	GUJ MEAN	ALR	MTR	UP MEAN	HSR	GLR	LDA	ZONE MEAN	RANK
1	IHT 301	MH 2864	5778	7900	4773	7512	6367	8651	11243	7461	4060	15704	7422	9062	10833	13361	12097	21333	15000	17178	10474	15
2	IHT 302	MH 2865	4833	5644	4625	6517	8028	7312	12626	7084	4435	11369	9200	8335	8944	9689	9317	14444	9722	11361	8583	23
3	IHT 303	MH 2866	6333	10017	8806	14190	10556	11719	6683	9758	8815	10018	11644	10159	24089	14978	19533	16444	17778	21339	12894	2
4	IHT 304	MH 2867	6889	7700	6658	8656	8989	13170	9515	8797	5421	11999	9822	9081	10700	10311	10506	18303	9444	24250	10789	13
5	IHT 305	MH 2868	4278	11222	5300	8407	6811	7778	10100	7699	4319	14322	12533	10392	5889	9067	7478	13667	6667	17611	9198	22
6	IHT 306	MP 7878 (Check)	7611	11417	8022	13608	10533	8478	11622	10185	7569	8019	14089	9893	16889	13489	15189	18278	11111	19833	12038	4
7	IHT 307	MH 2869	4500	7461	5289	8086	7172	11207	10511	7747	3282	8932	8389	6868	5200	12689	8944	13889	6389	13639	8442	24
8	IHT 308	MH 2870	5944	7089	5169	8943	6867	7611	10176	7400	4491	15402	9911	9935	7367	9378	8372	7778	6389	13528	8403	25
9	IHT 309	AHB 1200 (Check)	3833	7089	5611	8677	5967	11194	11694	7724	3454	12069	8522	8015	7644	10956	9300	10667	6389	9561	8222	26
10	IHT 310	MH 2871	5333	8656	6334	7417	12422	8290	11757	8601	4426	10159	11044	8543	10733	12294	11514	12722	18333	10283	10014	19
11	IHT 311	MH 2872	8667	12811	11276	15496	13439	11364	12211	12180	5801	13022	14767	11197	18789	14811	16800	8833	8611	9233	11942	5
12	IHT 312	MH 2873	6722	12428	8469	11983	8911	11426	12932	10410	5167	15539	9567	10091	21856	11744	16800	13944	11667	8189	11370	8
13	IHT 313	86M84 (Check)	5778	9883	8278	9829	15000	10077	11561	10058	5032	13354	13422	10603	15167	10778	12972	15117	14167	18811	11750	7
14	IHT 314	MH 2874	9389	9139	7946	11067	10650	10809	11541	10077	5593	11803	14011	10469	16233	11956	14094	9179	11389	16828	11169	11
15	IHT 315	MH 2875	8667	9333	7481	11748	11567	7401	10089	9469	4657	11822	15211	10563	14667	12667	13667	15222	15833	12044	11227	9
16	IHT 316	MH 2876	6278	10117	8814	10608	9267	9549	11056	9384	5000	15661	9267	9976	20078	10889	15483	12389	8889	19789	11177	10
17	IHT 317	MH 2877	5000	10583	5869	9520	9122	8759	10728	8512	4352	11044	10761	8719	9856	10139	9997	16111	6667	13183	9446	21
18	IHT 318	MH 2878	7111	9883	9861	16350	18611	11420	11467	12100	7296	9243	16567	11035	18922	15144	17033	18333	13333	17539	13405	1
19	IHT 319	MH 2879	6944	12628	10142	13709	12200	8963	9328	10559	7148	13772	14183	11701	16722	10872	13797	17222	7500	16083	11828	6
20	IHT 320	KBH 108 (Check)	5833	8667	7489	8096	9600	12648	9582	8845	4944	11123	13044	9704	15900	9522	12711	11056	19167	14511	10745	14
21	IHT 321	MH 2880	5000	8906	7192	11764	7211	7377	12722	8596	6361	16151	10500	11004	16067	12578	14322	14833	9167	9728	10370	16
22	IHT 322	MH 2881	5944	8078	6933	9444	7183	7454	12876	8273	3588	17848	13428	11621	13433	11517	12475	15444	8611	9322	10074	18
23	IHT 323	MH 2882	7167	7739	8981	11440	7533	10009	14193	9580	3963	11216	12072	9084	10767	9622	10194	10075	12778	15833	10226	17
24	IHT 324	MH 2883	4944	10378	5400	9242	17017	10426	14463	10267	5009	14366	15633	11670	17744	13456	15600	19111	6944	16606	12049	3
25	IHT 325	MH 2884	4111	5644	4967	6379	8267	7506	10044	6703	3019	17598	7133	9250	9122	7139	8131	6889	12500	12028	8156	27
26	IHT 326	MH 2885	5444	10639	8608	14223	11900	13421	14337	11225	5514	11086	12944	9848	12589	11928	12258	12667	7778	11856	10996	12
27	IHT 327	MH 2886	5500	8311	6383	7933	9833	8759	11876	8371	5324	10910	9422	8552	11033	10178	10606	17222	11667	9700	9604	20
		LOC. MEAN	6068	9236	7210	10402	10038	9733	11368	9151	5113	12724	11649	9828	13601	11524	12563	14118	10885	14440	10540	
		C.D. (5%)	1309	1225	1121	3073	2664	1313	4096	1919	1208	854	2050	3442	3658	2005	6317	5186	2341	2122	1813	
		C.D. (1%)	1744	1632	1494	4094	3550	1749	5457	2536	1610	1138	2731	4587	4873	2671	8539	6909	3119	2827	2388	
		C.V. (%)	13.2	8.1	9.5	18.0	16.2	8.2	22.0	19.1	14.4	4.1	10.7	21.6	16.4	10.6	24.3	22.4	13.1	9.0	23.8	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.858	0.000	0.000	0.018	0.000	0.000	0.000	0.000	
		PLOT SIZE (m ²)	6.00	6.00	6.00	6.00	6.00	5.40	6.00	-	7.20	6.00	6.00	-	6.00	6.00	-	6.00	6.00	6.00	-	

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Table I.64: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 DAYS TO 50% FLOWERING ZONE A

S.No.	TEST	ENTRY	JPR	JPR1	PTA	ALW4	ALW5	ALW	DAS	BHP	RAJ	JMR	AHD	DEG1	GUJ	ALR	MTR	UP	HSR	GLR	LDA	ZONE	RANK
	CODE									MEAN					MEAN			MEAN				MEAN	
1	IHT 301	MH 2864	51	56	53	53	60	58	61	62	57	49	52	56	52	58	52	55	58	54	53	55	20
2	IHT 302	MH 2865	45	46	54	50	51	50	55	62	52	46	50	49	48	51	46	49	52	47	51	50	27
3	IHT 303	MH 2866	57	64	62	61	59	64	67	71	63	56	60	61	59	64	60	62	65	62	58	62	2
4	IHT 304	MH 2867	51	54	57	54	54	54	58	63	56	51	54	56	54	56	51	54	57	55	55	55	21
5	IHT 305	MH 2868	49	51	54	54	56	55	57	64	55	50	52	49	50	54	52	53	56	55	50	54	23
6	IHT 306	MP 7878 (Check)	52	56	55	58	58	58	61	67	58	54	58	57	57	56	50	53	57	59	44	56	17
7	IHT 307	MH 2869	46	51	53	55	51	54	55	63	54	50	53	52	52	52	48	50	55	55	45	52	25
8	IHT 308	MH 2870	47	50	52	55	54	54	57	62	54	50	54	54	53	51	48	50	55	55	47	53	24
9	IHT 309	AHB 1200 (Check)	47	47	53	52	52	50	57	60	52	48	51	51	50	49	45	47	53	49	46	51	26
10	IHT 310	MH 2871	54	55	60	56	58	60	58	68	59	51	55	54	53	57	52	55	61	57	56	57	15
11	IHT 311	MH 2872	58	64	58	65	57	63	67	77	64	57	64	62	61	64	60	62	64	61	60	63	1
12	IHT 312	MH 2873	57	60	61	57	59	62	62	70	61	55	58	59	57	59	58	59	63	60	57	60	6
13	IHT 313	86M84 (Check)	55	61	56	59	60	60	62	63	60	55	57	56	56	61	53	57	60	57	49	58	11
14	IHT 314	MH 2874	51	58	55	56	57	57	60	62	57	54	59	54	56	57	51	54	58	54	46	56	19
15	IHT 315	MH 2875	52	56	54	56	58	57	61	65	57	54	57	55	55	57	51	54	59	56	45	56	18
16	IHT 316	MH 2876	55	62	61	63	62	62	66	76	63	55	59	60	58	63	60	62	63	64	56	62	4
17	IHT 317	MH 2877	54	56	57	55	59	58	65	63	58	51	53	55	53	58	52	55	60	55	57	57	16
18	IHT 318	MH 2878	56	60	56	60	61	63	62	64	60	55	58	57	57	61	56	59	57	56	55	59	9
19	IHT 319	MH 2879	55	62	57	62	60	61	62	71	62	57	61	60	59	65	56	60	62	53	55	60	5
20	IHT 320	KBH 108 (Check)	54	60	57	58	58	63	66	68	60	56	60	57	58	62	55	58	62	57	58	59	8
21	IHT 321	MH 2880	49	56	54	57	57	60	62	70	58	54	59	56	56	59	51	55	58	56	56	57	14
22	IHT 322	MH 2881	57	62	60	60	59	63	66	74	63	55	61	59	58	64	58	61	65	62	61	62	3
23	IHT 323	MH 2882	51	57	59	58	53	62	61	66	59	53	57	56	56	58	52	55	59	56	55	57	13
24	IHT 324	MH 2883	51	53	57	53	58	55	58	61	56	51	53	50	51	55	52	54	56	50	54	54	22
25	IHT 325	MH 2884	53	59	60	58	61	60	59	68	60	55	58	60	57	58	59	59	63	60	62	60	7
26	IHT 326	MH 2885	55	59	58	59	57	60	64	67	60	54	59	57	56	60	54	57	60	57	55	58	10
27	IHT 327	MH 2886	52	58	59	57	58	58	60	69	59	53	59	57	56	56	54	55	58	58	55	57	12
		LOC. MEAN	52	57	57	57	57	59	61	67	58	53	57	56	55	58	53	56	59	56	53	57	
		C.D. (5%)	2.0	1.0	2.0	2.0	3.0	1.0	2.0	6.0	2.0	1.0	2.0	2.0	2.0	2.0	3.0	3.0	2.0	1.0	1.0	1.0	
		C.D. (1%)	2.0	2.0	3.0	2.0	4.0	2.0	3.0	8.0	3.0	2.0	2.0	3.0	3.0	2.0	4.0	4.0	3.0	1.0	2.0	2.0	
		C.V. (%)	2.1	1.3	2.3	1.9	3.2	1.3	2.4	5.7	3.4	1.6	2.0	2.1	2.1	1.8	3.5	2.8	2.4	0.8	1.4	3.5	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.65: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 DAYS TO MATURITY ZONE A

S.No.	TEST	ENTRY	JPR	JPR1	PTA	ALW4	ALW5	ALW	DAS	BHP	RAJ	JMR	AHD	DEG1	GUJ	ALR	MTR	UP	HSR	GLR	LDA	ZONE	RANK
	CODE										MEAN				MEAN			MEAN				MEAN	
1	IHT 301	MH 2864	80	84	80	77	85	85	86	94	84	79	83	83	82	84	79	82	89	75	93	84	21
2	IHT 302	MH 2865	78	78	81	72	78	79	81	93	80	75	78	74	76	83	73	78	83	74	93	80	27
3	IHT 303	MH 2866	84	92	89	88	83	95	91	101	90	85	90	89	88	87	87	87	98	86	99	90	3
4	IHT 304	MH 2867	80	85	84	78	80	80	84	93	83	80	86	82	82	83	78	81	89	86	95	84	20
5	IHT 305	MH 2868	78	82	81	79	81	81	82	94	82	80	84	74	79	83	79	81	88	78	96	82	23
6	IHT 306	MP 7878 (Check)	81	85	82	85	83	85	85	99	86	84	89	85	86	85	77	81	89	86	96	86	16
7	IHT 307	MH 2869	77	82	80	77	75	80	81	95	81	79	84	78	80	83	75	79	85	77	95	81	24
8	IHT 308	MH 2870	78	81	79	78	80	80	79	91	81	78	84	80	81	83	75	79	85	75	94	81	25
9	IHT 309	AHB 1200 (Check)	80	78	80	73	77	76	83	90	80	77	81	77	78	82	72	77	84	75	98	80	26
10	IHT 310	MH 2871	84	83	87	83	82	90	83	100	87	80	84	80	81	85	79	82	94	84	102	86	14
11	IHT 311	MH 2872	87	92	85	90	83	95	93	109	92	86	92	90	89	90	87	89	99	85	104	92	1
12	IHT 312	MH 2873	88	87	88	86	85	95	86	99	89	83	90	87	87	87	85	86	97	88	99	89	6
13	IHT 313	86M84 (Check)	87	90	83	87	85	90	85	92	87	84	88	82	85	89	80	84	92	86	97	87	12
14	IHT 314	MH 2874	80	89	82	80	82	85	85	94	85	82	89	79	84	86	78	82	89	84	95	85	19
15	IHT 315	MH 2875	80	87	81	84	85	85	84	96	85	82	87	81	83	86	78	82	89	87	96	86	18
16	IHT 316	MH 2876	84	91	88	90	86	92	90	106	91	83	90	87	87	90	87	88	95	88	97	90	4
17	IHT 317	MH 2877	86	85	84	79	85	87	91	92	86	80	82	81	81	86	79	83	91	90	103	86	13
18	IHT 318	MH 2878	86	91	83	86	86	95	85	96	89	84	88	84	86	87	83	85	89	87	104	88	9
19	IHT 319	MH 2879	87	90	84	90	85	90	86	103	89	86	91	88	88	93	83	88	94	88	98	90	5
20	IHT 320	KBH 108 (Check)	87	89	84	84	83	94	89	97	88	85	90	85	86	88	82	85	94	88	103	89	7
21	IHT 321	MH 2880	80	86	81	83	82	91	87	99	86	83	88	82	84	85	78	81	89	78	103	86	17
22	IHT 322	MH 2881	82	91	87	88	84	95	89	103	90	84	91	87	87	92	85	89	96	89	104	91	2
23	IHT 323	MH 2882	83	86	86	85	79	94	84	98	87	82	87	83	84	86	79	83	90	80	95	86	15
24	IHT 324	MH 2883	80	82	84	75	83	79	84	92	83	80	82	76	79	82	79	81	89	74	97	83	22
25	IHT 325	MH 2884	81	88	87	86	86	90	84	97	87	84	88	88	86	85	86	86	96	85	108	89	8
26	IHT 326	MH 2885	84	87	85	88	81	91	83	96	87	83	89	82	85	87	81	84	93	83	104	87	10
27	IHT 327	MH 2886	82	86	86	85	84	87	84	101	87	82	89	83	85	86	81	83	90	84	105	87	11
		LOC. MEAN	82	86	84	83	83	88	85	97	86	82	87	82	84	86	80	83	91	83	99	86	
		C.D. (5%)	1.0	1.0	2.0	4.0	3.0	1.0	2.0	6.0	3.0	1.0	3.0	2.0	3.0	2.0	3.0	4.0	3.0	2.0	2.0	2.0	
		C.D. (1%)	1.0	2.0	3.0	5.0	4.0	2.0	2.0	8.0	3.0	2.0	4.0	3.0	3.0	2.0	4.0	6.0	4.0	2.0	2.0	2.0	
		C.V. (%)	0.6	1.1	1.5	2.8	2.0	0.8	1.2	3.8	3.0	0.9	1.9	1.8	1.9	1.3	2.3	2.6	2.0	1.3	1.1	2.8	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.66: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 PLANT HEIGHT (cm) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	PTA	ALW4	ALW5	ALW	DAS	BHP	RAJ MEAN	JMR	AHD	DEG1	GUJ MEAN	ALR	MTR	UP MEAN	HSR	GLR	LDA	ZONE MEAN	RANK
1	IHT 301	MH 2864	136	270	248	195	220	243	250	192	219	159	177	183	173	268	268	268	267	310	218	225	18
2	IHT 302	MH 2865	164	235	229	183	161	223	223	156	197	150	164	162	158	258	233	246	254	281	200	205	22
3	IHT 303	MH 2866	237	303	314	248	265	258	293	211	266	223	265	237	242	290	293	291	287	359	242	270	2
4	IHT 304	MH 2867	137	255	228	213	196	213	225	171	205	185	205	182	191	240	223	231	236	266	197	211	21
5	IHT 305	MH 2868	154	215	215	185	171	203	200	188	192	156	169	170	165	242	209	225	227	243	177	195	26
6	IHT 306	MP 7878 (Check)	150	290	253	233	231	233	248	173	227	206	240	203	216	267	262	264	267	319	202	236	10
7	IHT 307	MH 2869	192	237	208	213	178	210	247	175	208	150	173	160	161	230	253	241	194	266	180	204	23
8	IHT 308	MH 2870	190	227	212	197	183	210	207	171	200	163	194	157	171	227	206	217	213	274	177	200	25
9	IHT 309	AHB 1200 (Check)	173	227	233	195	181	210	218	166	200	161	182	172	171	217	224	220	204	286	192	202	24
10	IHT 310	MH 2871	162	252	250	213	197	232	248	185	217	163	200	180	181	255	240	248	241	266	200	218	19
11	IHT 311	MH 2872	220	308	317	280	294	270	308	238	279	233	271	273	259	292	284	288	318	403	297	288	1
12	IHT 312	MH 2873	165	277	273	225	217	245	233	200	229	189	221	200	203	257	245	251	267	307	255	236	11
13	IHT 313	86M84 (Check)	200	283	256	225	227	248	248	199	236	196	206	190	197	247	234	240	211	313	233	232	14
14	IHT 314	MH 2874	206	265	242	220	210	245	248	180	227	195	219	192	202	260	248	254	264	326	215	233	13
15	IHT 315	MH 2875	212	283	250	230	232	233	232	191	233	191	255	190	212	268	244	256	271	297	230	238	9
16	IHT 316	MH 2876	107	290	295	233	226	250	272	213	236	209	248	222	226	262	242	252	273	298	248	243	5
17	IHT 317	MH 2877	173	258	247	197	211	222	248	164	215	164	179	172	171	233	233	233	246	267	220	215	20
18	IHT 318	MH 2878	200	303	285	248	248	268	277	231	257	226	249	215	230	268	276	272	261	340	230	258	3
19	IHT 319	MH 2879	199	292	265	243	253	263	257	194	246	205	249	233	229	265	245	255	277	328	243	251	4
20	IHT 320	KBH 108 (Check)	184	283	272	235	205	247	257	206	236	215	224	208	216	262	249	255	258	359	193	241	8
21	IHT 321	MH 2880	184	287	239	225	229	220	223	176	223	211	241	198	217	270	259	265	224	319	205	232	15
22	IHT 322	MH 2881	194	275	275	237	230	232	235	201	235	194	268	207	223	263	243	253	281	326	225	243	7
23	IHT 323	MH 2882	166	267	257	242	227	238	238	196	229	204	250	200	218	248	239	244	239	318	233	235	12
24	IHT 324	MH 2883	210	270	252	207	198	248	237	194	227	170	222	183	192	250	265	258	257	321	218	231	16
25	IHT 325	MH 2884	146	188	187	177	157	148	200	155	170	153	170	143	156	192	178	185	171	244	158	173	27
26	IHT 326	MH 2885	203	267	280	237	232	247	267	192	241	202	240	203	215	258	251	255	261	326	218	243	6
27	IHT 327	MH 2886	205	272	251	223	208	235	245	179	227	199	236	187	207	227	237	232	258	288	217	229	17
		LOC. MEAN	180	266	253	221	214	233	244	189	225	188	219	193	200	252	244	248	249	306	216	229	
		C.D. (5%)	10.0	11.0	4.0	17.0	18.0	24.0	15.0	22.0	15.0	15.0	6.0	15.0	19.0	32.0	8.0	19.0	32.0	25.0	12.0	10.0	
		C.D. (1%)	13.0	15.0	6.0	22.0	25.0	32.0	20.0	30.0	20.0	20.0	8.0	20.0	25.0	42.0	11.0	26.0	43.0	33.0	16.0	14.0	
		C.V. (%)	3.3	2.6	1.1	4.6	5.3	6.4	3.8	7.2	6.7	5.0	1.7	4.8	5.7	7.7	2.1	3.8	7.8	4.9	3.3	6.6	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.67: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 PRODUCTIVE TILLERS (No./Plant) ZONE A

S.No.	TEST	ENTRY	JPR	JPR1	ALW4	ALW5	ALW	DAS	BHP	RAJ	JMR	AHD	DEG1	GUJ	ALR	HSR	GLR	LDA	ZONE	RANK
	CODE									MEAN				MEAN					MEAN	
1	IHT 301	MH 2864	2.4	2.0	1.1	1.1	2.1	3.0	2.9	2.1	2.3	1.3	1.3	1.7	1.1	2.9	2.3	3.0	2.1	1
2	IHT 302	MH 2865	1.9	2.0	1.1	1.0	1.8	2.0	2.9	1.8	1.9	2.3	1.5	1.9	1.1	3.2	2.3	1.9	1.9	2
3	IHT 303	MH 2866	1.1	1.0	1.1	1.0	1.7	2.0	1.3	1.3	1.6	1.7	1.1	1.4	1.1	2.6	1.7	2.2	1.5	25
4	IHT 304	MH 2867	2.7	1.0	1.1	1.0	1.7	2.0	2.6	1.7	1.4	1.3	1.0	1.2	1.1	2.4	1.5	2.3	1.7	15
5	IHT 305	MH 2868	1.2	1.3	1.1	1.1	1.8	2.0	2.2	1.5	1.3	1.3	1.0	1.2	1.1	3.0	1.7	2.5	1.6	19
6	IHT 306	MP 7878 (Check)	2.0	1.3	1.2	1.1	1.8	2.7	2.1	1.7	1.2	2.3	1.3	1.6	1.1	3.3	2.3	2.8	1.9	3
7	IHT 307	MH 2869	1.1	1.0	1.1	1.0	1.7	2.0	1.5	1.4	1.5	1.3	1.1	1.3	1.1	3.0	1.5	2.5	1.5	24
8	IHT 308	MH 2870	1.2	1.3	1.0	1.1	1.1	2.0	1.7	1.3	1.3	1.7	1.1	1.4	1.1	2.8	1.8	2.7	1.6	23
9	IHT 309	AHB 1200 (Check)	1.9	1.0	1.1	1.0	1.7	3.0	2.6	1.8	1.5	1.3	1.1	1.3	1.1	2.8	1.9	4.0	1.9	4
10	IHT 310	MH 2871	2.0	1.0	1.1	1.0	2.1	2.3	2.5	1.7	1.3	2.0	1.0	1.4	1.1	2.6	2.1	2.7	1.8	10
11	IHT 311	MH 2872	2.0	1.0	1.1	1.1	2.0	2.7	2.4	1.7	1.3	1.0	1.1	1.1	1.1	3.1	2.1	3.1	1.8	9
12	IHT 312	MH 2873	1.1	1.7	1.1	1.1	1.5	2.0	2.6	1.6	1.4	1.0	1.0	1.1	1.1	2.1	1.7	3.2	1.6	19
13	IHT 313	86M84 (Check)	1.0	1.0	1.1	1.0	1.9	2.3	2.1	1.5	1.5	1.3	1.1	1.3	1.1	2.8	1.6	2.9	1.6	18
14	IHT 314	MH 2874	2.3	1.0	1.1	1.0	2.1	2.3	1.6	1.6	1.3	2.0	1.1	1.4	1.1	2.7	2.0	2.5	1.7	12
15	IHT 315	MH 2875	1.1	1.0	1.1	1.0	2.1	2.0	2.0	1.5	1.3	2.3	1.0	1.5	1.1	3.1	1.9	2.9	1.7	14
16	IHT 316	MH 2876	2.0	1.0	1.1	1.1	1.6	2.3	1.7	1.5	1.4	1.3	1.0	1.2	1.1	1.8	2.2	3.6	1.7	16
17	IHT 317	MH 2877	1.2	1.0	1.1	1.1	2.0	2.0	2.0	1.5	1.3	1.0	1.1	1.1	1.1	2.5	1.9	1.9	1.5	26
18	IHT 318	MH 2878	1.2	1.3	1.1	1.0	1.7	2.0	1.8	1.4	1.1	1.7	1.0	1.3	1.1	2.9	1.3	3.2	1.6	21
19	IHT 319	MH 2879	1.0	1.0	1.1	1.0	1.7	2.7	1.3	1.4	1.3	1.3	1.0	1.2	1.1	2.5	1.8	3.2	1.6	22
20	IHT 320	KBH 108 (Check)	1.2	1.0	1.1	1.0	1.9	2.0	2.4	1.5	1.3	1.7	1.0	1.3	1.1	2.1	1.9	3.3	1.7	17
21	IHT 321	MH 2880	1.2	1.0	1.1	1.0	2.0	3.0	2.1	1.6	1.5	2.3	1.1	1.6	1.1	2.7	1.8	3.5	1.8	6
22	IHT 322	MH 2881	1.2	1.0	1.1	1.0	2.0	2.0	2.3	1.5	1.5	1.3	1.0	1.3	1.1	2.9	1.9	2.1	1.6	20
23	IHT 323	MH 2882	3.3	1.0	1.0	1.0	2.0	3.0	2.4	2.0	1.4	1.3	1.1	1.3	1.1	2.8	1.8	2.8	1.9	5
24	IHT 324	MH 2883	2.9	1.0	1.2	1.0	1.7	2.7	1.6	1.7	1.4	1.0	1.0	1.1	1.1	2.7	2.1	3.1	1.8	11
25	IHT 325	MH 2884	2.9	1.0	1.1	1.0	1.7	2.7	1.5	1.7	1.4	2.0	1.1	1.5	1.1	2.7	1.9	3.2	1.8	7
26	IHT 326	MH 2885	2.5	1.0	1.1	1.3	2.1	2.0	2.0	1.7	1.4	1.7	1.0	1.4	1.1	2.7	1.9	2.4	1.7	13
27	IHT 327	MH 2886	1.7	1.0	1.1	1.0	2.0	3.0	2.7	1.8	1.4	2.3	1.1	1.6	1.1	2.6	1.9	2.0	1.8	8
		LOC. MEAN	1.7	1.1	1.1	1.0	1.8	2.4	2.1	1.6	1.4	1.6	1.1	1.4	1.1	2.7	1.9	2.8	1.7	
		C.D. (5%)	0.4	0.4	0.2	0.1	0.6	0.6	0.9	0.4	0.3	0.7	0.3	0.6	0.1	0.8	0.3	0.6	0.3	
		C.D. (1%)	0.6	0.5	0.2	0.1	0.8	0.8	1.2	0.5	0.4	0.9	0.4	0.8	0.1	1.0	0.4	0.8	0.3	
		C.V. (%)	15.1	21.8	9.1	5.4	20.0	15.8	26.1	22.5	11.9	25.9	17.4	22.3	2.9	17.6	9.1	12.6	20.1	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.063	0.000	0.000	0.000	0.175	0.000	0.000	0.000	0.000	0.000	

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Table I.68: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 PANICLE LENGTH (cm) ZONE A

S.No.	TEST	ENTRY	JPR	JPR1	PTA	ALW4	ALW5	ALW	DAS	BHP	RAJ	JMR	AHD	DEG1	GUJ	ALR	MTR	UP	HSR	GLR	LDA	ZONE	RANK
	CODE										MEAN				MEAN			MEAN				MEAN	
1	IHT 301	MH 2864	19	28	25	26	25	26	26	27	25	25	26	24	25	28	24	26	28	24	30	26	9
2	IHT 302	MH 2865	18	22	22	24	23	23	24	21	22	20	20	22	21	26	21	24	28	23	21	22	27
3	IHT 303	MH 2866	31	32	32	30	27	29	31	27	30	29	29	27	28	30	31	31	30	30	33	30	2
4	IHT 304	MH 2867	20	25	26	26	24	25	24	25	24	22	26	22	23	28	25	27	28	25	26	25	19
5	IHT 305	MH 2868	23	25	25	27	25	25	24	25	25	22	22	23	22	26	23	25	26	26	28	25	21
6	IHT 306	MP 7878 (Check)	32	26	22	26	28	24	25	25	26	23	24	23	23	27	27	27	30	25	27	26	8
7	IHT 307	MH 2869	26	25	25	27	25	26	25	26	26	23	23	22	23	25	24	24	29	26	27	25	14
8	IHT 308	MH 2870	26	22	22	26	22	23	24	24	24	22	23	19	21	25	22	24	25	26	26	24	25
9	IHT 309	AHB 1200 (Check)	28	25	20	26	22	23	23	22	24	20	23	21	21	26	26	26	28	21	24	24	26
10	IHT 310	MH 2871	21	24	25	26	23	26	24	26	24	20	23	23	22	28	24	26	27	25	26	24	23
11	IHT 311	MH 2872	24	36	33	38	33	35	30	28	32	30	30	33	31	32	31	31	32	37	32	32	1
12	IHT 312	MH 2873	26	25	27	26	24	25	25	25	25	25	23	23	24	25	24	24	28	27	22	25	17
13	IHT 313	86M84 (Check)	21	27	25	29	25	27	26	27	26	24	24	23	24	31	27	29	28	25	31	26	7
14	IHT 314	MH 2874	26	26	25	26	25	26	25	26	26	23	27	23	24	26	24	25	28	24	28	26	10
15	IHT 315	MH 2875	24	25	21	27	23	27	24	27	25	25	26	22	25	28	25	27	27	26	26	25	13
16	IHT 316	MH 2876	24	30	29	30	27	27	25	30	28	27	28	26	27	30	27	29	28	29	31	28	5
17	IHT 317	MH 2877	24	29	24	26	24	24	26	22	25	21	22	22	22	27	26	26	29	28	30	25	15
18	IHT 318	MH 2878	25	26	24	26	23	27	25	25	25	24	23	21	23	25	25	25	29	26	25	25	16
19	IHT 319	MH 2879	24	25	25	26	25	27	25	24	25	22	27	23	24	28	26	27	27	25	29	25	11
20	IHT 320	KBH 108 (Check)	21	24	25	26	23	26	25	26	24	23	23	21	23	28	24	26	29	27	23	25	22
21	IHT 321	MH 2880	29	29	29	30	28	29	25	27	28	30	29	25	28	31	30	31	30	26	30	29	3
22	IHT 322	MH 2881	27	32	27	30	28	27	29	27	28	26	33	24	28	29	27	28	28	27	34	29	4
23	IHT 323	MH 2882	22	26	26	29	29	26	25	29	27	24	27	24	25	29	25	27	28	26	31	27	6
24	IHT 324	MH 2883	26	26	27	26	22	26	24	26	25	22	27	22	24	27	25	26	29	25	26	25	12
25	IHT 325	MH 2884	26	25	25	26	21	24	25	25	25	24	26	23	24	23	23	23	28	26	25	25	20
26	IHT 326	MH 2885	26	27	24	26	22	26	25	23	25	24	24	22	24	25	24	25	27	26	25	25	18
27	IHT 327	MH 2886	24	23	27	26	21	25	24	25	24	24	26	21	24	24	25	25	26	25	25	24	24
		LOC. MEAN	25	26	25	27	25	26	25	26	26	24	25	23	24	27	25	26	28	26	27	26	
		C.D. (5%)	2.0	1.0	1.0	3.0	3.0	3.0	2.0	4.0	2.0	2.0	1.0	2.0	2.0	3.0	1.0	2.0	3.0	1.0	2.0	1.0	
		C.D. (1%)	3.0	2.0	1.0	4.0	4.0	5.0	2.0	5.0	2.0	3.0	1.0	2.0	3.0	4.0	2.0	3.0	4.0	2.0	3.0	2.0	
		C.V. (%)	5.2	3.4	2.2	6.5	7.7	8.1	3.9	9.1	7.3	6.2	1.8	4.7	6.3	7.0	3.1	4.5	5.9	2.9	4.6	6.7	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.69: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 PANICLE DIAMETER (cm) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	ALW5	ALW	DAS	BHP	RAJ	JMR	AHD	DEG1	GUJ	ALR	MTR	UP	HSR	GLR	LDA	ZONE	RANK
									MEAN				MEAN			MEAN				MEAN	
1	IHT 301	MH 2864	2.5	3.2	3.1	3.0	3.1	2.6	2.9	2.4	3.1	2.8	2.8	3.7	3.7	3.7	4.0	2.5	3.9	3.1	23
2	IHT 302	MH 2865	2.8	3.1	3.2	3.1	2.7	2.7	3.0	2.9	3.0	2.7	2.8	3.4	3.3	3.3	3.7	2.5	3.4	3.0	24
3	IHT 303	MH 2866	3.0	3.2	2.6	3.0	3.2	2.7	3.0	2.8	3.0	3.1	2.9	3.2	4.0	3.6	4.2	2.6	3.7	3.2	22
4	IHT 304	MH 2867	2.7	3.5	3.3	3.4	3.4	2.8	3.2	2.6	3.8	3.3	3.2	3.9	3.9	3.9	4.0	2.5	3.6	3.3	15
5	IHT 305	MH 2868	3.3	3.5	3.1	3.3	3.2	3.0	3.2	2.8	3.3	3.3	3.1	3.9	3.4	3.7	4.0	3.3	3.9	3.4	9
6	IHT 306	MP 7878 (Check)	3.9	3.5	3.6	3.4	3.3	2.5	3.4	3.1	3.7	3.4	3.4	3.8	4.0	3.9	4.1	2.6	3.9	3.5	3
7	IHT 307	MH 2869	3.2	3.5	3.4	3.6	3.2	2.9	3.3	2.9	3.0	3.1	3.0	3.6	3.9	3.7	4.1	2.7	3.9	3.4	12
8	IHT 308	MH 2870	2.8	3.1	3.2	3.3	3.0	2.6	3.0	2.6	3.4	3.0	3.0	3.5	4.1	3.8	3.9	3.0	3.8	3.2	21
9	IHT 309	AHB 1200 (Check)	3.2	3.5	2.8	3.4	3.1	2.0	3.0	2.6	3.8	3.2	3.2	3.7	4.1	3.9	4.3	2.5	3.8	3.3	18
10	IHT 310	MH 2871	3.1	3.6	3.5	3.7	3.3	2.5	3.3	3.0	3.4	3.5	3.3	3.9	3.6	3.8	4.2	2.9	3.8	3.4	4
11	IHT 311	MH 2872	2.7	2.6	2.7	2.8	2.9	2.5	2.7	2.5	2.6	2.6	2.5	3.2	3.0	3.1	3.7	2.7	3.3	2.8	25
12	IHT 312	MH 2873	3.3	3.4	3.5	3.3	3.0	2.3	3.1	2.9	3.4	3.2	3.2	3.8	3.3	3.5	4.1	2.8	3.6	3.3	19
13	IHT 313	86M84 (Check)	2.4	3.5	3.2	3.4	3.5	2.7	3.1	3.2	3.3	3.0	3.1	4.0	3.7	3.9	4.1	2.6	3.7	3.3	17
14	IHT 314	MH 2874	3.2	3.3	3.3	3.3	3.1	2.8	3.2	3.0	3.6	3.3	3.3	3.9	3.7	3.8	4.2	2.6	3.9	3.4	11
15	IHT 315	MH 2875	2.9	3.3	3.6	3.4	3.3	3.3	3.3	3.0	3.7	3.2	3.3	3.8	3.7	3.8	4.0	2.6	3.7	3.4	7
16	IHT 316	MH 2876	3.0	4.0	3.7	3.6	3.2	3.0	3.4	3.2	3.7	3.3	3.4	4.1	3.7	3.9	4.1	3.0	4.0	3.5	2
17	IHT 317	MH 2877	2.7	3.5	3.4	3.5	3.2	2.7	3.2	2.8	3.2	3.2	3.0	3.9	3.5	3.7	4.0	3.5	4.0	3.4	14
18	IHT 318	MH 2878	2.7	3.4	3.4	3.5	3.2	3.0	3.2	3.1	3.4	3.3	3.3	3.7	3.7	3.7	4.2	2.7	3.9	3.4	10
19	IHT 319	MH 2879	3.0	3.4	3.5	3.5	3.5	2.8	3.3	2.9	3.8	3.2	3.3	4.0	3.5	3.8	4.0	2.6	3.7	3.4	8
20	IHT 320	KBH 108 (Check)	2.8	3.2	3.4	3.5	3.4	2.5	3.2	3.0	3.3	3.3	3.2	3.7	3.3	3.5	4.2	3.1	3.5	3.3	16
21	IHT 321	MH 2880	2.8	3.3	3.2	3.1	3.0	2.5	3.0	3.1	3.4	3.1	3.2	3.5	3.8	3.7	4.4	2.5	3.7	3.2	20
22	IHT 322	MH 2881	3.2	3.6	3.5	3.6	3.0	2.3	3.2	3.1	3.7	3.5	3.4	3.8	3.7	3.8	4.0	2.5	4.0	3.4	6
23	IHT 323	MH 2882	3.9	3.6	4.0	3.6	3.4	2.7	3.5	3.4	3.5	3.6	3.5	3.8	4.0	3.9	4.1	3.2	4.3	3.7	1
24	IHT 324	MH 2883	3.2	3.4	3.2	3.5	3.2	2.8	3.2	2.8	3.8	3.0	3.2	3.8	3.7	3.8	4.2	2.6	3.7	3.4	13
25	IHT 325	MH 2884	3.8	3.4	3.1	3.3	3.2	2.7	3.2	3.2	4.0	3.2	3.5	3.5	3.5	3.5	4.2	3.2	3.6	3.4	5
26	IHT 326	MH 2885	3.5	3.4	3.1	3.2	3.1	2.7	3.1	3.1	3.4	3.2	3.2	3.7	3.6	3.7	4.2	2.5	3.8	3.3	16
27	IHT 327	MH 2886	3.4	3.5	3.2	3.4	3.3	2.8	3.3	3.1	3.6	3.1	3.3	3.5	3.7	3.6	4.0	2.5	3.6	3.4	13
		LOC. MEAN	3.1	3.4	3.3	3.4	3.2	2.7	3.2	2.9	3.4	3.2	3.2	3.7	3.7	3.7	4.1	2.7	3.8	3.3	
		C.D. (5%)	0.2	0.2	0.4	0.2	0.3	0.5	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.4	0.5	0.2	0.4	0.2	
		C.D. (1%)	0.2	0.3	0.5	0.3	0.4	0.6	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.5	0.6	0.2	0.5	0.2	
		C.V. (%)	3.2	4.2	7.5	3.8	5.2	10.3	7.0	6.7	3.5	5.7	6.6	5.2	4.1	5.3	7.2	4.1	6.2	6.3	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.70: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 1000-SEED Wt.(g) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	ALW4	ALW	DAS	BHP	RAJ MEAN	JMR	AHD	DEG1	GUJ MEAN	MTR	HSR	GLR	LDA	ZONE MEAN	RANK
1	IHT 301	MH 2864	6.7	10.5	8.2	6.5	7.0	12.0	8.5	8.8	7.6	9.1	8.5	10.6	10.0	11.1	9.8	9.1	26
2	IHT 302	MH 2865	7.5	11.0	10.2	8.6	8.7	10.2	9.4	10.3	7.6	9.4	9.1	9.9	10.3	11.7	11.2	9.7	23
3	IHT 303	MH 2866	7.2	11.9	11.6	6.1	9.0	11.4	9.6	9.7	9.1	8.4	9.1	10.4	10.2	11.2	12.0	9.9	20
4	IHT 304	MH 2867	7.5	11.5	10.4	7.3	7.2	12.1	9.3	10.5	9.8	11.4	10.6	10.1	11.8	11.5	11.2	10.2	15
5	IHT 305	MH 2868	8.1	13.8	12.9	8.3	9.2	12.6	10.8	10.7	9.3	11.6	10.5	10.7	13.4	11.3	12.9	11.1	4
6	IHT 306	MP 7878 (Check)	9.6	13.4	9.6	8.6	12.4	12.1	11.0	10.6	11.4	11.3	11.1	10.1	14.0	10.7	12.7	11.3	2
7	IHT 307	MH 2869	7.0	10.9	11.8	8.3	11.7	10.2	10.0	10.9	12.0	12.3	11.7	10.8	15.0	11.3	11.7	11.1	5
8	IHT 308	MH 2870	7.6	11.5	13.2	8.7	10.6	10.2	10.3	10.9	9.8	10.6	10.5	10.9	12.9	11.0	13.1	10.8	7
9	IHT 309	AHB 1200 (Check)	9.0	11.6	13.5	8.7	12.3	11.2	11.0	10.7	10.2	9.4	10.1	11.0	13.0	11.8	13.1	11.2	3
10	IHT 310	MH 2871	8.6	10.4	12.6	8.1	9.1	9.5	9.7	10.4	10.4	11.2	10.7	12.0	11.0	12.0	11.3	10.5	10
11	IHT 311	MH 2872	6.7	10.4	8.4	7.1	9.1	12.0	9.0	7.9	7.1	6.5	7.2	11.1	9.3	12.0	8.8	9.0	27
12	IHT 312	MH 2873	7.6	10.9	12.2	7.7	7.8	10.1	9.4	10.1	9.1	9.3	9.5	10.3	12.2	11.7	11.7	10.1	16
13	IHT 313	86M84 (Check)	7.7	12.3	11.3	8.5	7.2	12.1	9.9	10.8	8.8	10.9	10.1	10.3	10.9	12.1	12.9	10.4	11
14	IHT 314	MH 2874	7.7	10.9	8.1	8.5	9.8	9.3	9.1	10.0	8.3	11.0	9.8	10.3	11.8	11.4	12.0	9.9	19
15	IHT 315	MH 2875	9.8	12.5	10.9	8.6	8.5	11.2	10.2	10.3	11.3	11.3	10.9	10.5	13.7	11.5	10.8	10.8	8
16	IHT 316	MH 2876	6.7	12.4	13.0	9.2	8.6	10.2	10.0	11.8	10.6	10.3	10.9	10.6	12.3	12.0	11.3	10.7	9
17	IHT 317	MH 2877	7.7	13.3	12.7	8.9	7.0	12.3	10.3	10.1	10.2	12.1	10.8	10.4	12.5	11.8	14.8	11.1	6
18	IHT 318	MH 2878	7.6	10.5	10.3	8.0	6.5	11.3	9.0	9.3	8.8	9.2	9.1	11.1	11.3	11.9	11.8	9.8	22
19	IHT 319	MH 2879	8.4	14.9	9.8	8.5	11.3	11.2	10.7	11.2	10.8	12.7	11.6	11.2	12.4	11.6	13.6	11.4	1
20	IHT 320	KBH 108 (Check)	7.8	11.9	10.4	8.4	7.5	12.3	9.7	10.2	7.6	10.8	9.5	10.6	12.5	11.7	12.7	10.3	14
21	IHT 321	MH 2880	7.7	11.6	10.6	7.9	7.3	9.1	9.0	10.5	8.1	10.4	9.7	11.6	12.2	11.6	11.9	10.0	18
22	IHT 322	MH 2881	7.6	10.6	9.9	8.2	6.2	12.3	9.1	8.8	7.5	9.3	8.5	11.2	11.2	11.5	13.3	9.8	21
23	IHT 323	MH 2882	9.8	13.5	9.7	8.7	7.8	10.4	10.0	10.0	7.5	11.7	9.7	11.3	11.6	10.4	12.1	10.4	13
24	IHT 324	MH 2883	10.7	11.6	11.3	9.0	9.0	11.0	10.4	9.9	9.2	9.5	9.5	10.8	11.7	11.7	9.5	10.4	12
25	IHT 325	MH 2884	7.6	9.6	8.4	7.6	5.7	10.4	8.2	8.0	11.1	7.0	8.7	11.1	10.2	11.4	12.1	9.3	25
26	IHT 326	MH 2885	9.9	10.6	9.3	8.3	6.4	11.2	9.3	9.1	9.3	9.2	9.2	11.4	8.6	12.1	10.4	9.7	24
27	IHT 327	MH 2886	7.9	9.8	9.6	8.2	11.2	10.8	9.6	10.5	7.4	10.8	9.6	11.7	10.4	11.7	10.7	10.0	17
		LOC. MEAN	8.1	11.6	10.7	8.2	8.7	11.1	9.7	10.1	9.3	10.2	9.9	10.8	11.7	11.5	11.8	10.3	
		C.D. (5%)	0.7	0.6	1.0	1.5	0.2	2.1	1.5	1.0	0.2	1.4	2.1	0.4	1.7	0.9	0.9	1.0	
		C.D. (1%)	0.9	0.8	1.3	2.0	0.3	2.7	2.0	1.3	0.3	1.9	2.8	0.6	2.3	1.2	1.1	1.3	
		C.V. (%)	5.3	3.4	5.8	11.4	1.5	11.3	11.0	6.0	1.3	8.6	13.1	2.5	8.9	4.7	4.4	11.4	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.236	0.000	0.000	0.000	0.000	0.000	

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Table I.71: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 POPULATION AT HARVEST(No./plot) ZONE A

S.No.	TEST	ENTRY	JPR	JPR1	PTA	ALW4	ALW5	ALW	DAS	BHP	RAJ	JMR	AHD	DEG1	GUJ	ALR	MTR	UP	HSR	GLR	LDA	ZONE	RANK
	CODE									MEAN					MEAN			MEAN				MEAN	
1	IHT 301	MH 2864	65	91	75	91	67	92	78	61	78	107	72	55	78	80	88	84	48	52	81	75	14
2	IHT 302	MH 2865	68	87	67	108	78	86	80	61	79	98	75	68	80	81	88	84	52	52	81	77	5
3	IHT 303	MH 2866	75	94	70	93	54	95	80	65	78	90	76	74	80	79	86	83	47	48	80	75	12
4	IHT 304	MH 2867	67	89	71	97	72	88	77	61	78	99	77	69	82	80	89	85	42	47	81	75	13
5	IHT 305	MH 2868	82	86	70	93	61	80	81	73	78	90	77	71	79	80	87	83	45	36	81	75	17
6	IHT 306	MP 7878 (Check)	71	89	71	93	75	81	78	65	78	92	69	73	78	80	88	84	46	46	81	75	16
7	IHT 307	MH 2869	58	86	75	93	69	73	81	67	75	105	74	68	83	78	87	83	48	38	80	74	19
8	IHT 308	MH 2870	94	92	75	100	76	68	79	57	80	105	72	73	83	81	86	84	40	37	81	76	8
9	IHT 309	AHB 1200 (Check)	79	87	69	106	76	71	81	66	79	101	74	61	79	81	87	84	46	49	81	76	10
10	IHT 310	MH 2871	50	87	75	94	51	76	80	75	73	96	72	75	81	78	87	83	47	37	80	72	20
11	IHT 311	MH 2872	47	85	70	79	36	80	81	42	65	87	74	64	75	74	87	81	50	47	80	68	27
12	IHT 312	MH 2873	79	88	69	85	58	69	80	52	73	87	75	72	78	80	87	84	51	27	82	71	24
13	IHT 313	86M84 (Check)	83	88	75	101	49	88	81	72	80	97	74	67	79	78	88	83	47	52	81	76	6
14	IHT 314	MH 2874	105	90	70	92	79	85	79	65	83	91	76	75	81	76	90	83	51	49	81	78	4
15	IHT 315	MH 2875	94	89	69	96	74	75	79	63	80	86	73	69	76	77	88	83	45	38	81	75	15
16	IHT 316	MH 2876	61	83	75	93	31	93	80	55	71	97	74	67	79	80	86	83	42	35	81	71	26
17	IHT 317	MH 2877	56	87	67	94	64	75	77	50	71	99	73	69	80	75	88	82	47	40	81	71	23
18	IHT 318	MH 2878	85	89	76	105	67	89	79	72	83	89	76	73	79	79	89	84	47	56	81	78	3
19	IHT 319	MH 2879	68	89	75	104	63	94	80	77	81	110	75	79	88	78	87	83	47	67	81	80	1
20	IHT 320	KBH 108 (Check)	53	79	66	102	55	80	77	58	71	97	73	69	80	76	87	81	42	44	81	71	25
21	IHT 321	MH 2880	72	87	71	99	69	82	79	72	79	104	74	64	81	77	88	83	45	51	80	76	9
22	IHT 322	MH 2881	87	86	69	98	70	97	81	72	83	104	75	73	84	76	89	83	50	52	80	79	2
23	IHT 323	MH 2882	75	88	74	92	57	70	80	67	75	101	74	77	84	77	86	82	51	42	80	74	18
24	IHT 324	MH 2883	57	88	72	109	69	86	77	71	79	94	73	76	81	81	86	83	48	46	80	76	11
25	IHT 325	MH 2884	64	85	69	87	56	89	81	58	74	89	72	72	78	79	86	83	40	43	80	72	22
26	IHT 326	MH 2885	58	86	74	99	73	80	81	71	78	105	74	76	85	78	86	82	44	52	81	76	7
27	IHT 327	MH 2886	54	87	70	98	51	76	79	68	73	95	73	66	78	80	88	84	45	46	81	72	21
		LOC. MEAN	71	87	72	96	63	82	79	64	77	97	74	70	80	79	87	83	46	46	81	75	
		C.D. (5%)	22.0	5.0	3.0	16.0	18.0	23.0	4.0	12.0	8.0	17.0	3.0	9.0	9.0	4.0	3.0	4.0	7.0	22.0	1.0	4.0	
		C.D. (1%)	29.0	7.0	4.0	21.0	24.0	30.0	6.0	16.0	10.0	22.0	3.0	12.0	11.0	5.0	4.0	5.0	9.0	30.0	2.0	6.0	
		C.V. (%)	18.6	3.4	2.5	10.0	17.8	17.0	3.3	11.3	10.3	10.5	2.2	7.9	6.5	3.0	1.9	2.1	9.3	29.7	0.9	8.6	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.640	0.000	0.000	0.865	0.000	0.000	0.000	0.000	

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Table I.72: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 SEED SET (%) UNDER BAG ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	PTA	ALW4	ALW5	ALW	DAS	BHP	RAJ MEAN	JMR	AHD	DEG1	GUJ MEAN	ALR	MTR	UP MEAN	HSR	GLR	LDA	ZONE MEAN	RANK
1	IHT 301	MH 2864	65	97	67	63	78	97	100	100	83	50	77	92	73	63	79	71	95	100	72	81	10
2	IHT 302	MH 2865	75	35	58	57	78	90	98	99	74	32	77	90	66	43	17	30	87	100	53	68	22
3	IHT 303	MH 2866	95	92	62	70	81	87	93	100	85	67	73	78	73	70	50	60	87	100	65	79	17
4	IHT 304	MH 2867	77	72	57	77	78	87	97	100	80	56	83	95	78	83	73	78	91	100	63	81	11
5	IHT 305	MH 2868	98	72	70	63	83	87	98	99	84	43	83	98	75	70	62	66	83	100	70	80	14
6	IHT 306	MP 7878 (Check)	100	98	67	90	79	100	100	98	91	70	77	92	80	83	79	81	87	100	72	87	1
7	IHT 307	MH 2869	97	82	63	73	79	93	95	99	85	47	83	98	76	80	60	70	83	67	73	80	16
8	IHT 308	MH 2870	90	90	42	57	78	77	100	99	79	17	77	72	55	60	83	71	87	37	77	71	21
9	IHT 309	AHB 1200 (Check)	67	70	67	53	79	73	95	99	75	18	77	70	55	60	47	53	85	33	60	66	24
10	IHT 310	MH 2871	98	92	58	70	83	90	95	100	86	67	73	100	80	47	55	51	93	100	62	80	13
11	IHT 311	MH 2872	90	72	58	60	85	90	100	99	82	59	83	68	70	73	55	64	95	87	62	77	18
12	IHT 312	MH 2873	85	97	75	83	82	80	100	98	87	69	67	98	78	70	58	64	97	100	67	83	5
13	IHT 313	86M84 (Check)	95	92	70	90	88	90	93	99	90	71	73	98	81	90	53	72	90	100	88	86	2
14	IHT 314	MH 2874	90	97	67	77	76	90	97	99	86	69	73	97	80	80	70	75	83	97	57	82	7
15	IHT 315	MH 2875	100	92	58	77	85	97	97	99	88	72	67	98	79	83	70	77	98	100	63	85	3
16	IHT 316	MH 2876	92	100	75	67	73	97	100	100	88	79	77	83	80	43	69	56	98	100	43	81	9
17	IHT 317	MH 2877	90	82	47	57	83	83	100	99	80	57	77	95	76	63	58	61	100	33	55	74	20
18	IHT 318	MH 2878	80	95	67	90	76	100	90	98	87	72	67	98	79	73	55	64	93	100	68	83	6
19	IHT 319	MH 2879	85	95	53	83	81	93	98	99	86	72	83	83	80	80	58	69	96	80	65	82	8
20	IHT 320	KBH 108 (Check)	88	90	67	77	83	80	98	98	85	80	73	95	83	65	22	43	92	100	77	80	12
21	IHT 321	MH 2880	63	48	50	50	73	57	98	98	67	16	83	65	55	10	63	37	83	100	62	64	25
22	IHT 322	MH 2881	85	97	70	80	85	93	98	99	88	73	77	97	82	-	48	48	96	100	63	84	4
23	IHT 323	MH 2882	90	65	70	37	83	30	93	98	71	54	13	35	34	80	55	68	90	100	60	66	23
24	IHT 324	MH 2883	85	73	65	63	75	97	93	100	82	73	77	68	73	70	51	61	78	100	63	77	19
25	IHT 325	MH 2884	82	38	57	-	76	30	93	98	68	-	13	-	13	10	30	20	-	47	60	53	27
26	IHT 326	MH 2885	100	22	67	-	79	40	98	99	72	56	17	78	50	67	37	52	96	23	62	63	26
27	IHT 327	MH 2886	92	75	67	83	79	100	100	99	87	59	77	68	68	67	56	61	85	100	72	80	15
		LOC. MEAN	87	79	63	70	80	82	97	99	82	58	70	85	71	65	56	60	90	85	65	77	
		C.D. (5%)	5.0	10.0	19.0	19.0	10.0	18.0	5.0	2.0	9.0	17.0	8.0	30.0	25.0	23.0	9.0	31.0	12.0	8.0	5.0	8.0	
		C.D. (1%)	7.0	14.0	25.0	25.0	13.0	23.0	6.0	3.0	12.0	22.0	11.0	40.0	34.0	31.0	12.0	42.0	17.0	10.0	7.0	11.0	
		C.V. (%)	3.8	8.1	18.3	16.5	7.3	13.0	3.0	1.2	11.3	17.5	7.0	21.5	21.5	22.0	9.8	25.1	8.4	5.5	4.8	15.7	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.056	0.000	0.000	0.000	0.000	

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Table I.73: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 GRAIN QUALITY: IRON CONTENT (ppm) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	PTA	ALW4	ALW	DAS	BHP	JMR	AHD	ALR	MTR	LDA	ZONE MEAN	RANK
1	IHT 306	MP 7878 (Check)	48	48	60	53	56	40	53	45	45	53	54	49	50	2
2	IHT 309	AHB 1200 (Check)	47	53	64	74	77	36	80	65	55	66	92	63	64	1
3	IHT 313	86M84 (Check)	41	33	54	49	49	42	55	55	39	49	56	46	47	3
4	IHT 315	MH 2875	40	34	45	48	45	34	54	39	38	36	56	48	43	4
5	IHT 318	MH 2878	43	34	46	40	44	34	63	37	41	35	50	32	42	5
6	IHT 320	KBH 108 (Check)	37	28	37	38	44	36	52	37	31	45	49	37	39	6

Table I.74: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 GRAIN QUALITY: ZINC CONTENT (ppm) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	PTA	ALW4	ALW	DAS	BHP	JMR	AHD	ALR	MTR	LDA	ZONE MEAN	RANK
1	IHT 306	MP 7878 (Check)	35	55	29	40	44	16	32	38	29	27	17	34	33	1
2	IHT 309	AHB 1200 (Check)	39	37	22	47	43	24	26	37	24	27	20	42	32	2
3	IHT 313	86M84 (Check)	35	35	31	38	33	33	28	39	20	31	18	44	32	2
4	IHT 315	MH 2875	34	39	29	38	32	26	26	35	21	29	17	53	32	2
5	IHT 318	MH 2878	38	38	33	35	32	25	30	39	28	30	21	33	32	2
6	IHT 320	KBH 108 (Check)	34	28	26	31	31	32	27	29	21	27	18	33	28	3

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Table I.75: INITIAL HYBRID TRIAL (Late) KHARIF 2024 EXPERIMENTAL DETAILS ZONE B

Locations	Soil	pH	Sowing date	Harvesting date	Interculture date	Irrigation date	Fertilizers (kg/ha.)			Insecticide
							N	P	K	
MAHARASHTRA										
Aurangabad (NARP)	MB	7.5	22.7.24	12.11.24	Nil	Nil	60	30	30	Nil
Aurangabad (Ajeet Seed)	M	-	12.7.24	18.10.24	10.8.24	Nil	60	30	30	Nil
Aurangabad (Seed works)	BC	-	9.7.24	15.10.24	1.8.24	9.7, 21.7.24	80	40	40	Chloropyriphos
Paithan (Nath BioGenes)	BCS	-	8.7.24	22.10.24	-	Nil	-	-	-	Nil
Dhule (MPKV)	MB	8.6	4.7.24	15.10.24	28.7.24	Nil	60	30	0	Nil
Pachora (Nirmal Seed)	MB	7.6	1.7.24	3.10.24	29.7.24	1.7.24	100	50	50	Nil
Gangapur (Ganga Kaveri)	BS	6.5	27.6.24	7.10.24	25.7.24	27.6, 5.8.24	40	20	20	Coragen
KARNATAKA										
Vijayapur (UAS, Dharwad)	SB	8.7	6.7.24	25.10.24	16.8.24	Nil	50	25	0	Nil
ANDHRA PRADESH										
Ananthapuram (ANGRAU)	A	6.7	9.8.24	As Per Maturity	5.9.24	As Per Required	60	30	20	Nil
TELANGANA										
Toopran, Medak (NU Genes)	-	-	8.7.24	-	-	Nil	-	-	-	Nil
TAMIL NADU										
Coimbatore (TNAU)	CL	7.8	29.6.24	6.10.24	-	29.6, 18.7, 13.8, 3.9, 18.9, 1.10.24	80	40	40	Nil

SB = Shallow Black, MB = Medium Black, CL = Clay Loam, A = Alfisols, BCS = Black Cotton Soil, BS=Black Soil, M = Medium.

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Table I.76: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 GRAIN YIELD (kg/ha) ZONE B

S.No.	TEST ENTRY CODE	ABD1	ABD3	ABD7	PTN	DHL	PCR	GNG	MS MEAN	VYP	APR	TPN	CBE	ZONE MEAN	RANK
1	IHT 301 MH 2864	2591	2320	4979	4133	3831	2730	4294	3554	3003	3094	4324	3235	3503	11
2	IHT 302 MH 2865	2758	2315	2829	2611	2031	2198	3400	2592	3124	1683	3213	2843	2637	25
3	IHT 303 MH 2866	3819	2107	5200	4996	3873	4868	3517	4054	2401	3094	3838	2770	3680	6
4	IHT 304 MH 2867	3608	2497	4532	4073	3596	2249	3614	3453	3574	2496	4134	3272	3422	12
5	IHT 305 MH 2868	2702	1541	4356	3921	1831	3045	3564	2994	3932	1632	3727	4137	3126	20
6	IHT 306 NBH 4903 (Check)	3192	2314	4960	5235	3513	2787	3622	3660	4313	3076	4417	3821	3750	3
7	IHT 307 MH 2869	2719	1431	4019	4175	2555	3718	3489	3158	3609	2405	3931	2853	3173	17
8	IHT 308 MH 2870	2850	2649	3631	2764	2199	2817	2931	2835	3491	1698	3560	3287	2898	23
9	IHT 309 AHB 1200 (Check)	3471	1081	3253	2280	1894	2667	3003	2521	2609	1589	3981	2887	2610	26
10	IHT 310 MH 2871	2600	2503	4017	3441	1739	2661	3422	2912	2591	2257	4190	3836	3023	22
11	IHT 311 MH 2872	3283	1394	3928	3356	2301	1492	3364	2731	2393	1386	3756	2747	2673	24
12	IHT 312 MH 2873	3546	1359	3956	4269	4037	2321	3556	3292	3409	1924	4134	2545	3187	15
13	IHT 313 Kaveri S Boss (Check)	3808	2453	4876	4194	4844	2691	3273	3734	4109	2542	4301	3842	3721	4
14	IHT 314 MH 2874	3883	2461	5136	5010	3535	2411	3161	3657	3623	2573	4792	2992	3598	9
15	IHT 315 MH 2875	3717	3496	5844	3686	4594	4090	3483	4130	3541	2802	4579	4604	4040	1
16	IHT 316 MH 2876	3197	3530	4496	3841	3338	3769	3528	3671	3498	2779	4838	5035	3804	2
17	IHT 317 MH 2877	3550	2369	4549	4144	3244	2949	3151	3422	3292	2938	4273	2618	3371	13
18	IHT 318 MH 2878	3780	2429	5198	4745	3390	2372	3656	3653	3946	2816	4324	4238	3718	5
19	IHT 319 MH 2879	3668	2421	4824	4481	3858	3081	3350	3669	4186	2049	3481	4691	3645	7
20	IHT 320 86M86 (Check)	2434	1305	3792	3870	2771	3216	3606	2999	2963	2463	3968	4227	3147	19
21	IHT 321 MH 2880	3372	2440	4944	4538	3770	2129	3578	3539	3659	2475	4296	3907	3555	10
22	IHT 322 MH 2881	3321	2594	4813	3846	4087	3589	2944	3599	3552	2284	4343	4375	3614	8
23	IHT 323 MH 2882	2384	2119	3623	3265	2781	3228	3342	2963	3116	2095	4458	4408	3165	18
24	IHT 324 MH 2883	2984	2141	4099	2472	1633	2868	3388	2798	3733	3075	3769	3201	3033	21
25	IHT 325 MH 2884	2542	996	2573	3438	1876	1892	3397	2388	2729	1527	3394	2535	2445	27
26	IHT 326 MH 2885	2447	2567	4953	3870	3228	3408	3214	3384	2704	1987	3903	2702	3180	16
27	IHT 327 MH 2886	2817	2502	3927	3771	3503	2739	3196	3208	3444	2314	3815	4432	3315	14
	LOC. MEAN	3150	2198	4345	3868	3106	2888	3409	3280	3353	2335	4064	3557	3298	
	C.D. (5%)	478	471	530	994	832	921	756	570	471	336	373	530	438	
	C.D. (1%)	636	627	706	1325	1108	1227	1007	753	628	447	496	706	577	
	C.V. (%)	9.3	13.1	7.4	15.7	16.3	19.5	13.5	16.5	8.6	8.8	5.6	9.1	15.8	
	F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	PLOT SIZE (m ²)	6.00	6.00	6.00	7.20	5.55	5.55	6.00	-	6.00	6.00	7.20	6.00	-	

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Table I.77: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 DRY FODDER YIELD (kg/ha) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	ABD3	ABD7	PTN	DHL	PCR	GNG	MS MEAN	VYP	APR	CBE	ZONE MEAN	RANK
1	IHT 301	MH 2864	8444	4754	12548	5565	6547	8288	8997	7878	6056	3693	4579	6947	18
2	IHT 302	MH 2865	8833	4978	7046	5889	5646	8228	8689	7044	5944	4293	5327	6487	23
3	IHT 303	MH 2866	8667	5306	15906	3866	9429	11592	9336	9157	7667	3611	8267	8365	5
4	IHT 304	MH 2867	9000	4540	11992	6907	7027	9670	9550	8384	5889	5180	4347	7410	13
5	IHT 305	MH 2868	8944	2583	8830	7046	5105	9069	8939	7217	5222	4591	5758	6609	21
6	IHT 306	NBH 4903 (Check)	8778	5356	14004	7731	9790	9489	8994	9163	7889	5463	5159	8265	7
7	IHT 307	MH 2869	8667	3029	9729	6102	5045	9730	8911	7316	5556	3408	4713	6489	22
8	IHT 308	MH 2870	8333	4631	9421	5231	6126	9309	9197	7464	5222	3613	6807	6789	20
9	IHT 309	AHB 1200 (Check)	8833	2998	8234	5065	4685	7988	8867	6667	5333	3529	5169	6070	27
10	IHT 310	MH 2871	6000	4334	8918	4375	4444	8889	9406	6624	5056	4314	5614	6135	24
11	IHT 311	MH 2872	7833	3908	18851	6167	10631	10210	8811	9487	6722	4079	5456	8267	6
12	IHT 312	MH 2873	8667	3378	12389	5620	7988	15135	9961	9020	5111	4890	6347	7949	10
13	IHT 313	Kaveri S Boss (Check)	8556	4738	14018	5380	9009	14384	8758	9263	6111	3765	5129	7985	9
14	IHT 314	MH 2874	8667	5820	14039	5657	9369	13934	9039	9504	6944	4995	5529	8399	4
15	IHT 315	MH 2875	7833	7430	13862	5787	9489	13393	8711	9501	6500	4821	6673	8450	3
16	IHT 316	MH 2876	7111	7704	15836	7574	7988	11544	8733	9499	5722	3602	5827	8164	8
17	IHT 317	MH 2877	8333	6248	11576	6181	7508	10751	8731	8475	5556	3627	5313	7382	14
18	IHT 318	MH 2878	8833	6839	17072	7269	9550	13514	9347	10346	5333	4462	6055	8827	1
19	IHT 319	MH 2879	8222	6708	20230	6806	10330	8589	8919	9972	7667	4922	5668	8806	2
20	IHT 320	86M86 (Check)	4556	5004	9423	5616	5225	7327	8919	6582	5222	4002	5877	6117	25
21	IHT 321	MH 2880	8056	5326	13578	5718	10691	9550	8839	8822	5556	5054	6778	7914	11
22	IHT 322	MH 2881	8667	5227	10786	5639	6847	10270	8992	8061	5611	3761	5564	7136	17
23	IHT 323	MH 2882	8444	5772	12779	7088	7087	6366	9706	8178	5611	3687	6025	7257	15
24	IHT 324	MH 2883	8556	4723	9974	6134	7387	11622	9250	8235	5167	3607	5723	7214	16
25	IHT 325	MH 2884	8611	2718	8927	6574	4925	5607	8517	6554	5111	3938	6223	6115	26
26	IHT 326	MH 2885	8444	5198	13781	6500	10751	9429	8936	9006	5222	4737	5788	7879	12
27	IHT 327	MH 2886	7500	4741	9953	5750	8168	5586	8906	7229	6111	4554	6703	6797	19
		LOC. MEAN	8200	4963	12359	6046	7659	9980	9036	8320	5893	4230	5793	7416	
		C.D. (5%)	1813	729	1746	1884	2421	2917	1132	1737	806	568	988	1394	
		C.D. (1%)	2416	972	2327	2510	3226	3886	1508	2293	1074	757	1316	1838	
		C.V. (%)	13.5	9.0	8.6	19.0	19.3	17.8	7.6	19.8	8.4	8.2	10.4	19.8	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		PLOT SIZE (m ²)	6.00	6.00	6.00	7.20	5.55	5.55	6.00	-	6.00	6.00	6.00	-	

CHAPTER I: BREEDING

Table I.78: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 DAYS TO 50% FLOWERING ZONE B

S.No.	TEST	ENTRY	ABD1	ABD3	ABD7	PTN	DHL	PCR	GNG	MS	VYP	APR	TPN	CBE	ZONE	RANK
		CODE								MEAN					MEAN	
1	IHT 301	MH 2864	60	54	56	50	54	55	60	55	50	44	56	48	53	19
2	IHT 302	MH 2865	55	47	45	46	46	47	50	48	46	42	52	43	47	27
3	IHT 303	MH 2866	61	59	60	58	51	53	65	58	51	41	56	51	55	8
4	IHT 304	MH 2867	62	54	54	53	52	55	60	56	53	40	56	48	53	16
5	IHT 305	MH 2868	57	50	49	49	49	52	56	52	46	42	53	47	50	24
6	IHT 306	NBH 4903 (Check)	60	58	58	55	51	55	62	57	52	49	59	50	55	6
7	IHT 307	MH 2869	55	50	50	48	51	54	58	52	46	41	53	45	50	25
8	IHT 308	MH 2870	53	53	53	50	50	51	58	53	46	43	54	46	51	22
9	IHT 309	AHB 1200 (Check)	56	49	48	48	50	51	58	51	47	40	53	46	50	26
10	IHT 310	MH 2871	60	53	50	52	51	53	57	54	48	41	54	44	51	21
11	IHT 311	MH 2872	62	59	62	61	53	56	65	60	52	50	61	47	57	1
12	IHT 312	MH 2873	60	59	58	56	52	55	62	58	51	48	56	51	55	7
13	IHT 313	Kaveri S Boss (Check)	59	59	60	59	53	57	63	59	53	48	58	51	56	2
14	IHT 314	MH 2874	61	56	55	53	51	55	60	56	49	45	57	49	54	13
15	IHT 315	MH 2875	62	55	54	53	52	53	60	55	51	46	58	50	54	12
16	IHT 316	MH 2876	63	57	61	58	51	55	65	59	51	48	58	53	56	3
17	IHT 317	MH 2877	59	53	56	54	52	54	61	55	49	41	57	50	53	18
18	IHT 318	MH 2878	58	56	58	57	50	57	62	57	50	40	58	51	54	9
19	IHT 319	MH 2879	61	59	62	59	50	54	65	59	51	44	59	52	56	4
20	IHT 320	86M86 (Check)	62	56	57	56	50	55	64	57	49	41	57	50	54	10
21	IHT 321	MH 2880	59	56	55	56	50	56	61	56	48	43	57	49	54	14
22	IHT 322	MH 2881	58	55	56	56	51	58	61	57	51	43	58	49	54	11
23	IHT 323	MH 2882	60	52	57	56	52	54	60	56	50	42	57	49	54	15
24	IHT 324	MH 2883	55	51	49	48	49	53	58	52	48	41	55	48	50	23
25	IHT 325	MH 2884	61	59	60	57	50	57	63	58	50	48	55	51	56	5
26	IHT 326	MH 2885	62	54	55	52	51	58	60	56	47	41	54	49	53	20
27	IHT 327	MH 2886	58	54	54	55	52	53	61	55	51	46	55	48	53	17
		LOC. MEAN	59	55	55	54	51	54	61	56	49	44	56	49	53	
		C.D. (5%)	1.0	2.0	1.0	3.0	2.0	2.0	2.0	2.0	1.0	1.0	2.0	2.0	2.0	
		C.D. (1%)	2.0	3.0	2.0	4.0	3.0	3.0	3.0	3.0	2.0	2.0	3.0	2.0	2.0	
		C.V. (%)	1.2	2.2	1.5	3.8	2.8	2.6	2.0	3.4	1.6	1.9	2.2	1.9	3.5	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

CHAPTER I: BREEDING

Table I.79: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 DAYS TO MATURITY ZONE B

S.No.	TEST	ENTRY	ABD1	ABD3	ABD7	PTN	DHL	PCR	GNG	MS	VYP	APR	TPN	CBE	ZONE	RANK
		CODE								MEAN					MEAN	
1	IHT 301	MH 2864	99	89	82	78	90	81	90	87	91	78	82	86	86	18
2	IHT 302	MH 2865	95	88	72	74	83	73	79	81	87	79	79	81	81	27
3	IHT 303	MH 2866	98	92	85	86	88	79	92	89	91	76	81	89	87	9
4	IHT 304	MH 2867	100	89	80	81	89	82	90	87	95	75	83	86	86	14
5	IHT 305	MH 2868	96	88	75	77	86	79	86	84	86	77	80	85	83	25
6	IHT 306	NBH 4903 (Check)	100	93	84	83	87	82	90	88	93	84	84	88	88	6
7	IHT 307	MH 2869	95	89	76	76	88	81	88	85	87	75	79	83	83	24
8	IHT 308	MH 2870	95	90	78	78	86	77	88	85	87	76	81	84	84	22
9	IHT 309	AHB 1200 (Check)	94	87	74	76	87	77	88	83	88	73	79	84	82	26
10	IHT 310	MH 2871	96	90	76	80	87	80	86	85	88	76	80	82	84	21
11	IHT 311	MH 2872	101	94	88	89	89	83	94	91	92	84	86	85	89	1
12	IHT 312	MH 2873	98	93	84	84	88	81	92	89	91	84	83	89	88	7
13	IHT 313	Kaveri S Boss (Check)	96	94	85	87	90	84	93	90	96	83	83	89	89	3
14	IHT 314	MH 2874	98	91	81	81	88	81	90	87	91	81	82	87	86	15
15	IHT 315	MH 2875	101	90	80	81	88	79	89	87	91	82	83	88	87	12
16	IHT 316	MH 2876	102	92	88	86	88	81	93	90	92	84	85	91	89	2
17	IHT 317	MH 2877	96	90	82	82	88	80	90	87	91	76	81	88	86	19
18	IHT 318	MH 2878	96	91	83	85	87	84	91	88	91	75	83	89	87	11
19	IHT 319	MH 2879	96	94	87	87	87	80	94	89	91	79	83	90	88	5
20	IHT 320	86M86 (Check)	102	90	84	84	86	81	92	89	90	76	83	88	87	8
21	IHT 321	MH 2880	97	89	80	84	86	83	90	87	90	77	84	87	86	17
22	IHT 322	MH 2881	98	89	81	84	88	84	91	88	91	78	85	87	87	10
23	IHT 323	MH 2882	97	88	82	84	89	81	89	87	92	78	84	87	86	13
24	IHT 324	MH 2883	96	88	74	76	85	79	87	84	89	75	80	86	83	23
25	IHT 325	MH 2884	99	93	86	85	87	84	90	89	91	83	83	89	88	4
26	IHT 326	MH 2885	100	91	82	80	87	85	88	87	87	75	82	87	86	20
27	IHT 327	MH 2886	96	90	79	83	88	80	90	87	92	82	83	86	86	16
		LOC. MEAN	98	90	81	82	87	81	90	87	90	78	82	87	86	
		C.D. (5%)	1.0	1.0	2.0	3.0	2.0	2.0	2.0	2.0	2.0	1.0	3.0	2.0	2.0	
		C.D. (1%)	2.0	2.0	2.0	4.0	3.0	3.0	3.0	3.0	2.0	2.0	4.0	2.0	2.0	
		C.V. (%)	0.7	0.9	1.2	2.5	1.7	1.8	1.3	2.2	1.1	1.0	2.0	1.1	2.2	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.80: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 PLANT HEIGHT (cm) ZONE B

S.No.	TEST	ENTRY	ABD1	ABD3	ABD7	PTN	DHL	PCR	GNG	MS	VYP	APR	TPN	CBE	ZONE	RANK
		CODE								MEAN					MEAN	
1	IHT 301	MH 2864	160	220	217	206	218	236	213	210	179	128	193	164	194	15
2	IHT 302	MH 2865	145	174	177	178	210	200	165	178	162	125	152	156	168	24
3	IHT 303	MH 2866	160	226	263	229	265	260	200	229	207	128	202	187	212	4
4	IHT 304	MH 2867	145	202	213	217	227	228	207	206	200	131	170	183	193	17
5	IHT 305	MH 2868	150	172	183	163	182	190	173	173	164	115	155	159	164	25
6	IHT 306	NBH 4903 (Check)	155	219	243	214	232	231	229	218	199	134	183	183	202	8
7	IHT 307	MH 2869	115	183	183	172	181	184	168	170	163	114	163	155	162	26
8	IHT 308	MH 2870	140	223	197	183	206	203	191	192	172	127	157	156	178	21
9	IHT 309	AHB 1200 (Check)	148	197	190	196	199	198	194	189	162	129	159	154	175	22
10	IHT 310	MH 2871	145	195	193	193	209	185	177	185	163	130	153	163	173	23
11	IHT 311	MH 2872	215	264	307	261	288	304	273	273	214	127	209	240	246	1
12	IHT 312	MH 2873	160	200	233	211	227	225	186	206	204	143	181	181	195	12
13	IHT 313	Kaveri S Boss (Check)	182	210	253	219	242	249	205	223	213	136	191	175	207	5
14	IHT 314	MH 2874	160	221	227	226	232	227	200	213	193	138	198	184	201	9
15	IHT 315	MH 2875	157	226	240	209	244	246	217	220	204	130	195	203	206	6
16	IHT 316	MH 2876	157	211	237	214	239	220	236	216	201	143	198	199	205	7
17	IHT 317	MH 2877	140	188	223	198	220	206	211	198	176	131	158	178	184	20
18	IHT 318	MH 2878	175	211	263	254	263	258	245	238	200	138	223	217	223	2
19	IHT 319	MH 2879	172	233	257	231	245	247	239	232	199	137	213	193	215	3
20	IHT 320	86M86 (Check)	157	192	220	204	233	212	218	205	184	129	196	184	194	16
21	IHT 321	MH 2880	150	188	237	214	237	229	193	207	190	135	189	185	195	13
22	IHT 322	MH 2881	145	239	233	217	241	237	192	215	168	121	215	166	198	11
23	IHT 323	MH 2882	150	223	237	208	231	230	214	213	188	139	191	188	200	10
24	IHT 324	MH 2883	152	199	207	190	237	226	197	201	195	130	178	167	189	19
25	IHT 325	MH 2884	120	159	173	145	162	165	147	153	157	126	186	136	152	27
26	IHT 326	MH 2885	172	205	227	219	237	237	193	213	198	120	183	153	195	14
27	IHT 327	MH 2886	140	190	223	210	236	217	203	203	185	133	183	189	192	18
		LOC. MEAN	154	206	224	207	228	224	203	207	187	130	184	178	193	
		C.D. (5%)	13.0	17.0	9.0	24.0	22.0	18.0	22.0	12.0	14.0	8.0	12.0	20.0	11.0	
		C.D. (1%)	18.0	22.0	12.0	32.0	30.0	24.0	30.0	15.0	19.0	11.0	16.0	27.0	14.0	
		C.V. (%)	5.3	5.0	2.5	7.1	6.0	4.9	6.8	5.4	4.7	3.8	3.9	6.8	6.5	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.81: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 PRODUCTIVE TILLERS (No./Plant) ZONE B

S.No.	TEST	ENTRY	ABD1**	ABD3	ABD7	PTN	DHL	PCR	GNG	MS	VYP	APR	TPN	CBE	ZONE	RANK
		CODE								MEAN					MEAN	
1	IHT 301	MH 2864	1.7	1.6	3.0	2.1	2.1	2.3	2.0	2.2	3.3	1.5	3.7	2.7	2.4	2
2	IHT 302	MH 2865	1.0	1.8	2.7	2.0	2.1	2.9	2.0	2.2	3.1	1.5	3.7	3.0	2.5	1
3	IHT 303	MH 2866	1.0	1.4	1.0	1.7	1.5	2.7	2.0	1.7	3.4	1.4	3.0	2.4	2.1	16
4	IHT 304	MH 2867	1.0	1.4	2.0	1.6	1.9	2.0	2.0	1.8	3.6	1.3	2.7	2.3	2.1	12
5	IHT 305	MH 2868	1.7	1.3	2.0	2.0	2.0	2.8	1.7	2.0	2.9	1.2	3.0	3.0	2.2	5
6	IHT 306	NBH 4903 (Check)	1.0	1.0	3.0	2.1	1.9	1.9	2.0	2.0	2.9	1.2	2.7	2.6	2.1	8
7	IHT 307	MH 2869	1.0	1.3	2.0	1.7	1.9	2.6	2.0	1.9	3.0	1.5	2.7	2.0	2.1	15
8	IHT 308	MH 2870	1.0	1.3	1.3	1.6	2.1	2.7	2.0	1.8	3.0	1.3	3.0	2.5	2.1	12
9	IHT 309	AHB 1200 (Check)	1.7	1.4	2.3	1.6	1.8	1.7	2.0	1.8	3.0	1.2	3.0	1.6	2.0	23
10	IHT 310	MH 2871	1.0	1.3	1.7	1.8	1.8	2.4	1.7	1.8	2.9	1.9	2.7	2.3	2.0	17
11	IHT 311	MH 2872	1.3	1.7	2.3	1.6	1.5	1.7	2.0	1.8	3.3	1.5	3.0	2.2	2.1	13
12	IHT 312	MH 2873	1.3	1.2	2.0	1.6	1.8	2.0	2.0	1.8	3.5	1.3	2.7	3.0	2.1	9
13	IHT 313	Kaveri S Boss (Check)	1.3	1.3	2.3	1.7	1.9	2.3	1.3	1.8	2.8	1.3	2.7	2.0	2.0	21
14	IHT 314	MH 2874	1.3	1.3	2.7	2.0	1.9	2.2	2.3	2.1	3.3	1.6	2.0	2.7	2.2	4
15	IHT 315	MH 2875	1.0	1.3	2.3	1.7	2.1	2.3	2.0	2.0	3.5	1.3	3.0	2.5	2.2	3
16	IHT 316	MH 2876	1.0	1.4	2.3	1.6	1.8	2.4	1.7	1.9	3.1	1.6	2.0	3.0	2.1	10
17	IHT 317	MH 2877	1.3	1.2	1.7	1.8	1.9	2.2	1.7	1.7	2.7	1.6	2.7	2.3	2.0	22
18	IHT 318	MH 2878	1.0	1.4	1.3	1.8	1.6	2.1	2.0	1.7	2.9	1.6	2.0	2.2	1.9	24
19	IHT 319	MH 2879	1.7	1.3	2.3	2.0	1.7	1.9	1.7	1.8	3.3	1.3	3.0	2.2	2.1	14
20	IHT 320	86M86 (Check)	1.3	1.4	2.0	1.7	1.7	2.7	2.0	1.9	3.0	1.3	2.3	2.0	2.0	18
21	IHT 321	MH 2880	1.3	1.4	2.0	1.9	1.9	1.8	2.0	1.8	2.9	1.2	3.0	2.0	2.0	19
22	IHT 322	MH 2881	1.0	1.1	2.0	2.1	1.9	2.0	2.0	1.8	2.5	1.8	2.7	2.2	2.0	18
23	IHT 323	MH 2882	1.0	1.3	2.0	1.8	1.9	2.3	2.0	1.9	2.5	1.3	2.7	2.2	2.0	20
24	IHT 324	MH 2883	1.0	1.3	1.7	2.1	2.0	3.1	1.7	2.0	3.3	1.4	2.3	2.0	2.1	11
25	IHT 325	MH 2884	1.3	1.1	1.7	1.5	1.7	2.8	2.0	1.8	2.9	1.7	2.5	2.3	2.0	18
26	IHT 326	MH 2885	1.7	1.3	2.0	1.5	2.0	2.5	2.0	1.9	2.9	1.5	2.5	3.0	2.1	7
27	IHT 327	MH 2886	1.0	1.2	2.0	1.7	1.9	3.0	2.0	2.0	2.7	1.4	2.7	3.0	2.2	6
		LOC. MEAN	1.2	1.3	2.1	1.8	1.9	2.3	1.9	1.9	3.1	1.4	2.7	2.4	2.1	
		C.D. (5%)	0.6	0.4	0.7	0.5	0.2	0.9	0.5	0.3	0.7	0.4	0.8	0.3	0.3	
		C.D. (1%)	0.9	0.5	0.9	0.7	0.3	1.1	0.7	0.4	1.0	0.5	1.1	0.4	0.3	
		C.V. (%)	32.4	16.8	20.2	17.5	7.7	22.3	16.7	15.3	14.5	16.7	18.8	6.7	14.2	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.268	0.000	0.000	0.000	0.000	0.015	

**LOCATION REJECTED DUE TO HIGH C.V. (i.e. > 30%): ABD1 32.4%

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Table I.82: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 PANICLE LENGTH (cm) ZONE B

S.No.	TEST	ENTRY	ABD1	ABD3	ABD7	PTN	DHL	PCR	GNG	MS	VYP	APR	TPN	CBE	ZONE	RANK
	CODE		MEAN										MEAN			
1	IHT 301	MH 2864	23	25	32	24	28	30	24	27	25	27	28	23	26	21
2	IHT 302	MH 2865	18	22	24	25	24	25	22	23	25	27	22	22	23	26
3	IHT 303	MH 2866	29	30	36	30	30	37	24	31	31	32	27	40	31	2
4	IHT 304	MH 2867	26	26	33	29	27	28	23	27	29	29	25	23	27	13
5	IHT 305	MH 2868	24	26	29	26	26	29	23	26	29	29	28	25	27	15
6	IHT 306	NBH 4903 (Check)	25	27	35	30	28	35	25	29	30	31	26	25	29	6
7	IHT 307	MH 2869	21	26	29	27	26	27	22	25	27	31	27	28	26	19
8	IHT 308	MH 2870	21	26	27	24	25	27	23	25	27	26	24	24	25	25
9	IHT 309	AHB 1200 (Check)	22	25	29	25	27	29	24	26	26	29	21	25	26	24
10	IHT 310	MH 2871	21	27	28	25	26	30	24	26	29	28	27	25	26	20
11	IHT 311	MH 2872	32	25	38	28	38	39	30	33	29	33	32	24	32	1
12	IHT 312	MH 2873	23	27	31	27	27	31	23	27	28	30	25	26	27	14
13	IHT 313	Kaveri S Boss (Check)	27	26	32	29	29	33	24	29	28	32	28	25	29	7
14	IHT 314	MH 2874	26	26	31	27	28	32	24	28	27	33	25	25	28	10
15	IHT 315	MH 2875	25	28	33	25	28	30	25	28	30	32	24	30	28	9
16	IHT 316	MH 2876	24	30	32	28	30	32	25	29	25	31	30	31	29	5
17	IHT 317	MH 2877	22	27	32	27	28	32	23	27	28	29	26	26	27	11
18	IHT 318	MH 2878	23	24	30	27	27	30	24	26	26	29	25	28	27	17
19	IHT 319	MH 2879	24	27	30	27	27	31	24	27	28	32	26	24	27	12
20	IHT 320	86M86 (Check)	21	27	27	25	27	29	25	26	24	30	23	25	26	23
21	IHT 321	MH 2880	23	28	37	30	31	38	24	30	28	30	32	25	30	4
22	IHT 322	MH 2881	26	24	34	34	31	34	25	30	33	30	32	24	30	3
23	IHT 323	MH 2882	25	27	32	30	28	34	24	29	26	32	21	31	28	8
24	IHT 324	MH 2883	21	28	29	25	27	28	23	26	24	30	26	26	26	22
25	IHT 325	MH 2884	21	25	29	28	26	29	24	26	28	30	27	26	27	16
26	IHT 326	MH 2885	22	25	31	26	27	28	24	26	28	29	26	27	27	18
27	IHT 327	MH 2886	22	25	30	26	26	28	24	26	24	31	27	26	26	21
		LOC. MEAN	24	26	31	27	28	31	24	27	27	30	26	26	27	
		C.D. (5%)	1.0	3.0	2.0	3.0	2.0	3.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0	
		C.D. (1%)	2.0	5.0	3.0	3.0	3.0	5.0	3.0	2.0	2.0	4.0	3.0	4.0	2.0	
		C.V. (%)	3.5	8.0	4.9	5.8	4.3	6.9	6.3	6.1	3.9	6.5	5.8	6.8	7.1	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.83: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 PANICLE DIAMETER (cm) ZONE B

S.No.	TEST	ENTRY	ABD1	ABD3	ABD7	PTN	DHL	PCR	GNG	MS	VYP	APR	TPN	CBE	ZONE	RANK
	CODE		MEAN										MEAN			
1	IHT 301	MH 2864	2.7	3.7	3.2	3.3	3.4	3.3	3.4	3.3	2.3	3.4	2.4	3.7	3.2	23
2	IHT 302	MH 2865	2.8	3.7	2.9	3.3	3.3	3.0	3.3	3.2	2.3	3.1	2.3	3.5	3.0	25
3	IHT 303	MH 2866	3.0	3.8	3.2	3.3	3.2	3.4	3.4	3.3	2.8	3.3	2.3	3.2	3.2	22
4	IHT 304	MH 2867	3.2	3.8	3.7	3.7	3.5	3.6	3.4	3.6	3.0	3.8	2.5	3.3	3.4	6
5	IHT 305	MH 2868	3.1	3.8	3.5	3.5	3.3	3.6	3.6	3.5	3.1	3.3	2.7	3.5	3.4	11
6	IHT 306	NBH 4903 (Check)	2.9	3.9	3.9	3.7	3.6	3.9	3.5	3.6	3.2	3.6	2.6	3.5	3.5	2
7	IHT 307	MH 2869	3.1	3.8	3.3	3.6	3.4	3.5	3.3	3.4	3.0	3.9	2.8	3.6	3.4	5
8	IHT 308	MH 2870	2.8	3.9	3.3	3.6	3.5	3.5	3.6	3.5	3.0	3.4	2.4	3.6	3.3	16
9	IHT 309	AHB 1200 (Check)	3.2	3.9	3.2	3.3	3.7	3.6	3.5	3.5	3.1	3.6	2.8	3.3	3.4	7
10	IHT 310	MH 2871	3.1	3.8	3.5	3.9	3.7	4.1	3.9	3.7	3.1	3.5	2.5	3.4	3.5	2
11	IHT 311	MH 2872	2.8	3.5	2.9	3.4	2.9	3.6	3.4	3.2	2.7	3.6	2.5	3.3	3.1	24
12	IHT 312	MH 2873	3.2	3.7	3.8	3.6	3.4	3.7	3.4	3.5	3.0	3.3	2.4	3.5	3.4	12
13	IHT 313	Kaveri S Boss (Check)	3.0	3.8	3.2	3.6	3.8	3.6	3.5	3.5	2.7	3.8	2.6	3.3	3.4	14
14	IHT 314	MH 2874	3.3	3.8	3.5	3.5	3.5	3.4	3.3	3.5	2.8	3.9	2.5	3.4	3.4	13
15	IHT 315	MH 2875	3.2	3.8	3.4	3.5	3.7	3.6	3.5	3.5	2.9	4.0	2.3	3.3	3.4	9
16	IHT 316	MH 2876	2.8	3.9	3.8	3.5	3.7	3.9	3.3	3.6	3.2	3.7	2.9	3.6	3.5	2
17	IHT 317	MH 2877	3.1	3.9	3.7	3.5	3.5	3.7	3.3	3.5	3.2	3.8	2.5	3.7	3.4	3
18	IHT 318	MH 2878	3.1	3.7	3.7	3.6	3.3	3.6	3.3	3.5	2.9	3.4	2.4	3.7	3.4	15
19	IHT 319	MH 2879	3.3	3.8	3.9	3.7	3.6	3.6	3.3	3.6	3.0	3.5	2.3	3.1	3.4	8
20	IHT 320	86M86 (Check)	3.1	3.5	3.4	3.3	3.5	3.4	3.4	3.4	3.0	3.6	2.8	2.9	3.3	20
21	IHT 321	MH 2880	2.8	3.7	3.3	3.5	3.4	3.6	3.5	3.4	2.9	4.0	2.6	3.8	3.4	10
22	IHT 322	MH 2881	3.2	3.9	3.6	3.7	3.7	3.6	3.5	3.6	2.9	3.8	2.4	3.3	3.4	4
23	IHT 323	MH 2882	3.2	4.0	3.9	3.9	3.6	4.2	3.3	3.7	3.3	3.5	2.6	3.5	3.6	1
24	IHT 324	MH 2883	3.1	3.7	3.5	3.3	3.4	3.6	3.3	3.4	2.8	3.4	2.5	3.3	3.3	19
25	IHT 325	MH 2884	2.6	3.8	3.5	3.5	3.3	3.5	3.5	3.4	2.8	3.5	2.4	3.6	3.3	18
26	IHT 326	MH 2885	3.2	3.7	3.5	3.5	3.5	3.6	3.5	3.5	2.7	3.5	2.5	3.2	3.3	17
27	IHT 327	MH 2886	2.8	3.7	3.4	3.5	3.5	3.5	3.4	3.4	3.0	3.4	2.5	2.6	3.2	21
		LOC. MEAN	3.0	3.8	3.5	3.5	3.5	3.6	3.4	3.5	2.9	3.6	2.5	3.4	3.3	
		C.D. (5%)	0.2	0.2	0.3	0.3	0.2	0.4	0.3	0.2	0.3	0.4	0.3	0.4	0.1	
		C.D. (1%)	0.2	0.2	0.4	0.4	0.3	0.5	0.4	0.2	0.4	0.5	0.4	0.5	0.2	
		C.V. (%)	3.2	2.9	4.7	5.5	3.4	6.6	5.5	4.5	6.3	6.2	7.3	7.2	5.3	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.84: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 1000-SEED Wt.(g) ZONE B

S.No.	TEST	ENTRY	ABD1	ABD3	ABD7	PTN	DHL	PCR	MS	VYP	TPN	CBE	ZONE	RANK
	CODE								MEAN				MEAN	
1	IHT 301	MH 2864	9.0	10.3	10.3	11.9	7.8	9.4	9.8	12.1	12.7	10.0	10.4	26
2	IHT 302	MH 2865	13.4	10.6	11.3	14.7	6.9	9.8	11.1	12.2	12.7	9.5	11.2	20
3	IHT 303	MH 2866	13.4	10.5	12.0	12.0	7.9	10.8	11.1	13.3	12.6	10.5	11.5	16
4	IHT 304	MH 2867	7.9	11.5	11.7	13.1	8.8	10.4	10.6	14.3	12.9	11.8	11.4	18
5	IHT 305	MH 2868	11.7	10.9	12.7	14.4	9.0	10.2	11.5	14.8	13.2	8.9	11.8	10
6	IHT 306	NBH 4903 (Check)	11.7	11.1	14.0	13.0	9.8	8.6	11.4	12.8	13.0	12.4	11.8	9
7	IHT 307	MH 2869	12.9	11.5	13.0	15.2	9.4	10.5	12.1	14.3	13.5	12.6	12.6	1
8	IHT 308	MH 2870	10.6	10.5	15.7	14.4	9.9	11.2	12.0	14.4	12.6	12.4	12.4	2
9	IHT 309	AHB 1200 (Check)	13.8	11.4	14.3	12.9	11.2	8.9	12.1	14.5	12.2	10.1	12.1	5
10	IHT 310	MH 2871	10.2	11.1	14.3	12.8	11.2	8.4	11.4	12.8	12.8	11.1	11.7	11
11	IHT 311	MH 2872	9.3	9.8	12.3	11.5	8.6	9.5	10.2	11.4	12.8	8.0	10.4	27
12	IHT 312	MH 2873	12.6	11.1	13.0	12.4	10.2	10.0	11.5	13.2	12.6	7.3	11.4	19
13	IHT 313	Kaveri S Boss (Check)	10.4	10.1	12.3	13.0	8.2	8.4	10.4	13.1	12.5	10.7	11.0	23
14	IHT 314	MH 2874	13.4	10.4	11.7	12.6	7.8	9.3	10.9	13.2	12.9	13.2	11.6	12
15	IHT 315	MH 2875	10.2	11.5	13.3	14.3	10.3	8.1	11.3	14.7	12.8	13.5	12.1	6
16	IHT 316	MH 2876	10.7	11.2	14.0	15.2	10.6	10.7	12.1	13.5	12.5	11.4	12.2	4
17	IHT 317	MH 2877	12.8	10.5	13.0	13.5	10.4	10.0	11.7	12.8	12.6	8.8	11.6	14
18	IHT 318	MH 2878	9.5	11.2	12.7	14.8	9.6	10.3	11.4	12.9	13.6	12.2	11.9	8
19	IHT 319	MH 2879	13.5	9.9	15.3	13.9	10.3	9.7	12.1	13.2	12.8	12.6	12.3	3
20	IHT 320	86M86 (Check)	13.2	10.9	10.0	13.6	9.5	9.8	11.2	13.0	12.7	11.5	11.6	15
21	IHT 321	MH 2880	9.6	11.4	11.7	15.1	10.4	10.1	11.4	12.9	13.1	12.7	11.9	7
22	IHT 322	MH 2881	11.2	10.5	10.7	11.3	7.9	10.2	10.3	12.8	12.6	13.1	11.1	21
23	IHT 323	MH 2882	11.1	10.5	12.0	13.0	8.2	10.4	10.9	12.9	12.6	12.1	11.4	17
24	IHT 324	MH 2883	13.7	11.2	11.3	12.2	4.5	8.6	10.3	13.7	12.6	12.0	11.1	22
25	IHT 325	MH 2884	12.9	11.1	11.7	9.5	7.3	9.2	10.3	13.3	12.4	11.3	11.0	24
26	IHT 326	MH 2885	9.6	10.6	10.7	11.9	4.8	11.3	9.8	14.0	12.7	11.4	10.8	25
27	IHT 327	MH 2886	13.3	11.3	12.0	11.5	9.7	8.8	11.1	13.7	12.6	11.6	11.6	13
		LOC. MEAN	11.5	10.8	12.5	13.1	8.9	9.7	11.1	13.3	12.8	11.2	11.5	
		C.D. (5%)	0.4	1.4	1.3	2.1	0.8	0.4	1.5	0.8	0.6	1.3	1.3	
		C.D. (1%)	0.6	1.8	1.8	2.8	1.0	0.6	1.9	1.0	0.8	1.7	1.7	
		C.V. (%)	2.3	7.8	6.4	9.8	5.4	2.8	11.5	3.5	2.9	6.8	10.6	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.004	

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Table I.85: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 POPULATION AT HARVEST(No./plot) ZONE B

S.No.	TEST	ENTRY	ABD1	ABD3	ABD7	PTN	DHL	PCR	GNG	MS	VYP	APR	TPN	CBE	ZONE	RANK
		CODE								MEAN					MEAN	
1	IHT 301	MH 2864	76	51	73	69	63	41	87	66	71	51	72	65	65	18
2	IHT 302	MH 2865	75	66	72	67	66	41	87	68	71	48	74	68	67	5
3	IHT 303	MH 2866	74	60	77	73	61	41	86	67	72	47	73	68	66	8
4	IHT 304	MH 2867	74	57	77	69	58	52	89	68	72	51	72	60	67	7
5	IHT 305	MH 2868	76	53	71	64	60	45	91	66	72	43	72	70	65	19
6	IHT 306	NBH 4903 (Check)	75	59	77	69	63	49	90	69	74	58	72	70	69	2
7	IHT 307	MH 2869	76	35	71	72	62	37	90	63	74	49	73	73	65	22
8	IHT 308	MH 2870	75	55	75	71	57	37	90	66	71	51	72	59	65	20
9	IHT 309	AHB 1200 (Check)	76	56	71	68	66	39	89	66	71	48	74	71	66	10
10	IHT 310	MH 2871	75	65	70	58	52	44	90	65	73	45	74	75	66	16
11	IHT 311	MH 2872	75	57	67	63	64	26	87	63	70	52	73	72	64	24
12	IHT 312	MH 2873	76	60	69	67	62	45	86	66	71	43	73	53	64	25
13	IHT 313	Kaveri S Boss (Check)	74	62	75	70	67	50	88	69	72	42	74	56	66	9
14	IHT 314	MH 2874	75	70	70	76	56	37	91	68	70	44	74	65	66	12
15	IHT 315	MH 2875	74	59	71	63	51	44	89	64	72	53	74	57	64	23
16	IHT 316	MH 2876	73	70	65	70	56	41	89	66	73	52	74	69	67	6
17	IHT 317	MH 2877	76	68	67	67	59	40	87	66	70	48	73	68	66	14
18	IHT 318	MH 2878	73	74	71	74	62	57	86	71	72	52	74	74	70	1
19	IHT 319	MH 2879	76	69	75	69	64	43	88	69	72	55	72	70	68	3
20	IHT 320	86M86 (Check)	73	58	73	69	47	33	88	63	71	46	72	65	63	26
21	IHT 321	MH 2880	76	69	77	70	59	35	91	68	73	42	74	61	66	11
22	IHT 322	MH 2881	73	65	71	63	56	41	89	66	73	48	74	69	66	15
23	IHT 323	MH 2882	75	71	75	68	57	41	88	68	70	48	72	60	66	13
24	IHT 324	MH 2883	75	66	77	70	56	47	88	68	73	51	74	70	68	4
25	IHT 325	MH 2884	76	55	67	74	56	35	89	65	72	46	72	65	64	24
26	IHT 326	MH 2885	75	59	73	72	55	37	89	66	72	47	73	68	66	17
27	IHT 327	MH 2886	76	54	76	70	52	38	89	65	70	53	73	65	65	21
		LOC. MEAN	75	61	72	69	59	41	89	67	72	49	73	66	66	
		C.D. (5%)	3.0	7.0	4.0	12.0	11.0	12.0	5.0	5.0	2.0	6.0	2.0	8.0	4.0	
		C.D. (1%)	4.0	9.0	6.0	16.0	15.0	16.0	7.0	7.0	3.0	8.0	3.0	10.0	5.0	
		C.V. (%)	2.3	6.8	3.6	10.8	11.5	17.9	3.5	7.1	1.9	7.3	1.9	7.0	6.6	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.145	0.000	0.000	0.000	0.000	0.113	

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Table I.86: INITIAL HYBRID TRIAL (Late) KHARIF - 2024 SEED SET (%) UNDER BAG ZONE B

S.No.	TEST	ENTRY	ABD1	ABD3	ABD7	PTN	DHL	PCR	GNG	MS	TPN	CBE	ZONE	RANK
		CODE								MEAN			MEAN	
1	IHT 301	MH 2864	97	88	82	75	96	67	72	82	100	83	84	5
2	IHT 302	MH 2865	97	75	72	90	53	63	73	75	93	84	78	21
3	IHT 303	MH 2866	97	38	85	78	94	83	68	78	100	85	81	15
4	IHT 304	MH 2867	97	93	80	72	98	82	77	85	100	90	88	1
5	IHT 305	MH 2868	96	85	75	88	96	47	68	79	100	73	81	16
6	IHT 306	NBH 4903 (Check)	93	77	84	82	93	73	65	81	100	85	83	8
7	IHT 307	MH 2869	95	78	76	84	91	60	68	79	100	85	82	12
8	IHT 308	MH 2870	94	43	78	28	98	42	68	65	100	61	68	26
9	IHT 309	AHB 1200 (Check)	95	85	74	78	86	80	65	81	100	50	79	19
10	IHT 310	MH 2871	93	90	76	82	99	30	65	76	100	75	79	20
11	IHT 311	MH 2872	96	73	88	72	98	85	67	83	100	71	83	9
12	IHT 312	MH 2873	96	83	84	88	97	63	72	83	100	88	86	2
13	IHT 313	Kaveri S Boss (Check)	93	83	85	81	96	73	67	83	100	88	85	3
14	IHT 314	MH 2874	96	78	81	84	97	48	63	78	100	90	82	11
15	IHT 315	MH 2875	94	90	80	90	96	58	67	82	100	87	85	4
16	IHT 316	MH 2876	92	78	88	70	97	73	70	81	100	85	84	7
17	IHT 317	MH 2877	92	80	82	73	97	27	65	74	100	73	77	22
18	IHT 318	MH 2878	95	93	83	67	95	73	72	83	93	88	84	6
19	IHT 319	MH 2879	93	65	87	83	94	63	68	79	100	75	81	14
20	IHT 320	86M86 (Check)	93	70	84	83	89	80	68	81	100	86	84	7
21	IHT 321	MH 2880	90	33	80	43	98	63	67	68	100	89	74	25
22	IHT 322	MH 2881	93	72	81	82	94	58	70	79	100	75	81	17
23	IHT 323	MH 2882	93	27	82	78	92	67	73	73	100	75	76	23
24	IHT 324	MH 2883	90	67	74	88	98	62	73	79	92	73	80	18
25	IHT 325	MH 2884	92	35	86	59	91	73	68	72	100	-	76	24
26	IHT 326	MH 2885	95	52	82	87	94	73	68	79	100	-	81	13
27	IHT 327	MH 2886	95	80	79	87	96	60	70	81	100	83	83	10
		LOC. MEAN	94	71	81	77	93	64	69	78	99	80	81	
		C.D. (5%)	4.0	8.0	2.0	24.0	8.0	6.0	9.0	12.0	2.0	7.0	12.0	
		C.D. (1%)	5.0	11.0	2.0	31.0	11.0	8.0	12.0	16.0	2.0	9.0	16.0	
		C.V. (%)	2.5	7.0	1.2	18.8	5.4	5.7	8.3	14.3	1.0	5.2	14.3	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.181	0.000	0.000	0.181	

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Table I.87: INITIAL HYBRID TRIAL (Late) KHARIF - 2024: GRAIN QUALITY: IRON CONTENT (ppm) ZONE B

S.No.	TEST	ENTRY	ABD1	ABD3	ABD7	PTN	DHL	PCR	CBE	ZONE	RANK
	CODE									MEAN	
1	IHT 306	NBH 4903 (Check)	58	34	55	40	62	38	39	47	4
2	IHT 309	AHB 1200 (Check)	62	60	80	72	101	75	65	74	1
3	IHT 313	Kaveri S Boss (Check)	45	40	53	39	51	46	41	45	5
4	IHT 315	MH 2875	46	39	41	48	55	44	42	45	5
5	IHT 316	MH 2876	51	47	52	52	63	47	44	51	3
6	IHT 320	86M86 (Check)	60	56	58	53	58	52	53	56	2

Table I.88: INITIAL HYBRID TRIAL (Late) KHARIF - 2024: GRAIN QUALITY: ZINC CONTENT (ppm) ZONE B

S.No.	TEST	ENTRY	ABD1	ABD3	ABD7	PTN	DHL	PCR	CBE	ZONE	RANK
	CODE									MEAN	
1	IHT 306	NBH 4903 (Check)	37	47	49	35	38	27	41	39	2
2	IHT 309	AHB 1200 (Check)	35	45	41	41	36	35	49	40	1
3	IHT 313	Kaveri S Boss (Check)	30	35	37	31	31	24	38	32	6
4	IHT 315	MH 2875	35	38	35	34	35	27	42	35	5
5	IHT 316	MH 2876	34	49	39	37	34	30	41	37	4
6	IHT 320	86M86 (Check)	41	41	38	36	36	34	39	38	3

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Table I.89: ADVANCE HYBRID TRIAL (Medium) KHARIF 2024 EXPERIMENTAL DETAILS ZONE B

Locations	Soil	pH	Sowing date	Harvesting date	Interculture date	Irrigation date	Fertilizers (kg/ha.)			Insecticide
							N	P	K	
MAHARASHTRA										
Aurangabad (NARP)	MB	7.5	12.7.24	11.11.24	-	Nil	60	30	30	Nil
Niphad (MPKV)	-	-	10.7.24	-	-	Nil	-	-	-	-
Dhule (MPKV)	MB	8.6	4.7.24	15.10.24	28.7.24	Nil	60	30	0	Nil
Pachora (Nirmal Seed)	MB	7.8	16.7.24	25.10.24	10.8.24	16.7.24	100	50	50	Nil
KARNATAKA										
Vijayapur (UAS, Dharwad)	SB	8.7	6.7.24	26.10.24	17.8.24	Nil	50	25	0	Nil
Malnoor (UAS,Raichur)	S	7.6	12.7.24	27.11.24	31.7.24	Nil	50	50	0	Emamectin Benzoate
ANDHRA PRADESH										
Ananthapuram (ANGRAU)	A	6.7	12.8.24	As Per Maturity	5.9.24	Nil	60	30	20	Nil
Vizianagaram (ANGRAU)	RSL	7.4	2.7.24	7.10.24	22.7.24	Nil	60	40	30	Nil
TELANGANA										
Palem (PJ TSAU)	RSL	7.0	9.7.24	24.10.24	27.8, 12.8.24	Nil	60	40	40	Nil
TAMIL NADU										
Coimbatore (TNAU)	CL	7.8	29.6.24	6.10.24	-	29.6, 17.7, 12.8, 3.9, 18.9, 1.10.24	80	40	40	Nil

SB = Shallow Black, MB = Medium Black, CL = Clay Loam, RSL = Red Sandy Loam, S = Shallow, A = Alfisols.

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Table I.90: ADVANCE HYBRID TRIAL (Medium) KHARIF - 2024 GRAIN YIELD (kg/ha) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	NPD	DHL	PCR	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	AHT 401 B	AHB 1200 (Check)	2945	2031	2123	2666	2441	2144	2340	2242	1885	1802	1844	2969	3787	2469	8
2	AHT 402 B	MH 2682	3538	2503	2011	3017	2767	2902	2526	2714	3053	2351	2702	4047	4227	3017	2
3	AHT 403 B	AHB 1269 (Check)	2397	1426	1985	3788	2399	2243	1876	2060	2134	2180	2157	3014	3579	2462	9
4	AHT 404 B	MH 2767	2846	2784	2330	3223	2796	2870	2183	2527	2078	2955	2516	4071	4318	2966	4
5	AHT 405 B	MH 2773	3814	2187	2440	3149	2898	2638	2512	2575	2753	2378	2566	3697	4295	2986	3
6	AHT 406 B	MH 2775	3421	2096	2097	4578	3048	3087	2764	2926	2758	3306	3032	3464	2931	3050	1
7	AHT 407 B	86M01 (Check)	2950	1231	2214	2703	2275	3122	2064	2593	2835	2568	2701	3289	3414	2639	7
8	AHT 408 B	MH 2777	3938	1479	2647	3868	2983	2640	2552	2596	1211	2045	1628	3857	3847	2808	6
9	AHT 409 B	MH 2784	3713	1596	2576	2988	2718	3153	2112	2632	2685	2748	2716	3232	4510	2931	5
10	AHT 410 B	Pratap (Check)	2993	1287	1932	1633	1961	2579	2469	2524	2409	1901	2155	2490	3510	2320	10
		LOC. MEAN	3256	1862	2235	3161	2629	2738	2340	2539	2380	2423	2402	3413	3842	2765	
		C.D. (5%)	439	591	536	827	729	317	416	663	212	506	880	644	598	394	
		C.D. (1%)	602	809	734	1133	984	434	570	952	291	693	1264	882	820	522	
		C.V. (%)	7.9	18.5	14.0	15.3	19.1	6.8	10.4	11.5	5.2	12.2	16.2	11.0	9.1	16.0	
		F (Prob)	0.000	0.000	0.000	0.000	0.093	0.000	0.000	0.338	0.000	0.000	0.088	0.000	0.000	0.001	
		PLOT SIZE (m ²)	12.00	12.00	11.10	7.40	-	12.00	12.00	-	12.00	11.10	-	12.00	12.00	-	

Table I.91: ADVANCE HYBRID TRIAL (Medium) KHARIF - 2024 DRY FODDER YIELD (kg/ha) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	NPD	DHL	PCR	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	AHT 401 B	AHB 1200 (Check)	7500	4746	4444	4775	5366	4806	7333	6069	3489	2946	3218	6657	6288	5298	8
2	AHT 402 B	MH 2682	7250	5579	5886	6806	6380	5306	6944	6125	3633	3306	3470	9029	5956	5970	3
3	AHT 403 B	AHB 1269 (Check)	4250	6134	4084	5806	5069	4917	5889	5403	3741	2838	3290	6742	7133	5153	9
4	AHT 404 B	MH 2767	6278	7134	7057	6311	6695	5861	12111	8986	3809	3081	3445	9096	7949	6869	1
5	AHT 405 B	MH 2773	7583	6162	6577	6689	6753	5667	8111	6889	2624	3604	3114	8284	6274	6157	2
6	AHT 406 B	MH 2775	7250	6968	6006	6329	6638	4917	6333	5625	3594	3712	3653	7787	5873	5877	6
7	AHT 407 B	86M01 (Check)	7306	4308	4565	5613	5448	5028	7722	6375	3342	3189	3265	7272	7517	5586	7
8	AHT 408 B	MH 2777	8250	5454	8138	5342	6796	5111	7778	6444	3345	2703	3024	8633	4820	5957	4
9	AHT 409 B	MH 2784	7250	4672	7207	5784	6228	5694	9333	7514	2907	2964	2936	7239	6081	5913	5
10	AHT 410 B	Pratap (Check)	7667	4363	3544	5104	5169	4889	6222	5556	3396	2538	2967	5545	4349	4762	10
		LOC. MEAN	7058	5552	5751	5856	6054	5219	7778	6499	3388	3088	3238	7628	6224	5754	
		C.D. (5%)	1600	960	1866	1698	1467	418	2071	2444	368	702	923	1707	981	838	
		C.D. (1%)	2193	1315	2557	2326	1981	573	2838	3511	505	961	1326	2339	1344	1111	
		C.V. (%)	13.2	10.1	18.9	16.9	16.7	4.7	15.5	16.6	6.3	13.3	12.6	13.0	9.2	16.4	
		F (Prob)	0.000	0.000	0.000	0.000	0.084	0.000	0.000	0.156	0.000	0.000	0.723	0.000	0.000	0.000	
		PLOT SIZE (m ²)	12.00	12.00	11.10	7.40	-	12.00	12.00	-	12.00	11.10	-	12.00	12.00	-	

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Table I.92: ADVANCE HYBRID TRIAL (Medium) KHARIF - 2024 DAYS TO 50% FLOWERING ZONE B

S.No.	TEST CODE	ENTRY	ABD1	NPD*	DHL	PCR	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	AHT 401 B	AHB 1200 (Check)	57	65	50	50	52	45	50	47	41	43	42	41	43	47	8
2	AHT 402 B	MH 2682	52	64	50	55	52	47	49	48	42	49	46	44	46	48	4
3	AHT 403 B	AHB 1269 (Check)	47	57	48	50	49	46	49	47	40	45	42	42	46	46	10
4	AHT 404 B	MH 2767	59	66	47	58	54	49	51	50	45	54	49	47	51	51	1
5	AHT 405 B	MH 2773	58	63	48	55	54	49	52	50	41	50	46	48	50	50	2
6	AHT 406 B	MH 2775	54	61	50	50	51	47	49	48	41	49	45	44	44	48	6
7	AHT 407 B	86M01 (Check)	52	65	49	51	50	47	50	48	41	48	44	44	46	47	7
8	AHT 408 B	MH 2777	57	57	47	53	52	48	49	48	40	48	44	44	45	48	5
9	AHT 409 B	MH 2784	53	66	48	56	52	50	49	50	46	53	50	44	48	50	3
10	AHT 410 B	Pratap (Check)	52	65	49	50	50	46	49	48	42	44	43	43	44	46	9
		LOC. MEAN	54	63	49	53	52	47	50	49	42	48	45	44	46	48	
		C.D. (5%)	1.0	1.0	3.0	3.0	5.0	1.0	2.0	2.0	1.0	2.0	4.0	3.0	1.0	2.0	
		C.D. (1%)	2.0	2.0	4.0	5.0	6.0	2.0	3.0	3.0	2.0	3.0	6.0	5.0	2.0	2.0	
		C.V. (%)	1.3	1.4	3.2	3.6	5.2	1.6	2.4	2.0	1.8	2.3	4.2	4.6	1.5	3.9	
		F (Prob)	0.000	0.000	0.000	0.000	0.315	0.000	0.000	0.071	0.000	0.000	0.031	0.000	0.000	0.000	

*LOCATION REJECTED DUE TO DELAYED FLOWERING IN CHECKS

Table I.93: ADVANCE HYBRID TRIAL (Medium) KHARIF - 2024 DAYS TO MATURITY ZONE B

S.No.	TEST CODE	ENTRY	ABD1	NPD	DHL	PCR	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	AHT 401 B	AHB 1200 (Check)	96	86	86	70	85	87	83	85	76	73	75	72	81	81	8
2	AHT 402 B	MH 2682	92	86	86	86	88	88	83	85	77	79	78	73	84	83	4
3	AHT 403 B	AHB 1269 (Check)	86	79	85	72	80	86	81	84	74	76	75	70	84	79	10
4	AHT 404 B	MH 2767	99	88	83	95	91	90	84	87	80	86	83	77	89	87	1
5	AHT 405 B	MH 2773	95	84	85	92	89	89	86	88	75	80	78	80	88	85	2
6	AHT 406 B	MH 2775	91	82	86	80	85	87	84	85	75	81	78	74	82	82	6
7	AHT 407 B	86M01 (Check)	92	84	85	77	84	86	84	85	76	78	77	73	84	82	7
8	AHT 408 B	MH 2777	97	85	84	83	87	88	82	85	75	79	77	74	83	83	5
9	AHT 409 B	MH 2784	93	85	85	87	87	90	84	87	81	83	82	74	86	85	3
10	AHT 410 B	Pratap (Check)	92	86	85	67	82	85	84	85	76	73	75	74	82	80	9
		LOC. MEAN	93	85	85	81	86	88	84	86	77	79	78	74	84	83	
		C.D. (5%)	1.0	2.0	3.0	7.0	7.0	2.0	2.0	3.0	1.0	2.0	5.0	4.0	1.0	3.0	
		C.D. (1%)	1.0	3.0	4.0	10.0	9.0	2.0	2.0	4.0	2.0	3.0	8.0	6.0	2.0	4.0	
		C.V. (%)	0.6	1.3	1.8	5.4	5.6	1.1	1.2	1.4	1.0	1.8	3.0	3.2	0.8	3.9	
		F (Prob)	0.000	0.000	0.000	0.000	0.111	0.000	0.000	0.110	0.000	0.000	0.050	0.000	0.000	0.000	

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Table I.94: ADVANCE HYBRID TRIAL (Medium) KHARIF - 2024 PLANT HEIGHT (cm) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	NPD	DHL	PCR	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	AHT 401 B	AHB 1200 (Check)	163	160	205	184	178	167	161	164	131	201	166	155	156	168	9
2	AHT 402 B	MH 2682	175	153	233	210	193	189	198	194	146	211	179	157	196	187	3
3	AHT 403 B	AHB 1269 (Check)	155	160	205	200	180	191	182	187	146	192	169	169	199	180	6
4	AHT 404 B	MH 2767	228	178	264	258	232	202	218	210	177	223	200	201	220	217	1
5	AHT 405 B	MH 2773	172	174	222	212	195	203	179	191	145	179	162	199	183	187	2
6	AHT 406 B	MH 2775	150	173	209	216	187	179	163	171	131	201	166	160	166	175	8
7	AHT 407 B	86M01 (Check)	155	162	212	237	191	182	192	187	141	193	167	179	170	182	5
8	AHT 408 B	MH 2777	170	171	191	214	187	175	203	189	141	187	164	161	168	178	7
9	AHT 409 B	MH 2784	162	165	228	212	192	193	194	194	145	184	165	187	191	186	4
10	AHT 410 B	Pratap (Check)	115	173	193	180	165	159	171	165	125	161	143	181	157	162	10
		LOC. MEAN	165	167	216	212	190	184	186	185	143	193	168	175	181	182	
		C.D. (5%)	9.0	5.0	26.0	49.0	21.0	14.0	13.0	25.0	10.0	9.0	22.0	13.0	22.0	11.0	
		C.D. (1%)	12.0	7.0	35.0	67.0	29.0	20.0	17.0	37.0	14.0	12.0	31.0	18.0	30.0	15.0	
		C.V. (%)	3.1	1.8	7.0	13.5	7.8	4.6	4.0	6.1	4.1	2.8	5.7	4.4	7.0	6.9	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.019	0.000	0.000	0.000	

Table I.95: ADVANCE HYBRID TRIAL (Medium) KHARIF - 2024 PRODUCTIVE TILLERS (No./Plant) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	NPD	DHL	PCR	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	AHT 401 B	AHB 1200 (Check)	2.0	6.0	2.1	2.9	3.3	2.7	3.7	3.2	2.2	2.0	2.1	2.9	3.2	3.0	4
2	AHT 402 B	MH 2682	1.7	6.3	2.1	2.5	3.1	2.5	3.6	3.1	1.4	2.3	1.9	3.3	2.6	2.8	7
3	AHT 403 B	AHB 1269 (Check)	1.3	8.3	1.7	2.1	3.4	3.1	3.3	3.2	1.9	2.0	1.9	2.2	2.8	2.9	6
4	AHT 404 B	MH 2767	1.3	8.0	1.9	2.3	3.4	2.8	3.6	3.2	1.9	1.9	1.9	2.2	2.8	2.9	5
5	AHT 405 B	MH 2773	2.3	6.0	2.2	2.4	3.2	3.3	3.8	3.6	2.1	2.6	2.3	3.0	2.8	3.1	2
6	AHT 406 B	MH 2775	2.0	8.0	2.0	2.5	3.6	3.1	4.0	3.5	1.9	2.4	2.1	4.0	3.6	3.4	1
7	AHT 407 B	86M01 (Check)	1.3	6.0	1.8	2.3	2.9	2.8	3.2	3.0	1.7	2.2	1.9	2.6	2.8	2.7	9
8	AHT 408 B	MH 2777	2.0	6.0	3.1	2.1	3.3	2.8	3.6	3.2	1.4	1.9	1.7	3.4	2.4	2.9	5
9	AHT 409 B	MH 2784	1.0	6.3	2.4	2.2	3.0	2.9	4.3	3.6	1.3	2.3	1.8	2.0	2.0	2.7	8
10	AHT 410 B	Pratap (Check)	1.3	8.3	2.3	2.6	3.6	3.1	3.0	3.0	1.8	1.7	1.8	3.5	2.6	3.0	3
		LOC. MEAN	1.6	6.9	2.1	2.4	3.3	2.9	3.6	3.3	1.8	2.1	2.0	2.9	2.8	2.9	
		C.D. (5%)	0.8	1.4	0.4	0.6	1.0	0.7	0.8	0.7	0.6	0.5	0.7	0.6	0.3	0.4	
		C.D. (1%)	1.1	2.0	0.5	0.9	1.3	0.9	1.0	1.0	0.8	0.7	0.9	0.8	0.5	0.6	
		C.V. (%)	28.6	12.2	9.7	15.7	20.1	13.7	12.3	9.3	19.6	14.6	14.9	11.1	7.3	16.7	
		F (Prob)	0.000	0.000	0.000	0.000	0.808	0.000	0.000	0.435	0.000	0.000	0.569	0.000	0.000	0.120	

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Table I.96: ADVANCE HYBRID TRIAL (Medium) KHARIF - 2024 PANICLE LENGTH (cm) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	NPD	DHL	PCR	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	AHT 401 B	AHB 1200 (Check)	22	22	26	28	24	27	22	25	24	26	25	22	28	25	6
2	AHT 402 B	MH 2682	23	23	25	27	25	29	25	27	24	30	27	23	24	25	5
3	AHT 403 B	AHB 1269 (Check)	20	24	24	23	23	24	20	22	24	25	25	20	22	23	10
4	AHT 404 B	MH 2767	26	22	27	29	26	27	25	26	25	29	27	22	25	26	3
5	AHT 405 B	MH 2773	25	22	26	26	25	26	23	24	25	23	24	24	23	24	8
6	AHT 406 B	MH 2775	25	24	27	30	27	31	25	28	27	31	29	22	27	27	1
7	AHT 407 B	86M01 (Check)	25	22	27	29	26	26	22	24	25	28	27	24	27	26	4
8	AHT 408 B	MH 2777	23	25	30	25	26	29	24	27	26	29	28	23	26	26	2
9	AHT 409 B	MH 2784	22	22	29	26	25	25	21	23	27	26	27	24	25	25	7
10	AHT 410 B	Pratap (Check)	18	25	23	23	22	23	21	22	25	27	26	18	26	23	9
		LOC. MEAN	23	23	27	27	25	27	23	25	25	27	26	22	26	25	
		C.D. (5%)	1.0	3.0	2.0	6.0	3.0	2.0	2.0	2.0	3.0	2.0	4.0	2.0	3.0	1.0	
		C.D. (1%)	2.0	5.0	3.0	8.0	4.0	2.0	3.0	3.0	4.0	3.0	5.0	3.0	4.0	2.0	
		C.V. (%)	3.6	8.7	4.0	13.4	7.6	4.0	4.8	3.6	6.2	4.8	6.4	6.2	5.8	6.6	
		F (Prob)	0.000	0.000	0.000	0.000	0.049	0.000	0.000	0.001	0.000	0.000	0.236	0.000	0.000	0.000	

Table I.97: ADVANCE HYBRID TRIAL (Medium) KHARIF - 2024 PANICLE DIAMETER (cm) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	DHL	PCR	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	AHT 401 B	AHB 1200 (Check)	3.1	3.5	3.5	3.4	3.1	2.4	2.8	3.1	2.8	2.9	3.8	3.2	3.2	2
2	AHT 402 B	MH 2682	3.1	3.6	3.7	3.5	3.0	2.0	2.5	3.4	2.1	2.8	3.0	3.3	3.0	3
3	AHT 403 B	AHB 1269 (Check)	2.7	3.5	3.7	3.3	2.7	2.6	2.7	3.3	2.4	2.9	2.8	3.1	3.0	4
4	AHT 404 B	MH 2767	2.8	3.3	3.7	3.3	2.9	2.3	2.6	3.0	2.1	2.6	2.9	3.4	2.9	8
5	AHT 405 B	MH 2773	3.2	3.5	3.6	3.4	2.7	2.5	2.6	3.3	1.6	2.5	3.6	2.9	3.0	6
6	AHT 406 B	MH 2775	2.6	3.3	3.5	3.2	3.1	2.3	2.7	3.0	1.9	2.5	3.8	3.4	3.0	5
7	AHT 407 B	86M01 (Check)	3.1	3.4	3.6	3.4	2.8	2.4	2.6	3.2	1.9	2.6	2.6	3.3	2.9	8
8	AHT 408 B	MH 2777	3.2	3.8	3.7	3.6	3.0	2.7	2.9	3.3	2.7	3	3.8	3.4	3.3	1
9	AHT 409 B	MH 2784	3.1	3.6	3.6	3.4	3.0	2.5	2.8	3.0	2.3	2.7	2.3	3.2	3.0	7
10	AHT 410 B	Pratap (Check)	2.8	3.4	3.3	3.2	2.5	2.4	2.5	2.8	2.1	2.5	2.3	3.2	2.8	9
		LOC. MEAN	3.0	3.5	3.6	3.4	2.9	2.4	2.6	3.1	2.2	2.7	3.1	3.2	3.0	
		C.D. (5%)	0.1	0.2	0.4	0.3	0.3	0.6	0.3	0.5	0.3	0.4	0.3	0.3	0.3	
		C.D. (1%)	0.2	0.2	0.6	0.4	0.4	0.8	0.4	0.7	0.3	0.5	0.4	0.5	0.4	
		C.V. (%)	2.7	2.8	6.8	3.6	5.7	13.9	4.2	9.9	6.7	6.1	5.1	6.2	9.0	
		F (Prob)	0.000	0.000	0.000	0.028	0.000	0.000	0.150	0.000	0.000	0.280	0.000	0.000	0.008	

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Table I.98: ADVANCE HYBRID TRIAL (Medium) KHARIF - 2024 1000 SEED Wt.(g) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	DHL	PCR	MS MEAN	VYP	MLR	KS MEAN	VZN	CBE	ZONE MEAN	RANK
1	AHT 401 B	AHB 1200 (Check)	11.7	9.1	10.2	10.4	13.2	12.3	12.8	9.9	11.0	11.1	2
2	AHT 402 B	MH 2682	10.4	9.2	11.2	10.3	11.6	12.6	12.1	9.3	12.8	11.0	3
3	AHT 403 B	AHB 1269 (Check)	10.4	8.2	10.8	9.8	11.6	12.5	12.0	8.5	13.1	10.7	6
4	AHT 404 B	MH 2767	11.2	7.9	9.3	9.5	10.6	12.5	11.5	7.1	11.2	10.0	9
5	AHT 405 B	MH 2773	10.4	10.0	10.2	10.2	10.8	11.9	11.4	6.1	10.7	10.0	8
6	AHT 406 B	MH 2775	10.5	7.7	10.8	9.7	11.4	12.1	11.7	7.2	7.1	9.5	10
7	AHT 407 B	86M01 (Check)	11.6	7.7	11.4	10.2	12.0	12.5	12.3	7.2	12.9	10.7	5
8	AHT 408 B	MH 2777	13.4	9.3	13.4	12.0	12.3	12.8	12.6	5.7	12.5	11.3	1
9	AHT 409 B	MH 2784	10.3	9.8	10.8	10.3	12.6	12.3	12.5	7.4	13.0	10.9	4
10	AHT 410 B	Pratap (Check)	11.7	9.5	10.2	10.5	11.2	12.5	11.8	5.6	10.8	10.2	7
		LOC. MEAN	11.2	8.9	10.8	10.3	11.7	12.4	12.1	7.4	11.5	10.6	
		C.D. (5%)	0.5	0.5	1.7	2.1	0.3	0.9	1.7	0.7	1.4	1.0	
		C.D. (1%)	0.7	0.7	2.4	3.0	0.4	1.2	2.4	1.0	1.9	1.3	
		C.V. (%)	2.5	3.5	9.3	9.3	1.5	4.3	6.5	5.7	7.0	6.8	
		F (Prob)	0.000	0.000	0.000	0.488	0.000	0.000	0.104	0.000	0.000	0.018	

Table I.99: ADVANCE HYBRID TRIAL (Medium) KHARIF - 2024 POPULATION AT HARVEST(No./plot) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	DHL	PCR	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	AHT 401 B	AHB 1200 (Check)	152	140	47	113	144	157	151	120	129	124	153	125	130	5
2	AHT 402 B	MH 2682	153	113	53	106	143	136	140	125	132	129	128	122	123	10
3	AHT 403 B	AHB 1269 (Check)	151	148	56	118	143	153	148	146	132	139	155	118	133	1
4	AHT 404 B	MH 2767	153	134	48	112	143	158	151	142	132	137	156	129	133	2
5	AHT 405 B	MH 2773	155	129	54	113	144	155	150	148	131	139	154	105	131	4
6	AHT 406 B	MH 2775	154	139	58	117	146	147	147	114	132	123	151	123	129	7
7	AHT 407 B	86M01 (Check)	155	120	53	109	145	148	147	126	130	128	148	113	126	9
8	AHT 408 B	MH 2777	151	144	53	116	146	157	152	120	131	126	154	124	131	3
9	AHT 409 B	MH 2784	152	144	54	117	145	153	149	109	133	121	157	119	130	6
10	AHT 410 B	Pratap (Check)	153	141	54	116	143	145	144	110	130	120	155	121	128	8
		LOC. MEAN	153	135	53	114	144	151	148	126	131	129	151	120	129	
		C.D. (5%)	2.0	25.0	9.0	20.0	3.0	16.0	5.0	14.0	4.0	22.0	12.0	14.0	7.0	
		C.D. (1%)	3.0	35.0	13.0	29.0	4.0	22.0	8.0	19.0	6.0	32.0	16.0	20.0	10.0	
		C.V. (%)	0.8	10.9	10.2	6.1	1.2	6.1	2.4	6.4	2.0	7.1	4.5	7.0	5.6	
		F (Prob)	0.000	0.000	0.000	0.698	0.000	0.000	0.306	0.000	0.000	0.225	0.000	0.000	0.085	

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Table I.100: ADVANCE HYBRID TRIAL (Medium) KHARIF - 2024 SEED SET (%) UNDER BAG ZONE B

S.No.	TEST CODE	ENTRY	ABD1	DHL	PCR	MS MEAN	PLM	CBE	ZONE MEAN	RANK
1	AHT 401 B	AHB 1200 (Check)	98	83	87	89	97	84	90	2
2	AHT 402 B	MH 2682	97	92	72	87	87	91	88	5
3	AHT 403 B	AHB 1269 (Check)	97	94	67	86	95	89	89	3
4	AHT 404 B	MH 2767	92	95	67	85	89	84	86	9
5	AHT 405 B	MH 2773	96	88	55	80	96	89	85	10
6	AHT 406 B	MH 2775	97	80	93	90	95	90	91	1
7	AHT 407 B	86M01 (Check)	94	98	70	87	96	75	87	7
8	AHT 408 B	MH 2777	91	97	82	90	85	83	87	6
9	AHT 409 B	MH 2784	92	96	78	89	97	80	88	4
10	AHT 410 B	Pratap (Check)	91	91	70	84	88	89	86	8
		LOC. MEAN	95	91	74	87	93	86	88	
		C.D. (5%)	4.0	11.0	31.0	13.0	7.0	8.0	14.0	
		C.D. (1%)	5.0	15.0	42.0	19.0	10.0	11.0	19.0	
		C.V. (%)	2.4	7.0	24.1	6.1	4.5	5.4	9.5	
		F (Prob)	0.000	0.000	0.000	0.932	0.000	0.000	0.881	

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Table I.101: ADVANCE HYBRID TRIAL (Medium) KHARIF - 2024 ZONE B
GRAIN QUALITY: IRON CONTENT (ppm)

S.No.	TEST CODE	ENTRY	ABD1	DHL	PCR	VYP	PLM	CBE	ZONE MEAN	RANK
1	AHT 401 B	AHB 1200 (Check)	61	97	71	51	88	50	70	1
2	AHT 402 B	MH 2682	41	78	49	37	45	44	49	5
3	AHT 403 B	AHB 1269 (Check)	60	74	74	51	72	52	64	2
4	AHT 404 B	MH 2767	45	41	44	34	52	38	43	7
5	AHT 405 B	MH 2773	51	55	52	52	44	43	49	5
6	AHT 406 B	MH 2775	56	68	62	35	76	41	56	3
7	AHT 407 B	86M01 (Check)	47	54	54	40	55	41	48	6
8	AHT 408 B	MH 2777	56	67	51	38	58	38	51	4
9	AHT 409 B	MH 2784	51	53	56	38	58	34	48	6
10	AHT 410 B	Pratap (Check)	58	59	48	41	48	41	49	5

Table I.102: ADVANCE HYBRID TRIAL (Medium) KHARIF - 2024 ZONE B
GRAIN QUALITY: ZINC CONTENT (ppm)

S.No.	TEST CODE	ENTRY	ABD1	DHL	PCR	VYP	PLM	CBE	ZONE MEAN	RANK
1	AHT 401 B	AHB 1200 (Check)	42	40	39	35	22	39	36	2
2	AHT 402 B	MH 2682	36	37	33	31	19	40	33	4
3	AHT 403 B	AHB 1269 (Check)	37	40	45	40	27	45	39	1
4	AHT 404 B	MH 2767	34	29	31	33	24	41	32	5
5	AHT 405 B	MH 2773	39	29	33	32	20	42	32	5
6	AHT 406 B	MH 2775	32	31	33	30	29	40	33	4
7	AHT 407 B	86M01 (Check)	35	37	39	31	23	42	34	3
8	AHT 408 B	MH 2777	31	39	38	28	23	37	33	4
9	AHT 409 B	MH 2784	29	37	38	33	22	34	32	5
10	AHT 410 B	Pratap (Check)	45	41	42	33	20	39	36	2

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Table I.103: ADVANCE HYBRID TRIAL (Late) KHARIF 2024 EXPERIMENTAL DETAILS ZONE A

Locations	Soil	pH	Sowing date	Harvesting date	Interculture date	Irrigation date	Fertilizer			Insecticide
							N	P	K	
RAJASTHAN										
Jaipur (SKNAU)	SL	-	8.7.24	9.10.24	24.7.24	Nil	40	30	0	Nil
Jaipur (Seed works)	MSL	7.1	8.7.24	10.10.24	24.7.24	8.7, 15.8, 20.9.24	80	60	40	Chloropyriphos, Coragen,
Alwar(Corteva)	L	7.5	8.7.24	16.10.24	12.8.24	Life Saving	90	60	30	Chloropyriphos+Imidachlorpid
GUJARAT										
Jamnagar (JAU)	MB	7.6	18.7.24	19.10.24	28.7, 3.8, 9.8, 17.8.24	Nil	80	40	0	Nil
Dehgam (Kaveri Seeds)	SL	-	12.7.24	4.10.24	23.7, 14.8.24	12.7.24	128	92	0	Nil
UTTAR PRADESH										
Aligarh (Hytech)	SL	-	14.7.24	11.10.24	6.8, 23.8.24	14.7.24	65	30	15	Monocrotophos, Bavistin
Agra (Mahindra)	SL	-	12.7.24	12.10.24	14.8.24	Nil	85	60	50	Nil
Bichpuri (Kaveri Seeds)	SL	-	24.7.24	21.10.24	16.8.24	24.7.24	148	22.5	22.5	Nil
HARYANA										
Hisar (CCSHAU)	SL	-	11.7.24	25.10.24	-	28.8.24	100	40	0	Nil
MADHYA PRADESH										
Gwalior (RVSKVV)	SL	7.1	10.7.24	10.10.24	8.11.24	26.7.24	60	40	20	Nil
PUNJAB										
Ludhiana (PAU)	SL	-	10.7.24	15.11.24	31.7, 2.9.24	30.7, 31.8, 2.10.24	100	60	0	Nil

SL = Sandy Loam, MB = Medium Black, MSL = Medium Sandy Loam, L = Loam.

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Table I.104: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 GRAIN YIELD (kg/ha) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	ALW	RAJ MEAN	JMR	DEG1	GUJ MEAN	AGR2	ALR	BCR	UP MEAN	HSR	GLR	LDA	ZONE MEAN	RANK
1	AHT 501 A	MH 2709	2392	5956	2983	3777	3609	3496	3552	2959	3438	3514	3304	4379	3436	5037	3745	4
2	AHT 502 A	MH 2712	2225	6022	2582	3610	3097	3768	3433	1701	2228	4306	2745	3564	2614	4243	3305	10
3	AHT 503 A	MH 2717	2431	6642	3871	4314	3285	3669	3477	3505	3434	3231	3390	4437	2367	4764	3785	3
4	AHT 504 A	86M86 (Check)	2044	5450	2335	3276	2586	3463	3024	1790	2221	3469	2493	3216	1922	4941	3040	12
5	AHT 505 A	MH 2796	2092	6822	2967	3960	4150	3329	3740	1549	3616	3611	2925	4452	2328	5091	3637	5
6	AHT 506 A	86M84 (Check)	1892	6142	3140	3725	2868	3716	3292	2182	3146	3342	2890	4159	2769	4066	3402	9
7	AHT 507 A	MH 2797	2039	4419	3349	3269	2338	3597	2968	3793	3010	3683	3495	3968	3522	4127	3441	8
8	AHT 508 A	MH 2798	2603	6769	3550	4307	3692	3566	3629	3394	3593	4175	3721	3350	3088	4225	3819	2
9	AHT 509 A	KBH 108 (Check)	2164	4719	1519	2801	3155	3150	3153	1510	828	3711	2016	3631	1972	4394	2796	13
10	AHT 510 A	MH 2801	2083	4397	3957	3479	2537	3617	3077	2211	2602	3531	2781	3568	2863	3997	3215	11
11	AHT 511 A	MP 7878 (Check)	1869	5933	2751	3518	3264	3706	3485	2033	2909	3825	2922	4063	2608	4891	3441	7
12	AHT 512 A	MH 2806	2078	5564	3763	3801	3625	3916	3771	4103	3570	4986	4220	3828	2608	4986	3912	1
13	AHT 513 A	AHB 1200 (Check)	1028	3636	1657	2107	1616	2003	1809	1509	1851	2003	1788	1882	1803	4914	2173	14
14	AHT 514 A	MH 2808	2328	5372	2729	3476	4012	3391	3701	2636	3928	4508	3691	3265	1998	4072	3476	6
		LOC. MEAN	2090	5560	2939	3530	3131	3456	3294	2491	2884	3707	3027	3697	2564	4554	3370	
		C.D. (5%)	589	829	928	961	568	514	936	431	200	792	994	565	293	410	457	
		C.D. (1%)	796	1121	1255	1299	767	695	1304	583	271	1071	1343	764	396	554	604	
		C.V. (%)	16.8	8.9	18.8	16.2	10.8	8.9	13.2	10.3	4.1	12.7	19.6	9.1	6.8	5.4	16.1	
		F (Prob)	0.000	0.000	0.000	0.008	0.000	0.000	0.042	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	
		PLOT SIZE (m ²)	12.00	12.00	12.00	-	14.40	12.00	-	12.00	12.00	12.00	-	12.00	12.00	12.00	-	

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Table I.105: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 DRY FODDER YIELD (kg/ha) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	ALW	RAJ MEAN	JMR	DEG1	GUJ MEAN	AGR2	ALR	BCR	UP MEAN	HSR	GLR	LDA	ZONE MEAN	RANK
1	AHT 501 A	MH 2709	5111	7533	8331	6992	5308	13411	9359	10514	17028	11586	13043	14278	7333	15053	10499	10
2	AHT 502 A	MH 2712	6611	9619	9917	8716	5840	13439	9640	7826	10989	15792	11536	15306	9056	13392	10708	9
3	AHT 503 A	MH 2717	5139	9097	12169	8802	5657	12956	9306	10286	16456	17242	14661	16111	9611	13844	11688	3
4	AHT 504 A	86M86 (Check)	4000	6656	8617	6424	5366	12011	8688	9733	15078	7831	10880	12594	8667	15767	9665	12
5	AHT 505 A	MH 2796	4139	8347	9822	7436	7648	11561	9605	9919	15750	15972	13881	16944	8333	17500	11449	4
6	AHT 506 A	86M84 (Check)	4722	10031	13058	9270	5361	12611	8986	7246	14100	13425	11590	14722	5944	14061	10480	11
7	AHT 507 A	MH 2797	4194	7242	11106	7514	4924	12386	8655	15144	14661	13956	14587	14278	6167	16119	10925	7
8	AHT 508 A	MH 2798	5472	8133	9992	7866	6472	14544	10508	14586	14089	14753	14476	14778	8722	14236	11434	5
9	AHT 509 A	KBH 108 (Check)	6250	8389	8439	7693	5463	13089	9276	9776	10100	9553	9810	12944	6944	15167	9647	13
10	AHT 510 A	MH 2801	5972	8925	15150	10016	5037	16742	10889	11093	19328	15647	15356	13722	6556	14733	12082	1
11	AHT 511 A	MP 7878 (Check)	5500	8950	9583	8011	6560	16497	11529	12306	15611	14058	13992	14722	8667	16642	11736	2
12	AHT 512 A	MH 2806	6444	7328	9239	7670	5211	11906	8558	13244	15167	13414	13942	14278	8444	16206	10989	6
13	AHT 513 A	AHB 1200 (Check)	2694	4803	3742	3746	2833	9203	6018	9669	7294	7719	8228	7133	9111	17125	7393	14
14	AHT 514 A	MH 2808	6028	10328	9353	8569	7252	12525	9889	10319	18839	12239	13799	10278	9333	12894	10853	8
		LOC. MEAN	5163	8241	9894	7766	5638	13063	9350	10833	14606	13085	12841	13721	8063	15196	10682	
		C.D. (5%)	1054	601	2262	2255	1023	2218	2837	3444	1280	1966	4045	2370	909	2981	1562	
		C.D. (1%)	1425	813	3058	3048	1383	2998	3956	4655	1730	2657	5468	3204	1228	4030	2064	
		C.V. (%)	12.2	4.4	13.6	17.3	10.8	10.1	14.1	18.9	5.2	9.0	18.8	10.3	6.7	11.7	17.3	
		F (Prob)	0.000	0.000	0.000	0.002	0.000	0.000	0.124	0.000	0.000	0.000	0.035	0.000	0.000	0.000	0.000	
		PLOT SIZE (m ²)	12.00	12.00	12.00	-	14.40	12.00	-	12.00	12.00	12.00	-	12.00	12.00	12.00	-	

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Table I.106: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 DAYS TO 50% FLOWERING ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	ALW	RAJ MEAN	JMR	DEG1	GUJ MEAN	AGR2	ALR	BCR	UP MEAN	HSR	GLR	LDA	ZONE MEAN	RANK
1	AHT 501 A	MH 2709	51	54	57	54	51	52	51	54	54	52	53	59	51	54	54	13
2	AHT 502 A	MH 2712	56	58	62	59	53	58	56	57	59	58	58	62	57	55	58	3
3	AHT 503 A	MH 2717	52	54	58	55	52	54	53	54	54	53	54	58	50	54	54	12
4	AHT 504 A	86M86 (Check)	53	56	57	55	53	57	55	56	57	56	57	62	52	56	56	8
5	AHT 505 A	MH 2796	52	58	58	56	51	57	54	56	56	55	55	59	52	55	55	10
6	AHT 506 A	86M84 (Check)	55	59	60	58	53	56	55	57	57	56	57	60	56	58	57	6
7	AHT 507 A	MH 2797	56	59	59	58	53	58	56	58	58	55	57	62	54	60	57	4
8	AHT 508 A	MH 2798	55	55	58	56	52	54	53	55	56	54	55	61	56	58	56	9
9	AHT 509 A	KBH 108 (Check)	50	60	63	57	54	58	56	58	61	58	59	62	56	52	57	5
10	AHT 510 A	MH 2801	54	60	60	58	55	59	57	58	60	58	59	65	58	59	59	2
11	AHT 511 A	MP 7878 (Check)	55	57	58	57	54	56	55	58	58	56	57	60	55	50	56	7
12	AHT 512 A	MH 2806	53	57	58	56	52	55	54	55	55	53	54	59	55	51	55	11
13	AHT 513 A	AHB 1200 (Check)	54	47	51	51	48	51	50	50	49	50	50	54	51	55	51	14
14	AHT 514 A	MH 2808	53	62	61	59	56	59	58	59	62	59	60	65	57	60	59	1
		LOC. MEAN	53	57	59	56	53	56	54	56	57	55	56	61	54	56	56	
		C.D. (5%)	2.0	1.0	1.0	4.0	1.0	2.0	2.0	1.0	2.0	1.0	1.0	2.0	2.0	2.0	1.0	
		C.D. (1%)	2.0	2.0	2.0	5.0	1.0	3.0	3.0	2.0	3.0	1.0	2.0	3.0	2.0	2.0	2.0	
		C.V. (%)	1.9	1.2	1.4	3.9	1.2	2.3	1.8	1.3	2.2	0.9	1.4	1.9	2.0	1.9	3.0	
		F (Prob)	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.107: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 DAYS TO MATURITY ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	ALW	RAJ MEAN	JMR	DEG1	GUJ MEAN	AGR2	ALR	BCR	UP MEAN	HSR	GLR	LDA	ZONE MEAN	RANK
1	AHT 501 A	MH 2709	80	84	86	83	80	78	79	84	83	84	84	91	86	97	85	13
2	AHT 502 A	MH 2712	85	89	90	88	81	86	84	85	86	87	86	93	85	99	88	5
3	AHT 503 A	MH 2717	82	85	88	85	80	80	80	82	83	85	84	90	79	103	85	12
4	AHT 504 A	86M86 (Check)	82	86	86	84	81	83	82	85	87	87	86	94	81	99	86	8
5	AHT 505 A	MH 2796	82	88	86	85	80	84	82	85	86	86	86	92	78	102	86	9
6	AHT 506 A	86M84 (Check)	85	88	90	88	83	82	83	85	87	86	86	94	82	99	87	7
7	AHT 507 A	MH 2797	86	88	87	87	82	85	84	87	88	87	87	92	85	103	88	4
8	AHT 508 A	MH 2798	80	85	85	83	81	79	80	85	87	86	86	92	87	101	86	10
9	AHT 509 A	KBH 108 (Check)	84	88	93	88	83	85	84	88	87	86	87	94	87	101	89	3
10	AHT 510 A	MH 2801	85	89	90	88	83	86	85	87	89	88	88	97	88	105	90	1
11	AHT 511 A	MP 7878 (Check)	87	88	85	87	83	82	83	87	87	88	87	92	84	98	87	6
12	AHT 512 A	MH 2806	82	88	86	85	81	82	82	83	84	85	84	91	83	97	86	11
13	AHT 513 A	AHB 1200 (Check)	83	81	80	81	77	76	77	76	83	83	81	86	78	102	82	14
14	AHT 514 A	MH 2808	80	91	90	87	85	87	86	89	89	88	89	97	84	105	90	2
		LOC. MEAN	83	87	87	86	82	83	82	85	86	86	86	92	83	101	87	
		C.D. (5%)	1.0	2.0	1.0	3.0	1.0	3.0	3.0	1.0	1.0	1.0	2.0	4.0	1.0	2.0	2.0	
		C.D. (1%)	1.0	2.0	1.0	5.0	1.0	5.0	5.0	2.0	1.0	1.0	3.0	5.0	1.0	2.0	2.0	
		C.V. (%)	0.6	1.1	0.7	2.4	0.8	2.5	1.9	1.0	0.7	0.7	1.5	2.3	0.8	1.0	2.2	
		F (Prob)	0.000	0.000	0.000	0.006	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.108: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 PLANT HEIGHT (cm) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	ALW	RAJ MEAN	JMR	DEG1	GUJ MEAN	AGR2	ALR	BCR	UP MEAN	HSR	GLR	LDA	ZONE MEAN	RANK
1	AHT 501 A	MH 2709	200	273	243	239	196	207	202	232	283	240	252	265	273	213	239	7
2	AHT 502 A	MH 2712	186	272	245	234	213	225	219	264	272	253	263	268	308	240	250	1
3	AHT 503 A	MH 2717	171	263	245	226	187	195	191	237	253	222	237	253	268	225	229	11
4	AHT 504 A	86M86 (Check)	177	252	227	218	191	200	195	218	252	230	233	246	261	200	223	12
5	AHT 505 A	MH 2796	219	268	238	242	199	198	199	232	262	230	241	265	266	225	237	9
6	AHT 506 A	86M84 (Check)	216	273	243	244	198	197	197	252	260	232	248	252	279	232	239	6
7	AHT 507 A	MH 2797	193	243	220	219	162	178	170	228	247	198	224	231	247	200	213	13
8	AHT 508 A	MH 2798	200	267	253	240	197	200	199	237	273	233	248	254	277	232	239	8
9	AHT 509 A	KBH 108 (Check)	188	273	240	234	213	227	220	249	270	243	254	269	287	237	245	3
10	AHT 510 A	MH 2801	220	265	243	243	191	213	202	238	257	245	246	264	286	234	241	5
11	AHT 511 A	MP 7878 (Check)	199	293	238	244	206	220	213	234	273	250	253	267	285	245	246	2
12	AHT 512 A	MH 2806	172	277	240	229	192	198	195	244	273	240	252	258	270	223	235	10
13	AHT 513 A	AHB 1200 (Check)	155	210	198	188	153	158	156	185	200	197	194	185	206	192	185	14
14	AHT 514 A	MH 2808	218	275	247	247	213	210	212	233	267	248	249	259	270	240	244	4
		LOC. MEAN	194	265	237	232	194	202	198	234	260	233	243	253	270	224	233	
		C.D. (5%)	9.0	10.0	18.0	19.0	10.0	14.0	11.0	6.0	19.0	11.0	15.0	13.0	6.0	12.0	8.0	
		C.D. (1%)	12.0	14.0	24.0	26.0	13.0	19.0	16.0	9.0	26.0	14.0	21.0	17.0	9.0	17.0	10.0	
		C.V. (%)	2.8	2.3	4.4	4.9	3.0	4.2	2.6	1.6	4.3	2.7	3.8	3.0	1.4	3.3	4.0	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.109: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 PRODUCTIVE TILLERS (No./Plant) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	ALW	RAJ MEAN	JMR	DEG1	GUJ MEAN	ALR	BCR	UP MEAN	HSR	GLR	LDA	ZONE MEAN	RANK
1	AHT 501 A	MH 2709	2.1	1.0	1.7	1.6	1.9	1.0	1.5	1.1	1.1	1.1	2.4	1.7	3.2	1.7	11
2	AHT 502 A	MH 2712	2.2	1.0	2.0	1.7	1.7	1.1	1.4	1.2	1.0	1.1	3.6	3.5	2.8	2.0	2
3	AHT 503 A	MH 2717	1.0	1.0	1.7	1.2	1.8	1.0	1.4	1.1	1.0	1.1	2.5	2.3	3.8	1.7	10
4	AHT 504 A	86M86 (Check)	1.1	1.0	2.0	1.4	1.7	1.1	1.4	1.1	1.2	1.2	3.1	2.2	2.3	1.7	13
5	AHT 505 A	MH 2796	2.5	1.0	1.7	1.8	2.1	1.0	1.6	1.1	1.0	1.1	2.6	2.0	3.6	1.9	3
6	AHT 506 A	86M84 (Check)	2.4	1.0	1.7	1.7	1.7	1.1	1.4	1.1	1.0	1.1	2.4	2.3	3.9	1.9	4
7	AHT 507 A	MH 2797	1.1	1.0	2.1	1.4	1.8	1.1	1.5	1.1	1.1	1.1	2.3	2.3	2.1	1.6	14
8	AHT 508 A	MH 2798	1.0	1.0	1.7	1.2	1.8	1.1	1.5	1.1	1.0	1.1	2.7	2.4	4.0	1.8	7
9	AHT 509 A	KBH 108 (Check)	2.6	1.0	1.7	1.8	2.1	1.0	1.6	1.1	1.1	1.1	2.6	2.0	2.5	1.8	8
10	AHT 510 A	MH 2801	2.5	1.7	2.2	2.1	1.9	1.2	1.6	1.6	1.1	1.3	3.1	2.3	2.9	2.0	1
11	AHT 511 A	MP 7878 (Check)	1.2	1.7	2.1	1.6	1.7	1.1	1.4	1.1	1.0	1.1	2.9	2.5	3.2	1.8	5
12	AHT 512 A	MH 2806	1.1	1.0	2.0	1.4	1.8	1.1	1.4	1.1	1.0	1.1	2.5	1.9	3.7	1.7	12
13	AHT 513 A	AHB 1200 (Check)	1.1	1.0	2.1	1.4	1.5	1.2	1.4	1.1	1.0	1.1	2.9	2.5	3.6	1.8	6
14	AHT 514 A	MH 2808	1.2	1.3	1.8	1.4	1.9	1.1	1.5	1.1	1.2	1.1	2.7	2.1	3.1	1.8	9
		LOC. MEAN	1.7	1.1	1.9	1.6	1.8	1.1	1.5	1.1	1.1	1.1	2.7	2.3	3.2	1.8	
		C.D. (5%)	0.4	0.5	0.7	0.7	0.3	0.2	0.3	0.3	0.1	0.3	0.6	0.5	0.7	0.3	
		C.D. (1%)	0.6	0.6	0.9	1.0	0.5	0.3	0.4	0.4	0.1	0.4	0.8	0.7	0.9	0.4	
		C.V. (%)	15.9	24.5	20.8	27.5	11.3	12.5	10.3	17.3	5.3	17.3	12.7	13.4	12.4	18.4	
		F (Prob)	0.000	0.000	0.000	0.426	0.000	0.000	0.867	0.000	0.000	0.000	0.000	0.000	0.000	0.038	

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Table I.110: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 PANICLE LENGTH (cm) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	ALW	RAJ MEAN	JMR	DEG1	GUJ MEAN	AGR2	ALR	BCR	UP MEAN	HSR	GLR	LDA	ZONE MEAN	RANK
1	AHT 501 A	MH 2709	23	25	27	25	27	24	25	28	28	31	29	29	27	26	27	5
2	AHT 502 A	MH 2712	23	31	30	28	27	26	27	31	30	33	31	29	28	34	29	1
3	AHT 503 A	MH 2717	22	27	26	25	25	21	23	27	29	30	29	29	26	23	26	7
4	AHT 504 A	86M86 (Check)	21	24	26	24	24	21	23	27	27	28	28	28	26	21	25	12
5	AHT 505 A	MH 2796	26	25	24	25	24	22	23	26	27	26	26	29	24	25	25	11
6	AHT 506 A	86M84 (Check)	32	27	28	29	26	24	25	28	30	31	30	29	30	29	29	2
7	AHT 507 A	MH 2797	23	23	24	23	23	21	22	26	26	27	26	27	25	27	25	13
8	AHT 508 A	MH 2798	23	24	28	25	24	23	24	27	30	30	29	28	26	27	26	6
9	AHT 509 A	KBH 108 (Check)	25	25	25	25	25	23	24	28	27	28	28	29	25	25	26	8
10	AHT 510 A	MH 2801	21	26	27	25	24	22	23	28	26	26	27	29	26	28	26	10
11	AHT 511 A	MP 7878 (Check)	20	25	27	24	24	24	24	28	26	28	27	30	25	28	26	9
12	AHT 512 A	MH 2806	23	25	27	25	27	24	26	28	29	31	29	28	26	29	27	4
13	AHT 513 A	AHB 1200 (Check)	20	23	23	22	21	23	22	28	26	25	26	27	24	27	24	14
14	AHT 514 A	MH 2808	31	26	27	28	25	23	24	29	29	29	29	29	24	29	27	3
		LOC. MEAN	24	25	26	25	25	23	24	28	28	29	28	29	26	27	26	
		C.D. (5%)	2.0	1.0	2.0	4.0	2.0	2.0	2.0	1.0	3.0	1.0	2.0	2.0	1.0	2.0	1.0	
		C.D. (1%)	3.0	1.0	3.0	5.0	3.0	2.0	3.0	1.0	4.0	2.0	3.0	3.0	2.0	3.0	2.0	
		C.V. (%)	5.2	2.4	5.0	8.8	5.2	4.4	4.1	2.4	6.2	2.3	4.0	4.7	2.9	4.9	6.0	
		F (Prob)	0.000	0.000	0.000	0.040	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.111: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 PANICLE DIAMETER (cm) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	ALW	RAJ MEAN	JMR	DEG1	GUJ MEAN	ALR	BCR	UP MEAN	HSR	GLR	LDA	ZONE MEAN	RANK
1	AHT 501 A	MH 2709	2.5	3.1	3.1	2.9	2.8	3.0	2.9	3.5	3.0	3.3	3.9	2.5	3.3	3.1	14
2	AHT 502 A	MH 2712	2.8	3.3	3.2	3.1	2.9	3.1	3.0	3.6	3.1	3.4	4.0	2.6	3.8	3.2	12
3	AHT 503 A	MH 2717	2.6	3.5	3.5	3.2	3.2	3.2	3.2	3.9	3.5	3.7	4.2	2.6	3.7	3.4	9
4	AHT 504 A	86M86 (Check)	2.7	3.4	3.5	3.2	3.2	3.3	3.2	3.8	3.4	3.6	4.1	2.6	3.2	3.3	11
5	AHT 505 A	MH 2796	3.5	3.5	3.6	3.6	3.3	3.5	3.4	4.2	3.6	3.9	4.1	2.5	4.2	3.6	1
6	AHT 506 A	86M84 (Check)	3.5	3.3	3.4	3.4	3.1	3.2	3.2	3.8	3.3	3.6	3.8	2.6	3.7	3.4	8
7	AHT 507 A	MH 2797	2.5	3.3	3.4	3.1	2.8	3.1	3.0	3.7	3.0	3.4	4.0	2.5	3.9	3.2	13
8	AHT 508 A	MH 2798	2.9	3.2	3.6	3.3	3.3	3.3	3.3	4.1	3.4	3.8	4.3	2.5	4.1	3.5	3
9	AHT 509 A	KBH 108 (Check)	3.2	3.4	3.4	3.3	3.5	3.3	3.4	4.0	3.5	3.8	4.1	2.5	3.6	3.5	6
10	AHT 510 A	MH 2801	3.5	3.4	3.4	3.5	3.1	3.2	3.2	3.8	3.4	3.6	4.3	2.6	4.1	3.5	4
11	AHT 511 A	MP 7878 (Check)	2.9	3.5	3.4	3.3	3.2	3.4	3.3	3.8	3.5	3.7	4.0	2.5	3.8	3.4	7
12	AHT 512 A	MH 2806	3.1	3.3	3.5	3.3	3.2	3.1	3.2	3.9	3.3	3.6	4.0	2.5	3.8	3.4	10
13	AHT 513 A	AHB 1200 (Check)	3.0	3.4	3.7	3.3	3.1	3.3	3.2	3.8	3.7	3.7	4.1	3.4	3.6	3.5	2
14	AHT 514 A	MH 2808	4.2	3.3	3.4	3.6	3.2	3.2	3.2	3.8	3.3	3.6	3.9	2.6	3.7	3.5	5
		LOC. MEAN	3.1	3.4	3.4	3.3	3.1	3.2	3.2	3.8	3.4	3.6	4.1	2.6	3.8	3.4	
		C.D. (5%)	0.1	0.3	0.3	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.5	0.2	
		C.D. (1%)	0.2	0.4	0.4	0.6	0.4	0.2	0.3	0.3	0.3	0.3	0.6	0.2	0.7	0.2	
		C.V. (%)	2.8	4.9	4.8	8.7	5.7	2.8	3.0	3.7	3.3	3.7	6.3	4.0	7.8	5.9	
		F (Prob)	0.000	0.000	0.000	0.236	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.112: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 1000-SEED Wt.(g) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	ALW	RAJ MEAN	JMR	DEG1	GUJ MEAN	BCR	HSR	GLR	LDA	ZONE MEAN	RANK
1	AHT 501 A	MH 2709	11.4	12.4	8.2	10.6	11.8	11.9	11.8	9.9	13.2	10.3	12.0	11.2	7
2	AHT 502 A	MH 2712	8.5	11.8	7.4	9.2	10.0	9.1	9.5	8.6	10.3	15.5	11.9	10.4	14
3	AHT 503 A	MH 2717	7.7	12.4	8.5	9.5	10.3	9.9	10.1	9.9	10.5	19.7	10.9	11.1	8
4	AHT 504 A	86M86 (Check)	8.4	11.7	8.4	9.5	11.0	10.6	10.8	10.5	12.4	10.7	12.2	10.6	12
5	AHT 505 A	MH 2796	7.9	12.3	8.1	9.4	11.9	12.9	12.4	10.6	12.9	18.2	12.8	11.9	3
6	AHT 506 A	86M84 (Check)	7.8	10.8	9.0	9.2	11.4	9.4	10.4	10.3	11.9	13.5	11.6	10.6	13
7	AHT 507 A	MH 2797	7.0	11.5	9.4	9.3	10.4	11.2	10.8	10.0	12.9	13.5	10.9	10.8	11
8	AHT 508 A	MH 2798	9.4	13.5	10.9	11.3	12.4	15.0	13.7	10.2	13.0	13.8	10.0	12.0	2
9	AHT 509 A	KBH 108 (Check)	9.3	12.3	7.9	9.8	11.1	11.4	11.3	9.1	11.5	13.5	12.7	11.0	9
10	AHT 510 A	MH 2801	8.9	13.5	10.0	10.8	12.2	11.0	11.6	8.9	12.4	18.7	10.9	11.8	5
11	AHT 511 A	MP 7878 (Check)	7.2	13.1	8.5	9.6	11.9	12.0	12.0	11.4	12.9	17.3	12.9	11.9	4
12	AHT 512 A	MH 2806	7.5	11.5	9.1	9.4	11.8	13.3	12.6	10.8	13.3	13.6	14.7	11.7	6
13	AHT 513 A	AHB 1200 (Check)	7.5	12.6	9.6	9.9	11.0	11.3	11.1	8.7	13.6	11.7	11.9	10.9	10
14	AHT 514 A	MH 2808	11.0	12.9	10.4	11.4	13.2	12.3	12.8	10.9	12.4	18.2	12.8	12.7	1
		LOC. MEAN	8.5	12.3	9.0	9.9	11.4	11.5	11.5	10.0	12.4	14.9	12.0	11.3	
		C.D. (5%)	0.8	0.6	1.7	1.5	0.8	1.4	1.8	1.1	1.2	1.1	0.8	0.9	
		C.D. (1%)	1.1	0.9	2.2	2.1	1.0	1.8	2.5	1.5	1.7	1.5	1.1	1.3	
		C.V. (%)	5.6	3.1	11.1	9.2	4.0	7.0	7.2	6.7	5.9	4.5	3.9	8.3	
		F (Prob)	0.000	0.000	0.000	0.050	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	

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Table I.113: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 POPULATION AT HARVEST(No./plot) ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	ALW	RAJ MEAN	JMR	DEG1	GUJ MEAN	AGR2	ALR	BCR	UP MEAN	HSR	GLR	LDA	ZONE MEAN	RANK
1	AHT 501 A	MH 2709	182	171	160	171	181	150	165	137	159	161	152	96	108	163	152	2
2	AHT 502 A	MH 2712	171	160	140	157	177	158	168	129	160	146	145	89	131	163	148	4
3	AHT 503 A	MH 2717	94	171	165	143	191	161	176	133	155	162	150	93	136	162	147	5
4	AHT 504 A	86M86 (Check)	83	168	122	125	155	156	155	128	153	90	124	93	96	163	128	14
5	AHT 505 A	MH 2796	134	172	142	149	197	154	175	128	160	157	148	97	109	163	147	7
6	AHT 506 A	86M84 (Check)	77	164	143	128	178	160	169	132	158	155	148	93	120	164	140	11
7	AHT 507 A	MH 2797	128	170	153	150	198	155	177	133	160	167	153	94	148	162	152	1
8	AHT 508 A	MH 2798	131	177	148	152	178	156	167	134	159	163	152	91	103	163	146	9
9	AHT 509 A	KBH 108 (Check)	108	166	134	136	182	149	165	123	165	152	147	90	92	163	139	12
10	AHT 510 A	MH 2801	179	162	134	158	160	152	156	136	166	158	153	88	115	165	147	6
11	AHT 511 A	MP 7878 (Check)	159	160	143	154	180	154	167	123	162	155	147	93	111	163	146	8
12	AHT 512 A	MH 2806	150	169	155	158	203	158	181	132	160	159	150	97	105	163	150	3
13	AHT 513 A	AHB 1200 (Check)	117	171	130	139	188	146	167	114	160	156	143	94	132	164	143	10
14	AHT 514 A	MH 2808	129	175	135	146	172	153	163	130	160	112	134	91	100	163	138	13
		LOC. MEAN	132	168	143	148	181	154	168	129	160	150	146	93	115	163	144	
		C.D. (5%)	45.0	7.0	42.0	34.0	28.0	18.0	21.0	14.0	7.0	13.0	21.0	9.0	28.0	2.0	12.0	
		C.D. (1%)	61.0	10.0	57.0	47.0	39.0	24.0	29.0	19.0	10.0	18.0	28.0	12.0	38.0	3.0	15.0	
		C.V. (%)	20.3	2.5	17.4	13.9	9.4	6.8	5.8	6.6	2.7	5.3	8.5	5.5	14.8	0.9	9.5	
		F (Prob)	0.000	0.000	0.000	0.376	0.000	0.000	0.419	0.000	0.000	0.000	0.267	0.000	0.000	0.000	0.005	

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Table I.114: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 SEED SET (%) UNDER BAG ZONE A

S.No.	TEST CODE	ENTRY	JPR	JPR1	ALW	RAJ MEAN	JMR	DEG1	GUJ MEAN	ALR	BCR	UP MEAN	HSR	GLR	LDA	ZONE MEAN	RANK
1	AHT 501 A	MH 2709	92	97	90	93	70	97	83	73	77	75	92	100	80	87	8
2	AHT 502 A	MH 2712	93	93	73	87	71	90	81	63	68	66	95	100	72	82	12
3	AHT 503 A	MH 2717	95	100	93	96	74	98	86	83	80	82	96	97	73	89	4
4	AHT 504 A	86M86 (Check)	100	83	83	89	70	98	84	83	82	83	90	100	97	89	6
5	AHT 505 A	MH 2796	100	98	83	94	74	100	87	90	80	85	100	100	96	92	1
6	AHT 506 A	86M84 (Check)	98	97	93	96	62	98	80	90	80	85	92	100	77	89	5
7	AHT 507 A	MH 2797	97	80	80	86	50	83	67	87	22	54	93	100	70	76	13
8	AHT 508 A	MH 2798	62	100	100	87	68	100	84	90	78	84	93	100	67	86	10
9	AHT 509 A	KBH 108 (Check)	85	80	97	87	58	98	78	73	82	78	90	100	78	84	11
10	AHT 510 A	MH 2801	98	95	100	98	50	100	75	90	90	90	95	100	97	91	2
11	AHT 511 A	MP 7878 (Check)	97	93	87	92	66	98	82	73	87	80	93	100	98	89	3
12	AHT 512 A	MH 2806	78	93	90	87	69	97	83	90	83	87	92	100	77	87	7
13	AHT 513 A	AHB 1200 (Check)	87	35	73	65	29	78	53	-	73	73	78	83	68	67	14
14	AHT 514 A	MH 2808	98	95	83	92	60	100	80	90	82	86	92	87	77	86	9
		LOC. MEAN	91	89	88	89	62	95	79	83	76	79	92	98	80	85	
		C.D. (5%)	8.0	11.0	26.0	20.0	12.0	12.0	14.0	18.0	9.0	18.0	11.0	4.0	5.0	8.0	
		C.D. (1%)	10.0	15.0	35.0	27.0	16.0	17.0	19.0	24.0	12.0	24.0	15.0	6.0	6.0	11.0	
		C.V. (%)	4.9	7.4	17.7	13.3	11.1	7.7	8.1	12.6	6.8	12.6	7.1	2.7	3.5	9.8	
		F (Prob)	0.000	0.000	0.000	0.231	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.041	

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Table I.115: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 ZONE A
GRAIN QUALITY: IRON CONTENT (ppm)

S.No.	TEST CODE	ENTRY	JPR	ALW	JMR	ALR	BCR	HSR	GLR	LDA	ZONE MEAN	RANK
1	AHT 501 A	MH 2709	40	72	51	38	48	59	66	61	54	4
2	AHT 502 A	MH 2712	48	59	51	51	43	75	67	74	59	3
3	AHT 503 A	MH 2717	42	49	45	35	42	57	65	54	49	7
4	AHT 504 A	86M86 (Check)	51	67	64	48	52	59	74	69	61	2
5	AHT 505 A	MH 2796	42	58	54	45	47	53	76	48	53	5
6	AHT 506 A	86M84 (Check)	42	47	46	46	42	74	59	51	51	6
7	AHT 507 A	MH 2797	39	44	41	33	35	79	38	34	43	10
8	AHT 508 A	MH 2798	38	50	46	41	41	45	53	43	45	9
9	AHT 509 A	KBH 108 (Check)	49	49	41	41	33	70	47	37	46	8
10	AHT 510 A	MH 2801	41	74	61	53	54	57	68	63	59	3
11	AHT 511 A	MP 7878 (Check)	46	52	52	49	49	66	58	60	54	4
12	AHT 512 A	MH 2806	40	43	42	38	37	48	49	47	43	10
13	AHT 513 A	AHB 1200 (Check)	45	91	85	38	65	69	90	79	70	1
14	AHT 514 A	MH 2808	43	48	47	36	33	48	62	43	45	9

Table I.116: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 ZONE A
GRAIN QUALITY: ZINC CONTENT (ppm)

S.No.	TEST CODE	ENTRY	JPR	ALW	JMR	ALR	BCR	HSR	GLR	LDA	ZONE MEAN	RANK
1	AHT 501 A	MH 2709	40	47	42	20	35	50	39	37	39	3
2	AHT 502 A	MH 2712	49	43	42	22	34	56	43	39	41	1
3	AHT 503 A	MH 2717	40	32	40	25	36	51	35	38	37	5
4	AHT 504 A	86M86 (Check)	45	42	48	26	35	49	29	43	40	2
5	AHT 505 A	MH 2796	39	37	40	26	31	43	36	33	36	6
6	AHT 506 A	86M84 (Check)	39	31	41	19	31	52	36	39	36	6
7	AHT 507 A	MH 2797	35	33	37	21	30	54	32	32	34	8
8	AHT 508 A	MH 2798	34	41	39	24	35	44	37	37	36	6
9	AHT 509 A	KBH 108 (Check)	33	32	33	21	26	51	28	29	32	9
10	AHT 510 A	MH 2801	35	41	43	26	36	46	38	36	38	4
11	AHT 511 A	MP 7878 (Check)	42	40	41	27	38	60	41	38	41	1
12	AHT 512 A	MH 2806	33	28	35	24	29	42	32	29	32	9
13	AHT 513 A	AHB 1200 (Check)	37	45	51	20	38	54	40	42	41	1
14	AHT 514 A	MH 2808	38	35	36	24	28	43	37	37	35	7

Table I.117: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 ZONE A
GRAIN QUALITY (Protein and Fat)

S. No.	TEST CODE	ENTRY	Protein (%)	Fat (%)
			HSR	HSR
1	AHT 501 A	MH 2709	10.1	5.1
2	AHT 502 A	MH 2712	9.9	5.3
3	AHT 503 A	MH 2717	8.8	5.7
4	AHT 504 A	86M86 (Check)	9.5	5.9
5	AHT 505 A	MH 2796	9.8	5.6
6	AHT 506 A	86M84 (Check)	9.0	6.0
7	AHT 507 A	MH 2797	9.7	5.5
8	AHT 508 A	MH 2798	10.3	5.6
9	AHT 509 A	KBH 108 (Check)	10.2	5.0
10	AHT 510 A	MH 2801	9.8	5.0
11	AHT 511 A	MP 7878 (Check)	9.2	6.0
12	AHT 512 A	MH 2806	9.3	5.2
13	AHT 513 A	AHB 1200 (Check)	9.5	5.5
14	AHT 514 A	MH 2808	8.8	5.6

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Table I.118: ADVANCE HYBRID TRIAL (Late) KHARIF 2024 EXPERIMENTAL DETAILS ZONE B

Locations	Soil	pH	Sowing date	Harvesting date	Interculture date	Irrigation date	Fertilizers (kg/ha.)			Insecticide
							N	P	K	
MAHARASHTRA										
Aurangabad (NARP)	MB	7.5	12.7.24	11.11.24	Nil	Nil	60	30	30	Nil
Aurangabad (Ajeet Seed)	M	-	12.7.24	15.10.24	10.8.24	Nil	60	30	30	Nil
Aurangabad (Seed Works)	BCS	-	9.7.24	15.10.24	1.8.24	9.7, 21.7.24	80	40	40	Chloropyriphos
Niphad (MPKV)	-	-	10.7.24	-	-	Nil	-	-	-	-
Dhule (MPKV)	MB	8.6	4.7.24	15.10.24	28.7.24	Nil	60	30	0	Nil
KARNATAKA										
Vijayapur (UAS, Dharwad)	SB	8.7	6.7.24	26.10.24	17.8.24	Nil	50	25	0	Nil
ANDHRA PRADESH										
Ananthapuram (ANGRAU)	A	6.7	12.8.24	As Per Maturity	5.9.24	As Per Required	60	30	20	Nil
TAMIL NADU										
Coimbatore (TNAU)	CL	7.8	29.6.24	6.10.24	Nil	29.6, 17.7, 12.8, 3.6, 18.9, 01.10.24	80	40	40	Nil

SB = Shallow Black, MB = Medium Black, CL = Clay Loam, BCS = Black Cotton Soil., M = Medium, A = Alfisols.

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Table I.119: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 GRAIN YIELD (kg/ha) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	ABD3	ABD7	NPD	DHL	MS MEAN	VYP	APR***	CBE	ZONE MEAN	RANK
1	AHT 501 B	MH 2717	2939	3536	5315	2174	2799	3353	2689	2443	3160	3230	4
2	AHT 502 B	Kaveri Super Boss (Check)	2846	2053	4359	1733	2947	2788	3347	1936	3657	2992	5
3	AHT 503 B	MH 2795	2913	2203	4467	1642	3150	2875	2987	1969	2879	2892	6
4	AHT 504 B	86M86 (Check)	2499	1580	4252	1451	2765	2509	2585	1456	3169	2614	7
5	AHT 505 B	MH 2798	3225	3719	5021	1933	3150	3410	3250	1603	4323	3517	1
6	AHT 506 B	NBH 4903 (Check)	2445	3277	4794	1755	2933	3041	3653	1178	4636	3356	2
7	AHT 507 B	MH 2808	3272	3587	5088	1303	2907	3231	2896	1193	3892	3278	3
8	AHT 508 B	AHB 1200 (Check)	2936	2214	2684	1376	1447	2131	2425	1388	3208	2327	8
		LOC. MEAN	2884	2771	4498	1671	2762	2917	2979	1646	3616	3026	
		C.D. (5%)	262	460	945	356	618	615	279	214	590	502	
		C.D. (1%)	364	639	1312	494	858	830	388	297	818	671	
		C.V. (%)	5.2	9.5	12.0	12.2	12.8	16.3	5.4	7.4	9.3	15.4	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	
		PLOT SIZE (m ²)	12.00	12.00	8.00	12.00	11.10	-	12.00	12.00	12.00	-	

***TEST LOCATION REJECTED DUE TO LOW AVERAGE YIELD (1646 kg/ha), THAN THE STATE AVERAGE YIELD (1772 kg/ha) TAKEN OVER 10 YEARS

Table I.120: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 DRY FODDER YIELD (kg/ha) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	ABD3	ABD7	NPD	DHL	MS MEAN	VYP	APR	CBE	ZONE MEAN	RANK
1	AHT 501 B	MH 2717	6139	8840	14092	7125	6306	8500	5722	4649	6755	7454	4
2	AHT 502 B	Kaveri Super Boss (Check)	6972	7906	12821	6542	7327	8314	5972	3360	5760	7082	6
3	AHT 503 B	MH 2795	7417	10304	12126	6917	7147	8782	5333	3293	5027	7195	5
4	AHT 504 B	86M86 (Check)	4250	5529	10988	4792	5946	6301	5000	3141	7043	5836	7
5	AHT 505 B	MH 2798	7333	8091	12282	8875	7177	8752	5361	3606	7122	7481	3
6	AHT 506 B	NBH 4903 (Check)	6278	10650	15127	6417	8078	9310	5833	4244	5852	7810	2
7	AHT 507 B	MH 2808	6611	12923	16975	6972	4775	9651	5806	4035	5446	7943	1
8	AHT 508 B	AHB 1200 (Check)	7083	5004	7558	6389	3724	5952	4861	3722	5302	5455	8
		LOC. MEAN	6510	8656	12746	6753	6310	8195	5486	3756	6038	7032	
		C.D. (5%)	1462	1349	1035	1153	1590	2080	369	755	1127	1418	
		C.D. (1%)	2029	1872	1437	1600	2206	2806	513	1048	1564	1891	
		C.V. (%)	12.8	8.9	4.6	9.8	14.4	19.6	3.9	11.5	10.7	20.1	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.006	
		PLOT SIZE (m ²)	12.00	12.00	8.00	12.00	11.10	-	12.00	12.00	12.00	-	

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Table I.121: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 DAYS TO 50% FLOWERING ZONE B

S.No.	TEST CODE	ENTRY	ABD1	ABD3	ABD7	NPD	DHL	MS MEAN	VYP	APR	CBE	ZONE MEAN	RANK
1	AHT 501 B	MH 2717	52	54	52	59	53	54	50	54	46	53	7
2	AHT 502 B	Kaveri Super Boss (Check)	62	58	60	58	53	58	51	55	52	56	2
3	AHT 503 B	MH 2795	58	56	57	57	50	55	50	56	46	54	5
4	AHT 504 B	86M86 (Check)	58	58	58	56	54	57	50	57	47	55	3
5	AHT 505 B	MH 2798	56	56	54	57	51	55	51	52	51	53	6
6	AHT 506 B	NBH 4903 (Check)	59	57	58	56	52	56	51	52	51	54	4
7	AHT 507 B	MH 2808	62	60	62	56	51	58	51	56	52	56	1
8	AHT 508 B	AHB 1200 (Check)	49	50	49	53	49	50	47	53	46	49	8
		LOC. MEAN	57	56	56	56	52	55	50	54	49	54	
		C.D. (5%)	2.0	2.0	1.0	2.0	2.0	3.0	2.0	1.0	1.0	2.0	
		C.D. (1%)	2.0	3.0	1.0	3.0	3.0	4.0	3.0	1.0	1.0	3.0	
		C.V. (%)	1.6	2.1	1.0	1.8	2.5	3.7	2.1	1.0	1.2	3.8	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

Table I.122: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 DAYS TO MATURITY ZONE B

S.No.	TEST CODE	ENTRY	ABD1	ABD3	ABD7	NPD	DHL	MS MEAN	VYP	APR	CBE	ZONE MEAN	RANK
1	AHT 501 B	MH 2717	93	85	78	83	90	86	91	90	84	87	7
2	AHT 502 B	Kaveri Super Boss (Check)	100	90	86	84	90	90	92	92	90	90	2
3	AHT 503 B	MH 2795	96	86	82	83	87	87	90	91	84	87	5
4	AHT 504 B	86M86 (Check)	94	90	84	83	90	88	91	93	85	89	4
5	AHT 505 B	MH 2798	92	88	80	82	88	86	91	88	89	87	6
6	AHT 506 B	NBH 4903 (Check)	101	89	83	83	88	89	92	87	89	89	3
7	AHT 507 B	MH 2808	105	93	87	83	88	91	91	92	90	91	1
8	AHT 508 B	AHB 1200 (Check)	88	82	75	82	85	82	88	87	84	84	8
		LOC. MEAN	96	88	82	83	88	87	91	90	87	88	
		C.D. (5%)	1.0	2.0	2.0	1.0	2.0	3.0	2.0	1.0	1.0	2.0	
		C.D. (1%)	1.0	2.0	2.0	1.0	3.0	4.0	3.0	1.0	1.0	3.0	
		C.V. (%)	0.6	1.1	1.2	0.7	1.4	2.8	1.2	0.6	0.7	2.5	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.123: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 PLANT HEIGHT (cm) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	ABD3	ABD7	NPD	DHL	MS MEAN	VYP	APR	CBE	ZONE MEAN	RANK
1	AHT 501 B	MH 2717	162	221	217	163	225	198	172	126	202	186	6
2	AHT 502 B	Kaveri Super Boss (Check)	178	235	240	189	249	218	202	122	212	204	2
3	AHT 503 B	MH 2795	150	220	220	189	232	202	188	124	183	188	5
4	AHT 504 B	86M86 (Check)	152	204	217	181	224	195	189	126	189	185	7
5	AHT 505 B	MH 2798	150	220	233	178	230	202	194	124	211	193	4
6	AHT 506 B	NBH 4903 (Check)	168	238	237	178	223	209	203	126	211	198	3
7	AHT 507 B	MH 2808	187	237	253	173	248	220	210	123	212	205	1
8	AHT 508 B	AHB 1200 (Check)	115	183	187	169	204	172	174	120	164	164	8
		LOC. MEAN	158	220	225	177	230	202	191	124	198	190	
		C.D. (5%)	12.0	12.0	10.0	9.0	18.0	13.0	14.0	10.0	18.0	10.0	
		C.D. (1%)	17.0	16.0	14.0	13.0	26.0	17.0	20.0	14.0	25.0	13.0	
		C.V. (%)	4.5	3.0	2.6	2.9	4.6	4.8	4.2	4.6	5.2	5.2	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

Table I.124: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 PRODUCTIVE TILLERS (No./Plant) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	ABD3	ABD7	NPD	DHL	MS MEAN	VYP	APR	CBE	ZONE MEAN	RANK
1	AHT 501 B	MH 2717	1.0	1.4	2.0	6.0	2.1	2.5	3.3	1.3	2.6	2.5	6
2	AHT 502 B	Kaveri Super Boss (Check)	2.0	1.6	3.0	5.7	2.2	2.9	3.2	1.5	2.6	2.7	1
3	AHT 503 B	MH 2795	1.7	1.4	2.0	6.0	2.8	2.8	2.7	1.6	1.8	2.5	5
4	AHT 504 B	86M86 (Check)	2.0	1.7	2.0	6.7	2.2	2.9	3.1	1.5	2.6	2.7	2
5	AHT 505 B	MH 2798	1.0	1.3	1.7	5.0	2.7	2.3	2.9	1.7	2.6	2.4	7
6	AHT 506 B	NBH 4903 (Check)	1.3	1.8	1.7	5.0	1.9	2.3	3.0	1.4	2.4	2.3	8
7	AHT 507 B	MH 2808	1.3	1.6	1.7	6.3	2.1	2.6	3.1	1.7	3.0	2.6	3
8	AHT 508 B	AHB 1200 (Check)	2.0	1.4	2.0	6.0	1.8	2.6	3.0	1.5	2.6	2.5	4
		LOC. MEAN	1.5	1.5	2.0	5.8	2.2	2.6	3.0	1.5	2.5	2.5	
		C.D. (5%)	0.6	0.5	0.6	1.8	0.2	0.5	0.5	0.5	0.2	0.4	
		C.D. (1%)	0.9	0.7	0.9	2.5	0.3	0.7	0.6	0.7	0.3	0.5	
		C.V. (%)	24.0	18.0	17.7	17.7	5.8	15.0	8.6	20.2	4.5	13.8	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.164	0.000	0.000	0.000	0.193	

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Table I.125: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 PANICLE LENGTH (cm) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	ABD3	ABD7	NPD	DHL	MS MEAN	VYP	APR	CBE	ZONE MEAN	RANK
1	AHT 501 B	MH 2717	24	26	31	21	29	26	25	27	30	27	3
2	AHT 502 B	Kaveri Super Boss (Check)	23	28	32	21	29	27	29	26	28	27	2
3	AHT 503 B	MH 2795	22	25	27	22	27	24	27	27	27	25	8
4	AHT 504 B	86M86 (Check)	24	26	27	21	27	25	28	23	28	26	6
5	AHT 505 B	MH 2798	23	27	32	19	29	26	29	26	26	26	4
6	AHT 506 B	NBH 4903 (Check)	25	28	36	22	29	28	27	26	27	28	1
7	AHT 507 B	MH 2808	24	25	30	20	28	26	28	25	26	26	5
8	AHT 508 B	AHB 1200 (Check)	19	26	33	18	25	24	28	26	28	25	7
		LOC. MEAN	23	26	31	21	28	26	28	26	28	26	
		C.D. (5%)	1.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	2.0	
		C.D. (1%)	2.0	2.0	3.0	2.0	3.0	3.0	2.0	4.0	4.0	2.0	
		C.V. (%)	3.6	3.8	3.4	4.5	4.1	6.3	3.7	5.9	5.2	6.0	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.061	

Table I.126: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 PANICLE DIAMETER (cm) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	ABD3	ABD7	DHL	MS MEAN	VYP	APR	CBE	ZONE MEAN	RANK
1	AHT 501 B	MH 2717	3.2	3.8	3.6	3.7	3.6	2.8	2.5	3.1	3.2	6
2	AHT 502 B	Kaveri Super Boss (Check)	3.0	3.8	3.5	3.8	3.5	3.1	2.4	3.2	3.3	5
3	AHT 503 B	MH 2795	3.2	3.8	3.5	3.5	3.5	3.1	2.7	3.4	3.3	3
4	AHT 504 B	86M86 (Check)	3.2	3.7	3.4	3.4	3.4	2.8	2.6	3.3	3.2	7
5	AHT 505 B	MH 2798	3.2	4.0	3.7	3.6	3.6	3.1	2.6	3.4	3.3	2
6	AHT 506 B	NBH 4903 (Check)	2.8	3.9	3.9	3.7	3.6	3.1	2.5	3.1	3.3	4
7	AHT 507 B	MH 2808	2.9	3.7	3.5	3.5	3.4	2.9	2.5	3.2	3.2	8
8	AHT 508 B	AHB 1200 (Check)	3.1	3.9	4.1	3.6	3.7	2.9	2.7	3.6	3.4	1
		LOC. MEAN	3.1	3.8	3.6	3.6	3.5	3.0	2.6	3.3	3.3	
		C.D. (5%)	0.1	0.1	0.3	0.2	0.3	0.2	0.3	0.3	0.2	
		C.D. (1%)	0.2	0.2	0.4	0.3	0.4	0.3	0.5	0.4	0.2	
		C.V. (%)	2.6	2.1	4.5	3.8	4.8	4.8	7.4	4.9	4.3	
		F (Prob)	0.000	0.000	0.000	0.000	0.448	0.000	0.000	0.000	0.159	

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Table I.127: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 1000 SEED Wt.(g) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	ABD3	ABD7	DHL	MS MEAN	VYP	CBE	ZONE MEAN	RANK
1	AHT 501 B	MH 2717	9.9	10.0	13.3	9.7	10.7	11.8	12.2	11.1	4
2	AHT 502 B	Kaveri Super Boss (Check)	8.7	11.2	10.7	7.0	9.4	10.7	10.3	9.8	8
3	AHT 503 B	MH 2795	10.0	9.9	11.7	6.9	9.6	11.5	10.6	10.1	7
4	AHT 504 B	86M86 (Check)	11.2	10.4	11.7	10.2	10.8	10.7	10.7	10.8	6
5	AHT 505 B	MH 2798	13.5	11.8	14.7	9.4	12.4	10.2	13.6	12.2	1
6	AHT 506 B	NBH 4903 (Check)	8.6	11.3	12.0	8.0	10.0	11.9	15.3	11.2	3
7	AHT 507 B	MH 2808	10.5	11.7	14.0	9.0	11.3	11.6	12.9	11.6	2
8	AHT 508 B	AHB 1200 (Check)	11.7	10.2	11.0	9.4	10.6	12.4	11.9	11.1	5
		LOC. MEAN	10.5	10.8	12.4	8.7	10.6	11.3	12.2	11.0	
		C.D. (5%)	0.5	0.8	1.7	0.8	1.9	0.4	1.1	1.4	
		C.D. (1%)	0.7	1.1	2.3	1.1	2.6	0.5	1.5	1.9	
		C.V. (%)	2.6	4.3	7.8	5.2	9.5	1.9	5.2	10.1	
		F (Prob)	0.000	0.000	0.000	0.000	0.052	0.000	0.000	0.059	

Table I.128: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 POPULATION AT HARVEST(No./plot) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	ABD3	ABD7	DHL	MS MEAN	VYP	APR	CBE	ZONE MEAN	RANK
1	AHT 501 B	MH 2717	153	120	99	128	125	145	123	120	127	2
2	AHT 502 B	Kaveri Super Boss (Check)	154	110	99	103	117	146	119	115	121	6
3	AHT 503 B	MH 2795	155	118	100	118	123	144	126	112	125	4
4	AHT 504 B	86M86 (Check)	153	87	100	80	105	146	130	107	115	8
5	AHT 505 B	MH 2798	154	104	101	128	122	145	124	120	125	3
6	AHT 506 B	NBH 4903 (Check)	155	129	98	131	128	144	130	117	129	1
7	AHT 507 B	MH 2808	155	127	105	85	118	145	121	118	122	5
8	AHT 508 B	AHB 1200 (Check)	155	104	102	129	122	142	92	122	121	7
		LOC. MEAN	154	112	101	113	120	145	121	117	123	
		C.D. (5%)	2.0	12.0	3.0	14.0	14.0	3.0	12.0	11.0	13.0	
		C.D. (1%)	2.0	17.0	4.0	20.0	19.0	4.0	17.0	15.0	18.0	
		C.V. (%)	0.6	6.3	1.6	7.3	6.5	1.1	5.7	5.2	9.1	
		F (Prob)	0.000	0.000	0.000	0.000	0.379	0.000	0.000	0.000	0.408	

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Table I.129: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 SEED SET (%) UNDER BAG ZONE B

S.No.	TEST CODE	ENTRY	ABD1	ABD3	ABD7	DHL	MS MEAN	CBE	ZONE MEAN	RANK
1	AHT 501 B	MH 2717	97	83	77	93	88	82	86	4
2	AHT 502 B	Kaveri Super Boss (Check)	96	77	67	99	85	85	85	5
3	AHT 503 B	MH 2795	99	82	80	92	88	83	87	3
4	AHT 504 B	86M86 (Check)	94	83	70	94	85	80	84	6
5	AHT 505 B	MH 2798	94	88	87	97	92	71	87	2
6	AHT 506 B	NBH 4903 (Check)	97	78	70	94	85	72	82	7
7	AHT 507 B	MH 2808	99	88	80	96	91	85	90	1
8	AHT 508 B	AHB 1200 (Check)	97	37	50	91	69	40	63	8
		LOC. MEAN	97	77	73	95	85	75	83	
		C.D. (5%)	5.0	6.0	9.0	7.0	16.0	7.0	12.0	
		C.D. (1%)	6.0	9.0	13.0	10.0	22.0	10.0	17.0	
		C.V. (%)	2.7	4.7	7.4	4.3	11.0	5.3	10.0	
		F (Prob)	0.000	0.000	0.000	0.000	0.034	0.000	0.030	

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Table I.130: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 ZONE B
GRAIN QUALITY: IRON CONTENT (ppm)

S.No.	TEST CODE	ENTRY	ABD1	ABD3	ABD7	DHL	VYP	CBE	ZONE MEAN	RANK
1	AHT 501 B	MH 2717	43	51	42	56	29	43	44	7
2	AHT 502 B	Kaveri Super Boss (Check)	47	47	52	59	30	33	45	6
3	AHT 503 B	MH 2795	75	60	61	58	35	46	56	3
4	AHT 504 B	86M86 (Check)	75	73	63	65	39	47	60	2
5	AHT 505 B	MH 2798	50	48	47	49	29	39	44	7
6	AHT 506 B	NBH 4903 (Check)	70	51	44	62	30	37	49	4
7	AHT 507 B	MH 2808	59	57	46	47	33	41	47	5
8	AHT 508 B	AHB 1200 (Check)	83	64	79	122	50	42	73	1

Table I.131: ADVANCE HYBRID TRIAL (Late) KHARIF - 2024 ZONE B
GRAIN QUALITY: ZINC CONTENT (ppm)

S.No.	TEST CODE	ENTRY	ABD1	ABD3	ABD7	DHL	VYP	CBE	ZONE MEAN	RANK
1	AHT 501 B	MH 2717	34	36	37	34	30	41	35	5
2	AHT 502 B	Kaveri Super Boss (Check)	31	36	41	34	26	30	33	7
3	AHT 503 B	MH 2795	37	44	49	34	31	41	39	3
4	AHT 504 B	86M86 (Check)	37	52	49	36	32	40	41	1
5	AHT 505 B	MH 2798	40	45	40	32	31	39	38	4
6	AHT 506 B	NBH 4903 (Check)	37	49	43	40	30	38	40	2
7	AHT 507 B	MH 2808	26	49	35	31	30	30	34	6
8	AHT 508 B	AHB 1200 (Check)	47	47	45	39	34	34	41	1

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Table I.132: POPULATION TRIAL KHARIF 2024 EXPERIMENTAL DETAILS ZONE A

Locations	Soil	pH	Sowing date	Harvesting date	Interculture date	Irrigation date	Fertilizer			Insecticide
							N	P	K	
RAJASTHAN										
Mandor (ARS, AU Jodhpur)	SL	8.1	10.7.24	As Per Maturity	12.8.24	Nil	40	20	0	Nil
Bikaner (SKRAU)	S	8.0	9.7.24	25.10.24	10.8.24	25.9.24	40	20	0	Nil
Jaipur (SKNAU)	SL	-	8.7.24	9.10.24	24.7.24	Nil	40	30	0	Nil
GUJARAT										
Jamnagar (JAU)	MB	7.6	18.7.24	19.10.24	28.7, 3.8, 9.8, 17.8.24	Nil	80	40	0	Nil
UTTAR PRADESH										
Jhansi (RLBCAU)	R	8.0	4.7.24	26.10.24	15.8.24	25.8.24	80	40	40	Nil
HARYANA										
Hisar (CCSHAU)	SL	-	11.7.24	25.10.24	-	28.8.24	100	40	0	Nil
MADHYA PRADESH										
Gwalior (RVSKVV)	SL	7.1	11.7.24	12.10.24	7.8.24	25.7.24	60	40	20	Nil
Morena (RVSKVV)	SL	7.8	22.7.24	4.11.24	-	Nil	100	50	20	Nil
PUNJAB										
Ludhiana (PAU)	SL	-	10.7.24	15.11.24	31.7, 2.9.24	30.7, 31.8, 2.10.24	100	60	0	Nil
DELHI										
New Delhi (ICAR-IARI)	SL	7.8	2.7.24	15.10.24	-	Nil	60	40	40	Nil

MB = Medium Black, SL = Sandy Loam, S = Sandy, R = Red.

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Table I.133: POPULATION TRIAL KHARIF - 2024 GRAIN YIELD (kg/ha) ZONE A

S.No.	TEST CODE	ENTRY	MDR	BKR	JPR	RAJ MEAN	JMR	JNS***	HSR	GLR***	MRN***	LDA	NDL	ZONE MEAN	RANK
1	PT 601 A	MP 640	1448	1273	1767	1496	2102	356	3369	1942	2392	3859	2867	2384	3
2	PT 602 A	MP 641	2074	1516	1708	1766	2306	528	3662	1858	2438	3023	2102	2341	5
3	PT 603 A	MP 642	1048	833	1172	1018	1338	389	1525	1110	644	3520	1815	1607	16
4	PT 604 A	Dhanshakti (Check)	1388	775	1556	1240	1519	161	2090	966	1363	3840	1965	1876	14
5	PT 605 A	MP 637	1502	1481	1431	1471	2634	753	2873	1791	2065	3938	2124	2283	6
6	PT 606 A	MP 643	1045	1146	1744	1312	1157	617	1987	674	548	2622	1444	1592	17
7	PT 607 A	ICMV 221 (Check)	825	1331	1367	1174	1398	267	2386	870	923	2876	1915	1728	15
8	PT 608 A	MP 644	766	799	1694	1086	1032	411	2292	1011	1764	2869	1228	1526	19
9	PT 609 A	MP 645	858	741	1203	934	1199	450	1500	1874	1113	2896	2313	1530	18
10	PT 610 A	Pusa Comp. 383 (Check)	1648	1123	1781	1517	1935	397	3101	2662	2190	2855	2806	2178	9
11	PT 611 A	MP 646	1213	926	1308	1149	2079	303	1794	1780	1785	3655	3248	2032	13
12	PT 612 A	MP 647	1300	891	1736	1309	2569	394	2509	1997	1773	3770	3039	2259	7
13	PT 613 A	MP 648	1436	926	1625	1329	2356	269	2459	1892	2125	3673	3009	2212	8
14	PT 614 A	MP 649	1356	1817	2722	1965	2199	408	3613	1978	1523	2857	2791	2479	2
15	PT 615 A	Pusa Comp. 701 (Check)	1537	1991	2500	2009	2583	625	3345	1751	1959	3511	3019	2641	1
16	PT 616 A	MP 650	879	1597	1525	1334	2449	389	2471	1871	2390	3356	2517	2113	12
17	PT 617 A	JBV 2 (Check)	1725	1644	1708	1692	2491	325	3112	1808	1379	2711	3106	2357	4
18	PT 618 A	MP 651	1405	1354	2225	1661	1903	544	2450	1761	1335	2837	2830	2143	10
19	PT 619 A	Raj 171 (Check)	1019	1447	1975	1480	1944	322	3166	1023	1396	2882	2498	2133	11
		LOC. MEAN	1288	1243	1724	1418	1958	416	2616	1611	1637	3239	2454	2074	
		C.D. (5%)	215	149	539	459	438	106	505	182	291	122	468	413	
		C.D. (1%)	288	200	723	616	588	142	677	245	390	163	628	547	
		C.V. (%)	10.1	7.3	18.9	19.6	13.5	15.4	11.7	6.8	10.7	2.3	11.5	18.8	
		F (Prob)	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		PLOT SIZE (m ²)	14.40	14.40	12.00	-	14.40	12.00	12.00	12.00	12.00	12.00	18.00	-	

***TEST LOCATION REJECTED DUE TO LOW AVERAGE YIELD (416, 1611 & 1637 kg/ha), THAN THE STATE AVERAGE YIELD (2008 & 2166 kg/ha) TAKEN OVER 10 YEARS

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Table I.134: POPULATION TRIAL KHARIF - 2024 DRY FODDER YIELD (kg/ha) ZONE A

S.No.	TEST CODE	ENTRY	MDR	BKR	JPR	RAJ MEAN	JMR	JNS	HSR	GLR	MRN	MP MEAN	LDA	NDL	ZONE MEAN	RANK
1	PT 601 A	MP 640	6608	4954	5194	5585	5236	3778	9722	14306	6972	10639	10078	10456	7730	6
2	PT 602 A	MP 641	8076	5995	4139	6070	6213	5056	10556	12778	7722	10250	11272	9531	8134	3
3	PT 603 A	MP 642	4410	5810	3389	4536	3796	2139	5833	8194	8056	8125	9500	11961	6309	15
4	PT 604 A	Dhanshakti (Check)	8080	5394	3667	5713	4329	2194	5417	7778	5306	6542	10419	10174	6276	16
5	PT 605 A	MP 637	8267	4931	3694	5631	5949	2861	8333	7361	7889	7625	11833	13709	7483	7
6	PT 606 A	MP 643	1944	5787	3278	3670	2204	1250	8056	6389	5361	5875	8244	12653	5517	19
7	PT 607 A	ICMV 221 (Check)	7380	5602	6306	6429	4523	3583	6667	6250	6306	6278	8114	11872	6660	14
8	PT 608 A	MP 644	2188	5509	4083	3927	3454	3194	6667	6806	7472	7139	7967	13192	6053	18
9	PT 609 A	MP 645	3479	5810	3361	4217	2889	2889	6667	9306	6583	7944	8153	13157	6229	17
10	PT 610 A	Pusa Comp. 383 (Check)	6944	5532	3333	5270	4551	1389	10111	9722	6861	8292	9664	13419	7153	10
11	PT 611 A	MP 646	8924	5833	5333	6697	6343	6694	8889	12917	7833	10375	7678	11600	8204	2
12	PT 612 A	MP 647	5101	5231	5611	5314	5231	2083	7583	9444	7667	8556	10103	11656	6971	11
13	PT 613 A	MP 648	8972	5208	3556	5912	6130	2917	6944	7917	7250	7583	9278	10743	6891	12
14	PT 614 A	MP 649	7170	5625	5556	6117	5065	7083	10000	10417	6861	8639	10119	11947	7984	5
15	PT 615 A	Pusa Comp. 701 (Check)	9681	5787	4583	6684	6824	6500	9611	11528	7639	9583	9047	13398	8460	1
16	PT 616 A	MP 650	4868	5694	3222	4595	6097	5444	6222	10417	7556	8986	10519	14563	7460	8
17	PT 617 A	JBV 2 (Check)	8969	6435	5667	7024	6685	3750	10278	8333	6750	7542	9469	13521	7986	4
18	PT 618 A	MP 651	5375	5417	6611	5801	4880	5361	7417	11111	7056	9083	8294	11839	7336	9
19	PT 619 A	Raj 171 (Check)	5774	5509	5389	5557	5375	3583	7778	7639	6139	6889	9472	12076	6873	13
		LOC. MEAN	6432	5582	4525	5513	5041	3776	8039	9401	7015	8208	9433	12182	7143	
		C.D. (5%)	1166	762	1371	2360	1040	973	2605	2830	966	3157	923	1139	1200	
		C.D. (1%)	1564	1021	1838	3164	1394	1304	3493	3795	1295	4325	1237	1527	1584	
		C.V. (%)	11.0	8.2	18.3	25.9	12.5	15.6	19.6	18.2	8.3	18.3	5.9	5.7	19.0	
		F (Prob)	0.000	0.000	0.000	0.220	0.000	0.000	0.000	0.000	0.000	0.136	0.000	0.000	0.000	
		PLOT SIZE (m ²)	14.40	14.40	12.00	-	14.40	12.00	12.00	12.00	12.00	-	12.00	18.00	-	

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Table I.135: POPULATION TRIAL KHARIF - 2024 DAYS TO 50% FLOWERING ZONE A

S.No.	TEST CODE	ENTRY	MDR	BKR	JPR	RAJ MEAN	JMR	JNS	HSR	GLR	MRN	MP MEAN	LDA	NDL	ZONE MEAN	RANK
1	PT 601 A	MP 640	58	60	52	57	51	52	57	51	50	50	54	55	54	8
2	PT 602 A	MP 641	52	61	50	55	49	50	56	47	48	48	47	55	52	15
3	PT 603 A	MP 642	59	61	53	58	57	58	59	55	60	58	56	62	58	1
4	PT 604 A	Dhanshakti (Check)	50	50	56	52	45	50	51	40	45	43	44	44	47	17
5	PT 605 A	MP 637	58	62	49	56	50	51	58	51	51	51	47	52	53	12
6	PT 606 A	MP 643	62	61	55	59	52	55	59	55	50	52	58	58	56	5
7	PT 607 A	ICMV 221 (Check)	51	48	44	47	43	44	52	38	47	42	44	43	45	18
8	PT 608 A	MP 644	62	61	50	58	54	57	59	57	59	58	59	58	58	2
9	PT 609 A	MP 645	62	62	53	59	54	55	61	58	52	55	60	58	57	3
10	PT 610 A	Pusa Comp. 383 (Check)	56	63	49	56	50	55	59	45	48	46	52	51	53	13
11	PT 611 A	MP 646	60	61	55	59	53	54	62	57	56	57	55	56	57	4
12	PT 612 A	MP 647	59	61	47	56	51	60	58	51	52	52	56	52	55	6
13	PT 613 A	MP 648	55	62	46	54	50	59	59	48	51	49	53	52	53	10
14	PT 614 A	MP 649	58	60	46	55	46	52	54	48	51	49	52	51	52	15
15	PT 615 A	Pusa Comp. 701 (Check)	56	58	47	54	49	53	54	46	53	50	55	51	52	14
16	PT 616 A	MP 650	59	54	46	53	49	57	55	50	51	51	55	52	53	11
17	PT 617 A	JBV 2 (Check)	60	60	44	55	50	55	59	51	51	51	53	53	54	9
18	PT 618 A	MP 651	61	60	45	55	50	49	61	53	52	53	59	55	55	7
19	PT 619 A	Raj 171 (Check)	56	59	46	54	49	50	53	46	48	47	44	49	50	16
		LOC. MEAN	57	59	49	55	50	54	57	50	51	51	53	53	53	
		C.D. (5%)	3.0	2.0	2.0	5.0	1.0	7.0	4.0	1.0	2.0	5.0	2.0	2.0	2.0	
		C.D. (1%)	4.0	3.0	3.0	7.0	2.0	10.0	5.0	1.0	3.0	7.0	2.0	3.0	3.0	
		C.V. (%)	2.9	2.2	2.9	5.9	1.6	8.2	3.8	1.2	2.5	5.0	2.0	2.2	5.0	
		F (Prob)	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

CHAPTER I: BREEDING

Table I.136: POPULATION TRIAL KHARIF - 2024 DAYS TO MATURITY ZONE A

S.No.	TEST CODE	ENTRY	MDR	BKR	JPR	RAJ MEAN	JMR	JNS	HSR	GLR	MRN	MP MEAN	LDA	NDL	ZONE MEAN	RANK
1	PT 601 A	MP 640	91	90	80	87	81	86	89	76	96	86	97	83	87	9
2	PT 602 A	MP 641	89	91	81	87	78	86	86	77	93	85	93	83	86	14
3	PT 603 A	MP 642	91	91	83	88	86	85	91	82	96	89	99	90	89	2
4	PT 604 A	Dhanshakti (Check)	88	80	84	84	74	89	82	72	96	84	94	74	83	18
5	PT 605 A	MP 637	95	91	79	89	80	87	91	80	97	89	90	80	87	7
6	PT 606 A	MP 643	95	90	84	90	81	88	90	85	93	89	101	85	89	1
7	PT 607 A	ICMV 221 (Check)	90	78	75	81	73	87	83	75	92	84	91	72	82	19
8	PT 608 A	MP 644	89	91	84	88	83	88	89	83	92	87	105	88	89	3
9	PT 609 A	MP 645	92	91	84	89	84	79	93	85	95	90	100	85	89	4
10	PT 610 A	Pusa Comp. 383 (Check)	91	93	78	87	79	88	89	76	97	87	100	81	87	8
11	PT 611 A	MP 646	92	91	86	90	82	78	92	82	95	89	102	84	89	5
12	PT 612 A	MP 647	94	91	77	87	80	92	86	85	95	90	103	82	88	6
13	PT 613 A	MP 648	92	92	77	87	79	86	89	74	95	85	100	81	87	11
14	PT 614 A	MP 649	93	90	78	87	75	76	83	75	97	86	99	78	84	16
15	PT 615 A	Pusa Comp. 701 (Check)	93	88	80	87	79	86	83	74	95	85	100	81	86	13
16	PT 616 A	MP 650	92	84	74	83	78	87	87	84	94	89	100	81	86	12
17	PT 617 A	JBV 2 (Check)	93	89	74	86	79	75	86	80	92	86	104	81	85	15
18	PT 618 A	MP 651	94	89	75	86	79	88	92	74	91	83	103	82	87	10
19	PT 619 A	Raj 171 (Check)	92	88	76	85	78	87	85	70	92	81	97	78	84	17
		LOC. MEAN	92	89	79	87	79	85	88	78	94	86	99	82	87	
		C.D. (5%)	2.0	2.0	1.0	5.0	1.0	14.0	3.0	2.0	4.0	8.0	3.0	2.0	3.0	
		C.D. (1%)	3.0	3.0	1.0	7.0	1.0	18.0	5.0	2.0	5.0	10.0	4.0	2.0	4.0	
		C.V. (%)	1.6	1.6	0.7	3.5	0.7	9.8	2.4	1.4	2.3	4.2	1.7	1.2	3.8	
		F (Prob)	0.000	0.000	0.000	0.105	0.000	0.000	0.000	0.000	0.000	0.476	0.000	0.000	0.000	

CHAPTER I: BREEDING

Table I.137: POPULATION TRIAL KHARIF - 2024 PLANT HEIGHT (cm) ZONE A

S.No.	TEST CODE	ENTRY	MDR	BKR	JPR	RAJ MEAN	JMR	JNS	HSR	GLR	MRN	MP MEAN	LDA	NDL	ZONE MEAN	RANK
1	PT 601 A	MP 640	203	170	171	181	185	202	250	265	156	211	215	219	204	13
2	PT 602 A	MP 641	206	205	208	206	199	289	265	328	172	250	225	197	229	2
3	PT 603 A	MP 642	217	173	210	200	194	187	241	259	154	207	205	228	207	12
4	PT 604 A	Dhanshakti (Check)	200	168	183	184	173	196	227	248	161	205	193	238	199	15
5	PT 605 A	MP 637	212	181	231	208	190	195	256	258	152	205	230	232	214	7
6	PT 606 A	MP 643	146	163	146	152	131	158	173	181	117	149	150	154	152	19
7	PT 607 A	ICMV 221 (Check)	201	168	216	195	158	205	242	213	130	172	170	205	191	16
8	PT 608 A	MP 644	164	160	145	156	146	204	200	207	131	169	170	216	174	18
9	PT 609 A	MP 645	168	167	170	168	156	200	206	219	137	178	157	198	178	17
10	PT 610 A	Pusa Comp. 383 (Check)	224	187	219	210	179	188	270	260	144	202	220	215	211	10
11	PT 611 A	MP 646	217	172	181	190	205	221	264	237	148	192	248	226	212	9
12	PT 612 A	MP 647	191	169	205	188	194	184	247	261	143	202	215	218	203	14
13	PT 613 A	MP 648	204	176	201	193	199	193	260	256	179	218	227	228	212	8
14	PT 614 A	MP 649	211	186	269	222	177	224	265	277	168	223	230	196	220	5
15	PT 615 A	Pusa Comp. 701 (Check)	234	217	224	225	201	247	282	276	185	231	220	220	231	1
16	PT 616 A	MP 650	234	197	233	221	196	195	256	297	154	226	222	231	222	4
17	PT 617 A	JBV 2 (Check)	233	192	225	217	200	223	274	263	163	213	210	245	223	3
18	PT 618 A	MP 651	230	191	212	211	185	246	259	256	158	207	217	208	216	6
19	PT 619 A	Raj 171 (Check)	206	200	211	206	192	203	258	231	192	212	170	224	209	11
		LOC. MEAN	205	181	203	197	182	208	247	252	155	204	205	216	205	
		C.D. (5%)	19.0	18.0	8.0	25.0	16.0	57.0	30.0	5.0	24.0	40.0	11.0	14.0	15.0	
		C.D. (1%)	25.0	24.0	11.0	33.0	21.0	77.0	40.0	7.0	32.0	54.0	14.0	18.0	20.0	
		C.V. (%)	5.5	5.9	2.4	7.5	5.3	16.6	7.3	1.3	9.2	9.2	3.2	3.9	8.2	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	

CHAPTER I: BREEDING

Table I.138: POPULATION TRIAL KHARIF - 2024 PRODUCTIVE TILLERS (No./Plant) ZONE A

S.No.	TEST CODE	ENTRY	MDR	BKR	JPR	RAJ MEAN	JMR	JNS	HSR	GLR	MRN	MP MEAN	LDA	NDL	ZONE MEAN	RANK
1	PT 601 A	MP 640	4.0	1.3	1.1	2.1	2.8	1.4	4.4	2.7	2.4	2.6	2.3	2.9	2.5	2
2	PT 602 A	MP 641	3.6	1.2	1.4	2.1	2.7	1.4	3.5	1.9	2.4	2.1	3.5	2.7	2.4	4
3	PT 603 A	MP 642	3.4	1.2	1.2	1.9	2.2	1.5	3.1	1.6	2.3	2.0	2.8	2.8	2.2	16
4	PT 604 A	Dhanshakti (Check)	3.4	1.1	1.0	1.8	2.6	1.3	2.9	1.8	2.4	2.1	3.6	2.8	2.3	14
5	PT 605 A	MP 637	3.8	1.2	1.4	2.1	2.1	1.5	4.8	2.4	2.3	2.3	3.3	2.7	2.5	1
6	PT 606 A	MP 643	2.8	1.1	2.0	2.0	1.9	1.7	3.2	1.3	2.1	1.7	2.2	3.0	2.1	17
7	PT 607 A	ICMV 221 (Check)	2.3	1.2	1.9	1.8	1.9	1.4	2.1	1.4	2.2	1.8	2.5	2.9	2.0	19
8	PT 608 A	MP 644	2.9	1.2	1.1	1.7	1.8	1.6	2.7	1.4	2.2	1.8	2.7	2.9	2.1	18
9	PT 609 A	MP 645	2.5	1.3	2.1	2.0	2.3	1.6	3.9	1.9	2.4	2.2	2.5	2.8	2.3	11
10	PT 610 A	Pusa Comp. 383 (Check)	3.3	1.3	2.2	2.3	2.2	1.6	3.2	1.7	2.5	2.1	2.8	2.8	2.4	10
11	PT 611 A	MP 646	3.5	1.2	2.2	2.3	2.1	1.3	3.9	1.6	2.1	1.9	3.8	2.8	2.5	3
12	PT 612 A	MP 647	2.3	1.2	2.0	1.8	2.1	1.5	3.3	1.9	2.3	2.1	3.0	2.8	2.2	15
13	PT 613 A	MP 648	3.3	1.1	2.2	2.2	2.4	1.3	2.9	2.0	2.2	2.1	2.8	2.8	2.3	12
14	PT 614 A	MP 649	4.1	1.1	1.9	2.4	2.5	1.7	3.6	1.8	2.4	2.1	2.2	2.5	2.4	9
15	PT 615 A	Pusa Comp. 701 (Check)	3.2	1.2	1.2	1.9	2.2	1.3	3.5	2.0	2.5	2.2	4.0	2.7	2.4	8
16	PT 616 A	MP 650	3.2	1.3	1.3	1.9	2.5	1.4	3.1	2.5	2.4	2.4	3.5	2.8	2.4	6
17	PT 617 A	JBV 2 (Check)	3.0	1.2	2.2	2.1	2.4	1.4	3.5	1.8	2.2	2.0	2.7	2.5	2.3	13
18	PT 618 A	MP 651	3.2	1.2	2.2	2.2	2.2	1.3	3.6	2.6	2.5	2.6	2.4	2.8	2.4	7
19	PT 619 A	Raj 171 (Check)	3.9	1.2	1.1	2.1	3.1	1.3	3.0	2.6	2.5	2.6	3.0	2.5	2.4	5
		LOC. MEAN	3.2	1.2	1.7	2.0	2.3	1.4	3.4	1.9	2.3	2.1	2.9	2.8	2.3	
		C.D. (5%)	0.4	0.1	0.3	0.7	0.7	0.3	1.0	0.3	0.4	0.6	0.5	0.6	0.3	
		C.D. (1%)	0.5	0.2	0.5	1.0	0.9	0.4	1.4	0.4	0.5	0.8	0.7	0.8	0.4	
		C.V. (%)	7.0	6.4	12.3	21.9	17.2	13.6	18.7	8.9	10.2	12.3	11.0	13.0	16.3	
		F (Prob)	0.000	0.000	0.000	0.930	0.000	0.000	0.000	0.000	0.000	0.074	0.000	0.000	0.084	

CHAPTER I: BREEDING

Table I.139: POPULATION TRIAL KHARIF - 2024 PANICLE LENGTH (cm) ZONE A

S.No.	TEST CODE	ENTRY	MDR	BKR	JPR	RAJ MEAN	JMR	JNS	HSR	GLR	MRN	MP MEAN	LDA	NDL	ZONE MEAN	RANK
1	PT 601 A	MP 640	22	25	27	25	25	25	29	29	21	25	28	24	26	10
2	PT 602 A	MP 641	25	30	28	28	28	24	29	30	22	26	30	24	27	1
3	PT 603 A	MP 642	25	26	28	26	25	23	30	27	25	26	23	25	26	8
4	PT 604 A	Dhanshakti (Check)	17	25	20	21	20	24	28	24	20	22	24	23	22	17
5	PT 605 A	MP 637	22	25	28	25	26	24	31	23	22	22	24	27	25	11
6	PT 606 A	MP 643	23	23	21	23	24	23	29	23	19	21	20	23	23	16
7	PT 607 A	ICMV 221 (Check)	18	25	23	22	21	26	29	20	18	19	19	22	22	18
8	PT 608 A	MP 644	23	26	23	24	22	26	30	21	21	21	23	24	24	15
9	PT 609 A	MP 645	25	25	23	24	24	24	30	25	22	23	27	25	25	12
10	PT 610 A	Pusa Comp. 383 (Check)	26	25	28	26	26	23	30	28	20	24	27	27	26	6
11	PT 611 A	MP 646	27	26	23	26	27	25	31	24	25	25	32	23	26	5
12	PT 612 A	MP 647	24	27	28	26	30	24	30	25	25	25	31	22	27	3
13	PT 613 A	MP 648	22	26	25	24	24	25	30	22	22	22	23	23	24	14
14	PT 614 A	MP 649	26	26	31	28	25	22	29	27	22	25	25	25	26	7
15	PT 615 A	Pusa Comp. 701 (Check)	25	31	25	27	30	24	30	25	25	25	28	24	27	2
16	PT 616 A	MP 650	23	26	31	27	21	24	29	22	21	22	26	26	25	13
17	PT 617 A	JBV 2 (Check)	27	27	28	27	28	25	29	23	24	23	30	25	27	4
18	PT 618 A	MP 651	26	29	23	26	21	24	29	27	24	26	31	23	26	9
19	PT 619 A	Raj 171 (Check)	25	27	28	26	25	24	29	23	23	23	28	25	26	8
		LOC. MEAN	24	26	26	25	25	24	30	25	22	23	26	24	25	
		C.D. (5%)	3.0	3.0	2.0	4.0	3.0	4.0	3.0	2.0	2.0	4.0	2.0	3.0	2.0	
		C.D. (1%)	3.0	4.0	2.0	5.0	4.0	5.0	3.0	2.0	3.0	6.0	3.0	3.0	2.0	
		C.V. (%)	6.6	6.5	3.8	8.7	7.4	8.9	5.3	3.7	6.7	8.8	5.4	6.4	8.2	
		F (Prob)	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.118	0.000	0.000	0.000	

CHAPTER I: BREEDING

Table I.140: POPULATION TRIAL KHARIF - 2024 PANICLE DIAMETER (cm) ZONE A

S.No.	TEST CODE	ENTRY	MDR	BKR	JPR	RAJ MEAN	JMR	JNS	HSR	GLR	MRN	MP MEAN	LDA	NDL	ZONE MEAN	RANK
1	PT 601 A	MP 640	2.5	2.7	3.0	2.7	3.0	2.3	4.0	2.7	2.8	2.8	3.7	2.6	2.9	6
2	PT 602 A	MP 641	2.4	2.5	2.2	2.4	3.1	2.6	3.9	2.8	2.8	2.8	3.0	2.6	2.8	13
3	PT 603 A	MP 642	3.4	2.9	2.8	3.0	3.0	2.8	4.2	2.6	3.1	2.9	3.4	3.3	3.1	1
4	PT 604 A	Dhanshakti (Check)	2.2	2.4	2.5	2.4	2.7	2.4	3.9	2.8	2.9	2.8	3.0	2.5	2.7	15
5	PT 605 A	MP 637	2.7	2.6	2.3	2.5	2.9	2.6	3.9	2.5	3.1	2.8	3.3	3.3	2.9	7
6	PT 606 A	MP 643	2.7	2.2	2.5	2.5	2.8	2.3	4.0	2.4	2.8	2.6	2.9	2.5	2.7	17
7	PT 607 A	ICMV 221 (Check)	2.4	2.6	2.2	2.4	2.8	2.4	4.1	2.6	2.8	2.7	3.2	2.8	2.8	12
8	PT 608 A	MP 644	2.6	2.6	2.8	2.7	2.6	2.3	4.2	2.6	3.1	2.8	3.6	2.6	2.9	8
9	PT 609 A	MP 645	2.8	2.7	2.8	2.8	2.8	2.1	4.4	2.7	3.1	2.9	3.7	2.8	3.0	5
10	PT 610 A	Pusa Comp. 383 (Check)	2.5	2.6	2.8	2.6	3.2	2.3	4.0	2.9	3.0	2.9	3.8	3.2	3.0	3
11	PT 611 A	MP 646	2.8	2.8	2.5	2.7	3.0	2.5	4.2	2.3	2.8	2.6	4.2	3.1	3.0	2
12	PT 612 A	MP 647	2.4	2.5	2.0	2.3	3.0	2.5	4.0	2.9	2.9	2.9	3.3	2.7	2.8	9
13	PT 613 A	MP 648	2.5	2.7	2.8	2.6	2.8	2.8	4.1	2.5	3.0	2.8	3.9	2.9	3.0	4
14	PT 614 A	MP 649	2.4	2.5	2.5	2.5	2.4	2.3	4.0	2.5	2.7	2.6	3.6	2.8	2.8	14
15	PT 615 A	Pusa Comp. 701 (Check)	2.3	2.2	2.4	2.3	2.5	2.8	3.8	1.6	2.6	2.1	3.6	2.7	2.6	18
16	PT 616 A	MP 650	2.3	2.7	2.3	2.4	2.5	2.6	4.0	2.5	3.0	2.7	3.7	2.4	2.8	11
17	PT 617 A	JBV 2 (Check)	2.4	2.2	2.6	2.4	2.5	2.3	4.0	2.6	2.6	2.6	3.4	2.7	2.7	16
18	PT 618 A	MP 651	2.3	2.5	2.7	2.5	2.3	2.5	3.9	2.7	2.7	2.7	3.3	3.0	2.8	10
19	PT 619 A	Raj 171 (Check)	2.3	2.0	2.7	2.3	1.9	2.7	4.0	1.5	2.5	2.0	2.9	2.8	2.5	19
		LOC. MEAN	2.5	2.5	2.5	2.5	2.7	2.5	4.0	2.5	2.9	2.7	3.4	2.8	2.8	
		C.D. (5%)	0.3	0.3	0.1	0.4	0.4	0.4	0.4	0.2	0.2	0.4	0.5	0.3	0.2	
		C.D. (1%)	0.4	0.5	0.2	0.5	0.5	0.5	0.6	0.2	0.3	0.6	0.7	0.4	0.3	
		C.V. (%)	7.6	8.1	3.5	8.4	7.9	9.7	6.7	3.8	4.0	8.0	8.7	6.8	8.3	
		F (Prob)	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.000	0.000	

CHAPTER I: BREEDING

Table I.141: POPULATION TRIAL KHARIF - 2024 1000-SEED Wt.(g) ZONE A

S.No.	TEST CODE	ENTRY	MDR	BKR	JPR	RAJ MEAN	JMR	HSR	GLR	MRN	MP MEAN	LDA	NDL	ZONE MEAN	RANK
1	PT 601 A	MP 640	7.6	9.0	8.6	8.4	9.5	9.9	11.1	8.0	9.6	12.4	8.6	9.4	16
2	PT 602 A	MP 641	6.5	8.4	8.2	7.7	9.3	10.2	11.2	10.2	10.7	9.2	9.8	9.2	18
3	PT 603 A	MP 642	7.2	9.0	9.6	8.6	11.1	11.0	11.6	9.8	10.7	11.2	11.8	10.3	1
4	PT 604 A	Dhanshakti (Check)	7.0	9.1	8.1	8.1	11.8	14.7	12.0	7.8	9.9	11.9	9.0	10.2	4
5	PT 605 A	MP 637	7.2	9.4	7.5	8.0	9.7	10.5	12.3	9.2	10.7	12.5	10.2	9.8	9
6	PT 606 A	MP 643	6.6	8.8	7.1	7.5	8.7	11.6	10.4	9.3	9.9	9.9	8.8	9.0	19
7	PT 607 A	ICMV 221 (Check)	8.5	8.9	8.5	8.6	11.7	14.0	10.9	8.8	9.8	10.4	9.4	10.1	5
8	PT 608 A	MP 644	7.9	8.7	8.1	8.2	10.3	11.2	11.1	9.7	10.4	11.5	9.9	9.8	8
9	PT 609 A	MP 645	7.4	8.8	9.4	8.5	10.7	10.0	12.0	10.1	11.0	11.4	10.3	10.0	6
10	PT 610 A	Pusa Comp. 383 (Check)	7.2	8.6	10.4	8.7	10.0	11.7	11.9	10.1	11.0	10.7	8.8	9.9	7
11	PT 611 A	MP 646	7.0	8.4	7.5	7.7	10.6	9.4	12.0	9.4	10.7	11.4	9.6	9.5	14
12	PT 612 A	MP 647	6.7	8.9	7.6	7.7	10.1	10.0	11.6	10.1	10.8	11.8	9.9	9.6	11
13	PT 613 A	MP 648	7.5	9.2	10.4	9.0	10.4	11.3	11.7	10.2	11.0	11.4	9.7	10.2	3
14	PT 614 A	MP 649	7.4	8.5	9.7	8.5	9.8	12.2	12.0	10.1	11.0	10.9	11.4	10.2	2
15	PT 615 A	Pusa Comp. 701 (Check)	8.0	9.1	9.7	8.9	9.2	9.3	11.7	9.0	10.4	9.3	10.0	9.5	13
16	PT 616 A	MP 650	7.3	9.3	7.3	8.0	10.9	10.4	11.6	8.9	10.3	11.9	10.1	9.7	10
17	PT 617 A	JBV 2 (Check)	7.4	8.7	7.6	7.9	8.6	10.1	10.9	9.4	10.2	11.0	11.1	9.4	15
18	PT 618 A	MP 651	7.4	8.4	7.4	7.7	10.3	12.1	11.6	9.3	10.5	10.2	8.8	9.5	12
19	PT 619 A	Raj 171 (Check)	7.9	9.0	8.0	8.3	9.1	10.1	11.2	8.4	9.8	11.1	9.0	9.3	17
		LOC. MEAN	7.4	8.8	8.5	8.2	10.1	11.0	11.5	9.4	10.4	11.1	9.8	9.7	
		C.D. (5%)	0.4	0.9	0.5	1.1	0.9	1.4	1.0	0.9	2.3	0.8	1.0	0.8	
		C.D. (1%)	0.5	1.3	0.6	1.5	1.3	1.8	1.4	1.2	3.1	1.0	1.3	1.1	
		C.V. (%)	3.0	6.5	3.4	8.1	5.6	7.4	5.4	6.0	9.7	4.2	6.0	8.6	
		F (Prob)	0.000	0.000	0.000	0.178	0.000	0.000	0.000	0.000	0.532	0.000	0.000	0.039	

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Table I.142: POPULATION TRIAL KHARIF - 2024 POPULATION AT HARVEST(No./plot) ZONE A

S.No.	TEST CODE	ENTRY	MDR	BKR	JPR	RAJ MEAN	JMR	JNS	HSR	GLR	MRN	MP MEAN	LDA	NDL	ZONE MEAN	RANK
1	PT 601 A	MP 640	108	132	97	112	164	111	81	111	127	119	163	160	125	4
2	PT 602 A	MP 641	81	137	78	99	159	112	77	96	128	112	163	160	119	8
3	PT 603 A	MP 642	61	129	54	81	150	66	78	42	113	78	162	157	101	19
4	PT 604 A	Dhanshakti (Check)	91	145	72	103	149	98	72	90	91	91	163	158	113	15
5	PT 605 A	MP 637	71	134	55	87	150	97	81	47	100	74	163	158	106	18
6	PT 606 A	MP 643	51	146	117	105	158	122	74	99	91	95	164	154	118	9
7	PT 607 A	ICMV 221 (Check)	82	132	116	110	179	82	70	97	97	97	162	158	117	10
8	PT 608 A	MP 644	51	137	93	94	126	122	79	58	87	73	163	162	108	17
9	PT 609 A	MP 645	60	129	64	84	161	109	76	76	97	86	163	159	109	16
10	PT 610 A	Pusa Comp. 383 (Check)	93	139	95	109	165	87	77	93	126	110	165	159	120	6
11	PT 611 A	MP 646	93	130	87	103	193	114	79	118	120	119	163	158	126	3
12	PT 612 A	MP 647	96	127	95	106	141	89	74	103	142	123	163	162	119	7
13	PT 613 A	MP 648	103	128	63	98	150	103	76	86	125	105	164	161	116	12
14	PT 614 A	MP 649	102	129	115	115	174	122	76	110	112	111	163	154	126	2
15	PT 615 A	Pusa Comp. 701 (Check)	90	130	120	113	195	111	79	97	148	123	164	160	130	1
16	PT 616 A	MP 650	84	128	108	107	169	83	80	79	90	85	164	158	114	14
17	PT 617 A	JBV 2 (Check)	121	125	90	112	187	112	72	72	138	105	162	163	124	5
18	PT 618 A	MP 651	85	133	97	105	162	120	78	66	101	83	162	160	116	11
19	PT 619 A	Raj 171 (Check)	81	138	129	116	173	88	82	53	83	68	163	159	115	13
		LOC. MEAN	84	133	92	103	163	102	77	84	111	98	163	159	117	
		C.D. (5%)	7.0	13.0	36.0	28.0	39.0	30.0	15.0	34.0	22.0	34.0	2.0	6.0	13.0	
		C.D. (1%)	10.0	18.0	49.0	38.0	53.0	40.0	20.0	45.0	29.0	46.0	3.0	8.0	17.0	
		C.V. (%)	5.2	6.0	23.9	16.6	14.5	17.8	11.4	24.1	11.8	16.5	0.9	2.4	12.3	
		F (Prob)	0.000	0.000	0.000	0.404	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.001	

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Table I.143: POPULATION TRIAL KHARIF - 2024 GRAIN QUALITY: IRON CONTENT (ppm) ZONE A

S.No.	TEST CODE	ENTRY	MDR	JPR	JMR	HSR	GLR	LDA	NDL	ZONE MEAN	RANK
1	PT 601 A	MP 640	36	54	55	70	39	49	51	50	5
2	PT 604 A	Dhanshakti (Check)	45	90	53	69	62	91	73	69	1
3	PT 605 A	MP 637	35	52	71	57	44	48	65	53	4
4	PT 607 A	ICMV 221 (Check)	47	77	85	74	48	83	59	68	2
5	PT 610 A	Pusa Comp. 383 (Check)	40	57	59	72	53	51	74	58	3
6	PT 614 A	MP 649	33	53	67	61	44	49	63	53	4
7	PT 615 A	Pusa Comp. 701 (Check)	34	45	58	61	37	55	55	49	6
8	PT 617 A	JBV 2 (Check)	34	53	48	81	52	56	45	53	4
9	PT 619 A	Raj 171 (Check)	36	51	56	69	43	52	45	50	5

Table I.144: POPULATION TRIAL KHARIF - 2024 GRAIN QUALITY: ZINC CONTENT (ppm) ZONE A

S.No.	TEST CODE	ENTRY	MDR	JPR	JMR	HSR	GLR	LDA	NDL	ZONE MEAN	RANK
1	PT 601 A	MP 640	31	36	45	56	42	38	36	41	4
2	PT 604 A	Dhanshakti (Check)	41	45	46	54	43	40	39	44	2
3	PT 605 A	MP 637	38	32	61	53	40	41	37	43	3
4	PT 607 A	ICMV 221 (Check)	42	40	60	65	44	54	34	48	1
5	PT 610 A	Pusa Comp. 383 (Check)	39	38	50	56	35	43	44	44	2
6	PT 614 A	MP 649	35	35	54	52	40	44	45	44	2
7	PT 615 A	Pusa Comp. 701 (Check)	37	34	43	53	40	51	44	43	3
8	PT 617 A	JBV 2 (Check)	34	38	34	59	48	46	40	43	3
9	PT 619 A	Raj 171 (Check)	40	40	47	60	41	45	35	44	2

Table I.145: POPULATION TRIAL KHARIF 2024 ZONE A
GRAIN QUALITY(Protein and Fat)

S.No.	TEST CODE	ENTRY	Protein (%)	Fat (%)
			HSR	HSR
1	PT 601 A	MP 640	9.8	5.4
2	PT 602 A	MP 641	10.3	5.5
3	PT 603 A	MP 642	10.6	5.7
4	PT 604 A	Dhanshakti (Check)	11.1	5.4
5	PT 605 A	MP 637	10.2	5.1
6	PT 606 A	MP 643	9.3	6.2
7	PT 607 A	ICMV 221 (Check)	10.9	5.5
8	PT 608 A	MP 644	10.4	5.4
9	PT 609 A	MP 645	10.0	5.0
10	PT 610 A	Pusa Comp. 383 (Check)	10.1	5.2
11	PT 611 A	MP 646	10.1	5.6
12	PT 612 A	MP 647	9.8	5.8
13	PT 613 A	MP 648	10.2	5.7
14	PT 614 A	MP 649	10.3	5.6
15	PT 615 A	Pusa Comp. 701 (Check)	10.8	5.7
16	PT 616 A	MP 650	9.5	5.6
17	PT 617 A	JBV 2 (Check)	9.6	5.4
18	PT 618 A	MP 651	9.8	5.3
19	PT 619 A	Raj 171 (Check)	9.8	5.8

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Table I.146: POPULATION TRIAL KHARIF 2024 EXPERIMENTAL DETAILS ZONE B

Locations	Soil	pH	Sowing date	Harvesting date	Interculture date	Irrigation date	Fertilizer			Insecticide
							N	P	K	
MAHARASHTRA										
Aurangabad (NARP)	MB	7.5	23.7.24	18.11.24	-	Nil	60	30	30	Nil
Niphad (MPKV)	-	-	10.7.24	-	-	Nil	-	-	-	Nil
Dhule (MPKV)	MB	8.6	4.7.24	15.10.24	28.7.24	Nil	60	30	0	Nil
KARNATAKA										
Vijayapur (UAS, Dharwad)	SB	8.7	6.7.24	28.10.24	18.8.24	Nil	50	25	0	Nil
Malnoor (UAS, Raichur)	S	7.5	12.7.24	27.11.24	31.7.24	Nil	50	50	0	Emamectin Benzoate
ANDHRA PRADESH										
Ananthapuram (ANGRAU)	RSL	7.7	12.8.24	As Per Maturity	5.9.24	As Per Required	60	30	20	Nil
Perumallapalle (ANGRAU)	SCL	7.3	6.7.24	9.10.24	10.8.24	As Per Required	80	40	30	Nil
Vizianagaram (ANGRAU)	RSL	6.8	2.7.24	7.10.24	22.7.24	Nil	60	40	30	Nil
TELANGANA										
Palem (PJ TSAU)	RSL	7.0	9.7.24	24.10.24	27.7, 12.8.24	Nil	60	40	40	Nil
TAMIL NADU										
Coimbatore (TNAU)	CL	7.8	29.6.24	6.10.24	-	29.6, 18.7, 13.8, 3.9, 18.9, 01.10.24	70	35	35	Nil
ODISHA										
Semiliguda (OUAT)	SL	-	3.7.24	As Per Maturity	-	Nil	60	30	30	Nil

MB = Medium Black, CL = Clay Loam, SB = Shallow Black, RSL = Red Sandy Loam, SL= Sandy Loam, S = Shallow, SCL = Sandy Clay Loam.

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Table I.147: POPULATION TRIAL KHARIF - 2024 GRAIN YIELD (kg/ha) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	NPD	DHL	MS MEAN	VYP	MLR	KS MEAN	APR***	PMP	VZN	AP MEAN	PLM	CBE***	SMG	ZONE MEAN	RANK
1	PT 601 B	MP 640	3153	3271	1966	2796	2398	1731	2064	1534	2833	3288	3061	3092	2679	2667	2711	2
2	PT 602 B	MP 641	2475	1920	1917	2104	1647	1903	1775	1816	2860	2688	2774	1949	1329	2550	2212	12
3	PT 603 B	MP 642	2819	1844	1918	2193	2270	1344	1807	1675	3094	3015	3055	2793	2788	1300	2266	10
4	PT 604 B	MP 643	2414	1782	992	1729	2002	1103	1553	1123	2619	3105	2862	2415	1632	1094	1947	15
5	PT 605 B	Dhanshakti (Check)	2508	1587	909	1668	1940	1056	1498	1133	2088	2177	2132	2424	1718	1094	1754	17
6	PT 606 B	MP 644	2413	2189	966	1856	2493	1254	1873	888	1176	2823	2000	2731	2584	1428	1941	16
7	PT 607 B	MP 645	3182	1514	1223	1973	2573	1468	2021	793	2034	2571	2302	2556	1718	2189	2145	14
8	PT 608 B	ICMV 155 (Check)	1843	1835	750	1476	2005	1345	1675	397	1337	2486	1912	1997	1288	583	1576	18
9	PT 609 B	MP 646	2672	1936	1947	2185	2242	1751	1997	1077	2492	3339	2916	2207	1927	2739	2369	6
10	PT 610 B	ICMV 221 (Check)	2415	4456	1135	2669	2451	1744	2098	1281	1777	2039	1908	2128	2297	1322	2163	13
11	PT 611 B	Raj 171 (Check)	2563	3327	1741	2544	1992	1618	1805	986	1930	2931	2430	2108	1687	2333	2283	9
12	PT 612 B	MP 647	3198	2006	2622	2609	2492	1588	2040	1013	4071	2907	3489	1992	1842	3528	2712	1
13	PT 613 B	MP 648	3223	1993	1999	2405	2729	1582	2156	1148	3968	2832	3400	2453	2552	3117	2655	3
14	PT 614 B	MP 649	2836	2039	1712	2196	2390	1495	1942	1380	2894	2087	2491	2057	2598	2744	2251	11
15	PT 615 B	MP 650	2623	2119	1549	2097	2504	1561	2033	706	3372	2565	2968	2303	2401	2278	2319	7
16	PT 616 B	ABV 04 (Check)	2608	1782	1690	2027	2731	1576	2154	767	3388	3006	3197	2292	1666	2339	2379	5
17	PT 617 B	MP 651	3046	1587	2153	2262	2380	1654	2017	882	3481	2517	2999	1918	2622	2128	2318	8
18	PT 618 B	Pusa Comp. 612 (Check)	2673	1835	1976	2161	2232	1853	2043	1289	3335	2625	2980	2889	1919	2528	2438	4
		LOC. MEAN	2703	2168	1620	2164	2304	1535	1919	1105	2708	2722	2715	2350	2069	2109	2247	
		C.D. (5%)	382	511	396	900	336	424	538	178	759	510	1260	459	321	610	453	
		C.D. (1%)	513	686	531	1208	451	569	739	238	1019	685	1731	616	431	818	598	
		C.V. (%)	8.5	14.2	14.7	25.1	8.8	16.6	13.3	9.7	16.9	11.3	22.0	11.8	9.4	17.4	21.6	
		F (Prob)	0.000	0.000	0.000	0.263	0.000	0.000	0.367	0.000	0.000	0.000	0.244	0.000	0.000	0.000	0.000	
		PLOT SIZE (m ²)	12.00	12.00	11.10	-	12.00	12.00	-	12.00	12.00	11.10	-	12.00	12.00	12.00	-	

***TEST LOCATION REJECTED DUE TO LOW AVERAGE YIELD (1105 & 2069 kg/ha), THAN THE STATE AVERAGE YIELD (1772 & 2388 kg/ha) TAKEN OVER 10 YEARS

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Table I.148: POPULATION TRIAL KHARIF - 2024 DRY FODDER YIELD (kg/ha) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	NPD	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	PMP	VZN	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	PT 601 B	MP 640	5611	7092	4535	5746	4444	4167	4306	4253	8958	3174	5462	6904	5830	5497	8
2	PT 602 B	MP 641	4333	4675	5165	4725	4167	5611	4889	4217	9665	3000	5627	4352	3296	4848	16
3	PT 603 B	MP 642	5167	7203	3754	5374	4750	5111	4931	3806	12579	3673	6686	6238	6349	5863	3
4	PT 604 B	MP 643	4972	7064	1111	4382	4639	2333	3486	4536	9794	3502	5944	5362	4211	4752	17
5	PT 605 B	Dhanshakti (Check)	6167	6619	3333	5373	4306	5167	4736	3550	11710	3012	6091	5375	3878	5312	11
6	PT 606 B	MP 644	6333	6731	3303	5456	4417	2500	3458	3211	7124	3045	4460	6081	6302	4905	15
7	PT 607 B	MP 645	7222	5397	3634	5418	4861	3778	4319	3656	12507	4682	6948	5671	4085	5549	6
8	PT 608 B	ICMV 155 (Check)	5083	3731	1742	3519	4500	2944	3722	3764	5169	3024	3986	4457	2008	3642	18
9	PT 609 B	MP 646	5083	4036	5736	4952	4806	4556	4681	4111	12791	3640	6847	4970	5558	5529	7
10	PT 610 B	ICMV 221 (Check)	6222	5731	4505	5486	4806	4778	4792	4514	11239	3084	6279	4736	5881	5549	5
11	PT 611 B	Raj 171 (Check)	6861	5703	5165	5910	5028	5222	5125	4500	7645	4237	5461	4699	4183	5324	10
12	PT 612 B	MP 647	6556	4036	7868	6153	5306	4778	5042	3722	15315	4351	7796	4446	4678	6106	1
13	PT 613 B	MP 648	6472	5814	5225	5837	5389	5056	5222	3492	11757	3745	6331	5513	6999	5946	2
14	PT 614 B	MP 649	6389	4369	4955	5238	5167	3611	4389	3739	12343	3970	6684	4596	4890	5403	9
15	PT 615 B	MP 650	6417	7203	4775	6131	5222	2694	3958	3267	12935	4321	6841	5146	5175	5715	4
16	PT 616 B	ABV 04 (Check)	5528	3981	3814	4441	4944	3889	4417	3431	12478	3075	6328	5107	4182	5043	14
17	PT 617 B	MP 651	6778	3397	6547	5574	5111	3833	4472	2450	9738	2874	5021	4274	5598	5060	13
18	PT 618 B	Pusa Comp. 612 (Check)	6083	6064	4294	5481	5444	4056	4750	2378	8638	2417	4478	6432	5711	5152	12
		LOC. MEAN	5960	5491	4414	5289	4850	4116	4483	3700	10688	3490	5959	5242	4934	5289	
		C.D. (5%)	1314	1013	1142	2203	394	1289	1613	613	2452	865	2385	1013	819	1029	
		C.D. (1%)	1764	1360	1534	2957	529	1730	2216	823	3292	1161	3202	1360	1100	1358	
		C.V. (%)	13.3	11.1	15.6	25.1	4.9	18.9	17.1	10.0	13.8	14.9	24.1	11.7	10.0	22.0	
		F (Prob)	0.000	0.000	0.000	0.714	0.000	0.000	0.516	0.000	0.000	0.000	0.166	0.000	0.000	0.004	
		PLOT SIZE (m ²)	12.00	12.00	11.10	-	12.00	12.00	-	12.00	12.00	11.10	-	12.00	12.00	-	

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Table I.149: POPULATION TRIAL KHARIF - 2024 DAYS TO 50% FLOWERING ZONE B

S.No.	TEST CODE	ENTRY	ABD1	NPD	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	PMP	VZN	AP MEAN	PLM	CBE	SMG	ZONE MEAN	RANK
1	PT 601 B	MP 640	59	59	48	55	49	49	49	42	46	57	48	43	46	49	50	6
2	PT 602 B	MP 641	51	54	47	51	49	47	48	46	46	41	44	41	44	49	47	14
3	PT 603 B	MP 642	59	64	53	58	49	48	48	46	53	49	49	46	52	50	52	2
4	PT 604 B	MP 643	60	66	52	59	50	51	51	43	48	54	48	45	48	53	52	1
5	PT 605 B	Dhanshakti (Check)	46	64	40	50	48	51	50	41	40	36	39	40	40	41	44	17
6	PT 606 B	MP 644	59	54	49	54	50	52	51	46	51	47	48	46	49	48	50	5
7	PT 607 B	MP 645	60	54	52	55	51	51	51	46	50	46	47	46	50	45	50	5
8	PT 608 B	ICMV 155 (Check)	51	52	44	49	48	52	50	44	41	41	42	42	42	50	46	15
9	PT 609 B	MP 646	50	67	52	56	50	56	53	44	49	55	49	47	48	43	51	3
10	PT 610 B	ICMV 221 (Check)	45	70	40	51	49	50	50	41	41	35	39	43	40	41	45	16
11	PT 611 B	Raj 171 (Check)	47	62	46	52	49	51	50	43	44	40	42	47	45	51	48	10
12	PT 612 B	MP 647	51	54	49	51	49	50	49	43	47	48	46	44	45	50	48	9
13	PT 613 B	MP 648	49	64	48	54	50	50	50	41	46	47	45	45	45	47	48	8
14	PT 614 B	MP 649	49	66	46	53	49	51	50	42	43	41	42	44	44	43	47	13
15	PT 615 B	MP 650	52	62	47	54	49	50	49	41	46	42	43	45	44	48	48	11
16	PT 616 B	ABV 04 (Check)	56	63	53	57	49	56	52	45	48	48	47	42	48	50	51	4
17	PT 617 B	MP 651	54	60	47	54	48	53	51	44	49	44	46	46	44	42	48	7
18	PT 618 B	Pusa Comp. 612 (Check)	52	59	47	53	49	51	50	42	45	44	44	43	43	43	47	12
		LOC. MEAN	53	61	48	54	49	51	50	43	46	45	45	44	45	47	48	
		C.D. (5%)	1.0	1.0	3.0	8.0	1.0	2.0	3.0	1.0	2.0	2.0	5.0	3.0	2.0	4.0	3.0	
		C.D. (1%)	1.0	2.0	4.0	10.0	2.0	2.0	5.0	2.0	2.0	3.0	7.0	4.0	2.0	6.0	4.0	
		C.V. (%)	1.0	1.2	3.8	8.6	1.7	2.0	3.3	2.0	2.2	2.8	7.1	4.3	2.2	5.6	6.5	
		F (Prob)	0.000	0.000	0.000	0.377	0.000	0.000	0.379	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	

CHAPTER I: BREEDING

Table I.150: POPULATION TRIAL KHARIF - 2024 DAYS TO MATURITY ZONE B

S.No.	TEST ENTRY	ABD1	NPD	DHL	MS	VYP	MLR	KS	APR	PMP	VZN	AP	PLM	CBE	ZONE	RANK
	CODE				MEAN			MEAN				MEAN			MEAN	
1	PT 601 B MP 640	95	84	84	88	90	84	87	75	80	90	82	73	84	84	6
2	PT 602 B MP 641	93	80	83	85	89	82	86	80	82	71	77	72	82	81	12
3	PT 603 B MP 642	98	89	89	92	89	83	86	80	81	79	80	76	90	85	3
4	PT 604 B MP 643	98	91	89	93	90	83	87	77	80	85	81	76	86	86	2
5	PT 605 B Dhanshakti (Check)	87	89	76	84	88	85	86	75	78	65	73	71	78	79	18
6	PT 606 B MP 644	95	79	86	87	91	86	89	81	81	78	80	76	87	84	7
7	PT 607 B MP 645	95	79	88	88	91	87	89	81	81	77	80	75	88	84	5
8	PT 608 B ICMV 155 (Check)	91	78	81	83	89	84	87	79	78	71	76	72	80	80	16
9	PT 609 B MP 646	88	92	88	90	90	87	89	79	79	86	81	82	86	86	1
10	PT 610 B ICMV 221 (Check)	84	96	76	85	89	85	87	74	79	64	72	75	78	80	17
11	PT 611 B Raj 171 (Check)	85	87	82	85	89	83	86	78	78	70	75	76	83	81	14
12	PT 612 B MP 647	90	79	84	84	89	83	86	76	81	79	79	74	83	82	10
13	PT 613 B MP 648	89	89	84	87	91	83	87	75	81	78	78	75	83	83	9
14	PT 614 B MP 649	87	91	82	87	89	85	87	76	77	71	75	75	82	82	11
15	PT 615 B MP 650	91	87	81	87	89	83	86	75	78	71	75	74	82	81	13
16	PT 616 B ABV 04 (Check)	97	88	88	91	90	86	88	80	79	79	80	71	86	84	4
17	PT 617 B MP 651	95	86	83	88	88	85	86	80	81	75	78	75	82	83	8
18	PT 618 B Pusa Comp. 612 (Check)	91	84	-	88	89	85	87	77	77	75	76	72	81	81	15
	LOC. MEAN	92	86	84	87	90	84	87	78	80	76	78	74	83	83	
	C.D. (5%)	1.0	3.0	3.0	8.0	1.0	1.0	2.0	2.0	2.0	3.0	7.0	5.0	2.0	3.0	
	C.D. (1%)	1.0	4.0	4.0	11.0	2.0	1.0	3.0	2.0	3.0	4.0	9.0	7.0	2.0	4.0	
	C.V. (%)	0.6	1.9	2.1	5.4	1.0	0.7	1.2	1.2	1.4	2.3	5.1	4.0	1.2	4.1	
	F (Prob)	0.000	0.000	0.000	0.472	0.000	0.000	0.102	0.000	0.000	0.000	0.144	0.000	0.000	0.000	

CHAPTER I: BREEDING

Table I.151: POPULATION TRIAL KHARIF - 2024 PLANT HEIGHT (cm) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	NPD	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	PMP	VZN	AP MEAN	PLM	CBE	SMG	ZONE MEAN	RANK
1	PT 601 B	MP 640	160	166	197	174	159	171	165	135	199	170	168	184	170	184	172	13
2	PT 602 B	MP 641	195	172	215	194	183	199	191	138	222	188	183	206	174	177	188	5
3	PT 603 B	MP 642	175	155	199	177	185	175	180	145	207	207	186	187	195	190	184	10
4	PT 604 B	MP 643	130	159	140	143	163	132	147	133	139	143	138	172	139	164	147	17
5	PT 605 B	Dhanshakti (Check)	160	179	188	176	159	169	164	133	196	165	165	158	182	177	170	14
6	PT 606 B	MP 644	155	151	167	157	156	142	149	126	141	146	138	132	175	177	152	16
7	PT 607 B	MP 645	162	163	189	171	173	143	158	130	159	167	152	169	163	184	164	15
8	PT 608 B	ICMV 155 (Check)	92	146	168	135	170	109	140	109	148	140	133	136	93	118	130	18
9	PT 609 B	MP 646	210	164	230	201	165	178	172	143	210	239	197	156	216	228	194	2
10	PT 610 B	ICMV 221 (Check)	162	179	225	189	153	174	164	136	220	214	190	127	152	182	175	11
11	PT 611 B	Raj 171 (Check)	223	180	217	207	165	175	170	137	220	161	173	180	211	228	191	3
12	PT 612 B	MP 647	172	136	235	181	184	164	174	136	222	198	185	159	184	255	186	8
13	PT 613 B	MP 648	193	129	240	187	174	165	170	133	218	227	193	147	206	233	188	6
14	PT 614 B	MP 649	180	159	213	184	161	170	165	140	223	248	204	188	201	213	191	4
15	PT 615 B	MP 650	173	139	240	184	188	153	170	137	211	237	195	165	180	214	185	9
16	PT 616 B	ABV 04 (Check)	163	146	197	169	159	159	159	143	209	219	190	143	185	194	174	12
17	PT 617 B	MP 651	192	166	223	194	184	154	169	131	210	210	184	170	197	212	186	7
18	PT 618 B	Pusa Comp. 612 (Check)	192	179	232	201	192	177	184	134	222	257	204	180	184	247	200	1
		LOC. MEAN	172	159	206	179	171	162	166	134	199	197	177	164	178	199	176	
		C.D. (5%)	7.0	9.0	45.0	33.0	9.0	25.0	33.0	8.0	25.0	21.0	33.0	14.0	19.0	11.0	16.0	
		C.D. (1%)	9.0	12.0	60.0	45.0	12.0	34.0	46.0	11.0	33.0	28.0	45.0	19.0	26.0	15.0	21.0	
		C.V. (%)	2.3	3.3	13.1	11.2	3.2	9.4	9.5	3.6	7.5	6.4	11.4	5.2	6.4	3.5	10.8	
		F (Prob)	0.000	0.000	0.000	0.006	0.000	0.000	0.287	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

CHAPTER I: BREEDING

Table I.152: POPULATION TRIAL KHARIF - 2024 PRODUCTIVE TILLERS (No./Plant) ZONE B

S.No.	TEST CODE	ENTRY	ABD1**	NPD	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	PMP	VZN	AP MEAN	PLM	CBE	SMG	ZONE MEAN	RANK
1	PT 601 B	MP 640	1.7	4.3	2.0	3.2	2.8	3.6	3.2	2.1	1.6	1.7	1.8	2.9	3.0	2.7	2.7	3
2	PT 602 B	MP 641	1.7	4.0	2.3	3.1	2.5	2.8	2.7	2.2	1.3	1.7	1.7	3.3	3.3	2.7	2.6	4
3	PT 603 B	MP 642	2.0	4.0	2.0	3.0	3.7	1.5	2.6	1.5	1.7	1.9	1.7	3.5	3.5	2.7	2.6	5
4	PT 604 B	MP 643	2.0	3.0	2.5	2.8	3.7	1.7	2.7	1.8	1.5	1.7	1.7	2.3	2.6	2.7	2.4	14
5	PT 605 B	Dhanshakti (Check)	2.3	4.3	1.8	3.1	3.3	2.5	2.9	1.9	1.8	2.3	2.0	4.3	2.8	2.9	2.8	1
6	PT 606 B	MP 644	2.0	3.7	2.4	3.0	3.3	1.4	2.3	1.3	1.1	1.7	1.4	2.5	2.6	1.6	2.2	18
7	PT 607 B	MP 645	1.7	3.7	1.8	2.8	2.9	2.1	2.5	1.7	1.5	2.0	1.7	4.5	2.8	2.5	2.5	8
8	PT 608 B	ICMV 155 (Check)	2.0	3.3	3.2	3.3	3.2	1.8	2.5	1.8	1.9	1.9	1.9	3.5	2.4	2.0	2.5	10
9	PT 609 B	MP 646	2.3	3.3	2.3	2.8	3.1	2.0	2.5	1.3	1.7	1.5	1.5	2.5	2.6	1.9	2.2	17
10	PT 610 B	ICMV 221 (Check)	2.0	4.0	2.6	3.3	2.9	1.9	2.4	1.7	1.9	1.9	1.8	2.0	2.4	2.6	2.4	13
11	PT 611 B	Raj 171 (Check)	2.0	3.7	2.5	3.1	2.8	1.9	2.3	1.9	1.9	1.7	1.8	3.1	3.0	3.5	2.6	7
12	PT 612 B	MP 647	2.0	4.3	2.1	3.2	3.2	2.2	2.7	1.7	1.6	1.7	1.6	3.3	3.0	2.1	2.5	9
13	PT 613 B	MP 648	2.0	3.3	2.0	2.7	2.7	2.3	2.5	1.9	2.0	3.1	2.3	2.7	1.8	2.4	2.4	12
14	PT 614 B	MP 649	2.0	3.7	2.2	2.9	2.8	1.7	2.3	2.1	1.5	1.9	1.9	3.2	2.8	1.6	2.4	15
15	PT 615 B	MP 650	1.7	3.3	2.1	2.7	3.5	2.3	2.9	1.5	2.1	2.1	1.9	2.6	2.5	1.5	2.4	16
16	PT 616 B	ABV 04 (Check)	2.0	3.3	2.1	2.7	3.3	2.0	2.7	1.9	1.9	1.8	1.9	2.6	2.8	2.5	2.4	11
17	PT 617 B	MP 651	1.7	3.3	2.6	3.0	3.2	1.8	2.5	1.8	2.2	2.3	2.1	4.2	2.5	2.8	2.7	2
18	PT 618 B	Pusa Comp. 612 (Check)	3.0	4.0	2.6	3.3	3.1	2.1	2.6	2.1	2.3	1.7	2.0	3.4	2.5	2.2	2.6	6
		LOC. MEAN	2.0	3.7	2.3	3.0	3.1	2.1	2.6	1.8	1.8	1.9	1.8	3.1	2.7	2.4	2.5	
		C.D. (5%)	1.1	1.1	0.2	0.9	0.6	1.0	1.1	0.4	0.5	0.5	0.5	0.5	0.3	0.5	0.4	
		C.D. (1%)	1.4	1.5	0.2	1.3	0.8	1.4	1.5	0.6	0.7	0.6	0.6	0.7	0.4	0.7	0.5	
		C.V. (%)	32.5	18.4	4.5	14.8	12.0	29.8	19.4	14.4	17.7	14.5	15.0	9.4	6.5	12.8	16.8	
		F (Prob)	0.000	0.000	0.000	0.936	0.000	0.000	0.952	0.000	0.000	0.000	0.066	0.000	0.000	0.000	0.078	

**LOCATION REJECTED DUE TO HIGH C.V. (i.e. > 30%): ABD1 32.5%

CHAPTER I: BREEDING

Table I.153: POPULATION TRIAL KHARIF - 2024 PANICLE LENGTH (cm) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	NPD	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	PMP	VZN	AP MEAN	PLM	CBE	SMG	ZONE MEAN	RANK
1	PT 601 B	MP 640	26	19	27	24	24	19	22	26	27	23	25	26	27	25	25	12
2	PT 602 B	MP 641	25	23	29	25	27	21	24	27	29	27	28	27	26	27	26	7
3	PT 603 B	MP 642	26	22	28	25	28	26	27	29	30	22	27	28	28	27	27	2
4	PT 604 B	MP 643	20	23	26	23	24	18	21	24	25	24	24	28	29	24	24	15
5	PT 605 B	Dhanshakti (Check)	22	36	27	28	22	19	21	24	22	28	25	25	28	23	25	9
6	PT 606 B	MP 644	23	26	26	25	25	20	23	23	23	31	26	23	23	23	24	14
7	PT 607 B	MP 645	26	24	27	26	28	19	24	25	26	27	26	22	26	25	25	8
8	PT 608 B	ICMV 155 (Check)	15	22	15	17	22	18	20	20	16	23	20	16	18	14	18	17
9	PT 609 B	MP 646	30	24	28	28	28	23	25	27	29	30	29	24	27	37	28	1
10	PT 610 B	ICMV 221 (Check)	24	25	24	24	28	18	23	25	23	25	24	23	24	21	24	16
11	PT 611 B	Raj 171 (Check)	26	24	28	26	27	22	25	24	27	33	28	22	29	24	26	6
12	PT 612 B	MP 647	26	19	28	24	30	22	26	25	32	36	31	21	24	29	27	5
13	PT 613 B	MP 648	23	22	27	24	29	19	24	24	28	28	27	20	26	24	24	13
14	PT 614 B	MP 649	24	21	25	24	26	21	24	29	24	27	27	27	25	24	25	11
15	PT 615 B	MP 650	22	23	28	24	26	20	23	26	26	26	26	25	27	25	25	10
16	PT 616 B	ABV 04 (Check)	22	36	27	28	26	18	22	26	29	34	30	22	28	25	27	3
17	PT 617 B	MP 651	29	26	28	27	25	23	24	24	28	29	27	26	23	27	26	7
18	PT 618 B	Pusa Comp. 612 (Check)	28	24	29	27	27	22	25	27	30	29	29	25	24	26	27	4
		LOC. MEAN	24	24	27	25	26	20	23	25	26	28	27	24	26	25	25	
		C.D. (5%)	1.0	3.0	2.0	6.0	2.0	3.0	4.0	3.0	5.0	3.0	5.0	3.0	2.0	3.0	2.0	
		C.D. (1%)	2.0	4.0	3.0	8.0	2.0	4.0	5.0	4.0	7.0	4.0	6.0	3.0	3.0	4.0	3.0	
		C.V. (%)	3.4	8.1	4.5	14.1	3.9	7.9	7.3	6.3	11.2	6.6	10.5	6.5	4.8	7.2	11.0	
		F (Prob)	0.000	0.000	0.000	0.115	0.000	0.000	0.034	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	

CHAPTER I: BREEDING

Table I.154: POPULATION TRIAL KHARIF - 2024 PANICLE DIAMETER (cm) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	PMP	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	PT 601 B	MP 640	2.8	3.1	3.0	2.5	2.4	2.4	2.8	2.9	2.9	2.4	3.2	2.8	14
2	PT 602 B	MP 641	2.6	2.5	2.6	2.2	2.0	2.1	2.5	2.8	2.7	2.5	3.1	2.5	17
3	PT 603 B	MP 642	3.3	3.0	3.2	2.8	2.4	2.6	2.8	3.5	3.1	3.2	3.4	3.0	1
4	PT 604 B	MP 643	2.9	2.7	2.8	2.6	2.2	2.4	3.0	2.8	2.9	3.1	3.2	2.8	10
5	PT 605 B	Dhanshakti (Check)	2.9	2.9	2.9	2.2	2.3	2.3	2.8	3.0	2.9	2.5	3.5	2.8	12
6	PT 606 B	MP 644	3.0	3.2	3.1	2.7	2.6	2.7	2.8	2.8	2.8	3.0	3.1	2.9	4
7	PT 607 B	MP 645	3.3	3.2	3.2	3.0	2.1	2.5	2.9	3.0	3.0	2.1	3.3	2.9	6
8	PT 608 B	ICMV 155 (Check)	2.3	2.7	2.5	2.3	1.9	2.1	2.6	2.2	2.4	2.2	3.5	2.5	18
9	PT 609 B	MP 646	3.2	3.1	3.1	2.6	2.1	2.4	2.9	3.1	3.0	2.6	3.1	2.8	8
10	PT 610 B	ICMV 221 (Check)	2.8	3.3	3.0	2.6	2.5	2.6	3.0	2.8	2.9	2.2	3.0	2.8	11
11	PT 611 B	Raj 171 (Check)	2.8	2.8	2.8	2.2	1.7	2.0	3.1	2.1	2.6	3.1	2.9	2.6	16
12	PT 612 B	MP 647	3.2	3.1	3.2	2.7	2.4	2.5	2.8	3.1	3.0	2.1	3.2	2.8	9
13	PT 613 B	MP 648	3.1	3.3	3.2	3.0	2.3	2.6	2.9	2.9	2.9	2.9	3.0	2.9	3
14	PT 614 B	MP 649	3.1	3.0	3.0	2.6	2.4	2.5	3.0	2.9	3.0	2.0	3.1	2.8	13
15	PT 615 B	MP 650	2.8	3.4	3.1	2.1	2.3	2.2	3.1	3.1	3.1	2.5	3.3	2.8	7
16	PT 616 B	ABV 04 (Check)	3.2	3.1	3.1	2.7	2.5	2.6	3.3	3.4	3.4	2.2	3.1	2.9	2
17	PT 617 B	MP 651	3.0	3.3	3.2	2.7	1.9	2.3	3.0	2.9	3.0	3.2	3.2	2.9	5
18	PT 618 B	Pusa Comp. 612 (Check)	2.6	2.8	2.7	2.3	2.3	2.3	3.2	2.5	2.9	2.8	3.3	2.7	15
		LOC. MEAN	2.9	3.0	3.0	2.5	2.2	2.4	2.9	2.9	2.9	2.6	3.2	2.8	
		C.D. (5%)	0.2	0.3	0.2	0.3	0.5	0.4	0.4	0.5	0.4	0.3	0.3	0.2	
		C.D. (1%)	0.2	0.4	0.2	0.3	0.7	0.5	0.6	0.7	0.6	0.4	0.3	0.3	
		C.V. (%)	3.2	6.4	3.2	6.1	13.6	6.7	8.7	10.8	8.1	7.0	4.9	7.4	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.269	0.000	0.000	0.000	

CHAPTER I: BREEDING

Table I.155: POPULATION TRIAL KHARIF - 2024 1000-SEED Wt.(g) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	DHL	MS MEAN	VYP	MLR	KS MEAN	VZN	CBE	ZONE MEAN	RANK
1	PT 601 B	MP 640	10.4	7.2	8.8	10.4	13.9	12.1	8.6	10.7	10.2	9
2	PT 602 B	MP 641	14.8	6.0	10.4	10.2	12.9	11.6	7.4	10.1	10.2	8
3	PT 603 B	MP 642	9.5	6.7	8.1	10.4	13.8	12.1	6.9	11.2	9.8	12
4	PT 604 B	MP 643	10.6	8.8	9.7	13.5	12.6	13.1	4.9	8.1	9.8	13
5	PT 605 B	Dhanshakti (Check)	12.6	6.6	9.6	13.1	13.0	13.0	6.7	7.4	9.9	10
6	PT 606 B	MP 644	13.2	11.1	12.1	11.7	12.7	12.2	6.2	7.5	10.4	7
7	PT 607 B	MP 645	14.8	8.2	11.5	11.5	12.0	11.7	5.8	11.1	10.6	3
8	PT 608 B	ICMV 155 (Check)	8.5	6.9	7.7	11.2	12.5	11.9	7.2	6.6	8.8	17
9	PT 609 B	MP 646	12.3	7.5	9.9	10.7	12.3	11.5	6.4	9.7	9.8	11
10	PT 610 B	ICMV 221 (Check)	13.0	10.0	11.5	13.1	12.5	12.8	5.6	9.4	10.6	2
11	PT 611 B	Raj 171 (Check)	9.4	7.0	8.2	10.3	13.9	12.1	5.7	6.9	8.9	16
12	PT 612 B	MP 647	9.1	6.7	7.9	9.9	12.6	11.3	6.1	8.3	8.8	18
13	PT 613 B	MP 648	12.7	10.6	11.6	11.1	11.7	11.4	5.4	11.4	10.5	6
14	PT 614 B	MP 649	13.2	10.4	11.8	9.6	13.3	11.5	6.2	13.8	11.1	1
15	PT 615 B	MP 650	8.9	6.7	7.8	11.2	13.0	12.1	5.5	9.2	9.1	15
16	PT 616 B	ABV 04 (Check)	11.8	8.3	10.0	13.4	12.7	13.1	6.2	10.7	10.5	4
17	PT 617 B	MP 651	11.9	8.4	10.1	11.0	13.1	12.1	7.5	11.1	10.5	5
18	PT 618 B	Pusa Comp. 612 (Check)	13.3	7.8	10.6	9.9	12.5	11.2	5.3	8.0	9.5	14
		LOC. MEAN	11.7	8.0	9.9	11.2	12.8	12.0	6.3	9.5	9.9	
		C.D. (5%)	0.7	0.5	0.7	0.4	0.9	2.6	0.8	1.0	2.0	
		C.D. (1%)	0.9	0.7	0.9	0.5	1.3	3.6	1.1	1.4	2.6	
		C.V. (%)	3.6	3.8	3.6	2.0	4.4	12.8	7.9	6.5	12.7	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.171	0.000	0.000	0.234	

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Table I.156: POPULATION TRIAL KHARIF - 2024 POPULATION AT HARVEST(No./plot) ZONE B

S.No.	TEST CODE	ENTRY	ABD1	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	PMP	VZN	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	PT 601 B	MP 640	151	86	119	143	143	143	114	125	130	123	155	127	131	6
2	PT 602 B	MP 641	155	116	135	140	130	135	130	118	131	126	153	113	132	5
3	PT 603 B	MP 642	154	64	109	144	140	142	117	97	131	115	158	112	124	14
4	PT 604 B	MP 643	153	71	112	143	150	147	127	131	129	129	140	125	130	9
5	PT 605 B	Dhanshakti (Check)	152	75	114	145	143	144	109	93	131	111	159	126	126	12
6	PT 606 B	MP 644	151	77	114	143	136	139	118	73	131	107	156	119	123	16
7	PT 607 B	MP 645	152	121	137	142	138	140	126	98	132	119	156	128	133	4
8	PT 608 B	ICMV 155 (Check)	153	59	106	144	139	142	108	121	133	120	156	123	126	11
9	PT 609 B	MP 646	153	113	133	142	132	137	103	121	131	118	151	126	130	8
10	PT 610 B	ICMV 221 (Check)	153	89	121	145	134	140	129	107	130	122	153	130	130	9
11	PT 611 B	Raj 171 (Check)	152	97	124	143	150	147	125	114	132	124	151	129	133	3
12	PT 612 B	MP 647	154	136	145	141	135	138	112	122	131	122	152	133	135	1
13	PT 613 B	MP 648	155	106	131	139	136	138	105	120	130	118	154	128	130	7
14	PT 614 B	MP 649	155	73	114	144	133	139	95	126	133	118	156	116	126	13
15	PT 615 B	MP 650	155	98	127	142	140	141	89	107	131	109	156	112	126	13
16	PT 616 B	ABV 04 (Check)	154	114	134	143	131	137	127	125	133	129	153	122	134	2
17	PT 617 B	MP 651	153	126	139	143	135	139	70	90	130	97	143	115	123	15
18	PT 618 B	Pusa Comp. 612 (Check)	152	81	117	144	146	145	116	123	129	123	156	118	130	10
		LOC. MEAN	153	95	124	143	138	141	112	112	131	118	153	123	129	
		C.D. (5%)	3.0	30.0	3.0	3.0	22.0	36.0	12.0	17.0	3.0	21.0	9.0	13.0	12.0	
		C.D. (1%)	4.0	40.0	4.0	3.0	29.0	49.0	16.0	23.0	4.0	28.0	12.0	17.0	15.0	
		C.V. (%)	1.2	19.1	1.2	1.1	9.4	14.3	6.4	9.4	1.5	10.3	3.5	6.3	9.1	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.642	0.000	0.000	0.000	0.176	0.000	0.000	0.648	

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Table I.157: POPULATION TRIAL KHARIF - 2024 ZONE B

GRAIN QUALITY: IRON CONTENT (ppm)

S.No.	TEST	ENTRY	ABD1	DHL	VYP	APR	PMP	CBE	ZONE MEAN	RANK
1	PT 601 B	MP 640	60	57	44	52	58	47	53	5
2	PT 605 B	Dhanshakti (Check)	82	74	65	77	82	43	71	1
3	PT 608 B	ICMV 155 (Check)	43	70	44	46	42	39	47	8
4	PT 610 B	ICMV 221 (Check)	65	70	52	68	79	54	65	2
5	PT 611 B	Raj 171 (Check)	47	59	41	68	43	51	51	6
6	PT 612 B	MP 647	73	65	46	59	75	51	62	3
7	PT 613 B	MP 648	70	63	46	48	63	59	58	4
8	PT 616 B	ABV 04 (Check)	53	56	40	46	56	48	50	7
9	PT 618 B	Pusa Comp. 612 (Check)	43	56	39	52	56	51	50	7

Table I.158: POPULATION TRIAL KHARIF - 2024 ZONE B

GRAIN QUALITY:ZINC CONTENT (ppm)

S.No.	TEST	ENTRY	ABD1	DHL	VYP	APR	PMP	CBE	ZONE MEAN	RANK
1	PT 601 B	MP 640	41	32	36	24	30	39	34	8
2	PT 605 B	Dhanshakti (Check)	53	44	45	34	39	41	43	1
3	PT 608 B	ICMV 155 (Check)	35	40	39	30	27	42	35	7
4	PT 610 B	ICMV 221 (Check)	45	38	43	41	35	47	41	2
5	PT 611 B	Raj 171 (Check)	39	43	39	41	32	43	39	4
6	PT 612 B	MP 647	46	37	37	28	33	49	38	5
7	PT 613 B	MP 648	51	39	36	27	39	48	40	3
8	PT 616 B	ABV 04 (Check)	41	34	35	35	28	42	36	6
9	PT 618 B	Pusa Comp. 612 (Check)	37	33	35	37	31	42	36	6

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Table I.159: ADVANCE HYBRID AND POPULATION TRIAL (Early) KHARIF 2024 EXPERIMENTAL DETAILS ZONE A₁

Locations	Soil	pH	Sowing date	Harvesting date	Interculture date	Irrigation date	Fertilizers			Insecticide
							N	P	K	
RAJASTHAN										
Mandor (ICAR AICRP)	SL	8.2	19.7.24	11.10.24	09.10.24	Nil	40	20	0	Nil
Jodhpur (CAZRI)	SL	7.6	-	-	-	Nil	40	20	0	Nil
Bikaner (SKRAU)	S	8.0	8.7.24	25.10.24	10.8.24	25.9.24	40	20	0	Nil
Fathehpur(SKNAU)	SL	8.0	17.7.24	As Per Maturity	As Per Pop	Nil	As Per Pop	As Per Pop	As Per Pop	Nil
Samdari (ARSS, AUJ)	SL	8.3	10.7.24	15.10.24	10.8.24	Nil	40	20	0	Nil
ARS, Jalore (AUJ)	-	-	22.7.24	As Per Maturity	-	Ni	-	-	-	Nil
Nagaur (AU, Jodhpur)	SL	7.9	16.7.24	As Per Maturity	4.8.24	Nil	40	20	0	Nil
GUJARAT										
Deesa(SDAU)	SL	-	30.6.24	4.10.24	26.7.24	Nil	80	40	0	Nil
HARYANA										
Bawal (CCSHAU)	LS	8.2	10.7.24	As Per Maturity	6.8.24	Nil	40	20	30	Atrazine
Hisar (CCSHAU)	SL	-	11.7.24	25.10.24	-	28.8.24	40	20	0	Nil

SL = Sandy Loam, S= Sandy, LS= Loamy Sand.

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Table I.160: ADVANCE HYBRID & POPULATION TRIAL (Early) KHARIF - 2024 GRAIN YIELD (kg/ha) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR**	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	AHPT 801	PB 1756 (Check)	1597	914	1956	1742	846	1242	2130	1531	2605	3448	1992	2720	1914	11
2	AHPT 802	MH 2672	1921	1741	2465	2314	797	1292	1722	1827	2762	3691	3458	3575	2319	5
3	AHPT 803	MH 2673	1701	1704	2199	2596	860	1677	2523	1931	2981	4262	3610	3936	2493	1
4	AHPT 804	MH 2675	1644	1530	1690	1960	688	1283	2347	1643	2444	3831	2888	3360	2114	8
5	AHPT 805	AHB 1200 (Check)	1319	685	1065	2088	474	1269	2394	1337	1901	3715	2298	3006	1771	15
6	AHPT 806	MH 2678	2083	1775	2199	2000	955	1686	2162	1862	3086	4188	2770	3479	2358	3
7	AHPT 807	MH 2743	2049	1491	2211	1919	759	1605	2338	1794	3099	4268	3037	3652	2352	4
8	AHPT 808	MH 2744	2141	1264	2523	2604	1020	1887	2556	2018	2210	4258	2806	3532	2376	2
9	AHPT 809	MH 2746	1400	803	2083	2060	684	1385	2175	1534	2160	2634	1849	2242	1761	16
10	AHPT 810	MH 2747	1829	1590	2211	1962	763	1377	2235	1765	2593	3610	2608	3109	2155	7
11	AHPT 811	RHB 223 (Check)	1389	556	1539	1993	741	1264	2335	1425	2725	3590	2121	2855	1888	13
12	AHPT 812	MH 2748	1574	1650	1736	1809	924	1447	2151	1641	1395	3553	2405	2979	1911	12
13	AHPT 813	MH 2749	1574	1063	1655	2065	709	1602	2366	1572	2099	3228	2136	2682	1877	14
14	AHPT 814	MH 2754	1667	1213	2361	1924	650	1565	2235	1675	2895	2941	2137	2539	2003	9
15	AHPT 815	HHB 67 Imp. (Check)	1389	542	1609	2009	594	1759	2092	1372	1244	2622	2017	2320	1569	17
16	AHPT 816	MH 2758	1782	1678	2130	1876	756	1677	2280	1750	3117	3686	2693	3190	2222	6
17	AHPT 817	MPMH 35 (Check)	1667	1889	1968	1938	722	1454	2090	1712	1852	3202	2292	2747	1958	10
		LOC. MEAN	1690	1299	1976	2050	761	1498	2243	1670	2422	3572	2536	3054	2061	
		C.D. (5%)	548	323	274	318	160	752	443	286	507	333	577	530	293	
		C.D. (1%)	737	434	368	427	216	1012	596	379	681	448	776	731	387	
		C.V. (%)	19.5	15.0	8.3	9.3	12.7	30.2	11.9	14.9	12.6	5.6	13.7	8.2	15.2	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		PLOT SIZE (m ²)	14.40	14.40	14.40	14.40	14.40	14.40	14.40	-	10.80	14.40	14.40	-	-	

**LOCATION REJECTED DUE TO HIGH C.V. (i.e. > 30%): JLR 30.2%

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Table I.161: ADVANCE HYBRID & POPULATION TRIAL (Early) KHARIF - 2024 DRY FODDER YIELD (kg/ha) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	AHPT 801	PB 1756 (Check)	2569	2259	7245	4074	3125	2755	4588	3802	7099	9749	9491	9620	5295	11
2	AHPT 802	MH 2672	3009	3667	8403	6042	2894	2523	3424	4280	8488	8681	11574	10128	5870	4
3	AHPT 803	MH 2673	2662	4031	6389	6296	2894	3866	4931	4438	5802	10519	12500	11510	5989	2
4	AHPT 804	MH 2675	3171	3272	6713	5069	2963	3102	4625	4131	6883	11825	11343	11584	5897	3
5	AHPT 805	AHB 1200 (Check)	2870	1760	5741	4676	3472	2269	4308	3585	5031	10518	9954	10236	5060	14
6	AHPT 806	MH 2678	3032	3950	5926	4282	3171	2824	4280	3924	6821	8375	9722	9049	5238	12
7	AHPT 807	MH 2743	3148	3898	7130	4792	3125	3449	4234	4254	6111	8996	10880	9938	5576	7
8	AHPT 808	MH 2744	3403	2938	6204	6319	3657	4005	4843	4481	7716	11393	12500	11947	6298	1
9	AHPT 809	MH 2746	2801	1770	5394	4583	2454	3981	4120	3586	5370	7399	6481	6940	4435	17
10	AHPT 810	MH 2747	2708	3992	6412	5116	2755	3380	4181	4078	6296	7973	11574	9773	5439	9
11	AHPT 811	RHB 223 (Check)	2708	1294	5972	4676	3125	3310	4375	3637	5772	8270	10185	9228	4969	15
12	AHPT 812	MH 2748	2454	3938	5162	4583	2986	3611	3956	3813	5309	8829	10417	9623	5124	13
13	AHPT 813	MH 2749	3056	2888	5926	5162	3310	3877	4512	4104	5586	9222	11111	10167	5465	8
14	AHPT 814	MH 2754	2894	2606	7060	4815	3009	3958	4181	4075	6265	7872	10648	9260	5331	10
15	AHPT 815	HJB 67 Imp. (Check)	2130	1280	7106	4630	2847	3773	3963	3676	6327	7100	9491	8295	4865	16
16	AHPT 816	MH 2758	3472	4032	6782	4884	3102	3657	4299	4318	6235	9926	9722	9824	5611	5
17	AHPT 817	MPMH 35 (Check)	2894	4672	5949	5069	3519	3704	3877	4241	8086	9671	8565	9118	5601	6
		LOC. MEAN	2881	3073	6442	5004	3083	3414	4276	4025	6423	9195	10362	9779	5415	
		C.D. (5%)	778	1060	1120	439	803	1601	963	647	1215	1040	1822	2204	704	
		C.D. (1%)	1045	1425	1505	590	1079	2152	1295	857	1634	1398	2450	3037	929	
		C.V. (%)	16.2	20.7	10.5	5.3	15.7	28.2	13.5	15.2	11.4	6.8	10.6	10.6	14.7	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.067	0.000	0.000	0.000	0.028	0.000	
		PLOT SIZE (m ²)	14.40	14.40	14.40	14.40	14.40	14.40	14.40	-	10.80	14.40	14.40	-	-	

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Table I.162: ADVANCE HYBRID & POPULATION TRIAL (Early) KHARIF - 2024 DAYS TO 50% FLOWERING ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR*	FTR	SDR	JLR	NGR	RAJ MEAN	SKN	BWL	HSR*	HAR MEAN	ZONE MEAN	RANK
1	AHPT 801	PB 1756 (Check)	48	44	53	44	42	42	44	44	45	44	47	44	44	12
2	AHPT 802	MH 2672	45	44	49	44	46	44	43	44	42	44	45	44	44	15
3	AHPT 803	MH 2673	47	44	47	45	44	44	41	44	41	42	49	42	44	17
4	AHPT 804	MH 2675	48	46	53	44	45	42	46	45	40	46	51	46	45	10
5	AHPT 805	AHB 1200 (Check)	47	47	53	44	48	44	46	46	52	48	50	48	47	1
6	AHPT 806	MH 2678	46	45	51	45	46	42	47	45	42	43	45	43	44	11
7	AHPT 807	MH 2743	45	45	46	45	45	44	44	45	47	47	52	47	45	5
8	AHPT 808	MH 2744	45	45	51	44	45	42	44	44	43	46	52	46	44	13
9	AHPT 809	MH 2746	47	45	52	46	45	43	46	45	45	42	45	42	45	8
10	AHPT 810	MH 2747	46	43	52	46	46	45	44	45	47	45	51	45	45	4
11	AHPT 811	RHB 223 (Check)	48	45	47	45	46	44	47	46	52	47	52	47	47	2
12	AHPT 812	MH 2748	49	43	47	44	45	42	45	45	39	41	45	41	44	16
13	AHPT 813	MH 2749	47	46	54	44	45	44	46	45	44	48	49	48	45	3
14	AHPT 814	MH 2754	46	46	45	46	45	46	45	46	45	42	48	42	45	6
15	AHPT 815	HHB 67 Imp. (Check)	46	46	47	44	45	45	44	45	43	40	45	40	44	14
16	AHPT 816	MH 2758	46	46	50	45	45	44	44	45	45	42	48	42	45	9
17	AHPT 817	MPMH 35 (Check)	46	46	51	45	46	46	46	46	42	44	52	44	45	7
		LOC. MEAN	47	45	50	45	45	44	45	45	44	44	49	44	45	
		C.D. (5%)	1.0	1.0	3.0	2.0	1.0	2.0	3.0	1.0	4.0	2.0	2.0	2.0	2.0	
		C.D. (1%)	2.0	2.0	3.0	2.0	2.0	3.0	4.0	2.0	6.0	3.0	2.0	3.0	2.0	
		C.V. (%)	1.6	1.8	3.0	2.1	1.6	2.7	3.9	2.4	5.9	2.7	2.2	2.7	3.8	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.077	0.000	0.000	0.000	0.000	0.003	

*LOCATION REJECTED DUE TO DELAYED FLOWERING IN CHECKS

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Table I.163: ADVANCE HYBRID & POPULATION TRIAL (Early) KHARIF - 2024 DAYS TO MATURITY ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	BKR	FTR	SDR	JLR	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	AHPT 801	PB 1756 (Check)	79	82	75	73	75	79	77	79	75	75	75	77	5
2	AHPT 802	MH 2672	78	79	76	75	75	82	78	73	75	74	74	76	10
3	AHPT 803	MH 2673	78	77	75	78	73	77	76	78	72	79	76	76	8
4	AHPT 804	MH 2675	79	80	74	74	75	80	77	76	77	81	79	77	2
5	AHPT 805	AHB 1200 (Check)	79	80	73	77	75	78	77	74	80	79	79	77	4
6	AHPT 806	MH 2678	77	81	73	73	78	75	76	79	74	74	74	76	12
7	AHPT 807	MH 2743	76	76	74	73	77	75	75	78	78	81	80	76	8
8	AHPT 808	MH 2744	75	81	73	74	75	76	76	76	77	81	79	76	7
9	AHPT 809	MH 2746	78	82	72	72	78	79	77	71	73	75	74	76	14
10	AHPT 810	MH 2747	77	82	76	72	80	76	77	71	76	80	78	77	6
11	AHPT 811	RHB 223 (Check)	78	77	77	73	79	76	77	81	78	81	80	78	1
12	AHPT 812	MH 2748	80	77	72	74	76	72	75	71	72	75	74	74	16
13	AHPT 813	MH 2749	77	84	73	74	79	77	77	71	80	80	80	77	3
14	AHPT 814	MH 2754	77	74	71	74	80	75	75	73	74	77	76	75	15
15	AHPT 815	HHB 67 Imp. (Check)	77	77	74	73	81	79	77	75	71	75	73	76	13
16	AHPT 816	MH 2758	77	80	74	74	80	77	77	73	73	78	75	76	11
17	AHPT 817	MPMH 35 (Check)	76	81	75	73	81	73	77	71	74	82	78	76	9
		LOC. MEAN	77	79	74	74	78	77	77	75	75	78	77	76	
		C.D. (5%)	2.0	2.0	5.0	2.0	2.0	4.0	3.0	3.0	2.0	4.0	6.0	2.0	
		C.D. (1%)	2.0	3.0	6.0	3.0	3.0	5.0	3.0	4.0	3.0	5.0	8.0	3.0	
		C.V. (%)	1.4	1.7	3.8	1.6	1.8	2.8	2.7	2.2	1.8	2.8	3.6	3.1	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.920	0.000	0.000	0.000	0.241	0.518	

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Table I.164: ADVANCE HYBRID & POPULATION TRIAL (Early) KHARIF - 2024 PLANT HEIGHT (cm) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	AHPT 801	PB 1756 (Check)	186	193	193	172	163	191	179	182	169	196	232	214	187	3
2	AHPT 802	MH 2672	177	186	184	175	151	200	170	178	152	185	234	210	181	11
3	AHPT 803	MH 2673	174	193	182	179	156	207	174	181	169	193	242	218	187	4
4	AHPT 804	MH 2675	188	205	175	182	146	188	179	180	164	189	231	210	185	8
5	AHPT 805	AHB 1200 (Check)	197	193	179	185	155	200	163	182	156	190	221	206	184	10
6	AHPT 806	MH 2678	183	197	184	157	151	172	182	175	149	184	233	209	179	13
7	AHPT 807	MH 2743	186	187	195	170	154	193	179	180	151	191	256	224	186	6
8	AHPT 808	MH 2744	197	204	191	175	164	178	170	183	169	194	236	215	188	2
9	AHPT 809	MH 2746	175	172	169	166	155	171	178	169	144	181	219	200	173	15
10	AHPT 810	MH 2747	172	181	174	162	140	176	181	170	123	190	223	207	172	16
11	AHPT 811	RHB 223 (Check)	193	193	177	158	173	170	162	175	156	205	255	230	184	9
12	AHPT 812	MH 2748	158	165	169	148	134	140	175	156	137	185	214	200	163	17
13	AHPT 813	MH 2749	188	194	192	178	156	141	183	176	184	203	233	218	185	7
14	AHPT 814	MH 2754	202	195	199	186	140	146	165	176	164	202	265	233	186	5
15	AHPT 815	HHB 67 Imp. (Check)	193	169	183	170	152	162	198	175	152	193	233	213	181	12
16	AHPT 816	MH 2758	182	188	176	168	152	167	154	170	153	188	236	212	177	14
17	AHPT 817	MPMH 35 (Check)	202	207	194	187	154	175	196	188	161	194	251	222	192	1
		LOC. MEAN	185	189	183	172	153	175	176	176	156	192	236	214	182	
		C.D. (5%)	14.0	17.0	14.0	11.0	16.0	25.0	5.0	12.0	15.0	10.0	27.0	16.0	9.0	
		C.D. (1%)	19.0	23.0	19.0	15.0	22.0	34.0	7.0	16.0	21.0	13.0	36.0	23.0	12.0	
		C.V. (%)	4.7	5.4	4.5	4.0	6.4	8.7	1.7	6.3	5.9	3.0	6.8	3.6	5.9	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	

CHAPTER I: BREEDING

Table I.165: ADVANCE HYBRID & POPULATION TRIAL (Early) KHARIF - 2024 PRODUCTIVE TILLERS (No./Plant) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	AHPT 801	PB 1756 (Check)	1.4	2.3	1.5	5.0	1.3	5.3	3.6	2.9	1.9	1.7	4.0	2.9	2.8	14
2	AHPT 802	MH 2672	1.8	2.7	1.5	5.7	1.5	5.7	3.5	3.2	1.7	2.6	3.3	3.0	3.0	9
3	AHPT 803	MH 2673	1.9	3.3	1.5	5.8	1.5	5.7	3.9	3.4	1.9	2.3	3.5	2.9	3.1	2
4	AHPT 804	MH 2675	1.5	2.7	1.4	4.3	1.5	6.3	4.6	3.2	1.9	1.9	3.0	2.5	2.9	10
5	AHPT 805	AHB 1200 (Check)	1.3	3.3	1.4	3.5	1.5	6.3	4.1	3.1	1.7	2.3	3.4	2.9	2.9	13
6	AHPT 806	MH 2678	1.9	3.3	1.5	5.2	1.1	5.7	3.3	3.1	1.5	2.4	4.4	3.4	3.0	5
7	AHPT 807	MH 2743	1.7	3.3	1.5	5.2	1.6	5.8	4.3	3.3	1.4	2.4	2.8	2.6	3.0	8
8	AHPT 808	MH 2744	1.6	3.7	1.4	5.7	1.7	6.0	4.2	3.5	1.9	2.0	4.1	3.1	3.2	1
9	AHPT 809	MH 2746	2.0	2.7	1.5	5.3	1.9	5.7	3.3	3.2	1.4	1.5	3.8	2.7	2.9	12
10	AHPT 810	MH 2747	2.6	2.7	1.4	5.5	1.4	5.7	4.2	3.3	1.4	2.9	3.5	3.2	3.1	3
11	AHPT 811	RHB 223 (Check)	1.5	2.7	1.5	5.5	1.5	5.3	3.4	3.1	1.5	2.5	3.8	3.1	2.9	10
12	AHPT 812	MH 2748	1.7	3.3	1.6	5.5	1.3	5.3	2.4	3.0	1.2	1.3	5.1	3.2	2.9	13
13	AHPT 813	MH 2749	1.7	3.3	1.4	4.6	1.3	5.7	4.3	3.2	1.7	1.8	3.4	2.6	2.9	11
14	AHPT 814	MH 2754	2.1	2.7	1.5	5.7	1.2	5.7	3.6	3.2	1.8	1.9	3.9	2.9	3.0	7
15	AHPT 815	HHB 67 Imp. (Check)	2.3	3.3	1.5	5.5	1.3	5.3	3.4	3.2	1.6	2.3	3.8	3.1	3.0	4
16	AHPT 816	MH 2758	2.1	3.7	1.4	5.2	1.2	5.7	3.4	3.2	1.7	1.7	4.2	3.0	3.0	6
17	AHPT 817	MPMH 35 (Check)	1.9	2.7	1.5	5.0	1.7	5.3	3.0	3.0	1.5	2.2	3.2	2.7	2.8	15
		LOC. MEAN	1.8	3.0	1.5	5.2	1.4	5.7	3.7	3.2	1.6	2.1	3.7	2.9	3.0	
		C.D. (5%)	0.4	1.0	0.1	0.8	0.5	1.0	0.5	0.4	0.3	0.5	1.0	1.3	0.4	
		C.D. (1%)	0.6	1.3	0.2	1.1	0.7	1.4	0.6	0.6	0.3	0.6	1.3	1.8	0.5	
		C.V. (%)	13.9	19.6	4.6	9.7	22.6	11.1	7.5	12.5	9.5	13.7	15.6	20.7	13.7	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.593	0.000	0.000	0.000	0.978	0.695	

CHAPTER I: BREEDING

Table I.166: ADVANCE HYBRID & POPULATION TRIAL (Early) KHARIF - 2024 PANICLE LENGTH (cm) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	AHPT 801	PB 1756 (Check)	25	25	23	23	25	23	25	24	20	25	26	26	24	3
2	AHPT 802	MH 2672	23	22	23	21	25	21	22	22	21	24	26	25	23	11
3	AHPT 803	MH 2673	24	26	23	23	24	22	26	24	20	24	25	25	24	7
4	AHPT 804	MH 2675	21	22	23	21	21	23	24	22	18	24	23	24	22	15
5	AHPT 805	AHB 1200 (Check)	22	27	24	24	25	23	25	24	24	25	24	25	24	2
6	AHPT 806	MH 2678	23	24	23	22	23	26	22	23	22	24	25	24	23	9
7	AHPT 807	MH 2743	24	24	25	21	23	24	25	24	22	24	26	25	24	6
8	AHPT 808	MH 2744	23	23	24	23	25	23	27	24	19	26	26	26	24	4
9	AHPT 809	MH 2746	21	22	24	21	24	25	20	22	19	24	23	24	22	14
10	AHPT 810	MH 2747	20	21	22	20	21	25	22	22	19	23	24	24	22	16
11	AHPT 811	RHB 223 (Check)	23	26	25	22	25	24	26	24	24	26	26	26	25	1
12	AHPT 812	MH 2748	20	20	24	17	20	24	20	21	17	22	23	22	21	17
13	AHPT 813	MH 2749	23	24	24	22	23	25	21	23	21	25	26	25	23	10
14	AHPT 814	MH 2754	25	25	26	25	23	24	22	24	17	25	25	25	24	8
15	AHPT 815	HHB 67 Imp. (Check)	22	20	23	22	20	27	23	22	19	24	23	24	22	13
16	AHPT 816	MH 2758	21	25	24	23	24	24	25	24	22	25	25	25	24	5
17	AHPT 817	MPMH 35 (Check)	23	23	23	22	21	23	23	23	17	23	25	24	22	12
		LOC. MEAN	22	23	24	22	23	24	23	23	20	24	25	25	23	
		C.D. (5%)	2.0	3.0	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0	3.0	2.0	1.0	
		C.D. (1%)	3.0	4.0	2.0	3.0	5.0	5.0	4.0	2.0	2.0	3.0	4.0	2.0	2.0	
		C.V. (%)	6.6	7.1	4.6	6.0	8.8	8.6	7.6	6.3	5.3	4.7	6.7	3.1	6.0	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.000	

CHAPTER I: BREEDING

Table I.167: ADVANCE HYBRID & POPULATION TRIAL (Early) KHARIF - 2024 PANICLE DIAMETER (cm) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	NGR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	AHPT 801	PB 1756 (Check)	2.7	2.7	2.5	2.7	3.1	3.4	3.0	2.9	2.0	3.3	4.2	3.7	3.0	7
2	AHPT 802	MH 2672	2.7	2.5	2.5	2.3	3.2	3.0	2.2	2.6	2.6	3.3	4.2	3.8	2.8	13
3	AHPT 803	MH 2673	2.8	2.7	2.3	2.4	3.3	3.4	3.5	2.9	2.2	3.3	3.8	3.6	3.0	5
4	AHPT 804	MH 2675	2.7	2.6	2.4	2.8	3.0	3.4	3.4	2.9	2.2	3.3	3.6	3.5	2.9	9
5	AHPT 805	AHB 1200 (Check)	2.9	2.9	2.7	3.3	3.7	3.2	2.1	3.0	2.4	3.8	4.1	4.0	3.1	1
6	AHPT 806	MH 2678	2.8	2.3	2.6	2.5	3.1	2.6	2.4	2.6	2.6	3.2	3.9	3.5	2.8	14
7	AHPT 807	MH 2743	2.9	2.5	2.7	2.5	3.3	2.9	3.0	2.8	2.7	3.2	4.0	3.6	3.0	6
8	AHPT 808	MH 2744	2.9	2.5	2.8	2.8	3.5	3.3	3.1	3.0	2.5	3.6	3.9	3.8	3.1	3
9	AHPT 809	MH 2746	2.6	2.6	2.7	2.9	3.4	2.1	2.5	2.7	2.6	3.3	3.8	3.5	2.9	12
10	AHPT 810	MH 2747	2.6	2.5	2.6	2.5	3.1	3.9	2.9	2.9	2.5	3.1	3.9	3.5	3.0	8
11	AHPT 811	RHB 223 (Check)	2.6	2.6	2.4	2.5	3.5	3.3	2.8	2.8	2.7	3.6	4.1	3.9	3.0	4
12	AHPT 812	MH 2748	2.6	2.4	2.5	2.5	3.0	3.4	3.4	2.8	2.1	3.5	3.7	3.6	2.9	11
13	AHPT 813	MH 2749	2.8	2.7	2.8	3.1	3.4	3.5	2.3	2.9	2.6	3.5	4.2	3.9	3.1	2
14	AHPT 814	MH 2754	2.1	2.4	2.5	2.5	2.8	3.3	1.9	2.5	2.0	2.8	3.9	3.4	2.6	16
15	AHPT 815	HHB 67 Imp. (Check)	2.3	2.2	2.2	2.1	2.6	2.9	2.5	2.4	2.3	2.9	3.7	3.3	2.6	17
16	AHPT 816	MH 2758	2.7	2.4	2.4	2.4	3.4	3.2	2.7	2.7	2.7	3.4	4.0	3.7	2.9	10
17	AHPT 817	MPMH 35 (Check)	2.4	2.4	2.5	2.3	3.0	3.3	2.4	2.6	2.3	3.0	3.7	3.4	2.7	15
		LOC. MEAN	2.6	2.5	2.5	2.6	3.2	3.2	2.7	2.8	2.4	3.3	3.9	3.6	2.9	
		C.D. (5%)	0.3	0.5	0.2	0.3	0.4	0.8	0.4	0.3	0.2	0.3	0.5	0.4	0.2	
		C.D. (1%)	0.3	0.7	0.3	0.5	0.5	1.1	0.5	0.4	0.3	0.4	0.7	0.5	0.3	
		C.V. (%)	5.8	12.9	5.7	7.8	7.0	15.5	8.0	9.9	5.3	4.8	8.2	4.8	8.7	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.069	0.000	

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Table I.168: ADVANCE HYBRID & POPULATION TRIAL (Early) KHARIF - 2024 1000-SEED Wt. (g) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	NGR	RAJ MEAN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	AHPT 801	PB 1756 (Check)	9.2	6.2	9.3	8.3	8.4	8.0	5.4	7.8	11.1	11.1	11.1	8.6	11
2	AHPT 802	MH 2672	7.1	7.4	8.6	8.4	6.9	8.0	5.1	7.4	9.8	11.5	10.7	8.1	17
3	AHPT 803	MH 2673	7.7	8.3	8.7	9.6	7.2	8.0	5.0	7.8	10.8	12.3	11.5	8.6	10
4	AHPT 804	MH 2675	7.6	6.1	9.3	10.4	8.4	7.9	7.1	8.1	10.5	12.2	11.3	8.8	2
5	AHPT 805	AHB 1200 (Check)	8.5	5.7	9.3	8.5	6.4	8.1	5.8	7.5	11.3	12.0	11.7	8.4	12
6	AHPT 806	MH 2678	7.9	6.4	10.5	8.9	7.8	8.1	5.3	7.8	9.4	11.3	10.3	8.4	13
7	AHPT 807	MH 2743	8.9	6.2	9.0	10.0	7.8	8.2	5.2	7.9	11.8	12.2	12.0	8.8	3
8	AHPT 808	MH 2744	8.6	8.1	10.1	8.8	8.1	8.0	7.5	8.5	10.3	13.7	12.0	9.3	1
9	AHPT 809	MH 2746	7.9	7.5	10.3	9.2	8.4	8.0	5.3	8.1	9.5	11.9	10.7	8.7	9
10	AHPT 810	MH 2747	7.9	6.0	10.0	9.5	8.3	8.0	7.3	8.2	9.6	11.5	10.6	8.7	8
11	AHPT 811	RHB 223 (Check)	8.8	6.4	8.7	7.7	7.0	8.1	7.4	7.7	11.3	13.4	12.3	8.8	6
12	AHPT 812	MH 2748	7.9	9.3	8.0	9.4	6.8	8.2	6.3	8.0	10.4	12.1	11.2	8.7	7
13	AHPT 813	MH 2749	8.5	6.2	8.4	8.5	8.5	8.2	5.9	7.7	11.9	13.1	12.5	8.8	4
14	AHPT 814	MH 2754	7.9	6.0	9.8	8.9	7.6	8.2	4.9	7.6	8.5	11.5	10.0	8.1	16
15	AHPT 815	HHB 67 Imp. (Check)	8.1	8.1	9.0	9.7	7.0	8.3	5.4	7.9	10.4	13.0	11.7	8.8	5
16	AHPT 816	MH 2758	8.1	6.0	9.3	9.3	6.7	8.1	6.2	7.7	9.3	11.3	10.3	8.3	15
17	AHPT 817	MPMH 35 (Check)	8.0	5.9	9.0	9.7	6.8	8.2	5.7	7.6	11.2	10.8	11.0	8.4	14
		LOC. MEAN	8.2	6.8	9.3	9.1	7.5	8.1	5.9	7.8	10.4	12.1	11.2	8.6	
		C.D. (5%)	1.2	0.4	1.2	0.6	1.0	0.2	0.5	0.8	1.4	1.1	1.4	0.8	
		C.D. (1%)	1.6	0.5	1.7	0.8	1.3	0.3	0.7	1.0	1.9	1.5	1.9	1.0	
		C.V. (%)	8.9	3.4	8.1	3.9	7.6	1.8	5.3	9.4	8.3	5.7	8.3	9.5	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.493	0.000	0.000	0.000	0.569	

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Table I.169: ADVANCE HYBRID & POPULATION TRIAL (Early) KHARIF - 2024 POPULATION AT HARVEST (No./plot) ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	SDR	JLR	RAJ MEAN	SKN	BWL	HSR	HAR MEAN	ZONE MEAN	RANK
1	AHPT 801	PB 1756 (Check)	131	106	133	151	170	79	128	144	185	97	141	133	13
2	AHPT 802	MH 2672	164	115	129	151	155	78	132	147	165	102	133	134	8
3	AHPT 803	MH 2673	158	119	138	152	164	75	134	142	197	95	146	138	3
4	AHPT 804	MH 2675	144	114	126	151	154	82	128	141	182	95	139	132	14
5	AHPT 805	AHB 1200 (Check)	122	99	135	151	159	83	125	140	176	99	138	129	16
6	AHPT 806	MH 2678	163	112	131	152	174	86	136	145	191	97	144	139	1
7	AHPT 807	MH 2743	166	111	134	151	170	75	135	149	185	94	139	137	4
8	AHPT 808	MH 2744	163	105	130	151	175	85	135	145	182	95	138	137	5
9	AHPT 809	MH 2746	166	99	134	151	156	77	131	139	193	92	143	134	7
10	AHPT 810	MH 2747	165	105	125	152	166	70	131	128	195	95	145	134	10
11	AHPT 811	RHB 223 (Check)	108	54	121	151	158	72	111	131	179	94	137	119	17
12	AHPT 812	MH 2748	166	107	130	151	156	88	133	137	207	104	156	138	2
13	AHPT 813	MH 2749	160	102	125	152	167	70	129	148	180	92	136	133	12
14	AHPT 814	MH 2754	162	112	130	152	169	76	134	150	169	94	131	135	6
15	AHPT 815	HHB 67 Imp. (Check)	159	69	127	151	154	73	122	150	191	96	144	130	15
16	AHPT 816	MH 2758	168	106	133	151	143	70	128	136	196	94	145	133	11
17	AHPT 817	MPMH 35 (Check)	172	119	129	152	172	68	135	140	165	89	127	134	9
		LOC. MEAN	155	103	130	151	162	77	130	142	185	95	140	133	
		C.D. (5%)	18.0	15.0	19.0	1.0	18.0	19.0	12.0	14.0	14.0	11.0	23.0	10.0	
		C.D. (1%)	24.0	20.0	25.0	2.0	24.0	25.0	15.0	19.0	19.0	14.0	31.0	13.0	
		C.V. (%)	6.8	8.8	8.7	0.5	6.6	14.8	7.8	6.1	4.6	6.8	6.6	7.3	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.865	0.010	

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Table I.170: ADVANCE HYBRID & POPULATION TRIAL (Early) KHARIF - 2024
SEED SET (%) UNDER BAG ZONE A₁

S.No.	TEST CODE	ENTRY	MDR	JDR	BKR	FTR	RAJ MEAN	HSR	ZONE MEAN	RANK
1	AHPT 801	PB 1756 (Check)	83	77	43	81	71	87	74	4
2	AHPT 802	MH 2672	78	80	53	85	74	80	75	2
3	AHPT 803	MH 2673	65	82	48	83	70	62	68	12
4	AHPT 804	MH 2675	64	75	60	80	70	85	73	6
5	AHPT 805	AHB 1200 (Check)	77	73	45	85	70	83	73	5
6	AHPT 806	MH 2678	75	77	40	82	68	60	67	13
7	AHPT 807	MH 2743	78	82	45	81	71	85	74	3
8	AHPT 808	MH 2744	75	75	40	85	69	82	71	7
9	AHPT 809	MH 2746	78	73	43	83	69	33	62	15
10	AHPT 810	MH 2747	76	68	43	80	67	73	68	11
11	AHPT 811	RHB 223 (Check)	72	72	47	85	69	78	71	9
12	AHPT 812	MH 2748	44	77	48	82	63	47	59	17
13	AHPT 813	MH 2749	80	80	45	77	71	73	71	8
14	AHPT 814	MH 2754	82	78	48	83	73	90	76	1
15	AHPT 815	HHB 67 Imp. (Check)	70	78	43	83	69	35	62	16
16	AHPT 816	MH 2758	67	77	43	80	67	87	71	10
17	AHPT 817	MPMH 35 (Check)	48	82	52	85	67	62	66	14
		LOC. MEAN	71	77	46	82	69	71	69	
		C.D. (5%)	8.0	8.0	10.0	4.0	10.0	18.0	10.0	
		C.D. (1%)	11.0	10.0	14.0	6.0	13.0	24.0	13.0	
		C.V. (%)	7.0	6.0	13.3	3.1	9.9	15.1	9.9	
		F (Prob)	0.000	0.000	0.000	0.000	0.874	0.000	0.874	

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Table I.171: ADVANCE HYBRID & POPULATION TRIAL (Early) KHARIF - 2024 ZONE A₁
GRAIN QUALITY: IRON CONTENT (ppm)

S.No.	TEST CODE	ENTRY	JDR	BKR	NGR	FTR	SKN	BWL	HSR	ZONE MEAN	RANK
1	AHPT 801	PB 1756 (Check)	30	48	43	40	48	38	64	45	8
2	AHPT 802	MH 2672	31	46	36	44	44	36	69	44	9
3	AHPT 803	MH 2673	39	43	37	42	45	40	69	45	8
4	AHPT 804	MH 2675	31	50	39	43	58	50	60	47	6
5	AHPT 805	AHB 1200 (Check)	35	70	58	44	67	77	74	61	1
6	AHPT 806	MH 2678	29	42	40	40	37	51	66	44	9
7	AHPT 807	MH 2743	34	44	49	46	40	51	42	44	9
8	AHPT 808	MH 2744	46	37	43	45	44	37	47	43	10
9	AHPT 809	MH 2746	33	49	61	45	65	53	68	53	3
10	AHPT 810	MH 2747	32	36	50	42	44	47	50	43	10
11	AHPT 811	RHB 223 (Check)	34	46	44	42	46	48	63	46	7
12	AHPT 812	MH 2748	39	61	49	44	81	62	61	57	2
13	AHPT 813	MH 2749	34	46	35	43	58	45	74	48	5
14	AHPT 814	MH 2754	36	47	45	43	57	60	61	50	4
15	AHPT 815	HHB 67 Imp. (Check)	30	44	41	45	56	45	68	47	6
16	AHPT 816	MH 2758	48	42	42	44	48	36	53	45	8
17	AHPT 817	MPMH 35 (Check)	40	45	43	40	52	42	47	44	9

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Table I.172: ADVANCE HYBRID & POPULATION TRIAL (Early) KHARIF - 2024 ZONE A₁
GRAIN QUALITY: ZINC CONTENT (ppm)

S.No.	TEST CODE	ENTRY	JDR	BKR	NGR	FTR	SKN	BWL	HSR	ZONE MEAN	RANK
1	AHPT 801	PB 1756 (Check)	42	35	33	32	47	36	42	38	5
2	AHPT 802	MH 2672	41	34	31	32	44	36	45	38	5
3	AHPT 803	MH 2673	40	33	32	34	41	40	48	38	5
4	AHPT 804	MH 2675	36	38	32	34	37	50	41	38	5
5	AHPT 805	AHB 1200 (Check)	36	45	35	24	47	52	41	40	3
6	AHPT 806	MH 2678	38	34	38	35	43	43	40	39	4
7	AHPT 807	MH 2743	37	32	36	38	35	36	36	36	7
8	AHPT 808	MH 2744	43	33	36	29	44	40	43	38	5
9	AHPT 809	MH 2746	32	33	36	28	51	42	44	38	5
10	AHPT 810	MH 2747	36	32	44	33	40	32	41	37	6
11	AHPT 811	RHB 223 (Check)	43	32	43	20	43	35	41	37	6
12	AHPT 812	MH 2748	35	39	38	29	51	44	42	40	3
13	AHPT 813	MH 2749	37	39	37	32	47	41	48	40	3
14	AHPT 814	MH 2754	42	35	49	32	51	47	45	43	1
15	AHPT 815	HHB 67 Imp. (Check)	38	36	47	31	51	43	42	41	2
16	AHPT 816	MH 2758	41	32	32	28	45	38	40	37	6
17	AHPT 817	MPMH 35 (Check)	38	33	33	29	48	40	41	37	6

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Table I.173: ADVANCE HYB. & POP. TRIAL (Early) KHARIF - 2024 ZONE A₁
GRAIN QUALITY (Protein and Fat)

S.No.	TEST CODE	ENTRY	Protein (%)			Fat (%)		
			HSR	BWL	MEAN	HSR	BWL	MEAN
1	AHPT 801	PB 1756 (Check)	10.7	9.5	10.1	5.3	5.7	5.5
2	AHPT 802	MH 2672	11.1	10.1	10.6	5.2	5.9	5.6
3	AHPT 803	MH 2673	10.6	9.9	10.3	5.7	5.7	5.7
4	AHPT 804	MH 2675	12.1	9.7	10.9	6.0	6.1	6.1
5	AHPT 805	AHB 1200 (Check)	10.6	9.9	10.3	5.6	5.6	5.6
6	AHPT 806	MH 2678	10.8	9.1	10.0	6.0	5.9	6.0
7	AHPT 807	MH 2743	9.8	9.9	9.9	5.6	5.2	5.4
8	AHPT 808	MH 2744	10.8	9.0	9.9	5.7	5.8	5.8
9	AHPT 809	MH 2746	11.5	9.6	10.6	5.8	6.3	6.1
10	AHPT 810	MH 2747	10.9	9.1	10.0	5.6	5.5	5.6
11	AHPT 811	RHB 223 (Check)	11.3	9.4	10.4	5.6	5.9	5.8
12	AHPT 812	MH 2748	10.9	9.2	10.1	5.6	6.0	5.8
13	AHPT 813	MH 2749	10.2	8.6	9.4	5.6	6.0	5.8
14	AHPT 814	MH 2754	11.0	10.0	10.5	6.0	6.7	6.4
15	AHPT 815	HHB 67 Imp. (Check)	11.2	11.1	11.2	5.6	5.4	5.5
16	AHPT 816	MH 2758	10.8	9.6	10.2	5.8	5.2	5.5
17	AHPT 817	MPMH 35 (Check)	10.8	9.4	10.1	5.7	6.0	5.9

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Table I.174: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF 2024 EXPERIMENTAL DETAILS ZONE A

Locations	Soil	pH	Sowing date	Harvesting date	Interculture date	Irrigation date	Fertilizer			Insecticide
							N	P	K	
RAJASTHAN										
Mandor (ARS,AU Jodhpur)	SL	8.1	10.7.24	As Per Maturity	12.8.24	Nil	40	20	0	Nil
Bikaner (SKRAU)	S	8.0	9.7.24	25.10.24	10.8.24	25.9.24	40	20	0	Nil
Jobner (SKNAU)	-	-	12.7.24	As Per Maturity	-	Nil	-	-	-	Nil
Jaipur (SKNAU)	SL	-	8.7.24	9.10.24	24.7.24	Nil	40	30	0	Nil
GUJARAT										
Jamnagar (JAU)	MB	7.6	18.7.24	16.10.24	28.7, 3.8, 9.8, 17.8.24	Nil	80	40	0	Nil
UTTAR PRADESH										
Jhansi (RLBCAU)	B	8.0	4.7.24	26.10.24	15.8.24	25.8.24	80	40	40	Nil
HARYANA										
Hisar (CCSHAU)	SL	-	11.7.24	25.10.24	-	28.8.24	100	40	0	Nil
MADHYA PRADESH										
Gwalior (RVSKVV)	SL	7.1	18.7.24	17.10.24	12.8.24	26.7.24	60	40	20	Nil
Morena (RVSKVV)	SL	7.8	24.7.24	5.11.24	-	Nil	100	50	20	Nil
JHARKHAND										
Ranchi (BAU)	SRL	5.6	1.7.24	As Per Maturity	25.7, 28.7.24	Nil	60	40	40	Nil

SL = Sandy Loam, MB = Medium Black, S = Sandy, SRL= Sandy Red Lateritic, B = Black.

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Table I.175: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 GRAIN YIELD (kg/ha) ZONE A1 & A

S.No.	ENTRY	MDR	BKR	JBR***	JPR	RAJ MEAN	JMR	JNS***	HSR	GLR***	MRN***	RNC	ZONE MEAN	RANK
1	MPMH 42	1935	2037	1199	2372	2115	2065	358	2686	1817	2036	3207	2384	12
2	MPMH 35	1983	2014	890	1506	1834	2093	153	3385	1230	2139	3604	2431	9
3	RHB 223	1546	1470	1063	2119	1712	2019	144	1711	1159	1631	2396	1877	25
4	PB 1756	1785	1690	853	1956	1810	1815	175	2188	1782	2072	3874	2218	16
5	HHB 272	1413	1840	767	1267	1507	1856	211	3068	1408	2069	3505	2158	19
6	GHB 719	2409	1551	791	1706	1889	1935	192	3449	941	2036	3532	2430	10
7	GHB 538	1152	1019	915	1525	1232	1694	175	898	944	1369	4072	1727	28
8	HHB 67 Improved	1162	1389	804	1678	1410	1630	142	2559	1452	1722	2667	1847	27
9	86M94	2275	1539	995	2708	2174	2764	281	2553	1228	1103	5910	2958	2
10	DHBH 1397	2192	1458	940	2622	2091	2588	67	3354	2837	1836	5748	2994	1
11	PB 1852	1825	1725	705	2133	1894	2852	111	2874	1833	1081	5838	2874	4
12	86M01	1251	1447	958	1778	1492	2519	122	3898	1766	1725	5748	2773	5
13	GHB 905	1575	1748	649	1875	1732	2009	85	3750	1818	2006	2919	2313	13
14	RHB 173	-	729	-	-	729	-	92	-	-	-	-	729	33
15	GHB 732	1432	1400	711	1794	1542	3019	129	2546	2354	2467	5243	2573	7
16	GHB 744	1331	1377	693	2075	1594	1870	103	1976	1038	1611	4955	2264	15
17	86M80	1265	671	853	2731	1555	2602	72	2752	1850	1117	3676	2283	14
18	MP 7878	1667	2465	921	2503	2212	3532	97	2208	1139	822	3459	2639	6
19	86M84	1569	1343	822	2653	1855	2773	68	3391	1233	1028	2739	2411	11
20	KBH 108	1045	1644	699	1522	1403	2653	67	3403	995	906	2414	2113	20
21	Kaveri Super Boss	1496	2153	1044	2078	1909	2884	67	3678	1255	1425	4973	2877	3
22	86M86	1489	1373	748	2211	1691	2435	97	2885	912	972	1910	2051	23
23	RHB 233	1178	1204	754	2503	1628	2083	244	2124	964	2125	1207	1716	29
24	RHB 234	1097	787	700	2697	1527	1491	133	2228	981	936	2919	1870	26
25	AHB 1269	1423	1238	717	2392	1684	2083	100	2805	1051	1028	4649	2432	8
26	AHB 1200	1621	1179	816	2014	1605	2046	67	2536	921	964	3694	2182	17
27	HHB 299	1371	984	859	1892	1416	1736	67	1825	1305	1103	4000	1968	24
28	Dhanshakti	1026	984	700	2383	1464	907	69	2036	933	947	1423	1460	31
29	ICMV 221	1090	1042	705	1522	1218	1222	64	1357	1006	1028	1730	1327	32
30	Pusa Composite 701	1649	1215	822	1736	1533	2060	111	2860	1035	1325	2829	2058	22
31	Pusa Composite 383	1459	1539	767	1767	1588	1963	89	2423	957	975	3261	2069	21
32	JBV 2	1785	1139	1149	2147	1690	2204	58	2964	1167	1450	2775	2169	18
33	Raj 171	1053	1528	927	2522	1701	1866	208	1594	989	1117	1288	1642	30
	LOC. MEAN	1517	1422	842	2075	1671	2165	128	2624	1322	1443	3505	2218	
	C.D. (5%)	158	200	78	618	604	513	30	663	195	275	410	727	
	C.D. (1%)	210	266	104	821	804	682	40	881	259	365	545	960	
	C.V. (%)	6.4	8.6	5.7	18.2	22.1	14.5	14.4	15.5	9.0	11.7	7.2	28.7	
	F (Prob)	0.000	0.000	0.000	0.000	0.141	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	PLOT SIZE (m ²)	14.40	14.40	10.80	12.00	-	14.40	12.00	12.00	12.00	12.00	9.25	-	

***TEST LOCATION REJECTED DUE TO LOW AVERAGE YIELD (842, 128, 1322 & 1443 kg/ha), THAN THE STATE AVERAGE YIELD (970, 2008 & 2166 kg/ha) TAKEN OVER 10 YEARS

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Table I.176: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 DRY FODDER YIELD (kg/ha) ZONE A1 & A

S.No. ENTRY	MDR	BKR	JBR	JPR	RAJ MEAN	JMR	JNS	HSR	GLR	MRN	MP MEAN	RNC	ZONE RANK MEAN
1 MPMH 42	3377	5255	6586	5028	5062	5185	1028	7778	6111	7394	6753	10631	5837 21
2 MPMH 35	3345	5833	7210	4250	5160	5111	1736	11111	7222	8383	7803	11243	6545 13
3 RHB 223	2532	4653	3778	3778	3685	3977	1056	7500	5972	7594	6783	9441	5028 30
4 PB 1756	3211	4213	3023	3167	3403	4648	1147	9167	9583	7286	8435	10901	5635 24
5 HHB 272	3773	4745	4222	2167	3727	4181	1097	10833	5972	8261	7117	13658	5891 20
6 GHB 719	3146	4444	5759	4750	4525	4134	1058	10278	3889	7764	5826	14414	5964 19
7 GHB 538	2632	3843	2920	4250	3411	4231	1117	4333	4167	7192	5679	14883	4957 31
8 HHB 67 Improved	2220	4907	3531	3944	3651	3657	658	7778	6111	5814	5963	15964	5459 25
9 86M94	4808	4583	4235	6000	4906	5181	1694	8056	8472	7658	8065	16793	6748 10
10 DHBH 1397	3438	4074	5352	4917	4445	4389	1228	11111	10139	8156	9147	19369	7217 7
11 PB 1852	4014	4329	8858	5111	5578	6954	1606	8889	10833	7358	9096	20649	7860 2
12 86M01	4685	5231	11506	4111	6383	5083	1900	12778	7778	8125	7951	14252	7545 4
13 GHB 905	3653	3958	4006	4000	3904	3917	1408	12944	9306	6692	7999	19387	6927 9
14 RHB 173	-	3889	-	-	3889	-	1358	-	-	-	-	-	2624 33
15 GHB 732	2326	4537	4290	2889	3511	5384	1122	10833	9583	7069	8326	18919	6695 12
16 GHB 744	2616	4398	4926	3889	3957	4653	1206	10833	5278	6767	6022	18090	6265 18
17 86M80	4051	5648	7783	6722	6051	7028	1456	10278	14167	7353	10760	19982	8447 1
18 MP 7878	3884	5671	4710	5972	5059	7495	1589	7278	9444	7294	8369	11568	6491 14
19 86M84	5410	4097	7222	6889	5905	6602	1300	9833	8472	8544	8508	19495	7787 3
20 KBH 108	4324	5231	3762	5167	4621	5676	1936	11000	5833	8142	6988	18613	6968 8
21 Kaveri Super Boss	5417	4282	6037	4611	5087	6106	2039	12500	5278	8564	6921	19477	7431 5
22 86M86	4421	4676	3278	5250	4406	5745	1750	9722	5972	7406	6689	16288	6451 15
23 RHB 233	2440	4144	4173	5167	3981	3991	1433	9722	3611	6803	5207	11802	5328 26
24 RHB 234	1528	3681	1488	5306	3000	2995	625	9444	2778	7017	4897	10009	4487 32
25 AHB 1269	4259	4514	5093	5806	4918	5806	1833	8889	5972	6700	6336	18541	6741 11
26 AHB 1200	4537	5000	4537	5222	4824	4991	931	8611	5278	6794	6036	11532	5743 23
27 HHB 299	4961	5093	4481	3667	4550	4648	792	8889	4722	6214	5468	14710	5818 22
28 Dhanshakti	2546	4745	3086	5639	4004	3366	792	7500	3333	6850	5092	13532	5139 29
29 ICMV 221	2894	5347	4710	4806	4439	3810	1431	4722	3056	7733	5394	13279	5179 28
30 Pusa Composite 701	2894	4815	6401	5139	4812	5824	1953	10556	8611	8981	8796	17207	7238 6
31 Pusa Composite 383	3634	4468	5068	5639	4702	5097	528	10278	5694	7578	6636	14721	6270 17
32 JBV 2	2315	4213	5636	5222	4346	5162	1611	8889	5833	7369	6601	16577	6283 16
33 Raj 171	2398	4977	4562	6667	4651	5384	744	5361	3611	7022	5317	11459	5219 27
LOC. MEAN	3490	4651	5070	4848	4515	5013	1308	9303	6628	7434	7031	15231	6298
C.D. (5%)	380	702	1368	881	1569	951	317	2434	407	743	3719	1615	1368
C.D. (1%)	505	933	1819	1172	2077	1265	421	3236	542	988	5004	2147	1802
C.V. (%)	6.7	9.3	16.5	11.1	24.7	11.6	14.9	16.0	3.8	6.1	25.9	6.5	24.7
F (Prob)	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.274	0.000	0.000
PLOT SIZE (m ²)	14.40	14.40	10.80	12.00	-	14.40	12.00	12.00	12.00	12.00	-	9.25	-

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Table I.177: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 DAYS TO 50% FLOWERING ZONE A1 & A

S.No.	ENTRY	MDR	BKR	JBR	JPR	RAJ	JMR	JNS	HSR	GLR	MRN	MP	RNC	ZONE RANK
						MEAN						MEAN		MEAN
1	MPMH 42	45	47	53	43	47	44	47	42	41	42	42	42	29
2	MPMH 35	44	47	50	43	46	43	45	44	40	40	40	43	32
3	RHB 223	48	51	52	45	49	46	44	47	44	47	45	45	24
4	PB 1756	46	48	53	47	49	46	43	43	44	43	44	41	27
5	HHB 272	48	49	52	48	49	43	40	40	39	39	39	49	31
6	GHB 719	44	51	55	49	50	46	44	45	49	42	46	51	20
7	GHB 538	49	52	54	46	50	42	45	47	44	42	43	46	25
8	HHB 67 Improved	43	47	50	42	46	42	42	39	39	41	40	47	33
9	86M94	51	59	64	51	56	50	52	49	49	48	48	48	8
10	DHBH 1397	53	56	60	47	54	48	48	49	45	46	45	47	13
11	PB 1852	54	62	65	55	59	54	55	50	52	50	51	53	4
12	86M01	51	58	62	51	55	50	52	48	47	50	49	49	9
13	GHB 905	46	51	60	48	51	48	44	46	40	41	41	48	23
14	RHB 173	-	50	-	-	50	-	51	-	48	-	48	-	14
15	GHB 732	53	55	61	47	54	48	48	51	43	47	45	50	10
16	GHB 744	51	56	61	49	54	48	47	51	48	44	46	49	11
17	86M80	55	61	67	54	59	54	53	53	56	49	53	54	1
18	MP 7878	54	60	65	55	59	54	53	52	51	52	51	52	5
19	86M84	55	61	67	54	59	54	54	54	51	50	51	51	3
20	KBH 108	54	51	74	55	59	54	44	56	53	50	52	52	6
21	Kaveri Super Boss	53	60	66	54	58	53	55	55	51	51	51	53	2
22	86M86	55	54	65	51	56	51	52	54	48	49	49	51	7
23	RHB 233	50	54	57	46	52	48	44	48	44	45	44	41	21
24	RHB 234	48	57	60	48	53	48	45	47	46	47	46	45	16
25	AHB 1269	48	55	60	50	53	47	45	45	44	44	44	43	19
26	AHB 1200	50	51	58	50	52	48	46	45	42	45	44	40	22
27	HHB 299	49	56	61	51	54	47	45	49	42	42	42	44	18
28	Dhanshakti	44	49	54	45	48	42	37	44	40	44	42	48	30
29	ICMV 221	48	48	52	45	48	43	40	42	38	46	42	49	28
30	Pusa Composite 701	51	53	60	46	52	48	46	48	46	46	46	47	17
31	Pusa Composite 383	49	55	61	50	54	49	49	44	44	51	48	44	15
32	JBV 2	50	56	60	50	54	49	50	47	47	46	46	44	12
33	Raj 171	44	50	56	45	49	47	44	46	45	47	46	42	26
	LOC. MEAN	49	54	59	49	53	48	47	47	45	46	46	47	49
	C.D. (5%)	2.0	3.0	5.0	1.0	3.0	1.0	5.0	2.0	1.0	3.0	4.0	2.0	2.0
	C.D. (1%)	3.0	4.0	7.0	2.0	4.0	2.0	7.0	3.0	1.0	4.0	6.0	2.0	3.0
	C.V. (%)	2.5	3.1	5.4	1.6	4.1	1.5	7.0	2.6	1.5	3.7	4.8	2.0	4.6
	F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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Table I.178: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 DAYS TO MATURITY ZONE A1 & A

S.No.	ENTRY	MDR	BKR	JBR	JPR	RAJ	JMR	JNS	HSR	GLR	MRN	MP	RNC	ZONE RANK
						MEAN						MEAN		MEAN
1	MPMH 42	75	78	80	75	77	74	84	73	73	88	81	67	77 29
2	MPMH 35	74	77	79	74	76	72	84	75	68	90	79	68	76 31
3	RHB 223	75	81	80	75	78	76	84	77	69	91	80	66	77 28
4	PB 1756	78	78	82	76	79	75	83	73	77	95	86	67	78 25
5	HHB 272	73	79	80	78	78	72	84	71	73	89	81	61	76 31
6	GHB 719	81	80	84	80	81	76	84	76	77	88	83	72	80 18
7	GHB 538	80	82	84	78	81	72	86	78	73	90	81	66	79 23
8	HHB 67 Improved	74	77	81	74	76	70	83	70	72	89	81	58	75 32
9	86M94	80	88	89	82	85	78	82	80	78	94	86	69	82 11
10	DHBH 1397	81	86	84	82	83	78	84	80	80	88	84	68	81 14
11	PB 1852	85	90	89	82	87	83	82	81	81	92	87	74	84 5
12	86M01	83	88	86	85	86	79	84	78	70	93	82	70	82 12
13	GHB 905	85	81	82	78	82	77	87	77	70	86	78	72	79 22
14	RHB 173	-	80	-	-	80	-	83	-	72	-	72	-	79 24
15	GHB 732	89	85	87	75	84	77	84	82	78	92	85	73	82 10
16	GHB 744	92	86	85	78	85	77	86	81	79	90	85	72	83 8
17	86M80	86	91	91	86	88	83	85	85	80	94	87	77	86 1
18	MP 7878	85	90	88	86	88	83	83	82	80	96	88	76	85 2
19	86M84	88	91	90	84	88	83	79	84	70	88	79	71	83 7
20	KBH 108	93	81	92	85	88	83	82	87	69	94	82	73	84 4
21	Kaveri Super Boss	85	90	90	83	87	82	84	86	78	94	86	76	85 3
22	86M86	85	84	91	82	85	80	81	84	79	94	87	73	83 6
23	RHB 233	83	85	85	77	82	78	85	79	80	93	87	69	81 13
24	RHB 234	84	87	88	77	84	78	84	79	80	91	86	78	83 9
25	AHB 1269	84	85	86	80	84	76	86	75	68	92	80	64	80 19
26	AHB 1200	85	81	86	80	83	77	86	76	68	95	81	63	80 20
27	HHB 299	85	86	85	81	84	76	85	81	72	90	81	65	81 17
28	Dhanshakti	85	79	82	77	81	71	86	75	73	88	80	59	78 27
29	ICMV 221	81	78	82	75	79	72	86	74	70	88	79	60	77 30
30	Pusa Composite 701	82	83	87	75	82	78	83	78	75	96	86	70	81 16
31	Pusa Composite 383	84	85	88	78	84	78	86	75	80	90	85	65	81 15
32	JBV 2	80	86	86	76	82	78	85	78	71	90	81	64	79 21
33	Raj 171	74	80	84	75	78	76	82	76	81	92	86	58	78 26
	LOC. MEAN	82	84	85	79	83	77	84	78	75	91	83	68	80
	C.D. (5%)	4.0	3.0	4.0	1.0	4.0	1.0	4.0	3.0	2.0	3.0	7.0	4.0	3.0
	C.D. (1%)	5.0	4.0	6.0	1.0	5.0	1.0	5.0	3.0	3.0	4.0	9.0	5.0	4.0
	C.V. (%)	2.8	2.1	3.1	0.8	3.1	0.8	3.0	2.0	1.9	1.9	3.9	3.4	3.8
	F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.066	0.000	0.000

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Table I.179: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 PLANT HEIGHT (cm.) ZONE A1 & A

S.No. ENTRY		MDR	BKR	JBR	JPR	RAJ MEAN	JMR	JNS	HSR	GLR	MRN	MP MEAN	RNC	ZONE RANK MEAN
1	MPMH 42	167	212	145	191	179	147	175	227	213	151	182	141	177 27
2	MPMH 35	184	206	142	205	184	153	179	247	220	148	184	157	184 20
3	RHB 223	197	205	135	191	182	157	188	244	219	155	187	155	185 19
4	PB 1756	186	191	143	182	175	157	175	219	220	169	195	144	179 25
5	HHB 272	183	159	130	175	162	138	168	204	179	137	158	149	162 33
6	GHB 719	177	167	138	206	172	148	167	245	208	143	176	147	175 29
7	GHB 538	181	177	140	194	173	144	177	223	223	155	189	159	177 26
8	HHB 67 Improved	150	177	129	183	160	127	173	199	223	130	177	140	163 32
9	86M94	217	208	162	216	201	184	204	245	237	168	203	174	202 10
10	DHBH 1397	198	195	135	216	186	158	171	210	238	142	190	172	183 22
11	PB 1852	225	212	147	218	201	191	178	247	241	185	213	180	202 9
12	86M01	204	207	167	198	194	183	176	232	239	156	198	196	196 15
13	GHB 905	193	181	113	191	170	149	167	222	205	131	168	181	173 30
14	RHB 173	-	195	-	-	195	-	154	-	213	-	213	-	187 18
15	GHB 732	187	197	134	223	185	181	203	250	219	179	199	215	199 14
16	GHB 744	185	198	137	223	186	175	232	247	245	148	197	199	199 12
17	86M80	223	188	141	207	190	200	178	255	243	175	209	196	201 11
18	MP 7878	214	215	183	229	210	208	161	258	239	183	211	196	209 6
19	86M84	224	206	189	235	214	199	182	253	266	182	224	210	215 1
20	KBH 108	222	179	188	214	201	213	209	266	227	207	217	209	213 2
21	Kaveri Super Boss	253	196	185	206	210	203	174	271	255	162	208	214	212 3
22	86M86	220	197	184	191	198	188	186	240	243	142	192	199	199 13
23	RHB 233	221	194	147	189	188	166	210	209	221	147	184	185	189 17
24	RHB 234	181	180	161	220	186	153	186	219	233	156	195	124	181 23
25	AHB 1269	220	203	130	179	183	183	197	258	215	149	182	210	194 16
26	AHB 1200	193	170	113	168	161	157	194	236	202	130	166	181	175 28
27	HHB 299	188	163	132	197	170	150	196	195	201	131	166	155	171 31
28	Dhanshakti	174	178	116	188	164	165	197	235	223	137	180	180	179 24
29	ICMV 221	190	177	118	262	187	163	198	202	217	150	184	159	184 21
30	Pusa Composite 701	240	225	162	196	206	197	210	274	225	168	197	217	211 5
31	Pusa Composite 383	240	212	150	239	210	188	173	244	274	173	223	193	209 7
32	JBV 2	249	204	149	254	214	206	179	270	227	186	206	192	212 4
33	Raj 171	222	206	158	201	197	193	193	251	240	176	208	207	205 8
LOC. MEAN		203	193	147	206	187	173	185	237	227	158	192	179	191
C.D. (5%)		13.0	6.0	28.0	8.0	23.0	14.0	29.0	31.0	8.0	18.0	27.0	17.0	14.0
C.D. (1%)		17.0	7.0	38.0	11.0	31.0	19.0	39.0	41.0	11.0	24.0	37.0	23.0	18.0
C.V. (%)		4.0	1.8	11.8	2.5	8.9	5.0	9.8	8.0	2.3	7.1	7.0	5.9	8.1
F (Prob)		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000

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Table I.180: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 PRODUCTIVE TILLERS (No./Plant) ZONE A1 & A

S.No.	ENTRY	MDR	BKR	JBR	JPR	RAJ	JMR	JNS	HSR	GLR	MRN	MP	RNC	ZONE	RANK
						MEAN						MEAN		MEAN	
1	MPMH 42	3.5	1.7	1.4	3.3	2.5	2.8	1.5	4.0	2.4	3.0	2.7	2.2	2.6	6
2	MPMH 35	3.1	1.3	1.5	3.7	2.4	2.6	1.3	3.3	1.9	3.0	2.5	2.3	2.4	11
3	RHB 223	2.8	1.7	1.2	3.5	2.3	2.4	1.3	5.8	1.7	3.0	2.4	2.3	2.6	5
4	PB 1756	2.1	1.3	1.4	2.2	1.7	2.2	1.5	4.0	1.6	3.0	2.3	2.3	2.2	18
5	HHB 272	3.1	2.3	1.4	3.1	2.5	2.5	1.5	3.3	3.1	3.0	3.1	2.1	2.5	7
6	GHB 719	2.3	2.3	1.4	3.7	2.4	2.5	1.3	4.9	2.3	3.0	2.6	2.2	2.6	4
7	GHB 538	2.4	2.0	1.1	4.3	2.5	2.5	1.3	6.2	2.1	3.0	2.5	2.3	2.7	2
8	HHB 67 Improved	2.3	2.2	1.3	4.5	2.6	3.1	1.3	4.5	1.7	3.1	2.4	2.9	2.7	3
9	86M94	1.7	1.0	1.3	3.7	1.9	1.6	1.3	3.7	2.2	3.0	2.6	2.2	2.2	17
10	DHBH 1397	2.2	1.3	1.3	2.4	1.8	1.6	1.4	3.9	1.8	3.0	2.4	1.3	2.0	25
11	PB 1852	2.5	1.3	1.5	1.5	1.7	1.9	1.7	3.2	2.4	3.0	2.7	1.7	2.1	22
12	86M01	3.1	1.7	1.2	3.2	2.3	1.7	1.3	2.8	1.7	3.0	2.3	1.3	2.1	21
13	GHB 905	2.5	2.3	1.5	4.2	2.6	2.9	1.2	3.7	1.7	3.0	2.4	2.0	2.5	8
14	RHB 173	-	1.9	-	-	1.9	-	1.4	-	5.0	-	5.0	-	2.8	1
15	GHB 732	2.2	2.5	1.1	4.4	2.6	2.7	1.3	3.3	2.3	3.0	2.6	2.0	2.5	9
16	GHB 744	2.9	2.7	1.3	3.9	2.7	2.3	1.6	3.0	2.0	3.0	2.5	1.1	2.4	12
17	86M80	2.5	1.2	1.4	2.1	1.8	1.8	1.3	1.7	1.5	3.0	2.2	1.1	1.8	32
18	MP 7878	1.9	1.0	1.6	3.0	1.9	1.6	1.3	3.2	1.9	3.0	2.5	1.7	2.0	26
19	86M84	2.9	1.3	1.5	2.2	2.0	1.7	1.5	3.2	1.7	3.0	2.4	1.3	2.0	24
20	KBH 108	2.5	1.1	1.3	2.0	1.7	1.5	1.2	2.6	1.7	3.0	2.4	1.7	1.8	31
21	Kaveri Super Boss	2.8	1.0	1.3	2.1	1.8	1.5	1.3	3.0	1.7	3.0	2.4	1.3	1.9	30
22	86M86	2.2	1.2	1.2	1.3	1.5	1.7	1.6	4.0	1.9	3.0	2.4	1.6	2.0	27
23	RHB 233	2.3	2.6	1.3	3.0	2.3	1.8	1.2	3.9	1.9	3.0	2.4	1.5	2.2	15
24	RHB 234	2.3	1.5	1.2	3.2	2.1	1.8	1.4	4.2	1.9	3.0	2.5	1.1	2.2	16
25	AHB 1269	1.7	1.3	1.2	2.3	1.6	2.1	1.3	3.1	1.9	3.0	2.4	1.5	1.9	28
26	AHB 1200	2.0	1.3	1.3	3.6	2.1	1.9	1.3	2.3	2.2	3.0	2.6	1.6	2.1	23
27	HHB 299	2.3	1.3	1.3	3.3	2.1	1.7	1.3	3.0	2.2	3.0	2.6	1.3	2.1	20
28	Dhanshakti	2.3	1.3	1.1	3.7	2.1	2.2	1.3	3.0	2.3	3.0	2.6	1.5	2.2	17
29	ICMV 221	1.5	1.3	1.3	2.5	1.7	2.0	1.4	2.7	2.1	3.0	2.5	1.3	1.9	29
30	Pusa Composite 701	1.9	1.5	1.4	4.6	2.3	2.2	1.2	3.1	2.3	3.0	2.6	1.6	2.3	14
31	Pusa Composite 383	2.5	1.9	1.3	3.3	2.2	2.2	1.4	3.8	2.3	3.0	2.7	1.3	2.3	13
32	JBV 2	1.9	2.2	1.4	3.7	2.3	2.0	1.3	2.7	1.8	3.0	2.4	1.2	2.1	19
33	Raj 171	2.3	2.3	1.4	3.7	2.4	2.7	1.3	3.9	1.9	3.0	2.5	1.7	2.4	10
	LOC. MEAN	2.4	1.7	1.3	3.2	2.1	2.1	1.4	3.5	2.1	3.0	2.5	1.7	2.2	
	C.D. (5%)	0.2	0.3	0.3	0.7	0.7	0.5	0.3	1.0	0.5	0.3	0.5	0.5	0.4	
	C.D. (1%)	0.3	0.4	0.4	0.9	1.0	0.7	0.4	1.3	0.7	0.4	0.6	0.6	0.5	
	C.V. (%)	6.0	12.3	12.8	13.5	24.6	15.8	15.0	16.5	15.3	5.9	9.4	17.4	21.1	
	F (Prob)	0.000	0.000	0.000	0.000	0.029	0.000	0.000	0.000	0.000	0.000	0.557	0.000	0.000	

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Table I.181: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 PANICLE LENGTH (cm) ZONE A1 & A

S.No.	ENTRY	MDR	BKR	JBR	JPR	RAJ	JMR	JNS	HSR	GLR	MRN	MP	RNC	ZONE RANK
						MEAN						MEAN		MEAN
1	MPMH 42	22	21	21	21	21	20	22	28	22	20	21	20	22
2	MPMH 35	21	23	16	21	20	19	22	30	23	19	21	21	22
3	RHB 223	24	24	20	24	23	19	21	30	23	21	22	21	23
4	PB 1756	27	25	17	22	23	22	21	30	23	20	22	20	23
5	HHB 272	22	21	15	20	19	18	22	30	15	15	15	19	20
6	GHB 719	21	22	16	22	20	18	18	29	20	19	20	19	21
7	GHB 538	22	24	19	23	22	20	25	30	26	23	25	23	24
8	HHB 67 Improved	21	23	15	19	19	18	18	27	24	17	20	20	20
9	86M94	25	24	23	24	24	25	24	31	23	24	24	21	24
10	DHBH 1397	26	22	19	23	23	22	23	29	24	21	23	21	23
11	PB 1852	24	23	15	22	21	23	17	29	22	21	22	23	22
12	86M01	23	27	16	25	23	24	24	29	29	24	27	25	25
13	GHB 905	25	26	19	22	23	22	21	28	23	21	22	25	23
14	RHB 173	-	25	-	-	25	-	25	-	22	-	22	-	24
15	GHB 732	21	25	20	25	23	27	26	30	20	25	22	24	24
16	GHB 744	23	28	17	22	23	24	24	30	24	23	24	20	24
17	86M80	27	27	20	26	25	30	24	32	26	27	27	27	27
18	MP 7878	28	25	27	25	27	25	25	29	27	24	25	24	26
19	86M84	28	27	21	21	24	27	25	32	27	27	27	27	26
20	KBH 108	25	24	23	26	24	24	25	31	23	22	23	24	25
21	Kaveri Super Boss	25	26	23	22	24	27	24	27	26	24	25	26	25
22	86M86	26	28	24	24	25	24	20	30	24	24	24	25	25
23	RHB 233	23	27	17	24	23	22	22	28	21	23	22	23	23
24	RHB 234	23	26	17	22	22	21	21	30	20	21	21	21	22
25	AHB 1269	23	25	17	20	21	20	21	29	22	20	21	21	22
26	AHB 1200	24	25	17	20	21	22	24	28	25	24	24	26	23
27	HHB 299	27	25	16	22	23	20	22	28	22	20	21	21	22
28	Dhanshakti	22	23	15	21	20	21	24	29	23	18	21	21	22
29	ICMV 221	20	21	13	27	20	18	24	28	19	20	19	21	21
30	Pusa Composite 701	25	26	21	27	25	29	23	28	27	23	25	27	26
31	Pusa Composite 383	30	28	18	23	25	23	25	31	25	23	24	26	25
32	JBV 2	22	26	17	24	22	29	24	31	26	23	25	26	25
33	Raj 171	22	26	17	25	22	25	23	30	25	25	25	24	24
	LOC. MEAN	24	25	18	23	23	23	23	29	23	22	23	23	23
	C.D. (5%)	2.0	2.0	3.0	2.0	3.0	3.0	5.0	3.0	1.0	2.0	3.0	2.0	2.0
	C.D. (1%)	3.0	3.0	4.0	2.0	4.0	3.0	6.0	3.0	2.0	2.0	5.0	3.0	2.0
	C.V. (%)	6.0	5.2	8.8	4.9	8.9	7.0	12.3	5.4	3.8	4.3	7.5	6.3	8.2
	F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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Table I.182: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 PANICLE DIAMETER (cm) ZONE A1 & A

S.No.	ENTRY	MDR	BKR	JPR	RAJ	JMR	JNS	HSR	GLR	MRN	MP	RNC	ZONE	RANK
					MEAN						MEAN		MEAN	
1	MPMH 42	2.3	2.7	2.6	2.5	2.4	2.1	1.3	2.5	2.9	2.7	2.5	2.4	22
2	MPMH 35	2.2	2.4	2.4	2.4	2.0	2.2	1.2	2.2	2.6	2.4	2.3	2.2	28
3	RHB 223	2.5	3.1	3.2	2.9	2.4	2.2	1.3	2.3	2.9	2.6	2.6	2.5	18
4	PB 1756	2.4	2.8	2.6	2.6	2.5	1.6	1.3	2.2	2.7	2.5	2.5	2.3	24
5	HHB 272	2.0	2.6	2.5	2.4	2.3	1.5	1.2	2.2	2.6	2.4	2.5	2.2	29
6	GHB 719	2.2	2.2	2.3	2.2	2.6	1.8	1.2	1.9	2.6	2.2	2.2	2.1	31
7	GHB 538	2.2	2.2	2.4	2.3	2.2	2.6	1.3	2.4	2.6	2.5	2.3	2.2	26
8	HHB 67 Improved	1.9	2.2	2.2	2.1	2.1	2.5	1.2	2.3	2.4	2.4	2.4	2.1	30
9	86M94	2.5	3.3	3.2	3.0	3.1	2.2	1.4	3.0	3.2	3.1	3.0	2.8	6
10	DHBH 1397	2.5	3.2	3.4	3.0	3.1	2.1	1.4	3.4	3.0	3.2	3.1	2.8	4
11	PB 1852	2.7	3.2	3.3	3.1	3.0	2.2	1.3	3.2	3.1	3.1	3.1	2.8	3
12	86M01	2.6	3.1	2.8	2.9	2.9	2.0	1.3	3.0	3.1	3.1	3.2	2.7	12
13	GHB 905	2.6	2.4	2.3	2.4	2.2	2.3	1.2	1.7	2.6	2.1	2.6	2.2	27
14	RHB 173	-	3.0	-	3.0	-	2.7	-	2.3	-	2.3	-	2.7	13
15	GHB 732	2.5	3.1	2.7	2.8	2.1	2.9	1.3	1.9	2.5	2.2	3.1	2.4	19
16	GHB 744	2.3	3.0	2.7	2.7	2.5	2.4	1.3	2.3	2.8	2.6	1.9	2.4	23
17	86M80	2.9	3.0	3.4	3.1	3.0	2.4	1.4	2.6	3.0	2.8	3.1	2.8	7
18	MP 7878	2.9	3.2	3.3	3.1	3.2	2.4	1.4	2.3	3.4	2.9	2.6	2.7	10
19	86M84	2.8	3.0	3.2	3.0	3.3	2.4	1.4	2.5	3.2	2.8	3.1	2.8	5
20	KBH 108	2.7	3.3	3.1	3.0	3.4	2.2	1.4	2.6	3.2	2.9	2.9	2.8	8
21	Kaveri Super Boss	2.9	2.9	3.3	3.0	3.0	2.5	1.2	2.2	2.7	2.5	3.3	2.7	14
22	86M86	2.6	3.3	2.8	2.9	3.1	2.2	1.3	2.5	3.1	2.8	3.2	2.7	11
23	RHB 233	2.9	2.9	2.8	2.9	2.6	2.2	1.3	2.5	2.9	2.7	3.1	2.6	17
24	RHB 234	3.0	3.1	2.9	3.0	2.9	2.2	1.2	3.2	3.2	3.2	3.4	2.8	2
25	AHB 1269	2.6	3.0	3.2	3.0	2.6	2.4	1.3	2.0	3.0	2.5	3.2	2.6	16
26	AHB 1200	2.1	3.3	2.6	2.7	3.2	2.1	1.4	2.6	3.2	2.9	3.4	2.7	15
27	HHB 299	2.7	3.3	3.3	3.1	3.0	2.2	1.4	3.0	3.3	3.1	3.5	2.9	1
28	Dhanshakti	2.0	3.0	3.2	2.7	2.6	2.1	1.3	2.2	2.7	2.4	2.8	2.4	20
29	ICMV 221	2.2	2.9	2.3	2.5	2.8	2.2	1.3	2.5	2.8	2.7	2.5	2.4	21
30	Pusa Composite 701	3.0	2.7	3.1	2.9	1.8	2.5	1.2	2.1	2.6	2.3	2.3	2.4	22
31	Pusa Composite 383	2.8	3.8	3.0	3.2	2.8	1.8	1.3	3.2	2.8	3.0	3.2	2.7	9
32	JBV 2	2.7	2.7	2.2	2.5	2.8	2.3	1.2	2.3	2.3	2.3	3.0	2.4	21
33	Raj 171	3.0	2.7	3.0	2.9	2.0	2.4	1.2	1.8	2.3	2.1	2.1	2.3	25
	LOC. MEAN	2.5	2.9	2.9	2.8	2.7	2.2	1.3	2.4	2.9	2.6	2.8	2.5	
	C.D. (5%)	0.2	0.2	0.2	0.6	0.3	0.5	0.1	0.2	0.2	0.6	0.3	0.3	
	C.D. (1%)	0.3	0.2	0.3	0.8	0.4	0.6	0.1	0.3	0.3	0.8	0.4	0.4	
	C.V. (%)	5.6	3.9	5.0	10.1	6.7	13.4	5.3	5.5	4.4	15.5	5.7	11.2	
	F (Prob)	0.000	0.000	0.000	0.018	0.000	0.000	0.000	0.000	0.000	0.214	0.000	0.000	

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Table I.183: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 1000- SEED Wt.(g) ZONE A1 & A

S.No.	ENTRY	MDR	BKR	JBR	JPR	RAJ	JMR	HSR	GLR	MRN	MP	RNC	ZONE	RANK
						MEAN					MEAN		MEAN	
1	MPMH 42	7.7	8.6	6.9	7.7	7.7	8.7	8.1	10.4	7.9	9.1	7.7	8.2	31
2	MPMH 35	7.6	8.9	6.0	7.2	7.4	9.1	8.2	11.3	8.4	9.8	7.2	8.2	30
3	RHB 223	8.5	9.3	7.0	12.1	9.2	9.6	10.6	11.2	8.1	9.7	7.9	9.4	20
4	PB 1756	10.4	11.9	7.3	9.1	9.7	11.7	12.6	11.9	9.8	10.9	7.5	10.2	4
5	HHB 272	9.2	8.6	6.2	8.3	8.1	8.9	9.9	11.0	7.2	9.1	8.4	8.6	29
6	GHB 719	10.4	9.2	6.6	9.3	8.9	8.0	9.8	11.4	8.8	10.1	9.9	9.3	22
7	GHB 538	10.3	9.7	6.7	8.1	8.7	8.9	9.3	11.3	7.8	9.6	9.1	9.0	25
8	HHB 67 Improved	8.2	9.0	6.2	9.0	8.1	8.3	10.1	10.5	8.3	9.4	8.5	8.7	28
9	86M94	9.8	9.7	6.7	9.0	8.8	10.6	10.6	11.7	8.5	10.1	8.0	9.4	17
10	DHBH 1397	7.5	10.0	7.0	9.5	8.5	10.4	11.2	11.9	9.6	10.7	10.4	9.7	11
11	PB 1852	10.8	8.9	6.5	9.1	8.8	11.5	10.3	10.9	9.3	10.1	10.0	9.7	12
12	86M01	8.3	10.2	6.6	7.7	8.2	11.6	10.7	10.6	10.1	10.3	11.0	9.6	13
13	GHB 905	8.2	9.0	6.5	7.0	7.7	7.6	9.6	10.7	7.3	9.0	7.4	8.2	32
14	RHB 173	-	8.7	-	-	8.7	-	-	11.3	-	11.3	-	10.0	7
15	GHB 732	10.2	8.6	6.0	9.3	8.5	10.0	10.0	11.1	7.9	9.5	10.0	9.2	23
16	GHB 744	11.1	8.9	6.4	8.4	8.7	9.4	9.9	11.6	8.6	10.1	7.1	9.0	24
17	86M80	8.3	8.9	6.8	8.5	8.1	10.6	10.1	11.6	8.6	10.1	10.5	9.3	21
18	MP 7878	12.7	8.9	6.6	9.1	9.3	11.9	12.1	11.7	9.7	10.7	9.4	10.2	3
19	86M84	9.1	9.2	6.8	9.5	8.7	11.3	9.4	11.6	9.8	10.7	13.6	10.1	5
20	KBH 108	11.3	9.5	6.1	7.8	8.7	10.5	11.1	11.5	10.0	10.7	12.7	10.0	6
21	Kaveri Super Boss	10.7	9.8	6.9	8.0	8.9	10.6	11.3	11.3	8.5	9.9	9.5	9.6	14
22	86M86	10.7	10.1	6.5	8.2	8.9	10.7	10.4	10.7	9.5	10.1	11.3	9.8	8
23	RHB 233	11.3	9.4	7.3	9.3	9.4	10.2	11.6	11.2	8.3	9.8	9.0	9.8	9
24	RHB 234	10.6	8.8	6.5	10.4	9.1	8.5	9.6	11.3	8.2	9.7	6.2	8.9	27
25	AHB 1269	11.7	9.8	6.7	9.3	9.4	9.6	9.8	12.1	9.0	10.5	8.6	9.6	15
26	AHB 1200	11.6	9.4	6.2	8.5	8.9	11.3	10.5	11.8	8.8	10.3	9.4	9.7	10
27	HHB 299	11.6	8.8	6.6	10.5	9.4	10.1	10.5	11.1	8.2	9.7	9.8	9.7	12
28	Dhanshakti	11.2	10.5	7.3	11.2	10.1	10.6	11.3	10.9	10.6	10.8	10.8	10.5	1
29	ICMV 221	11.5	10.2	6.4	11.0	9.8	10.5	11.7	10.7	10.1	10.4	10.2	10.3	2
30	Pusa Composite 701	10.4	8.2	6.0	11.4	9.0	8.4	9.4	11.3	7.4	9.3	7.7	8.9	26
31	Pusa Composite 383	10.7	9.7	6.4	12.0	9.7	9.7	10.9	10.7	7.0	8.9	7.9	9.4	16
32	JBV 2	10.8	8.4	6.5	10.9	9.2	8.8	9.4	11.5	8.8	10.1	9.5	9.4	18
33	Raj 171	10.5	9.1	6.1	11.7	9.4	8.8	10.1	11.6	7.9	9.8	8.7	9.4	19
	LOC. MEAN	10.1	9.3	6.6	9.3	8.8	9.9	10.3	11.2	8.7	10.0	9.2	9.4	
	C.D. (5%)	0.3	1.2	0.1	0.6	1.4	0.9	2.0	0.8	0.9	1.5	0.3	0.9	
	C.D. (1%)	0.4	1.6	0.1	0.8	1.9	1.2	2.7	1.1	1.2	2.0	0.3	1.1	
	C.V. (%)	2.0	7.9	1.0	4.1	11.4	5.4	11.9	4.4	6.2	6.6	1.7	9.3	
	F (Prob)	0.000	0.000	0.000	0.000	0.049	0.000	0.000	0.000	0.000	0.226	0.000	0.000	

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Table I.184: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 POPULATION AT HARVEST (No./plot) ZONE A1 & A

S.No.	ENTRY	MDR	BKR	JBR	JPR	RAJ	JMR	JNS	HSR	GLR	MRN	MP	RNC	ZONE RANK
						MEAN						MEAN		MEAN
1	MPMH 42	92	136	153	172	138	213	110	75	103	102	103	145	130 11
2	MPMH 35	97	139	152	110	125	193	116	82	118	124	121	155	129 14
3	RHB 223	43	126	154	133	114	167	102	75	103	105	104	150	116 28
4	PB 1756	104	123	155	104	122	185	117	82	134	130	132	161	130 12
5	HHB 272	119	142	151	121	133	195	107	81	136	191	163	146	139 2
6	GHB 719	107	147	146	103	126	190	96	75	17	133	75	154	117 26
7	GHB 538	36	134	153	77	100	168	78	64	31	87	59	154	98 32
8	HHB 67 Improved	119	146	154	113	133	202	73	83	137	114	125	154	129 13
9	86M94	106	134	152	148	135	201	123	78	165	104	135	160	137 3
10	DHBH 1397	94	129	152	134	127	201	85	81	144	140	142	156	132 9
11	PB 1852	125	138	152	164	145	167	127	79	118	129	124	156	136 4
12	86M01	113	126	153	134	132	183	107	74	169	131	150	153	135 5
13	GHB 905	113	135	153	148	137	194	100	75	165	116	141	144	134 6
14	RHB 173	-	131	-	-	131	-	66	-	3	-	3	-	67 33
15	GHB 732	110	134	152	136	133	167	95	80	103	109	106	149	124 21
16	GHB 744	125	134	154	120	133	170	106	79	97	82	90	147	121 23
17	86M80	103	128	152	169	138	175	126	86	144	103	124	143	133 7
18	MP 7878	94	125	155	131	126	189	125	83	122	144	133	157	133 8
19	86M84	66	138	155	169	132	167	123	77	119	117	118	143	127 16
20	KBH 108	76	130	151	122	120	184	130	67	161	120	141	140	128 15
21	Kaveri Super Boss	115	126	154	110	126	165	132	80	126	110	118	142	126 19
22	86M86	105	125	146	128	126	166	132	88	119	104	112	154	127 18
23	RHB 233	44	140	153	146	121	172	123	76	120	84	102	142	120 25
24	RHB 234	35	127	154	109	106	160	100	82	92	52	72	152	106 31
25	AHB 1269	147	137	154	133	143	205	137	76	136	138	137	157	142 1
26	AHB 1200	139	139	154	84	129	171	118	82	106	96	101	136	123 22
27	HHB 299	72	137	149	91	112	175	102	73	103	103	103	154	116 27
28	Dhanshakti	115	130	152	90	122	178	114	85	93	133	113	157	125 20
29	ICMV 221	90	127	155	113	121	198	93	54	60	118	89	147	115 30
30	Pusa Composite 701	136	133	152	83	126	215	131	74	83	120	102	143	127 17
31	Pusa Composite 383	107	130	154	105	124	178	83	76	94	128	111	151	121 24
32	JBV 2	140	131	153	113	135	186	132	74	117	110	114	147	130 10
33	Raj 171	83	132	152	78	111	189	134	80	68	87	78	151	115 29
	LOC. MEAN	99	133	153	122	127	183	110	77	109	115	112	150	125
	C.D. (5%)	5.0	16.0	4.0	36.0	28.0	36.0	27.0	11.0	27.0	31.0	54.0	6.0	17.0
	C.D. (1%)	6.0	21.0	5.0	48.0	37.0	48.0	35.0	15.0	36.0	41.0	72.0	8.0	22.0
	C.V. (%)	2.8	7.2	1.5	18.4	15.9	12.0	14.7	9.1	15.3	16.7	23.2	2.4	15.1
	F (Prob)	0.000	0.000	0.000	0.000	0.442	0.000	0.000	0.000	0.000	0.000	0.085	0.000	0.000

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Table I.185: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 SEED SET (%) UNDER BAG ZONE A1 & A

S.No.	ENTRY	JBR	JPR	RAJ	JNS	HSR	GLR	ZONE MEAN	RANK
				MEAN					
1	MPMH 42	75	98	87	100	88	100	92	9
2	MPMH 35	64	95	79	100	68	100	85	27
3	RHB 223	67	100	84	100	91	100	92	11
4	PB 1756	61	98	80	100	92	83	87	26
5	HHB 272	63	62	62	100	63	100	78	31
6	GHB 719	63	65	64	93	91	100	83	29
7	GHB 538	65	82	74	100	91	57	79	30
8	HHB 67 Improved	62	95	79	100	96	100	91	19
9	86M94	72	93	83	100	92	100	91	13
10	DHBH 1397	70	95	83	100	92	100	91	14
11	PB 1852	65	100	83	100	94	100	92	10
12	86M01	67	92	79	100	93	100	90	21
13	GHB 905	62	97	79	100	97	100	91	17
14	RHB 173	-	-	-	100	-	67	83	28
15	GHB 732	65	97	81	100	91	100	91	20
16	GHB 744	66	97	81	100	95	100	91	12
17	86M80	73	98	86	100	95	100	93	2
18	MP 7878	75	98	87	100	91	100	93	4
19	86M84	72	97	84	100	88	100	91	14
20	KBH 108	72	97	84	100	95	100	93	6
21	Kaveri Super Boss	71	100	86	100	96	100	93	1
22	86M86	74	100	87	100	89	100	93	7
23	RHB 233	65	100	83	87	91	100	89	23
24	RHB 234	72	100	86	100	92	100	93	5
25	AHB 1269	64	100	82	100	92	100	91	16
26	AHB 1200	65	98	82	100	96	100	92	10
27	HHB 299	61	97	79	100	93	100	90	22
28	Dhanshakti	64	97	80	100	96	100	91	15
29	ICMV 221	64	100	82	100	90	88	88	24
30	Pusa Composite 701	73	97	85	100	93	100	93	8
31	Pusa Composite 383	72	98	85	100	95	100	93	3
32	JBV 2	63	98	81	100	92	100	91	18
33	Raj 171	64	100	82	100	90	82	87	25
	LOC. MEAN	67	95	81	99	91	96	90	
	C.D. (5%)	3.0	6.0	-	5.0	9.0	5.0	13.0	
	C.D. (1%)	4.0	7.0	-	6.0	12.0	6.0	17.0	
	C.V. (%)	2.8	3.6	3.0	3.0	5.9	3.0	7.9	
	F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.128	

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**Table I.186: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 ZONE A1 & A
GRAIN QUALITY (Protein and Fat)**

S.No.	TEST CODE	Protein (%)	Fat (%)
		HSR	HSR
1	MPMH 42	11.3	5.6
2	MPMH 35	12.0	6.1
3	RHB 223	12.0	5.7
4	PB 1756	12.6	5.8
5	HHB 272	11.7	6.1
6	GHB 719	11.3	6.2
7	GHB 538	11.6	5.8
8	HHB 67 Improved	12.0	6.0
9	86M94	11.6	5.3
10	DHBH 1397	11.6	6.4
11	PB 1852	11.3	5.8
12	86M01	11.1	5.3
13	GHB 905	11.2	5.7
14	RHB 173	11.3	6.0
15	GHB 732	11.5	5.8
16	GHB 744	11.0	5.4
17	86M80	11.0	5.9
18	MP 7878	11.7	5.2
19	86M84	10.7	5.3
20	KBH 108	10.7	5.2
21	Kaveri Super Boss	11.5	5.2
22	86M86	11.4	4.7
23	RHB 233	11.5	5.2
24	RHB 234	12.5	5.0
25	AHB 1269	11.5	5.0
26	AHB 1200	11.4	5.7
27	HHB 299	11.8	6.1
28	Dhanshakti	11.3	5.6
29	ICMV 221	11.5	5.4
30	Pusa Composite 701	10.8	5.7
31	Pusa Composite 383	11.8	6.5
32	JBV 2	12.0	5.7
33	Raj 171	11.2	6.1

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Table I.187: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF 2024 EXPERIMENTAL DETAILS ZONE B

Locations	Soil	pH	Sowing date	Harvesting date	Interculture date	Irrigation date	Fertilizer			Insecticide
							N	P	K	
MAHARASHTRA										
Aurangabad (NARP)	MB	7.5	24.7.24	19.11.24	-	Nil	60	30	30	Nil
Dhule (MPKV)	MB	8.6	4.7.24	15.10.24	26.7.24	Nil	60	30	0	Nil
KARNATAKA										
Vijayapur (UAS, Dharwad)	SB	8.7	6.7.24	26.10.24	17.8.24	Nil	50	25	0	Nil
Malnoor (UAS, Raichur)	MB	7.5	12.7.24	27.11.24	31.7.24	Nil	50	50	0	Emamectin Benzoate
ANDHRA PRADESH										
Ananthapuram (ANGRAU)	RSL	7.7	12.8.24	As Per Maturity	5.9.24	As Per Required	60	30	20	Nil
Vizianagaram (ANGRAU)	RSL	6.7	2.7.24	7.10.24	22.7.24	Nil	60	40	30	Nil
TELANGANA										
Palem (PJ TSAU)	RSL	7.0	9.7.24	24.10.24	24.7,12.8.24	Nil	60	40	40	Nil
TAMIL NADU										
Coimbatore (TNAU)	CL	7.8	29.6.24	6.10.24	-	29.6, 17.7, 12.8, 3.9, 18.9, 01.10.24	80	40	40	Nil
ODISHA										
Semiliguda (OUAT)	SL	-	3.7.24	As Per Maturity	-	Nil	60	30	30	Nil

MB = Medium Black, CL = Clay Loam, SB = Shallow Black, RSL = Red Sandy Loam, SL = Sandy Loam.

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Table I.188: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 GRAIN YIELD (kg/ha) ZONE B

S.No.	ENTRY	ABD1	DHL	MS MEAN	VYP	MLR	KS MEAN	APR***	VZN	AP MEAN	PLM	CBE	SMG	ZONE MEAN	RANK
1	RHB 233	3464	1730	2597	2083	1863	1973	1391	2483	2483	2986	3198	2383	2524	9
2	RHB 234	3497	1198	2347	1928	1974	1951	1401	1928	1928	3267	3527	956	2284	11
3	AHB 1269	2991	1251	2121	2176	2372	2274	1229	2934	2934	3101	3232	2089	2518	10
4	AHB 1200	3401	1248	2325	1947	2389	2168	1594	2805	2805	2633	3975	2633	2629	7
5	HHB 299	3616	2360	2988	2408	2723	2566	1412	2312	2312	3050	3112	3628	2901	5
6	Mahabeej 1005	3266	2109	2688	2700	2282	2491	954	2823	2823	2908	3328	2761	2772	6
7	86M01	3429	2589	3009	2954	2571	2763	1718	3105	3105	3039	3637	3244	3071	3
8	Pratap (MH 1642)	3555	1125	2340	2818	2396	2607	1449	3456	3456	2726	3347	1456	2610	8
9	NBH 4903	3944	2874	3409	3704	3049	3376	1611	2703	2703	3638	4710	5544	3771	1
10	86M86	3507	1824	2665	2388	2496	2442	1164	2483	2483	3088	4306	3156	2906	4
11	Kaveri Super Boss	3874	3094	3484	3089	2661	2875	1305	3132	3132	3407	3962	4289	3439	2
12	Dhanshakti	2853	1203	2028	1537	1333	1435	823	1796	1796	2182	2238	1483	1828	15
13	ICMV 221	2924	765	1844	1775	1325	1550	774	2934	2934	2049	1761	2333	1983	13
14	Pusa Comp. 612	3056	1869	2462	1919	1631	1775	1176	2459	2459	1897	2024	2689	2193	12
15	Raj 171	3335	1348	2342	1818	1592	1705	1152	1862	1862	2183	1476	2122	1967	14
	LOC. MEAN	3381	1773	2577	2350	2177	2263	1277	2614	2614	2810	3189	2718	2626	
	C.D. (5%)	465	268	811	276	476	486	178	642	642	621	511	784	476	
	C.D. (1%)	628	361	1126	372	642	675	240	865	865	838	690	1058	630	
	C.V. (%)	8.2	9.0	14.7	7.0	13.1	10.0	8.4	14.7	14.7	13.2	9.6	17.3	18.3	
	F (Prob)	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	PLOT SIZE (m ²)	12.00	11.10	-	12.00	12.00	-	12.00	11.10	-	12.00	12.00	12.00	-	

***TEST LOCATION REJECTED DUE TO LOW AVERAGE YIELD (1277 kg/ha), THAN THE STATE AVERAGE YIELD (1772 kg/ha) TAKEN OVER 10 YEARS

Table I.189: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 DRY FODDER YIELD (kg/ha) ZONE B

S.No.	ENTRY	ABD1	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	RHB 233	7556	2943	5249	5361	3833	4597	2422	4514	3468	6674	5401	4838	9
2	RHB 234	6917	2553	4735	4861	2500	3681	2563	3526	3044	7262	4537	4340	13
3	AHB 1269	7056	4414	5735	4917	4000	4458	3388	4883	4135	7465	5469	5199	5
4	AHB 1200	7222	4685	5953	5472	4167	4819	2748	4177	3462	5857	4334	4833	10
5	HHB 299	7333	6066	6700	5083	4611	4847	3354	3559	3456	6851	4213	5134	6
6	Mahabeej 1005	7222	4925	6074	5111	4111	4611	4109	3183	3646	6502	4699	4983	7
7	86M01	6722	5796	6259	5278	6222	5750	3611	3856	3733	6814	7670	5746	3
8	Pratap (MH 1642)	7028	2973	5000	4944	4500	4722	2890	4715	3802	6017	5185	4782	11
9	NBH 4903	6889	8198	7544	5278	7056	6167	2615	4601	3608	8116	5793	6068	2
10	86M86	6778	3754	5266	4889	4667	4778	3531	4808	4169	6894	7994	5414	4
11	Kaveri Super Boss	6583	8198	7391	5222	7722	6472	2973	5105	4039	7593	6009	6176	1
12	Dhanshakti	6806	3183	4994	4778	3167	3972	3080	2814	2947	4851	3983	4083	15
13	ICMV 221	6750	3574	5162	4972	3000	3986	3101	3147	3124	4611	4213	4171	14
14	Pusa Comp. 612	6556	7718	7137	5250	3889	4569	2531	3670	3100	4233	5226	4884	8
15	Raj 171	7250	4535	5892	4833	2778	3806	1861	4619	3240	4891	4402	4396	12
	LOC. MEAN	6978	4901	5939	5083	4415	4749	2985	4078	3532	6309	5275	5003	
	C.D. (5%)	1296	941	3103	360	983	2148	515	849	1572	1365	945	959	
	C.D. (1%)	1748	1269	4307	486	1326	2981	694	1145	2181	1842	1275	1269	
	C.V. (%)	11.1	11.5	24.4	4.2	13.3	21.1	10.3	12.4	20.8	12.9	10.7	19.3	
	F (Prob)	0.000	0.000	0.665	0.000	0.000	0.298	0.000	0.000	0.838	0.000	0.000	0.000	
	PLOT SIZE (m ²)	12.00	11.10	-	12.00	12.00	-	12.00	11.10	-	12.00	12.00	-	

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Table I.190: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 DAYS TO 50% FLOWERING ZONE B

S.No.	ENTRY	ABD1	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	SMG	ZONE MEAN	RANK
1	RHB 233	54	51	52	45	47	46	45	45	45	41	45	48	47	9
2	RHB 234	54	56	55	50	51	51	49	46	48	42	47	51	49	4
3	AHB 1269	52	53	53	48	48	48	44	45	44	40	45	45	47	8
4	AHB 1200	49	51	50	45	49	47	46	45	46	39	45	43	46	13
5	HHB 299	49	53	51	48	50	49	44	46	45	40	44	48	47	7
6	Mahabeej 1005	51	56	54	47	49	48	45	46	46	42	45	47	48	6
7	86M01	53	53	53	50	52	51	46	48	47	43	47	50	49	5
8	Pratap (MH 1642)	45	51	48	48	49	49	42	44	43	42	45	46	46	12
9	NBH 4903	56	55	55	51	49	50	43	48	46	47	52	53	50	2
10	86M86	60	52	56	50	51	50	44	47	46	44	50	53	50	3
11	Kaveri Super Boss	59	55	57	51	56	54	46	50	48	48	50	54	52	1
12	Dhanshakti	45	49	47	45	49	47	45	36	41	42	42	42	44	15
13	ICMV 221	46	48	47	45	46	46	44	45	45	43	39	38	44	14
14	Pusa Comp. 612	55	52	53	48	48	48	43	40	42	43	46	44	47	10
15	Raj 171	51	48	49	46	48	47	45	40	42	47	44	48	46	11
	LOC. MEAN	52	52	52	48	49	49	45	45	45	43	46	47	47	
	C.D. (5%)	1.0	6.0	6.0	1.0	2.0	3.0	2.0	2.0	6.0	3.0	1.0	4.0	2.0	
	C.D. (1%)	1.0	8.0	8.0	2.0	2.0	4.0	3.0	2.0	8.0	4.0	2.0	6.0	3.0	
	C.V. (%)	1.3	6.4	5.1	1.6	2.0	2.8	2.5	2.0	6.0	4.5	1.6	5.6	4.8	
	F (Prob)	0.000	0.000	0.026	0.000	0.000	0.002	0.000	0.000	0.332	0.000	0.000	0.000	0.000	

Table I.191: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 DAYS TO MATURITY ZONE B

S.No.	ENTRY	ABD1	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	RHB 233	93	87	90	86	82	84	81	76	78	72	83	83	8
2	RHB 234	93	92	93	90	83	87	84	77	81	72	85	85	5
3	AHB 1269	91	89	90	89	82	85	80	75	77	69	83	82	9
4	AHB 1200	89	88	88	86	83	85	81	76	79	68	83	82	11
5	HHB 299	91	90	90	89	84	87	79	77	78	71	82	83	7
6	Mahabeej 1005	93	93	93	87	82	85	82	78	80	74	83	84	6
7	86M01	94	90	92	90	85	88	81	80	80	71	85	85	4
8	Pratap (MH 1642)	88	87	88	88	82	85	76	74	75	73	83	82	12
9	NBH 4903	96	91	94	92	84	88	79	80	80	75	90	86	2
10	86M86	100	89	95	90	83	87	78	79	79	78	88	86	3
11	Kaveri Super Boss	96	92	94	92	87	90	81	81	81	75	88	87	1
12	Dhanshakti	89	85	87	86	81	84	80	65	72	71	80	80	15
13	ICMV 221	91	85	88	87	82	84	79	75	77	72	77	81	13
14	Pusa Comp. 612	92	89	91	89	82	85	78	69	74	71	84	82	10
15	Raj 171	89	84	87	87	81	84	80	69	75	75	82	81	14
	LOC. MEAN	92	89	91	88	83	86	80	75	78	73	84	83	
	C.D. (5%)	1.0	6.0	4.0	1.0	2.0	2.0	2.0	2.0	7.0	5.0	1.0	2.0	
	C.D. (1%)	2.0	8.0	6.0	2.0	3.0	3.0	2.0	3.0	9.0	7.0	2.0	3.0	
	C.V. (%)	0.7	3.8	2.3	0.9	1.4	1.3	1.3	1.7	4.1	4.1	0.9	2.6	
	F (Prob)	0.000	0.000	0.020	0.000	0.000	0.002	0.000	0.000	0.260	0.000	0.000	0.000	

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Table I.192: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 PLANT HEIGHT (cm.) ZONE B

S.No.	ENTRY	ABD1	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	SMG	ZONE MEAN	RANK
1	RHB 233	178	193	186	160	171	166	128	139	134	179	163	189	167	12
2	RHB 234	147	165	156	165	169	167	136	166	151	166	174	150	160	15
3	AHB 1269	168	197	183	165	182	173	137	166	152	147	183	211	173	10
4	AHB 1200	190	184	187	173	171	172	125	172	148	140	174	184	168	11
5	HHB 299	170	175	173	154	157	156	129	162	146	146	164	188	161	14
6	Mahabeej 1005	172	219	196	163	174	169	122	203	163	200	169	224	183	6
7	86M01	173	206	190	162	176	169	124	204	164	180	180	204	179	7
8	Pratap (MH 1642)	160	165	162	154	162	158	117	191	154	166	172	177	163	13
9	NBH 4903	185	226	206	188	192	190	148	220	184	192	204	237	199	2
10	86M86	160	207	184	187	177	182	126	217	172	195	223	204	188	5
11	Kaveri Super Boss	202	236	219	197	199	198	133	238	185	198	223	254	209	1
12	Dhanshakti	190	187	189	153	177	165	122	228	175	172	171	195	177	9
13	ICMV 221	178	214	196	167	172	170	130	195	163	166	192	195	179	8
14	Pusa Comp. 612	172	235	203	194	192	193	125	243	184	194	196	236	199	3
15	Raj 171	185	219	202	183	188	185	134	199	167	194	204	219	192	4
	LOC. MEAN	175	202	189	171	177	174	129	196	163	176	186	205	180	
	C.D. (5%)	8.0	15.0	31.0	10.0	16.0	13.0	12.0	19.0	48.0	15.0	20.0	23.0	13.0	
	C.D. (1%)	10.0	20.0	43.0	14.0	22.0	18.0	16.0	26.0	66.0	21.0	27.0	30.0	17.0	
	C.V. (%)	2.6	4.3	7.6	3.7	5.5	3.5	5.5	5.8	13.7	5.3	6.4	6.6	7.7	
	F (Prob)	0.000	0.000	0.040	0.000	0.000	0.000	0.000	0.000	0.522	0.000	0.000	0.000	0.000	

Table I.193: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 PRODUCTIVE TILLERS (No./Plant) ZONE B

S.No.	ENTRY	ABD1**	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	SMG	ZONE MEAN	RANK
1	RHB 233	2.3	2.3	2.3	3.2	3.6	3.4	1.5	1.6	1.5	2.3	4.4	2.5	2.7	6
2	RHB 234	1.7	2.2	2.2	3.3	4.0	3.6	1.6	1.9	1.8	3.3	4.0	2.3	2.8	1
3	AHB 1269	3.0	2.4	2.4	3.3	3.5	3.4	1.7	1.7	1.7	2.5	2.2	2.7	2.5	12
4	AHB 1200	2.7	1.6	1.6	3.0	3.4	3.2	1.5	1.9	1.7	3.3	2.5	2.8	2.5	13
5	HHB 299	3.0	2.1	2.1	3.5	3.8	3.7	1.5	1.5	1.5	2.5	2.5	2.7	2.5	11
6	Mahabeej 1005	2.0	2.1	2.1	3.4	3.6	3.5	1.6	1.7	1.7	3.9	2.5	2.8	2.7	3
7	86M01	1.3	2.3	2.3	3.5	3.5	3.5	1.7	1.6	1.7	3.6	3.2	2.7	2.8	2
8	Pratap (MH 1642)	2.0	2.1	2.1	3.5	4.1	3.8	1.4	2.5	2.0	2.5	2.7	2.1	2.6	9
9	NBH 4903	2.3	2.5	2.5	3.4	3.6	3.5	1.6	1.9	1.7	1.4	3.7	3.0	2.6	7
10	86M86	2.0	1.8	1.8	3.2	3.6	3.4	1.4	2.1	1.7	2.9	3.4	2.3	2.6	10
11	Kaveri Super Boss	2.3	2.7	2.7	3.1	3.6	3.3	1.5	1.6	1.6	3.1	3.0	3.1	2.7	4
12	Dhanshakti	1.7	2.1	2.1	2.9	3.1	3.0	1.2	2.1	1.6	2.5	3.2	2.1	2.4	14
13	ICMV 221	2.3	2.1	2.1	3.1	3.8	3.4	1.5	1.9	1.7	2.3	2.8	2.3	2.5	13
14	Pusa Comp. 612	1.3	2.1	2.1	3.0	3.9	3.4	1.4	2.1	1.8	2.2	3.2	3.0	2.6	8
15	Raj 171	1.7	1.9	1.9	3.4	3.7	3.5	1.6	2.0	1.8	3.6	3.1	2.2	2.7	5
	LOC. MEAN	2.1	2.2	2.2	3.2	3.6	3.4	1.5	1.9	1.7	2.8	3.1	2.6	2.6	
	C.D. (5%)	1.2	0.2	0.2	0.5	0.7	0.4	0.5	0.4	0.5	0.4	0.5	0.5	0.4	
	C.D. (1%)	1.6	0.2	0.2	0.7	1.0	0.5	0.6	0.5	0.8	0.6	0.7	0.7	0.5	
	C.V. (%)	33.9	5.0	5.0	9.5	12.1	5.1	19.0	11.7	15.0	8.8	9.4	12.3	15.1	
	F (Prob)	0.000	0.000	0.000	0.000	0.000	0.051	0.000	0.000	0.947	0.000	0.000	0.000	0.772	

**1 LOCATION REJECTED DUE TO HIGH C.V. (i.e. > 30%): ABD1 33.9%

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Table I.194: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 PANICLE LENGTH (cm) ZONE B

S.No.	ENTRY	ABD1	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	SMG	ZONE MEAN	RANK
1	RHB 233	26	27	26	26	23	24	25	33	29	29	29	24	27	3
2	RHB 234	24	23	24	24	21	23	26	32	29	23	25	21	25	9
3	AHB 1269	25	25	25	25	22	24	23	24	24	26	23	22	24	11
4	AHB 1200	28	27	28	24	23	23	26	22	24	28	22	24	25	8
5	HHB 299	22	24	23	24	21	23	23	25	24	21	22	23	23	12
6	Mahabeej 1005	25	26	26	26	22	24	25	28	26	22	22	23	24	10
7	86M01	26	26	26	25	23	24	24	32	28	33	26	23	27	5
8	Pratap (MH 1642)	18	23	20	23	21	22	22	29	25	22	21	21	22	14
9	NBH 4903	25	28	26	27	24	26	24	31	28	32	30	28	28	1
10	86M86	24	26	25	26	23	25	21	27	24	28	26	23	25	7
11	Kaveri Super Boss	26	28	27	28	24	26	23	28	26	26	29	27	27	4
12	Dhanshakti	22	24	23	24	19	21	21	24	22	20	19	22	21	15
13	ICMV 221	18	24	21	25	19	22	25	24	25	25	20	24	23	13
14	Pusa Comp. 612	28	29	29	30	22	26	23	23	23	35	30	25	27	2
15	Raj 171	27	27	27	27	23	25	26	28	27	24	24	26	26	6
	LOC. MEAN	24	26	25	26	22	24	24	27	26	26	25	24	25	
	C.D. (5%)	1.0	2.0	3.0	1.0	2.0	2.0	2.0	3.0	5.0	2.0	3.0	2.0	2.0	
	C.D. (1%)	1.0	2.0	4.0	2.0	2.0	3.0	3.0	4.0	7.0	3.0	4.0	3.0	3.0	
	C.V. (%)	2.3	3.5	6.0	3.0	4.3	4.9	5.7	6.4	9.7	4.8	6.3	5.0	9.0	
	F (Prob)	0.000	0.000	0.001	0.000	0.000	0.022	0.000	0.000	0.257	0.000	0.000	0.000	0.000	

Table I.195: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 PANICLE DIAMETER (cm) ZONE B

S.No.	ENTRY	ABD1	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	PLM	CBE	ZONE MEAN	RANK
1	RHB 233	2.8	3.3	3.1	2.7	2.9	2.8	3.1	2.9	3.2	3.0	8
2	RHB 234	3.3	3.1	3.2	2.6	3.4	3.0	2.9	2.0	3.3	2.9	11
3	AHB 1269	3.0	3.5	3.3	3.1	2.9	3.0	2.8	2.6	3.7	3.1	7
4	AHB 1200	3.2	3.4	3.3	2.7	2.9	2.8	2.8	3.6	3.4	3.2	4
5	HHB 299	3.3	3.5	3.4	2.8	3.1	2.9	2.8	2.9	3.4	3.1	5
6	Mahabeej 1005	3.2	3.4	3.3	2.7	2.8	2.8	2.9	3.0	3.6	3.1	6
7	86M01	2.9	3.2	3.1	2.8	2.8	2.8	2.5	2.7	3.2	2.9	12
8	Pratap (MH 1642)	2.9	3.3	3.1	2.6	3.0	2.8	2.4	3.1	3.3	2.9	10
9	NBH 4903	3.4	3.5	3.4	2.9	3.2	3.1	2.9	3.3	3.9	3.3	1
10	86M86	3.2	3.5	3.3	2.8	3.1	3.0	2.6	3.2	3.8	3.2	3
11	Kaveri Super Boss	3.2	3.6	3.4	2.8	2.7	2.7	2.6	4.0	3.5	3.2	2
12	Dhanshakti	3.3	3.4	3.3	2.3	2.5	2.4	2.8	2.1	2.6	2.7	14
13	ICMV 221	2.9	3.3	3.1	2.6	2.9	2.8	2.9	3.3	2.9	3.0	9
14	Pusa Comp. 612	2.8	3.3	3.1	2.2	2.2	2.2	2.7	3.2	2.7	2.7	13
15	Raj 171	2.4	2.8	2.6	2.4	2.1	2.3	2.5	2.8	2.2	2.5	15
	LOC. MEAN	3.1	3.3	3.2	2.7	2.8	2.7	2.7	3.0	3.2	3.0	
	C.D. (5%)	0.2	0.3	0.3	0.2	0.4	0.4	0.3	0.3	0.2	0.3	
	C.D. (1%)	0.2	0.4	0.4	0.3	0.5	0.5	0.5	0.4	0.3	0.4	
	C.V. (%)	3.4	5.2	4.4	4.8	7.8	6.5	7.6	6.1	4.6	9.4	
	F (Prob)	0.000	0.000	0.004	0.000	0.000	0.005	0.000	0.000	0.000	0.005	

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Table I.196: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 1000-SEED Wt.(g) ZONE B

S.No.	ENTRY	ABD1	DHL	MS MEAN	VYP	MLR	KS MEAN	VZN	CBE	ZONE MEAN	RANK
1	RHB 233	14.2	7.7	11.0	12.3	12.5	12.4	6.1	11.5	10.7	7
2	RHB 234	13.7	5.8	9.8	13.4	12.5	13.0	6.2	10.8	10.4	9
3	AHB 1269	12.2	7.9	10.0	12.6	12.2	12.4	5.4	11.4	10.3	10
4	AHB 1200	13.4	8.2	10.8	13.3	11.9	12.6	6.9	15.0	11.4	1
5	HHB 299	12.0	7.4	9.7	12.9	11.0	11.9	5.9	7.3	9.4	14
6	Mahabeej 1005	14.7	8.7	11.7	13.3	12.2	12.8	6.1	9.6	10.8	5
7	86M01	12.9	6.9	9.9	13.6	11.8	12.7	5.4	12.7	10.6	8
8	Pratap (MH 1642)	11.8	7.2	9.5	12.4	13.2	12.8	6.4	13.3	10.7	6
9	NBH 4903	13.2	7.0	10.1	14.4	12.2	13.3	5.7	12.5	10.8	4
10	86M86	14.4	8.2	11.3	13.4	12.7	13.1	6.5	12.7	11.3	2
11	Kaveri Super Boss	9.5	6.2	7.8	13.8	11.7	12.8	5.7	12.1	9.8	12
12	Dhanshakti	13.0	8.1	10.6	14.4	12.5	13.5	5.4	12.4	11.0	3
13	ICMV 221	13.4	6.4	9.9	14.3	12.3	13.3	5.5	7.7	9.9	11
14	Pusa Comp. 612	8.5	9.8	9.2	13.2	11.6	12.4	5.2	9.2	9.6	13
15	Raj 171	5.6	6.0	5.8	12.2	10.9	11.5	6.6	8.7	8.3	15
	LOC. MEAN	12.2	7.4	9.8	13.3	12.1	12.7	5.9	11.1	10.3	
	C.D. (5%)	0.4	0.5	3.9	0.5	0.7	1.3	0.7	1.2	1.6	
	C.D. (1%)	0.6	0.7	5.4	0.6	1.0	1.9	0.9	1.6	2.1	
	C.V. (%)	2.2	4.1	18.4	2.1	3.5	4.9	6.6	6.5	12.1	
	F (Prob)	0.000	0.000	0.323	0.000	0.000	0.288	0.000	0.000	0.097	

Table I.197: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024 POPULATION AT HARVEST (No./ plot) ZONE B

S.No.	ENTRY	ABD1	DHL	MS MEAN	VYP	MLR	KS MEAN	APR	VZN	AP MEAN	PLM	CBE	ZONE MEAN	RANK
1	RHB 233	154	113	134	145	150	148	89	131	110	158	129	134	8
2	RHB 234	151	101	126	144	148	146	58	131	94	158	119	126	14
3	AHB 1269	153	127	140	142	147	144	95	133	114	154	128	135	3
4	AHB 1200	152	144	148	145	148	147	83	132	108	157	127	136	1
5	HHB 299	153	139	146	145	150	147	74	131	103	159	119	134	7
6	Mahabeej 1005	154	121	138	146	155	150	86	129	108	156	128	134	5
7	86M01	151	121	136	144	151	148	106	131	119	155	119	135	2
8	Pratap (MH 1642)	153	120	136	143	147	145	78	130	104	145	106	128	11
9	NBH 4903	153	131	142	141	160	151	115	129	122	135	107	134	6
10	86M86	151	72	111	142	150	146	93	131	112	152	124	127	12
11	Kaveri Super Boss	153	127	140	143	153	148	94	129	111	151	129	135	4
12	Dhanshakti	151	128	140	142	147	145	84	132	108	157	116	132	10
13	ICMV 221	153	72	112	144	144	144	89	129	109	154	115	125	15
14	Pusa Comp. 612	153	134	144	144	151	148	90	130	110	154	111	133	9
15	Raj 171	152	110	131	144	145	145	68	130	99	153	112	127	13
	LOC. MEAN	152	117	135	144	150	147	87	131	109	153	119	132	
	C.D. (5%)	2.0	28.0	32.0	3.0	13.0	7.0	11.0	3.0	22.0	10.0	10.0	10.0	
	C.D. (1%)	3.0	37.0	45.0	5.0	17.0	9.0	15.0	4.0	30.0	14.0	13.0	13.0	
	C.V. (%)	0.9	14.2	11.2	1.4	5.1	2.1	7.6	1.5	9.3	3.9	4.8	7.4	
	F (Prob)	0.000	0.000	0.465	0.000	0.000	0.624	0.000	0.000	0.523	0.000	0.000	0.267	

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Table I.198: RELEASED HYBRIDS & VARIETIES TRIAL KHARIF - 2024
SEED SET (%) UNDER BAG ZONE B

S.No.	ENTRY	ABD1	DHL	MS MEAN	PLM	CBE	ZONE MEAN	RANK
1	RHB 233	99	98	99	94	69	90	9
2	RHB 234	99	91	95	95	37	81	15
3	AHB 1269	97	93	95	93	83	91	7
4	AHB 1200	97	92	94	96	69	89	12
5	HHB 299	98	93	96	91	94	94	3
6	Mahabeej 1005	99	96	97	95	67	89	11
7	86M01	96	91	94	95	53	84	14
8	Pratap (MH 1642)	98	98	98	85	84	91	8
9	NBH 4903	98	94	96	96	65	88	13
10	86M86	99	98	98	94	69	90	10
11	Kaveri Super Boss	99	98	98	95	83	94	5
12	Dhanshakti	96	93	95	96	90	94	4
13	ICMV 221	99	86	93	95	89	92	6
14	Pusa Comp. 612	98	98	98	97	90	96	1
15	Raj 171	98	98	98	97	83	94	2
	LOC. MEAN	98	94	96	94	75	90	
	C.D. (5%)	2.0	7.0	5.0	6.0	8.0	5.0	
	C.D. (1%)	3.0	9.0	7.0	8.0	11.0	7.0	
	C.V. (%)	1.2	4.4	2.5	3.7	6.5	2.5	
	F (Prob)	0.000	0.000	0.307	0.000	0.000	0.307	

E. AICRP on Pearl Millet Summer Trials: SHT

One coordinated trial in summer 2024 viz. Summer Hybrid Trial comprising entries of first, second and third year of testing was conducted at 16 locations i.e. Six locations in Gujarat, four in Maharashtra and one each in Rajasthan, U.P., Punjab, A.P., Telangana and Tamil Nadu. The results are presented below:

Seventeen hybrids along with five checks MP 7366, Nandi 75, Proagro 9444, 86M22 and 86M64 were evaluated in SHT (Summer Hybrid Trial). Mean performance of experimental hybrids for grain yield, dry fodder yield, days to 50% flowering and days to maturity are given in Tables I.199. Location-wise performance for grain yield and other ancillary characters are given in Tables I.200 to I.213. Two hybrids viz., MSH 406 (4442 kg/ha) and MSH 416 (4420 kg/ha) recorded higher grain yield over the best check MP 7366 (4381 kg/ha). Dry fodder yield ranged from 6907 kg/ha to 10591 kg/ha.

Table I.199: MEAN PERFORMANCE: SUMMER HYBRID TRIAL SUMMER 2024

S.No.	Name of Entry (Year of testing)	Grain Yield (kg/ha)	Dry Fodder Yield (kg/ha)	Days to 50% Flower	Days to Maturity	DM (%) 60 DAS	Blast (score)	Ergot (%)	Smut (%)	Rust (%)	Fe (ppm)	Zn (ppm)
1	MSH 406	4442	10591	57	88	0.0	1.0	0.0	0.5	0.0	53	40
2	MSH 416	4420	9962	55	86	0.0	0.9	0.0	0.6	0.9	51	40
3	MP 7366 (C)	4381	8640	56	86	0.2	0.9	0.4	0.3	3.4	53	42
4	MSH 417	4344	9066	55	87	0.0	0.5	0.0	0.0	1.3	51	40
5	MSH 420	4344	9152	55	86	0.0	0.5	0.0	0.0	2.3	43	34
6	Nandi 75 (C)	4290	9812	54	86	0.3	1.0	0.0	0.5	1.8	38	32
7	MSH 428	4285	9900	55	87	0.0	0.5	0.0	0.4	1.4		
8	MSH 407	4277	9546	55	87	0.7	1.0	0.9	0.4	1.8		
9	MSH 418	4233	8809	54	85	1.0	0.9	0.6	0.0	0.3		
10	86M64 (C)	4213	9594	55	86	0.3	1.5	0.5	0.5	1.6	48	36
11	86M22 (C)	4207	9569	55	86	0.0	0.9	0.0	0.5	0.4	54	42
12	MSH 414	4166	10398	57	88	0.2	0.4	0.0	0.4	0.0		
13	MSH 422	4151	8727	56	87	0.7	0.9	0.0	0.4	1.6		
14	Proagro 9444 (C)	4142	9083	56	87	0.0	0.5	0.0	0.1	0.0	40	35
15	MSH 423	4129	8553	54	85	1.0	1.2	1.0	0.4	3.1		
16	MSH 419	4081	8510	55	87	0.0	1.0	0.5	0.8	1.9		
17	MSH 426	3802	8405	50	82	0.4	0.6	0.0	0.4	2.8		
18	MSH 427	3777	7826	51	83	0.9	0.9	0.0	0.6	2.5		
19	MSH 421	3690	8622	56	87	0.0	0.9	0.0	0.6	2.3		
20	MSH 425	3671	7892	49	82	0.2	0.6	0.0	0.4	0.0		
21	MSH 424	3670	8483	54	85	0.3	1.3	0.0	0.6	2.3		
22	MSH 415	3208	6907	49	81	1.5	0.9	0.4	0.0	2.3		
LOC. MEAN		4087	9002	54	86							

Promotion criteria as per 54th Annual group meet: Grain yield =higher than best check or 5% higher over relevant check, Disease (Across all zones): Downy Mildew (60 DAS): $\leq 5\%$, Blast (score): ≤ 3 (0-9 scale), Ergot (% severity): $\leq 20\%$, Smut (% severity): $\leq 20\%$, Rust (% leaf area): $\leq 20\%$, Iron content: ≥ 42 ppm and Zinc content: ≥ 32 ppm.

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Table I.200: SUMMER HYBRID TRIAL SUMMER 2024 EXPERIMENTAL DETAILS

Locations	Soil	pH	Sowing date	Harvesting date	Interculture date	No. of Irrigations	Fertilizers			Insecticide
							N	P	K	
AICRP-PM, Mandor (AUJ)	SL	8.1	21.02.2024	25.05.2024	13.03.2004 & 14.03.2024	As per requirement	60	40	0	Nil
Anand (AAU)	SL	7.2	15.02.2024	25.05.2024	07.03, 14.03 & 20.03.2024	6	120	60	0	Emamectin Benzoate & Coragen
Jamnagar (JAU)	MB	7.6	17.02.2024	17.05.2024	26.02, 7.03, 16.03, 26.03.2024	8	120	60	0	Nil
Deesa (SDAU)	SL	-	20.02.2024	22.05.2024	15.03.2024	As per requirement	120	60	0	Nil
Ahmedabad (Nandi Seed)	SL	-	07.03.2024	06.06.2024	31.03.2024 & 15.04.2024	As per requirement	80	40	0	Coragen
Palanpur (Corteva)	A	-	04.03.2024	01.06.2024	26.03.2024	As per requirement	120	40	25	Emamectin Benzoate
Dehgam (Rallis)	SL	6.5	25.02.2024	22.05.2024	11.03.2024	11	40	20	20	Coragen
Agra (Kartik Bio Seeds)	SL	-	29.03.2024	01.07.2024	12.04.2024	4	0	0	0	Nil
Ludhiana (Ludhiana))	SL	-	26.03.2024	25.07.2024	13.04.2024 & 17.05.2024	3	100	60	0	Nil
Aurangabad (NARP)	MB	7.5	17.02.2024	25.05.2024	20.03.2024 & 18.04.24	6	60	30	30	Nil
Aurangabad (Seedworks)	BC	8.01	15.02.2024	16.05.2024	18.03.2024	7	80	40	40	Chloropyriphos
Dhule	MB	8.6	15.02.2024	25.05.2024	26,27.03.2024	6	90	45	45	Nil
Jalna (Mahyco)	B	-	15.03.2024	07.06.2024	05.04.2024	6	80	40	40	Delegate
Perumallapalle	RSL	7.7	18.03.2024	-	15.04.2024	As per requirement	60	30	20	Nil
Palem (PJ TSAU)	RSL	7.0	17.02.2024	27.05.2024	26.02.2024 & 18.03.2024	6	36	16	16	Nil
Coimbatore (TNAU)	CL	7.82	23.02.2024	31.05.2024	13.03.2024	5	80	40	40	Nil

SL = Sandy Loam, MB = Medium Black, CL = Clay Loam, B = Black, BC = Black Cotton, RSL= Red Sandy Loam, A = Alluvial

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Table I.201: SUMMER HYBRID TRIAL - 2024 GRAIN YIELD (kg/ha)

S.No.	TEST	ENTRY	MDR	AND	JMR	SKN	AHD	DEG	PNR1	GUJ	AGR1	LDA	ABD1	ABD7	DHL	JLN1	MS	PMP	PLM	CBE	ZONE	RANK
	CODE									MEAN							MEAN				MEAN	
1	SHT 101	MSH 406	4271	6192	4708	5728	4018	5438	5031	5186	2586	2189	3780	6423	2946	5171	4580	3889	3977	4722	4442	1
2	SHT 102	MSH 407	3681	4601	3968	5969	3468	4699	4679	4564	2983	2321	3054	6442	4084	4853	4608	4069	4691	4875	4277	8
3	SHT 103	86M64 (Check)	3565	5834	4241	6157	3885	5222	4864	5034	3008	2494	2929	6007	3996	5036	4492	2719	3327	4131	4213	10
4	SHT 104	MSH 414	3912	4904	4053	5799	4253	5713	4449	4862	3139	2057	3334	6326	3950	4769	4595	2556	3654	3783	4166	12
5	SHT 105	MSH 415	3681	4223	3720	3892	2474	3237	3743	3548	2661	1586	3042	4519	2983	3194	3435	3086	2176	3108	3208	22
6	SHT 106	MSH 416	4009	5724	4718	5596	3976	5572	5250	5139	2583	2998	3334	5904	3483	5068	4447	4586	3597	4325	4420	2
7	SHT 107	MP 7366 (Check)	2789	6641	5282	5170	3366	5591	4461	5085	2694	3391	2859	6115	4292	4706	4493	4289	3998	4458	4381	3
8	SHT 108	MSH 417	3611	5402	4688	6145	4061	5222	4838	5059	2819	2042	3088	6205	3215	5331	4459	4572	4458	3814	4344	4
9	SHT 109	MSH 418	3657	6298	4736	5858	3072	5119	5029	5019	3683	1795	3145	5794	3502	4346	4197	3072	4199	4417	4233	9
10	SHT 110	MSH 419	3611	5686	4606	5972	3328	5250	4263	4851	2711	2771	3317	6349	2980	4189	4209	2783	2947	4531	4081	16
11	SHT 111	86M22 (Check)	3194	6281	4384	5799	2567	5372	5088	4915	2703	3502	3459	6380	3137	4369	4336	3567	4232	3278	4207	11
12	SHT 112	MSH 420	3796	6440	4586	6580	3525	5839	4350	5220	3544	2326	3413	5902	3423	4998	4434	3292	4236	3247	4344	5
13	SHT 113	MSH 421	3519	5579	4016	5083	2980	4557	4516	4455	2586	2795	3128	4083	3142	3623	3494	3311	3388	2736	3690	19
14	SHT 114	MSH 422	3102	4711	3789	6346	3365	4913	4816	4657	2439	3609	2856	6604	3987	4550	4499	3225	3796	4314	4151	13
15	SHT 115	MSH 423	3843	5109	5287	5367	3156	4408	5004	4722	2717	2389	4179	5860	4412	4683	4783	2850	3419	3378	4129	15
16	SHT 116	Nandi 75 (Check)	3750	6303	4826	6019	3553	4719	3787	4868	2944	1996	2887	6186	4505	4994	4643	4303	3111	4756	4290	6
17	SHT 117	MSH 424	3639	4296	3859	3540	3406	3707	4271	3847	2889	2498	3393	5422	3440	4657	4228	2911	3014	3783	3670	21
18	SHT 118	MSH 425	3611	3896	3595	4586	3144	3600	4853	3946	2611	3272	3500	5445	4339	3424	4177	2456	2898	3503	3671	20
19	SHT 119	MSH 426	3773	4630	4002	5284	2975	4353	4356	4267	2783	3060	3988	5803	3996	4144	4483	1969	2803	2919	3802	17
20	SHT 120	MSH 427	3542	4787	3933	4614	2999	4193	4075	4100	3111	3468	3406	5621	3657	4504	4297	2542	2527	3447	3777	18
21	SHT 121	MSH 428	3565	6118	4132	6167	3918	5603	3543	4914	2869	2984	2842	6527	4193	4369	4483	3156	4238	4333	4285	7
22	SHT 122	Proagro 9444 (Check)	3611	4803	3704	6605	3304	4716	5644	4796	3394	3398	3593	5448	3808	3967	4204	3111	3088	4081	4142	14
		LOC. MEAN	3624	5384	4311	5558	3400	4866	4587	4684	2885	2679	3297	5880	3703	4497	4344	3287	3535	3906	4087	
		C.D. (5%)	391	633	964	1266	549	650	1511	580	184	198	360	729	754	945	668	842	926	516	361	
		C.D. (1%)	523	847	1289	1693	734	870	2020	767	247	264	481	974	1009	1263	887	1125	1238	690	476	
		C.V. (%)	6.6	7.1	13.6	13.8	9.8	8.1	20.0	10.8	3.9	4.5	6.6	7.5	12.4	12.8	10.9	15.5	15.9	8.0	12.7	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.000	0.000	0.000	0.000	
		PLOT SIZE (m ²)	14.40	12.00	14.40	10.80	12.00	8.00	12.00	-	12.00	12.00	12.00	8.00	11.10	12.00	-	12.00	12.00	12.00	-	

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Table I.202: SUMMER HYBRID TRIAL - 2024 DRY FODDER YIELD (kg/ha)

S.No.	TEST ENTRY	MDR	AND	JMR	SKN	AHD	DEG	PNR1	GUJ	AGR1	LDA	ABD1	ABD7	DHL	JLN1	MS	PMP	PLM	CBE	ZONE	RANK
	CODE	MEAN										MEAN									
1	SHT 101 MSH 406	6250	11313	7421	11914	13095	9746	23516	12834	10111	9411	7556	15223	8303	11583	10666	7722	8871	7422	10591	1
2	SHT 102 MSH 407	6366	8642	5389	7407	6922	6806	22464	9605	7986	6942	6972	12850	7057	18318	11299	10500	11260	6847	9546	8
3	SHT 103 86M64 (Check)	6204	10925	4907	7901	10125	9692	26114	11611	8750	6097	6722	11247	6441	20672	11271	3892	7339	6469	9594	6
4	SHT 104 MSH 414	6296	9851	6028	7500	13419	10138	25956	12149	8422	5744	7250	14718	6937	19935	12210	8456	8551	7172	10398	2
5	SHT 105 MSH 415	6319	8913	4303	6235	6610	5371	13928	7560	9297	4700	7750	6448	5135	10199	7383	5808	5263	4239	6907	22
6	SHT 106 MSH 416	6319	11180	5898	8395	10080	8858	20997	10902	9167	10111	7333	13044	7538	15882	10949	9836	8041	6708	9962	3
7	SHT 107 MP 7366 (Check)	6343	10983	6292	6265	8700	10717	14033	9498	8503	9364	7444	10354	7613	8442	8463	7306	9447	6431	8640	14
8	SHT 108 MSH 417	6197	11175	6384	8025	7405	8192	20294	10246	7336	5211	7806	11368	6847	9963	8996	10250	11025	7583	9066	11
9	SHT 109 MSH 418	6123	11110	5727	6728	6730	7850	20183	9721	8653	9214	7278	10748	7162	10296	8871	7111	9349	6681	8809	12
10	SHT 110 MSH 419	5716	11013	5347	7500	7370	7467	19036	9622	10222	7528	8167	10742	6907	6699	8128	9344	6698	6403	8510	17
11	SHT 111 86M22 (Check)	5000	12120	6060	7438	5788	9192	23847	10741	9972	9636	8194	13366	6547	9707	9453	9681	10630	5933	9569	7
12	SHT 112 MSH 420	6597	11233	4894	8796	8938	8329	20225	10402	9778	8742	8583	12416	7312	8589	9225	5931	9654	6408	9152	9
13	SHT 113 MSH 421	5706	10660	4343	8148	9721	7946	17472	9715	8833	7553	6889	11065	7027	9443	8606	8183	8379	6578	8622	15
14	SHT 114 MSH 422	5412	10678	5493	8210	7463	9163	18500	9918	8458	11019	7750	12564	7102	6333	8437	6192	8958	6342	8727	13
15	SHT 115 MSH 423	6829	10443	5931	6728	6984	6892	19658	9439	8575	10042	8361	11304	8078	7428	8793	6022	7497	6069	8553	16
16	SHT 116 Nandi 75 (Check)	6366	9958	7023	8858	11671	8542	25403	11909	9264	7889	6889	15071	8544	7817	9580	8547	7390	7761	9812	5
17	SHT 117 MSH 424	5660	8991	5664	5340	9153	6121	19356	9104	7083	10319	7444	11831	7372	13024	9918	4958	6772	6636	8483	18
18	SHT 118 MSH 425	6181	8147	4546	6636	5948	6288	19897	8577	7778	9950	7778	9677	7868	9692	8753	4472	6454	4967	7892	20
19	SHT 119 MSH 426	6206	10236	4734	7099	5938	7258	17664	8821	8569	10058	8472	12506	7282	11381	9910	6364	6614	4092	8405	19
20	SHT 120 MSH 427	5625	10380	4375	6235	6010	6625	18219	8641	9694	8472	8028	10335	5240	9461	8266	6058	6219	4242	7826	21
21	SHT 121 MSH 428	6343	10568	5639	8796	9040	9625	25125	11465	10319	10986	7083	12488	7102	11517	9547	7275	9532	6967	9900	4
22	SHT 122 Proagro 9444 (Check)	5949	9915	5100	7778	8842	8350	25564	10925	10542	8867	7556	9539	7012	11103	8802	6236	7069	5906	9083	10
	LOC. MEAN	6091	10383	5523	7633	8452	8144	20793	10155	8969	8539	7605	11768	7110	11249	9433	7279	8228	6266	9002	
	C.D. (5%)	752	1626	1243	1653	674	1492	4057	1856	330	829	1006	2088	1694	2322	3193	1821	2698	883	1192	
	C.D. (1%)	1005	2174	1661	2210	901	1995	5424	2456	441	1108	1345	2791	2264	3105	4244	2435	3608	1181	1570	
	C.V. (%)	7.5	9.5	13.7	13.1	4.8	11.1	11.8	16.0	2.2	5.9	8.0	10.8	14.5	12.5	24.0	15.2	19.9	8.6	19.0	
	F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.000	0.000	
	PLOT SIZE (m ²)	14.40	12.00	14.40	10.80	12.00	8.00	12.00	-	12.00	12.00	12.00	8.00	11.10	12.00	-	12.00	12.00	12.00	-	

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Table I.203: SUMMER HYBRID TRIAL - 2024 DAYS TO 50% FLOWERING

TABLE 12.2. SUMMARY OF DATA FROM 2017 DATA TO 2020 PERFORMANCE																						
S.No.	TEST	ENTRY	MDR	AND	JMR	SKN	AHD	DEG	GUJ	AGR1	LDA	ABD1	ABD7	DHL	JLN1	MS	PMP	PLM	CBE	ZONE	RANK	
	CODE		MEAN										MEAN									
1	SHT 101	MSH 406	61	52	59	54	56	61	56	67	60	61	64	65	53	61	45	50	52	57	2	
2	SHT 102	MSH 407	58	50	56	54	55	56	54	62	59	61	61	64	55	60	43	47	49	55	8	
3	SHT 103	86M64 (Check)	59	50	54	52	53	55	53	65	58	59	62	61	56	59	42	48	48	55	13	
4	SHT 104	MSH 414	59	52	59	55	54	59	56	66	63	60	63	63	58	61	46	51	53	57	1	
5	SHT 105	MSH 415	55	43	49	45	50	51	48	56	52	52	55	54	51	53	43	44	39	49	22	
6	SHT 106	MSH 416	58	49	54	52	58	55	54	61	55	62	62	60	55	60	44	47	51	55	12	
7	SHT 107	MP 7366 (Check)	60	48	55	54	54	56	53	61	57	61	62	62	62	62	42	49	50	56	6	
8	SHT 108	MSH 417	59	50	56	51	53	56	53	63	59	62	62	63	55	60	42	48	49	55	10	
9	SHT 109	MSH 418	58	48	53	52	54	58	53	56	52	58	62	62	53	59	43	49	49	54	16	
10	SHT 110	MSH 419	58	49	54	54	54	57	54	63	57	61	62	63	53	60	46	50	49	55	9	
11	SHT 111	86M22 (Check)	60	50	56	53	54	57	54	63	56	61	62	64	51	60	44	51	49	55	7	
12	SHT 112	MSH 420	58	45	55	54	55	56	53	59	56	62	62	63	51	60	46	49	51	55	14	
13	SHT 113	MSH 421	61	46	57	53	51	56	52	70	60	61	60	61	57	60	45	48	48	56	3	
14	SHT 114	MSH 422	58	51	55	54	54	56	54	71	54	60	62	65	53	60	44	48	49	56	4	
15	SHT 115	MSH 423	57	47	52	52	52	56	52	54	59	57	61	61	53	58	43	51	48	54	18	
16	SHT 116	Nandi 75 (Check)	56	48	53	51	55	55	52	68	56	56	61	61	55	58	44	48	50	54	15	
17	SHT 117	MSH 424	55	45	51	46	55	50	50	70	65	63	60	57	58	59	44	41	42	54	17	
18	SHT 118	MSH 425	57	42	47	43	50	47	46	67	54	51	55	53	51	53	43	41	38	49	21	
19	SHT 119	MSH 426	58	43	48	45	51	47	47	67	53	53	55	55	54	54	41	43	38	50	20	
20	SHT 120	MSH 427	58	45	50	47	49	51	48	66	56	52	56	57	53	55	40	46	37	51	19	
21	SHT 121	MSH 428	61	47	55	52	53	55	53	65	55	63	62	62	52	60	43	50	47	55	11	
22	SHT 122	Proagro 9444 (Check)	59	46	57	53	54	57	53	67	60	63	62	64	53	61	44	46	49	56	5	
		LOC. MEAN	58	47	54	51	53	55	52	64	57	59	61	61	54	59	43	48	47	54		
		C.D. (5%)	2.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0	4.0	3.0	1.0	2.0		
		C.D. (1%)	3.0	2.0	2.0	2.0	1.0	2.0	3.0	3.0	2.0	1.0	2.0	3.0	4.0	4.0	6.0	4.0	2.0	2.0		
		C.V. (%)	2.0	2.3	1.9	2.2	1.1	2.0	3.0	2.3	1.8	1.0	1.6	2.4	3.4	3.6	5.8	3.4	1.6	4.3		
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		

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Table I.204: SUMMER HYBRID TRIAL - 2024 DAYS TO MATURITY

S.No. TEST ENTRY MDR AND JMR SKN AHD DEG GUJ AGR1 LDA ABD1 ABD7 DHL JLN1 MS PMP PLM CBE ZONE RANK																					
CODE		MEAN										MEAN									
1	SHT 101	MSH 406	91	85	88	86	86	86	86	88	97	96	90	100	83	92	78	81	87	88	2
2	SHT 102	MSH 407	91	83	86	88	84	81	84	82	99	96	88	99	85	92	77	78	83	87	6
3	SHT 103	86M64 (Check)	87	84	84	83	82	80	83	88	94	96	87	96	86	91	81	79	83	86	14
4	SHT 104	MSH 414	91	86	88	84	84	84	85	88	101	97	89	98	88	93	80	81	88	88	1
5	SHT 105	MSH 415	81	82	79	80	79	76	79	78	90	91	82	89	81	86	75	73	77	81	22
6	SHT 106	MSH 416	87	85	84	84	87	80	84	82	92	96	88	96	85	91	77	77	86	86	15
7	SHT 107	MP 7366 (Check)	88	87	85	83	83	81	84	84	94	94	88	98	92	93	75	79	85	86	11
8	SHT 108	MSH 417	88	87	85	84	82	81	84	85	95	98	87	98	85	92	82	80	84	87	7
9	SHT 109	MSH 418	85	84	82	84	83	83	83	88	91	94	88	97	83	91	77	79	84	85	16
10	SHT 110	MSH 419	86	85	84	88	83	82	84	90	93	95	89	98	83	91	81	82	84	87	5
11	SHT 111	86M22 (Check)	87	86	85	84	84	82	84	87	94	95	87	99	81	91	80	81	84	86	10
12	SHT 112	MSH 420	88	82	85	87	84	81	84	81	96	98	90	99	81	92	79	78	86	86	12
13	SHT 113	MSH 421	89	87	86	86	80	81	84	91	100	97	86	97	87	92	76	78	83	87	4
14	SHT 114	MSH 422	87	87	85	87	83	81	85	92	99	94	88	100	83	92	77	78	84	87	3
15	SHT 115	MSH 423	85	86	82	85	81	81	83	74	101	96	87	96	83	90	77	81	83	85	17
16	SHT 116	Nandi 75 (Check)	85	84	83	83	85	80	83	88	98	95	89	96	85	91	80	79	85	86	13
17	SHT 117	MSH 424	86	83	81	79	85	75	81	91	105	98	87	92	88	91	76	70	77	85	18
18	SHT 118	MSH 425	81	81	77	79	79	72	78	90	102	91	81	89	81	85	75	71	75	82	21
19	SHT 119	MSH 426	80	82	78	83	80	72	79	90	98	91	82	90	84	87	76	72	76	82	20
20	SHT 120	MSH 427	83	83	80	82	79	76	80	87	101	88	83	92	83	87	76	75	75	83	19
21	SHT 121	MSH 428	89	84	86	86	82	80	84	87	99	100	88	98	81	92	78	80	82	87	8
22	SHT 122	Proagro 9444 (Check)	89	82	88	85	83	82	84	83	103	93	88	99	83	91	80	76	84	87	9
		LOC. MEAN	87	84	84	84	83	80	83	86	97	95	87	96	84	91	78	78	83	86	
		C.D. (5%)	2.0	3.0	1.0	2.0	1.0	2.0	2.0	2.0	2.0	1.0	2.0	3.0	3.0	4.0	3.0	5.0	2.0	2.0	
		C.D. (1%)	2.0	3.0	2.0	3.0	1.0	2.0	3.0	2.0	3.0	2.0	3.0	4.0	4.0	5.0	4.0	7.0	2.0	2.0	
		C.V. (%)	1.1	1.8	0.9	1.5	0.7	1.4	2.1	1.2	1.5	0.9	1.5	1.8	2.1	3.0	2.4	4.1	1.2	3.0	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	

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Table I.205: SUMMER HYBRID TRIAL - 2024 PLANT HEIGHT (cm)

S.No.	TEST	ENTRY	MDR	AND	JMR	SKN	AHD	DEG	PNR1	GUJ	AGR1	LDA	ABD1	ABD7	DHL	JLN1	MS	PMP	PLM	CBE	ZONE	RANK
	CODE		MEAN										MEAN									
1	SHT 101	MSH 406	202	212	207	200	205	213	237	212	212	158	155	240	222	242	215	162	139	192	200	1
2	SHT 102	MSH 407	182	169	177	160	196	163	220	181	182	115	115	200	196	227	185	164	109	161	171	15
3	SHT 103	86M64 (Check)	185	184	183	177	198	187	220	192	185	117	137	213	191	213	189	175	114	160	178	14
4	SHT 104	MSH 414	202	212	208	193	235	207	233	215	210	135	155	233	214	230	208	190	129	180	198	2
5	SHT 105	MSH 415	172	155	152	136	165	142	183	155	163	97	135	163	161	165	156	156	101	128	148	22
6	SHT 106	MSH 416	198	216	205	187	221	193	242	211	209	110	125	223	219	231	200	189	129	174	192	6
7	SHT 107	MP 7366 (Check)	202	186	191	170	187	187	217	190	201	108	175	210	197	222	201	170	123	183	183	10
8	SHT 108	MSH 417	199	217	208	189	180	200	242	206	227	115	175	237	217	249	219	176	129	191	197	3
9	SHT 109	MSH 418	200	185	193	156	180	185	222	187	212	123	140	210	204	212	191	168	127	167	180	13
10	SHT 110	MSH 419	221	194	191	170	178	182	222	189	187	121	140	213	205	243	200	192	120	157	184	9
11	SHT 111	86M22 (Check)	193	195	192	157	192	188	230	193	181	124	150	217	201	211	195	176	121	161	181	12
12	SHT 112	MSH 420	193	209	193	167	200	188	237	199	181	124	158	227	200	221	202	173	130	172	186	8
13	SHT 113	MSH 421	201	206	198	180	216	188	240	205	199	138	152	223	213	212	200	185	131	180	191	7
14	SHT 114	MSH 422	181	170	173	168	194	168	213	181	137	121	125	200	187	212	181	166	113	152	168	18
15	SHT 115	MSH 423	177	172	171	156	163	168	190	170	149	110	120	183	196	182	170	159	117	160	161	20
16	SHT 116	Nandi 75 (Check)	197	210	205	180	214	192	242	207	191	119	155	237	210	253	214	177	129	172	193	4
17	SHT 117	MSH 424	180	188	175	151	169	157	222	177	165	115	143	193	200	195	183	165	111	161	168	16
18	SHT 118	MSH 425	170	163	153	137	159	138	208	160	145	102	125	180	190	208	176	159	107	145	156	21
19	SHT 119	MSH 426	168	179	161	143	169	152	208	169	169	107	152	193	201	211	189	174	109	144	165	19
20	SHT 120	MSH 427	174	187	173	154	157	152	218	174	205	98	103	193	184	231	178	184	121	148	168	17
21	SHT 121	MSH 428	184	214	193	191	208	197	233	206	208	133	152	227	206	234	205	185	134	177	192	5
22	SHT 122	Proagro 9444 (Check)	195	178	188	160	182	182	225	186	202	120	175	207	201	227	202	184	119	167	182	11
		LOC. MEAN	190	191	186	167	189	179	223	189	187	119	144	210	201	220	194	174	121	165	179	
		C.D. (5%)	23.0	5.0	11.0	14.0	9.0	9.0	22.0	10.0	3.0	8.0	7.0	11.0	17.0	15.0	17.0	27.0	15.0	11.0	7.0	
		C.D. (1%)	31.0	7.0	15.0	19.0	12.0	11.0	29.0	13.0	4.0	11.0	9.0	15.0	22.0	20.0	23.0	37.0	20.0	15.0	10.0	
		C.V. (%)	7.5	1.7	3.6	5.1	2.8	2.9	5.9	4.4	1.0	4.1	2.8	3.2	5.1	4.1	6.3	9.5	7.6	4.0	5.9	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.206: SUMMER HYBRID TRIAL - 2024 PRODUCTIVE TILLERS (No./Plant)

S.No.	TEST ENTRY	MDR	AND	JMR	SKN	AHD**	DEG	PNR1**	GUJ	AGR1	LDA	ABD1	ABD7	DHL	JLN1**	MS	PMP	PLM	CBE	ZONE	RANK
CODE		MEAN										MEAN									
1	SHT 101 MSH 406	2.2	3.1	2.1	1.8	1.3	1.0	2.7	2.0	1.1	2.2	1.7	2.0	1.8	2.0	1.8	1.4	2.5	2.7	2.0	18
2	SHT 102 MSH 407	2.1	2.7	2.0	1.3	1.7	1.0	1.3	1.8	1.2	1.3	1.7	2.0	2.0	1.3	1.9	2.5	2.9	2.4	1.9	20
3	SHT 103 86M64 (Check)	2.3	3.3	1.9	1.5	1.0	1.2	2.7	2.0	1.4	2.2	1.0	2.3	2.3	2.3	1.9	1.3	3.1	2.3	2.0	17
4	SHT 104 MSH 414	2.3	3.3	2.4	1.9	1.3	1.1	1.3	2.2	1.3	2.5	1.0	2.3	1.8	1.7	1.7	1.9	2.5	2.3	2.0	16
5	SHT 105 MSH 415	2.4	3.1	2.3	1.5	1.7	1.0	1.0	2.0	1.3	2.0	1.3	3.0	2.0	1.3	2.1	1.9	2.7	2.1	2.1	14
6	SHT 106 MSH 416	2.3	3.2	2.0	1.5	1.3	1.1	2.7	1.9	1.2	3.2	1.0	2.0	1.8	2.0	1.6	1.9	2.5	2.7	2.0	17
7	SHT 107 MP 7366 (Check)	2.5	3.6	2.1	1.4	1.3	1.2	1.7	2.1	1.3	2.6	2.0	2.7	2.4	1.3	2.4	1.5	2.6	2.4	2.2	6
8	SHT 108 MSH 417	2.2	3.3	2.5	1.5	1.3	1.2	1.7	2.1	1.5	2.3	1.0	2.3	2.3	1.0	1.9	1.7	2.7	2.4	2.1	13
9	SHT 109 MSH 418	2.6	3.5	2.5	1.9	1.3	1.3	2.7	2.3	1.3	1.8	1.0	3.0	2.3	1.7	2.1	1.4	3.5	2.9	2.2	4
10	SHT 110 MSH 419	2.9	3.5	2.7	1.9	1.7	1.3	1.3	2.4	1.4	3.2	1.7	2.7	2.2	1.7	2.2	1.9	2.9	2.5	2.4	1
11	SHT 111 86M22 (Check)	2.3	2.7	1.7	1.8	1.3	1.0	2.7	1.8	1.3	3.0	2.3	2.0	2.0	2.0	2.1	1.9	2.5	2.7	2.1	11
12	SHT 112 MSH 420	2.6	3.7	2.2	1.6	1.7	1.2	2.0	2.2	1.3	1.8	1.0	2.0	1.9	1.7	1.6	1.3	2.5	2.4	2.0	19
13	SHT 113 MSH 421	2.7	3.5	2.5	1.6	1.3	1.2	1.7	2.2	1.2	2.9	1.7	3.0	1.4	1.7	2.0	1.9	3.1	2.3	2.2	3
14	SHT 114 MSH 422	2.1	2.9	1.8	1.9	1.0	1.0	2.0	1.9	1.4	2.3	1.7	2.3	2.0	1.0	2.0	1.1	2.5	2.1	1.9	21
15	SHT 115 MSH 423	2.1	3.3	2.1	1.5	1.3	1.2	2.0	2.0	1.6	1.7	1.3	3.3	2.5	1.3	2.4	1.5	3.7	2.1	2.1	9
16	SHT 116 Nandi 75 (Check)	2.2	3.7	2.2	1.3	1.7	1.2	1.7	2.1	1.4	2.3	1.7	2.0	2.6	1.3	2.1	1.3	2.7	2.3	2.1	15
17	SHT 117 MSH 424	2.1	3.4	2.0	1.3	1.3	1.3	1.3	2.0	1.2	2.9	1.7	3.3	2.0	2.3	2.3	1.5	3.3	2.0	2.2	7
18	SHT 118 MSH 425	2.1	3.9	1.9	1.5	1.3	1.3	1.7	2.2	1.4	2.4	1.0	3.3	2.4	2.0	2.2	1.5	2.9	2.4	2.2	8
19	SHT 119 MSH 426	2.2	3.6	2.1	1.7	1.7	1.2	1.0	2.2	1.2	3.0	1.7	2.3	1.8	1.7	1.9	1.7	2.5	2.5	2.1	10
20	SHT 120 MSH 427	2.2	2.9	2.1	1.9	1.3	1.2	1.7	2.0	1.2	3.1	1.0	3.0	1.7	1.7	1.9	1.1	2.7	3.1	2.1	12
21	SHT 121 MSH 428	2.1	3.4	1.9	2.1	1.3	1.2	1.3	2.2	1.3	3.0	2.7	2.0	1.9	1.0	2.2	1.2	2.9	2.7	2.2	5
22	SHT 122 Proagro 9444 (Check)	2.6	4.2	2.7	1.7	1.7	1.5	2.7	2.5	1.3	3.2	1.7	4.0	2.1	2.7	2.6	1.6	2.5	1.4	2.4	2
	LOC. MEAN	2.3	3.4	2.2	1.6	1.4	1.2	1.8	2.1	1.3	2.5	1.5	2.6	2.1	1.7	2.0	1.6	2.8	2.4	2.1	
	C.D. (5%)	0.3	0.4	0.7	0.3	0.9	0.1	1.1	0.3	0.1	0.3	0.7	0.6	0.3	0.9	0.8	0.6	0.5	0.5	0.3	
	C.D. (1%)	0.4	0.5	1.0	0.4	1.2	0.2	1.5	0.4	0.1	0.5	0.9	0.9	0.4	1.2	1.0	0.7	0.7	0.7	0.4	
	C.V. (%)	7.3	6.7	20.0	11.0	39.4	7.3	35.6	11.0	2.7	8.3	28.9	15.0	7.9	32.9	23.2	21.4	10.6	13.6	16.5	
	F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.647	0.000	0.000	0.000	0.067	

**LOCATIONS REJECTED DUE TO HIGH C.V. (i.e.> 30%): AHD 39.4%; PNR1 35.6%; JLN1 32.9%

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Table I.207: SUMMER HYBRID TRIAL - 2024 PANICLE LENGTH (cm)

S.No.	TEST	ENTRY	MDR	AND	JMR	SKN	AHD	DEG	PNR1	GUJ	AGR1	LDA	ABD1	ABD7	DHL	JLN1	MS	PMP	PLM	CBE	ZONE	RANK
	CODE		MEAN										MEAN									
1	SHT 101	MSH 406	28	31	29	32	27	28	27	29	33	28	31	31	30	31	31	29	25	30	29	1
2	SHT 102	MSH 407	25	25	24	24	25	22	25	24	28	21	24	23	24	25	24	27	21	25	24	17
3	SHT 103	86M64 (Check)	18	29	26	26	29	24	28	27	31	17	27	29	26	27	27	29	25	28	26	8
4	SHT 104	MSH 414	28	30	27	26	29	24	26	27	28	22	26	27	26	28	27	27	23	28	27	6
5	SHT 105	MSH 415	25	26	24	24	26	23	24	25	28	23	24	28	25	27	26	28	20	25	25	13
6	SHT 106	MSH 416	27	28	28	28	28	24	27	27	30	23	26	29	28	30	28	29	22	27	27	3
7	SHT 107	MP 7366 (Check)	26	28	27	26	22	24	28	26	28	23	24	27	27	28	26	28	24	27	26	9
8	SHT 108	MSH 417	27	28	31	27	29	25	27	28	32	29	25	30	29	31	29	28	24	28	28	2
9	SHT 109	MSH 418	27	29	26	24	27	23	27	26	29	23	23	27	25	28	26	29	21	27	26	10
10	SHT 110	MSH 419	24	27	25	24	25	21	26	25	28	25	25	26	26	25	25	27	22	25	25	13
11	SHT 111	86M22 (Check)	25	27	25	25	24	23	25	25	28	19	25	26	26	27	26	27	24	25	25	12
12	SHT 112	MSH 420	23	24	22	23	26	21	25	24	27	19	24	24	25	26	25	26	20	24	24	20
13	SHT 113	MSH 421	24	27	27	29	29	25	26	27	28	18	26	28	26	28	27	28	25	28	27	5
14	SHT 114	MSH 422	25	24	23	25	24	21	28	24	27	21	26	25	24	23	25	27	22	25	24	15
15	SHT 115	MSH 423	25	27	23	25	28	23	29	26	25	16	24	25	25	29	26	27	23	24	25	14
16	SHT 116	Nandi 75 (Check)	26	29	27	27	29	24	23	26	30	16	27	29	27	31	28	28	21	29	26	7
17	SHT 117	MSH 424	25	29	25	23	27	21	28	25	29	25	25	27	27	26	26	27	22	26	26	11
18	SHT 118	MSH 425	22	23	22	21	24	21	27	23	27	20	23	25	24	22	23	26	18	23	23	21
19	SHT 119	MSH 426	24	24	23	23	22	21	26	23	27	25	22	26	25	27	25	25	18	24	24	18
20	SHT 120	MSH 427	25	26	25	23	23	20	23	23	28	21	25	24	23	22	24	27	21	25	24	19
21	SHT 121	MSH 428	26	26	27	26	28	25	22	26	29	27	25	28	26	29	27	30	24	27	27	4
22	SHT 122	Proagro 9444 (Check)	23	27	23	22	24	21	29	24	29	21	24	24	24	28	25	26	21	24	24	16
		LOC. MEAN	25	27	25	25	26	23	26	25	29	22	25	27	26	27	26	27	22	26	26	
		C.D. (5%)	5.0	1.0	3.0	1.0	1.0	2.0	4.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	2.0	1.0	
		C.D. (1%)	7.0	2.0	4.0	2.0	2.0	3.0	5.0	2.0	1.0	2.0	2.0	3.0	3.0	3.0	2.0	5.0	4.0	3.0	1.0	
		C.V. (%)	12.1	2.7	8.0	3.5	2.9	6.2	8.2	6.2	0.9	4.4	3.9	5.3	5.3	5.1	4.6	7.5	7.5	4.8	6.3	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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Table I.208: SUMMER HYBRID TRIAL - 2024 PANICLE DIAMETER (cm)

S.No.	TEST CODE	ENTRY	MDR	AND	JMR	SKN	AHD	DEG	PNR1	GUJ	AGR1	LDA	ABD1	ABD7	DHL	JLN1	MS	PMP	PLM	CBE	ZONE	RANK
										MEAN							MEAN				MEAN	
1	SHT 101	MSH 406	3.4	3.8	3.7	3.5	3.6	3.7	3.4	3.6	4.0	3.1	3.5	3.8	3.6	3.8	3.7	3.2	2.7	3.5	3.5	2
2	SHT 102	MSH 407	3.0	3.5	3.4	3.2	3.3	3.4	3.5	3.4	3.8	2.7	2.8	3.6	3.4	4.0	3.4	3.2	2.6	3.6	3.3	12
3	SHT 103	86M64 (Check)	3.1	3.8	3.4	3.3	3.6	3.6	3.8	3.6	4.1	2.8	3.3	3.6	3.6	3.9	3.6	3.1	3.1	3.7	3.5	4
4	SHT 104	MSH 414	3.1	3.8	3.6	3.1	3.5	3.3	3.5	3.5	3.8	2.9	3.2	3.7	3.5	3.7	3.5	3.0	2.6	3.5	3.4	6
5	SHT 105	MSH 415	3.3	3.6	3.6	3.0	3.3	3.3	3.4	3.4	3.9	2.8	3.4	3.8	3.5	3.4	3.5	3.0	2.4	3.6	3.3	11
6	SHT 106	MSH 416	3.1	3.2	3.5	3.3	3.3	3.4	3.3	3.3	3.7	2.9	3.2	3.7	3.6	3.7	3.6	3.2	2.7	3.3	3.3	10
7	SHT 107	MP 7366 (Check)	3.3	3.7	3.6	3.0	3.1	3.5	3.6	3.4	3.6	2.8	3.2	3.4	3.6	3.4	3.4	3.1	2.8	3.5	3.3	9
8	SHT 108	MSH 417	3.3	3.2	3.2	3.2	3.4	3.2	3.4	3.3	3.7	2.9	3.0	3.6	3.5	3.6	3.4	3.0	2.5	3.7	3.3	16
9	SHT 109	MSH 418	3.3	3.6	3.7	2.9	3.2	3.4	3.9	3.5	3.6	2.6	3.2	3.7	3.5	3.4	3.4	3.0	2.4	3.7	3.3	13
10	SHT 110	MSH 419	3.1	3.5	3.5	3.0	2.6	3.2	3.1	3.2	3.7	3.3	3.3	3.7	3.5	3.9	3.6	3.2	2.5	3.2	3.3	15
11	SHT 111	86M22 (Check)	3.3	3.8	3.5	3.6	3.5	3.4	3.5	3.6	3.8	3.0	3.2	3.8	3.7	4.1	3.7	3.2	2.8	3.8	3.5	3
12	SHT 112	MSH 420	3.0	3.5	3.4	3.0	3.7	3.3	3.7	3.4	3.7	2.8	3.3	3.6	3.4	3.5	3.5	3.0	2.8	3.6	3.3	8
13	SHT 113	MSH 421	3.1	3.4	3.4	3.3	4.1	3.3	3.4	3.5	3.8	2.7	3.2	3.7	3.6	3.0	3.4	3.1	2.9	3.6	3.3	7
14	SHT 114	MSH 422	3.1	3.6	3.5	3.4	3.4	3.1	3.5	3.4	3.4	3.0	2.7	3.6	3.5	3.2	3.2	3.0	2.8	2.7	3.2	18
15	SHT 115	MSH 423	3.2	3.6	3.6	3.3	3.6	3.4	3.6	3.5	3.8	2.8	2.8	3.6	3.7	3.6	3.4	3.1	2.9	3.9	3.4	5
16	SHT 116	Nandi 75 (Check)	2.9	3.9	3.4	3.3	3.4	3.1	3.5	3.4	3.6	2.6	2.8	3.7	3.7	3.6	3.5	3.0	2.5	3.5	3.3	14
17	SHT 117	MSH 424	3.3	3.7	3.4	2.9	3.7	3.1	3.3	3.4	3.3	2.4	3.0	3.5	3.5	3.3	3.3	2.9	2.8	3.1	3.2	20
18	SHT 118	MSH 425	3.0	3.5	3.1	2.7	3.4	3.1	3.3	3.2	3.4	2.9	3.1	3.1	3.6	2.9	3.2	3.0	2.4	3.0	3.1	21
19	SHT 119	MSH 426	3.0	3.4	3.1	2.9	3.6	3.0	3.5	3.3	3.6	2.5	3.2	3.5	3.5	3.8	3.5	3.0	2.5	3.1	3.2	19
20	SHT 120	MSH 427	3.1	3.5	2.9	3.2	3.7	3.1	3.7	3.4	3.5	3.0	3.2	3.5	3.4	3.0	3.3	3.0	2.7	3.3	3.2	17
21	SHT 121	MSH 428	3.3	3.6	3.5	3.5	3.8	3.6	3.4	3.6	3.8	3.5	3.2	3.9	3.7	4.0	3.7	3.5	3.2	3.6	3.6	1
22	SHT 122	Proagro 9444 (Check)	3.1	3.2	3.0	2.9	3.1	3.0	3.7	3.2	3.2	2.7	3.0	3.2	3.2	3.2	3.1	2.7	2.4	2.8	3.0	22
		LOC. MEAN	3.2	3.6	3.4	3.2	3.4	3.3	3.5	3.4	3.7	2.9	3.1	3.6	3.5	3.5	3.5	3.1	2.7	3.4	3.3	
		C.D. (5%)	0.2	0.1	0.3	0.2	0.1	0.2	0.5	0.2	0.0	0.3	0.2	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.1	
		C.D. (1%)	0.3	0.1	0.4	0.3	0.2	0.2	0.7	0.3	0.0	0.4	0.2	0.3	0.3	0.5	0.4	0.5	0.4	0.4	0.2	
		C.V. (%)	4.3	1.3	5.3	4.4	2.5	2.9	8.9	5.8	0.6	6.6	3.0	4.3	4.3	6.7	5.6	7.3	6.8	5.0	5.7	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	

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Table I.209: SUMMER HYBRID TRIAL - 2024 1000-GRAIN Wt. (g)

S.No. TEST ENTRY MDR AND JMR SKN AHD DEG GUJ AGR1 LDA ABD1 ABD7 DHL JLN1 MS PMP CBE ZONE RANK																					
CODE		MEAN										MEAN									
1	SHT 101	MSH 406	10.4	11.9	10.8	9.8	9.5	13.0	11.0	6.6	7.6	8.9	12.1	9.2	13.2	10.9	9.5	11.4	10.3	15	
2	SHT 102	MSH 407	9.5	8.8	8.6	10.9	7.4	10.8	9.3	6.8	8.1	8.5	10.9	9.1	10.9	9.8	8.4	7.9	9.1	22	
3	SHT 103	86M64 (Check)	9.7	10.8	10.1	11.8	9.3	13.6	11.1	8.3	7.9	8.5	11.5	10.4	12.8	10.8	9.3	8.3	10.2	17	
4	SHT 104	MSH 414	9.8	10.0	9.3	9.8	8.4	11.0	9.7	8.5	6.6	9.0	10.9	10.1	13.6	10.9	8.8	10.7	9.8	19	
5	SHT 105	MSH 415	9.8	11.6	9.8	9.9	10.2	14.0	11.1	11.7	10.6	10.1	10.7	9.8	13.1	10.9	10.0	10.1	10.8	8	
6	SHT 106	MSH 416	10.1	11.6	10.5	11.3	10.1	14.0	11.5	7.8	8.2	9.7	13.1	10.3	13.3	11.6	9.1	11.5	10.8	10	
7	SHT 107	MP 7366 (Check)	10.3	12.6	11.2	9.9	10.7	14.1	11.7	9.9	11.5	10.3	12.7	11.3	13.1	11.9	8.7	12.3	11.3	1	
8	SHT 108	MSH 417	10.1	11.7	11.2	12.7	10.4	14.3	12.1	8.9	9.4	8.9	13.2	10.0	13.3	11.4	10.7	9.2	11.0	5	
9	SHT 109	MSH 418	9.5	11.2	10.2	11.2	9.7	14.2	11.3	11.0	9.6	10.1	12.0	9.9	12.8	11.2	11.0	8.7	10.8	9	
10	SHT 110	MSH 419	9.9	10.1	9.7	8.8	8.9	12.3	10.0	9.6	8.3	11.0	11.7	9.7	13.4	11.4	10.4	10.4	10.3	14	
11	SHT 111	86M22 (Check)	9.8	12.7	10.1	12.1	9.9	13.1	11.6	9.3	7.4	10.1	11.9	8.8	13.2	11.0	8.1	10.5	10.5	13	
12	SHT 112	MSH 420	10.0	12.8	11.2	10.0	12.3	13.8	12.0	8.6	10.7	9.8	13.5	9.3	13.5	11.5	9.3	11.4	11.1	4	
13	SHT 113	MSH 421	10.2	11.3	10.9	10.7	9.1	13.8	11.2	8.7	9.2	8.7	13.6	10.4	13.5	11.5	7.5	11.6	10.6	11	
14	SHT 114	MSH 422	9.9	9.0	9.0	11.5	7.1	10.7	9.5	6.3	7.2	8.6	10.9	10.9	9.9	10.1	7.2	10.0	9.2	21	
15	SHT 115	MSH 423	9.6	12.1	10.6	12.0	10.7	14.0	11.9	8.4	9.9	11.1	11.9	11.3	12.3	11.7	9.9	12.4	11.2	3	
16	SHT 116	Nandi 75 (Check)	9.1	11.4	10.8	10.6	10.3	12.1	11.0	8.1	7.4	9.3	11.1	12.3	13.1	11.4	11.0	10.4	10.5	12	
17	SHT 117	MSH 424	9.7	10.9	9.9	9.2	10.1	13.7	10.7	7.8	9.8	9.1	11.7	9.6	11.6	10.5	8.8	11.2	10.2	16	
18	SHT 118	MSH 425	10.3	11.8	10.8	12.2	9.5	11.8	11.2	9.3	10.2	9.3	10.6	11.3	13.5	11.2	9.4	11.9	10.9	6	
19	SHT 119	MSH 426	9.9	12.5	10.5	10.3	10.7	14.0	11.6	8.9	8.3	11.4	12.9	9.5	12.3	11.5	8.1	12.4	10.8	7	
20	SHT 120	MSH 427	9.1	10.7	8.7	11.3	8.1	12.3	10.2	10.6	7.2	9.1	12.0	9.6	13.5	11.0	8.2	10.6	10.1	18	
21	SHT 121	MSH 428	9.0	11.5	10.7	10.9	11.7	13.9	11.7	9.9	12.1	9.6	13.7	10.6	13.7	11.9	9.1	12.2	11.3	2	
22	SHT 122	Proagro 9444 (Check)	9.2	10.5	9.2	10.0	8.0	13.4	10.2	7.8	9.0	9.1	10.6	9.4	13.0	10.5	8.5	8.2	9.7	20	
		LOC. MEAN	9.8	11.2	10.2	10.8	9.6	13.1	11.0	8.8	8.9	9.5	12.0	10.1	12.8	11.1	9.1	10.6	10.5		
		C.D. (5%)	0.4	0.8	0.9	1.4	0.9	0.9	1.0	0.2	0.4	0.4	1.6	0.3	0.5	1.4	0.2	0.5	0.7		
		C.D. (1%)	0.6	1.1	1.2	1.9	1.1	1.1	1.3	0.3	0.6	0.6	2.2	0.4	0.6	1.9	0.3	0.7	0.9		
		C.V. (%)	2.7	4.3	5.6	8.1	5.4	4.0	7.3	1.5	3.0	2.7	8.3	1.9	2.3	9.8	1.2	3.1	8.6		
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.000		

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Table I.210: SUMMER HYBRID TRIAL - 2024 POPULATION AT HARVEST (No./plot)

S.No.	TEST	ENTRY	MDR	AND	JMR	SKN	AHD	DEG	PNR1	GUJ	AGR1	LDA	ABD1	ABD7	DHL	JLN1	MS	PMP	PLM	CBE	ZONE	RANK
	CODE		MEAN										MEAN									
1	SHT 101	MSH 406	191	156	187	159	196	147	178	171	171	164	154	87	117	132	123	127	154	116	152	7
2	SHT 102	MSH 407	173	155	186	164	180	156	188	172	177	164	152	92	142	155	135	133	159	114	156	2
3	SHT 103	86M64 (Check)	192	152	189	159	176	142	191	168	167	164	154	93	117	150	128	113	158	114	152	8
4	SHT 104	MSH 414	192	157	191	157	187	157	178	171	158	162	155	94	132	158	135	133	157	121	156	3
5	SHT 105	MSH 415	180	152	169	163	198	150	175	168	171	162	152	66	119	144	120	124	158	120	150	12
6	SHT 106	MSH 416	184	158	189	153	188	154	202	174	174	164	152	92	120	159	131	130	155	123	156	1
7	SHT 107	MP 7366 (Check)	183	154	189	140	178	151	181	165	168	161	153	87	124	137	125	137	138	107	149	15
8	SHT 108	MSH 417	182	155	181	161	189	151	191	171	172	162	153	90	123	147	128	134	158	115	154	5
9	SHT 109	MSH 418	178	157	182	163	194	147	188	172	157	163	153	93	128	151	131	127	156	116	153	6
10	SHT 110	MSH 419	166	154	160	160	174	153	191	166	170	162	153	91	124	119	122	124	152	107	148	18
11	SHT 111	86M22 (Check)	161	156	157	171	185	147	189	167	172	163	150	92	121	130	123	120	153	125	149	14
12	SHT 112	MSH 420	196	160	201	145	168	148	167	165	180	161	153	93	142	156	136	143	157	111	155	4
13	SHT 113	MSH 421	168	152	154	148	180	146	180	160	177	163	154	88	97	129	117	132	158	111	146	20
14	SHT 114	MSH 422	178	156	188	158	164	152	180	166	160	162	153	99	129	138	130	132	159	113	151	10
15	SHT 115	MSH 423	172	151	168	159	165	139	207	165	164	162	152	90	116	138	124	125	158	108	148	17
16	SHT 116	Nandi 75 (Check)	176	152	178	162	173	156	173	166	171	161	152	97	125	149	131	134	157	112	152	9
17	SHT 117	MSH 424	172	154	167	156	178	133	184	162	128	164	152	90	124	131	124	116	158	117	145	21
18	SHT 118	MSH 425	178	158	191	151	181	148	169	166	168	162	151	91	133	144	130	122	155	101	150	13
19	SHT 119	MSH 426	169	156	167	166	185	153	174	167	158	163	153	89	109	148	125	114	157	122	149	16
20	SHT 120	MSH 427	182	154	187	160	189	151	163	167	165	162	153	90	124	146	128	124	158	111	151	11
21	SHT 121	MSH 428	173	153	168	162	161	146	174	161	158	163	152	90	122	138	126	120	155	113	147	19
22	SHT 122	Proagro 9444 (Check)	160	147	148	165	170	143	196	161	162	161	152	82	101	141	119	128	138	113	144	22
		LOC. MEAN	178	155	177	158	180	149	183	167	166	162	153	90	122	143	127	127	155	114	151	
		C.D. (5%)	16.0	9.0	33.0	7.0	7.0	13.0	18.0	11.0	2.0	3.0	3.0	7.0	15.0	26.0	10.0	24.0	5.0	17.0	6.0	
		C.D. (1%)	21.0	12.0	44.0	9.0	10.0	18.0	23.0	14.0	3.0	4.0	3.0	9.0	20.0	34.0	14.0	32.0	7.0	23.0	7.0	
		C.V. (%)	5.5	3.6	11.2	2.5	2.5	5.5	5.8	5.7	0.8	1.1	1.0	4.7	7.2	10.9	5.8	11.5	2.1	9.1	5.3	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.478	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.000	0.000	0.000	

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Table I.211: SUMMER HYBRID TRIAL - 2024 SEED SET (%) UNDER BAG

S.No.	TEST	ENTRY	MDR	AND	JMR	SKN	AHD	DEG	PNR1	GUJ	AGR1	LDA	ABD1	ABD7	DHL	JLN1	MS	PMP	PLM	CBE	ZONE	RANK
	CODE		MEAN										MEAN									
1	SHT 101	MSH 406	85	69	82	81	70	73	83	77	64	73	99	88	96	72	89	67	96	79	80	6
2	SHT 102	MSH 407	82	76	80	86	82	73	70	78	92	98	99	93	98	75	91	72	90	82	84	4
3	SHT 103	86M64 (Check)	77	57	73	26	45	67	87	59	54	53	99	82	95	68	86	68	83	71	69	15
4	SHT 104	MSH 414	74	83	78	87	62	90	73	79	90	93	98	92	97	77	91	79	96	93	85	3
5	SHT 105	MSH 415	41	10	19	2	48	10	70	26	94	95	98	30	82	80	73	81	94	34	56	19
6	SHT 106	MSH 416	75	85	71	88	23	83	80	72	80	93	100	87	99	67	88	73	82	51	77	10
7	SHT 107	MP 7366 (Check)	65	38	50	64	55	47	87	57	84	95	98	60	96	73	82	62	96	92	73	13
8	SHT 108	MSH 417	77	65	74	58	28	70	87	64	80	63	98	83	98	87	92	72	94	92	77	11
9	SHT 109	MSH 418	39	1	30	5	12	8	50	18	4	65	98	12	92	82	71	72	82	7	41	22
10	SHT 110	MSH 419	47	4	36	5	15	27	60	24	-	98	99	20	91	68	70	59	96	10	49	21
11	SHT 111	86M22 (Check)	75	76	67	86	65	70	80	74	83	93	98	77	88	72	83	69	87	72	78	8
12	SHT 112	MSH 420	80	48	75	86	52	77	83	70	74	98	98	87	94	67	86	87	94	77	80	7
13	SHT 113	MSH 421	78	84	80	87	75	80	80	81	83	88	98	95	100	73	92	83	94	93	86	1
14	SHT 114	MSH 422	78	83	76	81	82	87	80	81	59	72	99	90	99	68	89	60	96	91	81	5
15	SHT 115	MSH 423	76	61	73	60	68	70	80	69	64	80	99	83	95	77	89	75	93	90	78	9
16	SHT 116	Nandi 75 (Check)	77	50	73	20	55	60	65	54	82	52	98	82	93	68	85	75	83	91	70	14
17	SHT 117	MSH 424	43	10	28	5	25	47	60	29	79	82	98	80	90	75	86	85	94	70	61	18
18	SHT 118	MSH 425	45	6	27	2	15	20	67	23	80	93	98	17	93	72	70	73	95	6	51	20
19	SHT 119	MSH 426	63	45	33	5	15	23	73	32	84	99	93	53	98	75	80	50	93	76	61	17
20	SHT 120	MSH 427	63	38	30	31	18	47	60	37	89	93	99	57	91	73	80	57	92	84	64	16
21	SHT 121	MSH 428	80	77	75	83	62	80	77	76	91	98	98	90	98	80	92	83	98	93	85	2
22	SHT 122	Proagro 9444 (Check)	78	17	72	77	25	77	77	57	90	92	98	87	97	75	89	83	92	71	75	12
		LOC. MEAN	68	49	59	51	45	58	74	56	76	85	98	70	95	74	84	72	92	69	71	
		C.D. (5%)	12.0	9.0	13.0	9.0	7.0	18.0	21.0	17.0	2.0	4.0	2.0	14.0	5.0	10.0	19.0	9.0	5.0	12.0	11.0	
		C.D. (1%)	16.0	13.0	18.0	12.0	9.0	24.0	28.0	22.0	2.0	6.0	2.0	19.0	6.0	13.0	26.0	13.0	7.0	16.0	14.0	
		C.V. (%)	10.5	11.6	13.5	10.7	9.2	19.0	17.3	26.2	1.5	3.0	1.1	12.3	3.0	8.0	16.2	7.9	3.6	10.6	21.9	
		F (Prob)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.299	0.000	0.000	0.000	0.000	

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Table I.212: SUMMER HYBRID TRIAL - 2024

GRAIN QUALITY: IRON CONTENT (ppm)

S.No.	TEST	ENTRY	MDR	AND	JMR	ABD1	ABD7	DHL	PMP	ZONE	RANK
		CODE								MEAN	
1	SHT 101	MSH 406	32	46	42	65	56	60	68	53	2
2	SHT 103	86M64 (Check)	27	51	38	68	56	53	44	48	4
3	SHT 106	MSH 416	29	45	41	73	61	56	51	51	3
4	SHT 107	MP 7366 (Check)	34	43	47	71	60	67	48	53	2
5	SHT 108	MSH 417	32	49	46	71	56	58	49	51	3
6	SHT 111	86M22 (Check)	32	50	47	79	55	65	48	54	1
7	SHT 112	MSH 420	24	37	51	58	52	44	33	43	5
8	SHT 116	Nandi 75 (Check)	22	35	39	51	40	41	36	38	7
9	SHT 122	Proagro 9444 (Check)	19	37	39	54	45	40	42	40	6

Table I.213: SUMMER HYBRID TRIAL - 2024

GRAIN QUALITY: ZINC CONTENT (ppm)

S.No.	TEST	ENTRY	MDR	AND	JMR	ABD1	ABD7	DHL	PMP	ZONE	RANK
		CODE								MEAN	
1	SHT 101	MSH 406	49	28	44	48	37	47	27	40	2
2	SHT 103	86M64 (Check)	41	28	40	50	32	39	25	36	3
3	SHT 106	MSH 416	43	30	43	59	36	37	29	40	2
4	SHT 107	MP 7366 (Check)	51	30	46	54	34	48	32	42	1
5	SHT 108	MSH 417	47	32	45	53	34	40	29	40	2
6	SHT 111	86M22 (Check)	49	34	46	54	33	45	35	42	1
7	SHT 112	MSH 420	39	21	43	42	32	34	24	34	5
8	SHT 116	Nandi 75 (Check)	31	25	41	40	29	33	24	32	6
9	SHT 122	Proagro 9444 (Check)	36	27	43	45	32	37	27	35	4

BREEDER SEED PRODUCTION

F. BREEDER SEED PRODUCTION (2024-2025)

In response to 15.48 q breeder seed indents received from the Department of Agriculture and Cooperation, Ministry of Agriculture and Farmer's Welfare (GOI), New Delhi, the target of production of 15.48 q breeder seed was assigned to different institutions for undertaking breeder seed production of 16 varieties and 103 parental lines of different hybrids during the year 2024-25. The breeder seed production programme was organized for seven parental lines and one variety at SKNAU, Jaipur, four parental lines at AU, Jodhpur, two parental line at SKRAU, Bikaner, three parental lines and three varieties at Delhi (ICAR-IARI), fifteen parental lines at CCSHAU, Hisar, two varieties at RVSKVV Gwalior, thirteen parental lines at JAU, Jamnagar, one parental at SDAU, SK Nagar, three varieties and one parental lines at PAU, Ludhiana, forty two parental lines at ICRISAT, one parental line at PJTSAU, Telangana, one variety and two varieties and two parental lines at NARP, Aurangabad, one variety (Dhanshakti) and ten parental lines at MPKV, Dhule, one variety at ANGRAU, Ananthapuram, one variety and one parental line at RARS, UAS, Dharwad, one variety at ARS, Malnoor, UAS, Raichur, one parental line and one variety at TNAU, Coimbatore.

The deficit breeder seed production in these cases is planned in summer 2025. The parental line/variety-wise DAC indent, actual production and supply position as per BSP I issued is summarized in Table I.214-216.

A total of 41.21 q breeder seed was produced against the DAC indent while supply of breeder seed of some of parental lines was assured through carry over seed stock of the year 2024-2025.

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Table I.214: Center-wise Breeder Seed Production Report Kharif 2024-25
Crop: Pearl millet

Year of Indent/ Production: 2024
Year of supply: February: 2025

S. No.	Name of Producing center/state	Name of parental line/ variety	DAC indent (q)	Actual allocation as per BSP-I Target (q)	Actual Production (q)	Production Surplus (+)/ Deficit (-) over BSP-I target (q)
A	Varieties					
1	PAU, Ludhiana	PCB 166 (FBL 4)	0.05	0.05	0.40	0.35
2	PAU, Ludhiana	PCB 165 (GBL 2) (MP 595)	0.05	0.05	0.20	0.15
3	RARS, UAS (Dharwad), Vijayapur	VPMV 9	0.05	0.05	0.50	0.45
4	ARS, Malnoor (UAS, Raichur)	MBP-2	0.05	0.05	0.00	-0.05
5	ANGRAU, Ananthapuram	ABV 04 (MP 552)	2.05	2.05	20.00	17.95
6	ICAR-IARI, New Delhi	Pusa Composite 701 (MP 535)	3.15	3.15	3.15	0.00
7	TNAU, Coimbatore	CO 10	0.05	0.05	0.05	0.00
8	ICRISAT, Patancheru	Dhanshakti (ICTP 8203 Fe 10-2)	1.55	1.55	2.10	0.55
9	NARP, Aurangabad	ABPC4-3 (MP 448)	0.13	0.13	0.25	0.12
10	ICAR-IARI, New Delhi	Pusa Composite 612 (MP 480)	0.12	0.12	0.12	0.00
11	ICAR-IARI, New Delhi	Pusa Composite 443 (MP 443)	0.05	0.05	0.25	0.20
12	PAU, Ludhiana	PCB 164	0.05	0.05	Not in seed chain**	-0.05
13	RVSKVV, Gwalior	JBV-4 (MP 403)	0.05	0.05	0.15	0.10
14	NARP, Aurangabad	PPC-6 (Parbhani Sampada)	0.12	0.12	0.20	0.08
15	RVSKVV, Gwalior	JBV-2 (GKKV-93191)	0.05	0.05	0.25	0.20
16	RARI, SKNAU, Durgapura	Raj 171	0.05	0.05	0.00	-0.05
		Total (A)	7.62	7.62	27.62	20.00
B.	Parental lines					
17	ICRISAT, Patancheru	ICMA 92777 (A Line MPMH 42, GHB 757)	0.12	0.12	Nucleus Seed***	-0.12
18	ICRISAT, Patancheru	ICMB 92777 (B Line MPMH 42, GHB 757)	0.08	0.08	Nucleus Seed***	-0.08
19	ICRISAT, Patancheru	ICMA 93333 (A Line GHB 1294, MPMH 21, RHB 173)	0.52	0.52	0.52	0.00
20	ICRISAT, Patancheru	ICMB 93333 (B Line GHB 1294, MPMH 21, RHB 173)	0.29	0.29	0.29	0.00
21	ICRISAT, Patancheru	ICMA 98222 (A Line Palem Sajja-1625, Moti	0.32	0.32	0.32	0.00

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S. No.	Name of Producing center/state	Name of parental line/ variety	DAC indent (q)	Actual allocation as per BSP-I Target (q)	Actual Production (q)	Production Surplus (+)/ Deficit (-) over BSP-I target (q)
		Shakti (GHB 1225), AHB 1269, AHB 1200)				
22	ICRISAT, Patancheru	ICMB 98222 (B Line Palem Sajja-1625, Moti Shakti (GHB 1225), AHB 1269, AHB 1200)	0.12	0.12	0.12	0.00
23	ICRISAT, Patancheru	ICMA 95444 (A Line GHB 538 Imp, RHB 154, GHB 538)	0.09	0.09	Nucleus Seed***	-0.09
24	ICRISAT, Patancheru	ICMB 95444 (B Line GHB 538 Imp, RHB 154, GHB 538)	0.06	0.06	Nucleus Seed***	-0.06
25	ICRISAT, Patancheru	ICMA 98444 (A Line GHB 1351 (Banas Nayan), GHB 744)	0.06	0.06	0.06	0.00
26	ICRISAT, Patancheru	ICMB 98444 (B Line GHB 1351 (Banas Nayan), GHB 744)	0.04	0.04	0.04	0.00
27	ICRISAT, Patancheru	ICMA 94555 (A Line MPMH 35, VPMH 7, HHB 223, GHB 558)	0.12	0.12	0.12	0.00
28	ICRISAT, Patancheru	ICMB 94555 (B Line MPMH 35, VPMH 7, HHB 223, GHB 558)	0.08	0.08	0.08	0.00
29	ICRISAT, Patancheru	ICMA 843-22 (A Line HHB 67 Imp 2, RHB 228, BHB 1202, HHB 226, RHB 177, HHB 67 Imp)	0.44	0.44	0.50	0.06
30	ICRISAT, Patancheru	ICMB 843-22 (B Line HHB 67 Imp 2, RHB 228, BHB 1202, HHB 226, RHB 177, HHB 67 Imp)	0.27	0.27	0.30	0.03
31	ICRISAT, Patancheru	ICMA 11222 (A Line GHB 1231/Sawaj Shakti)	0.05	0.05	Nucleus Seed***	-0.05
32	ICRISAT, Patancheru	ICMB 11222 (B Line GHB 1231/Sawaj Shakti)	0.06	0.06	Nucleus Seed***	-0.06
33	ICRISAT, Patancheru	ICMA 88004 (A Line BHB 1602)	0.19	0.19	Nucleus Seed***	-0.19
34	ICRISAT, Patancheru	ICMB 88004 (B Line BHB 1602)	0.10	0.10	Nucleus Seed***	-0.10
35	ICRISAT, Patancheru	ICMA 02333 (A Line HHB 311, RHB 234)	0.22	0.22	0.22	0.00
36	ICRISAT, Patancheru	ICMB 02333 (B Line HHB 311, RHB 234)	0.12	0.12	0.12	0.00
37	ICRISAT, Patancheru	ICMA 99222 (A Line Jam Shakti/GHB 1129, PHULE MAHSHAKTI/DHBH 1211)	0.06	0.06	0.06	0.00
38	ICRISAT, Patancheru	ICMB 99222 (B Line Jam Shakti/GHB 1129, PHULE MAHSHAKTI/DHBH 1211)	0.04	0.04	0.04	0.00
39	ICRISAT, Patancheru	ICMA 99444 (A Line RHB 233)	0.13	0.13	0.13	0.00
40	ICRISAT, Patancheru	ICMB 99444 (B Line RHB 233)	0.07	0.07	0.07	0.00
41	ICRISAT, Patancheru	ICMA 96666 (A Line RHB 223)	0.23	0.23	0.23	0.00
42	ICRISAT, Patancheru	ICMB 96666 (B Line RHB 223)	0.12	0.12	0.12	0.00
43	ICRISAT, Patancheru	ICMA 04888 (A Line HHB 299)	0.56	0.56	0.56	0.00
44	ICRISAT, Patancheru	ICMB 04888 (B Line HHB 299)	0.28	0.28	0.28	0.00

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S. No.	Name of Producing center/state	Name of parental line/ variety	DAC indent (q)	Actual allocation as per BSP-I Target (q)	Actual Production (q)	Production Surplus (+)/ Deficit (-) over BSP-I target (q)
45	ICRISAT, Patancheru	ICMA 22777 (A Line PHB 2884)	0.03	0.03	Nucleus Seed***	-0.03
46	ICRISAT, Patancheru	ICMB 22777 (B Line PHB 2884)	0.02	0.02	Nucleus Seed***	-0.02
47	ICRISAT, Patancheru	ICMA 04999 (A Line MPMH 17, GHB 905)	0.24	0.24	0.24	0.00
48	ICRISAT, Patancheru	ICMB 04999 (B Line MPMH 17, GHB 905)	0.16	0.16	0.16	0.00
49	ICRISAT, Patancheru	ICMA 93111 (A Line CO 9)	0.03	0.03	Nucleus Seed***	-0.03
50	ICRISAT, Patancheru	ICMB 93111 (B Line CO 9)	0.02	0.02	Nucleus Seed***	-0.02
51	ICRISAT, Patancheru	ICMA 92333 (A Line PHB 2168)	0.03	0.03	Nucleus Seed***	-0.03
52	ICRISAT, Patancheru	ICMB 92333 (B Line PHB 2168)	0.02	0.02	Nucleus Seed***	-0.02
53	ICRISAT, Patancheru	ICMA 97111 (A Line HHB 197)	0.03	0.03	0.03	0.00
54	ICRISAT, Patancheru	ICMB 97111 (B Line HHB 197)	0.02	0.02	0.02	0.00
55	ICRISAT, Patancheru	ICMA 96222 (A Line GHB 732)	0.03	0.03	0.03	0.00
56	ICRISAT, Patancheru	ICMB 96222 (B Line GHB 732)	0.02	0.02	0.02	0.00
57	ICRISAT, Patancheru	ICMA 95222 (A Line GHB 719, HHB 146, GHB 526)	0.09	0.09	0.09	0.00
58	ICRISAT, Patancheru	ICMB 95222 (B Line GHB 719, HHB 146, GHB 526)	0.06	0.06	0.06	0.00
59	MPKV, Dhule	DHLB-16A (A Line DHBH 1397)	0.03	0.03	0.05	0.02
60	MPKV, Dhule	DHLB-16B (B Line DHBH 1397)	0.02	0.02	0.04	0.02
61	MPKV, Dhule	DHLBI 1035 (R Line DHBH 1397)	0.01	0.01	0.04	0.03
62	MPKV, Dhule	DHLB-8A (A Line ADISHAKTI)	0.03	0.03	0.10	0.07
63	MPKV, Dhule	DHLB-8B (B Line ADISHAKTI)	0.02	0.02	0.06	0.04
64	MPKV, Dhule	DHLBI-967 (R Line ADISHAKTI)	0.01	0.01	0.05	0.04
65	MPKV, Dhule	RHRB 13A (A Line RHRBH-9808)	0.03	0.03	0.03	0.00
66	MPKV, Dhule	RHRB 13B (B Line RHRBH-9808)	0.02	0.02	0.03	0.01
67	MPKV, Dhule	RHRBI 1314 (R Line RHRBH-9808)	0.01	0.01	0.03	0.02
68	MPKV, Dhule	DHLBI 1201 (R Line PHULE MAHASHAKTI/DHBH 1211)	0.01	0.01	0.03	0.02
69	NARP, Aurangabad	AUBI 1105 (R Line AHB 1269)	0.01	0.01	0.40	0.39
70	NARP, Aurangabad	AUBI 1101 (R Line AHB 1200)	0.06	0.06	0.12	0.06
71	RARS, UAS (Dharwad), Vijayapur	CPRT-112 (R Line VPMH 7)	0.01	0.01	0.10	0.09
72	PJTSAU, Telangana	PBR511 (R Line Palem Sajja-1625)	0.01	0.01	0.02	0.01
73	TNAU, Coimbatore	PT 6029-30 (R Line CO 9)	0.01	0.01	0.01	0.00
74	JAU, Jamnagar	JMS A 101 (A Line GHB 577)	0.03	0.03	Not in seed chain**	-0.03
75	JAU, Jamnagar	JMS B 101 (B Line GHB 577)	0.02	0.02	Not in seed	-0.02

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S. No.	Name of Producing center/state	Name of parental line/ variety	DAC indent (q)	Actual allocation as per BSP-I Target (q)	Actual Production (q)	Production Surplus (+)/ Deficit (-) over BSP-I target (q)
					chain**	
76	JAU, Jamnagar	J 2405 (R Line GHB 577)	0.01	0.01	Not in seed chain**	-0.01
77	JAU, Jamnagar	J-2632 (R Line GHB 1294)	0.01	0.01	0.00	-0.01
78	JAU, Jamnagar	J-2340 Imp (R Line GHB 538Imp)	0.01	0.01	0.00	-0.01
79	JAU, Jamnagar	J-2597 (R Line GHB 1231/Sawaj Shakti)	0.05	0.05	0.06	0.01
80	JAU, Jamnagar	J-2565 (R Line GHB 1129/ Jam Shakti)	0.01	0.01	0.00	-0.01
81	JAU, Jamnagar	J-2591 (R Line GHB 1225/ Moti Shakti)	0.03	0.03	0.00	-0.03
82	JAU, Jamnagar	J-2454 (R Line GHB 905, GHB 719)	0.02	0.02	0.00	-0.02
83	JAU, Jamnagar	J-2340 (R Line GHB 732, GHB 538, GHB 744)	0.03	0.03	0.00	-0.03
84	JAU, Jamnagar	J-2467 (R Line GHB 757)	0.01	0.01	0.00	-0.01
85	JAU, Jamnagar	J-2290 (R Line GHB 558)	0.01	0.01	0.00	-0.01
86	JAU, Jamnagar	J-2372 (R Line GHB 526)	0.01	0.01	0.00	-0.01
87	SDAU, Deesa	ICMR 17548 (R Line GHB 1351/Banas Nayan)	0.01	0.01	0.00	-0.01
88	IARI, New Delhi	MS 411 A (A Line Pusa 1201)	0.03	0.03	0.05	0.02
89	IARI, New Delhi	MS 411 B (B Line Pusa 1201)	0.02	0.02	0.03	0.01
90	IARI, New Delhi	ICMR 07333 (R Line Pusa 1201)	0.01	0.01	0.01	0.00
91	HAU, Hisar	HMS 47A (A Line HHB 272)	0.03	0.03	0.00	-0.03
92	HAU, Hisar	HMS 47B (B Line HHB 272)	0.02	0.02	0.00	-0.02
93	HAU, Hisar	AC 04/13 (R Line HHB 272)	0.01	0.01	0.10*	0.09
94	HAU, Hisar	HMS 7A (A Line HHB 234, HHB 117)	0.09	0.09	0.20*	0.11
95	HAU, Hisar	HMS 7B (B Line HHB 234, HHB 117)	0.05	0.05	0.10*	0.05
96	HAU, Hisar	H77/833-2-202 (R Line HHB 234, HHB 67 Imp)	0.05	0.05	0.10*	0.05
97	HAU, Hisar	HMS 37A (A Line HHB 216)	0.03	0.03	Not in seed chain**	-0.03
98	HAU, Hisar	HMS 37B (B Line HHB 216)	0.02	0.02	Not in seed chain**	-0.02
99	HAU, Hisar	HTP 3/13 (R Line HHB 216)	0.01	0.01	Not in seed chain**	-0.01
100	HAU, Hisar	H 77/29-2 (R Line HHB 117)	0.01	0.01	Not in seed chain**	-0.01
101	HAU, Hisar	H 77-833-2-202-6R (R Line HHB 67 Imp 2)	0.11	0.11	0.15	0.04
102	HAU, Hisar	H 14/003 (R Line HHB 311)	0.04	0.04	0.04*	0.00
103	HAU, Hisar	H 13/0001 (R Line HHB 299)	0.27	0.27	0.30	0.03
104	HAU, Hisar	HL 11 (R Line HHB 226, HHB 223, HHB 197)	0.03	0.03	Not in seed	-0.03

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S. No.	Name of Producing center/state	Name of parental line/ variety	DAC indent (q)	Actual allocation as per BSP-I Target (q)	Actual Production (q)	Production Surplus (+)/ Deficit (-) over BSP-I target (q)
					chain***	
105	HAU, Hisar	HTP 94/54 (R Line HHB 146)	0.01	0.01	Not in seed chain***	-0.01
106	SKNAU, Jaipur	RIB 15S076 (R Line RHB 228)	0.01	0.01	4.00	3.99
107	SKNAU, Jaipur	RIB 15176 (R Line RHB 233)	0.06	0.06	0.07	0.01
108	SKNAU, Jaipur	RIB 15177 (R Line RHB 234)	0.06	0.06	0.04	-0.02
109	SKNAU, Jaipur	RIB 3135-18 (R Line RHB 223)	0.11	0.11	0.16	0.05
110	SKNAU, Jaipur	RIB 494 (R Line RHB 177)	0.01	0.01	0.01	0.00
111	SKNAU, Jaipur	RIB 192 S/99 (R Line RHB-173)	0.01	0.01	0.01	0.00
112	SKNAU, Jaipur	RIB 57 S/05 (R Line RHB 154)	0.01	0.01	0.01	0.00
113	AU, Jodhpur	MIR 519-1 (R Line MPMH 42)	0.05	0.05	0.12	0.07
114	AU, Jodhpur	MIR 1252 (R Line MPMH 35)	0.01	0.01	0.52	0.51
115	AU, Jodhpur	MIR 524 (R Line MPMH 21)	0.22	0.22	0.98	0.76
116	AU, Jodhpur	MIR 525-2 (R Line MPMH 17)	0.13	0.13	0.42	0.29
117	SKRAU, Bikaner	BIB-16810 (R Line BHB-1602)	0.09	0.09	0.09	0.00
118	SKRAU, Bikaner	BIB-22 (R Line BHB-1202)	0.04	0.04	0.04	0.00
119	PAU, Ludhiana	PIB 686 (R Line PHB-2884, PHB 2168)	0.02	0.02	0.04	0.02
		Total (B)	7.86	7.86	13.59	5.73
		Total (A)+(B)	15.48	15.48	41.21	25.73

*Carryover of Kharif 2023 season

**Not in seed chain

***Nucleus Seed can provide

CHAPTER I: BREEDING

Table I.215: State-wise Breeder Seed Production Report Kharif 2024-25
Crop: Pearl millet

Year of Indent/ Production: 2024
Year of supply: February 2025

S. No.	Name of Producing center/state	Hybrid/ Variety	Name of parental line	DAC indent (q)	Actual allocation as per BSP-I target (q)	Actual Production (q)	Production Surplus (+) Deficit (-) over BSP-I target (q)
	Rajasthan						
1	SKNAU, Jaipur	RHB 228 (R Line)	RIB 15S076	0.01	0.01	4.00	3.99
2	SKNAU, Jaipur	RHB 233 (R Line)	RIB 15176	0.06	0.06	0.07	0.01
3	SKNAU, Jaipur	RHB 234 (R Line)	RIB 15177	0.06	0.06	0.04	-0.02
4	SKNAU, Jaipur	RHB 223 (R Line)	RIB 3135-18	0.11	0.11	0.16	0.05
5	SKNAU, Jaipur	RHB 177 (R Line)	RIB 494	0.01	0.01	0.01	0.00
6	SKNAU, Jaipur	RHB-173 (R Line)	RIB 192 S/99	0.01	0.01	0.01	0.00
7	SKNAU, Jaipur	RHB 154 (R Line)	RIB 57 S/05	0.01	0.01	0.01	0.00
8	AU, Jodhpur	MPMH 42 (R Line)	MIR 519-1	0.05	0.05	0.12	0.07
9	AU, Jodhpur	MPMH 35 (R Line)	MIR 1252	0.01	0.01	0.52	0.51
10	AU, Jodhpur	MPMH 21 (R Line)	MIR 524	0.22	0.22	0.98	0.76
11	AU, Jodhpur	MPMH 17 (R Line)	MIR 525-2	0.13	0.13	0.42	0.29
12	SKRAU, Bikaner	BHB-1602 (R Line)	BIB-16810	0.09	0.09	0.09	0.00
13	SKRAU, Bikaner	BHB-1202 (R Line)	BIB-22	0.04	0.04	0.04	0.00
14	RARI, SKNAU, Durgapura	Raj 171	-	0.05	0.05	0.00	-0.05
		Total		0.86	0.86	6.47	5.61
	Delhi						
1	ICAR-IARI, New Delhi	Pusa Composite 701 (MP 535)	-	3.15	3.15	3.15	0.00
2	ICAR-IARI, New Delhi	Pusa Composite 612 (MP 480)	-	0.12	0.12	0.12	0.00
3	ICAR-IARI, New Delhi	Pusa Composite 443 (MP 443)	-	0.05	0.05	0.25	0.20
4	IARI, New Delhi	Pusa 1201 (A Line)	MS 411 A	0.03	0.03	0.05	0.02
5	IARI, New Delhi	Pusa 1201 (B Line)	MS 411 B	0.02	0.02	0.03	0.01
6	IARI, New Delhi	Pusa 1201 (R Line)	ICMR 07333	0.01	0.01	0.01	0.00
		Total		3.38	3.38	3.61	0.23
	Haryana						
1	HAU, Hisar	HHB 272 (A Line)	HMS 47A	0.03	0.03	0.00	-0.03
2	HAU, Hisar	HHB 272 (B Line)	HMS 47B	0.02	0.02	0.00	-0.02
3	HAU, Hisar	HHB 272 (R Line)	AC 04/13	0.01	0.01	0.10*	0.09

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S. No.	Name of Producing center/state	Hybrid/ Variety	Name of parental line	DAC indent (q)	Actual allocation as per BSP-I target (q)	Actual Production (q)	Production Surplus (+) Deficit (-) over BSP-I target (q)
4	HAU, Hisar	HHB 234, HHB 117 (A Line)	HMS 7A	0.09	0.09	0.20*	0.11
5	HAU, Hisar	HHB 234, HHB 117 (B Line)	HMS 7B	0.05	0.05	0.10*	0.05
6	HAU, Hisar	HHB 234, HHB 67 Imp (R Line)	H77/833-2-202	0.05	0.05	0.10*	0.05
7	HAU, Hisar	HHB 216 (A Line)	HMS 37A	0.03	0.03	Not in seed chain**	-0.03
8	HAU, Hisar	HHB 216 (B Line)	HMS 37B	0.02	0.02	Not in seed chain**	-0.02
9	HAU, Hisar	HHB 216 (R Line)	HTP 3/13	0.01	0.01	Not in seed chain**	-0.01
10	HAU, Hisar	HHB 117 (R Line)	H 77/29-2	0.01	0.01	Not in seed chain**	-0.01
11	HAU, Hisar	HHB 67 Imp 2 (R Line)	H 77-833-2-202-6R	0.11	0.11	0.15	0.04
12	HAU, Hisar	HHB 311 (R Line)	H 14/003	0.04	0.04	0.04*	0.00
13	HAU, Hisar	HHB 299 (R Line)	H 13/0001	0.27	0.27	0.30	0.03
14	HAU, Hisar	HHB 226, HHB 223, HHB 197 (R Line)	HBL 11	0.03	0.03	Not in seed chain***	-0.03
15	HAU, Hisar	HHB 146 (R Line)	HTP 94/54	0.01	0.01	Not in seed chain***	-0.01
		Total		0.78	0.78	0.99	0.21
	Madhya Pradesh						
1	RVSKVV, Gwalior	JBV-4 (MP 403)	-	0.05	0.05	0.15	0.10
2	RVSKVV, Gwalior	JBV-2 (GKKV-93191)	-	0.05	0.05	0.25	0.20
		Total		0.10	0.10	0.40	0.30
	Gujarat						
1	JAU, Jamnagar	GHB 577 (A Line)	JMS A 101	0.03	0.03	Not in seed chain**	-0.03
2	JAU, Jamnagar	GHB 577 (B Line)	JMS B 101	0.02	0.02	Not in seed chain**	-0.02
3	JAU, Jamnagar	GHB 577 (R Line)	J 2405	0.01	0.01	Not in seed chain**	-0.01
4	JAU, Jamnagar	GHB 1294 (R Line)	J-2632	0.01	0.01	0.00	-0.01
5	JAU, Jamnagar	GHB 538Imp (R Line)	J-2340 Imp	0.01	0.01	0.00	-0.01
6	JAU, Jamnagar	GHB 1231/Sawaj Shakti (R Line)	J-2597	0.05	0.05	0.06	0.01

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S. No.	Name of Producing center/state	Hybrid/ Variety	Name of parental line	DAC indent (q)	Actual allocation as per BSP-I target (q)	Actual Production (q)	Production Surplus (+) Deficit (-) over BSP-I target (q)
7	JAU, Jamnagar	GHB 1129/ Jam Shakti (R Line)	J-2565	0.01	0.01	0.00	-0.01
8	JAU, Jamnagar	GHB 1225/ Moti Shakti (R Line)	J-2591	0.03	0.03	0.00	-0.03
9	JAU, Jamnagar	GHB 905, GHB 719 (R Line)	J-2454	0.02	0.02	0.00	-0.02
10	JAU, Jamnagar	GHB 732, GHB 538, GHB 744 (R Line)	J-2340	0.03	0.03	0.00	-0.03
11	JAU, Jamnagar	GHB 757 (R Line)	J-2467	0.01	0.01	0.00	-0.01
12	JAU, Jamnagar	GHB 558 (R Line)	J-2290	0.01	0.01	0.00	-0.01
13	JAU, Jamnagar	GHB 526 (R Line)	J-2372	0.01	0.01	0.00	-0.01
14	SDAU, Deesa	GHB 1351/Banas Nayan (R Line)	ICMR 17548	0.01	0.01	0.00	-0.01
		Total		0.26	0.26	0.06	-0.20
	Punjab						
1	PAU, Ludhiana	PCB 166 (FBL 4)	-	0.05	0.05	0.40	0.35
2	PAU, Ludhiana	PCB 165 (GBL 2) (MP 595)	-	0.05	0.05	0.20	0.15
3	PAU, Ludhiana	PCB 164	-	0.05	0.05	0.00	-0.05
4	PAU, Ludhiana	PHB-2884, PHB 2168 (R Line)	PIB 686	0.02	0.02	0.04	0.02
		Total		0.17	0.17	0.64	0.47
	Maharashtra						
1	NARP, Aurangabad	PPC-6 (Parbhani Sampada)	-	0.12	0.12	0.20	0.08
2	MPKV, Dhule	DHBH 1397 (A Line)	DHLB-16A	0.03	0.03	0.05	0.02
3	MPKV, Dhule	DHBH 1397 (B Line)	DHLB-16B	0.02	0.02	0.04	0.02
4	MPKV, Dhule	DHBH 1397 (R Line)	DHLBI 1035	0.01	0.01	0.04	0.03
5	MPKV, Dhule	ADISHAKTI (A Line)	DHLB-8A	0.03	0.03	0.10	0.07
6	MPKV, Dhule	ADISHAKTI (B Line)	DHLB-8B	0.02	0.02	0.06	0.04
7	MPKV, Dhule	ADISHAKTI (R Line)	DHLBI-967	0.01	0.01	0.05	0.04
8	MPKV, Dhule	RHRBH-9808 (A Line)	RHRB 13A	0.03	0.03	0.03	0.00
9	MPKV, Dhule	RHRBH-9808 (B Line)	RHRB 13B	0.02	0.02	0.03	0.01
10	MPKV, Dhule	RHRBH-9808 (R Line)	RHRBI 1314	0.01	0.01	0.03	0.02
11	MPKV, Dhule	PHULE MAHASHKTI/DHBH 1211 (R Line)	DHLBI 1201	0.01	0.01	0.03	0.02
12	NARP, Aurangabad	AHB 1269 (R Line)	AUBI 1105	0.01	0.01	0.40	0.39
13	NARP, Aurangabad	AHB 1200 (R Line)	AUBI 1101	0.06	0.06	0.12	0.06
14	NARP, Aurangabad	ABPC4-3 (MP 448)	-	0.13	0.13	0.25	0.12
		Total		0.51	0.51	1.43	0.92
	Andhra Pradesh						
1	ANGRAU, Ananthapuram	ABV 04 (MP 552)	-	2.05	2.05	20.00	17.95

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S. No.	Name of Producing center/state	Hybrid/ Variety	Name of parental line	DAC indent (q)	Actual allocation as per BSP-I target (q)	Actual Production (q)	Production Surplus (+) Deficit (-) over BSP-I target (q)
		Total		2.05	2.05	20.00	17.95
	Karnataka						
1	RARS, UAS (Dharwad), Vijayapur	VPMV 9	-	0.05	0.05	0.50	0.45
2	ARS, Malnoor (UAS, Raichur)	MBP-2	-	0.05	0.05	0.00	-0.05
3	RARS, UAS (Dharwad), Vijayapur	VPMH 7 (R Line)	CPRT-112	0.01	0.01	0.10	0.09
		Total		0.11	0.11	0.60	0.49
	Tamil Nadu						
1	TNAU, Coimbatore	CO 10	-	0.05	0.05	0.05	0.00
2	TNAU, Coimbatore	CO 9 (R Line)	PT 6029-30	0.01	0.01	0.01	0.00
		Total		0.06	0.06	0.06	0.00
	Telangana						
1	ICRISAT, Patancheru	MPMH 42, GHB 757 (A Line)	ICMA 92777	0.12	0.12	Nucleus Seed***	-0.12
2	ICRISAT, Patancheru	MPMH 42, GHB 757 (B Line)	ICMB 92777	0.08	0.08	Nucleus Seed***	-0.08
3	ICRISAT, Patancheru	GHB 1294, MPMH 21, RHB 173 (A Line)	ICMA 93333	0.52	0.52	0.52	0.00
4	ICRISAT, Patancheru	GHB 1294, MPMH 21, RHB 173 (B Line)	ICMB 93333	0.29	0.29	0.29	0.00
5	ICRISAT, Patancheru	Palem Sajja-1625, Moti Shakti (GHB 1225), AHB 1269, AHB 1200 (A Line)	ICMA 98222	0.32	0.32	0.32	0.00
6	ICRISAT, Patancheru	Palem Sajja-1625, Moti Shakti (GHB 1225), AHB 1269, AHB 1200 (B Line)	ICMB 98222	0.12	0.12	0.12	0.00
7	ICRISAT, Patancheru	GHB 538 Imp, RHB 154, GHB 538 (A Line)	ICMA 95444	0.09	0.09	Nucleus Seed***	-0.09
8	ICRISAT, Patancheru	GHB 538 Imp, RHB 154, GHB 538 (B Line)	ICMB 95444	0.06	0.06	Nucleus Seed***	-0.06
9	ICRISAT, Patancheru	GHB 1351 (Banas Nayan), GHB 744 (A Line)	ICMA 98444	0.06	0.06	0.06	0.00
10	ICRISAT, Patancheru	GHB 1351 (Banas Nayan), GHB 744 (B Line)	ICMB 98444	0.04	0.04	0.04	0.00
11	ICRISAT, Patancheru	MPMH 35, VPMH 7, HHB 223, GHB 558 (A Line)	ICMA 94555	0.12	0.12	0.12	0.00
12	ICRISAT, Patancheru	MPMH 35, VPMH 7, HHB 223, GHB 558) (B Line)	ICMB 94555	0.08	0.08	0.08	0.00

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S. No.	Name of Producing center/state	Hybrid/ Variety	Name of parental line	DAC indent (q)	Actual allocation as per BSP-I target (q)	Actual Production (q)	Production Surplus (+) Deficit (-) over BSP-I target (q)
13	ICRISAT, Patancheru	HHB 67 Imp 2, RHB 228, BHB 1202, HHB 226, RHB 177, HHB 67 Imp (A Line)	ICMA 843-22	0.44	0.44	0.50	0.06
14	ICRISAT, Patancheru	HHB 67 Imp 2, RHB 228, BHB 1202, HHB 226, RHB 177, HHB 67 Imp (B Line)	ICMB 843-22	0.27	0.27	0.30	0.03
15	ICRISAT, Patancheru	GHB 1231/Sawaj Shakti (A Line)	ICMA 11222	0.05	0.05	Nucleus Seed***	-0.05
16	ICRISAT, Patancheru	GHB 1231/Sawaj Shakti (B Line)	ICMB 11222	0.06	0.06	Nucleus Seed***	-0.06
17	ICRISAT, Patancheru	BHB 1602 (A Line)	ICMA 88004	0.19	0.19	Nucleus Seed***	-0.19
18	ICRISAT, Patancheru	BHB 1602 (B Line)	ICMB 88004	0.10	0.10	Nucleus Seed***	-0.10
19	ICRISAT, Patancheru	HHB 311, RHB 234 (A Line)	ICMA 02333	0.22	0.22	0.22	0.00
20	ICRISAT, Patancheru	HHB 311, RHB 234 (B Line)	ICMB 02333	0.12	0.12	0.12	0.00
21	ICRISAT, Patancheru	Jam Shakti/GHB 1129, PHULE MAHSHAKTI/DHBH 1211 (A Line)	ICMA 99222	0.06	0.06	0.06	0.00
22	ICRISAT, Patancheru	Jam Shakti/GHB 1129, PHULE MAHSHAKTI/DHBH 1211 (B Line)	ICMB 99222	0.04	0.04	0.04	0.00
23	ICRISAT, Patancheru	RHB 233 (A Line)	ICMA 99444	0.13	0.13	0.13	0.00
24	ICRISAT, Patancheru	RHB 233 (B Line)	ICMB 99444	0.07	0.07	0.07	0.00
25	ICRISAT, Patancheru	RHB 223 (A Line)	ICMA 96666	0.23	0.23	0.23	0.00
26	ICRISAT, Patancheru	RHB 223 (B Line)	ICMB 96666	0.12	0.12	0.12	0.00
27	ICRISAT, Patancheru	HHB 299 (A Line)	ICMA 04888	0.56	0.56	0.56	0.00
28	ICRISAT, Patancheru	HHB 299 (B Line)	ICMB 04888	0.28	0.28	0.28	0.00
29	ICRISAT, Patancheru	PHB 2884 (A Line)	ICMA 22777	0.03	0.03	Nucleus Seed***	-0.03
30	ICRISAT, Patancheru	PHB 2884 (B Line)	ICMB 22777	0.02	0.02	Nucleus Seed***	-0.02
31	ICRISAT, Patancheru	MPMH 17, GHB 905 (A Line)	ICMA 04999	0.24	0.24	0.24	0.00
32	ICRISAT, Patancheru	MPMH 17, GHB 905 (B Line)	ICMB 04999	0.16	0.16	0.16	0.00
33	ICRISAT, Patancheru	CO 9 (A Line)	ICMA 93111	0.03	0.03	Nucleus Seed***	-0.03
34	ICRISAT, Patancheru	CO 9 (B Line)	ICMB 93111	0.02	0.02	Nucleus Seed***	-0.02
35	ICRISAT, Patancheru	PHB 2168 (A Line)	ICMA 92333	0.03	0.03	Nucleus	-0.03

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S. No.	Name of Producing center/state	Hybrid/ Variety	Name of parental line	DAC indent (q)	Actual allocation as per BSP-I target (q)	Actual Production (q)	Production Surplus (+) Deficit (-) over BSP-I target (q)
						Seed***	
36	ICRISAT, Patancheru	PHB 2168 (B Line)	ICMB 92333	0.02	0.02	Nucleus Seed***	-0.02
37	ICRISAT, Patancheru	HHB 197 (A Line)	ICMA 97111	0.03	0.03	0.03	0.00
38	ICRISAT, Patancheru	HHB 197 (B Line)	ICMB 97111	0.02	0.02	0.02	0.00
39	ICRISAT, Patancheru	GHB 732 (A Line)	ICMA 96222	0.03	0.03	0.03	0.00
40	ICRISAT, Patancheru	GHB 732 (B Line)	ICMB 96222	0.02	0.02	0.02	0.00
41	ICRISAT, Patancheru	GHB 719, HHB 146, GHB 526 (A Line)	ICMA 95222	0.09	0.09	0.09	0.00
42	ICRISAT, Patancheru	GHB 719, HHB 146, GHB 526 (B Line)	ICMB 95222	0.06	0.06	0.06	0.00
43	ICRISAT, Patancheru	Dhanshakti (ICTP 8203 Fe 10-2)	-	1.55	1.55	2.10	0.55
44	PJTSAU, Telangana	Palem Sajja-1625 (R Line)	PBR511	0.01	0.01	0.02	0.01
		Total		7.20	7.20	6.95	-0.25
		Grand Total		15.48	15.48	41.21	25.73

*Carryover of Kharif 2023 season

**Not in seed chain

***Nucleus Seed can provide

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Table I.216: Variety-wise Breeder Seed Production Report Kharif 2024-25

Crop: Pearl millet

Year of Indent/ Production: 2024

Year of supply: February 2025

S. No.	Name Variety/Hybrid	Name of parental line	Year of Release	Total DAC indent (q)	Actual allocation as per BSP-I target (q)	Actual Production (q)	Production Surplus (+) Deficit (-) over BSP-I target (q)
1	PCB 166 (FBL 4)	-	2023	0.05	0.05	0.40	0.35
2	PCB 165 (GBL 2) (MP 595)	-	2021	0.05	0.05	0.20	0.15
3	VPMV 9	-	2021	0.05	0.05	0.50	0.45
4	MBP-2	-	2021	0.05	0.05	0.00	-0.05
5	ABV 04 (MP 552)	-	2019	2.05	2.05	20.00	17.95
6	Pusa Composite 701 (MP 535)	-	2016	3.15	3.15	3.15	0.00
7	CO 10	-	2016	0.05	0.05	0.05	0.00
8	Dhanshakti (ICTP 8203 Fe 10-2)		2014	1.55	1.55	2.10	0.55
9	ABPC4-3 (MP 448)		2012	0.13	0.13	0.25	0.12
10	Pusa Composite 612 (MP 480)		2011	0.12	0.12	0.12	0.00
11	Pusa Composite 443 (MP 443)		2009	0.05	0.05	0.25	0.20
12	PCB 164		2007	0.05	0.05	Not in seed chain**	-0.05
13	JBV-4 (MP 403)		2007	0.05	0.05	0.15	0.10
14	PPC-6 (Parbhani Sampada)		2005	0.12	0.12	0.20	0.08
15	JBV-2 (GKKV-93191)		1999	0.05	0.05	0.25	0.20
16	Raj 171		1992	0.05	0.05	0.00	-0.05
			Total (A)	7.62	7.62	27.62	20.00
17	MPMH 42	ICMA 92777 (A Line)	2024	0.09	0.09	Nucleus Seed***	-0.09
		ICMB 92777 (B Line)		0.06	0.06	Nucleus Seed***	-0.06
		MIR 519-1 (R Line)		0.05	0.05	0.12	0.07
18	GHB 757	ICMA 92777 (A Line)	2008	0.03	0.03	Nucleus Seed***	-0.03
		ICMB 92777 (B Line)		0.02	0.02	Nucleus Seed***	-0.02
		J 2467 (R Line)		0.01	0.01	0.00	-0.01
19	GHB 1294	ICMA 93333 (A Line)	2024	0.03	0.03	0.03	0.00
		ICMB 93333 (B Line)		0.02	0.02	0.02	0.00
		J-2632 (R Line)		0.01	0.01	0.00	-0.01

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S. No.	Name Variety/Hybrid	Name of parental line	Year of Release	Total DAC indent (q)	Actual allocation as per BSP-I target (q)	Actual Production (q)	Production Surplus (+) Deficit (-) over BSP-I target (q)
20	MPMH 21	ICMA 93333 (A Line)		0.46	0.46	0.46	0.00
		ICMB 93333 (B Line)		0.25	0.25	0.25	0.00
		MIR 524		0.22	0.22	0.98	0.76
21	RHB 173	ICMA 93333 (A Line)		0.03	0.03	0.03	0.00
		ICMB 93333 (B Line)		0.02	0.02	0.02	0.00
		RIB 192S/99		0.01	0.01	0.01	0.00
22	Palem Sajja-1625	ICMA 98222 (A Line)	2024	0.03	0.03	0.03	0.00
		ICMB 98222 (B Line)		0.02	0.02	0.02	0.00
		PBR511		0.01	0.01	0.02	0.01
23	Moti Shakti (GHB 1225)	ICMA 98222 (A Line)	2020	0.07	0.07	0.07	0.00
		ICMB 98222 (B Line)		0.04	0.04	0.04	0.00
		J-2591 (R Line)		0.03	0.03	0.00	-0.03
24	AHB 1269	ICMA 98222 (A Line)	2019	0.03	0.03	0.03	0.00
		ICMB 98222 (B Line)		0.02	0.02	0.02	0.00
		AUBI 1105 (R Line)		0.01	0.01	0.40	0.39
25	AHB 1200	ICMA 98222 (A Line)	2018	0.19	0.19	0.19	0.00
		ICMB 98222 (B Line)		0.04	0.04	0.04	0.00
		AUBI 1101 (R Line)		0.06	0.06	0.12	0.06
26	GHB 538 Imp.	ICMA 95444 (A Line)	2024	0.03	0.03	Nucleus Seed***	-0.03
		ICMB 95444 (B Line)		0.02	0.02	Nucleus Seed***	-0.02
		J-2340 (R Line)		0.01	0.01	0.00	-0.01
27	RHB 154	ICMA 95444 (A Line)	2009	0.03	0.03	Nucleus Seed***	-0.03
		ICMB 95444 (B Line)		0.02	0.02	Nucleus Seed***	-0.02
		RIB 57 S/05 (R Line)		0.01	0.01	0.01	0.00
28	GHB 538	ICMA 95444 (A Line)	2005	0.03	0.03	Nucleus Seed***	-0.03
		ICMB 95444 (B Line)		0.02	0.02	Nucleus Seed***	-0.02
		J-2340 (R Line)		0.01	0.01	0.00	-0.01
29	GHB 1351 (Banas Nayan)	ICMA 98444 (A Line)	2024	0.03	0.03	0.03	0.00
		ICMB 98444 (B Line)		0.02	0.02	0.02	0.00
		ICMR 17548 (R Line)		0.01	0.01	0.00	-0.01
30	GHB 744	ICMA 98444 (A Line)	2008	0.03	0.03	0.03	0.00
		ICMB 98444 (B Line)		0.02	0.02	0.02	0.00
		J 2340 (R Line)		0.01	0.01	0.00	-0.01
31	MPMH 35	ICMA 94555 (A Line)	2022	0.03	0.03	0.03	0.00

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S. No.	Name Variety/Hybrid	Name of parental line	Year of Release	Total DAC indent (q)	Actual allocation as per BSP-I target (q)	Actual Production (q)	Production Surplus (+) Deficit (-) over BSP-I target (q)
		ICMB 94555 (B Line)		0.02	0.02	0.02	0.00
		MIR 1252 (R Line)		0.01	0.01	0.52	0.51
32	VPMH 7	ICMA 94555 (A Line)	2021	0.03	0.03	0.03	0.00
		ICMB 94555 (B Line)		0.02	0.02	0.02	0.00
		CPRT-112 (R Line)		0.01	0.01	0.10	0.09
33	HHB 223	ICMA 94555 (A Line)	2010	0.03	0.03	0.03	0.00
		ICMB 94555 (B Line)		0.02	0.02	0.02	0.00
		HBL 11 (R Line)		0.01	0.01	Not in seed chain**	-0.01
34	GHB 558	ICMA 94555 (A Line)	2003	0.03	0.03	0.03	0.00
		ICMB 94555 (B Line)		0.02	0.02	0.02	0.00
		J 2290 (R Line)		0.01	0.01	0.00	-0.01
35	HHB 67 Imp	ICMA 843-22 (A Line)	2005	0.09	0.09	0.12	0.03
		ICMB 843-22 (B Line)		0.04	0.04	0.07	0.03
		H 77/833-2-202 (R Line)		0.03	0.03	0.05*	0.02
36	HHB 67 Imp 2	ICMA 843-22 (A Line)	2021	0.17	0.17	0.20	0.03
		ICMB 843-22 (B Line)		0.12	0.12	0.12	0.00
		H 77/833-2-202-6 (R Line)		0.11	0.11	0.15	0.04
37	RHB 228	ICMA 843-22 (A Line)	2021	0.03	0.03	0.03	0.00
		ICMB 843-22 (B Line)		0.02	0.02	0.02	0.00
		RIB15S076 (R Line)		0.01	0.01	4.00	3.99
38	BHB 1202	ICMA 843-22 (A Line)	2018	0.09	0.09	0.09	0.00
		ICMB 843-22 (B Line)		0.05	0.05	0.05	0.00
		BIB-22 (R Line)		0.04	0.04	0.04	0.00
39	HHB 226	ICMA 843-22 (A Line)	2011	0.03	0.03	0.03	0.00
		ICMB 843-22 (B Line)		0.02	0.02	0.02	0.00
		HBL 11 (R Line)		0.01	0.01	Not in seed chain**	-0.01
40	RHB 177	ICMA 843-22 (A Line)	2011	0.03	0.03	0.03	0.00
		ICMB 843-22 (B Line)		0.02	0.02	0.02	0.00
		RIB 494 (R Line)		0.01	0.01	0.01	0.00
41	GHB 1231(Sawaj Shakti)	ICMA 11222	2021	0.05	0.05	Nucleus Seed***	-0.05
		ICMB 11222		0.06	0.06	Nucleus Seed***	-0.06
		J-2597 (R Line)		0.05	0.05	0.06	0.01

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S. No.	Name Variety/Hybrid	Name of parental line	Year of Release	Total DAC indent (q)	Actual allocation as per BSP-I target (q)	Actual Production (q)	Production Surplus (+) Deficit (-) over BSP-I target (q)
42	BHB 1602	ICMA 88004 (A Line)	2020	0.19	0.19	Nucleus Seed***	-0.19
		ICMB 88004 (B Line)		0.10	0.10	Nucleus Seed***	-0.10
		BIB-16810 (R Line)		0.09	0.09	0.09	0.00
43	HHB 311	ICMA 02333 (A Line)	2020	0.09	0.09	0.09	0.00
		ICMB 02333 (B Line)		0.05	0.05	0.05	0.00
		H-14/003 (R Line)		0.04	0.04	0.04*	0.00
44	RHB 234	ICMA 02333 (A Line)	2019	0.13	0.13	0.13	0.00
		ICMB 02333 (B Line)		0.07	0.07	0.07	0.00
		RIB 15177 (R Line)		0.06	0.06	0.04	-0.02
45	Jam Shakti (GHB 1129)	ICMA 99222 (A Line)	2020	0.03	0.03	0.03	0.00
		ICMB 99222 (B Line)		0.02	0.02	0.02	0.00
		J-2565 (R Line)		0.01	0.01	0.00	-0.01
46	PHULE MAHASHAKTI (DHBH 1211)	ICMA 99222 (A Line)	2019	0.03	0.03	0.03	0.00
		ICMB 99222 (B Line)		0.02	0.02	0.02	0.00
		DHLBI 1201 (R Line)		0.01	0.01	0.03	0.02
47	RHB 233	ICMA 99444 (A Line)	2019	0.13	0.13	0.13	0.00
		ICMB 99444 (B Line)		0.07	0.07	0.07	0.00
		RIB 15176 (R Line)		0.06	0.06	0.07	0.01
48	RHB 223	ICMA 96666 (A Line)	2018	0.23	0.23	0.23	0.00
		ICMB 96666 (B Line)		0.12	0.12	0.12	0.00
		RIB 3135-18 (R Line)		0.11	0.11	0.16	0.05
49	HHB 299	ICMA 04888 (A Line)	2018	0.56	0.56	0.56	0.00
		ICMB 04888 (B Line)		0.28	0.28	0.28	0.00
		H 13/0001 (R Line)		0.27	0.27	0.30	0.03
50	PHB 2884	ICMA 22777 (A Line)	2016	0.03	0.03	Nucleus Seed***	-0.03
		ICMB 22777 (B Line)		0.02	0.02	Nucleus Seed***	-0.02
		PIB 686 (R Line)		0.01	0.01	0.02	0.01
51	MPMH 17	ICMA 04999 (A Line)	2013	0.21	0.21	0.21	0.00
		ICMB 04999 (B Line)		0.14	0.14	0.14	0.00
		MIR 525-2 (R Line)		0.13	0.13	0.42	0.29
52	GHB 905	ICMA 04999 (A Line)	2013	0.03	0.03	0.03	0.00
		ICMB 04999 (B Line)		0.02	0.02	0.02	0.00
		J-2454 (R Line)		0.01	0.01	0.00	-0.01

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S. No.	Name Variety/Hybrid	Name of parental line	Year of Release	Total DAC indent (q)	Actual allocation as per BSP-I target (q)	Actual Production (q)	Production Surplus (+) Deficit (-) over BSP-I target (q)
53	CO09	ICMA 93111 (A Line)	2012	0.03	0.03	Nucleus Seed***	-0.03
		ICMB 93111 (B Line)		0.02	0.02	Nucleus Seed***	-0.02
		PT 6029-30 (R Line)		0.01	0.01	0.01	0.00
54	PHB 2168	ICMA 92333 (A Line)	2008	0.03	0.03	Nucleus Seed***	-0.03
		ICMB 92333 (B Line)		0.02	0.02	Nucleus Seed***	-0.02
		PIB 686 (R Line)		0.01	0.01	0.02	0.01
55	HHB 197	ICMA 97111 (A Line)	2008	0.03	0.03	0.03	0.00
		ICMB 97111 (B Line)		0.02	0.02	0.02	0.00
		HBL 11 (R Line)		0.01	0.01	Not in seed chain**	-0.01
56	GHB 732	ICMA 96222 (A Line)	2008	0.03	0.03	0.03	0.00
		ICMB 96222 (B Line)		0.02	0.02	0.02	0.00
		J 2340 (R Line)		0.01	0.01	0.00	-0.01
57	GHB 719	ICMA 95222 (A Line)	2007	0.03	0.03	0.03	0.00
		ICMB 95222 (B Line)		0.02	0.02	0.02	0.00
		J 2454 (R Line)		0.01	0.01	0.00	-0.01
58	HHB 146	ICMA 95222 (A Line)	2003	0.03	0.03	0.03	0.00
		ICMB 95222 (B Line)		0.02	0.02	0.02	0.00
		HTP 94/54 (R Line)		0.01	0.01	Not in seed chain**	-0.01
59	GHB 526	ICMA 95222 (A Line)	2003	0.03	0.03	0.03	0.00
		ICMB 95222 (B Line)		0.02	0.02	0.02	0.00
		J 2372 (R Line)		0.01	0.01	0.00	-0.01
60	DHBH 1397	DHLB-16A (A Line)	2019	0.03	0.03	0.05	0.02
		DHLB-16B (B Line)		0.02	0.02	0.04	0.02
		DHLBI 1035 (R Line)		0.01	0.01	0.04	0.03
61	ADISHAKTI	DHLB-8A (A Line)	2016	0.03	0.03	0.10	0.07
		DHLB-8B (B Line)		0.02	0.02	0.06	0.04
		DHLBI-967 (R Line)		0.01	0.01	0.05	0.04
62	RHRBH-9808	RHRB 13A (A Line)	2010	0.03	0.03	0.03	0.00
		RHRB 13B (B Line)		0.02	0.02	0.03	0.01
		RHRBI 1314 (R Line)		0.01	0.01	0.03	0.02
63	GHB 577	JMS A 101 (A Line)	2004	0.03	0.03	Not in seed chain**	-0.03

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S. No.	Name Variety/Hybrid	Name of parental line	Year of Release	Total DAC indent (q)	Actual allocation as per BSP-I target (q)	Actual Production (q)	Production Surplus (+) Deficit (-) over BSP-I target (q)
		JMS B 101 (B Line)		0.02	0.02	Not in seed chain**	-0.02
		J 2405 (R Line)		0.01	0.01	Not in seed chain**	-0.01
64	Pusa 1201	MS 411 A (A Line)	2018	0.03	0.03	0.05	0.02
		MS 411 B (B Line)		0.02	0.02	0.03	0.01
		ICMR 07333 (R Line)		0.01	0.01	0.01	0.00
65	HHB 272	HMS 47 A (A Line)	2016	0.03	0.03	0.00	-0.03
		HMS 47 B (B Line)		0.02	0.02	0.00	-0.02
		AC04/13 (R Line)		0.01	0.01	0.10*	0.09
66	HHB 234	HMS 7 A (A Line)	2013	0.06	0.06	0.12*	0.06
		HMS 7B (B Line)		0.03	0.03	0.06*	0.03
		H77/833-2-202 (R Line)		0.02	0.02	0.05*	0.03
67	HHB 117	HMS 7 A (A Line)	2004	0.03	0.03	0.08*	0.05
		HMS 7B (B Line)		0.02	0.02	0.04*	0.02
		H77/29-2 (R Line)		0.01	0.01	Not in seed chain**	-0.01
68	HHB 216	HMS 37 A (A Line)	2010	0.03	0.03	Not in seed chain**	-0.03
		HMS 37 B (B Line)		0.02	0.02	Not in seed chain**	-0.02
		HTP3/13 (R Line)		0.01	0.01	Not in seed chain**	-0.01
		Total (B)		7.86	7.86	13.59	5.73
		Total (A)+(B)		15.48	15.48	41.21	25.73

*Carryover of Kharif 2023 season

**Not in seed chain

***Nucleus Seed can provide

DUS TESTING

G. DUS Testing under PPV and FRA**a. DUS Testing of varieties/ hybrids/ parental lines**

The DUS testing trial was undertaken as per approved guidelines of PPV and FRA during Kharif 2024. Two candidate varieties for second year, five candidate varieties for first year, seven farmers' varieties and four reference varieties along with two local checks were tested at ICAR-AICRP on Pearl Millet, Mandor, Jodhpur and ICAR-AICRP on Pearl Millet, BRS, MPKV, Dhule as under:

S. No.	Name of candidate variety	S. No.	Name of candidate variety
Second year of testing			
1	Nutrifast-ADV 961 (ADV0061) (2889/2178/H)	2	TMBH 2652
First year of testing			
1	KPH6288	4	KP19SB021
2	MB1030	5	KP19SR022
3	KPH6499		
Farmers' Varieties			
1	Sundaram Verma Local	5	Moochwali Bajri
2	Pili Bajri	6	DR-1
3	Chanana Bajri	7	Sulkhaniya Bajri
4	DR-2		
Reference Varieties			
1	RHB 173	3	86M64
2	Kaveri Super boss	4	Pratap
Checks			
1	HHB 67 Improved	2	GHB 538

Observations on candidate and reference varieties on following 28 characters were recorded as per general and specific DUS guidelines (Pearl Millet) notified by PPV & FRA in Plant Variety Journal of India Vol. - 12, No. – 04, June 05, 2018:

S. No.	Characteristics	S. No.	Characteristics
1	Plant: Anthocyanin colouration of first leaf sheath	15	Spike: Length (cm)
2	Plant: Growth habit	16	Spike: Anthocyanin pigmentation of glume
3	Time of spike emergence (50% plant with at least one spike emerged fully)	17	Spike: Bristle
4	Leaf : Sheath pubescence	18	Spike: Bristle colour
5	Leaf : Sheath length (cm)	19	Spike: Bristle Appearance
6	Leaf: Blade length (cm)	20	Spike: Girth [maximum point (excluding bristles)] (cm)
7	Leaf: Blade width (at widest point) (cm)	21	Plant: Number of productive tillers
8	Spike: Stigma Pigmentation	22	Plant: Height (including spike) (cm)
9	Spike: Anther colour	23	Spike: Shape
10	Plant: Node pubescence	24	Spike: Tip sterility
11	Plant: Number of nodes	25	Spike: Density
12	Plant: Node pigmentation	26	Seed: colour
13	Plant: Internode pigmentation (between 3 rd and 4 th node from top)	27	Seed: Shape
14	Spike exertion	28	Seed: Weight of 1000 grains (g)

b. Maintenance of DUS reference varieties

Fifty four genotypes including B lines (18), R lines (16) and hybrids (20) listed below were studied for DUS characteristics at ICAR-AICRP on Pearl Millet, Jodhpur and MPKV, Dhule during Kharif 2023-24 & 2024-25 and maintained (B and R lines only) at ICAR-AICRP on Pearl Millet, Jodhpur during Kharif 2024.

S. No.	Reference/example varieties	S. No.	Reference/example varieties	S. No.	Reference/example varieties
1	81 B	20	J 2454	39	RHB 173
2	841 B	21	J 2467	40	MPMH 17
3	842 B	22	ICMR 356	41	GHB 558
4	843-22 B	23	H 77/833-2-202	42	GHB 744
5	ICMB 88004	24	G 73-107	43	GHB 732
6	ICMB 92333	25	H 77/29-2	44	ICMH 356
7	ICMB 92777	26	H 77/833-2	45	HHB 67 Improved
8	ICMB 93333	27	H 90/4-5	46	HHB 197
9	ICMB 94555	28	HBL 11	47	HHB 223
10	ICMB 94111	29	RHRBI 1314	48	Pratap
11	ICMB 95222	30	RIB 3135-18	49	Nandi 61
12	ICMB 97111	31	RIB 494	50	86M64
13	ICMB 97444	32	RIB 335/74	51	Kaveri Super Boss
14	ICMB 02333	33	PIB 686	52	86M86
15	ICMB 04999	34	MIR 525-2	53	JKBH 26
16	RHRB 1B	35	RHB 177	54	Proagro 9444
17	RHRB 5B	36	GHB 538		
18	RHRB 13B	37	GHB 719		
19	J 2340	38	PB 106		

c. Registration of cultivars in PPV and FRA

So far 228 cultivars and parental lines (46 Public, 174 private and 8 farmer varieties) have been registered with PPV and FRA and several are in the process of registration. ICAR-AICRP on Pearl Millet is the nodal agency for undertaking pearl millet variety registration with PPV & FRA. Details of registered genotypes are as under:

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S. No.	Registration No.	Category of Variety	Denomination of the Candidate Variety	Name of Applicant	Applicant Category	Date of Filling	Application No.	Date of Certificate Issue	Maximum Protection Period up to	Provisional Protection Claim
1.	1 of 2009	Extant (Notified)	JKBH-26 (MH-595)	JK Agri Genetics Ltd.	Private	14-Jun-2007	E17 PG 24 07 094	12 February 2009	16 September 2012	14-Jun-2007 to 12-Feb-2009
2.	27 of 2009	Extant (Notified)	GHB-719 (MH-1236)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E20 PG29 07 203	12 February 2009	05 February 2022	06-Nov-2007 to 12-Feb-2009
3.	28 of 2009	Extant (Notified)	GHB-538 (MH-1049)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E21 PG30 07 204	12 February 2009	24 August 2020	06-Nov-2007 to 12-Feb-2009
4.	29 of 2009	Extant (Notified)	Parbhani Sampada (PPC-6)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E24 PG33 07 207	12 February 2009	01 February 2020	06-Nov-2007 to 12-Feb-2009
5.	30 of 2009	Extant (Notified)	GHB-526 (MSH-105)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E26 PG 35 07 209	12 February 2009	11 March 2018	06-Nov-2007 to 12-Feb-2009
6.	31 of 2009	Extant (Notified)	GHB-558 (MH-946)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E27 PG36 07 210	12 February 2009	11 March 2018	06-Nov-2007 to 12-Feb-2009
7.	56 of 2009	Extant (Notified)	MP-406 (CZP-9802)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E30 PG39 07 213	16 April 2009	11 March 2018	06-Nov-2007 to 16-Apr-2009
8.	57 of 2009	Extant (Notified)	CoCu-9	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E31 PG 40 07 214	16 April 2009	24 August 2020	06-Nov-2007 to 16-Apr-2009
9.	58 of 2009	Extant (Notified)	HC-20-(HMP 9102)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E33 PG 42 07 216	16 April 2009	03 September 2017	06-Nov-2007 to 16-Apr-2009
10.	59 of 2009	Extant (Notified)	RHB-121 (MH-892)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E36 PG45 07 219	16 April 2009	14 November 2016	06-Nov-2007 to 16-Apr-2009
11.	60 of 2009	Extant (Notified)	COH (Cu)8	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E38 PG47 07 221	16 April 2009	14 November 2016	06-Nov-2007 to 16-Apr-2009
12.	61 of 2009	Extant (Notified)	Pusa Composite-383 (MP-383)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E39 PG48 07 222	16 April 2009	14 November 2016	06-Nov-2007 to 16-Apr-2009
13.	62 of 2009	Extant (Notified)	AIMP-92901 (Samrudhi-MP-282)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E41 PG50 07 224	16 April 2009	14 November 2016	06-Nov-2007 to 16-Apr-2009
14.	63 of 2009	Extant	JBV-2 (GKKV-	Indian Council of	Public	6-Nov-2007	E47 PG56	16 April	07 June	06-Nov-2007 to

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S. No.	Registration No.	Category of Variety	Denomination of the Candidate Variety	Name of Applicant	Applicant Category	Date of Filling	Application No.	Date of Certificate Issue	Maximum Protection Period up to	Provisional Protection Claim
		(Notified)	93191)	Agricultural Research (ICAR)			07 230	2009	2014	16-Apr-2009
15.	64 of 2009	Extant (Notified)	X-6 (MH-140)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E50 PG59 07 233	16 April 2009	30 April 2012	06-Nov-2007 to 16-Apr-2009
16.	65 of 2009	Extant (Notified)	Pusa Bajri-266 (MP-226)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E56 PG65 07 239	16 April 2009	30 April 2012	06-Nov-2007 to 16-Apr-2009
17.	66 of 2009	Extant (Notified)	RHRBH-8609 (Shraddha)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E59 PG68 07 242	16 April 2009	01 September 2009	06-Nov-2007 to 16-Apr-2009
18.	72 of 2009	Extant (Notified)	HHB 67 Improved	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E22 PG31 07 205	20 July 2009	04 November 2020	06-Nov-2007 to 20-Jul-2009
19.	73 of 2009	Extant (Notified)	HHB-117	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E32 PG41 07 215	20 July 2009	30 May 2019	06-Nov-2007 to 20-Jul-2009
20.	74 of 2009	Extant (Notified)	Haryana Composite-10	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E44 PG53 07 227	20 July 2009	02 April 2015	06-Nov-2007 to 20-Jul-2009
21.	75 of 2009	Extant (Notified)	X-7	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E51 PG60 07 234	20 July 2009	08 September 2012	06-Nov-2007 to 20-Jul-2009
22.	76 of 2009	Extant (Notified)	RBH-30	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E55 PG64 07 238	20 July 2009	30 April 2012	06-Nov-2007 to 20-Jul-2009
23.	112 of 2009	Extant	Nandi-52 (MH-1078) (NMH-45)	New Nandi Seeds Corporation	Private	8-Sep-2008	E322 PG20 08 446	20 July 2009	09 January 2023	08-Sep-2008 to 20-Jul-2009
24.	113 of 2009	Extant	Nandi-62 (MH-1274) (NMH-68)	New Nandi Seeds Corporation	Private	18-Sep-2008	E323 PG21 08 448	20 July 2009	04 October 2022	18-Sep-2008 to 20-Jul-2009
25.	114 of 2009	Extant	Nandi-35 (MH-889)	New Nandi Seeds Corporation	Private	18-Sep-2008	E324 PG22 08 449	20 July 2009	14 November 2016	18-Sep-2008 to 20-Jul-2009
26.	115 of 2009	Extant	Nandi-8 (MH-741)	New Nandi Seeds Corporation	Private	18-Sep-2008	E325 PG23 08 450	20 July 2009	07 June 2014	18-Sep-2008 to 20-Jul-2009
27.	116 of 2009	Extant	Nandi-30 (MH-515)	New Nandi Seeds Corporation	Private	18-Sep-2008	E326 PG24 08 451	20 July 2009	30 April 2012	18-Sep-2008 to 20-Jul-2009
28.	117 of 2009	Extant	Nandi-32 (MH-	New Nandi Seeds	Private	18-Sep-2008	E327 PG25	20 July	25 October	18-Sep-2008 to

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S. No.	Registration No.	Category of Variety	Denomination of the Candidate Variety	Name of Applicant	Applicant Category	Date of Filling	Application No.	Date of Certificate Issue	Maximum Protection Period up to	Provisional Protection Claim
			773)	Corporation			08 452	2009	2014	20-Jul-2009
29.	161 of 2009	Extant	GICK V-96752 (MP 363)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E40 PG49 07 223	21 December 2009	01 February 2016	06-Nov-2007 to 21-Dec-2009
30.	35 of 2011	Extant	JKBH-676 (MH-1299)	JK Agri Genetics Ltd.	Private	14-Jun-2007	E16 PG23 07 93	24 June 2011	26 August 2024	14-Jun-2007 to 24-Jun-2011
31.	49 of 2011	Extant	PROAGRO-9444 (MSH-118)	Bayer Biosciences Pvt. Ltd.	Private	12-Aug-2009	E15 PG22 09 335	24 June 2011	01 February 2020	12-Aug-2009 to 24-Jun-2011
32.	77 of 2011	Extant	PCB 164	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E29 PG38 07 212	21 October 2011	19 July 2022	06-Nov-2007 to 21-Oct-2011
33.	82 of 2011	Extant	PHB-2168	Indian Council of Agricultural Research (ICAR)	Public	22-Jan-2008	E390 PG27 08 158	21 October 2011	07 May 2023	22-Jan-2008 to 21-Oct-2011
34.	83 of 2011	Extant	GHB-744 (MH-1272)	Indian Council of Agricultural Research (ICAR)	Public	22-Jan-2008	E391 PG28 08 159	21 October 2011	09 January 2023	22-Jan-2008 to 21-Oct-2011
35.	99 of 2011	Extant	Pusa Composite 443 (MP 443)	Indian Council of Agricultural Research (ICAR)	Public	29-Apr-2009	E11 PG16 09 218	21 October 2011	10 February 2024	29-Apr-2009 to 21-Oct-2011
36.	111 of 2011	New	B 2114	Maharashtra Hybrid Seeds Company Limited	Private	21-May-2007	N1 PG3 07 017	07 December 2011	06 December 2026	21-May-2007 to 07-Dec-2011
37.	8 of 2012	New	B 2124	Maharashtra Hybrid Seeds Company Limited	Private	21-May-2007	N3 PG5 07 019	07 March 2012	06 March 2027	21-May-2007 to 07-Mar-2012
38.	9 of 2012	New	MIP-003	Emergent Genetics India Pvt Ltd	Private	22-May-2007	N6 PG14 07 077	07 March 2012	06 March 2027	22-May-2007 to 07-Mar-2012
39.	10 of 2012	New	SYN-PM-0458	Syngenta India Limited	Private	10-Oct-2007	N9 PG28 07 141	07 March 2012	06 March 2027	10-Oct-2007 to 07-Mar-2012
40.	11 of 2012	New	86M64	Pioneer Overseas corporation-India Branch Office	Private	17-Sep-2007	N8 PG27 07 140	07 March 2012	06 March 2027	17-Sep-2007 to 07-Mar-2012
41.	43 of 2012	Extant	HHB-146 (MH-960)	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E28 PG37 07 211	02 July 2012	11 February 2018	06-Nov-2007 to 02-Jul-2012
42.	177 of 2012	Extant	Proagro 9443 (MH-846)	Bayer Biosciences Pvt. Ltd.	Private	19-Sep-2011	E1 PG1 11 931	16 October 2012	01 February 2016	19-Sep-2011 to 16-Oct-2012

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43.	195 of 2012	Extant	Pusa 605 (MH 564)	Indian Council of Agricultural Research (ICAR)	Public	17-Jan-2008	E129 PG4 08 142	09 November 2012	07 June 2014	17-Jan-2008 to 09-Nov-2012
44.	196 of 2012	Extant	Pusa Composite-334 (MP-334)	Indian Council of Agricultural Research (ICAR)	Public	17-Jan-2008	E127 PG2 08 140	09 November 2012	25 October 2014	17-Jan-2008 to 09-Nov-2012
45.	197 of 2012	Extant	Pusa-415	Indian Council of Agricultural Research (ICAR)	Public	6-Nov-2007	E46 PG55 07 229	09 November 2012	25 October 2014	06-Nov-2007 to 09-Nov-2012
46.	21 of 2013	Extant	HHB 197 (MH-1302)	Indian Council of Agricultural Research (ICAR)	Public	22-Jan-2008	E395 PG10 08 161	01 February 2013	09 January 2023	22-Jan-2008 to 01-Feb-2013
47.	30 of 2013	Extant	Proagro 555 (MSH 16) (PB 727)	Bayer Biosciences Pvt. Ltd.	Private	1-Oct-2009	E20 PG28 09 414	06 March 2013	09 January 2023	01-Oct-2009 to 06-Mar-2013
48.	88 of 2013	Extant	GHB-732 (MH-1307)	Indian Council of Agricultural Research (ICAR)	Public	22-Jan-2008	E394 PG9 08 160	17 May 2013	09 January 2023	22-Jan-2008 to 17-May-2013
49.	89 of 2013	Extant	GHB-757 (MH-1328)	Indian Council of Agricultural Research (ICAR)	Public	22-Jan-2008	E396 PG11 08 162	17 May 2013	09 January 2023	22-Jan-2008 to 17-May-2013
50.	92 of 2013	Extant	KPMH-1	M/S Kaveri Seed Company Limited	Private	5-Feb-2009	E3 PG7 09 36	24 May 2013	09 September 2027	05-Feb-2009 to 24-May-2013
51.	115 of 2013	Extant (VCK)	MRB 204	Maharashtra Hybrid Seeds Company Limited	Private	21-May-2007	E2 PG2 07 016	17 July 2013	16 July 2028	21-May-2007 to 17-Jul-2013
52.	116 of 2013	Extant (VCK)	MRB 2210	Maharashtra Hybrid Seeds Company Limited	Private	21-May-2007	E1 PG1 07 013	22 July 2013	21 July 2028	21-May-2007 to 22-Jul-2013
53.	271 of 2013	Extant (VCK)	BPM 901	Bayer Biosciences Pvt. Ltd.	Private	12-Aug-2009	E14 PG21 09 334	16 December 2013	16 December 2028	12-Aug-2009 to 16-Dec-2013
54.	282 of 2013	Extant (VCK)	Nirmal-40 (NPH-40)	Nirmal Seeds Private Ltd.	Private	22-Sep-2009	E18 PG26 09 395	16 December 2013	16 December 2028	22-Sep-2009 to 16-Dec-2013
55.	283 of 2013	Extant (VCK)	NB-14A	Nuziveedu Seeds Limited	Private	3-Nov-2009	E28 PG36 09 465	16 December 2013	16 December 2028	03-Nov-2009 to 16-Dec-2013
56.	285 of 2013	Extant	NB-10R	Nuziveedu Seeds	Private	3-Nov-2009	E30 PG38	19	19	03-Nov-2009 to

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		(VCK)		Limited			09 467	December 2013	December 2028	19-Dec-2013
57.	287 of 2013	Extant (VCK)	NB-61A	Nuziveedu Seeds Limited	Private	3-Nov-2009	E24 PG32 09 461	20 December 2013	20 December 2028	03-Nov-2009 to 20-Dec-2013
58.	289 of 2013	New	DGB-013	Devgen NV, Belgium	Private	3-Nov-2009	N9 PG43 09 478	26 December 2013	26 December 2028	03-Nov-2009 to 26-Dec-2013
59.	290 of 2013	Extant (VCK)	NB-86R	Nuziveedu Seeds Limited	Private	3-Nov-2009	E26 PG34 09 463	26 December 2013	26 December 2028	03-Nov-2009 to 26-Dec-2013
60.	291 of 2013	Extant (VCK)	NB-153R	Nuziveedu Seeds Limited	Private	3-Nov-2009	E29 PG37 09 466	26 December 2013	26 December 2028	03-Nov-2009 to 26-Dec-2013
61.	299 of 2013	Extant (VCK)	BPM 904	Bayer Biosciences Pvt. Ltd.	Private	1-Oct-2009	E21 PG29 09 415	31 December 2013	31 December 2028	01-Oct-2009 to 31-Dec-2013
62.	300 of 2013	Extant (VCK)	GK 1044	Ganga Kaveri Seed Pvt. Ltd., Hyderabad	Private	23-Jun-2009	E13 PG19 09 299	31 December 2013	31 December 2028	23-Jun-2009 to 31-Dec-2013
63.	301 of 2013	Extant (VCK)	NB-151R	Nuziveedu Seeds Limited	Private	3-Nov-2009	E32 PG40 09 469	31 December 2013	31 December 2028	03-Nov-2009 to 31-Dec-2013
64.	302 of 2013	Extant (VCK)	NB-152 R	Nuziveedu Seeds Limited	Private	3-Nov-2009	E31 PG39 09 468	31 December 2013	31 December 2028	03-Nov-2009 to 31-Dec-2013
65.	1 of 2014	Extant (VCK)	NB-101 A	Nuziveedu Seeds Limited	Private	3-Nov-2009	E34 PG42 09 471	02 January 2014	02 January 2029	03-Nov-2009 to 02-Jan-2014
66.	2 of 2014	Extant (VCK)	NB-102A	Nuziveedu Seeds Limited	Private	3-Nov-2009	E33 PG41 09 470	02 January 2014	02 January 2029	03-Nov-2009 to 02-Jan-2014
67.	3 of 2014	Extant (VCK)	NB-20R	Nuziveedu Seeds Limited	Private	3-Nov-2009	E27 PG35 09 464	02 January 2014	02 January 2029	03-Nov-2009 to 02-Jan-2014
68.	4 of 2014	Extant (VCK)	NB-60A	Nuziveedu Seeds Limited	Private	3-Nov-2009	E25 PG33 09 462	09 January 2014	09 January 2029	03-Nov-2009 to 09-Jan-2014
69.	5 of 2014	Extant (VCK)	BPM 906	Bayer Biosciences Pvt. Ltd.	Private	1-Oct-2009	E23 PG31 09 417	09 January 2014	09 January 2029	01-Oct-2009 to 09-Jan-2014
70.	7 of 2014	New	KBH Boss 65	M/S Kaveri Seed Company Limited	Private	5-Feb-2009	N4 PG6 09 35	09 January 2014	09 January 2029	05-Feb-2009 to 09-Jan-2014
71.	9 of 2014	New	HT-PM-4201	Hytech Seed India Private Limited	Private	19-Nov-2009	N13 PG47 09 507	09 January 2014	09 January 2029	19-Nov-2009 to 09-Jan-2014

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72.	10 of 2014	New	BIO 448 H	Bioseed Research India Private Limited	Private	5-Feb-2009	N1 PG2 09 29	09 January 2014	09 January 2029	05-Feb-2009 to 09-Jan-2014
73.	27 of 2014	Extant (VCK)	BPM 905	Bayer Biosciences Pvt. Ltd.	Private	1-Oct-2009	E22 PG30 09 416	20 January 2014	20 January 2029	01-Oct-2009 to 20-Jan-2014
74.	30 of 2014	Extant	Pratap (MH 1642)	Nuziveedu Seeds Limited	Private	17-Mar-2009	E7 PG11 09 76	21 January 2014	09 September 2027	17-Mar-2009 to 21-Jan-2014
75.	32 of 2014	New	KBR 621	M/S Kaveri Seed Company Limited	Private	5-Feb-2009	N3 PG4 09 33	22 January 2014	22 January 2029	05-Feb-2009 to 22-Jan-2014
76.	33 of 2014	New	KBMS 329	M/S Kaveri Seed Company Limited	Private	5-Feb-2009	N2 PG3 09 32	22 January 2014	22 January 2029	05-Feb-2009 to 22-Jan-2014
77.	45 of 2014	New	VBBH 3040	Vibha Agrotech Limited	Private	17-Mar-2008	N25 PG14 08 203	05 February 2014	04 February 2029	17-Mar-2008 to 05-Feb-2014
78.	170 of 2014	New	KBR-780	M/S Kaveri Seed Company Limited	Private	21-Jun-2010	N27 PG27 10 169	13 May 2014	12 May 2029	21-Jun-2010 to 13-May-2014
79.	625 of 2014	New	JKBH 768	JK Agri Genetics Ltd.	Private	7-Apr-2008	N104 PG 19 08 351	17 September 2014	16 September 2029	07-Apr-2008 to 17-Sep-2014
80.	11 of 2015	Extant	MP-7792 (MH-1609)	Metahelix Life Sciences Limited	Private	21-Jul-2014	E2 PG23 14 1412	06 January 2015	25 July 2027	21-Jul-2014 to 06-Jan-2015
81.	13 of 2015	Extant	MP-7872 (MH-1610)	Metahelix Life Sciences Limited	Private	21-Jul-2014	E1 PG22 14 1411	07 January 2015	25 July 2027	21-Jul-2014 to 07-Jan-2015
82.	31 of 2015	New	JKBH 778	JK Agri Genetics Ltd.	Private	7-Apr-2008	N103 PG18 08 350	19 January 2015	18 January 2030	07-Apr-2008 to 19-Jan-2015
83.	32 of 2015	Extant (VCK)	AKASH (VBBH 350)	Vibha Agrotech Limited	Private	31-Mar-2008	E192 PG15 08 222	19 January 2015	18 January 2030	31-Mar-2008 to 19-Jan-2015
84.	79 of 2015	New	KBR 870	M/S Kaveri Seed Company Limited	Private	8-Mar-2010	N05 PG05 10 64	20 February 2015	19 February 2030	08-Mar-2010 to 20-Feb-2015
85.	82 of 2015	New	KBMS 293	M/S Kaveri Seed Company Limited	Private	8-Mar-2010	N06 PG06 10 65	25 February 2015	24 February 2030	08-Mar-2010 to 25-Feb-2015
86.	93 of 2015	New	NBBH-913	Navbharat Seeds Pvt. Ltd.	Private	12-Jan-2010	N02 PG02 10 06	07 April 2015	06 April 2030	12-Jan-2010 to 07-Apr-2015
87.	99 of 2015	New	BPM907	Bayer Biosciences Pvt. Ltd.	Private	19-Oct-2010	N38 PG38 10 319	27 April 2015	26 April 2030	19-Oct-2010 to 27-Apr-2015
88.	101 of 2015	New	KBMS 231	Kaveri Seed Company Limited	Private	8-Mar-2010	N10 PG10 10 69	27 April 2015	26 April 2030	08-Mar-2010 to 27-Apr-2015
89.	102 of 2015	New	KBR 864	Kaveri Seed	Private	8-Mar-2010	N04 PG04	27 April	26 April	08-Mar-2010 to

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				Company Limited			10 63	2015	2030	27-Apr-2015
90.	199 of 2015	Extant (VCK)	JKBH-550	JK Agri Genetics Ltd.	Private	14-Jun-2007	E15 PG22 07 92	27 August 2015	26 August 2030	14-Jun-2007 to 27-Aug-2015
91.	200 of 2015	New	VBBH 3115	VIBHA AGROTECH LIMITED	Private	4-Jan-2010	N01 PG01 10 02	27 August 2015	26 August 2030	04-Jan-2010 to 27-Aug-2015
92.	203 of 2015	Extant (VCK)	NBH-1188 (Big B)	Nath Bio-Genes (I) Ltd.	Private	13-Jun-2012	E1 PG5 12 200	27 August 2015	26 August 2030	13-Jun-2012 to 27-Aug-2015
93.	204 of 2015	Extant (VCK)	86M01	Pioneer Overseas Corporation	Private	28-Jun-2012	E3 PG8 12 228	27 August 2015	26 August 2030	28-Jun-2012 to 27-Aug-2015
94.	206 of 2015	Extant (VCK)	NBH-1134	Nuziveedu Seeds Ltd.	Private	17-Mar-2009	E6 PG10 09 75	02 September 2015	09 January 2030	17-Mar-2009 to 02-Sep-2015
95.	207 of 2015	Extant (VCK)	NBH-2223	Nuziveedu Seeds Ltd.	Private	17-Mar-2009	E8 PG12 09 77	02 September 2015	09 January 2030	17-Mar-2009 to 02-Sep-2015
96.	208 of 2015	Extant (VCK)	NBH-4455	Nuziveedu Seeds Ltd.	Private	13-Apr-2009	E9 PG14 09 139	02 September 2015	09 January 2030	13-Apr-2009 to 02-Sep-2015
97.	209 of 2015	Extant (VCK)	NBH-216	Nuziveedu Seeds Ltd.	Private	21-May-2009	E12 PG17 09 278	02 September 2015	01 September 2030	21-May-2009 to 02-Sep-2015
98.	210 of 2015	New	KBR 721	Kaveri Seed Company Limited	Private	8-Mar-2010	N07 PG07 10 66	02 September 2015	01 September 2030	08-Mar-2010 to 02-Sep-2015
99.	212 of 2015	Extant (VCK)	NBH-1717	Nath Bio-Genes (I) Ltd.	Private	13-Jun-2012	E2 PG6 12 201	02 September 2015	01 September 2030	13-Jun-2012 to 02-Sep-2015
100.	243 of 2015	Extant	RHRBH-9808	Mahatma Phule Krishi Vidyapeeth	Public	9-Jan-2015	E1 PG1 15 28	15 October 2015	30 August 2025	09-Jan-2015 to 15-Oct-2015
101.	361 of 2016	Extant (VCK)	PM80105R	DCM Shriram Limited	Private	26-Mar-2009	E35 PG13 9 113	09 November 2016	08 November 2031	26-Mar-2009 to 09-Nov-2016
102.	226 of 2017	New	KBMS 569	Kaveri Seed Company Limited	Private	3-Jun-2010	N15 PG15 10 136	30 August 2017	29 August 2032	03-Jun-2010 to 30-Aug-2017
103.	227 of 2017	New	KBMS 253	Kaveri Seed Company Limited	Private	3-Jun-2010	N16 PG16 10 137	30 August 2017	29 August 2032	03-Jun-2010 to 30-Aug-2017
104.	228 of 2017	New	KBMS 219	Kaveri Seed Company Limited	Private	21-Jun-2010	N21 PG21 10 163	30 August 2017	29 August 2032	21-Jun-2010 to 30-Aug-2017
105.	229 of 2017	New	KBR 877	Kaveri Seed Company Limited	Private	21-Jun-2010	N23 PG23 10 165	30 August 2017	29 August 2032	21-Jun-2010 to 30-Aug-2017

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106.	270 of 2017	New	KBMS 227	Kaveri Seed Company Limited	Private	3-Jun-2010	N18 PG18 10 139	29 September 2017	28 September 2032	03-Jun-2010 to 29-Sep-2017
107.	282 of 2017	New	KBMS 239	Kaveri Seed Company Limited	Private	8-Mar-2010	N8 PG8 10 67	04 October 2017	03 October 2032	08-Mar-2010 to 04-Oct-2017
108.	284 of 2017	New	KBR 831	Kaveri Seed Company Limited	Private	21-Jun-2010	N22 PG22 10 164	04 October 2017	03 October 2032	21-Jun-2010 to 04-Oct-2017
109.	285 of 2017	New	KBR 823	Kaveri Seed Company Limited	Private	21-Jun-2010	N25 PG25 10 167	04 October 2017	03 October 2032	21-Jun-2010 to 04-Oct-2017
110.	309 of 2017	New	SONY-NBH227	Nuziveedu Seeds Ltd.	Private	22-Sep-2008	N124 PG26 8 453	28 November 2017	27 November 2032	22-Sep-2008 to 28-Nov-2017
111.	312 of 2017	New	KBMS 251	Kaveri Seed Company Limited	Private	3-Jun-2010	N19 PG19 10 140	28 November 2017	27 November 2032	03-Jun-2010 to 28-Nov-2017
112.	41 of 2018	New	JKBH 1108	JK Agri Genetics Ltd.	Private	25-Jul-2012	N7 PG10 12 373	28 March 2018	27 March 2033	25-Jul-2012 to 28-Mar-2018
113.	42 of 2018	New	JKBH 1093	JK Agri Genetics Ltd.	Private	25-Jul-2012	N8 PG11 12 374	28 March 2018	27 March 2033	25-Jul-2012 to 28-Mar-2018
114.	43 of 2018	New	JKBH 1100	JK Agri Genetics Ltd.	Private	25-Jul-2012	N9 PG12 12 375	28 March 2018	27 March 2033	25-Jul-2012 to 28-Mar-2018
115.	19 of 2019	New	NBH-4903	Nuziveedu Seeds Limited	Private	19-Dec-2011	N2 PG3 11 1353	18 March 2019	17 March 2034	19-Dec-2011 to 18-Mar-2019
116.	95 of 2019	New	86M88	Pioneer Overseas Corporation	Private	28-Jun-2012	N6 PG9 12 229	27 March 2019	26 March 2034	28-Jun-2012 to 27-Mar-2019
117.	96 of 2019	New	86M12	Pioneer Overseas Corporation	Private	28-Jun-2012	N5 PG7 12 227	28 March 2019	27 March 2034	28-Jun-2012 to 28-Mar-2019
118.	99 of 2019	New	KBR 618	Kaveri Seed Company Limited	Private	21-Jun-2010	N24 PG24 10 166	28 March 2019	27 March 2034	21-Jun-2010 to 28-Mar-2019
119.	101 of 2019	Extant (Notified)	NBH 5061 (MH 1812)	Nuziveedu Seeds Ltd.	Private	20-Jul-2016	E5 PG31 16 946	28 March 2019	29 July 2029	20-Jul-2016 to 28-Mar-2019
120.	287 of 2019	Extant (VCK)	B 2037	Maharashtra Hybrid Seeds Company Limited	Private	21-May-2007	E68 PG4 7 18	19 December 2019	18 December 2034	21-May-2007 to 19-Dec-2019
121.	337 of 2019	New	PSP68	Bayer Biosciences Pvt. Ltd.	Private	7-Nov-2013	N12 PG12 13 753	19 December 2019	18 December 2034	07-Nov-2013 to 19-Dec-2019
122.	358 of 2019	New	PP63	Bayer Biosciences Pvt. Ltd.	Private	28-Dec-2012	N11 PG14 12 691	19 December 2019	18 December 2034	28-Dec-2012 to 19-Dec-2019

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123.	359 of 2019	New	DGB-017	M/s Crystal Crop Protection Limited	Private	22-Jul-2010	N31 PG31 10 214	19 December 2019	18 December 2034	22-Jul-2010 to 19-Dec-2019
124.	361 of 2019	New	MIP-007	M/s Crystal Crop Protection Limited	Private	22-May-2007	N10 PG15 7 78	19 December 2019	18 December 2034	22-May-2007 to 19-Dec-2019
125.	22 of 2020	Extant (VCK)	MIP-008	M/s Crystal Crop Protection Limited	Private	22-May-2007	E5 PG10 7 68	17 January 2020	16 January 2035	22-May-2007 to 17-Jan-2020
126.	126 of 2020	New	NPA-84	Nirmal Seeds Pvt. Ltd.	Private	19-Aug-2014	N24 PG28 14 1701	19 February 2020	18 February 2035	19-Aug-2014 to 19-Feb-2020
127.	127 of 2020	New	NPA-168	Nirmal Seeds Pvt. Ltd.	Private	19-Aug-2014	N23 PG27 14 1700	19 February 2020	18 February 2035	19-Aug-2014 to 19-Feb-2020
128.	112 of 2013	Extant (VCK)	86M52	Pioneer Overseas Corporation (reissued with address change, old serial no. 658)	Private	22-Aug-2007	E19 PG26 7 137	17 July 2013	16 July 2028	22-Aug-2007 to 17-Jul-2013
129.	94 of 2015	New	86M66	Pioneer Overseas Corporation (reissued with address change, old serial no. 1777)	Private	19-Apr-2010	N12 PG12 10 118	07 April 2015	06 April 2030	19-Apr-2010 to 07-Apr-2015
130.	97 of 2015	New	86M33	Pioneer Overseas Corporation (reissued with address change, old serial no. 1780)	Private	19-Apr-2010	N11 PG11 10 117	08 April 2015	07 April 2030	19-Apr-2010 to 08-Apr-2015
131.	105 of 2015	New	86M86	Pioneer Overseas Corporation (reissued with address change, old serial no. 1788)	Private	13-May-2010	N13 PG13 10 126	27 April 2015	26 April 2030	13-May-2010 to 27-Apr-2015
132.	40 of 2016	New	86 M 40	Pioneer Overseas Corporation (reissued with address change, old serial no. 2109)	Private	18-Jan-2012	N2 PG2 12 5	29 January 2016	28 January 2031	18-Jan-2012 to 29-Jan-2016
133.	41 of 2016	New	86 M 76	Pioneer Overseas Corporation (reissued with address change, old serial no. 2110)	Private	18-Jan-2012	N3 PG3 12 6	29 January 2016	28 January 2031	18-Jan-2012 to 29-Jan-2016
134.	42 of 2016	New	86M11	Pioneer Overseas Corporation (reissued	Private	8-Feb-2012	N4 PG4 12 12	29 January 2016	28 January 2031	08-Feb-2012 to 29-Jan-2016

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				with address change, old serial no. 2111)						
135.	201 of 2017	New	86M84	Pioneer Overseas Corporation (reissued with address change, old serial no. 2875)	Private	13-May-2014	N12 PG14 14 1150	29 May 2017	28 May 2032	13-May-2014 to 29-May-2017
136.	REG/2019/73 H	Extant (Notified)	PB 1705 (MH 2008)	Bayer Crop Science LP	Public	6-May-2019	E2 PG2 19 73	20 August 2020	26 March 2033	06-May-2019 to 20-Aug-2020
137.	REG/2019/73 A	Extant (Notified)	PSP83	Bayer Crop Science LP	Public	6-May-2019	E2 PG2 19 73	20 August 2020	26 March 2033	06-May-2019 to 20-Aug-2020
138.	REG/2019/73 B	Extant (Notified)	PSP84	Bayer Crop Science LP	Public	6-May-2019	E2 PG2 19 73	20 August 2020	26 March 2033	06-May-2019 to 20-Aug-2020
139.	REG/2019/73 R	Extant (Notified)	PP78	Bayer Crop Science LP	Public	6-May-2019	E2 PG2 19 73	20 August 2020	26 March 2033	06-May-2019 to 20-Aug-2020
140.	REG/2018/112 H	Extant (Notified)	Mahabeej-1005 (MH-1852)	Maharashtra State Seeds Corporation Ltd.	Public	13-Mar-2018	E2 PG7 18 112	20 August 2020	24 August 2032	13-Mar-2018 to 20-Aug-2020
141.	REG/2018/112 A	Extant (Notified)	MBJ-2A	Maharashtra State Seeds Corporation Ltd.	Public	13-Mar-2018	E2 PG7 18 112	20 August 2020	24 August 2032	13-Mar-2018 to 20-Aug-2020
142.	REG/2018/112 B	Extant (Notified)	MBJ-2B	Maharashtra State Seeds Corporation Ltd.	Public	13-Mar-2018	E2 PG7 18 112	20 August 2020	24 August 2032	13-Mar-2018 to 20-Aug-2020
143.	REG/2018/112 R	Extant (Notified)	MBJ-1R	Maharashtra State Seeds Corporation Ltd.	Public	13-Mar-2018	E2 PG7 18 112	20 August 2020	24 August 2032	13-Mar-2018 to 20-Aug-2020
144.	REG/2019/72 H	Extant (Notified)	PB 1720 (MH 2107) (PB 1720)	Bayer Crop Science LP	Private	6-May-2019	E1 PG1 19 72	20 August 2020	25 December 2033	06-May-2019 to 20-Aug-2020
145.	REG/2019/72 A	Extant (Notified)	PSP93	Bayer Crop Science LP	Private	6-May-2019	E1 PG1 19 72	20 August 2020	25 December 2033	06-May-2019 to 20-Aug-2020
146.	REG/2019/72 B	Extant (Notified)	PSP94	Bayer Crop Science LP	Private	6-May-2019	E1 PG1 19 72	20 August 2020	25 December 2033	06-May-2019 to 20-Aug-2020
147.	REG/2019/72 R	Extant (Notified)	PP106	Bayer Crop Science LP	Private	6-May-2019	E1 PG1 19 72	20 August 2020	25 December 2033	06-May-2019 to 20-Aug-2020
148.	REG/2019/172 H	Extant (Notified)	PB 1852 (MH-2224)	Bayer Crop Science LP	Private	3-Dec-2019	E9 PG10 19 172	29 October 2020	04 September	03-Dec-2019 to 29-Oct-2020

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									2034	
149.	REG/2019/172 A	Extant (Notified)	PSP95	Bayer Crop Science LP	Private	3-Dec-2019	E9 PG10 19 172	29 October 2020	04 September 2034	03-Dec-2019 to 29-Oct-2020
150.	REG/2019/172 B	Extant (Notified)	PSP96	Bayer Crop Science LP	Private	3-Dec-2019	E9 PG10 19 172	29 October 2020	04 September 2034	03-Dec-2019 to 29-Oct-2020
151.	REG/2019/172 R	Extant (Notified)	PP110	Bayer Crop Science LP	Private	3-Dec-2019	E9 PG10 19 172	29 October 2020	04 September 2034	03-Dec-2019 to 29-Oct-2020
152.	REG/2014/2446	Extant (VCK)	BLPMR 1295	Bisco Biosciences Pvt. Ltd.	Private	8-Dec-2014	E4 PG30 14 2446	12 November 2020	11 November 2035	08-Dec-2014 to 12-Nov-2020
153.	REG/2017/1870 H	Extant (Notified)	Nutrifeed (PAC-981)	UPL Limited	Private	18-Sep-2017	E2 PG27 17 1870	12 November 2020	23 April 2029	18-Sep-2017 to 12-Nov-2020
154.	REG/2017/1870 A	Extant (Notified)	110001	UPL Limited	Private	18-Sep-2017	E2 PG27 17 1870	12 November 2020	23 April 2029	18-Sep-2017 to 12-Nov-2020
155.	REG/2017/1870 B	Extant (Notified)	120001	UPL Limited	Private	18-Sep-2017	E2 PG27 17 1870	12 November 2020	23 April 2029	18-Sep-2017 to 12-Nov-2020
156.	REG/2017/1870 R	Extant (Notified)	PM03-48-23-32	UPL Limited	Private	18-Sep-2017	E2 PG27 17 1870	12 November 2020	23 April 2029	18-Sep-2017 to 12-Nov-2020
157.	REG/2010/224	Extant (VCK)	JKR 11568	JK Agri Genetics Ltd	Private	26-Jul-2010	E2 PG33 10 224	28 January 2021	27 January 2036	26-Jul-2010 to 28-Jan-2021
158.	REG/2010/225	Extant (VCK)	JKR 4259	JK Agri Genetics Ltd	Private	29-Jul-2010	E1 PG34 10 225	28 January 2021	27 January 2036	29-Jul-2010 to 28-Jan-2021
159.	REG/2010/227	Extant (VCK)	JKMS 405A	JK Agri Genetics Ltd	Private	29-Jul-2010	E3 PG36 10 227	28 January 2021	27 January 2036	29-Jul-2010 to 28-Jan-2021
160.	REG/2014/1171	New	M171G	Pioneer Overseas Corporation	Private	16-May-2014	N15 PG17 14 1171	28 January 2021	27 January 2036	16-May-2014 to 28-Jan-2021
161.	REG/2015/271	Extant (VCK)	MP12P16A	Metahelix Life Sciences Limited	Private	11-Feb-2015	E9 PG12 15 271	24 March 2021	23 March 2036	11-Feb-2015 to 24-Mar-2021
162.	REG/2010/68	New	KBMS 261	Kaveri Seed Company Limited	Private	8-Mar-2010	N9 PG9 10 68	06 April 2021	05 April 2036	08-Mar-2010 to 06-Apr-2021
163.	REG/2010/138	New	KBMS 353	Kaveri Seed Company Limited	Private	3-Jun-2010	N17 PG17 10 138	06 April 2021	05 April 2036	03-Jun-2010 to 06-Apr-2021
164.	REG/2015/301	New	PMGP100001A	Metahelix Life	Private	13-Feb-2015	N10 PG14	06 April	05 April	13-Feb-2015 to

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				Sciences Limited			15 301	2021	2036	06-Apr-2021
165.	REG/2016/771	New	BIO EM189Z	DCM Shriram Limited	Private	24-Jun-2016	N13 PG17 16 771	06 April 2021	05 April 2036	24-Jun-2016 to 06-Apr-2021
166.	REG/2014/2419	New	JKR 06128	JK Agri Genetics Ltd	Private	1-Dec-2014	N25 PG29 14 2419	20 April 2021	19 April 2036	01-Dec-2014 to 20-Apr-2021
167.	REG/2009/34	New	KBR 837	Kaveri Seed Company Limited	Private	5-Feb-2009	N14 PG5 9 34	16 June 2021	15 June 2036	05-Feb-2009 to 16-Jun-2021
168.	REG/2010/162	New	KBMS 229	Kaveri Seed Company Limited	Private	21-Jun-2010	N20 PG20 10 162	16 June 2021	15 June 2036	21-Jun-2010 to 16-Jun-2021
169.	REG/2010/168	New	KBR 672	Kaveri Seed Company Limited	Private	21-Jun-2010	N26 PG26 10 168	16 June 2021	15 June 2036	21-Jun-2010 to 16-Jun-2021
170.	REG/2010/170	New	KBR 882	Kaveri Seed Company Limited	Private	21-Jun-2010	N28 PG28 10 170	16 June 2021	15 June 2036	21-Jun-2010 to 16-Jun-2021
171.	REG/2010/172	New	KBR 880	Kaveri Seed Company Limited	Private	21-Jun-2010	N29 PG29 10 172	16 June 2021	15 June 2036	21-Jun-2010 to 16-Jun-2021
172.	Reg/2015/1166	New	M172R	Pioneer Overseas Corporation	Private	10-Jun-2015	N21 PG30 15 1166	16 June 2021	15 June 2036	10-Jun-2015 to 16-Jun-2021
173.	REG/2016/68	New	M297F	Pioneer Overseas Corporation	Private	16-Feb-2016	N5 PG6 16 68	16 June 2021	15 June 2036	16-Feb-2016 to 16-Jun-2021
174.	REG/2020/114 H	Extant (Notified)	CO 9	Tamil Nadu Agricultural University	Public	7-Jul-2020	E2 PG8 20 114	30 June 2021	25 July 2027	07-Jul-2020 to 30-Jun-2021
175.	REG/2020/114 A	Extant (Notified)	ICMA 93111A	Tamil Nadu Agricultural University	Public	7-Jul-2020	E2 PG8 20 114	30 June 2021	25 July 2027	07-Jul-2020 to 30-Jun-2021
176.	REG/2020/114 B	Extant (Notified)	ICMB 93111B	Tamil Nadu Agricultural University	Public	7-Jul-2020	E2 PG8 20 114	30 June 2021	25 July 2027	07-Jul-2020 to 30-Jun-2021
177.	REG/2020/114 R	Extant (Notified)	PT 6029-30	Tamil Nadu Agricultural University	Public	7-Jul-2020	E2 PG8 20 114	30 June 2021	25 July 2027	07-Jul-2020 to 30-Jun-2021
178.	REG/2016/5	New	PP56	Bayer Crop Science LP	Private	12-Jan-2016	N2 PG3 16 5	07 December 2021	06 December 2036	12-Jan-2016 to 07-Dec-2021
179.	REG/2016/6	New	PSP66	Bayer Crop Science LP	Private	12-Jan-2016	N3 PG4 16 6	07 December 2021	06 December 2036	12-Jan-2016 to 07-Dec-2021
180.	REG/2011/1354	New	NB-98R	Nuziveedu Seeds Limited	Private	Monday, December 19, 2011	N3 PG4 11 1354	Monday, March 18, 2019	17-March-2034	19-Dec-2011 to 18-Mar-2019

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S. No.	Registration No.	Category of Variety	Denomination of the Candidate Variety	Name of Applicant	Applicant Category	Date of Filling	Application No.	Date of Certificate Issue	Maximum Protection Period up to	Provisional Protection Claim
181.	REG/2017/1643	Farmer	Sulkhaniya Bajra	Shri Hanumanaram Jhuriya,	Farmer	Monday, July 03, 2017	F8 PG17 17 1643	02-March-2022	01-March-2037	03-Jul-2017 to 02-Mar-2022
182.	REG/2020/153	Extant (VCK)	M164R	Pioneer Overseas Corporation	Private	Wednesday, July 22, 2020	E3 PG10 20 153	18-October-2022	17-October-2037	22-Jul-2020 to 18-Oct-2022
183.	REG/2020/388	Farmer	BABARKOT NO BAJRO	Laxmanbhai Bhavanbhai Makwana	Farmer	Thursday, December 24, 2020	F1 PG11 20 388	18-October-2022	17-October-2037	24-Dec-2020 to 18-Oct-2022
184.	REG/2021/0215 H	Extant (Notified)	Pusa 1201 (MH 1849)	Indian Agricultural Research Institute	Public	Thursday, December 30, 2021	E1 PG12 21 215	15-November-2022	26-March-2033	30-Dec-2021 to 15-Nov-2022
185.	REG/2021/0215 A	Extant (Notified)	MS 411A	Indian Agricultural Research Institute	Public	Thursday, December 30, 2021	-	15-November-2022	26-March-2033	30-Dec-2021 to 15-Nov-2022
186.	REG/2021/0215 B	Extant (Notified)	MS 411B	Indian Agricultural Research Institute	Public	Thursday, December 30, 2021	-	15-November-2022	26-March-2033	30-Dec-2021 to 15-Nov-2022
187.	REG/2021/0215 R	Extant (Notified)	ICMR 07333	Indian Agricultural Research Institute	Public	Thursday, December 30, 2021	-	15-November-2022	26-June-2033	30-Dec-2021 to 15-Nov-2022
188.	REG/2013/182	New	PP 64	M/s Crystal Crop Protection Limited	Private	01 April 2013	N3 PG3 13 182	21-February-2023	20-February-2038	01-Apr-2013 to 21-Feb-2023
189.	REG/2013/977	New	PSP70	M/s Crystal Crop Protection Limited	Private	26 November 2013	N15 PG16 13 977	21-February-2023	20-February-2038	26-Nov-2013 to 21-Feb-2023
190.	REG/2014/489	New	BIO-LM135Z	DCM Shriram Limited	Private	03 March 2014	N3 PG4 14 489	21-February-2023	20-February-2038	03-Mar-2014 to 21-Feb-2023
191.	REG/2014/492	New	EM104Z	DCM Shriram Limited	Private	03 March 2014	N6 PG7 14 492	21-February-2023	20-February-2038	03-Mar-2014 to 21-Feb-2023
192.	REG/2019/96	Extant (VCK)	PP83	M/s Crystal Crop Protection Limited	Private	06 June 2019	E8 PG9 19 96	21-February-2023	20-February-2038	06-Jun-2019 to 21-Feb-2023
193.	REG/2015/270	New	MP12P021R	Rallis India Limited	Private	11 February 2015	N7 PG11 15 270	15-March-2023	14-March-2038	11-Feb-2015 to 15-Mar-2023

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194.	REG/2017/2023	Farmer	AH-PM	Abdul Hadi Khan	Farmer	13 October 2017	F21 PG32 17 2023	09-June-2023	08-June-2038	13-Oct-2017 to 09-Jun-2023
195.	REG/2022/0035 H	Extant (Notified)	NBH 5929 (MH 2423)	Nuziveedu Seeds Ltd	Private	08 March 2022	E1 PG1 22 35	09-June-2023	23-December-2036	08-Mar-2022 to 09-Jun-2023
196.	REG/2022/0035 A	Extant (Notified)	NB 1121A	Nuziveedu Seeds Ltd	Private	08 March 2022	-	09-June-2023	23-December-2036	08-Mar-2022 to 09-Jun-2023
197.	REG/2022/0035 B	Extant (Notified)	NB 1121B	Nuziveedu Seeds Ltd	Private	08 March 2022	-	09-June-2023	23-December-2036	08-Mar-2022 to 09-Jun-2023
198.	REG/2022/0035 R	Extant (Notified)	NB 197R	Nuziveedu Seeds Ltd	Private	08 March 2022	-	09-June-2023	23-December-2036	08-Mar-2022 to 09-Jun-2023
199.	REG/2016/1015	Extant (VCK)	M162F	Pioneer Overseas Corporation	Private	01 August 2016	E6 PG32 16 1015	13-July-2023	12-July-2038	01-Aug-2016 to 13-Jul-2023
200.	REG/2016/1743	Extant (VCK)	M444R	Pioneer Overseas Corporation	Private	18 October 2016	E8 PG40 16 1743	13-July-2023	12-July-2038	18-Oct-2016 to 13-Jul-2023
201.	REG/2015/210	New	PM12P017R	Rallis India Limited	Private	30 January 2015	N5 PG6 15 210	25-October-2023	24-October-2038	30-Jan-2015 to 25-Oct-2023
202.	REG/2017/997	Farmer	Bichhua Bajra	Sirpat Khapre	Farmer	30 March 2017	F1 PG6 17 997	25-October-2023	24-October-2038	30-Mar-2017 to 25-Oct-2023
203.	REG/2017/2012	Farmer	YKB-PM	Yogesh Kumar	Farmer	13 October 2017	F19 PG30 17 2012	25-October-2023	24-October-2038	13-Oct-2017 to 25-Oct-2023
204.	REG/2017/2181	Farmer	DEVNATH BAJRA	Devnath	Farmer	16 October 2017	F27 PG38 17 2181	25-October-2023	24-October-2038	16-Oct-2017 to 25-Oct-2023
205.	REG/2014/482	Farmer	Rukmani	Khamkaran Rajpoot	Farmer	03 March 2014	F1 PG1 14 482	26-November-2023	25-November-2038	03-Mar-2014 to 26-Nov-2023
206.	REG/2015/237	Farmer	BAGDAL DESHI BAAJRA	Mohammed Idris Ahmed Quadri	Farmer	06 February 2015	F1 PG7 15 237	26-November-2023	25-November-2038	06-Feb-2015 to 26-Nov-2023

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S. No.	Registration No.	Category of Variety	Denomination of the Candidate Variety	Name of Applicant	Applicant Category	Date of Filling	Application No.	Date of Certificate Issue	Maximum Protection Period up to	Provisional Protection Claim
207.	REG/2013/79	New	KBH 1952	Kaveri Seed Company Ltd	Private	01 March 2013	N1 PG1 13 79	22 April 2024	21 April 2039	01-Mar-2013 to 22-Apr-2024
208.	REG/2014/1293	New	NU 3214	NU Genes Pvt. Ltd.	Private	30 June 2014	N19 PG21 14 1293	22 April 2024	21 April 2039	30-Jun-2014 to 22-Apr-2024
209.	REG/2013/344	New	86M85	Pioneer Overseas Corporation	Private	01 July 2013	N7 PG7 13 344	07 May 2024	06 May 2039	01-Jul-2013 to 07-May-2024
210.	REG/2013/478	New	NBH-5782	Nuziveedu Seeds Ltd	Private	29 August 2013	N10 PG10 13 478	21 May 2024	20 May 2039	29-Aug-2013 to 21-May-2024
211.	REG/2013/181	New	BPM909	M/s Crystal Crop Protection Limited	Private	01 April 2013	N2 PG2 13 181	22 May 2024	21 May 2039	01-Apr-2013 to 22-May-2024
212.	REG/2013/975	New	9444 Gold	M/s Crystal Crop Protection Limited	Private	26 November 2013	N13 PG14 13 975	12 June 2024	11 June 2039	26-Nov-2013 to 12-Jun-2024
213.	REG/2013/976	New	PP71	M/s Crystal Crop Protection Limited	Private	26 November 2013	N14 PG15 13 976	12 June 2024	11 June 2039	26-Nov-2013 to 12-Jun-2024
214.	REG/2016/774	New	BIO LM460Z	DCM Shriram Limited	Private	24 June 2016	N16 PG20 16 774	12 June 2024	11 June 2039	24-Jun-2016 to 12-Jun-2024
215.	REG/2013/477	New	NBH-5807	Nuziveedu Seeds Ltd	Private	29 August 2013	N9 PG9 13 477	13 June 2024	12 June 2039	29-Aug-2013 to 13-Jun-2024
216.	REG/2017/62	New	MP15P035R	Rallis India Limited	Private	08 February 2017	N1 PG1 17 62	18 July 2024	17 July 2039	08-Feb-2017 to 18-Jul-2024
217.	REG/2017/1468	New	PSP73	M/s Crystal Crop Protection Limited	Private	11 May 2017	N9 PG10 17 1468	18 July 2024	17 July 2039	11-May-2017 to 18-Jul-2024
218.	REG/2017/63	New	MP14P028A	Rallis India Limited	Private	08 February 2017	N2 PG2 17 63	19 July 2024	18 July 2039	08-Feb-2017 to 19-Jul-2024
219.	REG/2010/215	New	DGB-016	M/s Crystal Crop Protection Limited	Private	22 July 2010	N32 PG32 10 215	26 July 2024	25 July 2039	22-Jul-2010 to 26-Jul-2024
220.	REG/2014/1201	New	MP 7794	Rallis India Limited	Private	21 May 2014	N17 PG19 14 1201	25 September	24 September	21-May-2014 to 25-Sep-2024

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S. No.	Registration No.	Category of Variety	Denomination of the Candidate Variety	Name of Applicant	Applicant Category	Date of Filling	Application No.	Date of Certificate Issue	Maximum Protection Period up to	Provisional Protection Claim
								2024	2039	
221.	REG/2016/1893	New	PA9001	Crystal Crop Protection Limited	Private	22 December 2016	N26 PG42 16 1893	25 September 2024	24 September 2039	22-Dec-2016 to 25-Sep-2024
222.	REG/2015/272	Extant (VCK)	PM12P018R	Rallis India Limited	Private	11 February 2015	E8 PG13 15 272	27 November 2024	26 November 2039	11-Feb-2015 to 27-Nov-2024
223.	REG/2017/1467	New	PP74	M/s Crystal Crop Protection Limited	Private	11 May 2017	N8 PG9 17 1467	27 November 2024	26 November 2039	11-May-2017 to 27-Nov-2024
224.	REG/2018/39	New	PP107	M/s Crystal Crop Protection Limited	Private	30 January 2018	N3 PG3 18 39	09 December 2024	08 December 2039	30-Jan-2018 to 09-Dec-2024
225.	REG/2018/40	New	PSP92	M/s Crystal Crop Protection Limited	Private	30 January 2018	N4 PG4 18 40	09 December 2024	08 December 2039	30-Jan-2018 to 09-Dec-2024
226.	REG/2014/844	New	MP 7793	Rallis India Limited	Private	02 April 2014	N9 PG11 14 844	06 January 2025	05 January 2040	02-Apr-2014 to 06-Jan-2025
227.	REG/2016/772	New	BIO MM368Z	DCM Shriram Limited	Private	24 June 2016	N14 PG18 16 772	06 January 2025	05 January 2040	24-Jun-2016 to 06-Jan-2025
228.	REG/2009/74	Extant (VCK)	NBH-1024	Nuziveedu Seeds Ltd	Private	17 March 2009	E5 PG9 9 74	06 March 2025	05 March 2040	17 Mar 2009 to 06 Mar 2025

Source: <https://plantaauthority.gov.in>

ICAR-ICRISAT PARTNERSHIP TRIALS

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ICAR-ICRISAT Partnership Project Trials *Kharif 2024-25*

Project title: Pearl millet hybrids for harshest drought prone environments and for new emerging markets.

Table 1: The summary table of breeding trials and nurseries is given below

S. No.	Nursery/Trial	Trial size	HYD	ABD	APR	MLR	DHL	JMR	DSA	MDR	JDR	BKR	JPR	HSR	NDL	VYP	GLR	GDN	LDN	Total
		Ent x reps x rows																		
	Seed Parent Progeny Trial																			
1	Potential B-line Nursery (PBLN)	60x2x1		*			*	*	*F				*F	*F						6
	Restorer Parent Progeny Trial																			
2	Potential R-Line Nursery (PRLN)	60x2x1		*			*	*	*F	*			*F	*F	*					8
	Other Trials																			
3	Drought Tolerant Restorer Parent Nursery (DTRPN)	50x2x1								*	*F	*	*F	*F						5
4	Blast Resistant B and R Line Nursery (BRB&RLN)	35x2x1	*	*	*		*		*F				*F	*F	*		*			9
5	Elite Joint Biofortification Nursery (EJBFN)	60x2x1				*	*	*		*			*	*F	*	*			*	9
	Marker Assisted Breeding Trial and Nurseries																			
6	Blast Resistance Trial: Mapping population	290x2x2					*F											*F		2
	Total Trials		1	3	1	1	5	3	3	3	1	1	5	5	3	1	1	1	1	39

Abbreviations * = Trial successfully conducted, *F = Trial conducted but failed

HYD=Hyderabad, ABD= NARP-Aurangabad, APR= Ananthapuram, MLR= Malnoor, DHL=Dhule, JMR=Jamnagar, DSA=Deesa (SDAU), MDR=Mandor, JDR=Jodhpur (CAZRI), BKR=Bikaner, JPR=Jaipur, HSR=Hisar, NDL=New Delhi, VYP=Vijayapura, GLR=Gwalior, GDN=Gudhamalani and LDN=Ludhiana.

AS=Agronomic score (1-Poor, 2-Average, 3-Good, 4-Very good, 5-Excellent), BS=Blast score 0-9 (0=Blast free, 9=more than 90% blast), DF=Days to 50% flowering, DM=Downy mildew per cent, E. or Ent.=Entry, ETPP=Effective tillers/plant, PH = Plant height (cm), HD=Head diameter (cm), HL= Head length (cm), NG = Not germinated, PH=Plant height (cm), SG 1 - 3 (1=Low or non stay green, 2=Medium stay green, 3=High stay green) Fe=XRF Fe (ppm), Zn = XRF Zn (ppm).

ICAR-ICRISAT COLLABORATIVE NURSERIES

A total of 6 trials comprising of potential B- line nursery, potential R- line nursery, drought tolerant restorer parent nursery, blast resistant B and R line nursery, elite joint biofortification nursery and biparental QTL mapping population trial for blast resistance conducted as per details given in table 1. Trial-wise results are given below:-

SEED PARENT PROGENY NURSERY

1. Potential B-line nursery (PBLN): In potential B-line nursery, a total of 60 entries along with 5 checks were evaluated across 6 locations-Aurangabad, Dhule, Jamnagar, Deesa (failed), Jaipur (failed) and Hisar (failed) (Table 7). In potential B-line nursery flowering time ranged from 61 to 73 days. The range of plant height is 77 to 125 cm, head length 14 to 26 cm, head diameter 1.5 to 2.6 cm, effective tillers per plant 1.3 to 3.3, stay green scores 3.0, blast scores 1.2 to 5.2 and agronomic scores 1.3 to 2.7. None of the entry was early to the best check ICMB 02333 (61 days). The entry no. 46, 15, 16, 20, 33, 22, 10 and 26 were superior in head length to the best check ICMB 18111 (21 cm). In head diameter entry no. 6, 21, 52, 1, 9, 11, 40, 49, 50, 51 and 54 were superior to the best check ICMB 18111 (2.1 cm). None of the entry was high tillering to the best check ICMB 02333 (3.3). None of the entry was higher in stay green scores to stay green best check ICMB 1604 (3.0). The entry no. 27, 52, 15, 26, 51, 55, 14, 32, 54, 21, 22, 40, 2, 10, 11, 25, 50, 3, 8, 20, 39 and 53 were superior in blast tolerance to the best check ICMB 18111 (2.7). The entry no. 4, 52, 3, 10, 14, 27, 51, 11, 15, 16, 18, 19, 21, 22, 23, 31, 34, 36, 1, 2, 6, 9, 12, 30, 48 and 49 were superior in agronomic scores to the best check ICMB 04999 (2.0).

RESTORER PARENT PROGENY NURSERY

2. Potential R-line nursery (PRLN): In potential R-line nursery, a total of 60 entries along with 3 checks were evaluated across 8 locations-Aurangabad, Dhule, Jamnagar, Deesa (failed), Mandor, Jaipur (failed), Hisar (failed) and New Delhi (Table 8). In Potential R-line nursery, the flowering time ranged from 59 to 72 days, plant height 100 to 165 cm, head length 15 to 33 cm, head diameter 1.8 to 2.7 cm, effective tillers per plant 1.7 to 2.9, stay green scores 1.5 to 3.0, blast scores 1.7 to 7.0 and agronomic scores 1.8 to 3.5. The entry no. 11, 18, 12, 23 and 47 were early to best check ICMR 10222 (63 days). Only entry no. 42 was superior in head length to the best check ICMR 10222 (30 cm). In head diameter entry no. 1, 5, 8, 13, 38, 6, 25, 32, 49, 50, 2, 14, 24, 34, 40, 46, 3, 9, 26, 28, 33, 35, 37 and 47 were superior to the best check ICMR 21555 (2.2 cm). None of the entry was high tillering to the best check ICMR 14888 (2.9). The entry no. 16, 26, 29, 36, 39, 42, 51 and 55 were equal in stay green scores to stay green best check ICMR 21555 (3.0). The entry no. 42, 13, 39 and 30 were superior in blast tolerance to the best check ICMR 21555 (2.2). The entry no. 50 and 13 were superior in agronomic scores to the best check ICMR 21555 (3.3).

OTHER TRIALS

3. Drought tolerant restorer parent nursery (DTRPN): In drought tolerant restorer parent nursery, a total of 50 entries along with 2 R line checks were evaluated across 5 locations-Mandor, Jodhpur (failed), Bikaner, Jaipur (failed) and Hisar (failed) (Table 9). In drought

tolerant nursery flowering time ranged from 53 to 63 days. The range of plant height 92 to 165 cm, head length 14 to 24 cm, head diameter 1.8 to 4.1 cm, effective tillers per plant 1.0 to 2.5 and agronomic scores 3.0 to 5.0. In drought tolerant restorer parent nursery entry no. 8, 17, 34, 44, 28, 37 and 38 were early to the best check PRLT 2/89-33 (55 days). The entry no. 27, 47, 48, 44, 12, 16, 14, 15, 17, 29, 31, 40, 41, 21, 22, 24, 35, 1, 13, 18, 20, 28, 32 and 43 were superior in head length to the best check H77/833-2 (17 cm). In head diameter only entry no. 22 was superior to the best check PRLT 2/89-33 (2.9 cm). None of the entry was high tillering to the best check H77/833-2 (2.5). The entry no. 2, 13, 17, 23, 24, 26, 27, 35, 40, 44, 47, 10, 12, 18, 20, 21, 22, 28, 29, 33, 39, 42, 45 and 48 were superior in agronomic scores to the best check H77/833-2 (4.0).

4. Blast resistant B and R line nursery (BRB & RLN): In this nursery, a total of 35 entries along with 1 B line and 1 R line checks were evaluated across 9 locations-Hyderabad, Aurangabad, Ananthapuram, Dhule, Deesa (failed), Jaipur (failed), Hisar (failed), New Delhi and Gwalior (Table 10). The days to 50% flowering of progenies ranged from 51 to 63 days. Progenies showed variation for plant height 94 to 182 cm, head length 17 to 30 cm, head diameter 1.6 to 2.6 cm, effective tillers per plant 1.5 to 2.8, stay green scores 1.3 to 2.6, blast scores 2.1 to 7.0 and agronomic scores 2.3 to 3.4.

Amongst blast resistant B lines none of the entry was early to the best check ICMB 95444 (51 days). The entry no. 3, 14, 1, 11, 2, 5, 12, 13, 4, 6, 8, 9 and 10 were superior in head length to the best check ICMB 95444 (17 cm). In head diameter the entry no. 10, 1, 13, 3, 4, 5, 11, 2, 7, 9, 14, 8, 12 and 6 were superior to the best check ICMB 95444 (1.6 cm). None of the entry was high tillering to the best check ICMB 95444 (2.8). The entry no. 1, 3, 6, 11, 2, 5, 8, 14, 4, 9, 7, 13, 12 and 10 were higher in stay green scores to stay green best checks ICMB 95444 (1.3). Amongst blast resistant B lines the entry no. 6, 13, 8, 12, 5, 10, 3, 1, 14, 2, 11, 9, 4 and 7 were superior in blast tolerance to the best check ICMB 95444 (7.0). The B lines entry no. 13, 5 and 11 were superior in agronomic scores to the best check ICMB 95444 (3.0).

Amongst blast resistant R lines the entry no. 24, 19, 20, 22, 16, 17, 21, 23, 33, 26, 27, 28, 31, 30, 32, 15, 18 and 29 were early to the best check ICMR 06666 (62 days). The entry no. 21, 31, 19, 24, 30, 17, 26, 22, 25, 29, 16, 32, 33, 20, 23, 27, 28 and 15 were superior in head length to the best check ICMR 06666 (19 cm). In head diameter entry no. 22, 31, 19, 26, 29, 20, 28, 30, 15, 21, 24, 25, 32, 33, 17 and 27 were superior to the best check ICMR 06666 (2.1 cm). The entry no. 25, 16, 17, 33, 24, 29, 23, 27 and 31 were high tillering to the best check ICMR 06666 (2.1). The entry no. 21, 22, 30, 29, 33, 25, 28, 31, 23, 24, 27, 16, 19 and 26 were higher in stay green scores to stay green best check ICMR 06666 (1.8). Amongst blast resistant R lines entry no. 18, 27, 21, 25, 26, 29, 15 and 31 were superior in blast tolerance to the best check ICMR 06666 (3.0). The R-lines entry no. 19, 17, 16, 27, 29, 31, 26, 20 and 24 were superior in agronomic scores to the best check ICMR 06666 (2.8).

5. Elite joint biofortification nursery (EJBFN): In this nursery, 60 entries along with 2 B lines and 1 R line checks were evaluated across 9 locations-Malnoor, Dhule, Jamnagar, Mandor, Jaipur, Hisar(failed), New Delhi, Vijayapur and Ludhiana (Table 11). The range of progenies for days to 50% flowering 51 to 65 days, plant height 95 to 161 cm, head length 16 to 26 cm, head diameter 1.5 to 2.9 cm, effective tillers per plant 1.7 to 3.0, stay green scores 1.1 to 3.1, blast scores 2.0 to 6.2, agronomic scores 1.9 to 3.4, Fe 37 to 145 ppm and Zn 30 to 83 ppm.

Amongst biofortification B lines none of the entry was early to the best check ICMB 92111 (51 days). The entry no. 3, 18, 54, 5, 20, 49, 51, 52, 55, 1, 9, 14, 2, 6, 7, 11, 12, 16 and 46 were superior in head length to the best check ICMB 92111 (19 cm). In head diameter entry no. 6 and 50 were superior to the best check ICMB 98222 (2.5 cm). The entry no. 8, 47, 53, 6 and 55 were high tillering to the best check ICMB 92111 (2.6). The entry no. 8, 6, 54, 7, 20, 17, 12, 18, 49, 3, 11, 1, 5, 13, 15, 16, 50, 10, 53, 4, 14, 19, 48, 55, 2, 51, 9 and 46 were higher in stay green scores to stay green best check ICMB 92111 (1.8). The entry no. 8, 6, 7, 54, 3, 12, 5, 17, 55, 10, 20, 49, 1, 18, 48, 53, 13, 51, 11, 46, 15, 16, 2, 9, 19, 47, 50, 4, 52 and 14 were superior in blast tolerance to the best check ICMB 92111 (5.3). The entry no. 1, 10, 18, 51, 6, 15, 20, 7, 49, 3, 54, 4, 11, 13, 48, 52, 14, 19, 5, 8, 46, 47 and 50 were superior in agronomic scores to the best check ICMB 92111 (2.5). In B lines high Fe were recorded in entry no. 9, 8, 2 and 7 in comparison to the best check ICMB 98222 (Fe 102 ppm) and high Zn were also recorded in entry no. 2, 8, 9 and 17 in comparison to the best check ICMB 92111 (Zn 64 ppm).

Amongst biofortification R lines entry no. 56, 60, 34, 59, 35, 38 and 57 were early to the best check ICMR 1202 (57 days). Only entry no. 58 was superior in head length to the best check ICMR 1202 (25 cm). In head diameter only entry no. 26 was superior to the best check ICMR 1202 (2.7 cm). The entry no. 56, 25 and 36 were high tillering to the best check ICMR 1202 (2.3). The entry no. 32, 24, 37 and 42 were higher in stay green scores to stay green best check ICMR 1202 (2.6). The entry no. 24, 23, 39, 40, 22, 26, 31, 36, 25, 21, 33, 35, 27 and 28 were superior in blast tolerance to the best check ICMR 1202 (4.2). None of the R line was superior in agronomic scores to the best check ICMR 1202 (3.3). In R lines high Fe were recorded in entry no. 32, 31, 21, 27, 37, 33, 40 and 30 in comparison to the best check ICMR1202 (Fe 100 ppm) and high Zn were also recorded in entry no. 21, 41, 32, 31, 60, 40, 37, 33, 36, 27, 24, 39, 29, 35, 38, 57, 34 and 56 in comparison to the best check ICMR 1202 (Zn 48 ppm).

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Table 2: Pedigree of entries in potential B-line nursery (PBLN) *kharif* - 2024

E. no.	Pedigree
1	[Blast and DM Resistance B-com HS-29-3-1-1-3 X ((ICMB 94333 x ICMB 01222)-47-1-B-B-B x 4287 {(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6-2-4)-14-4-9-B-5]-20-1-3
2	[((843B x ICMP5 900-9-3-2-2)-41-2-5-5 S2-34-1-2-3 x B-line bulk]-8-B-B-1-B-B-B-1 x (ICMB 01666xICMB 01222)-12-2-B-1-B P1)-4-1-3-1-B X (Blast and DM Resistance B-com HS-29-3-1-1-3)]-8-4-5
3	A4 Thick Head B-composite-Early (RCE 24B / K16)-3-3-4-1
4	[((MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6-3-2-5-B X (Blast and DM Resistance B-com HS-28-1-5-4-5)]-6-5-5
5	[((HHVDBC HS-246-1-2-1-2 x ICMB 99555)-1-3-3-1 x ((MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6-2-4)-18-2-1-B-B-1-1 X (Blast and DM Resistance B-com HS-28-1-5-4-5)]-4-4-2
6	[(((HHVDBC HS-246-1-2-1-2 x ICMB 99555)-1-3-3-1 x ((MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6-2-4)-18-2-1-B-B-1-1) X ((ICMB 03777 x ((MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-3-1)-21-4-4-1-4)]-2-4-4
7	[(((MC 94 S1-81-1-B x HHVBC)-4-4-1 x (MC 94 S1-81-1-B x HHVBC)-4-2-4-10-3-1--B-B-B x ICMB 02777)-3-3-B-2) X ((ICMB 95111 x (ICMB 96555 x IP 10437)-3]-7-2-1-B-2-15-1) x B-bulk (3981-3989/S06 G1))-3-2-4-B x ICMB 08999)-13]-B-12-1-1
8	[(((ICMB 95111 x (ICMB 96555 x IP 10437)-3]-7-2-1-B-2-15-1) x B-bulk (3981-3989/S06 G1))-3-2-4-B x ICMB 08999)-13] X ((ICMB 01333 x HHVDBC HS-10-1-2-1-1-1-3-B)-2-1-3-2-4)]-B-6-2-1
9	[((ICMB 94333 x ICMB 01222)-47-1-B-B-B x 4287 {(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6-2-4)-14-4-9-B-5 X (ICMB 99111 x ICMB 98222)-6-2-5-1-B]-2-4-5
10	[(((ICMB01333xHHVDBC HS-10-1-2-1-1-1-3-B)-2-1-3-2-1x(HTBLN/95-98xICMB89111)-1-B-B-1-9-1-3-4-2xHHVDBC HS-120-1-2-1-1-3-B-4x(ICMB01333xHHVDBC HS-10-1-2-1-1-1-3-B)-2-1-3-2-4)-5-1)
11	[((HHVDBC HS-246-1-2-1-2 x ICMB 99555)-2-2-2-1 x ((MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6-2-4)-15-3-5-1
12	[((843B x ICMP5 900-9-3-8-2)-21-8-4 X (ICMB 01666 x ICMB 01222)-49-1-2-B-2]-5-2-5
13	([(26B x (81B x SRL 50-1))-1-1-2 x 852B]-69-1-1 X (((81B x 4017-6-1-1)-3-1-4-3-4-1-2-1-B-2-2 x ICMB 05888)x (HHVDBC Medium HS-120-1-2-1-1-1-1 x HHVDBC Medium HS-15-1-1-1-2-2-4)]-21-2-1-3-1-4-2
14	((EBC-S1-40-2-2-1 x B-bulk)-25-B-B X (SPF3/S91-327 x SPF3/S91-5)-6-2-2)-B-13-5-4
15	[((SRC II C3 S1-1-1-2 x HHVBC)-2-2-1-1-1-B-B x (81B x 4017-5-4-B)-12-3-1-3]-2-3-1-2-3X[((ICMB 94333 x ICMB 01222)-47-1-B-B-B x 4287 {(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6-2-4)-14-4-9-B-5 X (MC 94 S1-34-1-B x HHVBC)-12-1-2-2-2-B-1-B-B-3-2-3-4)]-B-21]-B-1-5-4
16	[(((ICMB 95444 x ICMB 93333)-24-2-B-B X (MC 94 S1-34-1-B x HHVBC)-10-4-3-2-2-B-B-2)-2-1-1)] X (((ICMB 04999 x ICTP 8203 S1-250-3)-1-11-2-B)]-B-19-3-B-B
17	[((ICMB 04777 x ICMB 04111)-13-4-1-1-3X[((ICMB 94333 x ICMB 01222)-47-1-B-B-B x 4287 {(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6-2-4)-14-4-9-B-5 X (MC 94 S1-34-1-B x HHVBC)-12-1-2-2-2-B-1-B-B-3-2-3-4)]-B-11]-B-6-4-B-B-B
18	[(((ICMB 96555 x IP 10437)-9-B-B-B-B-B x IP 14758-2-2)-19-1-B x (ICMB 96555 x IP 10437)-3-4-1-2-2-1-B-2-B-3]-3-3-2-1-5 X (ICMB 01666 x ICMB 01222)-27-3-B-3]-B-10-3-3-B-B
19	[(((B x B) F2 S1-109-2-3-3-1-4-2 X (ICMB 01666 x ICMB 01222)-27-3-B-3]-1-2-4]-B-2-4-1-3 X (((DMR 133 x HTBC 48-B-1-1-1-5)-19-2-B-B x ICMB 04111]-145-1-1-2-2 X (ICMB 01333 x HHVDBC HS-10-1-2-1-1-1-3-B)-2-1-3-2-1)-1-1-4]-B-1-4-2-4]-B-13-2-4-B-B
20	[ICMB 11222 X PE 05532 Super sosat]-17-3-3-1-4-B-B-B-B
21	[([78-7088/3/SER3 AD//B282/(3/4)EB x PBLN/S95-359]-7-4-B-B-2-B-BX(ICMB 03777 x ((MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-3-1)-6]-11-3-2
22	[([78-7088/3/SER3 AD//B282/(3/4)EB x PBLN/S95-359]-7-4-B-B-2-B-BX(EBC-Gen-S1-40-2-2-1 x B-bulk)-28-B-B-3-B-B-3]-20-5-1

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Table 2: Pedigree of entries in potential B-line nursery (PBLN) *kharif* - 2024

E. no.	Pedigree
23	[[[(ICMB 01333 x HHVDBC HS-10-1-2-1-1-1-3-B)-2-1-3-2-1 x [(DMR 133 x HTBC 48-B-1-1-1-5)-19-2-B-B x ICMB 04111]-145-1-2-3)-17-4-2-1]] X [[[(ICMR 312 S1-1-5-2-B x HHVBC)-10-2-1-2-3-B x HHVDBC HS-158-2-1-2-1-1-B]-9-2-3-1) x ((ICMB 99444xICMB 99222)-1-4-4-2-2-3-2-3)-9]]-B-1-1-B
24	[[[(IC-CZBC-C0-1-6-3-3-B X [(81B x 4017-6-1-1)-3-1-4-3-4-1-2-1-B-2-2 x ICMB 05888)x (HHVDBC Medium HS-120-1-2-1-1-1-1 x HHVDBC Medium HS-15-1-1-1-2-2-4)]-21-2-1-3-1-15-4]] X [(ICMB 12111)]-B-15-2-1
25	A4 Thick Head B-composite-Early (RCE 24B / K16)-8-2-3-2-2
26	A4 Thick Head B-composite-Late (RCE 24B / K16)-24-2-7-2-B
27	[[[(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-3-6-4-2-3-BX[[[ICMV 88908-11-12-3-2-B x B-bulk]-8-B-3 x [(843B x ICMP5 900-9-3-2-2)-41-2-5-5 S2-34-1-2-1-1 x B-bulk]-5-B-B]-11-1-1-B-B x ICMB 04111]-127-1-3-4]-B-15-3-2-B
28	[[[(EEDBC S1-704-1-1-1-3-B-B-1xEBC 407 progenies bulk)-7-3-1 x NCD2S1-2-2-2-1-9-B-B-14-1-3-1-2 X ((843B x ICMP5 900-9-3-2-2)-41-2-5-5 S2-34-1-2-3 x B-line bulk]-8-B-B-1-B-B-B-1 x (ICMB 01666xICMB)01222)-12-2-B-1-B P1)-4-1-2-3-B)-1-5]-B-5-4-4 X Selection from KSU line BKM 2068]-B-12-1-4
29	[[[(D2BLN/95-93 x SPF1/K95-3213-20)-10 x (91777B x HHVBC)]-7-B-1-B-B-4-B-1 X (BSECBPT/91-38 x SPF3/S91-529)-10-1-7]-1-4-7]-B-4-7-2-SB X ((ICMB 01333 x HHVDBC HS-10-1-2-1-1-1-3-B)-2-1-3-2-1 x [(DMR 133 x HTBC 48-B-1-1-1-5)-19-2-B-B x ICMB 04111]-145-1-2-3)-13-3-2-B]-B-26-4-2
30	[[[(B x B) F2 S1-109-2-3-3-1-4-2 X (ICMB 01666 x ICMB 01222)-27-3-B-3]-1-2-1]-B-2-1-4-1 X Ankoutes X ICMB 04999-7-1]-B-6-3-1
31	[[[(B x B) F2 S1-109-2-3-3-1-4-2 X (ICMB 01666 x ICMB 01222)-27-3-B-3]-1-2-4]-B-2-4-1-3 X [[[(DMR 133 x HTBC 48-B-1-1-1-5)-19-2-B-B x ICMB 04111]-145-1-1-2-2 X (ICMB 01333 x HHVDBC HS-10-1-2-1-1-1-3-B)-2-1-3-2-1]-1-1-4]-B-1-4-2-4]-B-7-1-3
32	((7005x7001-7011)-14-7-1)
33	[[[(HHVDBC HS-45-2-3-1-2-3-4-B-1x[(EBC-Gen-S1-40-2-2-1xB-bulk)-1-B-B-2-B-B-BxICMB04111]-4-2-1-2X[(MC94S1-34-1-BxHHVBC)-10-4-3-2-2-B-B-2x(ICMR312S1-1-5-3-BxHHVBC)-7-1-1-1-B-B-B]-21-B-1-4-1-2-3-1x(ICMB01333xHHVDBC HS-10-1-2-1-1-1-3-B)-2-1-3-2-4)-2-5)
34	[[[(HHVDBC HS-246-1-2-1-2 x ICMB 99555)-2-2-2-1 x [(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6-2-4)-15-1-1-B
35	(ICMB 01666 x ICMB 01222)-49-1-2-B-2-5-P1
36	[[[(ICMB06555xICMB94444)-6-3-2-4-BX[(843BxICMP5900-9-3-2-2)-41-2-5-5S2-34-1-2-3xB-linebulk]-8-B-B-1-B-B-B-1x(ICMB01666xICMB)01222)-12-2-B-1-BP1)-4-1-2-3-B)-1-6)
37	[[[(ICMR 312 S1-1-5-2-B x HHVBC)-10-2-1-2-3-B x HHVDBC HS-158-2-1-2-1-1-B]-9-2-3-1) x ((ICMB 99444xICMB 99222)-1-4-4-2-2-3-2-3)-9
38	[(B x B) F2 S1-109-2-3-3-1-4-2 X (ICMB 01666 x ICMB 01222)-27-3-B-3]-1-10-4
39	[[[(843B x ICMP5 900-9-3-2-2)-41-2-5-5 S2-34-1-2-3 x B-line bulk]-8-B-B-1-B-B-B-1 x (ICMB 01666xICMB)01222)-12-2-B-1-B P1)-1-4-2-2-B) X [[[(MC 94 S1-34-1-B x HHVBC)-10-4-3-2-2-B-B-2 x (ICMR 312 S1-1-5-3-B x HHVBC)-7-1-1-1-B-B-B]-21-B-1-4-1-2-1-2-B]]-3
40	[[[(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6-3-2-5-B) X [(ICMB 03777 x [(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-3-1)-21-4-4-1-4]-4-3
41	[[[(HHVDBC HS-246-1-2-1-2 x ICMB 99555)-1-3-3-1 x [(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6-2-4)-18-2-1-B-B-1-1) X [[[(MC 94 S1-34-1-B x HHVBC)-10-4-3-2-2-B-B-2 x (ICMR 312 S1-1-5-3-B x HHVBC)-7-1-1-1-B-B-B]-21-B-1-4-1-2-1-2-B]]-1-1
42	[[[(843B x ICMP5 900-9-3-2-2)-41-2-5-5 S2-34-1-2-3 x B-line bulk]-8-B-B-1-B-B-B-1 x (ICMB 01666xICMB)01222)-12-2-B-1-B P1)-1-4-2-2-B) X [[[(MC 94 S1-34-1-B x HHVBC)-10-4-3-2-2-B-B-2 x (ICMR 312 S1-1-5-3-B x HHVBC)-7-1-1-1-B-B-B]-21-B-1-4-1-2-1-2-B]]-3-10-1-P3

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Table 2: Pedigree of entries in potential B-line nursery (PBLN) *kharif* - 2024

E. no.	Pedigree
43	[[[(HHVDBC HS-246-1-2-1-2 x ICMB 99555)-1-3-3-1 x {(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6-2-4)-18-2-1-B-B-1-1} X [(MC 94 S1-34-1-B x HHVBC)-10-4-3-2-2-B-B-2 x (ICMR 312 S1-1-5-3-B x HHVBC)-7-1-1-1-B-B-B]-21-B-1-4-1-2-1-2-B}]-1-3-4
44	[[[(843B x ICMP5 900-9-3-2-2)-41-2-5-5 S2-34-1-2-3 x B-line bulk]-8-B-B-1-B-B-B-1 x (ICMB 01666xICMB)01222)-12-2-B-1-B-P1)-1-4-2-2-B} X [(ICMB 03777 x {(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-3-1)-21-4-4-1-4}]-5-3-1
45	[[[(843B x ICMP5 900-9-3-2-2)-41-2-5-5 S2-34-1-2-3 x B-line bulk]-8-B-B-1-B-B-B-1 x (ICMB 01666xICMB)01222)-12-2-B-1-B-P1)-1-4-2-2-B} X [(ICMB 03777 x {(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-3-1)-21-4-4-1-4}]-3-3-4
46	A1 Thick panicle B-comp HS-104-5-1-4-1
47	A4 Thick Head B-composite-Late (RCE 24B / K16)-24-2-7-2-B-B
48	[(ICMB 03777 x {(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-3-1)-21-4-4-1 X (ICMB 01666 x ICMB 01222)-27-3-B-3]-B-6-3-4-B
49	[(ICMB 93333 x ICMB 01222)-11-1-B-7-1 X (ICMB 01666 x ICMB 01222)-27-3-B-3]-B-4-4-4-B-B
50	[(ICMB 18444)] X [([(ICMB 96555 x IP 10437)-9-B-B-B-B-B x IP 14758-2-2)-19-1-B x (ICMB 96555 x IP 10437)-3-4-1-2-2-1-B-2-B-3]-1-1-1-1-1) x [(MC 94 S1-34-1-B x HHVBC)-16-1-3-1-2-2-B-B-2-B-B x ICMB 00444]-14-5-1-1xEarly D2/Med group lines x med maturity lines bulk (1301-28)-3-2-1]-8-1-2]-B-12-2-3-B
51	[(ICMB 18444)] X [([(ICMB 96555 x IP 10437)-9-B-B-B-B-B x IP 14758-2-2)-19-1-B x (ICMB 96555 x IP 10437)-3-4-1-2-2-1-B-2-B-3]-1-1-1-1-1) x [(MC 94 S1-34-1-B x HHVBC)-16-1-3-1-2-2-B-B-2-B-B x ICMB 00444]-14-5-1-1xEarly D2/Med group lines x med maturity lines bulk (1301-28)-3-2-1]-8-1-2]-B-22-3-3-B
52	[[[(ICMB 01333 x HHVDBC HS-10-1-2-1-1-1-3-B)-2-1-3-2-1 x [(DMR 133 x HTBC 48-B-1-1-1-5)-19-2-B-B x ICMB 04111]-145-1-2-3)-17-4-2-1] X [([(ICMR 312 S1-1-5-2-B x HHVBC)-10-2-1-2-3-B x HHVDBC HS-158-2-1-2-1-1-B]-9-2-3-1) x [(ICMB 99444xICMB 99222)-1-4-4-2-2-3-2-3)-9]-B-1-3-B-B
53	[(ICMB 01666 x ICMB 01222)-27-3-B-3] X [(ICMB 03777 x {(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-3-1)-6}]-B-17-2-5-B-B-1
54	[[[ICMB 99555 x {78-7088/3/SER3 AD//B282/(3/4)EB x PBLN/S95-359]-10-2-B-2]-19-2-B-B-B-B] X [(ICMB 01666 x ICMB 01222)-27-3-B-3]-B-11-3-1-B-B-B
55	[(ICMB 01666 x ICMB 01222)-27-3-B-3] X [Blast and DM Resistance B-com HS-32-2-2-3-3]-B-5-1-3-B-B-B
56	ICMB 1604 (Stay Green Check)
57	ICMB 18111 (Thick Head Panicle Check)
58	ICMB 15111 (High Tillering Check)
59	ICMB 02333 (Thick and Compact Panicle Check)
60	ICMB 04999 (Check)

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Table 3: Pedigree of entries in potential R-line nursery (PRLN) *kharif* - 2024

E. no.	Pedigree
1	DMRRC /S19-HS-23-1-1-4-2
2	((((MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-8-3-1-2-B-BxR-lines bulk (22720-22726/S11))-7-6-4-2 x ICMR 13888)-B-9-2-1-2-B
3	(Thorny composite-HS-S2-B-14-4-3 x HHVBC tall (C1) S1-33-3-1-1-1-2-B-B-3-3-1-7)-B-6-2-1-5-B
4	(MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-28-1-3
5	((((SRC II C3 S1-19-3-2 x HHVBC)-3-5-1) x (IP 19626-4-1-1-1))-B-2-2-1-2-4-2-B-6-1-1-B x (((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-18-2-3-2-2-BxAIMP 92901 S1-296-2-1-1-2-2)-B-18-1 x (((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-28-2-2-3-1-2xICMR 312 S1-3-2-3-2-1-1-B-B-B-B)-B-14-3)-2-2-1-4)-B-2-2-1-3-1
6	((((MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-8-3-1-2-B-Bx (22720-22726/S11))-1-1-3-3 x (ICMR 312 S1-8-1-1-1-1-B-B-B-1-B x (20216-20249))-22-1-2-2-1-B)-B-13-3-1-1-B
7	{(((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-28-3-3-2-2}x{(MRC HS 225-3-5-2-B-B-B-B)-B-7-4-1-3-B-B
8	{(((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-1-1-2-1-2-B x (IPC 337 xSDMV 90031-S1-84-1-1-1-1)-12-5-2-4-B-B)-B-4-3-1-1-B
9	((MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-8-3-1 x ICMR15222)-B-21-1-1-1-B
10	((((MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-8-3-1-2-B-Bx (22720-22726/S11))-1-1-3-3 x (AIMP 92901 S1-415-2-1-2-B-B-B-1-B x (20216-20249))-11-1-2-3-1-B)-B-1-2-1-3-B
11	((([MRC HS-130-2-2-1-B-B-3-B-B-B-1-3-1 X ICMV 96490-S1-15-1-2-1-3-1]-31) x ((MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-2-2-2-64-2))-16-1-1-1-1-B
12	[ICMR 12555 x ICMV 221 S1-366-1]-B-2-7-6-1-B
13	(((((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-18-2-3-2-2-BxAIMP 92901 S1-296-2-1-1-2-2)-B-18-1 x (((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-28-2-2-3-1-2xICMR 312 S1-3-2-3-2-1-1-B-B-B-B)-B-14-3)-2-2-1-4 x ((SRC II C3 S1-19-3-2 x HHVBC)-3-5-1) x (IP 19626-4-1-1-1))-B-2-2-1-2-4-2-B-6-1-1-B X (ICMR 312 S1-8-1-1-1-1-B-B-B-1-B x (20216-20249))-22-1-2-3-3-B x ((SRC II C3 S1-19-3-2 x HHVBC)-3-5-1) x (IP 19626-4-1-1-1))-B-2-2-1-2-4-2-B-6-1-1-B)-B-16-4-1
14	((IAC-ISC TCP6 S1-9-1-2-B-4-2-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-11-3-1-B-B) / (((AIMP 92901 S1-488-2-1-1-2-B-1-B x R-lines bulk (20216-20249/K09))-6-4-1)-B-31-1-3
15	(ICMV 96490-S1-15-1-2-1-3-2-3-1-1x(MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-2-2-2 -G3-41)-B-16-1-4-B
16	((([MRC HS-130-2-2-1-B-B-3-B-B-B-1-3-1 X (((IP 12322-1-2)xB-Lines)-B-14) x (MRC S1-156-2-1-B))-B-1-3-3-B)x{GB 8735-S1-15-3-1-1-3-4-2-2-2-1]-B-11-5-1-1-1]-20-1-B) X (ICMV 96490-S1-15-1-2-1-1))-B-2-1-1-1
17	[(MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-34-4-1 X JBV 3 S1 -237-1-3-3-1-B]-B-10-2-4-1-1-B
18	[AIMP 92901 S1-15-1-2-3-B-2-B-13-3-1 x ICMR 12555]-SB-6-1-1-1-B
19	{(((MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-8-3-1-2-B-Bx (22720-22726/S11))-1-1-1-1 x HTRC S1's -1095-1-7-4)x(((MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-8-3-1-2-B-Bx (22720-22726/S11))-1-1-1-1 x (AIMP 92901 S1-415-2-1-2-B-B-B-1-B x (20216-20249))-11-1-2-3-1-B)-B-7-3-3
20	HTRC-Bulk-1084-1-5-4-2-BxJBV 3 S1-300-1-1-2-1-4-1)-B-2-1
21	(((((IP 12370-1-3 x B-Lines)-B-9-1-2-1-2-2 x MRC S1-191-2-1-5-B]-B-6-1x (22680-22692/S11))-4-5-1 x (15491-15506/S14)-15-4-2 x {((ICMV 88908-11-12-3-2-B x B-lines bulk)-8-B-3 x {(843B x ICMPs 900-9-3-2-2)-41-2-5-5 S2-34-1-2-1-1 x B-bulk}-5-B-B]-16-1-1-B-B)x(((ICMV-IS 94206-15)xB-Lines)-B-6-1-3-1)-B-8-5-2-1-1)-B-7-2-4-B-B-B
22	{((IPC 1617xSDMV 90031-S1-84-1-1-1-1)xAIMP 92901 S1-296-2-1-1-3-B-1]-3-1-1-4-2-B-B x [JBV 3 S1-300-1-1-2-2 x JBV 3 S1-18-1-3-3-2]-B-7-4x(((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-4-1-3-3-1-2-1-1-1-5)x((SDMV 90031-S1-86-4-2-1-1-B-2-3-B-B-Bx[MC 94 C2-S1-3-1-3-1-2-2-2-B-B-1 x (ICMV-IS 94206-7 x (SRC II C3 S1-1-1-2 x HHVBC)-1-3-3))-B-10-1-1-3-3-2]-B-18-1)-3-1-3-4 x [MC 94 C2-S1-3-1-3-1-2-2-2-B-B-1 x (ICMV-IS 94206-7 x (SRC II C3 S1-1-1-2 x HHVBC)-1-3-3))-B-10-1-1-4-3-1-1]-B-17-4-3-2-B)-B-5-1-1-B-B-B

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Table 3: Pedigree of entries in potential R-line nursery (PRLN) *kharif* - 2024

E. no.	Pedigree
23	(SDMV 95045 S1-7-2-4-2-3-2-1-B-B-B-B-8-1-1-B-B) / (((MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-44-2-1) X (((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-28-3-1-2-2)x{(MRC HS 225-3-5-2-B-B-B-B)-B-4-2-1)-35-1-B)-B-22-3-3-B-B
24	(SDMV 95045 S1-7-2-4-2-3-2-1-B-B-B-B-8-1-1-B-B) / ([ICMV 96490-S1-15-1-2-2-2 X LaGrap C2-S1-14-4-1-3-4-4]-24-1-2-2-1-2)-B-15-3-2-B-B
25	{((IPC 107xSDMV 90031-S1-84-1-1-1-1)xAIMP 92901 S1-296-2-1-1-3-B-1]-3-2-2-2-1-B-2 X [(IP 12370-1-3 x B-Lines)-B-9-1-2-1-2-2 x MRC S1-191-2-1-5-B]-B-6-1x(R-lines bulk (22669-22675/S11))-8-5-4-3-B-B)-B-8-2-3-B-B
26	(((((IP 12370-1-3 x B-Lines)-B-9-1-2-1-2-2 x MRC S1-191-2-1-5-B]-B-6-1x (22680-22692/S11))-5-6-1-5 x (SDMV 90031-S1-86-4-2-1-1-B-2-3-B-B-Bx[MC 94 C2-S1-3-1-3-1-2-2-2-B-B-1 x (ICMV-IS 94206-7 x (SRC II C3 S1-1-1-2 x HHVBC)-1-3-3))-B-10-1-1-3-3-2]-B-18-1)-3-1-1-3) X (Thorny composite-HS-S2-B-14-4-3 x (MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-8-3-1))) -B-4-3-1-B-B
27	[A5 R-composite-Early-HS-122-1-1-3-1-1] X [(((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-28-2-2-3-1-2xICMR 312 S1-3-2-3-2-1-1-B-B-B-B)-B-17x(((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-28-3-4-3-1)x{RCB2 S1-19-2-5-1-1-2-3-3-B]-B-5-P1-3)-2-2-4]-B-10
28	((MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-17-4-3-2-B-BxR-lines bulk (22720-22726/S11))-5-5-4-1x(ICMS 7704-S1-127-5-1 x RCB-2 Tall)-B-19-3-4-5-3)-B-4-2-2-B
29	((MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-17-4-3-2-B-BxR-lines bulk (22720-22726/S11))-5-5-4-1x(ICMS 7704-S1-127-5-1 x RCB-2 Tall)-B-19-3-2-1-1-1-B)-B-13-4-1-B
30	ICMS 8511 S1-17-2-1-1-4-1-B-3-2-3-2-B-1-1-BX(MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-23-2-1)-B-11-1-1-B
31	ICMS 8511 S1-17-2-1-1-4-1-B-3-2-3-2-B-1-1-BX(MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-23-2-1)-B-13-2-1-B
32	(EERC-HS-29)-19-3X(MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-23-2-1)-B-2-3-1-B
33	(EERC-HS-29)-19-3X(MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-23-2-1)-B-6-1-2-B
34	(EERC-HS-29)-19-3X(MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-23-2-1)-B-6-1-3-B
35	(EERC-HS-29)-19-3X(MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-23-2-1)-B-11-4-3-B
36	JBV 3 S1-286-1-1-3-B-8-1-1-BX(MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-23-2-1)-B-13-2-3-B
37	(MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-28-1-1-BX(MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-23-2-1)-B-3-1-3-B
38	(MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-28-1-1-BX(MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-23-2-1)-B-13-1-1-B
39	((EERC-HS-29)-19-3 x 10624-1-1-1-1-3-2-1)-14-2x(((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-37-1-1-1-2-B)-B-1-3-2
40	((EERC-HS-29)-19-3 x 10624-1-1-1-1-3-2-1)-14-2x(((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-37-1-1-1-2-B)-B-8-2-4
41	((EERC-HS-29)-19-3 x 10624-1-1-1-1-3-2-1)-14-2x(((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-37-1-1-1-2-B)-B-16-4-2
42	{(SRC II C3 S1-19-3-2 x HHVBC)-1-5-1)x{((96111B x 4017-6-1-1)-1-4-4-3) x (IP 19626-4-1-2-1))-B-6}-B-5-2-3-1-B-4-Bx{((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-37-1-1-1-2-B)-B-1-3-3
43	(ICMV 96490-S1-22-2-2-1-2 x 10624-1-1-1-1-3-2-2)-14-3x[JBV 3 S1-300-1-1-2-2 x JBV 3 S1-18-1-3-3-2]-B-7-4x{((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-4-1-3-3-1-2-1-1-1-3)-B-1-1-1
44	((EERC-HS-29)-19-3 x 10624-1-1-1-1-3-2-1)-14-2xHTRC S1's -2102-1-4-1-4-B)-B-9-1-4
45	((EERC-HS-29)-19-3 x 10624-1-1-1-1-3-2-1)-14-2xHTRC S1's -2102-1-4-1-4-B)-B-10-3-1

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Table 3: Pedigree of entries in potential R-line nursery (PRLN) *kharif* - 2024

E. no.	Pedigree
46	((EERC-HS-29)-19-3 x 10624-1-1-1-3-2-1)-14-2xHTRC S1's -2102-1-4-1-4-B)-B-13-3-2
47	((EERC-HS-29)-19-3 x 10624-1-1-1-3-2-1)-14-2xHTRC S1's -2102-1-4-1-4-B)-B-13-3-3
48	((EERC-HS-29)-19-3 x 10624-1-1-1-3-2-1)-14-2xHTRC S1's -2102-1-4-1-4-B)-B-20-2-4
49	(ICMR 13333 x (((IP 12370-1-3 x B-Lines)-B-9-1-2-1-2-2 x MRC S1-191-2-1-5-B]-B-6-1x (22680-22692/S11))-5-6-1-5)-B-1-1-2
50	(ICMR 13333 x (((IP 12370-1-3 x B-Lines)-B-9-1-2-1-2-2 x MRC S1-191-2-1-5-B]-B-6-1x (22680-22692/S11))-5-6-1-5)-B-12-3-5
51	(ICMR 14333 x (((IP 12370-1-3 x B-Lines)-B-9-1-2-1-2-2 x MRC S1-191-2-1-5-B]-B-6-1x (22680-22692/S11))-5-6-1-5)-B-1-3-2
52	(ICMR 14333 x (((IP 12370-1-3 x B-Lines)-B-9-1-2-1-2-2 x MRC S1-191-2-1-5-B]-B-6-1x (22680-22692/S11))-5-6-1-5)-B-4-2-4
53	(ICMR 14333 x (((IP 12370-1-3 x B-Lines)-B-9-1-2-1-2-2 x MRC S1-191-2-1-5-B]-B-6-1x (22680-22692/S11))-5-6-1-5)-B-11-2-4
54	(ICMR 14333 x (((IP 12370-1-3 x B-Lines)-B-9-1-2-1-2-2 x MRC S1-191-2-1-5-B]-B-6-1x (22680-22692/S11))-5-6-1-5)-B-16-3-4
55	(ICMR 07444 x JBV 3 S1-18-2-2-1-3-2 x JBV 3 S1 -237-1-3-3-1-B-20 (long)-11-2)-B-3-4-2
56	(ICMR 11666 x (((IP 12370-1-3 x B-Lines)-B-9-1-2-1-2-2 x MRC S1-191-2-1-5-B]-B-6-1x (22680-22692/S11))-5-6-1-5)-B-21-1-4
57	IAC-ISC TCP5 S1-2-1-1-B-1-2-B-4-B
58	ICMR 10222 (Long Panicle Check)
59	ICMR 21555 (Thick Compact Panicle and Good seed Set Check)
60	ICMR 14888 (High Tillering Check)

CHAPTER I: BREEDING

Table 4: Pedigree of entries in drought tolerant restorer parent nursery (DTRPN) *kharif* - 2024

E. no.	Pedigree
1	(ICMB 97111 x PRLT 2/89-33)-5-1-1-1-B-2-3-B-B
2	(ICMB 97111 x PRLT 2/89-33)-7-4-1-1-2-2-4-B-B
3	(ICMB 04999 x PRLT 2/89-33)-3-5-1-1-1-1-4-B-B
4	HT Composite (B) 1184-1-4-5-3065-1-3-B-2184-1-B-1-B-3-3-B-B
5	HT Composite (B) 1171-1-3-4-3-4-5-B-2178-2-B-1-2-1-B-B
6	((EBC-S1-40-2-2-1 x B-bulk)-25-B-B X (SPF3/S91-933 x SPF3/S91-3)-8-1-1-B)-B-24-3-1-B-B-B-B
7	(ICMB 04999 X PRLT 2/89-33)-P1202-3-B-5-B-B-B-B-B
8	(ICMB 97111 x PRLT 2/89-33)-7-4-1-1-2-B-B-B-B
9	(ICMV 96490-S1-15-1-2-1-3-2-3-1-1x(MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-2-2-2 -G3-41)-B-16-1-4-B
10	((((MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-8-3-1-2-B-Bx (22720-22726/S11))-4-6-2-3 x (ICMR 312 S1-8-1-1-1-1-B-B-B-1-B x (20216-20249))-22-1-2-2-1-B)-B-3-2-1-3-B
11	((MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-34-4-2-B-Bx(R-lines bulk (22669-22675/S11))-5-1-1-3-B-B x [(MC 94 C2-S1-3-1-1-2-3-2-B-1-B-B-B x R-lines bulk 20216-20249/K09)]-12-3-B)-B-12-2-1-B-B
12	(ICTP 8202 S1-99-2-1-B-B x ICTP 8203-S1-10-2-1-2-B)-B-20-3-2-B-B
13	((((MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-8-3-1-2-B-BxR-lines bulk (22720-22726/S11))-7-6-4-2 x ICMR 13888)-B-9-2-1-2-B
14	(ICTP 8202 S1-99-2-1-B-B x ICTP 8203-S1-10-2-1-2-B)-B-20-3-1-B
15	(((((IP 12370-1-3 x B-Lines)-B-9-1-2-1-2-2 x MRC S1-191-2-1-5-B)-B-6-1x (22680-22692/S11))-10-6-1 x (15491-15506/S14)-9-1-2 x [MC 94 C2-S1-3-1-3-1-4-2-2-B-B-1 x (ICMV-IS 94206-7 x (SRC II C3 S1-1-1-2 x HHVBC)-1-3-3))-B-10-1-1-5-4-4-1(ICMV-IS 94206-7 x (SRC II C3 S1-1-1-2 x HHVBC)-1-3-3))-B-10-1-1-5-4-4-1]-B-5-4-4-3-B)-B-1-3-3-B-B
16	((((EERC-HS-29)-19-3 x [(MC 94 S1-34-1-B x HHVBC)-16-2-1] x (IP 19626-4-2-3))-B-1-1-2-3-2-B-1) X ((ICMS 7704-S1-127-5-1 x RCB-2 Tall)-B-19-3-2-1-1-1-B x (ICMR 11333) IAC-ISC TCP5 S1-2-1-1-B-1-2-B-4-B))-B-9-3-2-B
17	((((MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-8-3-1-2-B-Bx (22720-22726/S11))-1-1-1-1 x (AIMP 92901 S1-415-2-1-2-B-B-B-1-B x (20216-20249))-11-1-2-3-1-B)x(((MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-8-3-1-2-B-Bx (22720-22726/S11))-1-1-1-1 x A5 R-composite-Early-HS-123-1-1-2-2)-B-11-4-3-B-B
18	{ICMR 12555 X ((EERC-HS-8)-B-5-1-1-1 X PRLT 2/89-33)-P1698-2-B)-B-64-3-1-B
19	{ICMR 12555 X ((EERC-HS-8)-B-5-1-1-1 X PRLT 2/89-33)-P1698-2-B)-B-79-3-2-B
20	{ICMR 12555 X (PRLT 2/89-33 X RIB 3135/18)-P315-2-B)-B-43-1-3-B
21	{ICMR 12555 X (PRLT 2/89-33 X MRC S1-155-4-3-B-B-B-B-1-B-B-1)-P2175-3-B)-B-50-3-1-B
22	{ICMR 14888 X ((MRC S1-4-1-3-B-B-B-1x(20275-20291))-2-4-6-4 X PRLT 2/89-33)-P2399-3-B)-B-54-1-2-B
23	{ICMR 15222 X ((EERC-HS-6)-B-12-1-1-3-B X PRLT 2/89-33)-P2287-3-B)-B-16-2-2-B
24	{ICMR 12555 X ((MRC S1-4-1-3-B-B-B-1x(20275-20291))-2-4-6-4 X PRLT 2/89-33)-P2399-3-B)-B-8-2-1-B
25	{ICMR 12555 X (PRLT 2/89-33 X MRC S1-155-4-3-B-B-B-B-1-B-B-1)-P2038-1-B)-B-7-1-2-B
26	{ICMR 15222 X ((EERC-HS-23)-3-1-4 X PRLT 2/89-33)-P1500-3-B)-B-6-2-2-B
27	((((MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-8-3-1-2-B-BxR-lines bulk (22720-22726/S11))-7-6-4-2 x ICMR 13888)-B-12-1-1-1-B
28	(((((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-2-2-1-3-1xMS group R-line bulk (20216-20249))-1-2-1-8-1 x (EERC-HS-6)-B-4-2-3-3-B)-B-9-1-4-B

CHAPTER I: BREEDING

Table 4: Pedigree of entries in drought tolerant restorer parent nursery (DTRPN) *kharif* - 2024

E. no.	Pedigree
29	(((((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-2-2-1-3-1xMS group R-line bulk (20216-20249))-1-2-1-8-1 x (EERC-HS-6)-B-4-2-3-3-B)-B-17-1-2-B
30	{ICMR 12555 X ((EERC-HS-8)-B-5-1-1-1 X PRLT 2/89-33)-P1698-2-B}-B-16-4-1-B
31	{ICMR 14888 X ((MRC S1-4-1-3-B-B-B-1x(20275-20291))-2-4-6-4 X PRLT 2/89-33)-P2399-3-B}-B-18-4-2-B
32	{ICMR 14888 X (MRC S1-155-4-3-B-B-B-B-1-B-B X PRLT 2/89-33)-P1893-3-B}-B-35-2-2-B
33	(((((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-2-2-1-3-1xMS group R-line bulk (20216-20249))-1-2-1-8-1 x (EERC-HS-6)-B-4-2-3-3-B)-8-2-1-B-B
34	(((((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-2-2-1-3-1xMS group R-line bulk (20216-20249))-1-2-1-8-1 x (EERC-HS-6)-B-4-2-3-3-B)-B-9-1-2-B-B
35	(((((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-2-2-1-3-1xMS group R-line bulk (20216-20249))-1-2-1-8-1 x (EERC-HS-6)-B-4-2-3-3-B)-B-12-2-4-B-B
36	(((((MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3))-B-2-2-1-3-1xMS group R-line bulk (20216-20249))-1-2-1-8-1 x (EERC-HS-6)-B-4-2-3-3-B)-B-13-5-2-B-B
37	{ICMR 12555 X ((EERC-HS-8)-B-5-1-1-1 X PRLT 2/89-33)-P1698-2-B}-B-64-3-1-B-B
38	{ICMR 12555 X ((EERC-HS-8)-B-5-1-1-1 X PRLT 2/89-33)-P1698-2-B}-B-94-3-4-B-B
39	{ICMR 12555 X (PRLT 2/89-33 X RIB 3135/18)-P315-2-B}-B-38-1-1-B-B
40	{ICMR 12555 X (PRLT 2/89-33 X RIB 3135/18)-P315-2-B}-B-43-1-1-B-B
41	{ICMR 12555 X (PRLT 2/89-33 X RIB 3135/18)-P315-2-B}-B-43-1-3-B-B
42	{ICMR 14888 X ((EERC-HS-23)-3-1-4 X PRLT 2/89-33)-P1584-1-B}-B-58-3-3-B-B
43	{ICMR 14888 X (PRLT 2/89-33 X RIB 3135/18)-P130-3-B}-B-71-4-2-B-B
44	{ICMR 14888 X (PRLT 2/89-33 X MRC S1-155-4-3-B-B-B-B-1-B-B-1)-P2038-1-B}-B-39-2-1-B-B
45	{ICMR 15222 X ((EERC-HS-6)-B-12-1-1-3-B X PRLT 2/89-33)-P2287-3-B}-B-16-2-2-B-B
46	{ICMR 12555 X ((MRC S1-4-1-3-B-B-B-1x(20275-20291))-2-4-6-4 X PRLT 2/89-33)-P2399-3-B}-B-8-3-3-B-B
47	{ICMR 12555 X (PRLT 2/89-33 X RIB 3135/18)-P130-3-B}-B-14-4-1-B-B
48	{ICMR 12555 X (PRLT 2/89-33 X MRC S1-155-4-3-B-B-B-B-1-B-B-1)-P2038-1-B}-B-7-1-1-B-B
49	PRLT 2/89-33 (Check)
50	H77/833-2 (Check)

CHAPTER I: BREEDING

Table 5: Pedigree of entries in blast resistant B & R line nursery (BRB&RLN) *kharif* - 2024

E. no.	Pedigree
1	{[(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6-3-2-5-B] X [(ICMB 03777 x {(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-3-1)-21-4-4-1-4}]-3-5-3}
2	{[(ICMB 95111 x (ICMB 96555 x IP 10437)-3]-7-2-1-B-2-15-1] x B-bulk (3981-3989/S06 G1)}-3-2-4-B x ICMB 08999)-13] X [(ICMB 01333 x HHVDBC HS-10-1-2-1-1-1-3-B)-2-1-3-2-4]-B-6-4-2
3	{[(MC 94 S1-34-1-B x HHVBC)-10-4-3-2-2-B-B-2 x (ICMR 312 S1-1-5-3-B x HHVBC)-7-1-1-1-B-B-B]-21-B-1-4-1-2-1 x [(81B x 4017-6-1-1)-3-1-4-3-4-1-2-1-B-2-2 x ICMB 05888]x (HHVDBC Medium HS-120-1-2-1-1-1-1 x HHVDBC Medium HS-15-1-1-1-2-2-4)-19-2-5-3]-9-1-1-1-1-B
4	(ICMB 97111 x PRLT 2/89-33)-7-2-1-1-B
5	{[(81B x 4017-6-1-1)-3-1-4-3-4-1-2-1-B-2-2 x ICMB 05888]x[(ICMB 96111 x 4017-5-3-B)-4-2-1-5-B-2-B-3-B-1-B x ICMB 05888]-2-5-2-4
6	(ICMB 04999 x ICMB 92777)-9-5-1
7	EEBC S1-407-1-B-B-B-B-2-1-B-2-B-B-2-1-B-BxEarly D2/Med group lines x med maturity lines bulk (1301-28)-7-2-2
8	{[(NC D2 BC7F4-34-3-1-2-B-2-B x EEBC 407)-12-1-2-3x EEDBC S1-2-1-1-1-1-1-1-B-B-1-4-B-B]-26-1-1-3
9	{[(MC 94 S1-67-1-B x HHVBC)-17-2-2-1-2-B-B-B-B-2-1-2 x [(DMR 133 x HTBC 48-B-1-1-1-5)-19-2-B-B x ICMB 04111]-145-1-2-3)-3-6-B-1
10	{[(EEBC S1-407-1-B-B-B-B-1-B-1-B-5-1x 3981-3989 G1)-2-1-1x(EEDBC S1-109-1-4-2-1-B-B-B-1-1x 3981-3989 G1)-4-2-6]-4-1-1-B
11	{[(ICMB 95111 x (ICMB 96555 x IP 10437)-3]-54-2-B-B-B-B-B x (HHVDBC HS-246-1-2-1-2 x ICMB 98444)-4-3-2-1)-7-8
12	[PE 05532 Super sosat X ICMB 08666]-3-2-1-2-3-3-B-B
13	[ICMB 11222 X PE 05532 Super sosat]-17-3-1-6-1-B-B-B
14	(ICMB 04999 X PRLT 2/89-33)-P1202-1-B-B-2-2-B-B
15	(Thorny composite-HS-S2-B-14-4-3 x HHVBC tall (C1) S1-33-3-1-1-1-2-B-B-3-3-1-7)-B-6-2-1-1
16	{[MRC HS-130-2-2-1-B-B-3-B-B-B-1-3-1 X {[(IP 12322-1-2)x B-Lines)-B-14] x (MRC S1-156-2-1-B)]-B-1-3-3-B}x(GB 8735-S1-15-3-1-1-3-4-2-2-2-1)-B-11-5-1-1-1]-20-1-B X {[(MC 94 S1-34-1-B x HHVBC)-16-2-1] x (IP 19626-4-2-3)]-B-28-3-4-3-1}x(RCB2 S1-19-2-5-1-1-2-3-3-B)-B-5-P1-3]-B-1-3-3-1-B
17	{[(IPC 337xSDMV 90031-S1-84-1-1-1-1)xSDMV 95045 S1-7-2-4-2-3-2-2-2-1]-P1-1-4 x (ICMS 8506 S1-4-2-2-2-3-3-1-2-3-3-B-4-x20265x(20259-20274))-1-1-1-2-1-B)-B-4-2-1-B-B
18	ICMV 91059 S1-4-2-3-2-1-1-4-B-1-3-B-3
19	{[(MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-8-3-1-2-B-BxR-lines bulk (22720-22726/S11))-7-6-4-2 x ICMR 13888)-B-3-1-1-1-B
20	{ICMR 1202 X ICMR 08111}-B-1-2
21	{[(MC 94 S1-34-1-B x HHVBC)-16-2-1] x (IP 19626-4-2-3)]-B-28-3-3-3-2}x(MRC HS 225-3-5-2-B-B-B-B)-B-7-4-4 X [ICMR 12555 x ICMV 221 S1 - 366-1]-2-12-1)-B-1-2-3
22	{[(MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-22-2-3-3-B-BxR-lines bulk (22680-22692/S11))-9-7-1-1-B X AIMP 92901]-B-1-3-1
23	{[(MC 94 S1-34-1-B x HHVBC)-16-2-1] x (IP 19626-4-2-3)]-B-18-2-3-2-2-BxAIMP 92901 S1-296-2-1-1-2-2)-B-25-4x(R-lines bulk (22669-22675/S11))-3-1-1-2-3-2-B X (EERC-HS-23)-B-3-1-2-4-B]-B-5-B
24	{[(MC 94 S1-34-1-B x HHVBC)-16-2-1] x (IP 19626-4-2-3)]-B-28-3-3-3-2}x(MRC HS 225-3-5-2-B-B-B-B)-B-7-4-1-3-B-B-B X {[(MC 94 S1-34-1-B x HHVBC)-16-2-1] x (IP 19626-4-2-3)]-B-28-2-2-3-1-2 x ICMR 312 S1-3-2-3-2-1-1-B-B-B-B)-B-4 x {[(MC 94 S1-34-1-B x HHVBC)-16-2-1] x (IP 19626-4-2-3)]-B-28-3-4-3-1} x {RCB2 S1-19-2-5-1-1-2-3-3-B)-B-5-P1-2)-2-4-4]-B-3-B

CHAPTER I: BREEDING

Table 5: Pedigree of entries in blast resistant B & R line nursery (BRB&RLN) *kharif* - 2024

E. no.	Pedigree
25	[[[(MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3)]-B-18-2-3-2-2-BxAIMP 92901 S1-296-2-1-1-2-2]-B-25-4x(R-lines bulk (22669-22675/S11)-3-1-1-2-3-2-B X [[[(MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3)]-B-28-2-2-3-1-2 x ICMR 312 S1-3-2-3-2-1-1-B-B-B-B]-B-4 x [(MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3)]-B-28-3-4-3-1} x {RCB2 S1-19-2-5-1-1-2-3-3-B}-B-5-P1-2)-2-4-4]-B-5-B
26	[MC 94 C2-S1-3-1-1-2-1-1-B-2-3-B-B X (ICMV 96490-S1-15-1-2-1-3-2x[[[(MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3)]-B-28-2-2-3-1-2xICMR 312 S1-3-2-3-2-1-1-B-B-B-B]-B-17)-4-4-3]-B-14-B
27	[[[(MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3)]-B-34-1-3-3-1-1-B-2-B X (ICMV 96490-S1-15-1-2-1-3-2x[[[(MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3)]-B-28-2-2-3-1-2xICMR 312 S1-3-2-3-2-1-1-B-B-B-B]-B-17)-4-4-3]-B-11-B
28	[[[(MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3)]-B-34-1-3-3-1-1-B-2-B X (ICMV 96490-S1-15-1-2-1-3-2x[[[(MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3)]-B-28-2-2-3-1-2xICMR 312 S1-3-2-3-2-1-1-B-B-B-B]-B-17)-4-4-3]-B-17-B
29	[[[(MRC S1-156-1-1-1-B-3-B-B-B-8-1-1) X ((MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-34-1-1)-21-3-1-1-B-B X (ICMV 96490-S1-15-1-2-1-3-2x[[[(MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3)]-B-28-2-2-3-1-2xICMR 312 S1-3-2-3-2-1-1-B-B-B-B]-B-17)-4-4-3]-B-7-B
30	[MC 94 C2-S1-3-1-1-2-1-1-B-2-3-B-B X ((ICMS 7704-S1-127-5-1 x RCB-2 Tall)-B-19-3-4-5-3 x DM/Blast R-Composte-HS(Early)-S1-1-1-2-4)-7-2 -B]-B-1-B
31	[MC 94 C2-S1-3-1-1-2-1-1-B-2-3-B-B X ((ICMS 7704-S1-127-5-1 x RCB-2 Tall)-B-19-3-4-5-3 x DM/Blast R-Composte-HS(Early)-S1-1-1-2-4)-7-2 -B]-B-11-B
32	[[[(MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3)]-B-34-1-3-3-1-1-B-2-B X ((ICMS 7704-S1-127-5-1 x RCB-2 Tall)-B-19-3-4-5-3 x DM/Blast R-Composte-HS(Early)-S1-1-1-2-4)-7-2 -B]-B-1-B
33	[[[(MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3)]-B-28-3-3-3-2}x{MRC HS 225-3-5-2-B-B-B-B]-B-7-4-1-3-B-B-B X ((MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-2-2-3) X (LaGrap C2-S1-14-4-3-1-1-2)-27-1-1-3]-B-14-B
34	ICMB 95444 (Susceptible Check)
35	ICMR 06666 (Resistance Check)

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Table 6: Pedigree of entries in elite joint biofortification nursery (EJBFN) *kharif* - 2024

E. no.	Pedigree
1	{[(ICMB 94333 x ICMB 01222)-47-1-B-B-B-B X DMR1 S2-52-4-1-1-B)-1-3]} X {[(ICMB 99444xICMB 99222)-1-4-2-4-3 x {(EEDBC S1-425-2-1-2-3-B-2-2-4 x NCD2S1-20-7-2-4-1-4-2-3) x (HHVDBC Medium HS-120-1-2-1-1-1 x HHVDBC Medium HS-15-1-1-1-2-2-4)}-14-1-2-4]-6-2}]-B-3-4-B
2	{[(B x B) F2 S1-109-2-3-3-1-4-2 X (ICMB 01666 x ICMB 01222)-27-3-B-3)-1-2-2]} X {[(ICMB 99444xICMB 99222)-1-4-2-4-3 x {(EEDBC S1-425-2-1-2-3-B-2-2-4 x NCD2S1-20-7-2-4-1-4-2-3) x (HHVDBC Medium HS-120-1-2-1-1-1 x HHVDBC Medium HS-15-1-1-1-2-2-4)}-14-1-2-4]-6-2}]-B-7-2-2
3	{[(ICMB 94333 x ICMB 01222)-47-1-B-B-B-B X DMR1 S2-52-4-1-1-B)-1-3]} X {[(ICMR 312 S1-1-5-2-B x HHVBC)-10-2-1-2-3-B x HHVDBC HS-158-2-1-2-1-1-B]-9-2-3-1) x [(ICMB 99444xICMB 99222)-1-4-4-2-2-3-2-3)-7}]-B-3-2-5
4	{[(ICMB 94333 x ICMB 01222)-47-1-B-B-B-B X ((843B x ICMP5 900-9-3-2-2)-41-2-5-5 S2-34-1-2-3 x B-line bulk)-8-B-B-1-B-B-B-1 x (ICMB 01666xICMB)01222)-12-2-B-1-B-P1)-4-1-2-3-B)-1-1]} X {[(ICMB 99444xICMB 99222)-1-4-4-2-2-3-2-1-2-11-2-B}]-B-6-1-B
5	{[(ICMB 01888 x ICMB 01222)-15-2-B-2-3 X (ICMB 01666 x ICMB 01222)-27-3-B-3)-1-10-4]} X {[(ICMB 99444xICMB 99222)-1-4-4-2-2-3-2-1-2-11-2-B}]-B-17-1-B
6	{[(ICMB 14222)] X {[(AIMP 92901-S1-183-2-2-B-P08 X {(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6)-16-1}]-B-19-1-5
7	{[(ICMB 14222)] X {[(AIMP 92901-S1-183-2-2-B-P08 X {(MC 94 S1-34-1-B x HHVBC)-16-2-1-1-1-1-B-B-5 x (MC 94 S1-34-1-B x HHVBC)-10-4-1-2-1-B-B-1-30-2-4-2-6)-16-1}]-B-24-2-B
8	{[(ICMB 17555)] X {[(ICMB 93333 x ICMB 01222)-20-2-B-5-B-1-B-2) x [(NC D2 BC7F4-34-3-1-2-B-2-B x EEBC 407)-12-1-2-3xEEDBC S1-2-1-1-1-1-1-B-B-1-4-B-B]-19-3-1-2)-45-B-B}]-B-1-4-2
9	{[(ICMB 18444)] X {[(ICMB 96555 x IP 10437)-9-B-B-B-B-B x IP 14758-2-2)-19-1-B x (ICMB 96555 x IP 10437)-3-4-1-2-2-1-B-2-B-3)-1-1-1-1-1]} X [(MC 94 S1-34-1-B x HHVBC)-16-1-3-1-2-2-B-B-2-B-B x ICMB 00444]-14-5-1-1xEarly D2/Med group lines x med maturity lines bulk (1301-28)-3-2-1)-8-1-2}]-B-21-2-B
10	{[(78-7088/3/SER3 AD/B282/(3/4)EB x PBLN/S95-359)-7-4-B-B-6-1-B-1-B-1-B-B-B X HHVDBC HS-120-1-2-1-1-3-B-4)-2-1-3]} X {[(ICMB 04999 x ICTP 8203 S1-250-3)-1-11-2-B}]-B-9-3-3
11	{[(78-7088/3/SER3 AD/B282/(3/4)EB x PBLN/S95-359)-7-4-B-B-6-1-B-1-B-1-B-B-B X HHVDBC HS-120-1-2-1-1-3-B-4)-2-1-3]} X {[(ICMR 312 S1-1-5-2-B x HHVBC)-10-2-1-2-3-B x HHVDBC HS-158-2-1-2-1-1-B]-9-2-3-1) x [(ICMB 99444xICMB 99222)-1-4-4-2-2-3-2-3)-9}]-B-9-3-B
12	{[(HHVBC S1-16-6-3-5-2-B X [(ICMV 88908-11-12-3-2-B x B-bulk)-8-B-3 x {(843B x ICMP5 900-9-3-2-2)-41-2-5-5 S2-34-1-2-1-1 x B-bulk)-5-B-B]-11-1-1-B-B x ICMB 04111]-67-5-2-1)-1-7]} X {[(ICMB 04999 x ICTP 8203 S1-250-3)-1-11-2-B}]-B-3-2-B
13	{[(IC-CZBC-C0-1-6-3-3-B X [(81B x 4017-6-1-1)-3-1-4-3-4-1-2-1-B-2-2 x ICMB 05888)x (HHVDBC Medium HS-120-1-2-1-1-1-1 x HHVDBC Medium HS-15-1-1-1-2-2-4)-21-2-1-3-1-15-4]} X {[(ICMB 12111)]-B-15-2-1
14	{[A1 Thick panicle B-comp HS-176-2-1-4]} X [(NC D2 S1-17-2-1-1-2-2-B-4}]-B-1-3-3
15	{[A1 Thick panicle B-comp HS-176-2-1-4]} X [(D2BLN/95-103 x EEBC C1-3)-6-B-B}]-B-2-3-2
16	{[A1 Thick panicle B-comp HS-176-2-1-4]} X [(ARD-288-1-10-1-2 (RM)-5-P1-A x 40258/S14-P11)-5-3-4-3}]-B-6-2-2
17	HiFeD2B comp 1701-S0-16-2-2
18	HiFeD2B comp 1701-S0-33-1-3
19	HiFeD2B comp 1701-S0-54-5-3
20	{[(ICMB 06111xICMB 98222)-6-4-2-1-1-4 x {(EEDBC S1-425-2-1-2-3-B-2-2-4 x NCD2S1-20-7-2-4-1-4-2-3) x (HHVDBC Medium HS-120-1-2-1-1-1-1 x HHVDBC Medium HS-15-1-1-1-2-2-4)}-14-1-2-4]-4-3-2]} X {[(ICMB 96555 x IP 10437)-9-B-B-B-B-B x IP 14758-2-2)-19-1-B x (ICMB 96555 x IP 10437)-3-4-1-2-2-1-B-2-B-3)-1-1-1-1-1]} X {[(ICMB 96555 x IP 10437)-9-B-B-B-B-B x IP 14758-2-2)-19-1-B x (ICMB 96555 x IP 10437)-3-4-1-2-2-1-B-2-B-3)-3-3-2-1-4]-3-2-2}]-B-6-2-B
21	{ICMR 1201 X ICMR 11003}-B-7-1-4-B-B
22	{AIMP 92901 S1-415-2-1-2-B-B-B-1-B x (20216-20249/K09))-11-1-2-3-1-B X AIMP 92901}-B-15-3-2-B
23	{ICMR 1505 X ICMR 08111}-B-2-1

CHAPTER I: BREEDING

Table 6: Pedigree of entries in elite joint biofortification nursery (EJBFN) kharif - 2024

E. no.	Pedigree
24	(ICMR 1801 X ICMR 08111)-B-9-4
25	(ICMR 1802 X ICMR 08111)-B-13-3
26	(ICMR 1802 X ICMR 12222)-B-4-4
27	(ICMR 1804 X ICMR 08111)-B-16-1
28	(ICMR 1804 X ICMR 08111)-B-25-2
29	(ICMR 1805 X ICMR 08111)-B-5-3
30	(ICMR 1805 X ICMR 08111)-B-6-2
31	(ICMR 1809 X ICMR 10888)-B-22-2
32	(ICMR 1809 X ICMR 10888)-B-22-3
33	[(MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3)]-B-28-3-4-3-1}x(RCB2 S1-19-2-5-1-1-2-3-3-B)-B-5-P1-5) X AIMP 92901-S1-183-2-2-B-P08-B)-8-1-1-B X ((EERC-HS-24)-B-2-3-2-1) x (ICMV 96490-S1-15-1-2-1-1))-3-2-1-1-1-B]-B-3-B
34	[(AIMP 92901 S1-15-1-2-3-B-2-B-13-3-1 X ICMR 12555)-19-2-B X ((EERC-HS-24)-B-2-3-2-1) x (ICMV 96490-S1-15-1-2-1-1))-3-2-1-1-1-B]-B-7-B
35	[(AIMP 92901 S1-15-1-2-3-B-2-B-13-3-1 X ICMR 12555)-19-2-B X ((EERC-HS-24)-B-2-3-2-1) x (ICMV 96490-S1-15-1-2-1-1))-3-2-1-1-1-B]-B-13-B
36	[[(AIMP 92901 S1-296-2-1-1-1-B-B-6-B-B) X ((MC 94 C2-S1-3-2-2-2-1-3-B-B x AIMP 92901 S1-488-2-1-1-4-B-B)-B-2-2-2)-6-3-1-4-1-B X ((EERC-HS-24)-B-2-3-2-1) x (ICMV 96490-S1-15-1-2-1-1))-3-2-1-1-1-B]-B-17-B
37	[AIMP 92901 S1-296-2-1-1-4-2-B-12-5-1-3-B-B X ((EERC-HS-24)-B-2-3-2-1) x (ICMV 96490-S1-15-1-2-1-1))-3-2-1-1-1-B]-B-15-B
38	[(ICMV 96490-S1-15-1-2-1-3-2 x {[(MC 94 S1-34-1-B x HHVBC)-16-2-1) x (IP 19626-4-2-3)]-B-28-2-2-3-1-2 x ICMR 312 S1-3-2-3-2-1-1-B-B-B)-B-17)-15-1-2-B X ((EERC-HS-24)-B-2-3-2-1) x (ICMV 96490-S1-15-1-2-1-1))-3-2-1-1-1-B]-B-1-B
39	[[(MC 94 C2-S1-3-2-2-2-1-3-B-B x ICMR 312 S1-3-2-3-2-1-1-B-B)-B-34-4-1 X JBV 3 S1 -237-1-3-3-1-B]-2-2-1-2 X ((EERC-HS-24)-B-2-3-2-1) x (ICMV 96490-S1-15-1-2-1-1))-3-2-1-1-1-B]-B-17-B
40	{HiFeRC-1401 (HS)-4}-1-3-2-1-3
41	{HiFeRC-1401 (HS)-122}-1-2-2-2-1
42	{HiFeRC-1401 (HS)-4}-1-3-2-1-3-B
43	ICMB 98222 (High Fe Check)
44	ICMB 92111 (Low Fe Check)
45	ICMR 1202 (High Fe Check)
46	150-SB-24
47	229-SB-24
48	217-SB-24
49	159-SB-24
50	171-SB-24
51	J-2553
52	JMSB 202211
53	JMSB 20216
54	JMSB 20213
55	JMSB 20202
56	MIR 1269
57	MIR 1374
58	MIR 1406
59	MIR 1410
60	MIR 1808

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Table 7: Potential B-line nursery, across three locations- Aurangabad, Dhule and Jamnagar. (for Pedigree of entries see table 2).

Plot size: 1 row x 4 m x 2 reps.

E. no.	ABD							DHL							JMR							Grand Mean								
	DF	PH	HL	HD	ETPP	BS	AS	DF	PH	HL	HD	ETPP	SG	BS	AS	DF	PH	HL	HD	ETPP	BS	AS	DF	PH	HL	HD	ETPP	SG	BS	AS
1	70	68	20	2.6	1.5	3.5	3.5	67	91	21	1.0	1.0	-	6.0	2.0	62	103	18	3.0	3.0	0.5	1.0	66	87	20	2.2	1.8	-	3.3	2.2
2	66	60	20	2.7	1.8	2.5	3.0	76	100	19	0.8	1.0	3.0	3.0	1.5	59	126	23	2.6	4.5	1.5	2.0	67	95	21	2.0	2.4	3.0	2.3	2.2
3	70	72	17	2.6	1.0	2.0	3.5	73	79	18	0.9	1.0	3.0	4.5	1.5	68	116	20	2.4	2.5	1.0	2.5	70	89	18	2.0	1.5	3.0	2.5	2.5
4	70	58	19	2.5	1.3	3.5	3.5	77	106	21	0.9	2.0	3.0	4.0	1.5	63	95	19	3.0	3.0	0.5	3.0	70	86	20	2.1	2.1	3.0	2.7	2.7
5	67	62	15	2.2	1.0	3.0	2.0	71	111	29	1.1	3.0	3.0	4.0	1.0	64	120	19	2.9	3.0	1.0	2.0	67	98	21	2.1	2.3	3.0	2.7	1.7
6	68	62	16	2.3	1.5	4.0	3.0	73	105	23	1.0	2.0	3.0	4.5	1.5	57	100	18	4.6	2.5	2.0	2.0	66	89	19	2.6	2.0	3.0	3.5	2.2
7	67	59	13	2.2	1.3	3.5	3.0	66	88	22	0.9	1.5	3.0	6.5	1.5	57	119	17	3.0	2.0	2.5	1.0	63	89	17	2.0	1.6	3.0	4.2	1.8
8	67	62	15	2.4	1.5	3.0	3.0	73	98	21	0.7	2.0	3.0	4.0	1.0	64	100	22	3.0	2.5	0.5	1.5	68	87	19	2.0	2.0	3.0	2.5	1.8
9	66	57	17	2.6	1.5	2.5	4.0	69	85	19	0.9	2.5	3.0	6.5	1.5	60	95	19	3.0	3.0	1.5	1.0	65	79	18	2.2	2.3	3.0	3.5	2.2
10	66	68	20	2.3	1.5	3.5	4.0	71	103	21	1.0	2.0	3.0	3.0	1.5	68	101	24	3.0	2.0	0.5	2.0	68	91	22	2.1	1.8	3.0	2.3	2.5
11	69	66	17	2.5	1.0	3.0	3.5	66	103	22	1.0	3.0	3.0	3.0	1.5	67	90	21	3.0	2.5	1.0	2.0	67	86	20	2.2	2.2	3.0	2.3	2.3
12	67	57	22	2.6	1.3	4.5	3.0	70	88	14	0.7	1.0	3.0	7.0	1.5	62	118	26	3.0	3.0	1.0	2.0	66	88	21	2.1	1.8	3.0	4.2	2.2
13	67	82	15	2.3	1.0	4.0	2.0	68	122	25	1.0	1.5	3.0	4.0	1.0	59	122	19	2.8	2.5	1.5	1.0	65	109	20	2.0	1.7	3.0	3.2	1.3
14	69	68	19	2.2	1.8	2.0	3.5	79	76	18	0.8	1.0	3.0	2.0	1.5	63	132	21	3.0	2.0	2.0	2.5	70	92	19	2.0	1.6	3.0	2.0	2.5
15	69	63	23	2.2	1.3	2.5	3.0	65	97	18	0.8	2.0	3.0	2.0	2.0	59	121	34	2.5	2.5	0.5	2.0	64	94	25	1.8	1.9	3.0	1.7	2.3
16	71	64	22	2.1	1.3	2.5	2.5	66	121	23	1.0	1.5	-	7.5	1.5	60	152	29	2.6	2.0	1.0	3.0	66	112	25	1.9	1.6	-	3.7	2.3
17	68	64	19	2.3	1.0	4.0	3.0	72	85	20	0.8	2.0	-	7.0	1.0	59	113	20	3.0	2.0	1.5	1.0	66	87	20	2.0	1.7	-	4.2	1.7
18	69	87	16	2.3	1.5	4.5	3.0	69	100	16	0.8	1.0	3.0	5.5	2.0	64	117	19	3.0	3.5	2.0	2.0	67	101	17	2.0	2.0	3.0	4.0	2.3
19	67	68	20	2.3	1.3	6.0	3.0	65	90	14	0.8	2.0	3.0	7.0	2.0	57	111	24	3.0	3.0	0.5	2.0	63	90	19	2.0	2.1	3.0	4.5	2.3
20	67	59	22	1.9	1.0	4.5	2.0	69	91	27	0.9	2.0	3.0	2.5	2.5	57	143	27	3.0	2.0	0.5	1.0	64	98	25	1.9	1.7	3.0	2.5	1.8
21	67	74	17	2.8	1.8	2.0	4.0	71	88	17	0.9	2.5	3.0	3.5	1.0	66	120	18	3.2	2.0	1.0	2.0	68	94	17	2.3	2.1	3.0	2.2	2.3
22	64	67	20	2	1.8	4.5	3.0	69	120	23	0.9	2.0	3.0	1.5	2.0	62	100	26	3.0	2.5	0.5	2.0	65	96	23	2.0	2.1	3.0	2.2	2.3
23	67	62	20	2.2	1.5	3.0	4.0	65	105	16	0.8	2.5	3.0	3.5	1.0	63	97	20	3.0	2.0	1.5	2.0	65	88	19	2.0	2.0	3.0	2.7	2.3
24	69	62	14	2.4	1.3	5.0	3.5	62	102	27	1.0	2.0	3.0	6.5	1.0	59	101	14	2.9	2.5	2.0	1.0	63	88	18	2.1	1.9	3.0	4.5	1.8
25	71	67	15	1.9	1.3	3.5	3.0	78	91	18	1.0	1.5	3.0	2.0	1.5	70	116	17	2.3	2.0	1.5	1.0	73	91	17	1.7	1.6	3.0	2.3	1.8
26	72	78	22	2.4	1.0	2.0	3.0	75	101	19	0.8	1.0	3.0	2.5	1.0	66	97	25	2.7	3.0	1.0	2.0	71	92	22	2.0	1.7	3.0	1.8	2.0
27	68	68	16	2.2	1.5	1.0	4.0	67	96	18	0.9	1.5	3.0	1.0	1.5	62	121	18	3.0	2.5	1.5	2.0	66	95	17	2.0	1.8	3.0	1.2	2.5
28	68	77	17	2.3	1.8	3.5	3.0	72	99	20	1.0	1.0	3.0	4.5	1.5	61	110	20	2.0	3.5	1.5	1.0	67	95	19	1.8	2.1	3.0	3.2	1.8
29	69	72	11	2.2	1.0	6.0	3.0	69	102	25	1.0	1.5	3.0	3.0	1.0	59	93	17	2.6	2.5	2.0	1.5	66	89	18	1.9	1.7	3.0	3.7	1.8
30	68	68	21	2.2	1.0	3.0	3.0	73	94	22	0.9	2.5	3.0	6.0	1.5	58	114	21	3.0	2.5	2.0	2.0	66	92	21	2.0	2.0	3.0	3.7	2.2

CHAPTER I: BREEDING

Table 7: Potential B-line nursery, across three locations- Aurangabad, Dhule and Jamnagar. (for Pedigree of entries see table 2).

Plot size: 1 row x 4 m x 2 reps.

E. no.	ABD							DHL							JMR							Grand Mean								
	DF	PH	HL	HD	ETPP	BS	AS	DF	PH	HL	HD	ETPP	SG	BS	AS	DF	PH	HL	HD	ETPP	BS	AS	DF	PH	HL	HD	ETPP	SG	BS	AS
31	66	58	14	2.3	1.0	4.5	3.0	64	101	17	0.8	2.0	3.0	4.5	2.0	56	104	18	3.0	2.0	0.5	2.0	62	88	16	2.0	1.7	3.0	3.2	2.3
32	67	63	13	1.8	1.0	1.0	3.0	71	99	23	0.9	2.0	-	4.5	1.0	66	96	17	2.0	3.5	0.5	1.0	68	86	18	1.6	2.2	-	2.0	1.7
33	69	67	21	2.4	1.5	5.0	3.0	72	106	29	1.0	2.0	3.0	6.5	1.0	60	110	22	2.9	3.5	2.0	1.0	67	94	24	2.1	2.3	3.0	4.5	1.7
34	70	68	21	2.3	1.0	3.5	3.5	68	110	23	1.0	3.0	-	4.5	2.5	60	97	17	3.0	2.5	1.0	1.0	66	92	20	2.1	2.2	-	3.0	2.3
35	70	51	17	2.5	1.0	4.5	2.0	74	105	17	0.8	2.0	3.0	6.0	1.0	62	91	18	3.0	3.0	2.0	1.0	69	82	17	2.1	2.0	3.0	4.2	1.3
36	70	77	17	2.3	1.3	3.0	3.0	72	113	20	0.9	1.0	3.0	6.0	1.0	58	117	21	2.8	4.0	3.0	3.0	67	102	19	2.0	2.1	3.0	4.0	2.3
37	68	59	19	1.9	1.5	4.0	3.0	72	119	25	1.0	1.5	3.0	3.0	1.0	60	97	20	2.0	2.0	1.5	1.0	67	92	21	1.6	1.7	3.0	2.8	1.7
38	69	60	18	2	1.3	2.5	3.5	69	91	17	0.7	2.0	3.0	5.5	1.0	56	102	18	2.0	2.5	1.5	1.0	65	84	18	1.6	1.9	3.0	3.2	1.8
39	69	62	15	2.5	1.0	1.0	2.5	76	106	21	0.9	1.0	-	5.0	1.0	62	88	19	2.7	2.0	1.5	2.0	69	85	18	2.0	1.3	-	2.5	1.8
40	67	43	17	2.5	1.5	1.0	3.0	72	113	20	1.0	2.0	3.0	3.5	1.5	64	106	19	3.0	3.0	2.0	1.0	68	87	19	2.2	2.2	3.0	2.2	1.8
41	68	58	14	2	1.3	4.5	2.5	71	89	20	0.9	2.0	3.0	2.5	1.5	58	93	22	3.0	3.0	2.5	1.5	66	80	19	2.0	2.1	3.0	3.2	1.8
42	66	63	15	2.1	1.0	3.0	4.0	66	86	21	0.8	2.0	3.0	3.0	1.0	54	85	17	2.0	2.5	5.0	1.0	62	78	18	1.6	1.8	3.0	3.7	2.0
43	69	52	12	2.2	1.0	5.0	3.0	70	101	24	0.9	1.0	-	7.0	1.0	60	79	15	3.0	3.0	1.0	1.0	66	77	17	2.0	1.7	-	4.3	1.7
44	69	77	20	2.2	1.5	1.5	3.0	75	100	21	1.0	1.5	-	5.5	1.0	65	88	20	3.0	3.0	1.0	2.0	70	88	20	2.1	2.0	-	2.7	2.0
45	67	82	21	2.3	1.0	2.0	3.0	75	92	17	0.7	1.5	3.0	7.0	1.0	63	102	24	3.0	3.0	0.5	2.0	68	92	21	2.0	1.8	3.0	3.2	2.0
46	70	77	24	2.2	1.8	3.0	3.5	63	93	25	0.8	1.5	3.0	4.0	1.0	62	105	28	2.0	2.0	1.5	1.0	65	92	26	1.7	1.8	3.0	2.8	1.8
47	67	72	20	1.9	1.0	4.0	3.0	76	110	19	0.7	2.0	3.0	4.5	1.0	69	102	23	2.8	3.0	1.0	2.0	71	95	21	1.8	2.0	3.0	3.2	2.0
48	70	72	15	2.1	1.5	2.0	3.0	72	97	27	0.9	2.0	-	5.5	1.5	64	117	14	2.7	3.5	3.0	2.0	69	95	19	1.9	2.3	-	3.5	2.2
49	69	86	17	2.6	1.8	3.5	3.0	69	122	19	1.1	1.5	3.0	7.0	1.5	59	108	16	3.0	2.5	1.5	2.0	66	105	17	2.2	1.9	3.0	4.0	2.2
50	69	64	20	2.5	1.3	1.5	3.5	85	91	20	1.0	1.0	3.0	5.0	1.0	65	108	21	3.0	3.0	0.5	1.0	73	88	20	2.2	1.8	3.0	2.3	1.8
51	69	90	20	2.9	1.8	2.0	4.5	81	99	20	1.0	1.0	3.0	2.5	1.0	57	128	23	2.7	2.0	1.0	2.0	69	106	21	2.2	1.6	3.0	1.8	2.5
52	68	89	21	2.8	1.8	1.5	3.0	74	117	20	1.0	1.5	3.0	2.0	1.0	70	142	22	3.0	3.0	1.0	4.0	71	116	21	2.3	2.1	3.0	1.5	2.7
53	66	58	16	2.1	1.3	3.5	2.5	74	89	23	1.0	1.0	3.0	1.5	1.0	64	98	17	2.4	2.0	2.5	1.0	68	82	19	1.8	1.4	3.0	2.5	1.5
54	72	72	21	2.6	1.0	-	2.0	74	98	22	0.9	1.0	3.0	3.0	1.5	69	103	19	3.0	2.5	1.0	2.0	72	91	21	2.2	1.5	3.0	2.0	1.8
55	69	120	20	2.2	1.0	2.0	2.5	65	97	20	1.0	1.5	3.0	3.0	1.5	59	158	21	2.9	3.5	0.5	1.0	64	125	20	2.0	2.0	3.0	1.8	1.7
56	69	82	13	1.8	1.5	3.5	3.0	73	95	17	0.8	3.0	3.0	4.5	1.5	58	129	15	2.7	4.0	1.0	1.0	67	102	15	1.8	2.8	3.0	3.0	1.8
57	69	59	18	2.3	1.0	2.0	3.0	78	118	27	1.0	2.0	3.0	3.0	1.0	60	100	19	3.0	2.0	3.0	1.0	69	92	21	2.1	1.7	3.0	2.7	1.7
58	69	67	15	2.1	1.5	3.0	2.5	79	94	18	0.8	3.0	3.0	4.0	1.0	62	101	16	2.0	4.5	1.5	1.0	70	87	16	1.6	3.0	3.0	2.8	1.5
59	65	65	14	2.2	6.0	6.0	2.0	66	100	15	0.7	2.0	-	6.0	1.0	53	125	14	2.9	2.0	3.5	1.5	61	97	14	1.9	3.3	-	5.2	1.5
60	68	57	15	1.5	1.0	5.0	3.0	70	96	19	0.9	1.5	-	5.5	1.0	55	97	16	2.0	2.5	4.0	2.0	64	83	17	1.5	1.7	-	4.8	2.0

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Table 8: Potential R-line nursery, across five locations- Aurangabad, Dhule, Jamnagar, Mandor and New Delhi. (for Pedigree of entries see table 3).

Plot size: 1 row x 4 m x 2 reps.

E. no.	ABD							DHL							JMR							
	DF	PH	HL	HD	ETPP	BS	AS	DF	PH	HL	HD	ETPP	SG	BS	AS	DF	PH	HL	HD	ETPP	BS	AS
1	70	92	17	2.5	1.3	2.0	4.0	62	149	20	1.0	2.5	3.0	4.5	2.0	57	160	21	3.5	3.0	5.0	2.0
2	68	78	16	2.0	1.8	4.5	3.0	62	129	23	1.0	3.0	3.0	3.5	1.5	57	136	21	3.0	3.0	1.5	2.5
3	71	92	17	2.2	1.3	3.0	3.5	63	135	20	0.9	2.0	3.0	2.5	2.5	58	137	20	3.0	2.5	2.5	3.0
4	68	59	16	2.0	1.0	1.5	2.5	74	124	25	1.0	2.0	-	7.0	1.0	57	133	25	2.9	2.0	3.5	2.0
5	68	78	15	2.5	1.8	4.0	3.0	69	122	17	0.9	2.0	3.0	4.0	2.0	58	131	20	3.4	2.0	3.0	2.5
6	68	87	19	2.4	1.0	3.5	2.5	66	116	21	0.9	1.5	3.0	3.0	1.5	65	141	23	3.2	4.0	2.5	3.0
7	70	92	20	2.5	1.5	3.0	3.0	68	132	21	0.7	1.0	3.0	5.5	1.0	60	137	23	2.6	3.5	1.5	1.5
8	67	87	17	2.4	1.0	-	3.0	68	139	19	1.0	2.0	3.0	1.0	1.0	66	118	17	3.2	4.0	1.5	1.0
9	68	87	14	2.4	1.0	2.0	2.5	66	143	19	0.9	2.5	-	6.5	1.5	58	134	17	2.9	3.0	1.0	3.0
10	69	72	14	2.1	1.0	3.5	3.5	65	142	22	0.9	2.5	3.0	2.0	2.0	55	124	25	2.6	3.0	3.5	2.0
11	64	77	15	2.0	1.5	3.0	3.0	64	141	23	0.9	1.0	-	7.0	1.0	55	117	20	2.6	2.5	4.0	1.0
12	64	67	16	2.5	1.5	5.0	2.0	59	96	17	0.8	2.0	3.0	2.0	1.0	56	115	17	2.6	3.0	1.0	2.0
13	70	67	17	2.6	1.0	2.5	3.5	62	139	18	0.9	2.0	3.0	1.0	2.0	64	132	22	3.2	3.5	0.5	3.5
14	68	83	16	2.3	1.5	4.5	3.0	66	155	19	1.0	2.0	3.0	4.5	2.0	63	144	16	2.9	2.5	2.5	2.0
15	67	67	13	2.0	1.0	5.0	2.0	70	130	23	0.9	1.5	3.0	5.0	1.0	60	96	17	2.6	2.0	1.5	1.0
16	70	94	16	2.0	1.5	3.5	2.5	72	141	17	0.9	2.0	3.0	3.0	1.5	69	127	17	2.2	3.0	1.5	3.0
17	71	92	18	2.4	1.5	1.0	4.0	67	164	19	0.9	3.0	3.0	3.5	1.5	65	148	19	2.8	2.0	1.5	2.0
18	62	95	19	2.5	1.0	7.0	2.5	64	162	33	0.9	2.5	3.0	6.0	1.5	54	134	16	2.2	4.0	2.5	2.5
19	67	108	19	2.5	1.0	7.0	2.5	66	139	18	0.9	2.5	-	3.5	2.0	60	130	18	2.7	3.5	1.5	3.0
20	69	87	16	1.9	1.3	4.0	3.5	60	156	21	0.8	2.5	3.0	2.5	1.0	60	146	22	2.6	3.5	1.5	3.0
21	67	127	22	2.4	1.8	5.0	3.0	70	131	21	0.8	1.0	3.0	1.5	1.0	71	192	22	2.8	3.0	1.5	2.0
22	70	101	26	1.9	1.4	4.5	3.5	62	104	22	0.9	1.0	3.0	1.0	1.0	64	166	24	2.4	2.0	2.0	2.0
23	69	67	15	2.2	1.0	2.5	3.5	62	112	16	0.8	3.0	-	9.0	1.0	56	107	15	2.5	2.0	3.0	1.5
24	69	73	12	2.2	1.0	3.5	2.5	68	114	17	1.0	2.5	3.0	4.0	1.0	58	129	17	3.2	3.0	2.0	3.0
25	71	82	13	2.4	1.5	4.0	3.0	67	130	18	1.0	1.5	-	8.0	1.0	62	138	17	3.1	2.0	6.5	1.0
26	68	92	24	2.0	1.5	5.0	3.0	73	117	23	0.8	2.5	3.0	4.0	1.5	60	128	28	2.8	3.5	1.0	2.0
27	70	87	15	1.8	1.3	3.5	2.5	71	119	17	0.8	2.0	3.0	2.5	1.0	70	154	18	2.5	4.0	1.5	2.0
28	70	97	21	2.6	1.8	3.0	3.5	69	140	19	0.9	3.0	3.0	1.0	2.0	68	175	20	2.8	3.5	1.5	2.0
29	69	88	16	2.3	1.8	4.5	2.5	61	135	22	0.9	1.5	3.0	2.5	1.0	65	169	20	2.9	4.0	0.5	2.0
30	65	88	18	2.4	1.5	2.5	2.0	61	168	22	1.0	2.5	3.0	1.5	2.0	64	149	23	2.2	2.5	0.5	2.0

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Table 8: Potential R-line nursery, across five locations- Aurangabad, Dhule, Jamnagar, Mandor and New Delhi. (for Pedigree of entries see table 3).

Plot size: 1 row x 4 m x 2 reps.

E. no.	ABD							DHL							JMR							
	DF	PH	HL	HD	ETPP	BS	AS	DF	PH	HL	HD	ETPP	SG	BS	AS	DF	PH	HL	HD	ETPP	BS	AS
31	68	89	19	2.3	1.5	5.0	2.0	59	147	19	0.9	2.0	3.0	1.0	1.0	64	162	22	2.6	3.0	3.0	2.0
32	66	122	16	2.6	2.0	6.0	2.0	62	131	21	1.0	1.0	3.0	1.5	2.5	58	131	33	3.1	2.5	3.5	2.0
33	72	58	19	2.6	1.3	3.5	2.5	72	99	20	1.0	1.0	3.0	3.5	1.0	62	138	24	3.1	2.5	1.5	1.5
34	66	83	20	2.3	1.0	7.0	2.5	66	145	27	1.0	1.5	-	5.5	2.0	62	143	26	2.9	2.0	3.0	2.0
35	68	68	23	2.1	1.6	6.5	2.0	59	118	23	1.0	2.5	3.0	2.5	1.0	59	143	33	2.8	2.5	2.0	2.0
36	67	72	18	2.1	1.3	2.0	3.0	65	125	18	0.8	2.5	3.0	3.0	1.5	59	135	21	2.7	3.0	3.0	2.0
37	68	63	16	2.0	1.0	5.0	2.5	69	143	19	0.9	2.0	3.0	5.0	1.5	57	112	21	2.9	3.0	2.0	2.0
38	70	89	20	2.6	1.0	5.0	3.0	71	126	25	0.9	1.5	3.0	1.0	2.0	62	130	25	3.2	3.0	1.0	2.0
39	71	92	16	2.2	1.0	2.0	3.0	70	146	23	0.8	1.5	3.0	2.5	1.0	67	171	20	2.4	3.5	0.5	2.0
40	69	93	27	2.5	1.3	3.0	3.0	58	121	24	1.0	2.0	3.0	4.0	1.5	63	140	29	3.0	3.0	3.0	2.5
41	69	87	24	2.3	1.8	5.0	4.0	72	124	25	0.9	2.5	3.0	3.5	1.0	64	108	28	2.7	2.5	1.5	1.0
42	70	92	38	2.1	1.5	-	3.0	66	155	27	0.9	1.5	3.0	1.0	1.0	69	185	43	2.5	3.0	1.0	1.0
43	66	87	26	1.9	1.5	-	3.5	60	124	24	0.9	2.0	3.0	3.0	1.5	65	94	30	1.9	3.0	1.0	2.0
44	70	61	17	2.4	1.0	3.5	3.0	59	125	25	1.0	2.0	3.0	3.5	2.0	64	119	24	2.5	2.5	2.5	2.0
45	69	52	15	2.4	1.0	3.0	2.0	67	95	23	1.0	1.0	-	8.0	1.0	65	92	20	2.3	2.0	5.5	1.0
46	66	68	19	2.2	1.0	4.0	3.5	73	144	28	0.9	1.0	-	7.5	1.5	62	139	32	2.9	3.0	3.0	1.0
47	65	57	16	2.3	4.0	4.0	2.0	57	156	25	0.9	2.5	3.0	1.0	2.0	60	130	25	3.1	2.5	2.5	2.0
48	70	78	20	2.1	1.3	5.0	2.0	73	145	25	0.9	1.5	3.0	3.5	1.0	62	147	25	2.7	3.0	2.5	1.0
49	69	92	19	2.5	1.0	5.5	2.5	68	127	23	1.0	3.0	3.0	1.5	3.0	56	122	20	2.8	2.5	2.5	2.0
50	69	73	18	2.2	2.0	2.0	4.0	59	129	20	1.0	1.0	3.0	-	3.0	64	136	51	3.4	2.0	1.5	3.0
51	70	118	23	2.4	1.8	5.0	2.0	68	155	22	0.9	1.0	3.0	4.0	1.0	68	132	23	2.4	3.0	1.0	2.0
52	70	79	18	2.6	1.5	4.0	2.0	76	163	21	0.9	1.5	3.0	2.0	1.5	67	101	20	2.1	3.5	1.0	1.0
53	68	78	18	2.4	1.3	4.5	3.0	79	112	18	0.9	1.0	-	8.5	1.0	63	126	15	2.5	2.5	6.0	1.0
54	70	84	17	2.1	2.0	3.0	3.0	70	170	23	0.9	3.5	3.0	3.0	2.5	63	137	21	2.3	3.5	0.5	3.0
55	69	83	15	2.3	1.5	2.0	3.5	59	146	33	0.9	1.5	3.0	1.5	1.0	68	153	21	2.4	2.5	2.0	1.0
56	68	57	20	2.3	1.0	5.0	2.0	66	125	21	0.8	2.0	-	7.0	1.0	60	145	29	2.6	3.5	3.5	1.0
57	70	77	17	2.4	1.0	1.0	4.0	62	133	21	0.9	1.0	3.0	1.0	1.0	66	152	22	2.5	2.5	3.5	1.5
58	69	93	27	2.0	1.0	2.0	3.5	59	135	25	0.8	3.0	-	7.0	1.0	62	178	31	1.9	2.5	4.5	1.0
59	70	93	22	2.1	1.3	-	2.5	68	165	20	1.0	3.0	3.0	1.0	3.0	70	103	18	2.2	2.5	0.5	2.0
60	68	79	14	2.1	2.5	4.5	3.5	58	134	16	0.9	3.0	3.0	4.0	1.0	59	144	16	2.3	4.0	2.0	2.0

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Table 8: Potential R-line nursery, across five locations- Aurangabad, Dhule, Jamnagar, Mandor and New Delhi. (for Pedigree of entries see table 3).

Plot size: 1 row x 4 m x 2 reps.

E. no.	MDR							NDL							Grand Mean								
	DF	PH	HL	HD	ETPP	SG	AS	DF	PH	HL	HD	ETPP	SG	BS	AS	DF	PH	HL	HD	ETPP	SG	BS	AS
1	62	158	21	3.7	2.0	3.0	5.0	70	152	16	2.8	3.0	1.0	9.0	2.0	64	142	19	2.7	2.4	2.3	5.1	3.0
2	58	135	23	3.1	2.5	3.0	5.0	69	154	21	2.8	3.0	2.0	5.0	4.5	63	126	21	2.4	2.7	2.7	3.6	3.3
3	67	108	18	2.7	2.0	2.0	4.0	68	162	21	2.6	3.0	2.5	5.0	3.5	65	127	19	2.3	2.2	2.5	3.3	3.3
4	62	92	24	2.6	1.0	3.0	4.0	68	148	25	2.7	3.0	1.0	6.5	3.0	66	111	23	2.2	1.8	2.0	4.6	2.5
5	64	106	13	2.7	1.0	2.0	4.0	68	152	16	3.4	3.5	2.5	5.0	3.5	65	118	16	2.6	2.1	2.5	4.0	3.0
6	68	106	19	2.7	1.0	2.0	4.0	76	169	22	3.3	3.0	3.0	3.0	3.0	69	124	21	2.5	2.1	2.7	3.0	2.8
7	67	131	19	2.2	1.0	2.0	4.0	72	173	24	2.3	3.0	2.0	5.0	4.0	67	133	22	2.1	2.0	2.3	3.8	2.7
8	68	95	15	3.1	2.0	2.0	4.5	69	145	15	3.2	3.0	2.0	5.0	3.0	68	117	17	2.6	2.4	2.3	2.5	2.5
9	66	127	17	2.5	2.0	2.5	4.0	71	165	18	2.7	3.5	2.0	5.0	4.5	66	131	17	2.3	2.4	2.3	3.6	3.1
10	65	90	22	2.8	1.0	2.5	4.0	69	139	25	2.5	3.0	1.5	5.0	3.5	64	113	21	2.2	2.1	2.3	3.5	3.0
11	57	132	18	2.6	2.0	3.0	4.5	56	159	21	2.8	3.0	2.0	5.0	2.0	59	125	19	2.2	2.0	2.5	4.8	2.3
12	59	102	16	2.8	1.0	2.5	4.0	68	127	18	2.4	3.5	2.0	5.0	3.0	61	101	17	2.2	2.2	2.5	3.3	2.4
13	66	98	15	2.7	2.0	2.5	4.5	73	150	19	3.4	3.5	3.0	4.0	3.5	67	117	18	2.6	2.4	2.8	2.0	3.4
14	66	116	19	2.7	2.0	2.0	4.0	71	170	18	3.0	3.5	2.5	5.0	4.0	67	134	18	2.4	2.3	2.5	4.1	3.0
15	65	93	16	2.6	1.5	2.0	3.0	70	131	17	2.7	3.0	2.0	5.0	3.0	66	103	17	2.1	1.8	2.3	4.1	2.0
16	NG	-	-	-	-	-	-	74	148	16	2.4	4.0	3.0	1.0	2.5	71	128	17	1.9	2.6	3.0	2.3	2.4
17	68	109	16	2.4	1.0	2.5	4.0	69	177	19	2.7	3.0	2.0	5.0	4.0	68	138	18	2.2	2.1	2.5	2.8	3.1
18	57	131	16	2.4	2.0	3.0	5.0	60	161	17	2.6	3.0	2.5	4.0	3.5	59	137	20	2.1	2.5	2.8	4.9	3.0
19	66	106	19	2.6	1.5	2.0	4.0	69	152	19	2.6	3.5	2.5	4.0	4.0	66	127	19	2.2	2.4	2.3	4.0	3.1
20	64	108	16	2.3	1.5	2.5	4.5	74	230	20	2.5	3.5	3.0	4.0	3.5	65	145	19	2.0	2.5	2.8	3.0	3.1
21	68	130	20	2.2	1.0	2.0	4.5	75	225	20	2.5	3.5	1.5	5.0	3.0	70	161	21	2.1	2.1	2.2	3.3	2.7
22	66	159	28	3.2	1.5	3.0	4.5	71	203	23	2.6	3.0	1.5	6.0	3.5	67	146	25	2.2	1.8	2.5	3.4	2.9
23	61	109	17	2.7	1.5	2.0	4.0	60	120	17	2.0	3.0	1.0	9.0	1.5	61	103	16	2.0	2.1	1.5	5.9	2.3
24	62	115	16	2.6	1.5	2.0	4.0	69	140	15	2.9	3.5	2.0	5.0	3.0	65	114	15	2.4	2.3	2.3	3.6	2.7
25	61	148	20	3.3	2.0	3.0	5.0	68	151	17	2.8	3.0	1.0	9.0	1.5	66	130	17	2.5	2.0	2.0	6.9	2.3
26	65	155	31	2.9	2.0	3.0	5.0	67	205	29	3.1	3.0	3.0	3.0	3.5	66	139	27	2.3	2.5	3.0	3.3	3.0
27	NG	-	-	-	-	-	-	78	187	18	2.5	3.0	2.5	5.0	2.0	72	137	17	1.9	2.6	2.8	3.1	1.9
28	66	151	21	2.5	2.0	3.0	5.0	70	199	22	2.6	3.5	2.5	4.0	3.5	69	152	21	2.3	2.8	2.8	2.4	3.2
29	NG	-	-	-	-	-	-	71	211	19	2.8	3.5	3.0	3.0	3.5	66	151	19	2.2	2.7	3.0	2.6	2.3
30	65	102	19	2.9	1.0	2.5	4.5	70	156	21	2.7	3.5	2.5	4.0	3.0	65	133	21	2.2	2.2	2.7	2.1	2.7

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Table 8: Potential R-line nursery, across five locations- Aurangabad, Dhule, Jamnagar, Mandor and New Delhi. (for Pedigree of entries see table 3).

Plot size: 1 row x 4 m x 2 reps.

E. no.	MDR							NDL							Grand Mean								
	DF	PH	HL	HD	ETPP	SG	AS	DF	PH	HL	HD	ETPP	SG	BS	AS	DF	PH	HL	HD	ETPP	SG	BS	AS
31	68	103	15	2.3	2.0	2.0	4.0	74	189	17	3.0	3.5	3.0	2.0	3.0	67	138	18	2.2	2.4	2.7	2.8	2.4
32	65	108	19	2.7	1.5	2.0	4.0	68	169	25	3.2	3.0	2.5	5.0	3.5	64	132	23	2.5	2.0	2.5	4.0	2.8
33	63	112	19	2.5	1.0	2.0	4.0	69	170	27	2.2	3.0	2.0	5.0	4.0	67	115	22	2.3	1.8	2.3	3.4	2.6
34	64	116	25	2.8	1.0	3.0	4.0	68	145	27	2.8	3.5	1.5	5.5	3.5	65	126	25	2.4	1.8	2.3	5.3	2.8
35	63	121	30	2.4	1.0	2.0	4.0	69	165	28	3.1	3.5	2.5	5.0	3.5	63	123	27	2.3	2.2	2.5	4.0	2.5
36	60	127	19	2.8	2.0	3.0	4.5	71	178	22	2.7	3.0	3.0	4.0	3.5	64	127	20	2.2	2.4	3.0	3.0	2.9
37	66	96	18	2.7	1.5	2.5	3.5	69	154	23	2.8	3.0	1.5	5.5	3.5	66	114	19	2.3	2.1	2.3	4.4	2.6
38	62	107	22	3.3	2.0	3.0	4.5	68	149	20	3.3	3.0	2.5	4.0	3.5	66	120	23	2.6	2.1	2.8	2.8	3.0
39	68	116	18	2.4	2.0	3.0	4.5	76	216	24	3.0	3.0	3.0	3.0	3.0	70	148	20	2.1	2.2	3.0	2.0	2.7
40	65	119	24	2.7	1.5	3.0	5.0	70	172	27	2.7	3.0	2.0	5.0	2.0	65	129	26	2.4	2.2	2.7	3.8	2.8
41	64	124	27	2.5	1.0	2.0	4.0	73	160	23	2.5	3.0	2.0	4.0	3.0	68	120	25	2.2	2.2	2.3	3.5	2.6
42	67	176	31	2.5	2.0	3.0	5.0	76	216	26	2.6	3.0	3.0	3.0	2.5	70	165	33	2.1	2.2	3.0	1.7	2.5
43	68	108	24	1.7	1.0	2.0	4.0	77	205	27	2.5	3.5	3.0	3.0	2.5	67	123	26	1.8	2.2	2.7	2.3	2.7
44	67	119	21	2.5	1.5	3.0	4.5	77	174	22	2.6	3.0	1.5	5.0	2.5	67	119	22	2.2	2.0	2.5	3.6	2.8
45	65	144	22	2.8	1.0	2.5	4.5	70	116	18	2.6	3.5	1.0	8.0	1.5	67	100	19	2.2	1.7	1.8	6.1	2.0
46	62	125	27	3.0	1.5	2.5	4.5	70	155	28	2.8	3.5	1.0	6.0	3.0	67	126	27	2.4	2.0	1.8	5.1	2.7
47	59	110	23	2.7	2.0	2.5	4.5	68	147	25	2.7	3.0	2.0	5.0	3.0	62	120	23	2.3	2.8	2.5	3.1	2.7
48	66	98	17	2.2	1.5	2.5	4.0	70	191	25	2.7	3.0	2.0	5.0	2.5	68	132	22	2.1	2.1	2.5	4.0	2.1
49	64	112	19	3.1	1.5	2.5	4.5	69	150	18	3.3	3.0	2.0	5.0	3.5	65	121	20	2.5	2.2	2.5	3.6	3.1
50	67	104	18	2.9	1.0	2.0	4.0	72	157	28	3.3	3.0	3.0	3.0	3.5	66	120	27	2.5	1.8	2.7	2.2	3.5
51	NG	-	-	-	-	-	-	74	163	23	2.7	4.0	3.0	3.0	2.5	70	142	23	2.1	2.5	3.0	3.3	1.9
52	67	114	16	2.3	1.5	2.5	4.5	70	165	19	2.4	4.0	1.5	5.0	3.5	70	124	19	2.1	2.4	2.3	3.0	2.5
53	66	154	20	2.9	1.0	2.5	4.5	74	133	12	2.2	4.0	1.0	9.0	1.0	70	120	17	2.2	2.0	1.8	7.0	2.1
54	68	113	24	2.4	1.5	2.0	4.0	76	170	21	2.6	3.0	3.0	3.0	3.0	69	135	21	2.0	2.7	2.7	2.4	3.1
55	68	132	18	2.4	1.5	3.0	4.5	74	219	22	2.8	3.0	3.0	5.0	4.0	68	146	22	2.1	2.0	3.0	2.6	2.8
56	67	103	20	2.5	1.0	2.0	3.0	70	166	21	2.4	3.5	1.0	5.0	2.0	66	119	22	2.1	2.2	1.5	5.1	1.8
57	NG	-	-	-	-	-	-	74	167	12	2.1	4.0	1.0	7.0	1.0	68	132	18	2.0	2.1	2.0	3.1	1.9
58	61	205	41	3.1	1.0	3.0	5.0	65	203	25	2.3	3.5	2.5	4.0	3.0	63	163	30	2.0	2.2	2.8	4.4	2.7
59	67	125	23	2.9	2.5	3.0	4.5	70	167	21	3.0	3.0	3.0	5.0	4.5	69	130	21	2.2	2.5	3.0	2.2	3.3
60	63	106	15	2.2	2.0	2.0	4.0	69	184	15	2.5	3.0	1.5	5.0	4.0	63	129	15	2.0	2.9	2.2	3.9	2.9

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Table 9: Drought tolerant restorer parent nursery, across two locations- Mandor and Bikaner. (for Pedigree of entries see table 4)
Plot size: 1 row x 4 m x 2 reps.

E. no.	MDR						BKR				Grand Mean					
	DF	PH	HL	HD	ETPP	AS	DF	PH	HL	HD	DF	PH	HL	HD	ETPP	AS
1	56	124	16	2.5	1.5	3.5	60	115	20	2.2	58	120	18	2.4	1.5	3.5
2	54	126	14	2.4	1.5	5.0	62	100	18	2.2	58	113	16	2.3	1.5	5.0
3	NG	-	-	-	-	-	NG	-	-	-	NG	-	-	-	-	-
4	63	102	14	3.2	1.0	3.5	54	130	16	1.2	58	116	15	2.2	1.0	3.5
5	60	103	15	2.9	1.0	4.0	NG	-	-	-	60	103	15	2.9	1.0	4.0
6	57	105	16	2.3	1.0	3.5	NG	-	-	-	57	105	16	2.3	1.0	3.5
7	55	92	15	2.3	1.0	3.5	NG	-	-	-	55	92	15	2.3	1.0	3.5
8	53	117	15	2.3	2.0	4.0	NG	-	-	-	53	117	15	2.3	2.0	4.0
9	61	98	14	2.3	1.0	3.5	NG	-	-	-	61	98	14	2.3	1.0	3.5
10	59	113	17	2.7	2.0	4.5	NG	-	-	-	59	113	17	2.7	2.0	4.5
11	63	101	17	2.8	1.0	4.0	NG	-	-	-	63	101	17	2.8	1.0	4.0
12	60	122	18	3.0	1.5	4.5	52	130	24	2.2	56	126	21	2.6	1.5	4.5
13	58	126	16	2.5	1.5	5.0	54	115	19	2.0	56	121	18	2.3	1.5	5.0
14	57	113	20	2.7	1.0	3.5	NG	-	-	-	57	113	20	2.7	1.0	3.5
15	61	124	20	2.1	1.0	4.0	NG	-	-	-	61	124	20	2.1	1.0	4.0
16	62	129	21	2.2	1.0	4.0	60	135	22	2.3	61	132	21	2.3	1.0	4.0
17	53	119	17	2.6	2.0	5.0	53	112	23	2.6	53	116	20	2.6	2.0	5.0
18	56	142	17	2.6	1.5	4.5	61	133	19	2.3	58	137	18	2.4	1.5	4.5
19	52	128	14	2.3	2.0	4.0	59	105	15	1.9	55	116	14	2.1	2.0	4.0
20	59	124	18	2.5	1.0	4.5	53	100	17	2.5	56	112	18	2.5	1.0	4.5
21	57	131	18	2.9	1.5	4.5	60	148	21	2.7	58	139	19	2.8	1.5	4.5
22	62	141	19	5.5	1.5	4.5	55	140	18	2.7	59	141	19	4.1	1.5	4.5
23	55	155	17	2.8	1.5	5.0	58	123	17	2.8	56	139	17	2.8	1.5	5.0
24	58	122	16	2.5	2.0	5.0	62	135	21	2.1	60	129	19	2.3	2.0	5.0
25	59	104	15	2.4	1.5	4.0	55	100	18	2.5	57	102	16	2.5	1.5	4.0
26	53	146	17	2.6	2.0	5.0	58	115	16	3.2	55	130	16	2.9	2.0	5.0
27	56	126	24	2.9	1.0	5.0	60	110	24	2.7	58	118	24	2.8	1.0	5.0
28	54	109	18	2.2	1.5	4.5	NG	-	-	-	54	109	18	2.2	1.5	4.5
29	57	118	19	2.2	1.5	4.5	54	145	21	3.1	55	132	20	2.7	1.5	4.5
30	53	115	17	2.4	1.5	4.0	60	118	17	2.1	57	116	17	2.2	1.5	4.0
31	60	135	16	2.3	2.0	4.0	57	145	25	1.8	58	140	20	2.0	2.0	4.0
32	55	103	16	2.2	1.0	3.5	57	110	20	2.2	56	107	18	2.2	1.0	3.5
33	62	147	15	2.2	1.5	4.5	NG	-	-	-	62	147	15	2.2	1.5	4.5
34	53	106	16	2.2	2.0	4.0	53	130	19	3.0	53	118	17	2.6	2.0	4.0
35	54	123	19	2.5	2.0	5.0	64	100	20	2.0	59	111	19	2.3	2.0	5.0
36	57	108	16	2.2	1.5	4.0	57	113	17	2.2	57	110	16	2.2	1.5	4.0
37	56	99	12	2.2	1.0	4.0	51	120	21	2.4	54	109	16	2.3	1.0	4.0
38	53	121	14	2.4	1.5	4.0	55	130	15	1.9	54	125	15	2.2	1.5	4.0
39	60	109	18	2.9	1.0	4.5	52	105	17	2.5	56	107	17	2.7	1.0	4.5
40	59	131	19	2.8	1.0	5.0	63	150	21	2.6	61	140	20	2.7	1.0	5.0
41	61	126	19	2.8	1.0	4.0	57	105	20	2.4	59	115	20	2.6	1.0	4.0
42	64	122	14	2.3	2.0	4.5	59	135	19	2.2	61	128	16	2.2	2.0	4.5
43	61	111	18	2.5	1.5	3.5	58	120	17	2.5	60	116	18	2.5	1.5	3.5
44	54	151	21	2.4	2.0	5.0	51	180	24	2.1	53	165	22	2.3	2.0	5.0
45	60	128	17	2.4	1.5	4.5	60	123	18	2.5	60	125	17	2.4	1.5	4.5
46	57	113	14	2.5	1.5	3.5	57	100	16	1.8	57	106	15	2.2	1.5	3.5
47	62	114	24	2.5	2.0	5.0	NG	-	-	-	62	114	24	2.5	2.0	5.0
48	54	161	20	2.5	2.0	4.5	57	153	26	2.5	55	157	23	2.5	2.0	4.5
49	52	120	14	3.2	2.0	3.0	57	140	19	2.5	55	130	16	2.9	2.0	3.0
50	51	125	15	1.6	2.5	4.0	59	128	20	2.1	55	126	17	1.8	2.5	4.0

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Table 10: Blast resistant B & R line nursery, across six locations- Hyderabad, Aurangabad, Ananthapuram, Dhule, New Delhi and Gwalior. (for Pedigree of entries see table 5).
Plot size: 1 row x 4 m x 2 reps.

E. no.	HYD								ABD						APR							
	DF	PH	HL	HD	ETPP	SG	BS	AS	DF	PH	HL	HD	ETPP	AS	DF	PH	HL	HD	ETPP	SG	BS	AS
1	53	111	24	3.0	1.0	1.5	1.5	1.5	NG	-	-	-	-	-	47	110	28	2.8	3.2	3.0	5.5	3.5
2	55	108	19	2.5	-	2.5	4.5	2.5	65	88	19	2.5	3.0	4.0	44	108	25	2.6	2.7	3.0	4.5	4.0
3	71	116	22	2.9	-	2.0	4.0	3.5	NG	-	-	-	-	-	44	130	25	2.6	2.6	3.0	3.5	3.0
4	50	126	21	3.0	1.0	2.5	2.5	2.5	59	90	15	2.5	1.0	2.0	43	111	25	2.6	2.4	1.0	5.0	4.5
5	55	116	21	2.9	1.5	2.0	1.5	1.0	58	92	19	2.1	1.0	5.0	40	110	24	2.5	2.2	3.0	3.5	4.0
6	54	123	17	2.5	2.5	2.0	1.0	3.0	61	64	13	2.1	1.0	2.0	47	124	25	2.6	4.0	3.0	3.5	3.0
7	52	102	17	2.7	2.0	2.0	1.0	3.0	55	68	11	1.8	2.0	3.0	44	108	24	2.9	1.7	1.0	6.5	4.5
8	50	116	18	3.0	1.0	2.0	1.0	1.0	60	72	13	2.3	1.0	4.0	41	107	24	2.4	1.7	1.0	5.5	5.0
9	54	111	18	2.9	1.0	2.0	3.0	2.0	48	42	12	1.8	2.0	3.0	47	110	25	2.7	2.5	1.0	7.5	4.5
10	51	119	19	3.4	-	2.5	1.0	2.5	NG	-	-	-	-	-	47	105	20	3.1	2.4	1.0	6.0	4.5
11	51	134	23	2.8	1.0	2.0	1.0	3.0	56	72	18	2.6	1.0	4.0	45	122	23	2.7	2.8	3.0	4.5	3.0
12	58	95	23	2.6	1.0	1.5	0.5	2.5	NG	-	-	-	-	-	45	96	27	2.5	3.0	1.0	7.0	5.0
13	40	104	20	2.7	-	1.5	1.0	2.0	61	63	18	2.5	1.0	4.0	45	109	26	3.3	2.5	1.0	5.5	3.5
14	50	100	21	2.9	1.0	3.0	2.5	3.0	61	72	25	2.5	2.0	4.0	41	111	26	2.9	2.5	1.0	4.5	4.0
15	54	124	21	2.8	-	2.0	1.0	2.0	68	122	15	2.9	2.0	4.0	49	129	27	2.3	1.4	1.0	4.0	3.0
16	52	150	21	2.8	-	2.5	1.0	2.5	NG	-	-	-	-	-	46	130	26	2.5	2.4	1.0	6.0	3.5
17	57	149	21	2.5	-	1.5	2.0	3.0	61	123	20	2.2	1.0	3.0	43	123	26	2.7	3.4	1.0	6.0	3.0
18	57	130	20	2.1	-	2.0	1.0	2.5	63	72	9	1.9	2.0	3.0	46	124	26	2.3	3.0	1.0	4.0	2.0
19	53	151	25	2.8	1.0	2.0	1.0	2.0	64	102	17	2.6	2.0	4.0	45	124	28	3.0	2.8	1.0	5.5	4.0
20	54	141	21	2.8	1.0	1.5	1.0	1.0	48	90	18	2.7	1.0	4.0	45	110	26	2.7	2.6	1.0	6.0	5.0
21	56	210	30	2.5	1.0	1.5	1.0	1.0	58	162	26	2.4	1.0	3.0	44	104	30	3.0	2.9	3.0	2.0	1.0
22	57	144	22	3.1	1.0	2.0	1.0	1.0	48	122	17	2.5	2.0	3.0	45	127	29	3.1	2.4	3.0	4.5	2.5
23	55	158	21	2.8	1.5	2.5	1.0	2.5	63	102	14	1.7	1.0	3.0	42	132	25	2.8	3.6	3.0	3.0	3.0
24	51	148	23	2.8	2.0	2.0	1.0	2.5	NG	-	-	-	-	-	46	134	27	2.9	2.8	1.0	6.5	2.5
25	57	136	22	2.8	-	3.5	2.5	3.0	68	52	15	2.1	4.0	2.0	45	123	25	2.5	2.5	1.0	5.0	3.0
26	56	171	24	3.1	1.0	2.0	1.5	2.0	61	132	19	2.5	2.0	4.0	47	135	26	2.9	2.4	1.0	5.5	2.0
27	52	172	23	2.6	-	2.5	1.0	1.0	64	72	17	2.4	2.0	4.0	45	137	27	2.7	2.6	1.0	4.5	2.5
28	57	153	20	2.9	1.0	1.5	1.3	1.0	64	86	18	2.0	1.0	3.0	43	133	28	2.8	2.4	3.0	3.0	2.5
29	57	146	20	2.8	-	2.0	1.0	1.5	65	122	15	2.6	2.0	5.0	45	127	28	2.6	3.8	3.0	4.0	2.5
30	55	194	25	2.9	1.0	2.0	2.5	1.5	61	154	22	2.0	1.0	3.0	50	137	28	3.0	2.7	3.0	3.0	1.0
31	56	213	24	3.0	1.0	1.5	1.0	1.0	67	152	23	3.1	1.0	5.0	44	135	28	2.8	3.5	3.0	5.0	2.0
32	55	181	20	2.8	1.5	2.0	5.0	2.0	69	92	15	2.1	1.0	3.0	49	135	26	2.7	2.6	1.0	4.0	2.5
33	57	175	21	2.7	1.0	1.5	3.0	1.5	60	105	20	2.6	2.0	4.0	44	136	26	2.6	3.4	3.0	4.5	2.0
34	46	95	16	1.7	3.0	1.0	9.0	3.5	NG	-	-	-	-	-	40	101	23	2.4	2.5	1.0	8.0	5.0
35	68	114	14	2.4	-	2.0	2.0	3.5	65	52	15	1.6	1.0	2.0	43	115	26	2.8	2.5	1.0	4.5	4.0

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Table 10: Blast resistant B & R line nursery, across six locations- Hyderabad, Aurangabad, Ananthapuram, Dhule, New Delhi and Gwalior. (for Pedigree of entries see table 5)

Plot size: 1 row x 4 m x 2 reps.

E. no.	DHL								NDL							
	DF	PH	HL	HD	ETPP	SG	BS	AS	DF	PH	HL	HD	ETPP	SG	BS	AS
1	67	103	26	1.0	2.5	3.0	2.0	1.0	76	100	18	2.9	3.0	2.0	5.0	3.0
2	58	119	26	1.1	2.5	3.0	4.5	2.0	67	140	21	3.3	3.0	1.0	5.0	3.0
3	72	116	26	1.0	2.0	3.0	2.5	2.0	59	150	25	2.8	3.0	1.0	4.0	3.0
4	54	141	21	1.1	2.5	-	7.5	1.0	55	199	23	2.8	2.5	2.5	6.0	3.0
5	61	144	20	0.9	2.5	3.0	3.5	3.0	60	168	23	3.1	2.5	1.0	4.0	3.0
6	61	150	21	0.8	3.5	3.0	3.5	1.5	63	177	21	2.3	3.0	1.0	3.0	4.0
7	58	94	18	0.9	2.5	-	7.5	1.0	52	123	17	2.9	3.0	1.5	5.0	3.5
8	56	131	20	1.0	1.5	3.0	4.0	1.5	53	135	17	2.5	2.5	1.0	4.0	3.5
9	58	103	18	0.9	2.5	3.0	5.0	1.0	66	134	17	2.8	3.0	1.0	5.0	4.0
10	53	107	19	1.1	2.0	-	5.0	1.0	61	125	16	3.3	2.5	1.5	5.0	3.0
11	55	139	25	1.1	4.0	3.0	6.0	2.0	60	228	25	3.0	3.0	1.0	5.0	3.5
12	59	108	23	0.9	1.5	3.0	4.0	2.0	68	136	22	2.6	3.0	1.0	4.0	3.0
13	66	119	24	1.0	2.0	3.0	2.0	3.0	79	133	23	3.1	2.5	1.0	4.0	3.0
14	52	123	24	0.9	4.0	3.0	5.0	1.5	62	124	22	2.7	2.5	1.5	4.0	3.0
15	63	111	19	0.9	2.0	3.0	2.0	2.0	63	142	22	2.8	3.0	1.5	5.0	3.0
16	59	133	24	1.0	3.0	3.0	5.5	1.5	66	151	20	2.3	2.5	1.0	4.0	3.5
17	58	154	29	1.1	2.0	3.0	1.0	3.0	63	190	22	2.4	2.5	1.0	5.0	4.0
18	65	147	22	0.8	2.0	3.0	1.5	2.0	68	150	17	2.1	2.5	1.0	4.0	3.0
19	60	143	27	1.0	1.5	3.0	2.0	2.0	59	191	28	3.0	2.5	1.5	4.0	5.0
20	63	119	19	0.9	2.0	3.0	3.0	2.0	68	201	23	3.2	3.0	1.0	4.0	3.0
21	64	183	28	1.0	3.0	3.0	4.0	1.5	62	231	32	2.7	2.5	1.5	3.0	5.0
22	64	143	26	1.2	2.0	3.0	3.5	2.5	69	147	23	2.9	2.0	1.5	4.0	3.0
23	61	176	24	0.8	2.5	-	6.5	1.0	60	169	22	2.6	2.5	1.0	3.0	3.5
24	60	148	26	1.0	2.0	3.0	4.5	2.0	63	163	26	2.6	2.0	1.5	4.0	4.0
25	67	139	27	1.0	2.5	3.0	2.5	2.0	70	165	25	3.1	2.5	1.0	3.0	3.5
26	62	169	26	1.0	1.5	3.0	2.5	2.5	63	187	24	3.2	3.0	1.5	4.0	3.5
27	63	178	19	0.9	1.5	3.0	4.0	2.0	63	172	21	2.5	2.5	1.0	3.0	4.0
28	62	157	19	0.9	1.0	3.0	4.0	3.0	67	186	18	3.4	2.5	1.0	3.0	3.5
29	62	154	25	1.0	1.5	3.0	3.0	2.0	69	192	26	3.3	2.0	1.0	5.0	3.0
30	68	201	26	1.1	2.5	3.0	4.5	2.5	62	184	25	2.7	2.5	1.0	4.0	3.0
31	57	171	25	1.0	1.5	3.0	1.5	3.0	62	194	26	2.9	3.0	1.0	4.0	3.0
32	64	171	26	1.1	1.0	-	6.5	1.0	64	212	21	2.8	3.0	2.5	5.0	3.5
33	62	147	24	1.0	2.5	3.0	2.0	2.0	64	222	19	2.5	3.0	1.5	5.0	3.5
34	59	88	21	0.9	3.5	-	7.5	1.0	61	91	13	1.5	3.0	2.0	4.5	4.0
35	63	131	22	1.0	3.5	3.0	3.5	1.0	67	175	18	2.6	2.0	1.0	3.0	4.0

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Table 10: Blast resistant B & R line nursery, across six locations- Hyderabad, Aurangabad, Ananthapuram, Dhule, New Delhi and Gwalior. (for Pedigree of entries see table 5)

Plot size: 1 row x 4 m x 2 reps.

E. no.	GLR								Grand Mean							
	DF	PH	HL	HD	ETPP	SG	BS	AS	DF	PH	HL	HD	ETPP	SG	BS	AS
1	69	126	22	2.7	2.3	3.5	5.0	3.0	62	110	23	2.5	2.4	2.6	3.8	2.4
2	65	134	20	2.1	2.3	1.5	2.0	2.0	59	116	22	2.3	2.7	2.2	4.1	2.9
3	68	157	26	2.5	1.7	3.0	4.0	3.5	63	134	25	2.4	2.3	2.4	3.6	3.0
4	55	148	16	2.4	1.7	1.5	6.0	2.0	53	136	20	2.4	1.9	1.9	5.4	2.5
5	54	146	25	2.7	2.8	2.0	3.5	3.0	55	129	22	2.4	2.1	2.2	3.2	3.2
6	49	142	16	1.4	1.7	2.5	0.0	4.0	56	130	19	1.9	2.6	2.3	2.2	2.9
7	47	124	16	2.5	2.5	2.5	8.5	2.5	51	103	17	2.3	2.3	1.8	5.7	2.9
8	52	131	16	2.2	1.4	3.0	0.0	3.0	52	115	18	2.2	1.5	2.0	2.9	3.0
9	66	138	20	2.5	2.3	2.5	3.0	2.5	56	106	18	2.3	2.2	1.9	4.7	2.8
10	52	120	15	2.2	1.1	1.5	0.0	3.0	53	115	18	2.6	2.0	1.6	3.4	2.8
11	58	165	22	2.4	3.2	2.5	5.0	3.0	54	143	23	2.4	2.5	2.3	4.3	3.1
12	69	110	18	2.0	1.0	2.0	0.0	1.0	60	109	22	2.1	1.9	1.7	3.1	2.7
13	66	130	21	2.4	1.8	2.5	0.0	4.0	60	110	22	2.5	2.0	1.8	2.5	3.3
14	48	146	24	2.2	2.3	1.5	3.5	1.5	52	113	24	2.4	2.4	2.0	3.9	2.8
15	68	141	19	1.9	1.5	1.5	2.5	2.5	61	128	21	2.3	2.0	1.8	2.9	2.8
16	65	151	19	2.0	2.8	2.5	0.0	5.0	58	143	22	2.1	2.7	2.0	3.3	3.2
17	59	182	25	2.2	3.9	2.0	4.5	3.5	57	154	24	2.2	2.6	1.7	3.7	3.3
18	65	147	20	1.7	1.1	2.0	0.0	2.0	61	128	19	1.8	2.1	1.8	2.1	2.4
19	57	160	24	2.5	1.9	2.0	6.0	3.5	56	145	25	2.5	2.0	1.9	3.7	3.4
20	60	156	22	2.4	1.7	1.5	2.5	2.5	56	136	21	2.4	1.9	1.6	3.3	2.9
21	61	202	32	2.2	2.1	3.0	3.0	4.5	57	182	30	2.3	2.1	2.4	2.6	2.7
22	55	157	22	2.8	2.0	2.5	5.5	3.0	56	140	23	2.6	1.9	2.4	3.7	2.5
23	59	176	22	2.2	2.2	2.0	7.0	2.0	57	152	21	2.2	2.2	2.1	4.1	2.5
24	55	178	23	2.2	2.7	3.0	0.0	3.5	55	154	25	2.3	2.3	2.1	3.2	2.9
25	63	135	23	2.2	2.3	2.5	0.0	1.0	62	125	23	2.3	2.8	2.2	2.6	2.4
26	59	174	23	2.3	2.5	2.0	0.0	4.0	58	161	24	2.5	2.1	1.9	2.7	3.0
27	61	171	19	2.3	2.2	3.0	0.0	5.0	58	150	21	2.2	2.2	2.1	2.5	3.1
28	61	172	20	2.5	1.9	2.5	4.5	3.5	59	148	21	2.4	1.6	2.2	3.2	2.8
29	66	165	22	2.5	2.4	2.5	1.0	4.5	61	151	23	2.5	2.3	2.3	2.8	3.1
30	66	216	23	2.5	2.4	3.0	4.5	4.0	60	181	25	2.4	2.0	2.4	3.7	2.5
31	66	217	27	2.6	2.9	2.5	3.0	4.5	59	180	25	2.6	2.2	2.2	2.9	3.1
32	60	179	22	2.4	2.1	1.5	6.0	2.0	60	162	22	2.3	1.9	1.8	5.3	2.3
33	57	167	22	2.3	2.4	2.5	5.0	2.0	57	159	22	2.3	2.4	2.3	3.9	2.5
34	48	97	12	1.5	2.0	1.0	6.0	1.5	51	94	17	1.6	2.8	1.3	7.0	3.0
35	67	166	17	2.1	1.4	2.0	2.0	2.0	62	126	19	2.1	2.1	1.8	3.0	2.8

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Table 11: Elite joint biofortification nursery, across eight locations- Malnoor, Dhule, Jamnagar, Mandor, Jaipur, New Delhi, Vijayapur and Ludhiana. (for Pedigree of entries see table 6)

Plot size: 1 row x 4 m x 2 reps

E. no.	MLR								DHL								JMR								MDR							
	DF	PH	HL	HD	ETPP	SG	BS	AS	DF	PH	HL	HD	ETPP	SG	BS	AS	DF	PH	HL	HD	ETPP	BS	AS	DF	PH	HL	HD	ETPP	SG	AS	Fe	Zn
1	52	141	20	3.7	1.8	3.0	2.0	3.5	63	108	22	1.0	2.5	3.0	2.5	2.0	59	106	19	2.8	3.5	4.0	2.5	62	117	23	2.6	2.0	2.5	4.5	84	48
2	53	141	18	3.8	1.4	2.5	2.0	2.5	67	105	18	0.9	1.5	-	5.5	1.0	59	123	20	2.1	2.0	6.0	1.5	NG	-	-	-	-	-	-	-	-
3	49	152	22	3.6	2.4	2.0	2.5	2.0	65	127	23	1.0	3.0	3.0	1.0	1.5	60	125	24	2.5	2.5	2.0	2.5	63	78	26	2.5	1.0	2.0	4.0	41	29
4	53	103	16	3.5	1.4	2.5	4.5	1.5	61	119	18	0.8	3.0	3.0	6.0	2.0	57	103	17	2.6	3.0	4.5	2.5	63	87	19	2.6	2.0	2.0	4.0	56	34
5	51	160	22	3.7	2.2	2.0	2.5	3.0	67	78	20	0.8	1.5	3.0	2.0	1.0	63	132	23	2.5	3.0	2.0	2.5	NG	-	-	-	-	-	-	-	-
6	49	145	17	4.1	2.0	3.0	0.0	3.0	62	116	19	1.1	3.5	3.0	2.0	2.0	59	127	21	2.7	3.0	1.5	2.0	65	117	20	3.4	2.0	3.0	4.5	86	48
7	50	127	19	4.2	1.2	2.5	0.5	2.0	69	111	21	1.0	2.5	3.0	1.0	1.5	60	115	18	2.8	4.0	2.0	2.5	64	98	19	2.6	1.0	2.0	4.0	81	45
8	51	138	14	3.2	2.0	3.0	0.5	2.5	77	104	16	0.9	3.5	3.0	1.5	1.0	55	115	19	2.5	4.0	1.5	1.0	NG	-	-	-	-	-	-	-	-
9	49	134	19	3.4	2.3	1.5	6.5	1.5	78	91	21	0.9	1.5	3.0	5.0	1.0	58	73	17	1.7	2.5	1.5	1.5	NG	-	-	-	-	-	-	-	-
10	50	137	17	3.7	2.6	1.5	4.5	4.5	60	107	17	0.9	3.0	3.0	1.5	3.0	60	107	18	2.6	3.0	4.0	2.0	63	90	17	2.7	1.5	2.5	4.0	101	57
11	52	167	18	3.5	1.8	2.5	3.5	2.0	71	101	19	0.7	2.0	-	5.5	1.0	61	115	18	2.3	3.0	3.0	2.5	65	94	19	2.5	2.5	3.0	4.5	48	31
12	53	161	17	3.3	2.1	3.0	0.5	1.0	57	110	20	0.8	3.0	3.0	2.5	1.0	60	132	18	2.5	3.0	2.0	2.0	63	104	20	2.7	2.0	3.0	4.0	49	32
13	52	163	16	3.6	1.4	2.5	3.0	2.0	63	108	20	1.0	3.5	3.0	3.0	2.0	60	105	16	2.7	3.5	5.5	1.5	62	93	15	2.8	2.0	2.0	4.0	81	45
14	50	137	18	4.0	2.3	1.5	7.5	2.0	61	105	21	0.9	2.5	3.0	5.5	1.5	59	99	22	2.5	3.5	3.0	1.0	63	108	24	3.0	2.0	3.0	5.0	51	40
15	51	149	17	3.8	2.1	2.5	5.5	4.0	64	109	18	0.9	2.5	3.0	3.0	2.0	60	104	17	2.6	3.0	5.0	2.0	63	91	16	2.9	2.0	3.0	5.0	47	38
16	52	126	16	3.6	1.7	2.0	6.0	1.5	69	117	21	1.0	1.0	-	5.0	1.0	67	113	21	2.8	2.5	2.0	1.5	NG	-	-	-	-	-	-	-	-
17	49	125	17	3.4	1.8	1.0	4.5	1.5	73	84	17	0.8	1.5	3.0	3.0	1.0	61	69	19	2.5	2.5	1.5	1.5	NG	-	-	-	-	-	-	-	-
18	52	141	21	3.7	1.9	3.0	1.0	3.5	61	127	23	0.9	3.5	3.0	2.5	2.0	61	116	20	2.6	3.5	2.5	2.5	61	98	22	3.0	2.5	3.0	5.0	64	43
19	51	148	16	3.6	1.6	1.0	7.5	1.5	65	116	19	1.0	2.5	3.0	3.0	2.0	58	101	17	2.6	3.0	2.0	2.0	63	77	16	2.8	2.0	3.0	5.0	50	34
20	50	158	19	4.2	1.9	3.0	5.5	2.5	70	115	24	1.1	2.5	3.0	2.0	1.5	59	124	22	3.0	3.5	1.0	2.0	65	108	20	3.0	2.0	2.5	4.5	49	37
21	51	201	19	2.4	1.9	2.5	0.0	3.0	62	155	24	1.0	2.0	3.0	3.0	1.0	54	149	25	3.3	2.5	2.0	2.0	65	111	22	2.7	1.0	2.0	3.5	86	49
22	52	134	15	3.3	2.3	2.0	2.5	1.5	55	127	19	0.9	3.0	3.0	1.0	2.0	57	118	16	2.8	3.0	2.0	2.5	63	103	19	3.0	1.5	2.0	4.5	73	38
23	52	136	18	2.9	1.5	2.0	0.0	1.5	64	145	21	0.9	1.5	3.0	1.5	1.0	57	140	18	2.5	2.0	0.5	2.0	63	117	18	2.8	1.0	2.0	3.5	74	44
24	50	151	16	3.5	1.7	2.5	1.0	2.0	67	150	20	1.0	2.0	3.0	1.5	1.5	56	140	18	3.1	3.0	1.5	2.5	NG	-	-	-	-	-	-	-	-
25	51	134	20	3.4	3.0	1.5	2.0	1.5	60	145	22	1.0	2.5	3.0	3.5	1.5	56	148	24	3.4	3.5	1.5	2.0	65	100	22	2.6	1.0	2.0	4.0	59	44
26	52	139	13	3.8	1.5	1.0	2.0	1.0	70	118	17	1.0	3.0	3.0	3.0	1.0	60	141	18	3.8	3.0	1.0	1.0	66	106	17	3.1	1.5	2.0	3.5	68	47
27	52	159	17	3.4	1.1	2.5	1.5	1.0	63	153	19	1.0	2.0	3.0	3.5	1.0	57	130	20	2.5	2.0	2.5	3.0	65	106	18	2.7	2.0	3.0	5.0	113	48
28	52	151	19	3.4	1.9	1.5	3.0	1.0	64	110	20	0.9	1.0	3.0	4.5	1.0	58	130	20	3.0	2.0	3.5	3.0	63	88	19	2.7	2.0	2.0	4.0	62	42
29	52	161	19	3.8	2.1	2.5	5.5	1.5	60	141	23	1.0	1.5	-	4.5	1.0	57	143	22	2.7	1.5	4.5	2.5	64	128	22	2.9	2.0	3.0	5.0	85	52
30	52	215	16	4.0	1.8	1.5	8.0	1.5	61	113	17	0.8	1.5	-	2.5	1.0	62	101	18	2.8	3.0	2.0	2.0	64	90	17	3.0	1.0	2.5	4.0	79	43

CHAPTER I: BREEDING

Table 11: Elite joint biofortification nursery, across eight locations- Malnoor, Dhule, Jamnagar, Mandor, Jaipur, New Delhi, Vijayapur and Ludhiana. (for Pedigree of entries see table 6)

Plot size: 1 row x 4 m x 2 reps

E. no.	MLR								DHL								JMR								MDR							
	DF	PH	HL	HD	ETPP	SG	BS	AS	DF	PH	HL	HD	ETPP	SG	BS	AS	DF	PH	HL	HD	ETPP	BS	AS	DF	PH	HL	HD	ETPP	SG	AS	Fe	Zn
31	50	118	15	3.9	1.8	1.5	0.0	1.5	72	135	19	1.1	2.0	3.0	2.5	1.0	58	153	18	3.4	2.0	4.0	2.5	NG	-	-	-	-	-	-	-	-
32	50	172	17	3.5	2.9	2.5	8.0	1.5	72	126	16	0.9	1.5	-	3.0	1.0	57	166	16	2.7	2.0	3.0	3.0	NG	-	-	-	-	-	-	-	-
33	47	178	16	3.8	1.7	1.5	2.5	3.0	60	156	20	1.1	2.5	3.0	3.5	2.0	54	153	14	3.3	2.0	2.5	2.0	64	121	17	2.8	1.5	2.0	4.0	83	53
34	52	182	21	3.6	1.1	1.5	5.5	1.5	54	127	21	1.0	4.0	3.0	3.5	1.5	58	133	23	2.6	2.5	7.0	2.0	62	111	19	2.6	1.5	2.5	4.5	62	42
35	50	158	18	3.5	2.0	1.5	2.0	1.5	58	150	22	0.9	2.5	3.0	2.5	1.5	59	135	21	2.3	2.5	4.0	2.5	61	116	17	2.4	1.5	2.0	4.0	83	42
36	51	136	18	3.6	2.1	1.5	4.5	2.5	66	142	23	1.1	2.5	3.0	3.0	1.0	56	111	17	3.0	2.0	1.5	2.5	65	113	19	3.0	2.0	3.0	4.5	67	47
37	52	140	13	3.5	1.7	2.5	5.5	2.0	62	125	19	1.1	3.0	3.0	2.5	1.5	57	138	18	3.2	2.0	5.0	2.5	64	102	16	2.8	1.5	2.0	4.0	106	50
38	51	159	18	3.6	2.2	1.5	6.0	1.5	55	148	22	1.0	2.0	3.0	2.0	2.5	58	145	20	2.6	2.5	2.5	2.0	64	129	23	2.9	2.0	3.0	4.0	70	45
39	49	133	18	3.8	1.9	2.5	0.0	2.0	54	147	22	1.0	1.5	3.0	1.5	2.5	59	138	21	3.2	3.0	1.0	2.5	64	128	15	2.9	1.0	3.0	4.5	86	49
40	50	147	17	3.7	1.9	2.0	0.5	1.5	61	152	22	0.9	2.0	3.0	3.5	1.0	56	134	23	2.4	2.5	1.5	4.0	62	141	18	2.6	2.0	3.0	5.0	79	52
41	50	148	17	3.4	1.1	1.5	5.5	1.5	68	151	22	1.0	1.0	-	3.0	1.0	65	155	21	3.1	3.0	7.0	4.0	NG	-	-	-	-	-	-	-	-
42	49	120	16	3.7	1.5	2.5	4.5	3.0	66	133	20	0.9	3.0	3.0	4.0	1.0	56	148	22	3.1	2.0	5.5	3.0	65	83	18	2.4	1.5	2.5	4.0	77	36
43	49	151	17	4.1	2.0	1.5	8.0	2.0	54	153	20	1.1	2.5	-	5.0	1.5	59	115	13	3.3	2.5	7.5	2.5	NG	-	-	-	-	-	-	-	-
44	52	161	19	3.5	2.1	1.5	5.0	2.5	51	128	22	1.0	5.0	3.0	6.5	1.5	56	118	19	2.1	4.0	6.5	2.0	54	128	16	2.6	2.0	2.5	4.0	47	45
45	54	190	25	4.2	1.4	2.0	5.5	3.0	62	152	22	1.0	2.0	3.0	3.0	2.5	59	149	30	3.2	2.5	2.5	3.0	64	113	22	2.5	2.0	2.5	4.0	83	48
46	51	162	16	3.4	2.2	2.0	3.0	2.0	59	126	26	0.9	1.0	3.0	5.0	2.0	55	116	20	3.0	2.5	3.5	1.0	64	91	15	2.5	1.0	2.0	4.0	64	45
47	49	152	18	2.7	2.5	1.5	7.5	2.5	55	111	18	0.4	4.0	3.0	3.0	1.0	57	119	18	2.5	3.0	3.0	2.0	61	122	17	1.9	2.0	3.0	4.5	36	43
48	53	163	15	3.6	1.5	1.0	5.5	3.5	56	150	16	0.9	3.0	3.0	1.5	2.5	55	141	16	2.5	3.0	2.5	2.0	61	122	18	2.4	1.5	3.0	4.5	54	47
49	52	152	21	3.5	2.6	2.5	4.5	3.0	51	168	22	1.0	2.0	3.0	3.0	2.0	57	164	19	3.1	3.5	3.5	3.0	54	169	22	2.8	2.0	3.0	5.0	54	44
50	50	168	14	3.7	1.3	1.0	5.5	2.0	63	136	21	1.0	1.0	3.0	5.0	2.0	57	128	17	3.2	2.0	6.5	1.0	64	102	15	2.7	2.0	2.5	4.5	67	44
51	51	159	22	3.7	2.7	1.5	8.0	4.5	53	142	25	1.1	2.0	3.0	1.0	2.5	60	134	21	2.9	3.0	2.5	3.0	59	156	22	2.9	1.5	3.0	5.0	39	22
52	50	153	23	3.1	1.5	1.5	7.5	3.0	55	153	24	0.9	3.0	-	6.0	1.5	58	133	22	2.4	2.0	4.5	2.0	62	140	20	2.2	2.0	3.0	5.0	34	32
53	52	163	13	2.8	3.2	1.5	5.0	1.5	56	135	18	0.7	5.5	3.0	2.0	1.5	56	114	15	1.7	4.0	3.0	1.0	59	120	15	1.9	2.0	2.5	4.0	40	37
54	49	151	22	3.2	2.6	2.0	2.5	2.0	64	155	22	0.9	2.5	3.0	2.0	2.0	58	144	24	2.2	3.5	1.5	3.0	60	174	23	2.6	2.0	3.0	5.0	44	33
55	49	131	20	2.8	2.6	1.5	5.5	1.0	57	146	22	0.4	5.0	3.0	1.5	1.0	56	156	24	1.5	2.5	1.5	2.0	62	132	20	1.9	2.0	3.0	4.0	46	38
56	49	153	17	3.1	2.9	1.0	6.0	1.5	54	136	21	0.8	2.0	-	8.0	1.0	54	144	19	2.5	3.5	5.0	2.0	59	142	18	2.3	2.0	3.0	5.0	39	32
57	51	175	21	4.1	1.6	1.0	8.5	3.0	59	130	23	1.0	2.0	3.0	5.5	1.0	57	135	22	3.0	3.0	4.0	2.0	61	115	19	2.8	2.0	3.0	5.0	50	44
58	50	175	25	3.1	2.2	2.0	7.5	1.5	77	120	24	0.9	1.5	-	8.0	1.0	66	117	31	2.6	1.5	2.0	1.0	65	113	34	2.6	1.0	2.5	4.0	60	36
59	47	161	19	6.7	1.9	1.0	4.5	3.0	54	150	25	0.9	1.5	3.0	-	3.0	57	133	24	2.7	2.0	4.0	2.0	61	125	20	2.6	2.0	3.0	4.0	44	25
60	52	177	15	3.9	2.2	1.5	8.0	2.0	56	123	17	1.0	1.0	-	7.5	1.5	55	129	17	3.2	2.0	6.0	1.0	NG	-	-	-	-	-	-	-	-

CHAPTER I: BREEDING

Table 11: Elite joint biofortification nursery, across eight locations- Malnoor, Dhule, Jamnagar, Mandor, Jaipur, New Delhi, Vijayapur and Ludhiana. (for Pedigree of entries see table 6)

Plot size: 1 row x 4 m x 2 reps

E.	JPR							NDL									VYP								
no.	DF	PH	HL	HD	ETPP	SG	AS	DF	PH	HL	HD	ETPP	SG	BS	AS	Fe	Zn	DF	PH	HL	HD	ETPP	SG	BS	AS
1	57	128	22	3.1	2.5	1.0	4.0	65	131	19	2.6	2.5	1.5	5.0	4.0	86	42	47	146	22	2.4	2.7	3.0	5.5	4.0
2	65	88	19	2.4	2.0	3.0	3.5	71	105	21	2.4	2.5	1.5	6.0	3.5	106	68	48	144	22	2.2	2.3	1.0	5.5	3.0
3	69	84	22	2.2	1.0	3.0	3.5	70	154	25	2.6	2.5	2.0	5.0	4.5	111	49	47	131	22	2.2	2.4	3.0	5.5	3.0
4	65	100	17	2.3	1.5	1.0	4.0	66	140	16	2.5	2.5	2.0	5.5	4.0	77	41	47	123	21	2.3	2.3	1.0	7.0	3.0
5	76	79	20	2.3	1.0	1.0	3.0	68	131	22	2.2	2.5	2.0	5.5	3.0	107	41	48	127	24	2.2	2.2	3.0	5.0	3.5
6	62	136	21	3.8	2.0	3.0	4.0	64	150	20	2.4	2.5	2.5	4.0	4.0	101	55	48	135	23	2.1	4.1	3.0	6.0	4.0
7	70	74	16	1.8	1.5	3.0	3.0	63	141	19	3.1	2.5	3.0	4.0	4.5	108	43	46	143	24	2.2	2.6	3.0	5.5	3.5
8	77	92	20	3.1	3.0	3.0	3.5	72	119	18	3.0	2.5	3.0	2.0	2.5	119	70	47	147	22	2.4	2.3	3.0	5.5	4.0
9	77	85	23	2.9	1.0	3.0	3.5	70	105	21	2.4	2.5	1.0	6.5	3.0	132	59	46	150	23	2.2	2.4	1.0	7.0	4.0
10	61	98	19	2.3	2.0	1.0	3.5	60	116	17	2.7	3.0	2.0	5.5	4.5	68	45	46	150	23	2.3	2.4	3.0	4.0	3.5
11	71	72	18	1.8	1.5	1.0	3.0	70	146	22	2.3	3.0	2.0	5.5	3.0	78	48	48	164	24	2.6	2.4	3.0	6.0	3.5
12	66	97	19	2.2	1.0	3.0	3.0	69	149	20	2.9	2.5	2.0	5.0	5.0	51	35	48	112	25	2.4	2.4	1.0	7.0	2.0
13	64	91	16	2.6	1.0	1.0	3.5	66	116	16	2.1	3.0	1.5	5.5	4.0	87	46	47	126	23	2.2	2.4	3.0	5.5	3.0
14	63	109	19	3.0	2.0	3.0	4.5	70	110	22	2.5	2.5	1.0	6.0	3.0	69	39	48	118	19	2.1	2.4	1.0	7.0	2.0
15	61	97	17	2.2	1.0	1.0	3.0	60	147	13	2.5	3.0	1.0	6.5	3.5	89	45	49	133	24	2.2	2.4	3.0	5.5	4.0
16	64	119	20	2.9	1.5	3.0	3.5	68	130	17	2.6	2.0	1.0	6.5	3.5	88	49	49	145	23	2.2	2.3	3.0	5.5	3.0
17	63	98	20	2.7	2.0	3.0	3.0	74	88	17	2.3	3.0	3.0	4.0	2.5	103	65	47	130	23	2.1	3.2	3.0	5.5	3.0
18	62	104	22	3.1	1.0	1.0	3.5	63	132	21	2.7	2.5	2.0	5.5	4.5	75	48	47	133	24	2.3	2.4	3.0	7.0	3.0
19	64	90	16	2.6	1.0	1.0	4.0	65	109	17	2.9	2.5	1.5	5.5	3.0	82	38	49	145	24	2.5	2.5	3.0	7.0	2.5
20	65	95	21	2.9	1.5	3.0	3.5	73	127	23	2.4	2.5	2.0	4.0	4.5	82	23	45	144	24	2.4	3.1	3.0	5.5	4.0
21	73	96	13	1.8	2.5	1.0	2.5	69	174	26	3.2	2.5	3.0	5.0	3.5	153	67	48	123	20	2.2	1.7	3.0	7.0	2.0
22	56	91	14	2.2	1.0	3.0	3.5	67	139	16	3.0	2.0	2.0	5.0	3.0	120	29	47	148	24	2.3	2.5	3.0	5.5	3.5
23	56	186	23	2.6	2.0	3.0	3.5	64	155	22	2.8	2.0	3.0	3.0	4.0	110	39	48	138	22	2.2	2.5	1.0	7.0	3.0
24	67	107	15	2.9	1.5	3.0	3.0	69	164	16	2.7	2.0	3.0	1.0	4.5	96	41	50	131	20	2.1	1.6	3.0	5.0	2.5
25	63	68	13	1.7	2.0	1.0	3.5	66	142	26	2.0	3.0	2.0	5.0	3.0	103	33	49	125	21	2.1	1.5	3.0	5.0	2.5
26	63	128	23	3.1	2.0	3.0	3.5	73	142	15	3.4	3.0	3.5	4.0	3.5	128	43	50	134	21	2.1	1.5	1.0	5.5	2.0
27	65	144	21	2.8	2.5	3.0	3.5	68	155	20	3.1	2.5	1.0	6.0	3.5	111	54	46	137	23	2.2	2.4	3.0	7.0	3.0
28	70	106	16	2.9	1.0	1.0	2.5	65	129	19	2.9	2.5	2.0	5.0	4.5	115	45	47	149	23	2.2	2.3	3.0	5.5	2.5
29	56	117	19	2.5	1.0	3.0	3.0	70	174	20	3.3	2.0	2.0	5.0	3.0	96	45	48	113	18	1.6	1.6	1.0	7.0	3.0
30	56	119	18	2.6	2.0	1.0	2.5	70	149	19	3.0	2.5	3.0	5.0	3.5	123	49	48	147	23	2.3	1.5	1.0	7.0	2.0

CHAPTER I: BREEDING

Table 11: Elite joint biofortification nursery, across eight locations- Malnoor, Dhule, Jamnagar, Mandor, Jaipur, New Delhi, Vijayapur and Ludhiana. (for Pedigree of entries see table 6)

Plot size: 1 row x 4 m x 2 reps

E.	JPR							NDL									VYP								
no.	DF	PH	HL	HD	ETPP	SG	AS	DF	PH	HL	HD	ETPP	SG	BS	AS	Fe	Zn	DF	PH	HL	HD	ETPP	SG	BS	AS
31	71	137	20	3.3	1.5	3.0	4.0	73	147	17	3.6	2.5	3.0	3.0	3.0	135	50	48	132	24	2.3	1.8	1.0	5.5	2.5
32	59	162	22	3.3	2.5	3.0	3.5	72	172	15	2.4	2.5	4.0	4.0	3.0	145	65	47	144	24	2.2	1.6	3.0	5.0	3.0
33	55	157	18	3.0	1.0	3.0	3.0	68	175	18	3.2	2.5	3.0	4.0	4.5	134	62	48	135	22	2.0	1.3	1.0	7.0	2.0
34	57	130	19	3.1	1.0	1.0	2.5	50	151	21	2.4	2.5	1.0	6.5	3.5	109	54	50	136	24	2.2	2.0	1.0	7.0	3.0
35	56	128	20	2.2	1.5	1.0	3.5	67	166	18	3.0	2.5	2.0	5.0	3.5	104	50	49	135	22	2.2	1.3	1.0	6.5	2.5
36	63	161	21	2.5	2.0	1.0	4.0	72	184	21	3.5	3.0	3.0	2.5	3.5	136	60	48	126	22	2.2	1.6	3.0	5.0	3.0
37	63	136	20	2.9	1.0	3.0	4.0	72	149	17	3.2	3.0	3.0	5.5	3.5	128	67	48	141	22	2.2	1.4	3.0	5.5	2.5
38	53	162	22	2.3	1.0	1.0	3.5	65	158	21	2.7	2.5	2.0	5.0	3.5	87	54	48	119	20	2.0	1.4	1.0	7.0	2.0
39	56	133	30	2.6	1.5	1.0	3.0	66	154	18	3.4	2.5	3.0	4.0	3.0	112	50	49	134	24	2.3	1.9	1.0	6.5	2.0
40	63	163	22	3.2	2.5	3.0	3.5	73	175	18	2.3	3.0	3.0	2.0	2.5	144	68	47	128	21	2.1	1.8	1.0	5.0	3.0
41	67	149	21	2.8	2.5	3.0	4.5	68	162	16	2.8	2.5	1.5	6.0	3.5	95	56	48	129	22	2.4	2.4	1.0	9.0	3.0
42	64	133	22	2.7	2.0	3.0	4.0	71	155	21	3.0	2.5	2.0	4.0	3.5	110	46	49	145	24	2.2	2.0	3.0	7.0	2.5
43	56	148	20	2.7	2.0	1.0	3.5	58	143	18	3.4	2.0	1.0	7.0	3.0	110	62	47	134	21	2.2	1.3	1.0	7.0	2.0
44	49	117	13	2.9	2.5	1.0	3.0	53	179	18	2.4	2.5	1.5	5.0	3.0	90	61	47	134	24	2.2	1.3	1.0	7.0	2.0
45	57	142	27	3.5	1.5	3.0	4.0	64	147	28	3.5	3.0	3.5	5.0	4.0	147	43	48	133	24	2.3	1.6	1.0	7.0	2.0
46	64	119	20	3.1	1.0	1.0	3.0	67	132	17	1.9	2.5	2.5	5.0	3.0	94	50	49	149	24	2.3	1.7	1.0	7.0	3.0
47	50	126	20	1.7	2.5	1.0	3.0	61	150	20	1.5	3.0	1.0	6.0	3.0	54	39	47	108	17	1.8	2.2	1.0	7.0	2.0
48	55	159	20	2.2	2.0	1.0	3.5	66	156	13	2.2	3.0	1.5	5.0	3.0	85	51	50	145	24	2.5	1.5	3.0	5.5	2.5
49	49	161	23	2.9	2.0	1.0	3.0	53	186	23	2.5	2.5	3.0	4.0	3.5	82	52	47	139	23	2.3	2.4	3.0	5.5	3.5
50	64	100	16	3.2	1.0	3.0	2.5	63	140	20	3.6	3.0	1.5	6.0	4.5	106	74	46	147	23	2.2	1.6	3.0	5.0	2.5
51	53	168	21	3.6	1.5	1.0	3.0	64	194	21	3.1	2.5	2.5	5.0	4.0	75	30	46	141	24	2.3	1.5	1.0	7.0	2.0
52	58	130	23	2.3	1.0	1.0	3.0	65	185	22	2.2	2.5	2.5	5.0	4.0	44	34	48	138	24	2.4	1.4	1.0	5.0	2.5
53	51	113	16	1.5	2.5	1.0	2.5	53	138	14	1.4	2.0	2.0	4.0	3.0	46	38	48	132	21	2.4	1.4	3.0	5.0	2.0
54	57	186	31	3.2	2.0	3.0	3.5	67	156	20	2.2	2.0	3.0	3.0	3.5	49	23	47	131	22	2.4	1.4	3.0	5.5	2.0
55	56	151	19	1.5	2.5	1.0	3.0	68	185	26	1.4	2.5	3.0	3.0	3.5	53	36	47	122	19	1.9	2.0	1.0	6.5	2.5
56	49	143	22	2.1	2.5	1.0	3.5	62	178	18	2.4	2.5	1.0	6.0	3.0	68	54	46	109	18	1.9	2.1	1.0	5.0	2.0
57	56	137	21	3.3	1.0	1.0	3.5	65	125	24	2.8	3.0	2.0	5.5	3.5	59	35	49	155	24	2.3	1.5	3.0	5.0	2.5
58	67	139	26	2.4	1.0	3.0	3.0	72	100	24	1.5	2.5	1.0	7.0	2.0	143	56	47	151	24	2.2	1.4	1.0	5.5	2.0
59	53	108	15	3.0	1.5	1.0	2.5	64	165	23	2.6	2.5	2.5	5.0	4.0	98	36	48	150	24	2.4	1.6	1.0	5.5	2.0
60	56	132	14	2.4	1.0	1.0	3.0	49	138	18	3.1	3.0	1.0	7.0	3.0	111	67	49	142	21	2.3	1.4	1.0	5.5	2.0

CHAPTER I: BREEDING

Table 11: Elite joint biofortification nursery, across eight locations- Malnoor, Dhule, Jamnagar, Mandor, Jaipur, New Delhi, Vijayapur and Ludhiana. (for Pedigree of entries see table 6)

Plot size: 1 row x 4 m x 2 reps

E. no.	LDN										Grand Mean									
	DF	PH	HL	HD	ETPP	SG	BS	AS	Fe	Zn	DF	PH	HL	HD	ETPP	SG	BS	AS	Fe	Zn
1	46	123	23	0.9	2.2	-	3.3	3.0	111	63	56	125	21	2.4	2.5	2.3	3.7	3.4	94	51
2	71	110	21	0.9	2.7	-	3.1	2.0	110	78	62	116	20	2.1	2.0	2.0	4.7	2.4	108	73
3	69	123	26	0.8	3.1	-	2.7	3.0	91	68	61	122	24	2.2	2.2	2.5	3.1	3.0	81	49
4	62	108	21	0.9	2.5	3.0	2.5	2.0	67	56	59	110	18	2.2	2.3	2.1	5.0	2.9	67	44
5	72	98	24	0.9	2.5	3.0	2.8	2.0	84	65	63	115	22	2.1	2.1	2.3	3.3	2.6	96	53
6	60	120	21	1.1	3.0	3.0	1.7	2.0	111	64	59	131	20	2.6	2.8	2.9	2.5	3.2	99	56
7	61	120	27	1.0	3.4	-	2.7	4.0	127	88	60	116	20	2.3	2.3	2.8	2.6	3.1	105	59
8	77	114	21	0.8	3.7	3.0	1.5	4.0	105	71	65	118	19	2.3	3.0	3.0	2.1	2.6	112	71
9	69	103	22	0.9	2.9	-	2.5	3.0	95	75	64	106	21	2.0	2.2	1.9	4.8	2.5	114	67
10	43	113	20	0.9	1.7	-	1.2	2.0	73	51	55	115	18	2.3	2.4	2.2	3.5	3.4	80	51
11	69	118	22	0.9	3.5	3.0	3.0	4.0	57	44	63	122	20	2.1	2.5	2.4	4.4	2.9	61	41
12	70	118	22	0.9	2.5	3.0	2.4	2.0	61	53	60	123	20	2.2	2.3	2.6	3.2	2.5	53	40
13	50	110	19	0.9	3.5	3.0	1.2	3.0	75	54	58	114	18	2.2	2.5	2.3	4.0	2.9	81	48
14	71	108	27	1.0	2.9	-	1.8	3.0	58	48	61	112	21	2.4	2.5	2.1	5.1	2.8	59	43
15	43	110	18	0.9	3.9	-	2.0	2.0	51	34	56	118	17	2.3	2.5	2.3	4.6	3.2	62	39
16	69	105	22	0.8	2.0	-	2.5	2.0	67	62	62	122	20	2.3	1.9	2.3	4.6	2.3	78	55
17	75	73	19	0.9	2.4	3.0	1.5	2.0	85	68	63	95	19	2.1	2.3	2.7	3.3	2.1	94	66
18	60	123	30	0.9	3.1	3.0	3.5	3.0	74	72	58	122	23	2.4	2.5	2.6	3.7	3.4	71	54
19	69	98	20	0.8	2.2	-	3.5	2.0	65	55	60	110	18	2.4	2.2	2.1	4.8	2.8	66	43
20	62	95	21	1.0	3.7	3.0	2.9	3.0	89	67	61	121	22	2.5	2.6	2.8	3.5	3.2	73	42
21	65	140	19	0.9	2.2	-	2.5	2.0	139	133	61	144	21	2.2	2.0	2.4	3.3	2.4	126	83
22	79	124	19	0.8	2.7	-	0.8	2.0	100	65	59	123	18	2.3	2.2	2.5	2.8	2.8	98	44
23	66	158	28	1.0	2.3	-	1.8	2.0	58	49	59	147	21	2.2	1.8	2.3	2.3	2.6	81	44
24	58	115	18	0.9	4.0	-	1.8	3.0	82	69	59	137	18	2.3	2.2	2.9	2.0	2.7	89	55
25	64	110	21	0.9	2.3	-	2.3	2.0	97	57	59	121	21	2.1	2.4	2.1	3.2	2.5	86	45
26	-	-	-	-	-	-	1.5	-	-	-	62	130	18	2.9	2.2	2.3	2.8	2.2	98	45
27	62	130	19	0.9	2.4	3.0	2.2	2.0	125	70	60	139	20	2.3	2.1	2.6	3.8	2.8	116	58
28	-	-	-	-	-	-	3.0	-	-	-	60	123	19	2.6	1.8	2.1	4.1	2.6	89	43
29	55	140	23	1.1	2.9	3.0	2.0	3.0	94	61	58	140	21	2.4	1.8	2.4	4.8	2.8	92	53
30	-	-	-	-	-	-	2.5	-	-	-	59	133	18	2.6	1.9	1.8	4.5	2.4	101	46

CHAPTER I: BREEDING

Table 11: Elite joint biofortification nursery, across eight locations- Malnoor, Dhule, Jamnagar, Mandor, Jaipur, New Delhi, Vijayapur and Ludhiana. (for Pedigree of entries see table 6)

Plot size: 1 row x 4 m x 2 reps

E. no.	LDN										Grand Mean									
	DF	PH	HL	HD	ETPP	SG	BS	AS	Fe	Zn	DF	PH	HL	HD	ETPP	SG	BS	AS	Fe	Zn
31	44	123	15	1.0	3.9	-	2.3	2.0	125	80	59	135	18	2.6	2.2	2.3	2.9	2.4	130	65
32	78	128	19	0.8	2.5	3.0	2.0	2.0	-	-	62	153	18	2.3	2.2	3.1	4.2	2.4	145	65
33	64	163	19	1.0	1.9	-	2.2	2.0	110	66	57	155	18	2.5	1.8	2.3	3.6	2.8	109	60
34	52	130	22	0.8	4.0	-	1.2	3.0	79	54	54	137	21	2.3	2.3	1.7	5.1	2.7	83	50
35	47	128	22	0.9	2.6	-	2.3	2.0	103	62	56	139	20	2.2	2.0	1.8	3.7	2.6	97	51
36	73	118	21	0.9	3.9	3.0	2.2	4.0	82	70	61	136	20	2.5	2.4	2.5	3.1	3.1	95	59
37	61	140	19	0.9	2.2	-	2.4	2.0	102	70	60	134	18	2.5	2.0	2.8	4.4	2.8	112	63
38	53	130	23	1.0	3.7	-	2.5	4.0	74	55	56	144	21	2.3	2.2	1.9	4.2	2.9	77	51
39	65	148	21	0.9	2.4	3.0	0.8	2.0	104	58	58	139	21	2.5	2.0	2.4	2.3	2.7	100	53
40	64	140	19	0.8	2.4	-	1.5	2.0	101	71	59	147	20	2.2	2.3	2.5	2.3	2.8	108	64
41	78	139	19	0.9	3.3	3.0	3.3	3.0	100	84	63	147	20	2.3	2.3	2.0	5.6	2.9	98	70
42	63	140	19	0.8	2.9	-	0.9	3.0	76	57	60	132	20	2.3	2.2	2.7	4.3	3.0	88	46
43	64	118	17	0.9	2.0	-	2.4	2.0	94	62	55	137	18	2.5	2.0	1.1	6.2	2.4	102	62
44	49	125	18	0.8	1.7	-	2.0	2.0	105	87	51	136	19	2.2	2.6	1.8	5.3	2.5	81	64
45	53	163	21	0.9	4.0	3.0	1.9	4.0	69	55	57	148	25	2.7	2.3	2.6	4.2	3.3	100	48
46	53	132	18	0.8	2.7	-	3.2	3.0	55	54	58	128	20	2.2	1.8	1.9	4.5	2.6	71	50
47	49	150	22	0.7	3.9	-	2.0	3.0	59	57	53	130	19	1.6	2.9	1.8	4.8	2.6	50	46
48	48	138	20	0.8	1.7	-	2.1	2.0	-	-	55	147	18	2.1	2.2	2.1	3.7	2.9	70	49
49	77	153	22	0.9	2.4	3.0	1.3	2.0	76	68	55	161	22	2.4	2.4	2.6	3.6	3.1	71	55
50	69	108	16	0.9	2.6	-	1.6	2.0	80	51	59	128	18	2.6	1.8	2.3	4.9	2.6	84	56
51	55	128	18	0.8	2.4	-	1.9	2.0	51	38	55	153	22	2.5	2.1	2.0	4.2	3.3	55	30
52	56	153	21	0.8	2.0	-	1.8	2.0	34	42	56	148	22	2.0	1.9	1.8	5.0	2.9	37	36
53	49	110	16	0.7	2.3	-	3.0	2.0	64	61	53	128	16	1.6	2.9	2.2	3.7	2.2	50	45
54	50	150	21	0.8	3.4	3.0	1.8	3.0	58	45	56	156	23	2.2	2.4	2.9	2.7	3.0	50	34
55	61	178	25	0.7	2.7	-	2.1	2.0	38	38	57	150	22	1.5	2.7	2.1	3.4	2.4	46	38
56	49	135	22	0.8	2.3	-	2.9	2.0	53	63	52	143	19	2.0	2.5	1.4	5.5	2.5	53	50
57	50	148	20	0.9	3.7	-	3.2	3.0	93	71	56	140	22	2.5	2.2	2.2	5.3	2.9	67	50
58	70	128	24	0.8	2.3	-	2.4	2.0	55	49	64	130	26	2.0	1.7	1.9	5.4	2.1	86	47
59	54	130	26	0.9	2.4	-	2.2	2.0	56	42	55	140	22	2.7	1.9	1.9	4.2	2.8	66	35
60	50	93	17	0.8	1.4	-	1.8	1.0	57	61	52	133	17	2.4	1.7	1.1	6.0	1.9	84	64

**CRP
BIOFORTIFICATION
PROJECT**

Mean performance of entries for different traits in CRP Biofortification Parental Line Trial (CRPB PLT) *Kharif-2024*

The trial was conducted using 40 entries including two checks across 6 locations viz., Mandor, Jaipur, New Delhi, Jamnagar, Dhule and Hisar. The performance for days to 50% flowering, plant height (cm), Effective tillers /plant, head length (cm), head girth (cm), seed set (%), and agronomic score. The days to 50% flowering ranged from 44 (Dhanshakti) to 69 (RIB 15185 and RIB 15186). The plant height ranged from 106 cm (ICMB 98222 and DHL CRP 01) to 175 cm (150 SB 24). Effective tillers per plant was 1.8 (RIB 15183, RIB 15185 and PPMI 1322) to 3.7 (HSR 24-1). Head length ranged from 14 cm (MIR 1406) to 28 cm (JMSB 20229). Head girth ranged from 1.6 cm (MIR 1806) to 3.6 cm (RIB 15185). The seed set (%) under open pollination condition ranged from 50 (HSR 24-4) to 82 (RIB 15184 and Dhanshakti (C)). Agronomic score ranged from 1.9 (HSR 24-4) to 3.5 (DHL CRP 03). Grain sample of all test location collected and analyzed for grain nutrient content at ICAR-IIMR Hyderabad. Grain iron content ranged (36-97ppm) JMSB 20227(97ppm) recorded higher iron content compared to best check ICMB 98222 (82ppm). Grain zinc content ranged (32-55 ppm) JMSB 20227 (55ppm) recorded higher zinc content compared to best check ICMB 98222 (53ppm).

Centre wise brief progress report of CRP Biofortification project *kharif 2024*

Name of Centre	Activity performed
ICAR-AICRP-PM, Jodhpur	➤ CRP Biofortification Parental Line Trial (CRPBPLT) comprising (40 ent. x 1row x 2 rep.) constituted and distributed to associated centers and being conducted at Mandor location during kharif-2024. ➤ A total of 120 entries including checks were tested in 2 Initial Station Hybrid Trials during kharif 2024. Days to 50% flowering ranged from 44 to 47 and grain yield ranged from 2396 kg/ha to 3042 kg/ha and 12 entries found superior in comparison to best check MPMH 17 (2350 kg/ha). ➤ Harvested grain sample of selected entries were analyzed for grain iron and zinc content and sample ranged from 21ppm to 44.5 ppm for iron and from 32.4ppm to 57ppm for zinc content. ➤ 65 R-lines having high iron and zinc content were maintained for use in different breeding programmes. ➤ In kharif 2024, generation advancement activity for 9 RxR combinations were advanced from F₈ to F₉ and 7 RxR combinations were advanced from F₂ to F₃ and F₁ developed during summer 24 using 6 promising restorers were planted and new RXR crosses are being attempted using 6 entries. ➤ 34 promising A/B pairs are being maintained and seed is multiplied during <i>kharif 2024</i>. ➤ Hybrid development programme conducted for early and medium maturity group using 3 promising male sterile lines namely ICMA 93333, ICMA 97111 and ICMA 92777, using 45restorer lines having high iron and zinc content. A total of 135 F₁ were developed which are being tested in station hybrid trial <i>kharif 2025</i>. ➤ 34 grain samples of pearl millet including hybrids, varieties and landraces for proximate analysis at NIN, Hyderabad. ➤ Biofortified hybrids/varieties were demonstrated in National demonstration <i>kharif 2024</i>.

	➤ Seed increase of promising parental lines with high iron and zinc was done to include in future breeding programs. <u>Technical Programme 2024</u> ➤ Composition and distribution of CRP Biofortification Parental Line Trial (CRPBPLT) <i>kharif</i> 2025 to associated centers. ➤ CRP Biofortification parental Line Trial conducted and observation on different aspects will be recorded. ➤ Selection and screening activity will be carried out. ➤ Maintenance programme will be carried out for available high Fe and Zn lines and station and national repository A/B Pairs. ➤ Newly developed hybrids will be evaluated along with standard checks in Station hybrid trials and promising hybrid will be selected and advanced. ➤ Under hybrid development activity more number of A x R crosses attempted, generation advancement activity for RxR crosses will be carried out. ➤ Demonstration of biofortified hybrids/variety along with other in National demonstration <i>kharif</i> 2025 and seed increase programme for proposed hybrids will be carried out.
ICAR-IARI, New Delhi	➤ Pusa 1801 (MH 2417) a dual purpose biofortified hybrid with high grain and dry stover yields as well as high iron and zinc content was released and notified (S.O. 4388(E), dated October 8, 2024) for NCT of Delhi. ➤ 5 entries namely PPMI 1322, PPMI 1323, PPMI 1324, PPMI 1325 and PPMI 1326 were nominated to CRP-Bio-fortification Parental Line Trial conducted during <i>Kharif</i> 2024. ➤ 111 bio-fortified hybrids were evaluated and one hundred twenty new hybrids having high iron and zinc content were developed during <i>kharif</i> 2024. ➤ CRP-Biofortification Parental Line Trial (CRPB-PLT) comprising of forty entries evaluated in two replications during <i>Kharif</i> 2024. ➤ In Intermediate Station Trial; one hundred eleven hybrids were tested at IARI, New Delhi during <i>Kharif</i> 2024. Nine hybrids appearing at plot no. 4024 (ICMA 08666 x CTPRLT 17/14), 4028 (ICMA 11222 x HFeIT 17/2), 4042 (ICMA 11222 x KSU 20 Seln-1), 4050 (ICMA 14222 x ICFD 14-R-61), 4075 (ICMA 08666 x CTPRLT 17/22), 4080 (ICMA 11222 x ICFD-16-FZ-11), 4081 (ICMA 11222 x ICFD 14-R-61), 4170 (ICMA 08666 x PPMI 1251) and 4186 (ICMA 11222 x CHI 19/14) were found promising on the basis of yield, iron and zinc content. Range of average grain yield of promising hybrids was 4121 kg/ha to 4883 kg/ha. Iron and zinc content among these hybrids was more than 61 ppm and 37 ppm, respectively. ➤ Genetic variability for biochemical parameters influencing rancidity of pearl millet- A set 255 accessions was evaluated to explore genotypic variations related to biochemical parameters influencing rancidity. ➤ 436 families of cream grain colour and 106 of high iron and zinc content were advanced to F6 generation. ➤ 12 A/B pairs and 279 restorers having high Fe and Zn were maintained and multiplied. <u>Technical Programme 2024</u> ➤ Screening of pearl millet lines for iron and zinc. ➤ Evaluation of Fe and Zn enriched hybrids developed in <i>kharif</i> 2024 involving parental lines possessing high iron and Zinc content.

	➤ More number of hybrids will be generated in kharif 2025 using diverse and high Fe and Zn restorers and A/B pairs. ➤ Nomination of iron and zinc enriched lines will be made to biofortification trials constituted by AICRP-PM.
JAU, Jamnagar	➤ CRP Biofortification Parental Line Trial K-24(CRPB-PLT) consisted of 40 coded breeding lines conducted successfully. ➤ The 7 (2 B lines and 5 R lines) seed contributed for CRP Biofortification Parental Line Trial (CRPB-PLT)i ➤ Under breeding materials generation three R×R and two B×B crosses evaluated and selected progenies will be evaluated in the next season. ➤ The total 110 lines of breeding materials generated and maintained at this station were screened for their Fe and Zn content in which found 101 breeding line having more than 42 ppm Fe and 94 breeding lines having more than 32 ppm Zn. The range observed for iron from 35 to 106 ppm and for zinc from 23 to 89 ppm. ➤ Total six hybrids, tested along with high Fe and Zn content checks at four diverse locations of Gujarat were selected on the basis of yield during summer 2024 (total no. of samples 6 entry × 3 rep × 4 locations = 72 samples) and analyzed for their Fe and Zn content. The range observed in these selected hybrids for iron from 31.0 to 113.0 ppm and for zinc from 19.0 to 59.0 ppm. ➤ During kharif 2024, total nine hybrids, tested along with high Fe and Zn content checks at seven diverse locations of Gujarat were selected on the basis of yield and its grain samples (total no. of samples 9 entry × 3 rep × 7 locations = 189 samples) for nutrients (Fe and Zn) analysis submitted to ICRISAT, Hyderabad. ➤ Total 1163 kg parental lines breeder seed of biofortified hybrid produced and distributed as per the indent. ➤ Total 821 kg TL hybrid seed of biofortified hybrids produced and distributed to farmers. ➤ Under scaling-up activity total 50 FLD's (20 hectare) on biofortified pearl millet hybrids GHB 1129 were conducted. <u>Technical Programme 2025</u> ➤ New hybrids developed based on high Fe and Zn content parental lines will be evaluated at the station and other locations and promising hybrids based on yield and their Fe and Zn level will be promoted or released. ➤ Field trial/nurseries of CRPBPLT breeding lines as per the technical program finalized by sub group leader will be conducted and yield and related traits will be recorded and grain as well as straw samples for Fe and Zn determination will be submitted. ➤ The seed of promising B and R lines having higher content of Fe and Zn will be contribute to sub group leader for the testing in parental line multilocation trial. ➤ The breeding materials generation R × R and B × B crosses will be carried out and existing breeding materials and advanced generation material will evaluated and bulk/progenies selected and screened for Fe and Zn content. ➤ Scaling up activities for released biofortified hybrids will be carried out through conducting FLDs during summer and kharif2025. ➤ The seed increase program during off-season summer nurseries will be undertaken for the promising initial and advanced level hybrids for evaluate them.

ICAR-AICRP-PM, RARI, Jaipur	➤ Trial consisted of 40 lines including checks was conducted successfully during kharif 2024. The observation on different traits was taken and data along with grain samples for analysis was submitted to PC unit. ➤ Ten entries viz., RIB 15178, RIB 15183, RIB 15179, RIB 15184, RIB 15180, RIB 15185, RIB 15181, RIB 15186, RIB 15182 and RIB 15187 also contributed. ➤ Total 49 frontline demonstrations (FLDs) conducted on biofortified hybrids like RHB 233 and RHB 234 at different locations. All the biofortified hybrids recorded higher grain yield over the farmers preferred hybrids. RHB 234 (24.6%) and RHB 233 (20.2 %) recorded higher grain yield over the farmers preferred hybrids. ➤ Maintenance and screening of all available breeding material for quality parameters. ➤ 8 promising A/B pairs viz., ICMA98444 A &B, ICMA92777 A &B, ICMA88004 A &B , ICMA94333 A &B, ICMA98222 A &B, ICMA97111 A & B, ICMA843-22 A &B, ICMA96666 A &B, maintained at the centre. ➤ Maintenance of 60 designated R lines having high iron zinc content. ➤ New hybrids: 120 F1 crosses made and planted in Kharif 2024 ➤ R x R Crosses: 100 crosses made in Summer 2024, F1 planted in Kharif 2024 ➤ B x B Crosses: 24 crosses made in Summer 2024, F1 planted in Kharif 2024 ➤ R x R Advancement for high-Fe and Zn : 15 F2 crosses & 25 F3 progenies planted and selfed in Kharif 2024 ➤ High-Fe and Zn F4 Progenies: 15 progenies grown and selfed in Kharif 2024. <u>Technical Programme 2024</u> ➤ Evaluation of Fe and Zn rich hybrids, Screening of parental lines and more number of hybrids will be generated by using diverse and high Fe and Zn restorers and male sterile lines. ➤ Further evaluation of the segregating materials. ➤ Maintenance activity for available male sterile lines and established restorers having high grain iron and zinc will be carried out. ➤ Nomination of iron and zinc enriched lines will be made to bio-fortification trials.
ICAR-AICRP-PM, MPKV, Dhule	➤ A total of 40 entries were evaluated in CRP Biofortification Parental Trial (CRPB-PLT) in two replications during kharif 2024. ➤ 6 entries were contributed by Dhule center in CRPB PLT K-24. ➤ In all, eleven local Germplasm lines for blast resistant, long ear head, more ear head girth, no. of tillers with high Fe and Zn content were collected. ➤ Breeding material was evaluated during Kharif 2024 and Nine B lines and Thirty four R lines were selected for high Fe (>75 ppm) and Zn (>35 ppm). ➤ Five hybrids were promising over eight locations of state and two promising hybrids were tested in Kharif 2024. ➤ 6 male sterile lines and 10 restorers were maintained by sib mating having > 75 ppm Fe and > 35 ppm Zn. ➤ 120 hybrids were tested in Station trial-I to Station trial-VI in kharif 2024. Twenty two hybrids from different sets were found promising and yielded more than 15 per cent , Fe content >75 ppm and Zn content >35 ppm over recent hybrid check AHB-1200. ➤ Promising 3 biofortified hybrids were tested in University Multi location Trial in kharif 2024 at three locations of MPKV, Jurisdiction, Three hybrids viz, DHBH-

	21075, DHBH-23058 , DHBH-23036 were gave > 18 per cent more yield with Fe > 75 ppm and Zn >35 ppm than check AHB-1200. ➤ Six advanced stage biofortified CMS lines were sown for their maintenance and were freshly included in hybrid development programme. ➤ Four pairs of BC1 ,5 pairs of BC2, six pairs of BC3 and 5 pairs of BC4 backcross generations were evaluated and advanced. ➤ Development of Biofortified B line DHLB-16 B x ICMB-10899, ICMB-98222 x DHLB-28 B, ICMB-13444 x DHLB-23 B, DHLB-10B x ICMB-10899 and DHLB-23 B x ICMB-875. ➤ Advancement of Segregating material B line development programme: 7 F₁s derived from biofortified B X B crosses were raised. Six F₂s, Three F₃s, Three F₄s, Three F₅s derived from biofortified B X B crosses were evaluated and four promising advanced biofortified lines from B X B generations were selected for conversion programme to develop new biofortified CMS lines. <u>Technical Programme 2024</u> ➤ Maintenance of B and R-lines by sib mating, respectively. ➤ Generation advancement of different RxR crosses made by using biofortified parental lines will be carried out during <i>kharif</i> 2025. ➤ Development of experimental hybrids: Hybrid will be developed utilizing biofortified male sterile lines and restorers will be tested in <i>kharif</i> 2025 in Station trials, UMLT and SMLT trials. ➤ Advancement of breeding material – B and R improvement: Growing of F₁, F₂, F₃, F₄ generations.
ICAR AICRP-PM, CCS HAU, Hisar	➤ Breeding material derived from A/B x B, R x R and A x R crosses were advanced/evaluated in kharif 2024 and desirable plants/entries selected for further evaluation. ➤ Effect of different processing treatments such as blanching, malting and fermentation on biofortified pearl millet hybrids, namely, HHB 299 and HHB 311 revealed that crude protein increased in all the treatments as compared to the control. The ash content decreased in malting but increased in blanching and fermentation as compared to control. ➤ A total of 9 lectures/trainings/demonstration activities were carried out to popularize value-added products of pearl millet during the period under report. ➤ 2 non-exclusive licensing (NEL) agreements were entered into with private seed companies for production, sale and marketing of pearl millet hybrid HHB 67 Improved 2. ➤ Evaluation of CRP Biofortification Parental Trial: This trial was planted during kharif 2024 comprising of 40 entries in two replications on 11.07.2024. However, the trial had very less germination and treated as failed. ➤ B x B crosses: F₂s evaluated during k-2023 were planted in 10 row each in kharif 2024 and desirable plants selected. ➤ R x R crosses: Five new R x R F₁ crosses developed earlier were selfed to produce respective F₂s. These F₂s were planted in 10 row each in kharif 2024 and desirable plants selected. ➤ A x R crosses: Seven selected hybrids with checks were evaluated in LST trial in kharif 2024.

	➤ All FLDs conducted with biofortified hybrid HHB 299. ➤ Screening of germplasm for different traits. <u>Technical Programme 2025</u> ➤ Development of pearl millet genotypes/hybrids for high iron/zinc and other micronutrients. ➤ The main focus will be to screen available pearl millet germplasm for different nutritional traits in pearl millet. for e.g. mineral traits like Ca, Mg, Fe, Zn, P, K etc. ➤ Screening of germplasm for different traits
CCS HAU, Hisar	Under the project objective 5 and 6 i.e Development of value added products, ready to cook and multigrain mixtures suitable for mid day meal schemes and Socio-Impact studies for assessment of consumer knowledge, preference and preparedness for biofortified products and sensitization and popularization of biofortified products following activities were performed. ➤ Pearl millet hybrids viz. HHB 311 and HHB 299 were used to find out the effect of different processing methods like blanching, malting and fermentation of sprouts on nutritional composition of pearl millet on dry weight basis. ➤ Ash content of unprocessed pearl millet flour was 2.57 (HHB 299) and 2.39 (HHB 311) per cent. ➤ Malting (48, 60 and 72 hours of germination) resulted in 4.82 to 7.78 per cent reduction of ash in HHB 299 and 4.60 to 7.53 per cent reduction in HHB 311 variety. ➤ The ash content of blanched pearl millet flour was 2.69 (HHB 299) and 2.48 (HHB 311) per cent and that of fermented pearl millet flour was 2.85 (HHB 299) and 2.61 (HHB 311) per cent. ➤ Compared to control, ash content of blanched and fermented flour was significantly higher and it was observed that the ash content of malted flours decreased by 4.60 to 7.78 per cent. On overall mean (variety) basis, ash content of fermented flour (2.73%) was significantly higher, followed by blanched (2.59%), unprocessed (2.48%) and malted flour (2.29 to 2.36%). ➤ A significant decrease was observed in crude protein content of malted flour (72 h) from 10.46 percent to 10.21 percent in HHB 299 and 11.48 percent to 11.24 per cent in HHB 311 variety. However, the crude protein content of all other types of processed flours increased by 3.70 to 7.30 per cent, compared to control in both the varieties. ➤ Currently, multi-millet (Pearl millet, Finger millet and Foxtail millet) traditional recipes such as <i>Halwa</i> and <i>Suhali</i> are being standardized.

- **Technology Intervention given to student, farmers and rural ladies through lectures, trainings and demonstrations**



Technical Programme 2025

- Development of value added products, ready to cook and multigrain mixtures by utilization of biofortified and non-biofortified pearl millet hybrids/ varieties for product development.
- Nutritional analysis of developed value-added products.
- Trainings, lectures, demonstrations, surveys etc. for popularization of pearl millet products.
- Socio-Impact studies for assessment of consumer knowledge, preference and preparedness for biofortified products and sensitization and popularization of biofortified products.

CHAPTER I: BREEDING

Table 1: CRP Biofortification parental line trial (CRPB-PLT) *kharif*-2024 across 6 locations- Mandor, Jaipur, Hisar*, New Delhi, Jamnagar and Dhule.

S. No.	Entry name	Location																									
		Mandor										Jaipur								New Delhi							
		DF	PH	PP	HL	HD	SS	AS	Fe	Zn	DF	PH	PP	HL	HD	AS	Fe	Zn	DF	PH	PP	HL	HD	SS	AS	Fe	Zn
1	PPMI 1322	61	118	1.5	22	1.9	73	3.3	35	32	63	104	1.0	13	2.7	3.0	32	38	59	159	2.7	16	2.9	75	5.0	67	46
2	PPMI 1323	48	148	2.5	21	2.3	73	3.3	53	39	57	164	3.3	19	2.8	4.0	41	40	58	183	2.6	19	2.2	73	4.0	73	47
3	PPMI 1324	61	110	1.8	15	2.3	55	2.3	71	48	53	131	3.0	19	2.5	3.0	52	46	64	159	3.0	19	2.4	75	4.5	73	45
4	PPMI 1325	56	150	2.5	21	3.2	65	3.5	57	45	59	159	3.0	25	3.2	4.0	43	42	64	168	3.0	17	2.7	75	4.0	73	53
5	PPMI 1326	62	135	1.8	21	2.4	55	2.5	54	44	59	145	2.0	22	2.2	4.0	41	38	56	164	2.7	20	2.6	78	4.0	92	57
6	HSR 24-1	52	122	3.0	13	1.9	73	4.3	30	25	41	132	3.6	19	1.4	3.0	32	27	45	165	2.7	19	1.6	80	4.0	43	32
7	HSR 24-2	61	105	1.5	16	4.0	76	3.0	40	40	60	125	2.3	14	3.3	4.0	71	52	60	126	3.0	17	3.2	78	3.5	61	54
8	HSR 24-3	59	105	2.3	14	3.2	68	2.3	41	30	48	117	3.3	19	2.6	3.0	49	34	51	139	3.0	19	2.7	73	3.5	53	30
9	HSR 24-4	58	105	2.0	11	2.6	48	1.8	53	42	52	127	3.0	10	1.6	2.0	63	46	48	168	2.3	17	2.4	78	3.0	61	46
10	150 SB 24	55	145	3.5	17	3.0	60	3.3	62	44	47	166	4.0	21	2.6	4.0	45	51	54	200	3.0	26	3.2	78	3.0	58	38
11	159 SB 24	55	123	2.0	18	2.1	48	2.3	33	33	61	121	5.0	27	2.1	4.0	34	44	63	179	3.0	21	2.2	75	4.5	58	46
12	171 SB 24	52	135	2.0	21	2.3	63	2.3	40	34	52	177	3.0	28	1.7	3.0	41	36	64	181	3.0	25	2.3	75	3.0	34	30
13	217 SB 24	61	108	1.5	20	2.4	47	2.3	41	31	68	128	3.3	20	3.3	3.0	44	39	57	170	2.3	25	3.0	73	4.5	67	31
14	229 SB 24	55	148	2.3	27	2.9	53	2.0	50	33	68	137	2.6	22	2.6	3.0	56	48	57	205	3.0	27	3.2	78	3.5	72	42
15	JMSB 20213	60	117	2.8	21	2.9	60	2.3	49	37	75	83	3.0	22	3.5	2.0	52	45	60	139	3.0	21	2.4	79	3.5	60	47
16	JMSB 20227	64	85	3.0	16	3.8	80	3.3	75	38	-	-	-	-	-	-	-	-	75	103	3.0	13	2.4	73	3.0	121	72
17	JMSB 20229	64	163	2.8	35	3.2	70	2.3	43	34	71	204	3.0	23	2.1	3.0	60	56	67	118	2.4	28	2.7	82	3.0	68	42
18	DHL CRP 01	55	85	2.0	11	2.7	40	2.0	59	38	-	-	-	-	-	-	-	-	53	121	3.0	15	2.4	75	3.0	89	47
19	DHL CRP 02	61	138	2.5	17	3.1	44	2.5	52	42	58	162	6.0	27	2.9	3.0	59	51	57	188	3.0	22	2.8	78	4.0	63	43
20	DHL CRP 03	63	143	2.5	20	3.4	63	4.3	59	41	52	120	4.0	22	3.4	3.0	-	-	57	178	2.7	23	3.2	78	4.0	106	69
21	DHL CRP 04	62	148	2.3	21	3.5	50	3.3	60	42	53	164	5.3	21	3.2	3.0	70	40	63	201	2.8	25	3.1	78	4.0	70	37
22	DHL CRP 05	63	153	2.0	23	3.6	55	2.3	51	33	60	151	5.0	24	3.6	3.0	64	46	57	179	3.0	23	3.3	78	3.5	88	42
23	DHL CRP 06	60	153	3.0	23	3.5	55	2.3	51	41	60	152	3.0	29	3.2	3.0	57	49	62	214	3.0	22	3.3	79	3.0	60	42
24	RIB 15178	58	105	1.5	15	2.6	50	2.3	64	40	-	-	-	-	-	-	-	-	62	170	2.6	21	2.7	73	3.5	88	57
25	RIB 15179	64	105	1.5	16	3.0	80	2.3	57	39	60	138	3.3	27	2.5	3.0	44	38	68	168	2.8	25	2.7	78	3.0	49	31
26	RIB 15180	57	103	2.3	17	3.0	50	2.3	44	35	-	-	-	-	-	-	-	-	67	135	3.0	20	3.1	73	3.0	87	44
27	RIB 15181	65	133	2.5	19	3.1	48	2.3	38	45	48	145	4.0	21	3.1	2.0	43	46	69	170	3.0	21	2.3	70	3.0	44	35
28	RIB 15182	51	135	2.5	19	3.2	73	2.3	27	27	56	131	1.0	25	2.6	3.0	25	38	59	174	2.3	23	2.6	73	4.0	41	34
29	RIB 15183	64	128	1.5	19	2.4	33	2.3	42	33	58	92	1.0	18	2.8	2.0	-	-	74	159	3.0	19	2.9	70	2.5	59	49
30	RIB 15184	59	155	2.5	24	2.9	75	3.3	57	36	-	-	-	-	-	-	-	-	74	169	3.0	22	2.4	78	3.0	63	42
31	RIB 15185	64	113	1.8	19	3.8	85	3.8	60	46	68	103	1.0	22	3.8	2.0	80	48	72	119	2.5	22	3.6	73	3.0	85	50
32	RIB 15186	65	100	2.0	18	3.9	75	3.0	58	36	-	-	-	-	-	-	-	-	72	116	3.0	17	3.1	70	2.5	82	48
33	RIB 15187	57	138	2.3	20	3.6	65	2.8	45	36	75	74	1.0	14	1.6	2.0	63	44	55	133	3.0	18	2.3	77	3.5	54	40
34	MIR 1117	64	125	3.0	18	1.8	85	3.3	53	39	53	133	1.0	17	1.6	2.0	56	68	57	148	2.6	20	1.7	79	4.0	57	36
35	MIR 1406	55	103	2.3	12	3.3	70	3.5	60	56	56	87	1.0	12	2.7	2.0	50	56	58	156	3.0	19	2.7	75	3.5	48	57
36	MIR 1716	54	130	4.0	19	1.9	83	4.0	37	35	56	145	2.0	23	1.7	3.0	-	-	62	249	3.0	27	1.8	77	3.5	48	43
37	MIR 1806	53	120	3.8	22	2.0	80	4.0	52	40	75	113	2.3	15	1.1	2.0	49	54	71	194	2.8	18	1.4	77	3.0	50	47
38	MIR 1907	53	105	2.8	12	3.4	88	4.5	56	48	45	122	3.0	21	2.7	2.0	81	59	57	151	2.5	16	2.8	83	4.0	50	62
39	ICMB 98222 (C)	53	89	2.3	20	2.7	63	3.3	52	38	65	89	2.0	13	2.0	2.0	86	65	53	118	3.0	15	3.2	75	3.0	105	71
40	Dhanshakti (C)	45	162	2.8	23	2.8	88	4.0	66	42	41	122	2.0	17	2.2	2.0	73	47	45	229	3.0	25	2.5	75	3.5	106	67

* Trial vitiated at Hisar

cont...

CHAPTER I: BREEDING

Table 1: CRP Biofortification parental line trial (CRPB-PLT) *kharif*-2024 across 6 locations- Mandor, Jaipur, Hisar*, New Delhi, Jamnagar and Dhule.

S. No.		Entry name	Location																							
			Jamnagar							Dhule								Grand Mean								
			DF	PH	PP	SS	AS	Fe	Zn	DF	PH	PP	HL	HD	SS	AS	Fe	Zn	DF	PH	PP	HL	HD	SS	AS	Fe
1	PPMI 1322	58	134	2.0	55	2.0	46	45	57	149	2.0	16	2.8	100	2.0	46	33	60	133	1.8	17	2.5	76	3.1	45	39
2	PPMI 1323	58	154	2.2	75	3.3	52	48	58	189	2.5	21	3.0	88	1.5	54	44	56	167	2.6	20	2.6	77	3.2	54	44
3	PPMI 1324	58	129	2.0	55	2.3	65	56	56	150	2.5	21	2.6	83	1.5	66	53	58	136	2.5	18	2.5	67	2.7	65	50
4	PPMI 1325	58	148	2.2	65	2.8	53	50	54	165	2.5	23	3.3	95	2.5	53	37	58	158	2.6	21	3.1	75	3.4	56	45
5	PPMI 1326	57	135	2.2	55	2.3	49	46	52	178	2.5	22	2.9	83	2.0	70	39	57	151	2.2	21	2.5	68	3.0	61	45
6	HSR 24-1	47	117	5.1	45	1.5	42	39	45	156	4.0	19	2.1	45	1.0	54	39	46	138	3.7	17	1.7	61	2.8	40	32
7	HSR 24-2	60	131	2.7	55	2.5	54	40	61	152	2.0	20	3.6	100	2.0	55	44	60	128	2.3	16	3.5	77	3.0	56	46
8	HSR 24-3	52	115	2.7	45	2.3	51	40	51	135	1.5	20	3.0	88	1.5	46	31	52	122	2.6	18	2.9	68	2.5	48	33
9	HSR 24-4	50	120	3.1	35	1.8	81	56	45	157	3.5	21	2.9	40	1.0	74	44	51	135	2.8	15	2.4	50	1.9	67	47
10	150 SB 24	48	156	3.5	78	2.8	64	48	52	210	2.5	26	3.3	100	2.0	55	42	51	175	3.3	23	3.0	79	3.0	57	45
11	159 SB 24	59	138	2.8	75	2.8	30	40	56	164	1.5	22	2.2	93	2.0	33	39	59	145	2.9	22	2.2	73	3.1	38	41
12	171 SB 24	56	159	2.4	78	3.3	36	28	54	165	3.0	30	2.8	93	2.5	44	36	55	163	2.7	26	2.3	77	2.8	39	33
13	217 SB 24	55	141	2.2	75	3.3	49	34	53	162	1.0	25	3.2	100	3.0	48	33	59	142	2.1	22	3.0	74	3.2	50	34
14	229 SB 24	55	140	1.9	75	3.0	54	38	54	165	1.5	24	3.3	98	2.5	52	31	58	159	2.3	25	3.0	76	2.8	57	38
15	JMSB 20213	58	120	1.9	60	2.8	59	46	59	145	2.0	20	3.2	88	1.5	61	38	62	121	2.5	21	3.0	72	2.4	56	43
16	JMSB 20227	66	89	2.0	30	2.0	112	64	68	154	2.0	25	2.5	78	1.0	81	46	68	108	2.5	18	2.9	65	2.3	97	55
17	JMSB 20229	66	135	1.5	35	2.0	64	48	68	143	1.5	26	2.9	83	1.0	49	33	67	152	2.2	28	2.7	67	2.3	57	43
18	DHL CRP 01	54	95	1.7	30	1.5	67	44	52	125	2.5	20	3.3	68	1.5	85	27	54	106	2.3	15	2.8	53	2.0	75	39
19	DHL CRP 02	55	156	2.1	60	3.0	41	36	54	179	2.5	23	3.5	95	2.5	67	37	57	164	3.2	22	3.1	69	3.0	56	42
20	DHL CRP 03	54	142	2.3	60	3.0	59	44	56	186	2.0	25	3.5	90	3.0	69	50	56	154	2.7	23	3.4	73	3.5	73	51
21	DHL CRP 04	56	168	2.2	80	3.0	66	43	63	182	2.0	24	3.3	95	2.0	56	33	59	172	2.9	23	3.3	76	3.1	64	39
22	DHL CRP 05	60	145	1.5	60	2.8	56	38	58	172	2.0	26	3.4	95	2.0	60	35	59	160	2.7	24	3.5	72	2.7	64	39
23	DHL CRP 06	61	139	2.1	75	3.0	61	47	57	186	2.5	24	3.4	100	1.5	57	36	60	169	2.7	25	3.4	77	2.6	57	43
24	RIB 15178	61	127	1.7	55	2.3	83	51	51	175	2.5	27	2.9	90	2.0	78	33	58	144	2.1	21	2.7	67	2.5	78	45
25	RIB 15179	62	115	1.6	60	2.8	88	38	57	143	1.0	18	2.9	58	1.5	55	37	62	134	2.0	21	2.8	69	2.5	59	37
26	RIB 15180	59	98	1.8	53	1.8	80	39	60	98	1.5	21	3.0	98	1.5	64	35	61	108	2.1	19	3.0	68	2.1	69	38
27	RIB 15181	67	137	1.8	50	2.5	50	44	58	169	2.5	28	2.9	85	2.5	41	31	61	151	2.8	22	2.8	63	2.5	43	40
28	RIB 15182	56	137	1.8	60	2.5	50	44	59	167	2.0	26	3.1	90	2.0	39	34	56	149	1.9	23	2.9	74	2.8	36	35
29	RIB 15183	68	144	1.6	60	2.5	43	41	64	165	2.0	25	3.0	80	1.5	56	34	65	137	1.8	20	2.8	61	2.2	50	39
30	RIB 15184	66	162	2.3	88	3.3	58	51	65	167	1.0	22	3.3	88	1.0	62	41	66	163	2.2	23	2.9	82	2.6	60	43
31	RIB 15185	69	133	2.0	40	2.3	83	48	71	109	1.5	21	3.3	78	1.0	58	41	69	115	1.8	21	3.6	69	2.4	73	47
32	RIB 15186	69	113	1.7	48	2.8	82	51	69	103	2.5	18	3.3	83	1.0	108	53	69	108	2.3	17	3.4	69	2.3	83	47
33	RIB 15187	54	130	2.0	40	2.3	61	42	51	157	3.0	24	2.9	63	1.0	87	49	58	126	2.3	19	2.6	61	2.3	62	42
34	MIR 1117	59	140	3.5	70	2.5	52	40	57	150	2.0	20	2.0	73	1.0	40	37	58	139	2.4	19	1.8	77	2.6	52	44
35	MIR 1406	56	110	2.5	50	2.1	62	52	55	147	3.0	14	3.1	85	1.0	54	46	56	120	2.4	14	2.9	70	2.4	55	54
36	MIR 1716	56	154	3.8	65	2.6	45	45	50	184	4.0	26	2.2	83	1.0	43	42	55	172	3.4	24	1.9	77	2.8	43	41
37	MIR 1806	58	137	5.3	55	2.1	49	51	59	167	3.0	25	1.8	63	1.0	51	40	63	146	3.4	20	1.6	69	2.4	50	47
38	MIR 1907	58	120	3.3	55	2.5	87	47	58	132	2.0	16	2.9	90	1.5	54	51	54	126	2.7	16	2.9	79	2.9	66	53
39	ICMB 98222 (C)	53	115	1.6	55	2.3	89	49	59	118	1.0	14	2.9	95	1.0	79	43	56	106	2.0	15	2.7	72	2.3	82	53
40	Dhanshakti (C)	46	161	2.4	70	2.8	85	51	45	174	2.5	24	3.0	95	2.0	67	36	44	169	2.5	22	2.6	82	2.9	79	49

DF: Days to 50% flowering, PH: Plant height (cm), PP: Panicle/Plant, HL: Head length (cm), HD: Head diameter, SS: seed set (%), AS: Agronomic Score, Fe (ppm) Zn (ppm)

TRIALS MONITORING REPORT

CHAPTER I: BREEDING

ICAR-AICRP on Pearl millet Monitoring Report-Kharif 2024

Team No.	Monitoring Team	Name of Centre	Date of Monitoring	Remarks/Comments	Overall Remarks
Team 5	Dr. R. S. Choudhary, ICAR-AICRP on Pearl millet, Jodhpur	CCS HAU, Hisar	26.09.2024	Breeding: All allotted trials were conducted as per approved technical programme CRP Biofortification Trials ICAR-ICRISAT Trials Agronomy: All 5 allotted trials were conducted as per approved technical programme Pathology: All 8 pathological trials successfully conducted as per technical programme	Good
	Dr. Dr. Ruchika Bhardwaj, Breeder, PAU, Ludhiana		27.09.2024	Breeding: All allotted trials were conducted as per approved technical programme	Good
Team 2.A.	Dr. Vikas Khandelwal, Breeder, ICAR-AICRP on Pearl millet, Jodhpur- Convenor	ARS, SKRAU, Bikaner	29.09.2024	Breeding- All 5 allotted trials were conducted as per approved technical programme Two Station Trials conducted Agronomy- All 5 allotted trials were conducted as per approved technical programme	Good All the experiments are maintained well.
		ARSS, Nagaur	29.09.2024	Breeding- Both allotted trials were conducted as per approved technical programme	Good
Team 2.B.	Dr. Manoj Kumar, Assistant Professor (Agronomy), AICRP on Pearl millet, Jodhpur- Convenor	ARS, Fathehpur Shekhawati,	27.09.2024	Breeding- Both allotted trials were conducted as per approved technical programme Entomology- All 8 allotted trials were conducted as per approved technical programme	Good
	Dr. J. P. Bisnoi Assistant Professor (Pathology) AICRP on Pearl millet, Jodhpur - Member	SKNCOA, SKNAU	28.09.2024	Breeding- Both allotted trials were conducted as per approved technical programme	Good
Team 3.	Dr. R. K. Pandya, Professor (Plant Pathology), ICAR- AICRP-PM, MRS, Gwalior- Convenor	ICAR-IARI, New Delhi	28.09.2024	Breeding- Both allotted trials were conducted as per approved technical programme CRPB-PLT Pathology: One AICRP and 1 PMPTVN trial conducted successfully	Good
	Dr. Susma Tiwari, Principal Scientist (Breeding), ICAR- AICRP-PM, MRS, Gwalior	PAU, Ludhiana	27.09.2024	Breeding- Both allotted trials were conducted as per approved technical programme One EIJBFT & 2 Station trail	Good

CHAPTER I: BREEDING

Team No.	Monitoring Team	Name of Centre	Date of Monitoring	Remarks/Comments	Overall Remarks
		Kaveri Seed, Alwar	29.09.2024	Breeding- Allotted trial was conducted as per approved technical programme	Good
Team 4.	Dr. Dev Vart, Senior Scientist (PB), CCSHAU, Hisar Dr. Vinod Malik, Assitant Professor-Pathology, CCSHAU, Hisar	RARI, Durgapura Jaipur	30.09.2023	Breeding- All 5allotted trials were conducted as per approved technical programme CPB-PLT, 2 Station trial	Good
				Agronomy- All 5 allotted trials were conducted as per approved technical programme	All the experiments are maintained well.
				Entomology- All 7 allotted trials were conducted as per approved technical programme	Good
				Plant Pathology- All 8 pathological trials successfully conducted as per technical programme	Satisfactory
				Plant Physiology - - All trials Failed	Failed
		ARSS, Tabiji Ajmer	By Video calling monitored	Breeding- All allotted trials were conducted as per approved technical programme	Good
		Jaipur, SeedWorks	30.09.2024	Breeding- Both allotted trials were conducted as per approved technical programme	Good
Team 6.A.	Dr. S. P. Singh, Principal Scientist (GPB), IARI, New Delhi- Convenor Dr. Minakshi Grover, Principal Scientist (Microbiology), IARI, New Delhi- Member	Mahindra, Agra	30.09.2024	Breeding- Allotted Trail was conducted as per approved technical programme	Good
		Hytech Seed India, Aligarh	30.09.2024	Breeding- Both allotted trials were conducted as per approved technical programme	Good
		Kaveri Seed Company Ltd., Bichpuri	30.09.2024	Breeding- Allotted trial were conducted as per approved technical programme	Good
		Kamadgiri Crop Sci. Ltd., Raipura	30.09.2024	Breeding- Both allotted trials were conducted as per approved technical programme	Good
Team 6.B.	Dr. Nirupama Singh, Principal Scientist (GPB), IARI, New Delhi- Convenor	Ganga Kaveri, Alwar	04.10.2024	Breeding- Allotted trial were conducted as per approved technical programme	Good
		Nuziveedu	04.10.2024	Breeding- Allotted trial were conducted as per	Good

CHAPTER I: BREEDING

Team No.	Monitoring Team	Name of Centre	Date of Monitoring	Remarks/Comments	Overall Remarks
	Dr. R. S. Bana Principal Scientist (GPB), IARI, New Delhi- Convenor	Seeds, Bharatpur		approved technical programme	
Team 7.	Dr. S.K Jain, Assoc. Prof. (PB&G) & Incharge ICAR- AICRP-PM, RARI, Durgapura Jaipur- Convenor	RVSKVV, Gwalior and Morena	07-08, 10.2024	At RVSKVV, Gwalior Breeding- All 5 allotted coordinated trials were conducted as per approved technical programme Station Trials 04 Station trials conducted	Good
	Dr. Seema Sharma, Assoc. Prof. (Agronomy), RARI, Durgapura Jaipur- Member			Pathology- All 8 coordinated trials successfully Conducted as per approved technical programme	
	Dr. R.S. Bajia, Asstt. Prof. (Entomology), RARI, Durgapura Jaipur- Member		07-08, 10.2024	At Morena- Allotted coordinated trial (2) were conducted as per approved technical programme *RLBCAU, Jhansi crop harvested at the time of visit.	Good
Team 9.	Dr. C.B. Patil, Pearl Millet Agronomist, AICRP-PM, NARP, Aurangabad-Member Dr. D.G. Hingole, Pathology, AICRP-PM, NARP, Aurangabad-Member Dr. D. K. Patil, Breeder AICRP-PM, NARP, Aurangabad-Member	MRS, Jamnagar	09.10.2024	Breeding- All 5 allotted coordinated trials were conducted as per approved technical programme One station Trial	Good
				Agronomy- All 5 allotted trials were conducted as per approved technical programme	Satisfactory
				Plant Pathology- All 8 coordinated trials successfully Conducted as per approved technical programme	Good
				Plant Physiology- All 4 trials allotted were conducted as per technical programme	-
				Entomology- All 9 trials conducted as per approved technical programme.	Good
Team 8.	Dr. P.S. Shekhawat, Director Research, SKRAU, Bikaner Dr. P. C. Gupta, Breeder SKRAU, Bikaner	RRS, Anand	Not Monitored	Breeding- One trial allotted was conducted as per technical programme	-
		ARSS, Talaja		Entomology- All 4 allotted trials were conducted as per approved technical programme	-
		Ahmadabad, Biostadt		Breeding- One allotted trial was conducted as per approved technical programme	-

CHAPTER I: BREEDING

Team No.	Monitoring Team	Name of Centre	Date of Monitoring	Remarks/Comments	Overall Remarks
		Dehgam, Kaveri Seed		Breeding- All 2 allotted trials were conducted as per approved technical programme	-
		MRS, Deesa		Breeding- All 3 allotted trials were conducted as per approved technical programme	-
Team 12.	Dr. K. Iyanar, Professor (PBG), AICRP-PM, TNAU, Coimbatore -Convener	RARS, Vijayapur	15.10.2024	Breeding- All 6 trials allotted were conducted as per approved technical programme 12 Station trials	Satisfactory
				Agronomy- All 5 allotted trials were conducted as per approved technical programme	Satisfactory
	Dr. V. Vasuki, Assoc. Prof., (Agronomy), TNAU Coimbatore - Member	ARS, Malnoor	16.10.2024	Breeding- All 4 trials allotted were conducted as per approved technical programme	Good
		KSSC, Dharwad, Karnataka	15.10.2024	Breeding- Trial allotted was conducted as per approved technical programme	Good
	Dr. I. Johnson, Assoc. Prof., (Pathology), TNAU, Coimbatore - Member	ARS, Anantpuram	17.10.2024	Breeding- All 6 trials allotted were conducted as per approved technical programme	Good
Team 14.	Dr. K.K. Barhate, Professor (Pearl Millet Breeding) AICRP on Pearl Millet, Bajra Research Scheme, COA,(MPKV), Dhule - Convenor	TNAU, Coimbatore	05.10.2024	Breeding- All 6 trials allotted were conducted as per approved technical programme 1 IIMR & 1 Station trial	Good
				Agronomy- All 5 allotted trials were conducted as per approved technical programme	Well managed
				Plant Pathology- All 5 coordinated trials Conducted as per approved technical programme	Good
	Dr. C.S.Thakre, Asstt. Prof.(Pathology.) AICRP-PM,COA, Dhule - Member Sh. R.T. Suryavanshi, Asstt. Prof. (Agronomy.) AICRP-PM,COA, Dhule-Member	UOM, Mysore	07.10.2024	Plant Pathology- All 8 coordinated trials Conducted as per approved technical programme	Good
Team 13.	Dr. Babar Sadhana R., Scientist, (Agronomy) &	ARS, Perumallapalle	06.10.2024	Breeding- All 2 trials allotted were conducted as per approved technical programme	Good

CHAPTER I: BREEDING

Team No.	Monitoring Team	Name of Centre	Date of Monitoring	Remarks/Comments	Overall Remarks
	Incharge AICRP-PM, RRS, Vijaypur - Covener Dr. B.K. Athoni, Jr. Breeder, AICRP on Pearl Millet, RRS, Vijaypur - Member			Agronomy- One allotted trials was conducted as per approved technical programme.	Good
				Plant Pathology- All 2 coordinated trials and 1 Epidemiology trial, 1 PMBVN conducted as per approved technical programme	Maintained properly
		ARS, Vizianagaram	05.10.2024	Breeding- All 3 trials allotted were conducted as per approved technical programme	Good
				Plant Pathology- All 2 coordinated trials Conducted as per approved technical programme. PMBVN trial	Maintained properly
		RARS, Palem	05.10.2024	Breeding- All 4 trials allotted were conducted as per approved technical programme	Good
		Toopran Medak, NU Genes	05.10.2024	Breeding- One allotted trial were conducted as per approved technical programme.	Good
Team 10.	Dr. Chandra Nayak, Professor (Patholgy), AICRP-PM, Mysore – Convenor Dr. L Madhavalatha, Breeder, AICRP-PM, Anantpuram Member	NARP, Aurangabad	15.10.2024	Breeding- All 6 trials allotted were conducted as per approved technical programme 3 ICRISAT and one station trial	Satisfactory
				Agronomy- All 5 allotted trials were conducted as per approved technical programme	Managed properly
				Entomology- 4 Trials were harvested before the team's visit	Good
				Plant Pathology- All 8 coordinated trials Conducted as per approved technical programme	Satisfactory
		Nath Seeds, Paithan	14.10.2024	Breeding- Two trials allotted were conducted as per approved technical programme	Satisfactory
		Aurangabad, Seed Works	14.10.2024	Breeding- All 2 trials allotted were conducted as per approved technical programme	Satisfactory
Team 11.	Dr. H. M. Bhuva, Agronomist, RS Bajra, Jamnagar – Convener	COA, Dhule	25.09.2024	Breeding- All 6 Coordinated trials allotted were conducted as per approved technical programme	Satisfactory
	Dr. S. K. Parmar, RS Bajra, Jamnagar-Member			Agronomy- All 4 allotted trials were conducted as per approved technical programme	Good
	Dr. R. J. Chaudhari, RS Bajra, Jamnagar-Member			Plant Pathology- All 8 coordinated trials Conducted as per approved technical programme	Satisfactory

CHAPTER II

AGRONOMY

AGRONOMY

The agronomical trials conducted at different locations under All India Coordinated Research Project on Pearl Millet are presented in Table II.1. The plot history and agronomical operations carried out in these trials are briefly presented in Table II.2.

PMAT 1: Response of pearl millet advance hybrids and/or populations to different levels of nitrogen

Response of different advance hybrid entries (medium and late) under different levels of nitrogen in Zone A designated as PMAT 1b was conducted during *Kharif* season.

PMAT 1a: Performance of advance hybrids or populations to nitrogen levels in Zone A

The trial was conducted at two locations *i.e.* Bikaner & Mandor. Four advance hybrid entries MH 2672, MH 2673, MH 2675 and MH 2678 were tested for their response to four N levels (0, 20, 40 and 60 kg N/ha) in comparison with five hybrid checks *i.e.* HHB 67 (Imp.), MPMH 21, AHB 1200, PB 1756 and RHB 223 (c). Thus, 36 treatment combinations (Nine entries and four levels of nitrogen) were evaluated in split plot design, keeping N in main plots and entries in sub-plots. All the treatments were replicated for three times. The observations recorded on grain and stover yields along with other parameters are presented in Table II.3. The location wise performance of grain and stover yields of these advance entries at different N levels and against Zonal checks are described in the following paragraphs.

1.1 Bikaner: The grain as well as stover yields were not significantly increased with increase in doses of Nitrogen (N) from 0 to 60 kg/ha. However, maximum grain yield (26.90 q/ha) and dry stover yield (57.66 q/ha) were recorded with the application of 60 kg N/ha which was found to be 28.2 percent higher in grain and 12.5 % more in dry stover yield compared to the control. The advance hybrid entry MH 2672 (26.95 q/ha), MH 2673 (26.78 q/ha) and MH 2678 (27.49 q/ha) produced significantly higher grain yield than all the checks except MPMH 21 (25.14 q/ha) and PB 1756 (25.23 q/ha). However, none of the advance entry except MH 2678 (59.20 q/ha) could surpass the stover yield of the check PB 1756 (58.90 q/ha).

1.2 Mandor: The grain and stover yields were significantly increased with successive increase in doses of Nitrogen (N) from 0 to 60 kg/ha. Maximum grain yield (18.72 q/ha) and dry stover yield (35.06 q/ha) were recorded with the application of 60 kg N/ha which was found to be 62.2, 31.3 and 7.3 percent higher in grain and 64.9, 33.4 and 10.5% more in dry stover yield compared to the grain and dry stover yields obtained by applying 0, 20 and 40 kg N/ha, respectively. The advance hybrid MH 2678 (16.83 q/ha) produced significantly higher grain yield than all the checks whereas entries MH 2673 (16.33 q/ha), and MH 2675 (16.03 q/ha) remained at par with the check MPMH 21 (15.78 q/ha). The advance hybrid entries MH 2678 (30.85 q/ha) and MH 2673 (30.04 q/ha) produced significantly higher stover yield than all the checks except the check MPMH 21 (29.83 q/ha). The test weight was significantly improved with incremental in the N doses up to 60 kg/ha over their lower doses. The test weight among all the tested hybrids was significantly lower than the three checks AHB 1200, PB 1756 and RHB 223.

Zonal performance – Zone A1

The mean data revealed that advance hybrid entries MH 2678 (22.16 q/ha) and MH 2673 (21.55 q/ha) were found higher grain yielder than the check HHB 67 Imp. (17.30 q/ha), AHB 1200 (17.30 q/ha) and RHB 223 (18.40 q/ha) but almost at par with the checks MPMH 21 (20.46 q/ha) and PB 1756 (20.24 q/ha). The dry stover yield was found superior in the advance entry MH 2678 (45.03 q/ha) comparable with the check PB 1756 (43.27 q/ha) but superior over the checks HHB 67 Imp. (38.36 q/ha) and AHB 1200 (39.73 q/ha). Maximum grain (22.81 q/ha) and stover (46.36 q/ha) yields were recorded with the application of 60 kg N/ha and it produced 40.2, 22.0 and 6.4% more grain yield whereas, stover yield was 27.8, 15.1 and 4.2% higher over application of 0, 20 kg and 40 kg N/ha, respectively. Days taken to 50% flowering were almost par with increasing nitrogen levels (45.1 to 46.1 days) over control (45.3 days) whereas, advance hybrid entry MH 2675 took maximum 46.0 days for 50% flowering but minimum by the MH 2678 (45.2 days) than all the checks with range of 45.3 to 45.8 days for 50% flowering. Total tillers/plant (3.9) and effective tillers/plant (3.6) were recorded highest in the entry MH 2678 than all the checks and other tested entries. None of the advance entry could surpass the test weight (8.2 to 8.7 g) of the best check PB 1756 (8.8 g)

PMAT 1b: Response of advance medium and late hybrid entries to nitrogen levels in Zone A

The trial was conducted at four locations viz. Hisar, Jamnagar, Jaipur and New Delhi. Three advance hybrid entries *i.e.* MH 2709, MH 2712 and MH 2717 were tested for its response to four N levels (0, 30, 60 and 90 kg N/ha) in comparison with five hybrid checks *i.e.* AHB 1200, 86M84, 86M86, KBH 108 and MP 7878(c). Thus, 32 treatment combinations (Eight entries and four levels of nitrogen) were evaluated in split plot design, keeping N in main plots and entries in sub-plots. All the treatments were replicated three times. The observations recorded on grain and stover yields along with other parameters are presented in Table II.4 and II.5. Location-wise performance of grain and stover yield of these advance entries at different N levels and against Zonal checks are described in the following paragraphs.

1.1 Hisar: The grain and dry stover yields were increased with successive increase in dose of Nitrogen (N) from 0 to 90 kg/ha. Maximum grain yield (39.90 q/ha) recorded with the application of 90 kg N/ha was found to be 40.4, 19.9 and 7.4 percent higher as compared to the grain yield obtained by applying 0, 30 and 60 kg N/ha, respectively whereas, stover yield was improved to the tune of 22.9, 8.6 and 3.5%, respectively. The advance hybrid entries MH 2717 (38.67 q/ha) and MH 2712 (36.44 q/ha) produced significantly higher grain yield than all the checks (30.84 -34.87 q/ha). The test weight in all the checks (10.5 -11.0g) was found at par as compared to the advance hybrid entries (10.1-11.0 g).

1.2 Jamnagar: The advance hybrid entries MH 2717 (33.99 q/ha) and MH 2712 (34.51 q/ha) produced significantly higher grain yield than all the checks (21.50 -30.44 q/ha) except MP 7878 (32.68 q/ha). The stover yield in the advance hybrid entry MH 2712 (52.25 q/ha) was found significantly higher than all the advance entries (42.43 to 47.40 q/ha) and checks (30.05 to 47.23 q/ha). The grain yield was significantly increased up to highest level of 90 kg N/ha (34.65 q/ha) as compared to the control (25.16 q/ha), 30 kg/ha (28.26 q/ha) and 60 kg N/ha (31.11 q/ha). The stover yield increased was significantly higher at 90 kg N/ha (48.46 q/ha) than control (37.99 q/ha) and 30 kg N/ha (42.41 q/ha) but remained statistically at par with 60 kg N/ha (45.18 q/ha).

The hybrid MH 2712 (206.1 cm) produced significantly taller plants than two advance hybrid entries and all the checks. The MH 2712 (12.6 g) and MH 2717 (11.2 g) hybrid entries recorded significantly higher test weight compared to the advance hybrid entry MH 2709 (10.6 g) and all the checks with range of test weight from 9.2 to 10.6 g.

1.3 Jaipur: Maximum grain yield (25.08 q/ha) recorded with application of 90 kg N/ha was found significantly higher over the control (19.67 q/ha), 30 kg N/ha (21.70 q/ha) and 60 kg N/ha (22.57 q/ha) but 30 & 60 kg N/ha remained at par with each other. Significantly higher stover yield (58.68 q/ha) was also obtained with application of 90 kg N/ha than 0, 30 and 60 kg N/ha (46.01, 50.78 and 50.99 q/ha) but 30 and 60 kg/ha remained statistically at par. The performance of all the three advance entries MH 2709 (30.01 q/ha), MH 2712 (28.50 q/ha) and MH 2717 (27.39 q/ha) in terms of grain yield was found significantly superior than all the checks with grain yield of 17.34-21.83 q/ha). The stover yield of all the advance hybrid entries MH 2709 (70.21 q/ha), MH 2712 (66.67 q/ha) and MH 2717 (64.06 q/ha) was found significantly superior over all the checks (40.56-51.09 q/ha). The test weight was found significantly higher in the advance hybrid entry MH 2709 (11.8 g) than all the checks except 86M86 (11.8 g) and other advance hybrid entries. Days taken to 50% flowering were significantly higher in the MH 2709 entry (60.7 days) than both the advance hybrid entries MH 2712 (52.4 days) and MH 2717 (53.6 days) and among checks it varied from 50.8-55.9 days.

1.4 New Delhi: The performance of all the advance entries MH 2709 (29.11 q/ha) MH 2712 (28.18 q/ha) and MH 2717 (27.11 q/ha) in terms of grain yield was found significantly superior over the checks AHB 1200 (23.78 q/ha), MP 7878 (15.07 q/ha) and KBH 108 (23.87 q/ha) but remained at par with the checks 86M86 (26.94 q/ha). The stover yield in the advance entries MH 2709 (80.77 q/ha) and MH 2717 (79.10 q/ha) was found significantly superior over all the checks. Maximum grain yield (29.56 q/ha) recorded with application of 90 kg N/ha was found significantly higher over the control (19.93 q/ha), 30 kg N/ha (23.43 q/ha) and 60 kg N/ha (27.39 q/ha). Significantly higher stover yield (80.34 q/ha) was also obtained with application of 90 kg N/ha than 0, 30 and 60 kg N/ha (61.11, 70.55 q/ha and 77.94). The advance entry MH 2709 (237.5 cm) produced significantly taller plants except entry 2712 (234.7 cm) than other advance hybrid entry MH 2717 and all the checks. The entry MH 2709 (10.3 g) recorded significantly highest test weight compared to the check MP 7878 (7.8 g), AHB 1200 (9.3 g) and KBH 108 (9.6 g) but remained at par with other two checks and advance entries.

Zonal performance – Zone A

The mean data revealed that all the three advance hybrid MH 2709 (31.46 q/ha) MH 2712 (31.91 q/ha) and MH 2717 (31.79 q/ha) in terms of grain yield was found quite superior over all the checks i.e. AHB 1200 (23.78 q/ha), 86M86 (26.17 q/ha), 86M84 (27.87 q/ha), KBH 108 (25.83 q/ha) and MP 7878 (24.81 q/ha). The dry stover yield of all the advance hybrid entries MH 2709 (74.93 q/ha), MH 2712 (77.50 q/ha) and MH 2717 (76.54 q/ha) was found quite superior over all the checks (61.68-68.73 q/ha). Maximum grain (32.30 q/ha) and stover (76.71 q/ha) yields were recorded with the application of 90 kg N/ha and it produced 33.9, 21.1 and 9.3 % more grain yield whereas, stover yield was 26.7, 12.1 and 5.4% higher over application of 0, 30 kg and 60 kg N/ha, respectively. Days taken to 50% flowering were increased with increasing nitrogen levels over control whereas, advance hybrid entry MH 2709 took maximum number of days for 50% flowering (54.8) and minimum by the check AHB 1200 (46.2 days). Total tillers and

effective tillers/plant were recorded higher in the entry MH 2712 (3.4 and 2.7) and similarly the test weight (11.0 g). The checks recorded test weight in the range of 10.1-10.5 g).

PMAT 1c: Response of advance medium and late hybrid entries to nitrogen levels in Zone B

The trial was conducted at four locations *i.e.* Aurangabad, Dhule, Vijaypur & Coimbatore in Zone B. Two advance hybrid entries viz., MH 2682 and MH 2717 were tested for their response to four nitrogen levels (0, 30, 60 & 90 kg N/ha) in comparison with seven national checks AHB 1200, 86M86, Pratap, 86M01, AHB 1269, NHB 4903 and Kaveri Super Boss. Thus, 36 treatment (9 hybrids and 4 nitrogen levels) combinations were evaluated in Split plot design (Nitrogen in main plot and entries in sub-plots) with three replications. The observations recorded on grain and stover yields along with other parameters are presented in Table II.6 to II.9. Centre wise performance of grain and dry fodder yield of these hybrids at different nitrogen levels are discussed in the following paragraphs.

1.5 Aurangabad: The grain yield in both the advance entries MH 2682 (22.16 q/ha) and MH 2717 (20.21 q/ha) were found statistically lower or at par yielder in comparison all the checks (20.18 to 26.89 q/ha) except the checks Pratap and 86M86. Similar trend was observed in the stover yield with range of 39.40 to 51.43 q/ha in the checks as compared to 44.55 to 46.43 q/ha in both the advance entries. The increasing levels of N from 60 kg/ha (23.15 q/ha) and 90 kg N/ha (24.31 q/ha) bring out significant improvement in the grain yield of pearl millet crop over the control (19.35 q/ha). The stover yield also followed the trend of grain yield with values of 48.05 q/ha (60 kg N/ha) and 50.99 q/ha (90 kg/ha) than 40.50 q/ha in control. The tested hybrid entries were found statistically lower stover yielder than the two checks *i.e.* AHB 1200 (50.81 q/ha) and AHB 1269 (51.43 q/ha) but at par with all the other checks.

1.6 Dhule: Increasing levels of N up to 90 kg/ha (25.18 q/ha) caused no significant improvement in the grain yield over the 30 (20.26 q/ha) and 60 kg N/ha (22.66 q/ha) and similar trend was observed for stover yield. The new advance hybrid entry MH 2717 (26.11 q/ha) performance in terms of grain yield was found significantly superior over all the checks whereas, the entry MH 2682 (24.50 q/ha) was found significantly superior over all the checks except AHB 1269 check (23.01 q/ha). Similarly the stover yield in MH 2717 exhibited its statistical superiority over all the checks. The yield attributing trait *viz.* test wt. was found significantly superior in the entry MH 2717 (12.3 g) in comparison to all the checks (11.8 to 12.1 g). The plant height was recorded significantly higher in the check Kaveri Super Boss (191.0 cm) than advance entry MH 2682 (184.1 cm) and MH 2717 (188.7 cm).

1.7 Vijaypur: The highest grain yield recorded with 90 kg N/ha (18.42 q/ha) was found significantly superior than control (8.47 q/ha), 30 kg N/ha (12.16 q/ha) and 60 kg N/ha (14.69 q/ha). The stover yield also exhibited the similar trend of grain yield with values of 28.94, 33.36, 38.90 and 45.84 q/ha in control, 30, 60 and 90 kg N/ha, respectively. The grain yield was recorded significantly higher in advance entry MH 2682 (15.25 q/ha) over all the checks except NHB 4903 (14.68 q/ha) and Kaveri Super Boss (14.43 q/ha). The stover yield also exhibited the similar trend of grain yield. The test weight was found statistically at par among the two advance entries with the seven checks.

1.8 Coimbatore: The grain yield was significantly increased up to 60 kg N/ha (35.67 q/ha) over control (28.17 q/ha) and 30 kg N/ha (32.72 q/ha) but remained at par with 90 kg N/ha (37.01 q/ha). The stover yield was significantly higher at 90 kg/ha (56.07 q/ha) over the control (44.1 q/ha) and 30 kg N/ha (51.17 q/ha) but remained at par to 60 kg N/ha (54.44 q/ha). The grain yield was found statistically at par among the two advance entries (35.40 to 36.90 q/ha) with three checks 86M86 (35.51 q/ha), 86M01 (35.90 q/ha), NHB 4903 (33.55 q/ha) and Kaveri Super Boss (37.24 q/ha) . The stover yield was found statistically at par in MH 2682 (54.78 q/ha) and MH 2717 (56.88 q/ha) entries as compared to the checks 86M86 (55.07 q/ha), 86M01 (55.35 q/ha) and Kaveri Super Boss (57.22 q/ha) but significantly superior than other checks. The total and effective tillers/plant were found significantly lower among the two advance entries as compared to two checks Pratap and 86M86 whereas, test weight was found significantly superior in the check Kaveri Super Boss (13.0 g) over all the checks (10.3-12.7 g) and two advance entries with range of 10.7 to 11.0 g .

Zonal performance – Zone B

The entry MH 2682 produced highest grain yield (24.32 q/ha) followed by MH 2717 (24.15 q/ha) but almost at par with Kaveri Super Boss (24.02 q/ha) whereas, range was between 19.59 – 23.74 q/ha among other remaining checks. The dry fodder yield was found superior in the entry MH 2717 (47.39 q/ha) followed by MH 2682 (46.62 q/ha) but almost at par with Kaveri Super Boss (47.06 q/ha) whereas, range was between 37.78–44.44 q/ha among other remaining checks. The grain yield at the highest level of 90 kg N/ha was found 40.5, 21.7 and 9.1% superior over control, 30 and 60 kg N/ha whereas, the stover yield was to the tune 31.2, 20.2 and 8.8%. The test weight was quite higher among all the checks (11.6-11.9 g) except 86M01 (11.2 g) than value of 11.4 g in both the advance entries.

PMAT 2: Response of pearl millet to foliar application of nano urea (New Experiment)

The applied nitrogen through fertilizers undergoes transformation processes such as biological nitrogen fixation, humus mineralization, immobilization and nitrification under acidic and alkaline pH, denitrification and volatilization. To address these challenges, the development and application of nano urea represent a promising innovation. Nano urea is a ground breaking agricultural input derived from nanotechnology, characterized by its ultra-small particle size ranging from 20 to 50 nm. To study the effect of foliar application of nano urea on growth, yield, quality and its suitable dose, the present experiment was started during *Kharif*, 2024 under irrigated condition at two locations of Zone A1 (Mandor and Bikaner), three locations each in Zone A (Jaipur, Jamnagar and Hisar) and four locations in Zone B (Aurangabad, Coimbatore, Vijayapur and Dhule). Ten treatments i.e. T1 : Control (No nitrogen), T2 : RDN(1/4 at basal, 1/2 after 3 weeks and 1/4 after 5 weeks), T3 : 75% RDN + foliar spray of urea @ 1.5 % at 3 and 5 Weeks, T4 : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 Weeks, T5 : 75% RDN + foliar spray of urea @ 2.5 % at 3 and 5 Weeks, T6 : 75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing, T7 : 50% RDN + foliar spray of urea @ 1.5 % at 3 and 5 Weeks, T8 : 50% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 Weeks, T9: 50% RDN + foliar spray of urea @ 2.5 % at 3 and 5 Weeks, T10: 50% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing were replicated three times in RBD. Data on ancillary characters, yield attributes, yield and quality of pearl millet are presented in Table II.10 to II.22.

2.1 Bikaner: The data presented in the Table II.10 and 11 exhibited that the treatment T3: 75% RDN + foliar spray of urea @ 1.5 % at 3 and 5 Weeks (23.33 q/ha) and T5 : 75% RDN + foliar spray of urea @ 2.5 % at 3 and 5 Weeks (23.77 q/ha) produced statistical at par grain yield as compared to RDN along with recommended P & K (25.23 q/ha). The application of Nano Urea either @2.0 or 4.0 ml/l at 3 and 5 weeks after sowing along with 50 or 75 % RDN did not bring out significant improvement in the grain as well as dry fodder yields. Total tillers/plant, effective tillers/plant and test weight parameters were found statistically at par among all the treatments.

2.2 Mandor: The perusal of the data in Table10-13 revealed that the treatment T6 (75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing) produced statistically at par grain (16.97 q/ha) and stover (32.90 q/ha) yields as compared to RDN along with recommended P & K (19.13 q/ha grain; 38.43 q/ha dry fodder) whereas, other treatments of Nano Urea or Urea realized statistically lower grain and stover yields than the RDN treatment. N and protein content in grain were also found significantly higher in the T2 treatment as compared to all the treatments except T4 : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 Weeks & T6: 75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing. N content in fodder was found statistically at par in the T2 and T4 treatments. P content in grain and dry fodder was significantly higher in the RDN treatments as compared to all other treatments. The economic evaluation of application of different treatments exhibited maximum gross returns (Rs. 75207/ha), net returns (Rs. 49707/ha) and BC ratio (2.95) in the treatment T2 viz. RDN along with P & K) which was followed by T6 treatment viz. 75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing (Rs. 65923/ha, Rs. 38623/ha and 2.41, respectively).

Zonal performance – Zone A₁

The two locations mean data exhibited the superior performance of RDN treatment along with recommended P & K in terms of grain yield (22.18 q/ha). The next best treatment was found T5 : 75% RDN + foliar spray of urea @ 2.5 % at 3 and 5 Weeks (19.55 q/ha) which was followed by T6:75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing (19.32 q/ha) and lowest in the control (14.00 q/ha). The stover yield was also found superior in RDN treatment along with recommended P & K (44.00 q/ha) and it was followed by T6:75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks after Sowing (38.80 q/ha) T5 : 75% RDN + foliar spray of urea @ 2.5 % at 3 and 5 Weeks after Sowing (37.10 q/ha) treatments.

At Mandor location, N and protein content in grain were also found significantly higher in the T2 treatment as compared to all the treatments except T4 : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 Weeks & T6: 75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing. N content in fodder was found statistically at par in the T2 and T4 treatments. P content in grain and dry fodder was significantly higher in the RDN treatments as compared to all other treatments. The economic evaluation of application of different treatments exhibited maximum gross returns (Rs. 75207/ha), net returns (Rs. 49707/ha) and BC ratio (2.95) in the treatment T2 viz. RDN along with P & K) which was followed by T6 treatment viz. 75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing (Rs. 65923/ha, Rs. 38623/ha and 2.41, respectively).

2.3 Hisar:

The study revealed that neither of the treatment could statistically produced grain (39.71 q/ha) and stover (115.44 q/ha) yields to the tune of the treatment RDN along with recommended P & K. The next best treatment was found T6 (75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing) with grain yield of 35.87 q/ha and stover yield of 107.93 q/ha whereas, other treatments of Nano Urea or Urea realized significantly grain yield between 30.88-35.19 q/ha and stover yield from 93.57-106.65 q/ha. N and protein content in grain as well as in dry fodder were also found significantly higher in the T2 treatment as compared to all the treatments except T3 to T6 treatment having 75 % RDN through Urea and remaining N with foliar spray of Nano Urea or Urea. P & K content content in grain and P in fodder were found statistically at par among all the treatments. K content in dry fodder fodder was significantly higher among all the other treatments as compared to control. The economic evaluation of application of different treatments exhibited maximum gross returns (Rs. 127327/ha), net returns (Rs. 73005/ha) and BC ratio (2.34) in the treatment T2 viz. RDN along with P & K) which was followed by T6 treatment viz. 75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing (Rs. 115744/ha, Rs. 60232/ha and 2.09, respectively).

2.4 Jamnagar: The study revealed that the treatment T4 (75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 Weeks) and T6 (75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing) produced statistically at par grain (28.91 q/ha & 30.16 q/ha) and stover (45.10 & 46.16 q/ha) yields as compared to RDN along with recommended P & K (31.30 q/ha grain; 48.23 q/ha dry fodder) whereas other treatments of Nano Urea or Urea realized statistically lower grain and stover yields than the RDN treatment. Similar trend was also found for N and protein content in grain whereas, P content in dry fodder were also found significantly higher in the T2 treatment as compared to all the treatments except T3 to T6 treatment having 75 % RDN through Urea and remaining N with foliar spray of Nano Urea or Urea. The gross returns (Rs. 83073/ha), net returns (Rs. 58749/ha) and BC ratio (3.42) in the treatment T2 were maximum which was followed by T6 treatment viz. 75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing (Rs. 80016/ha, Rs. 53625/ha and 3.03, respectively) and noticed higher compared to all the treatments including control (Rs. 45761/ha, Rs. 22416/ha and 1.96, respectively).

2.5 Jaipur: In comparison to Hisar and Jamnagar centres, the performance of the treatment T2 i.e. RDN along with recommended P & K (25.38 q/ha grain; 60.50 q/ha dry fodder) was found statistically at par with all the 75 & 50 % RDN treatment combinations with foliar spray of urea and Nano Urea (T3 to T10) with grain yield between 25.46 to 27.35 q/ha. However, all the treatments (T2 to T10) produced significantly higher grain as well as dry fodder yield than the control (20.52 q/ha grain; 52.35 q/ha fodder).

Zonal performance – Zone A

The Zonal mean data in the Tables 14 to 17 showed that the treatment RDN along with recommended P & K in produced highest grain yield (32.13 q/ha) and dry fodder yield (74.73 q/ha). The next best treatment was found T6:75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing (31.20 q/ha grain; 72.98 q/ha dry fodder) which was followed by

T4: 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 & 5 Weeks of Sowing (29.75 q/ha grain) and lowest in the control (20.59 q/ha grain; 52.95 q/ha dry fodder).

N (1.54 %) and protein content (9.65%) in grain as well as N in dry fodder (0.99 %) were also found higher in the T2 treatment as compared to all the treatments with range of N content between 1.37-1.41%. and protein content from 8.62 to 9.19 % and lowest in control (1.29% and 8.06%), respectively. The economic evaluation of application of different treatments exhibited maximum gross returns (Rs. 105200/ha), net returns (Rs. 65877/ha) and BC ratio (2.88) in the treatment T2 viz. RDN along with P & K) which was followed by T6 treatment viz. 75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing (Rs. 97880/ha, Rs. 56929/ha and 2.56, respectively).

2.6 Aurangabad: The data presented in Table II.18 to 22 clearly indicated that the performance of the treatment T2 i.e. RDN along with recommended P & K (24.00 q/ha grain; 53.76 q/ha dry fodder) was found statistically at par with all the 75 & 50 % RDN treatment combinations with foliar spray of urea and Nano Urea (T3 to T10) with grain yield between 23.49 to 27.05 q/ha and dry fodder yield between 52.62 to 62.48 q/ha. However, all the treatments (T2 to T10) produced significantly higher grain as well as dry fodder yield than the control (16.57 q/ha grain; 37.13 q/ha fodder). The gross returns (Rs. 92283/ha) and net returns (Rs. 62083/ha) were noticed highest in the T6 (75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing) compared to all the treatments including control (Rs. 56327/ha and Rs. 28827/ha, respectively) whereas, BC ratio was noticed highest in T10 treatment (3.09).

2.7 Dhule: Grain and dry fodder yields were also found significantly higher in the T2 treatment as compared to all the treatments except T3 to T6 treatment having 75 % RDN through Urea and remaining N with foliar spray of Nano Urea or Urea. The gross returns (Rs. 81903/ha), net returns (Rs. 51809/ha) and BC ratio (2.72) in the treatment T2 were maximum which was followed by T5 : 75% RDN + foliar spray of urea @ 2.5 % at 3 and 5 Weeks (Rs. 78014/ha, Rs. 47064/ha and 2.52, respectively) and noticed higher compared to all the treatments including control (Rs. 51033/ha, Rs. 22707/ha and 1.80, respectively). N & P content in grain and stover as well as Protein content in grain were found statistically at par among all the treatments including control. The available N in soil after harvest was found higher in the T2 treatment (202.0 kg/ha) as compared to all the treatments with range of 176.0 to 198.0 kg N/ha.

2.8 Vijaypur: The perusal of the data (Table II.18 to 22) revealed that the treatment RDN along with recommended P & K produced highest grain yield (23.77 q/ha) but at par with T5 : 75% RDN + foliar spray of urea @ 2.5 % at 3 and 5 Weeks (22.09 q/ha), T3 : 75% RDN + foliar spray of urea @ 1.5 % at 3 and 5 Weeks (20.99 q/ha) and T6:75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing (20.84 q/ha). The T2 treatment produced significantly higher grain yield than all remaining treatments. The dry fodder yield was found statistically at par among all the treatments. The gross returns (Rs. 55862/ha), net returns (Rs. 38885/ha) and B:C (3.29) were maximum in T2 treatment as compared to all other treatments with net returns ranges from Rs. 18780 to 33917/ha in T3 to T10 treatments and minimum in control (Rs. 35593/ha, Rs. 21277/ha, 2.49, respectively). Protein and N content in grain were found statistically at par among T2 to T10 treatments however, exhibited significantly

superiority over the control. N & P content in dry fodder were not significantly effected by different treatments.

3.10 Coimbatore: The study revealed that the the performance of the treatment T2 i.e. RDN along with recommended P & K (27.72 q/ha grain; 42.22 q/ha dry fodder) was found statistically at par with all the 75 % RDN treatment combinations with foliar spray of urea and Nano Urea (T3 to T6) with grain yield between 27.11 to 31.12 q/ha and dry fodder yield between 41.17 to 47.09 q/ha and all these treatments produced significantly higher grain and stover yield than control and T7 to T10 treatments. N,P and protein content in grain as well as in dry fodder were also found significantly higher in the T2 and T3 to T6 treatments having 75 % RDN through Urea and remaining N with foliar spray of Nano Urea or Urea as compared to all the other treatments. The gross returns (Rs. 77862/ha), net returns (Rs. 37978/ha) and BC ratio (1.95) in the treatment T6 treatment viz. 75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing were maximum which was followed by T4 (Rs. 77027/ha, Rs. 36143/ha and 1.88, respectively) and noticed higher compared to all the treatments including control (Rs. 64350/ha, Rs. 23934/ha and 1.59, respectively).

Zonal performance – Zone B

The four locations mean data exhibited the superior performance of RDN treatment along with recommended P & K in terms of grain yield (26.61 q/ha). The next best treatment was found T5: 75% RDN + foliar spray of urea @ 2.5% at 3 and 5 Weeks (26.42 q/ha) which was followed by T6:75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing (26.39 q/ha) and lowest in the control (17.51 q/ha). The stover yield was found superior in T6:75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing (52.63 q/ha) followed by treatment RDN along with recommended P & K (52.22 q/ha) and T5 : 75% RDN + foliar spray of urea @ 2.5 % at 3 and 5 Weeks (52.02 q/ha) treatment.

The protein content was between 11.6 to 11.8 % in T2 to T6 treatments was quite higher over 11.1 to 11.3 % in T7 to T10 treatments and with value of 10.0 % in control. Similar trend was observed in N content in grain with values of 1.75 to 1.79 %, 1.60-1.68 % and 1.50%, respectively. P content in grain (0.34-0.36%) as well as fodder (.018-0.21%) was not much variable among T2 to T10 treatments but showed their superiority over control with values of 0.32 % and 0.17 %, respectively. The net returns (Rs. 42608/ha) and BC ratio (2.59) in the treatment T2 were maximum which was followed by T6 treatment viz. 75% RDN + foliar spray of nano urea @ 4 ml/l between 3-4 Weeks of Sowing (Rs. 42383/ha and 2.48, respectively) and noticed higher compared to all the treatments including control (Rs. 20834/ha and 1.90, respectively).

PMAT 3: Response of pearl millet to application of Nano DAP (New Experiment)

Many soils of the semi-arid tropics are deficient in available P and under such adverse conditions, the establishment of pearl millet seedlings is a critical step to achieve satisfactory crop stands. To increase the phosphorus use efficiency and minimize the fixation of phosphatic fertilizers, nano phosphatic fertilizer may be the best alternative to increase phosphorus use efficiency as well as other nutrient and protein content. Nano-fertilizers, like Nano DAP developed by IFFCO's Nano Biotechnology Research Centre in Gujarat, offer a new approach to nutrient delivery. This experiment was planned and started during *kharif* 2024 at two locations

of Zone A1 (Mandor and Bikaner), three locations in Zone A (Jaipur, Jamnagar and Hisar) and four locations in Zone B (Aurangabad, Coimbatore, Vijayapur and Dhule) to study the effect of application of Nano DAP on growth, yield, quality and to find out its suitable dose. The experiment comprises of 10 treatments was evaluated in RBD keeping three replications. Treatments were T1 : Control (No Phosphorus), T2 :RDF, T3 : 75% RDP + seed treatment of nano DAP 5 ml/kg seed, T4 : 50% RDP + seed treatment of nano DAP 5 ml/kg seed, T5 : T3 + foliar spray of nano DAP 2.5 ml/l at 3 Weeks After Sowing, T6 : T3 + foliar spray of nano DAP 5.0 ml/l at 3 Weeks After Sowing, T7 : T3 + foliar spray of nano DAP 2.5 ml/l at 3 & 5 Weeks After Sowing, T8 : T4 + foliar spray of nano DAP 2.5 ml/l at 3 & 5 Weeks After Sowing, T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing and T10: T4 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing. The result of the experiment are discussed in the following paragraphs and data are presented in Tables II.23 to 37.

3.1 Bikaner: The perusal of the data in the Table II.23 and 26 revealed that grain yield was found statistically at par among all the treatments, however, maximum was in the T2 treatment (RDF) with yield of 28.23 q/ha. The variation was between 21.00 to 25.33 q/ha among T3 to T10 treatments with lowest in control (19.53 q/ha). The application of Nano DAP either as seed treatment or foliar spray in combinations did not bring out significant improvement in the dry fodder yield among T2 to T10 (60.47 to 71.37 q/ha) treatments but significantly higher over the control (47.33 q/ha). Total tillers/plant and effective tillers/plant were significantly higher in the RDF treatment as compared to all the treatments whereas, test weight was found statistically at par among all the treatments.

3.2 Mandor: The T2 (RDF) treatment produced statistically at par grain yield (20.23 q/ha) as compared to T7: T3 + foliar spray of nano DAP 2.5 ml/l at 3 & 5 Weeks After Sowing (17.37 q/ha) and T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing (18.03 q/ha) but it was significantly superior than all other treatments. However, T2 (RDF) treatment realized statistically superior dry fodder yield as compared to all the treatments (T3 to T10) including control (T1). Total tillers/plant and effective tillers/plant were significantly higher in the RDF treatment except T9 treatment as compared to all the treatments whereas, test weight was found statistically at par among all the treatments. N, P and protein content in grain as well as in dry fodder were also found significantly higher in the T2 (RDF) treatment as compared to all the treatments except T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing treatment. The T2 (RDF) treatment exhibited maximum gross returns (Rs. 79459/ha), net returns (Rs. 53959/ha) and BC ratio (3.12) which was followed by T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing (Rs.69156/ha, Rs. 43656/ha and 2.71, respectively) and minimum in control (Rs. 43840/ha, Rs. 20540/ha and 1.88, respectively)

Zonal performance – Zone A₁

The mean data exhibited the superior performance of RDF treatment in terms of grain yield (24.23 q/ha). The next best treatment was T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing (21.68 q/ha) which was followed by T7 : T3 + foliar spray of nano DAP 2.5 ml/l at 3 & 5 Weeks After Sowing (20.92 q/ha) and lowest in the control (15.57 q/ha). The stover yield was also found superior in RDF treatment (55.95 q/ha) and it was followed by T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing (52.05 q/ha) which was followed by T6 :T3 + foliar spray of nano DAP 5.0 ml/l at 3 Weeks After Sowing (52.10 q/ha)

and T7 : T3 + foliar spray of nano DAP 2.5 ml/l at 3 & 5 Weeks After Sowing (52.05 q/ha) and minimum in the control (33.97 q/ha).

N, P and protein content in grain as well as in dry fodder were found significantly higher in the T2 (RDF) treatment as compared to all the treatments except T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing treatment. The T2 (RDF) treatment exhibited maximum gross returns (Rs. 79459/ha), net returns (Rs. 53959/ha) and BC ratio (3.12) which was followed by T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing (Rs. 69156/ha, Rs. 43656/ha and 2.71, respectively) and minimum in control (Rs. 43840/ha, Rs. 20540/ha and 1.88, respectively)

3.3 Hisar: The data presented in Tables 27-31 indicated that neither of the treatments could statistically produce grain (37.12 q/ha) and stover (114.87 q/ha) yields to the tune of the treatment T2 (RDF). The next best treatment was found T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing with grain yield of 33.29 q/ha and stover yield of 109.04 q/ha whereas, other treatments produced grain yield between 20.54-33.16 q/ha and stover yield from 70.67-108.03 q/ha. Test weight and effective tillers/plant were significantly higher in the RDF treatment as compared to all the treatments whereas, Total tillers/plant were found statistically at par among all the treatments.

N and protein content in grain were found significantly higher in the T2 (RDF) treatment as compared to all the treatments except T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing treatment. P content in grain was found significantly superior in T2 (RDF) treatment as compared to T1 (Control) and T4 : 50% RDP + seed treatment of nano DAP 5 ml/kg but at par with other treatments. Available P and K were not significantly effected by different treatments. Maximum gross returns (Rs. 120415/ha), net returns (Rs. 66093/ha) and BC ratio (2.22) were received in RDF treatment which was followed by T7: T3 + foliar spray of nano DAP 2.5 ml/l at 3 & 5 Weeks After Sowing in terms of net returns (Rs. 51076/ha), T3 in B:C (1.91) and minimum in control (Rs. 68052/ha, Rs. 17350/ha and 1.34, respectively).

3.4 Jamnagar: The perusal of the data in Tables 27-31 exhibited that the T2 (RDF) treatment produced statistically at par grain (24.71 q/ha) and dry fodder (41.33 q/ha) yields as compared to T7 : T3 + foliar spray of nano DAP 2.5 ml/l at 3 & 5 Weeks After Sowing (21.96 q/ha grain; 41.33 q/ha dry fodder), T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing (24.41 q/ha grain; 39.14 q/ha dry fodder) and T6 : T3 + foliar spray of nano DAP 5.0 ml/l at 3 Weeks After Sowing (20.16 q/ha grain; 35.63 q/ha dry fodder)) but it was significantly superior than all other treatments. Similar trend was also found for ancillary characters i.e. total tillers/plant, effective tillers/plant and test weight. N, P and protein content in grain and dry fodder also followed the trend of grain yield.

3.5 Jaipur: The performance of the treatment T2 i.e. RDF was found significantly lower than T6 : T3 + foliar spray of nano DAP 5.0 ml/l at 3 Weeks After Sowing, T7 : T3 + foliar spray of nano DAP 2.5 ml/l at 3 & 5 Weeks After Sowing, T8 : T4 + foliar spray of nano DAP 2.5 ml/l at 3 & 5 Weeks After Sowing, T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing and T10: T4 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing treatments whereas, dry fodder yield also followed the trends of grain yield except T6 treatment

which remained at par to RDF treatment. Total tillers/plant and effective tillers/plant were found significantly higher in the T6 to T10 treatments as compared to RDF whereas, test weight was found statistically at par among all the treatments.

Zonal performance – Zone A

The Zonal mean data in the Tables 27-31 showed that the treatment T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing produced highest grain yield (29.55 q/ha) and dry fodder yield (73.90 q/ha) followed by RDF treatment in grain yield (28.99 q/ha) but by T7 : T3 + foliar spray of nano DAP 2.5 ml/l at 3 & 5 Weeks After Sowing in fodder yield (72.62 q/ha). Test weight was higher in the RDF treatment as compared to all the treatments whereas, no definite trend was found for total & effective tillers/plant among the treatments.

N (1.57 %), P (0.36 %) and protein content (10.04 %) in grain were found higher in the RDF (T2) treatment as compared to all the treatments with range of N content between 1.40-1.55 % and protein content from 8.94 to 10.55 % and lowest in control (1.39% and 8.79%). The economic evaluation of application of different treatments exhibited maximum gross returns (Rs. 93161/ha), net returns (Rs. 53933/ha) and BC ratio (2.47) in the treatment T2 viz. RDF which was followed by T9: T3 + foliar spray of Nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing (Rs. 87067/ha and Rs. 41501/ha, respectively) whereas BC was second best in T3: 75% RDP + seed treatment of nano DAP 5 ml/kg seed treatment (2.05).

3.6 Aurangabad: The data presented in Table II.27-31 and 47 clearly indicated the performance of the treatment T2 i.e. RDF (26.93 q/ha grain; 58.48 q/ha dry fodder) was found statistically at par with all the 75 & 50 % RDP treatment combinations with foliar spray of Nano DAP (T3 to T10) with grain yield between 22.42 to 26.75 q/ha and dry fodder yield between 48.24 to 57.02 q/ha. However, all the treatments (T2 to T10) produced significantly higher grain as well as dry fodder yield than the control (16.08 q/ha grain; 34.84 q/ha fodder). The gross returns (Rs. 91124/ha), net returns (Rs. 59624/ha) and B:C were noticed highest in the T2 i.e. RDF treatment which was followed by T9: T3 + foliar spray of Nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing (Rs. 90329/ha and Rs. 59479/ha and 2.93, respectively) and lowest in control (Rs. 54410/ha and Rs. 27910/ha and 2.02, respectively).

3.7 Dhule: Grain yield and dry fodder yield were found significantly higher in the T2 treatment as compared to all the treatments except T5 to T7 treatments having 75 % RDP through DAP and remaining with foliar spray of Nano DAP. Total tillers/plant, effective tillers/plant and test wt. were at par among T2 to T10 treatments but significantly superior over control. The gross returns (Rs. 81513/ha), net returns (Rs. 51419/ha) and BC ratio (2.71) in the treatment T2 were maximum which was followed by T7 : T3 + foliar spray of nano DAP 2.5 ml/l at 3 & 5 Weeks After Sowing in terms of gross returns (Rs. 77148/ha) and net returns/ha (Rs. 43147/ha), respectively but B:C in T3 treatment (2.37) and noticed higher compared to all the treatments including control (Rs. 47828/ha, Rs. 19984/ha and 1.72, respectively).

N & P content in grain and stover as well as protein content in grain were found statistically at par among all the treatments including control. The available N in soil after harvest was found higher in the T2 treatment (202.0 kg/ha) as compared to all the treatments with range of 192.0 to

198.0 kg N/ha. The available P in soil after harvest was found at par among T2 to T10 treatments (15.9 kg/ha) but more than control (13.6 kg/ha).

3.8 Vijaypur: The data in the Table II.27-31 revealed that the grain yield, dry fodder yield, test weight and economics of different DAP and Nao DAP applied treatments were found statistically at par among all the treatments in comparison to control. Protein and N content in grain and dry fodder were found statistically at par among all the treatments. P content in grain was found significantly higher in the RDF (T2) treatment over all the other treatments except T8 to T10 treatments. Available N, P and K were quite higher in T2 to T10 treatments as compared to control.

3.10 Coimbatore: The T2 (RDF) treatment produced statistically at par grain and dry fodder yields (30.63 and 46.74 q/ha) as compared to T5 : T3 + foliar spray of nano DAP 2.5 ml/l at 3 Weeks After Sowing (31.09 and 47.81 q/ha), T6 : T3 + foliar spray of nano DAP 5.0 ml/l at 3 Weeks After Sowing (28.69 and 43.98 q/ha), T7 : T3 + foliar spray of nano DAP 2.5 ml/l at 3 & 5 Weeks After Sowing (31.93 and 48.44 q/ha), T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing (31.99 and 48.92 q/ha) and T10: T4 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing (28.53 and 42.92 q/ha) but it was significantly superior than all other treatments. N, P and protein content in grain as well as in dry fodder were also found significantly higher in T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing than all the other treatments except T2 (RDF), T5 : T3 + foliar spray of nano DAP 2.5 ml/l at 3 Weeks After Sowing and T7 : T3 + foliar spray of nano DAP 2.5 ml/l at 3 & 5 Weeks After Sowing treatments.

The gross returns (Rs. 80057/ha), net returns (Rs. 41469/ha) and BC ratio (2.07) in the T9: T3 + foliar spray of Nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing were maximum which was followed by T5 : T3 + foliar spray of nano DAP 2.5 ml/l at 3 Weeks After Sowing in terms of net returns i.e. Rs. 40450/ha and B:C viz. 2.08, respectively and noticed higher compared to all the treatments including control (Rs. 55883/ha, Rs. 19795/ha and 1.55, respectively).

Zonal performance – Zone B

The four locations mean data exhibited the superior performance of RDF treatment in terms of grain yield (27.63 q/ha) and dry fodder yield (56.17 q/ha). The next best treatment was found T7: T3 + foliar spray of nano DAP 2.5 ml/l at 3 & 5 Weeks After Sowing (26.97 and 53.93 q/ha) which was followed by T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing (26.77 and 53.12 q/ha) and lowest in the control (18.57 and 39.14 q/ha). The protein content was between 10.49 to 11.39% in T2 to T10 treatments and value of 10.48% in control. Similar trend was observed for N content in grain with values of 1.52 to 1.69% and 1.53%, respectively. P content in grain (0.32-0.37%) as well as fodder (0.18-0.21%) was variable among T2 to T10 treatments but showed their superiority over control with values of 0.30 % and 0.17 %, respectively. The T2 (RDF) treatment exhibited maximum gross returns (Rs. 75346/ha), net returns (Rs. 46181/ha) and BC ratio (2.67) which was followed by T9: T3 + foliar spray of nano DAP 5.0 ml/l at 3 & 5 Weeks After Sowing in terms of gross returns (Rs. 72748/ha) but net returns (Rs. 41751/ha) in T7 treatment and B:C (2.39) in T5 whereas, minimum in control (Rs. 49980/ha, Rs. 23557/ha and 2.02, respectively).

PMAT 4: Diversifying, enhancing production of millets through intercropping with pearl millet

The trail was started during *kharif*, 2024 with an objective to diversify, enhancing production of millets through intercropping with pearl millet at two locations in Zone A (Jamnagar and Hisar) and three locations in Zone B (Aurangabad, Coimbatore and Vijayapur). Eleven treatments i.e. 6 Sole crops of millets/green gram and 5 intercropping systems with pearl millet of different millets in paired rows at 30 cm: 2 rows of intercrop at 30 cm with each strip of 90 cm were evaluated in RBD with three replications. The details of the treatments are as follow; T1: Sole Pearl millet (45 cm x 10 cm), T2: Sole Proso millet (30 cm x 5 cm), T3: Sole Foxtail millet (30 cm x 5 cm), T4: Sole Little millet (30 cm x 5 cm), T5: Sole Barnyard millet (30 cm x 5 cm), T6: Sole Mungbean, T7: Pearl millet + Proso millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm, T8: Pearl millet + Foxtail millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm, T9: Pearl millet + Little millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm, T10: Pearl millet + Barnyard millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm, T11: Pearl millet + Mungbean (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm, The results of the experiment are discussed in the following paragraphs and data presented in Tables II.38-41.

4.1 Hisar: The perusal of the data in the Table 38-39 revealed that the grain yield of pearl millet in sole stand was 41.88 q/ha as compared to 32.92-39.07 q/ha in different intercropping systems. The respective yield was 5.42, 3.93, 9.65 and 3.90 q/ha as sole crops of proso millet, foxtail millet, barnyard millet and mungbean, respectively. The dry fodder yields were 118.57 q/ha, 99.68-116.53 q/ha and 26.28, 20.46, 55.33 and 10.77 q/ha, respectively. Neither of the sole minor millets and intercropping based treatment could surpass the grain yield of sole pearl millet equivalent yield (50.92 q/ha) which was significantly superior than all the treatments (1.56 to 47.86 q/ha) except mungbean based intercropping system (50.69 q/ha). Maximum gross returns, net returns and BC ratio of Rs. 133657/ha, Rs. 86159/ha and 2.51 were achieved in the sole pearl millet crop (T1) which was followed by T11 (Pearl millet + Mungbean intercropping system) treatment (Rs.133061ha, Rs.84963/ha and 2.86). The sole crop cultivation of minor millets was not found economical.

4.2 Jamnagar: The data presented in the Tables 38-39 revealed that the grain yield was realized 11.30, 10.28, 20.18, 23.38 and 12.67 q/ha by proso millet, foxtail millet, little millet, barnyard millet and mungbean crops in comparison to 24.49 q/ha by sole pearl millet crop. The range of pearl millet yield was between 12.54 – 19.99 q/ha among different intercropping systems. The straw yield was highest in the little millet crop (63.52 q/ha) followed by barnyard millet (55.52 q/ha) and 37.27 q/ha in pearl millet crop. The PMEY was significantly highest in the pearl millet + mungbean intercropping system (41.43 q/ha) than all the treatments. All the intercropping systems and sole crops of barnyard, little millet and mungbean produced significantly higher yield than sole pearl millet crop. Maximum gross returns, net returns and BC ratio of Rs. 103575/ha, Rs. 68527/ha and 2.2.96 were exhibited by T11 (Pearl millet + Mungbean intercropping system) treatment which was followed by sole mung bean in terms of gross returns (Rs.95025/ha), by sole barnyard in net returns (Rs.67526/ha) whereas maximum B:C in the sole little millet treatment (T4)

Zonal performance – Zone A

The mean data of two locations revealed that the pearl millet equivalent grain yield (46.06 q/ha) was highest in the T11 (Pearl millet + Mungbean intercropping system) treatment which was followed by pearl millet + barnyard (41.22 q/ha), pearl millet + little millet (39.10 q/ha) and sole pearl millet crop (37.70 q/ha), respectively. In rest of the treatments the PMEY was between 11.06 – 37.69 q/ha. The economic evaluation of the treatments revealed that gross returns (Rs. 118318/ha), net returns (Rs. 76745/ha) and B:C (2.86) were highest in the T11 (Pearl millet + Mungbean intercropping system) treatment which was followed by T10: Pearl millet + Barnyard millet treatment (Rs.106033/ha, Rs.64856/ha and 2.58) and only these two have more yield and economic returns than sole crop of pearl millet (Rs.97441/ha, Rs. 59799/ha and 2.51, respectively).

4.3 Aurangabad: The data presented in the Tables 40-41 revealed that the grain as well as stover yield of pearl millet was quite higher (26.83 q/ha & 58.35 q/ha) in the sole pearl millet as compared to grain yield of minor millets between 8.69-11.55 q/ha and dry fodder yield between 16.28-27.02 q/ha. The pearl millet grain yield was drastically reduced by intercropping treatments (13.95-16.10q/ha). The PMEY was significantly higher in the sole pearl millet (30.79 q/ha) and pearl millet + mungbean intercropping system treatment (31.09 q/ha) than all the sole crops of minor millets and mungbean crop. However, the intercropping systems with proso millet, foxtail millet and little millet produced at par PMEY compared to sole pearl millet crop. Maximum gross returns, net returns and BC ratio of Rs. 59830/ha, Rs. 3079/ha and 2.93 were exhibited by sole pearl millet which was followed by T11 (Pearl millet + Mungbean intercropping system) treatment with gross returns (Rs.59707/ha), net returns (Rs.3109/ha) and B:C (2.87)

4.4 Vijayapur: The perusal of the data in the Table 40-41 revealed that the pearl millet grain yield was found at par among different intercropping systems (15.65-17.25 q/ha) as compared to sole pearl millet crop (17.10 q/ha). However, the dry fodder yield was drastically reduced from 53.63 q/ha in sole pearl millet to 34.76-37.79 q/ha among different intercropping systems. The grain yield among minor millets was highest in proso millet (14.62 q/ha) which was followed by barnyard millet (13.73 q/ha), foxtail millet (12.69 q/ha), little millet (11.41 q/ha) and minimum in mung bean (10.41 q/ha). The PMEY was found highest in the pearl millet + foxtail millet treatment (28.26 q/ha) which was followed by pearl millet + barnyard millet (28.26 q/ha), pearl millet + mung bean (26.30 q/ha) and pearl millet + proso millet (25.14 q/ha) and quite higher than sole pearl millet (17.10 q/ha). Maximum gross returns, net returns and BC ratio of Rs. 66396, Rs. 48798/ha and 3.77 were realized in pearl millet + foxtail millet treatment and followed the trend of PMEY.

4.5 Coimbatore: The intercropping system of pearl millet + foxtail millet (27.13 q/ha) as well as sole crop of foxtail millet (17.68 q/ha) produced lesser PMEY than sole crop of pearl millet (33.96 q/ha). The highest PMEY was recorded in the sole barnyard treatment (54.90 q/ha) followed by sole proso millet (47.17 q/ha), sole mungbean (43.79 q/ha) and among intercropping systems it was highest in pearl millet + proso millet treatments (40.10 q/ha). The range of PMEY was between 37.83-39.32 q/ha among remaining treatments. The economic evaluation revealed that gross returns, net returns and BC ratio of Rs. 137312, Rs. 101330/ha and 3.82 were realized maximum in pearl millet + barnyard treatment followed by sole proso millet treatment with

respective values of Rs. 117968/ha, Rs. 81736/ha and 3.26, respectively. Among intercropping systems it was highest in pearl millet + proso millet treatments (100317/ha, Rs. 60855/ha and 2.54, respectively).

Zonal performance - Zone B

The mean data of three locations exhibited that the pearl millet grain yield was found highest in sole pearl millet (25.96 q/ha) as compared to different intercropping systems with pearl millet grain yield varying from 17.07-19.22 q/ha. However, the dry fodder yield was drastically reduced from 52.74 q/ha in sole pearl millet to 32.05-34.75 q/ha among different intercropping treatments. The grain yield among minor millets was highest in barnyard (15.10 q/ha) which was followed by proso millet (14.91 q/ha), little millet (12.47 q/ha), foxtail millet (11.55 q/ha) and minimum in mung bean (9.15 q/ha). The highest PMEY (31.74 q/ha) was recorded in the Pearl millet + Mungbean intercropping system treatment which was followed by sole barnyard treatment (31.34 q/ha) and pearl millet + proso millet treatments (30.77 q/ha) treatments. The range of PMEY was between 18.95-30.47 q/ha among remaining treatments whereas, it was 27.28 q/ha in the sole pearl millet crop. The economic evaluation study revealed that gross returns (Rs. 72051/ha) was maximum in pearl millet + mungbean treatment whereas net returns (Rs. 47415/ha) and BC ratio (3.00) in sole barnyard millet treatment. Among remaining intercropping systems, the net returns (Rs. 26645-35888/ha & B: C (2.67-2.80) were realized more than sole pearl millet crop (Rs. 24189/ha and 2.51, respectively). The net returns and B:C were achieved less in sole foxtail (Rs. 14977/ha and 2.11, respectively) and sole mungbean (Rs. 19497/ha and 2.21, respectively) cultivation as compared to sole pearl millet.

PMAT 7: Productivity of pearl millet [*Pennisetum glaucum* (L.) R.Br. Emend. Stuntz]-Mustard/ Chickpea cropping sequence as influenced by organic and natural farming.

The field experiment aimed to evaluate the effect of organic and natural farming on productivity, quality, soil properties and microbial counts of pearl millet and mustard/chickpea crops was started during *Kharif*, 2022 at two locations of Zone A1 (Mandor and Bikaner), four locations in Zone A (Jaipur, Jamnagar, Jammu and Hisar) and five locations in Zone B (Aurangabad, Coimbatore, Vijayapur, Dhule and Peruvulam). The performance of most popular pearl millet hybrid or mustard/gram varieties of the locations in Zone A1, Zone A and Zone B were evaluated with nine different treatments *i.e.* T₁: Control (RDF), T₂: RDN* through Farm yard manure (FYM), T₃: RDN through Vermicompost (VC), T₄: DN through Poultry manure(PM) for Zone A & B / *Sheep or Goat manure for Zone A₁, T₅: DN through Poultry manure(PM) for Zone A & B / *Sheep or Goat manure for Zone A₁, T₆: RDN through Poultry manure(PM) for Zone A & B / *Sheep or Goat manure for Zone A₁, T₇: RDN through Poultry manure + Biofertilizer and T₈ : *** Cow based bio formulation (250 kg/ha Cow Urine Based Solid Organic bio-Formulation (CUBSOF)/ha before sowing along with sieved dry FYM @ 250 kg/ha will be applied into the soil before sowing and Cow Urine Based Liquid Organic bio-Formulation (CUBLOF) @ 500 litre/ha with irrigation water or foliar spray of 10 % will be applied two times at 15-20 & 35-40 DAS in pearl millet and after 35-40 & 70-75 DAS in mustard/chickpea crops during the crop season) and T₉: RDF** Nine treatments were replicated three times in RBD. Data on ancillary characters, nutritional aspects, microbial counts, yield attributes, yield and economics are presented in Table II.42 to II.86.

7.1 Bikaner: The data presented in the Tables II.42 to 45 during *kharif*, 2024 exhibited significantly higher pearl millet grain yield in RDF treatment (26.00 q/ha) than control (16.53 q/ha), FYM (18.03 q/ha), VC (18.67 q/ha), Goat Manure (18.67 q/ha) and FYM + Biofertilizer treatments (21.30 q/ha) but remained at par with cow based formulation and other treatments with range from 23.13-24.00 q/ha. Maximum stover yield was recorded by T₉- RDF (59.00 q/ha) treatment and it also followed the trend of grain yield. The stover yield was 49.63 q/ha in the cow based treatment and 37.30 q/ha in control. The gross returns (Rs. 66797/ha), net returns (Rs. 37797/ha) and BC ratio (2.3) were highest in the RDF treatment during *kharif*, 2023 season.

7.2 Mandor: The grain and and stover yields were found maximum in RDF treatment (19.37 q/ha grain; 35.17 q/ha stover) and these were higher by 81.5 and 95.4 %, respectively over the control. The grain and stover yields were significantly lower in the cow based treatment (13.00 q/ha grain; 23.50 q/ha stover) and sheep/goat manure sole treatments). The range of grain yield was between 13.90-16.63 q/ha and stover yield between 24.70-31.53 q/ha among the sole organic manures and their combination with biofertilizer treatments. The maximum gross (Rs. 73696/ha), net returns (Rs. 48196/ha) and BC ratio (2.9) were found in the RDF treatment and resulted in Rs. 20796/ha more net returns over the cow based treatment (T₈).

During Rabi 2023-24, maximum chickpea seed yield (25.80 q/ha) was recorded by RDF treatment which was significantly higher than all other RDN through sole organic manure and their combination treatments with biofertilizer and cow based bio formulation treatment (19.13 q/ha) however, it remained at par to RDN through Poultry + Biofertilizer treatment (23.00 q/ha). Maximum straw yield was recorded in RDF treatment (33.93 q/ha) which was significantly higher than all the treatments and it was 21.97 q/ha in control and 27.73 q/ha in cow based treatment. Similarly maximum gross returns (Rs. 170892/ha), net returns (Rs. 136392/ha) and BC ratio (5.58) were recorded by RDF treatment and this treatment resulted in Rs. 64385 and Rs. 41147/ha more net returns over control and cow based bio formulations treatment.

The enzymatic and microbial count studies after *kharif*, 2024 season of pearl millet (Tables 46-47) revealed that The dehydrogenase and alkaline phosphatase activity were recorded highest in the T5 treatment (RDN through FYM + biofertilizer) being statistically at par with T6 (RDN through VC + biofertilizer) but significantly superior over all other treatments. Acid phosphatase was found statistically at par in the T4 to T8 treatments but significantly higher than control and RDF treatments. Urease population was found statistically at par among T5 to T7 treatments but showed their statistical superiority than all the remaining treatments. The SMBC populations were recorded highest in treatment T5 and it was at par with T4, T6 and T7 treatments but significantly superior over all other treatments. The bacterial counts were recorded highest in treatment T5 and it was at par with T6 and T7 treatments but significantly superior than remaining treatments. Fungal counts was found significantly higher in the T7 treatment but statistically at par with T6 & T8 but shown its significant superiority than other treatments. The actinomycetes counts were found significantly higher in T6 (RDN through VC + biofertilizer) treatment than all other except T5 treatment.

The enzymatic and microbial count studies (Table 50-51) after *Rabi* 2023-24 season in chickpea revealed that all the enzymatic activities i.e. dehydrogenase activity (335.5-409.9 $\mu\text{g TPF g}^{-1}$ soil), alkaline phosphatase (6.60-7.37 $\mu\text{g PNP g}^{-1}$ soil), acid phosphatase (3.77-3.97 $\mu\text{g PNP g}^{-1}$ soil).

soil) and Urease activities in T5 to T7 treatments were significantly higher than all the treatments and values were 163.8 & 235.2 $\mu\text{g TPF g}^{-1}$ soil, 5.43 & 5.87 $\mu\text{g PNP g}^{-1}$ soil, and 8.14 & 9.49 $\mu\text{mol NH}_3 \text{ g}^{-1}$ soil, respectively in control and Cow based treatments. Bacterial count was recorded significantly higher in treatment T₅ ($10.24 \log^{10}$ cfu/g soil) than all treatments except T4, T6 & T7. The fungal counts ($6.32 \log^{10}$ cfu/g soil) and actinomycetes counts ($8.46 \log^{10}$ cfu/g soil) were recorded significantly higher in treatment T6 which remained at par with T4, T5, T7 & T8 treatments. The SMBC $\mu\text{g/g}$ soil were recorded significantly higher in T5 treatment than all the treatments except T3, T4, T6 & T7.

Zonal performance – Zone A1

The two locations mean data showed the superiority of treatment T₉ (RDF) treatment in terms of grain and stover yields (20.74 and 36.81 q/ha, respectively) compared to all the remaining treatments including control (13.26 q/ha grain; 25.94 q/ha stover) and cow based formulation treatment (17.50 q/ha grain; 34.04 q/ha stover). The grain and stover yields were improved by 56.4 and 60.5% in the T₉ treatment over the control and by 18.5 and 22.3 % over the cow based formulation treatment (T₈). The T₉ treatment resulted in Rs. 19437/ha and Rs. 11045/ha more net returns over the control and cow based treatments. The maximum B:C was also recorded in the T₉ (2.8) whereas it was 1.9 and 2.2 in control and cow based treatments.

The enzymatic and microbial count studies (Tables 50-51) after *Rabi* 2023-24 season in chickpea revealed that all the enzymatic activities i.e. dehydrogenase activity (335.5-409.9 $\mu\text{g TPF g}^{-1}$ soil), alkaline phosphatase (6.60-7.37 $\mu\text{g PNP g}^{-1}$ soil), acid phosphatase (3.77-3.97 $\mu\text{g PNP g}^{-1}$ soil) and Urease activities in T5 to T7 treatments were significantly higher than all the treatments. Bacterial count was recorded significantly higher in treatment T₅ ($10.24 \log^{10}$ cfu/g soil) than all treatments except T4, T6 & T7. The fungal counts ($6.32 \log^{10}$ cfu/g soil) and actinomycetes counts ($8.46 \log^{10}$ cfu/g soil) were recorded significantly higher in treatment T6 which remained at par with T4, T5, T7 & T8 treatments. The SMBC $\mu\text{g/g}$ soil were recorded significantly higher in T5 treatment than all the treatments except T3, T4, T6 & T7.

The enzymatic and microbial count studies after *kharif*, 2024 season of pearl millet (Tables 46-47) revealed that the dehydrogenase and alkaline phosphatase activity were recorded highest in the treatment T5 (RDN through FYM + biofertilizer). Acid phosphatase was found statistically at par among T4 to T8 treatments but significantly higher than control and RDF treatments. Urease population was found statistically at par among T5 to T7 treatments but showed their statistical superiority than all the remaining treatments. The SMBC was recorded highest in treatment T5 and it was at par with T4, T6 and T7 treatments but significantly superior over all other treatments. The bacterial counts were recorded highest in treatment T5 and it was at par with T6 and T7 treatments but significantly superior than remaining treatments. Fungal counts were found significantly higher in the T7 treatment but statistically at par with T6 & T8 but shown its significant superiority than other treatments. The actinomycetes counts were found significantly higher in T6 (RDN through VC + biofertilizer) treatment than all other except T5 treatment.

7.3 Hisar: Results shown in Table II.52-53 exhibited that organic and cow centric nutrients have significant impact on grain and stover yield of pearl millet. The grain and stover yield of pearl millet showed an increment with the application of different organic manures alone (viz., farmyard manure (FYM), vermicompost (VM) and poultry manure (PM) and in combination

with bio fertilizers over control. Highest grain and straw yield (39.15 q/ha in grain and 107.95 q/ha in stover) were obtained under treatment RDF. However, lowest grain and straw yields (22.14 q/ha and 62.43 q/ha) were obtained in the control. The respective range of grain yield was in the range of 31.40 to 34.57 q/ha and 88.49-101.17 q/ha, respectively in the T₂ to T₇ treatments whereas, it was 26.62 q/ha and 74.83 q/ha, respectively in cow based treatment (T₈). Highest gross (Rs. 124367/ha), net returns (Rs. 76994/ha) and BC ratio (2.28) were also found in the T₉ treatment and resulted in Rs. 40847/ha more net returns over the cow based treatment (T₈).

During 2023-24, in comparison to significantly higher mustard seed yield in the RDF treatment (13.52 q/ha), the respective yield in the control was 5.45 q/ha whereas, in cow based formulation treatment it was 6.25 q/ha. The range of seed yield in the sole organic manure treatments i.e. FYM, VC and Poultry Manure was between 7.54–7.84 q/ha whereas, the combination of these organic manures with biofertilizer it varied between 8.14-8.62 q/ha. Similar trend was also observed for seed yield attributes viz. Seeds/silique, no. of siliquae/plant and number of siliquae/plant. The test weight was found significantly higher in RDF treatment (5.6%) than all the treatments of cow based, sole application of FYM, VC and Poultry Manure and control whereas, it remained statistically at par with FYM, VC and Poultry Manure plus biofertilizers treatments (T₅ to T₇). The oil content was found statistically at par among different treatments.

It can be inferred from the Table II.56-57 that organic sources of nutrients alone as well as along with biofertilizers were found to be higher in SOC, available nitrogen (N), phosphorus (P) and potash (K). Maximum available soil organic carbon (0.42 %) and N (195.3 kg/ha) were observed in the FYM along with biofertilizers treatment. However, organic carbon and available nitrogen (N) in post-harvest soils were observed minimum under control followed by cow based formulation treatment.

An appraisal of data presented in Table II.60 inferred that remarkable effects of biofertilizers, FYM and vermicompost were observed on the bacterial population of soil after harvesting of pearl millet. Treatments RDN through FYM + Biofertilizer (5.82×10^7 cfu count g⁻¹ soil) and RDN through VC+ Biofertilizer (5.75×10^7 cfu count g⁻¹ soil) treatments notably recorded significantly higher bacterial population over cow based bio formulations (5.25×10^7 cfu count g⁻¹ soil), control (4.10×10^5 cfu count g⁻¹ soil) and RDF treatment (4.95×10^5 cfu count g⁻¹ soil). The fungal population was found maximum in RDN through PM + Biofertilizer (7.47×10^5 cfu count g⁻¹ soil) followed by RDN through VC + Biofertilizer (7.12×10^5 cfu count g⁻¹ soil) treatments and shown their significantly superiority than the cow based treatment (4.50×10^5 cfu count g⁻¹ soil), control (2.80×10^5 cfu count g⁻¹ soil) and RDF treatment (3.53×10^5 cfu count g⁻¹ soil). The actinomycetes population was found significantly higher among all the organic manure alone, organic manure+biofertilizer and cow based treatments as compared to control and RDF alone treatments. However, the treatment RDN through VC + Biofertilizer (16.52×10^5 cfu count g⁻¹ soil) showed its significant superiority than all the treatments with value of 13.98×10^5 cfu count g⁻¹ soil in cow based treatment over control (10.83×10^4 cfu count g⁻¹ soil) and RDF treatment (11.85×10^5 cfu count g⁻¹ soil).

7.4 Jaipur: The data presented in the Tables II.52 to 55 exhibited at par performance for grain yield in the treatments T₄, T₆, T₇, T₈ & T₉ (24.57 to 26.60 q/ha) and all these produced significantly higher yield than control (19.88 q/ha) and FYM alone (20.39 q/ha). The stover yield

(51.03-56.14 q/ha) was statistically at par among T3 to T9 treatments but significantly superior over control (45.19 q/ha). The respective grain and stover yields were 25.55 q/ha and 55.87 q/ha, respectively in the cow based treatment. The protein content was found statistically at par among all the treatments.

During *Rabi* 2023-24, the perusal of the data in Tables 61 to 65 revealed that the mustard seed yield was found in the range of 11.76-12.56 q/ha in the treatments T₃ to T₇ and remained statistically at par but significantly superior over control (8.55 q/ha) and cow based treatment (10.29 q/ha). Similar trend was also observed for mustard straw yield.

7.5 Jamnagar: The study exhibited that the grain yield was significantly higher in the RDF treatment (24.39 q/ha) over all the treatments except T5 (20.18 q/ha), T7 (22.63 q/ha) & T8 (20.38 q/ha). The grain yield was higher by 124.8 and 19.7 per cent higher over control and cow based treatments. The stover yield was significantly higher in RDF treatment as compared to all the treatments and it was 91.7 and 18.8 per cent more in these treatments, respectively. Among organic manure treatments, the poultry manure application alone (18.16 q/ha) and in combination (22.63 q/ha) resulted into higher yield as compared to sole FYM, vermicompost and their combinations with biofertilizer treatments. The protein content in T7 & T8 treatments was significantly higher than all the treatments. The highest gross returns (Rs. 76994/ha), net returns (Rs. 53717/ha) and BC ratio (3.31) were found in the RDF treatment and resulted in Rs. 13723/ha more net returns over the cow based treatment (T₈).

Table II.56-57 exhibited that organic sources of nutrients alone as well as along with biofertilizers were found to be higher in SOC (0.63-0.72%) than 0.63% in cow based treatment and 0.45 % in RDF treatment. The available nitrogen in the RDF (220.2 kg/ha), Poultry Manure (205.6 kg/ha) and VC (202.0 kg/ha) along with biofertilizer treatments, significantly higher than all the treatment and it was 199.1 kg/ha in cow based treatment and 182.5 kg/ha in control. The available phosphorus (25.4-28.3 kg/ha) in the treatments T4 to T9 was statistically at par but significantly superior than control (17.5 kg/ha) The available potash (311.7-324.1 kg/ha) in the treatments from T3 to T9 was at par but shown their significant superiority over control (291.6 kg/ha). During 2022, bacterial counts were observed significantly higher in T₈ than all the treatments except FYM alone and FYM along with biofertilizer treatments which remained statistically at par. The microbial counts study was not reported during 2023 & 2024 crop seasons.

Maximum mustard seed yield was recorded in the RDF treatment (15.57 q/ha) whereas, the respective yield in the control was 4.65 q/ha whereas, in cow based formulation treatment it was 6.65 q/ha. The range of seed yield in the sole organic manure treatments i.e FYM, VC and PM was between 5.62-7.49 q/ha whereas, the combination of these organic manures with biofertilizer it varied between 8.27-11.77 q/ha. Similar trend was also observed for seed yield attributes viz. Seeds/silique, no. of siliquae/plant and number of siliquae/plant. The oil content was 33.0% in the RDF treatment whereas, it was 27.2% in the control and 28.2% in the cow based formulation treatment during 2022-23 season. The highest gross returns (Rs. 94635/ha) and net returns (Rs. 65936/ha) and BC ratio (3.3) were found highest in the RDF treatment and resulted in Rs. 44343/ha more net returns over the cow based treatment (T₈).

After mustard harvest, the OC was between 0.61-0.70 % among organic manure treatments in comparison to 0.62 % in cow based treatment, 0.44 % in RDF and 0.47 % in control. The available N was significantly highest in RDF treatment (225.0 kg/ha) as compared to all the treatments from T2 to T7 (193.3-204.8 kg/ha), control (181.4 kg/ha) and cow based treatment (198.8 kg/ha). The available P was statistically at par between T4 to T9 treatments but significantly superior over control. The available K was found statistically at par between T3 to T9 treatments and cow based bio formulation treatment (316.9 kg/ha) showed higher value than control (287.3 kg/ha).

7.6 Jammu: During 2024, the data presented in the Table II.52 to 55 exhibited that grain yield was significantly higher in the RDF treatment (29.397 q/ha) as compared to all the treatments (18.99-24.07 q/ha) except RDN through Poultry Manure + Biofertilizer treatment (25.66 q/ha). The stover yield was found statistically at par in the RDF and RDN through Poultry Manure + Biofertilizer treatment and former had shown its significant superiority among remaining treatments including control. The grain (29.97 q/ha) and stover (51.77 q/ha) yields were significantly higher in the RDF treatment over all the treatments. The grain yield was higher by 51.4 and 36.8 per cent higher over control and cow based treatments.

Zonal performance – Zone A

The four locations mean data showed the superiority of T₉ (RDF) treatment in terms of grain and stover yield (31.32 and 63.86 q/ha, respectively) compared to all the remaining treatments including control (18.85 q/ha grain; 41.76 q/ha stover). The grain and stover yields were higher by 66.2 and 52.9 % in the T₉ treatment over the control and by 31.1 and 23.5% than the cow based formulation treatment (T₈). Among organic manures, the treatment T₇ (RDN through Poultry Manure+ Biofertilizer) produced maximum grain yield (27.93 q/ha) and stover yield (58.94 q/ha) and was comparable to RDF treatment. The T₉ treatment resulted in Rs. 39765/ha and Rs. 28052/ha more net returns over the control and cow based treatments. The maximum B:C was also recorded in the T₉ (2.52) whereas it was 1.59 and 1.88 in control and cow based treatments. The protein content was observed maximum in the Poultry manure (10.2%) treatment as compared to 9.5% in RDF and 10.1 % in cow based treatments whereas, lowest in the control (9.1%).

At Hisar, it can be inferred from the Table II.56-57 that organic sources of nutrients alone as well as along with biofertilizers were found to be higher in SOC, available nitrogen (N), phosphorus (P) and potash (K). Maximum available soil organic carbon (0.42 %) and N (195.3 kg/ha) were observed in the FYM along with biofertilizers treatment. However, organic carbon and available nitrogen (N) in post-harvest soils were observed minimum under control followed by cow based formulation treatment.

An appraisal of data presented in Table II.60 at Hisar centre inferred that remarkable effects of biofertilizers, FYM and vermicompost were observed on the bacterial population of soil after harvesting of pearl millet. Treatments RDN through FYM + Biofertilizer (5.82×10^7 cfu count g⁻¹ soil) and RDN through VC+ Biofertilizer (5.75×10^7 cfu count g⁻¹ soil) treatments notably recorded significantly higher bacterial population over cow based bio formulations (5.25×10^7 cfu count g⁻¹ soil), control (4.10×10^5 cfu count g⁻¹ soil) and RDF treatment (4.95×10^5 cfu count g⁻¹ soil). The fungal population was found maximum in RDN through PM + Biofertilizer ($7.47 \times$

10^5 cfu count g^{-1} soil) followed by RDN through VC + Biofertilizer (7.12×10^5 cfu count g^{-1} soil) treatments and shown their significant superiority than the cow based treatment (4.50×10^5 cfu count g^{-1} soil), control (2.80×10^5 cfu count g^{-1} soil) and RDF treatment (3.53×10^5 cfu count g^{-1} soil). The actinomycetes population was found significantly higher among all the organic manure alone, organic manure +biofertilizer and cow based treatments as compared to control and RDF alone. However, the treatment RDN through VC + Biofertilizer (16.52×10^5 cfu count g^{-1} soil) showed its significant superiority than all the treatments with value of 13.98×10^5 cfu count g^{-1} soil in cow based treatment, control (10.83×10^5 cfu count g^{-1} soil) and RDF treatment (11.85×10^5 cfu count g^{-1} soil).

At Jamnagar, Table II.56-57 exhibited that organic sources of nutrients alone as well as along with biofertilizers were found to be higher in SOC (0.63-0.72%) than 0.63% in cow based treatment and 0.45 % in RDF treatment. The available nitrogen in the RDF (220.2 kg/ha), Poultry Manure (205.6 kg/ha) and VC (202.0 kg/ha) along with biofertilizer treatments, significantly higher than all the treatment and it was 199.1 kg/ha in cow based treatment and 182.5 kg/ha in control. The available phosphorus (25.4-28.3 kg/ha) in the treatments T4 to T9 was statistically at par but significantly superior than control (17.5 kg/ha) The available potash (311.7-324.1 kg/ha) in the treatments from T3 to T9 was at par but shown their significant superiority over control (291.6 kg/ha). During 2022, bacterial counts were observed significantly higher in T₈ than all the treatments except FYM alone and FYM along with biofertilizer treatments which remained statistically at par. The microbial counts study was not reported during 2023 & 2024 crop seasons.

The three locations mean data showed the superiority of treatment T₉ (RDF) treatment in terms of seed and straw yield of mustard (14.15 and 33.74 q/ha, respectively) compared to all the remaining treatments including control (6.40 q/ha seed; 19.30 q/ha straw). The seed and straw yield were higher by 121.1 and 74.8 % in the T₉ treatment over the control and by 70.7 and 39.2% over the cow based formulation treatment (T₈).

At Jamnagar, after mustard harvest, the OC was between 0.61-0.70 % among organic manure treatments in comparison to 0.62 % in cow based treatment, 0.44 % in RDF and 0.47 % in control. The available N was significantly highest in RDF treatment (225.0 kg/ha) as compared to all the treatments from T2 to T7 (193.3-204.8 kg/ha), control (181.4 kg/ha) and cowbased treatment (198.8 kg/ha). The available P was statistically at par between T4 to T9 treatments but significantly superior over control. The available K was found statistically at par between T3 to T9 treatments and cow based bio formulation treatment (316.9 kg/ha) showed higher value than to control (287.3 kg/ha).

7.7 Aurangabad: The data presented in the Tables II.67 to 73 exhibited at par performance for grain yield in the treatments T₅ to T₇ (22.00-23.40 q/ha) and all these were statistically at par with cow based formulation (19.20 q/ha) and control (14.10 q/ha). The stover yield also followed the trend of grain yield. The grain yield (26.30 q/ha) was significantly higher in the RDF treatment than cow based treatment (19.2 q/ha). The stover yield (57.41 q/ha) was significantly higher in the RDF treatment than all the treatments. The grain yield was higher by 86.5 and 36.9 per cent higher over control and cow based treatments, respectively. The T₉ treatment resulted in Rs. 37721/ha and Rs. 22799/ha more net returns over the control and cow based treatments. The

maximum B:C was also recorded in the T₉ (2.87) whereas, it was 1.74 and 2.19 % in control and cow based treatments, respectively.

7.8 Dhule: The grain and and stover yields were found maximum in T₉ treatment (26.21 q/ha grain; 48.02 q/ha stover) and grain yield was higher by 79.2 and 39.0 % over the control and cow based treatment, respectively. The grain and stover yield were significantly lower in the cow based treatments (T₈) treatment (18.85 q/ha grain; 34.54 q/ha stover) as compared to RDF treatment but remained at par with the sole organic manure treatments (FYM, VC and Poultry Manure) but significantly lesser grain yield than their combination with biofertilizers treatments. The maximum gross (Rs. 69374/ha), net returns (Rs. 41337/ha) and BC ratio (2.47) were found in the T₉ treatment and resulted in Rs. 18837/ha more net returns over the cow based treatment (T₈).

The perusal of the data during 2022 season in Table II.48 revealed that organic sources of nutrients alone as well as along with biofertilizers were found to be higher in SOC , available nitrogen (N), phosphorus (P) and potash (K). Maximum available soil organic carbon (0.58 %), N (213.7 kg/ha) and P₂O₅ (17.2 kg/ha) were observed in the FYM along with biofertilizer treatment. However, organic carbon and available nitrogen (N) in post-harvest soils were observed minimum under control followed by RDF treatment.

During Rabi 2023-24 season, maximum chickpea seed yield (16.18 q/ha) was recorded by RDF treatment which was significantly higher than all other organic treatments (9.51-14.43 q/ha) and cow based bio formulation treatment (9.34 q/ha seed). Maximum straw yield was recorded in RDF treatment (28.07 q/ha) which was significantly higher than control (13.71 q/ha) and sole application of FYM, VC, poultry manure as well as in combination with biofertilizer treatments (16.50-25.04 q/ha) and cow based bio formulation treatment (16.20 q/ha seed). Similarly maximum gross returns (Rs. 144152/ha), net returns (Rs. 94249/ha) and BC ratio (2.89) were recorded by RDF treatment and this treatment resulted in Rs. 61601 and Rs. 48048/ha more net returns over control and cow based bio formulation treatments.

7.9 Vijayapur: All the yield attributes (total no. of tillers, effective tillers, ear head length, ear head girth and 1000 grains weight) grain and stover yields were significantly increased with the application of different sole organic manures (farmyard manure, vermicompost and poultry manure) and also along with biofertilizers over control (Tables II.67-82). Highest grain yield (24.59 q/ha) was obtained under vermicompost + biofertilizers treatment whereas, stover yield was found statistically at par among all the treatments (T₂ to T₉) but significantly higher over control (T₁). However, lowest grain and straw yields (14.38 & 43.71 q/ha) were obtained in the control. The respective range of grain yield was in the range of 20.16 to 24.59 q/ha and 51.76 to 54.07 q/ha, respectively in the T₅ to T₇ treatments whereas, it was 19.84 q/ha and 48.98 q/ha, respectively in cow based treatment (T₈). The Fe and Zn content in pearl millet grain were found statistically at par among all the treatments as compared to control.

The SOC (%) was statistically at par in cow based (0.64%) and RDF (0.62%) over the control (0.63%) but significantly higher in the sole organic manures and their combination with biofertilizer treatments (0.68-0.70%). Maximum available N (218.4 kg/ha), P (25.2 kg/ha) and K (425.5 kg/ha) were observed in the vermicompost along with biofertilizer treatment. The data

presented in Table II.78 inferred that cow based formulation, organic manures (FYM, PM and vermicompost) and organic manures with biofertilizers showed significantly higher bacterial population (59.00 to 73.67×10^6 cfu count g^{-1} soil in soil) over control and RDF treatments after harvesting of pearl millet. However, treatment receiving cow based bio formulations notably recorded bacterial population (65.33×10^6 cfu count g^{-1} soil) over control (34.00×10^6 cfu count g^{-1} soil) and RDF (43.33×10^6 cfu count g^{-1} soil).

In chickpea crop during 2023-24, the seed yield was 10.82 q/ha in control whereas, it was 13.13 q/ha in cow based bio formulation treatment. Maximum yield was realized in RDN through vermicompost + biofertilizers treatment (15.11 q/ha). The seed yield was 14.04 q/ha in RDF treatment. Similar trend was observed during 2023-24 crop season also. The straw yield was not statistically improved by organic manures, their combination with biofertilizers, cow based formulation and RDF treatments over the control. Seed index, protein content and no. of seeds/pod were found statistically at par among different treatments. However, number of primary branches, secondary branches and number of pods/plant were significantly superior among all the applied input treatments over the control.

2.10 Coimbatore: The study exhibited that the grain yield was significantly higher in the RDF (27.43 q/ha) over all the treatments (19.24 - 22.61 q/ha) except cow based treatment (24.39 q/ha). The stover yield also followed the trend of grain yield. Among sole organic manure treatments and along with biofertilizers, the grain and stover yields were at par among themselves as well as in comparison to cow based treatment. The highest gross returns (Rs. 109167 /ha), net returns (Rs. 70267 /ha) and BC ratio (2.81) were found in the RDF treatment and resulted in Rs. 10051 /ha more net returns over the cow based treatment (T_8).

During Rabi 2023-24 season, maximum chickpea seed yield (14.08 q/ha) was recorded by RDF treatment which was significantly higher than all other organic treatments except cow based bio formulation treatment (12.91 q/ha seed). Maximum straw yield was recorded in RDF treatment (17.05 q/ha) which was significantly higher than control (10.72 q/ha) and sole application of FYM, VC, goat manure as well as in combination treatments (13.18 - 14.29 q/ha). Similarly maximum gross returns (Rs. 114113 /ha), net returns (Rs. 73791 /ha) and BC ratio (2.44) were recorded by RDF treatment and this treatment resulted in Rs. 44874 and Rs. 6602 /ha more net returns over control and cow based bio formulation treatments.

After pearl millet- chickpea crop rotation during Rabi 2023-24 (Tables 83-84), the soil study revealed that the soil OC was found statistically at par among organic manures and cow based treatments (0.43 - 0.44%) and shown their significant superiority over control and RDF with 0.41% OC. The available N was significantly higher in RDF treatment as compared to all the treatments except T_6 , T_7 and cow based treatments. The available P was statistically at par among T_2 to T_9 treatments and exhibited their statistical superiority over the control. The available K was found statistically at par among T_5 to T_9 treatments but cow based and RDF treatments shown their significant superiority over T_1 to T_4 treatments.

2.11 Perruvullam: The data presented in the Table II.67 to 82 exhibited at par performance for grain yield in the treatments T_2 to T_7 treatments (23.19 - 27.82 q/ha) and all these produced statistically higher yield than cow based formulation (14.39 q/ha) and control (13.40 q/ha). The

stover yield was found statistically at par among RDF and T₄ to T₇ treatments but RDF treatment produced significantly higher over control, sole application of FYM, VC and cow based treatments. The highest gross returns (Rs. 109106/ha) and net returns (Rs. 67606/ha) and BC ratio (2.62) were found in the T₉ treatment and resulted in Rs. 57343/ha and Rs.46547/ha more net returns over the control (T₁) and cow based treatments (T₈).

The pH, EC and SOC (%) were not significantly affected by cow based, RDF, organic sources of nutrients alone as well as along with biofertilizers over the control. Maximum available N (263.3 kg/ha) was in the RDF treatment which was followed by RDN through VC treatment (254.7 kg/ha) and all the treatments had significantly more available N than control. Highest available P (58.3 kg/ha) was observed in the cow based treatment but statistically at par with T₆, T₈ and T₉ treatments and all these were statistically superior than rest of the treatments. The available K was significantly higher in the sole application of VC treatment as compared to all the treatments. An appraisal of data presented in Table II.78 inferred that cow based bio formulations and RDN through Vermicompost + biofertilizer notably recorded highest bacterial population (12.33×10^6 cfu count g⁻¹ soil) over control (7.67×10^6 cfu count g⁻¹ soil) and RDF treatment (8.67×10^6 cfu count g⁻¹ soil). However, the fungal population was found maximum in RDN through Vermicompost + biofertilizer treatment (8.00×10^4 cfu count g⁻¹ soil) as compared to cow based treatment (6.67×10^4 cfu count g⁻¹ soil), control (3.67×10^4 cfu count g⁻¹ soil) and RDF treatment (4.33×10^4 cfu count g⁻¹ soil).

During Rabi 2023-24 season, chickpea seed yield was not significantly improved by any of the treatments as compared to control.

Zonal performance – Zone B

The mean data of the five locations for grain and stover yield revealed the superiority of RDF treatment T₉ (27.04 and 49.69 q/ha, respectively) compared to all the remaining treatments including control (15.09 q/ha grain; 31.74 q/ha stover). The grain and stover yields were higher by 79.2 and 26.6% in the T₉ treatment over the control and by 34.5 and 24.2% over the cow based formulation treatment (20.11 q/ha grain; 40.02 q/ha stover). The T₉ treatment resulted in Rs. 34647/ha and Rs. 22344/ha more net returns over the control and cow based treatments. The maximum B:C was also recorded in the T₉ (2.67) whereas it was 1.73 and 2.03 in control and cow based treatments.

At Vijayapur, the SOC (%) was statistically at par in cow based (0.64%) and RDF (0.62%) over the control (0.63%) but significantly higher in the sole organic manures and their combination with biofertilizer treatments (0.68-0.70%). Maximum available N (218.4 kg/ha), P (25.2 kg/ha) and K (425.5 kg/ha) were observed in the vermicompost along with biofertilizer treatment. The data presented in Table II.78 inferred that cow based formulations, organic manures (FYM, PM and vermicompost) and organic manures with biofertilizers showed significantly higher bacterial population (59.00 to 73.67 10^6 cfu count g⁻¹ soil in soil) over control and RDF treatments after harvesting of pearl millet. However, treatment receiving cow based bio formulations notably recorded bacterial population (65.33×10^6 cfu count g⁻¹ soil) over control (34.00×10^6 cfu count g⁻¹ soil) and RDF treatment (43.33×10^6 cfu count g⁻¹ soil).

The four locations mean data showed the superiority of treatment T₉ (RDF) treatment in terms of seed and straw yield of chickpea (16.46 and 22.24 q/ha, respectively) compared to all the remaining treatments including control (10.09 q/ha seed; 13.29 q/ha straw). The seed and straw yields were higher by 63.1 and 67.3% in the T₉ treatment over the control and by 23.1 and 30.9% over the cow based formulation treatment (T₈). Maximum gross returns (Rs. 120195/ha), net returns (Rs. 75582/ha) and BC ratio (2.66) were recorded by RDF treatment and this treatment resulted in Rs. 46667 and Rs. 27285/ha more net returns over control and cow based bio formulations treatment.

At Coimbatore, after pearl millet- chickpea crop rotation during 2023-24, the soil study revealed that the soil OC was found statistically at par among organic manures and cow based treatments (0.43-0.44%) and shown their significant superiority over control and RDF with 0.41% OC. The available N was significantly higher in RDF treatment as compared to all the treatments except T₆, T₇ and cow based treatments. The available P was statistically at par among T₂ to T₉ treatments and exhibited their statistical superiority over the control. The available K was found statistically at par among T₅ to T₉ treatments but cow based and RDF treatments shown their significant superiority over T₁ to T₄ treatments.

At Perrumalai, the pH, EC and SOC (%) were not significantly affected by cow based, RDF, organic sources of nutrients alone as well as along with biofertilizers over the control. Maximum available N (263.3 kg/ha) was in the RDF treatment which was followed by RDN through VC treatment (254.7 kg/ha) and all the treatments had significantly more available N than control. Highest available P (58.3 kg/ha) was observed in the cow based treatment but statistically at par with T₆, T₈ and T₉ treatments and all these were statistically superior than rest of the treatments. The available K was significantly higher in the sole application of VC treatment as compared to all the treatments. An appraisal of data presented in Table II.78 inferred that cow based bio formulations and RDN through Vermicompost + biofertilizer notably recorded highest bacterial population (12.33×10^6 cfu count g⁻¹ soil) over control (7.67×10^6 cfu count g⁻¹ soil) and RDF treatment (8.67×10^6 cfu count g⁻¹ soil). However, the fungal population was found maximum in RDN through Vermicompost + biofertilizer treatment (8.00×10^4 cfu count g⁻¹ soil) as compared to cow based treatment (6.67×10^4 cfu count g⁻¹ soil), control (3.67×10^4 cfu count g⁻¹ soil) and RDF treatment (4.33×10^4 cfu count g⁻¹ soil).

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Table II.1: Summary of Agronomical trials conducted during 2024

S. No.	Name of centre							Trials allotted	Result reported	Trial failed/not conducted	
		1			2	3	4				5
		a	b	c							
ZONE A1											
1	Mandor	A	-	-	A	A	A*	A	5	4	PMAT 4 data not reported
2	Bikaner	A	-	-	A	A	A*	A*	4	4	PMAT 4 data and *PMAT 5 Rabi season 2023-24 data not reported
ZONE A											
3	Jaipur	-	A	-	A	A	A*	A	5	4	PMAT 4 data not reported - - -
4	New Delhi	-	A	-	-	-	-	-	1	1	
5	Hisar	-	A	-	A	A	A	A	5	5	
6	Jamnagar	-	A	-	A	A	A	A	5	5	
7	Jammu	-	-	-	-	-	-	A	1	1	
ZONE B											
7	Aurangabad	-	-	A	A	A	A	A	5	5	PMAT 4 data not reported - - -
8	Dhule	-	-	A	A	A	A*	A	5	4	
9	Vijayapur	-	-	A	A	A	A	A	5	5	
10	Coimbatore	-	-	A	A	A	A	A	5	5	
11	Perumallapalle	-	-	-	-	-	-	A	1	1	
Total		2	4	4	9	9	9	11	48	44	

A= Alloted

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Table II.2: Experimental details of Agronomy trials– Kharif 2024

Trials & Locations	Soil Status						Previous Crop	Variety Used	Nutrient (Kg/ha)			Date of operations carried								
	Type	pH	N	P	K	Depth/ Fe status			N	P	K	Sowing	Thinning	Top dressing	Weeding	Hoeing	Irri.	Pl. Prot.	Harvest	
PMAT 1a																				
Bikaner	LS	7.7	L	L	M	Deep	Fallow	APT	APT	40	-	11/07/24	25/07/24	22/08/24	19/08/24 03/09/24	19/08/24 03/09/24	3	-	17/10/24	
Mandor	SL	8.1	L	M	H	Deep	Pearl Millet	APT	APT	20	-	05/07/24	21/07/24	04/08/24	03/08/24 02/09/24	03/08/24 02/09/24	-	-	10/10/24	
PMAT 1b																				
Jaipur	LS	7.6	L	M	M	Deep	-	APT	APT	30	-	11/07/24	27/07/24	01/08/24	25/07/24	25/07/24	-	-	11/10/24	
Jamnagar	CL	7.4	M	L	M	60 cm	Groundnut	APT	APT	40	-	26/07/24	07/08/24	13/08/24	07/08/24 06/09/24	12/08/24 21/09/24	1	-	26/10/24	
New Delhi	SL	7.8	201 kg/ha	16.3 kg/ha	221 kg/ha	Deep	Mustard	APT	APT	-	-	11/07/24	19/07/24	-	07/08/24 06/09/24	12/08/24 21/09/24	-	-	12/10/24	
Hisar	SL	7.7	147.18 kg/ha	17.9 kg/ha	190 kg/ha	Deep	Fallow	APT	APT	62.5	-	13/07/24	31/07/24	07/08/24	4/8/24 21/8/24	4/8/24 21/8/24	-	-	12/10/24	
PMAT 1c																				
Aurangabad	MDB	8.3	L	M	H	60 cm	Fallow	APT	APT	30	30	26/07/24	20/08/24	31/07/24	10/09/24	10/09/24	-	27/08/24	31/10/24	
Dhule	MB	8.2	L	M	H	60-90 cm	Fallow	APT	APT	30	-	29/07/24	14/08/24	27/08/24	17/08/24 09/09/24	15/08/24 01/09/24	-	-	11/11/24	
Vijayapur	MB	8.4	L	L	H	30-45 cm	Fallow	APT	APT	30	-	23/07/24	27/07/24	21/08/24	20/08/24	20/08/24	1	-	29/10/24	
Coimbatore	CL	8.3	L	M	H	Deep	Fallow	APT	APT	40	40	09/08/24	21/08/24	26/08/24 12/09/24	24/08/24 09/09/24	24/08/24 09/09/24	5	-	25/11/24	
PMAT 2																				
Bikaner	LS	7.7	L	L	M	Deep	Fallow	HHB 299	40	40	-	07/07/24	29/07/24	13/08/24 31/08/24	23/08/24 03/09/24	23/08/24 03/09/24	3	-	16/10/24	
Mandor	SL	8.2	L	M	H	Deep	Pearl Millet	HHB 299	40	20	-	09/07/24	27/07/24	APT	06/08/24 19/08/24	06/08/24 19/08/24	-	-	0710/24	
Jaipur	LS	7.6	L	M	M	Deep	-	RHB 233	60	30	-	11/07/24	27/07/24	APT	25/07/24	26/07/24	-	-	14/10/24	

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Table II.2: Experimental details of Agronomy trials– Kharif 2024

Trials & Locations	Soil Status						Previous Crop	Variety Used	Nutrient (Kg/ha)			Date of operations carried								
	Type	pH	N	P	K	Depth/ Fe status			N	P	K	Sowing	Thinning	Top dressing	Weeding	Hoeing	Irri.	Pl. Prot.	Harvest	
Jamnagar	CL	7.5	L	M	H	60 cm	Groundnut	GHB 1231	80	40	-	26/07/24	07/08/24	13/08/24	07/08/24 06/09/24	12/08/24 21/09/24	1	-	29/10/24	
Hisar	SL	7.7	147 kg/ha	20.1 kg/ha	178 kg/ha	Deep	Fallow	HHB 299	APT	APT	-	30/07/24	19/08/24	28/8/24 31/8/24	14/8/24 22/8/24	14/8/24 22/8/24	-	-	14/10/24	
Aurangabad	MDB	8.3	L	M	H	60 cm	Fallow	AHB 1200	APT	APT	-	01/07/24	08/07/24	31/07/24	10/09/24	10/09/24	-	27/08/24	31/10/24	
Dhule	MB	8.2	L	M	H	60-90 cm	Fallow	APT	60	30	-	06/07/24	21/07/24	08/08/24	29/07/24 30/07/24	29/07/24 30/07/24	-	-	06/10/24	
Vijayapur	MB	8.2	L	L	H	30-45 cm	Fallow	VMPH 14	60	30	-	09/07/24	25/07/24	APT	25/07/24 23/08/24	25/07/24 23/08/24	1	-	14/10/24	
Coimbatore	CL	8.5	L	M	H	Deep	Fallow	COH 10	80	40	40	10/08/24	20/08/24	APT	23/08/24 12/09/24	23/08/24 12/09/24	5	-	23/11/24	
PMAT 3																				
Bikaner	LS	7.7	L	L	M	Deep	Fallow	HHB 299	40	40	-	07/07/24	29/07/24	13/08/24 31/08/24	23/08/24 03/09/24	23/08/24 03/09/24	3	23/07/24	16/10/24	
Mandor	SL	8.2	L	M	H	Deep	Pearl Millet	HHB 299	40	20	-	05/07/24	27/07/24	APT	02/08/24 15/08/24	02/08/24 15/08/24	-	-	09/10/24	
Jaipur	LS	7.6	L	M	M	Deep	-	RHB 233	APT	APT	-	15/07/24	14/08/24	APT	08/08/24	08/08/24	-	-	17/10/24	
Hisar	SL	7.8	149 kg/ha	18.8 kg/ha	188 kg/ha	Deep	Fallow	HHB 299	APT	APT	-	13/07/24	31/07/24	07/8/24 20/08/24	4/8/24 21/8/24	4/8/24 21/8/24	-	-	12/10/24	
Jamnagar	CL	7.5	L	M	H	60 cm	Groundnut	GHB 1231	80	40	-	26/07/24	07/08/24	13/08/24	07/08/24 06/09/24	12/08/24 21/09/24	1	-	29/10/24	
Aurangabad	MDB	8.2	L	M	H	60 cm	Fallow	AHB 1200	APT	APT	30	02/07/24	10/07/24	30/07/24	13/08/24	13/08/24	-	-	05/10/24	
Dhule	MB	8.2	L	M	H	60-90 cm	Fallow	AHB 1200	APT	APT	-	06/07/24	21/07/24	08/08/24	29/07/24 30/07/24	29/07/24 30/07/24	-	-	06/10/24	
Vijayapur	MB	8.2	L	L	H	30-45 cm	Fallow	VPMH 14	60	30	-	09/07/24	26/07/24	APT	26/07/24 24/08/24	26/07/24 24/08/24	1	-	15/10/24	

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Table II.2: Experimental details of Agronomy trials– Kharif 2024

Trials & Locations	Soil Status						Previous Crop	Variety Used	Nutrient (Kg/ha)			Date of operations carried								
	Type	pH	N	P	K	Depth/ Fe status			N	P	K	Sowing	Thinning	Top dressing	Weeding	Hoeing	Irri.	Pl. Prot.	Harvest	
Coimbatore	CL	8.2	L	M	H	Deep	Fallow	COH 10	80	40	40	10/08/24	21/08/24	APT	21/08/24 12/09/24	21/08/24 12/09/24	5	-	23/11/24	
PMAT 4																				
Hisar	SL	7.8	159 kg/ha	17.9 kg/ha	178 kg/ha	Deep	Fallow	APT	APT	APT	-	13/07/24	31/07/24	08/08/24	4/8/24 21/8/24	4/8/24 21/8/24	-	-	12/10/24	
Jamnagar	CL	7.6	L	M	H	60 cm	Groundnut	APT	APT	APT	-	26/07/24	08/08/24	20/08/24	12/08/24 21/08/24	12/08/24 21/08/24	1	-	As per maturity	
Aurangabad	MDB	8.2	L	M	H	60 cm	Fallow	APT	APT	APT	30	03/07/24	10/07/24	29/07/24	13/08/24	13/08/24	-	-	As per maturity	
Vijayapur	MB	8.4	L	L	H	30-45 cm	Fallow	APT	APT	APT	-	13/07/24	30/07/24	APT	09/08/24	09/08/24	1	-	As per maturity	
Coimbatore	CL	8.2	L	M	H	Deep	Fallow	APT	APT	APT	35	09/08/24	20/08/24	APT	25/08/24 09/09/24	25/08/24 09/09/24	5	-	As per maturity	
PMAT 7																				
Bikaner	LS	7.7	L	L	M	Deep	Fallow	HHB 299	APT	APT	-	07/07/24	28/07/24	-	16/08/24 28/08/24	16/08/24 28/08/24	-	-	18/10/24	
Mandor	SL	8.3	L	M	H	Deep	Pearl Millet	HHB 299	APT	APT	-	05/07/24	26/07/24	APT	01/08/24 15/08/24	01/08/24 15/08/24	-	-	06/10/24	
Jaipur	LS	7.6	L	M	M	Deep	-	RHB 233	APT	APT	-	15/07/24	05/08/24	APT	08/08/24	08/08/24	-	-	10/10/24	
Hisar	SL	8.1	144 kg/ha	18.1 kg/ha	187 kg/ha	Deep	Fallow	HHB 299	APT	APT	-	30/07/24	19/08/24	28/8/24 31/8/24	14/8/24 22/8/24	14/8/24 22/8/24	-	-	14/10/24	
Jamnagar	CL	7.6	L	M	H	60 cm	Mustard	GHB 1225	APT	APT	-	26/07/24	07/08/24	13/08/24	07/08/24 06/09/24	12/08/24 21/09/24	1	-	25/10/24	
Jammu	SL	6.7	L	M	L	90 cm	Mustard	RHB 173	APT	APT	-	13/07/24	22/07/24	16/08/24	12/08/24 27/08/24	12/08/24 27/08/24	-	-	04/10/24	
Aurangabad	MDB	8.2	L	M	H	60 cm	Fallow	AHB 1200	APT	APT	30	01/07/24	24/07/24	29/07/24	14/08/24	14/08/24	-	-	03/10/24	
Dhule	MB	8.2	L	M	H	60-90 cm	Fallow	Aadishakti	APT	APT	-	06/07/24	21/07/24	08/08/24	29/07/24 30/07/24	29/07/24 30/07/24	-	-	07/10/24	

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Table II.2: Experimental details of Agronomy trials– Kharif 2024

Trials & Locations	Soil Status						Previous Crop	Variety Used	Nutrient (Kg/ha)			Date of operations carried							
	Type	pH	N	P	K	Depth/ Fe status			N	P	K	Sowing	Thinning	Top dressing	Weeding	Hoeing	Irri.	Pl. Prot.	Harvest
Vijayapur	MB	8.2	L	L	H	30-45 cm	Fallow	HHB 299	APT	APT		09/07/24	27/07/24	APT	27/07/24 22/08/24	27/07/24 22/08/24	1	-	14/10/24
Coimbatore	CL	8.3	L	M	H	Deep	Fallow	CO 10	APT	APT	40	10/08/24	22/08/24	-	23/08/24 12/09/24	23/08/24 12/09/24	5	-	22/11/24
Perumallapalle	SL	7.5	L	M	M	60 cm	Fallow	HHB 299	APT	APT	30	23/07/24	30/07/22	10/08/24	16/08/24 29/08/24	16/08/24 29/08/24	4	-	09/10/24

VL = Very Low

H = High

Input/agronomic operation not applied

L = Low

M = Medium

APT = As per requirement

SL = Sandy loam

LS = Lomy sand

MB = Medium Black

CL = Clay Loam

APT = As per treatment

MDB = Medium deep Black

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Table II.3: PMAT 1A1: Performance of pearl Millet advance hybrids entries for yields and yield attributes as affected by nitrogen levels in Zone A1 during *kharif* 2024

Treatment		Grain yield (q/ha)			Stover yield (q/ha)			Days to 50% Flowering			Plant height (cm)			Plant population ('000/ha)			Total tillers/plant			Effective			Test weight (g)		
N(kg/ha)	Entries	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean
0	MH 2672	24.90	11.47	18.18	55.80	21.33	38.57	45.3	45.0	45.2	169.1	135.2	152.2	128.9	103.0	116.0	3.7	2.1	2.9	3.4	1.9	2.6	8.3	8.3	8.3
	MH 2673	25.73	12.17	18.95	54.00	21.90	37.95	44.0	44.3	44.2	186.1	138.9	162.5	133.0	102.5	117.8	3.8	2.7	3.2	3.4	2.3	2.9	8.3	8.4	8.4
	MH 2675	22.23	12.00	17.12	58.23	21.00	39.62	46.3	45.0	45.7	179.6	137.8	158.7	130.6	104.1	117.4	3.2	2.5	2.8	3.0	2.2	2.6	8.1	8.1	8.1
	MH 2678	28.73	12.70	20.72	60.77	23.13	41.95	44.3	44.7	44.5	172.0	140.4	156.2	132.2	103.0	117.6	4.4	2.9	3.7	4.1	2.5	3.3	8.0	8.0	8.0
	HHB 67	15.63	10.80	13.22	37.33	21.50	29.42	46.0	44.7	45.3	176.4	128.9	152.7	130.6	104.2	117.4	2.0	1.9	1.9	1.8	1.5	1.7	8.4	8.4	8.4
	MPMH 21	22.77	11.73	17.25	51.83	22.40	37.12	44.0	45.3	44.7	184.2	136.7	160.4	129.0	102.4	115.7	3.3	2.3	2.8	3.0	1.9	2.5	8.4	8.3	8.3
	AHB 1200	13.63	10.70	12.17	50.27	19.27	34.77	47.7	46.3	47.0	195.8	126.4	161.1	129.0	104.2	116.6	1.6	1.7	1.7	1.2	1.5	1.4	8.3	8.7	8.5
	PB 1756	19.83	11.20	15.52	47.13	19.73	33.43	45.0	45.7	45.3	192.5	134.8	163.7	129.0	104.1	116.5	2.7	2.1	2.4	2.4	1.8	2.1	8.5	8.8	8.7
	RHB 223	15.37	11.10	13.23	46.07	21.10	33.58	46.7	45.0	45.8	172.6	129.8	151.2	130.2	105.3	117.8	2.0	2.0	2.0	1.7	1.8	1.8	8.4	8.8	8.6
	Mean	20.98	11.54	16.26	51.27	21.26	36.27	45.5	45.1	45.3	180.9	134.3	157.6	130.3	103.6	117.0	3.0	2.2	2.6	2.7	1.9	2.3	8.3	8.4	8.4
20	MH 2672	27.13	14.27	20.70	51.37	26.23	38.80	42.7	45.7	44.2	178.3	143.1	160.7	128.8	104.0	116.4	4.2	2.5	3.4	3.8	2.2	3.0	8.4	8.4	8.4
	MH 2673	22.67	15.13	18.90	54.60	27.53	41.07	44.3	45.0	44.7	175.6	148.7	162.1	131.6	103.7	117.6	3.3	3.0	3.2	3.0	2.7	2.8	8.9	8.8	8.9
	MH 2675	18.53	14.87	16.70	58.00	26.60	42.30	47.7	45.7	46.7	173.2	146.6	159.9	134.3	106.0	120.2	2.5	2.9	2.7	2.2	2.5	2.4	8.5	8.5	8.5
	MH 2678	22.60	15.57	19.08	58.77	28.33	43.55	44.3	45.3	44.8	162.6	152.3	157.5	130.4	104.4	117.4	3.2	3.1	3.2	2.9	2.7	2.8	8.2	8.2	8.2
	HHB 67	20.93	13.20	17.07	44.97	25.77	35.37	44.3	45.3	44.8	174.3	134.0	154.2	132.3	106.0	119.1	3.1	2.3	2.7	2.8	1.9	2.4	8.3	8.3	8.3
	MPMH 21	22.70	14.73	18.72	48.57	27.70	38.13	45.3	45.7	45.5	177.3	144.2	160.7	130.5	105.8	118.2	3.2	2.7	3.0	2.9	2.3	2.6	8.5	8.5	8.5
	AHB 1200	22.40	12.93	17.67	57.83	23.40	40.62	45.0	45.7	45.3	184.0	132.7	158.4	130.6	106.0	118.3	3.2	2.1	2.7	2.9	1.8	2.4	8.1	8.8	8.4
	PB 1756	27.00	14.03	20.52	59.33	25.27	42.30	44.3	45.7	45.0	182.5	141.7	162.1	130.6	104.7	117.7	4.2	2.4	3.3	3.9	2.1	3.0	8.5	9.0	8.7
	RHB 223	24.07	13.63	18.85	54.93	25.67	40.30	44.3	46.3	45.3	188.3	135.2	161.8	130.4	106.5	118.5	3.5	2.4	3.0	3.3	2.1	2.7	8.2	9.0	8.6
	Mean	23.12	14.26	18.69	54.26	26.28	40.27	44.7	45.6	45.1	177.3	142.1	159.7	131.1	105.2	118.1	3.4	2.6	3.0	3.1	2.3	2.7	8.4	8.6	8.5
40	MH 2672	28.23	17.43	22.83	61.40	31.40	46.40	44.3	45.7	45.0	178.3	153.5	165.9	130.1	104.4	117.2	4.4	3.3	3.9	4.0	3.0	3.5	8.4	8.4	8.4
	MH 2673	28.30	18.27	23.28	56.90	33.43	45.17	46.7	45.7	46.2	184.0	161.3	172.7	134.0	104.7	119.4	4.4	3.8	4.1	4.0	3.4	3.7	8.5	8.5	8.5
	MH 2675	22.13	17.93	20.03	57.83	31.57	44.70	46.7	45.7	46.2	178.3	157.8	168.1	131.7	105.5	118.6	3.3	3.7	3.5	3.0	3.3	3.2	8.3	8.2	8.2
	MH 2678	26.47	18.67	22.57	56.03	33.60	44.82	46.0	45.7	45.8	180.8	166.1	173.4	133.3	105.7	119.5	4.2	4.0	4.1	3.8	3.7	3.8	8.2	8.2	8.2
	HHB 67	20.73	16.73	18.73	53.70	31.77	42.73	45.7	45.3	45.5	167.2	145.6	156.4	131.7	106.2	119.0	2.9	2.8	2.9	2.7	2.4	2.5	8.6	8.5	8.5
	MPMH 21	25.90	17.60	21.75	52.37	32.60	42.48	48.3	45.7	47.0	172.1	155.2	163.7	130.2	106.5	118.3	3.9	3.5	3.7	3.6	3.3	3.4	8.5	8.5	8.5
	AHB 1200	23.50	16.30	19.90	49.43	29.33	39.38	48.7	45.7	47.2	165.5	142.8	154.2	130.2	106.0	118.1	3.5	2.7	3.1	3.2	2.3	2.7	8.4	8.9	8.7
	PB 1756	29.60	17.30	23.45	68.57	31.50	50.03	47.0	45.3	46.2	184.2	151.7	168.0	130.1	107.3	118.7	4.6	3.3	3.9	4.2	2.9	3.6	8.7	9.0	8.9
	RHB 223	24.07	16.77	20.42	58.87	30.37	44.62	46.3	46.3	46.3	181.7	147.5	164.6	131.3	108.0	119.6	3.5	3.0	3.3	3.3	2.7	3.0	8.6	9.0	8.8
	Mean	25.44	17.44	21.44	57.23	31.73	44.48	46.6	45.7	46.1	176.9	153.5	165.2	131.4	106.0	118.7	3.9	3.3	3.6	3.5	3.0	3.3	8.5	8.6	8.5

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Table II.3: PMAT 1A1: Performance of pearl Millet advance hybrids entries for yields and yield attributes as affected by nitrogen levels in Zone A1 during *kharif* 2024

Treatment		Grain yield (q/ha)			Stover yield (q/ha)			Days to 50% Flowering			Plant height (cm)			Plant population ('000/ha)			Total tillers/plant			Effective			Test weight (g)		
N(kg/ha)	Entries	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean
60	MH 2672	27.53	18.63	23.08	58.53	34.47	46.50	46.7	46.0	46.3	171.2	161.9	166.6	129.9	105.7	117.8	4.3	3.8	4.1	4.0	3.3	3.6	8.5	8.8	8.6
	MH 2673	30.43	19.73	25.08	57.33	37.30	47.32	46.7	46.0	46.3	170.9	172.5	171.7	132.6	105.9	119.2	4.7	4.1	4.4	4.4	3.6	4.0	9.1	8.9	9.0
	MH 2675	29.60	19.33	24.47	60.00	35.20	47.60	45.7	45.7	45.7	184.1	170.5	177.3	135.3	107.4	121.3	4.7	3.9	4.3	4.3	3.6	4.0	8.6	8.7	8.7
	MH 2678	32.17	20.40	26.28	61.23	38.33	49.78	45.3	45.7	45.5	171.3	174.4	172.9	131.5	106.3	118.9	5.1	4.4	4.7	4.7	4.0	4.3	8.3	8.3	8.3
	HHB 67	22.83	17.53	20.18	57.00	34.87	45.93	46.0	46.3	46.2	177.5	152.7	165.1	133.3	107.3	120.3	3.3	3.5	3.4	3.0	2.9	3.0	8.4	8.6	8.5
	MPMH 21	29.20	19.07	24.13	53.10	36.60	44.85	45.7	45.7	45.7	181.7	164.6	173.2	131.6	106.7	119.2	4.5	3.9	4.2	4.1	3.4	3.8	8.6	8.7	8.7
	AHB 1200	21.67	17.30	19.48	57.37	30.97	44.17	49.3	46.0	47.7	183.0	150.6	166.8	131.7	107.0	119.3	3.3	3.2	3.3	3.0	2.8	2.9	8.2	8.9	8.6
	PB 1756	24.47	18.50	21.48	60.57	34.03	47.30	43.0	46.3	44.7	191.0	160.5	175.7	131.7	108.2	119.9	3.6	3.7	3.7	3.3	3.2	3.3	8.6	9.0	8.8
	RHB 223	24.23	17.93	21.08	53.83	33.73	43.78	44.7	46.3	45.5	185.3	155.2	170.3	131.5	107.8	119.6	3.6	3.6	3.6	3.3	3.1	3.2	8.3	9.0	8.7
	Mean	26.90	18.72	22.81	57.66	35.06	46.36	45.9	46.0	45.9	179.6	162.6	171.1	132.1	106.9	119.5	4.1	3.8	4.0	3.8	3.3	3.6	8.5	8.8	8.6
Entries Mean	MH 2672	26.95	15.45	21.20	56.78	28.36	42.57	44.8	45.6	45.2	174.2	148.4	161.3	129.4	104.3	116.9	4.2	3.0	3.6	3.8	2.6	3.2	8.4	8.4	8.4
	MH 2673	26.78	16.33	21.55	55.71	30.04	42.88	45.4	45.3	45.3	179.2	155.4	167.3	132.8	104.2	118.5	4.0	3.4	3.7	3.7	3.0	3.3	8.7	8.7	8.7
	MH 2675	23.13	16.03	19.58	58.52	28.59	43.55	46.6	45.5	46.0	178.8	153.2	166.0	133.0	105.7	119.4	3.4	3.2	3.3	3.1	2.9	3.0	8.4	8.4	8.4
	MH 2678	27.49	16.83	22.16	59.20	30.85	45.03	45.0	45.3	45.2	171.7	158.3	165.0	131.8	104.9	118.4	4.2	3.6	3.9	3.9	3.2	3.6	8.2	8.2	8.2
	HHB 67	20.03	14.57	17.30	48.25	28.48	38.36	45.5	45.4	45.5	173.9	140.3	157.1	132.0	105.9	119.0	2.9	2.6	2.7	2.6	2.2	2.4	8.4	8.4	8.4
	MPMH 21	25.14	15.78	20.46	51.47	29.83	40.65	45.8	45.6	45.7	178.8	150.2	164.5	130.3	105.4	117.8	3.8	3.1	3.4	3.4	2.7	3.1	8.5	8.5	8.5
	AHB 1200	20.30	14.31	17.30	53.73	25.74	39.73	47.7	45.9	46.8	182.1	138.2	160.1	130.4	105.8	118.1	2.9	2.4	2.7	2.6	2.1	2.3	8.2	8.8	8.5
	PB 1756	25.23	15.26	20.24	58.90	27.63	43.27	44.8	45.8	45.3	187.5	147.2	167.4	130.4	106.0	118.2	3.8	2.9	3.3	3.5	2.5	3.0	8.6	9.0	8.8
	RHB 223	21.93	14.86	18.40	53.43	27.72	40.57	45.5	46.0	45.8	182.0	142.0	162.0	130.8	106.9	118.9	3.2	2.8	3.0	2.9	2.4	2.6	8.4	9.0	8.7
CD (5%)	N	NS	0.38		NS	0.69		NS	0.5		NS	3.4		NS	1.3		NS	0.1		NS	0.2		NS	0.1	
	E	4.05	0.65		6.85	1.19		NS	0.5		8.44	3.2		NS	1.4		0.8	0.2		0.7	0.2		NS	0.2	
	N x E	NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS	
	E x N	NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS	
CV (%)		20.5	5.1		15.2	5.1		5.2	1.3		5.8	2.6		4.5	1.7		26.0	7.3		26.6	7.3		5.3	2.2	

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Table II.4: PMAT 1a: Performance of pearl millet medium and late advance hybrids entries for grain yield, stover yield, days to 50% flowering and plant height as affected by nitrogen levels in Zone A during *kharif* 2024

Treatment		Grain yield (q/ha)					Stover yield (q/ha)					Days to 50% Flowering			Plant height (cm)				
N(kg/ha)	Entries	HSR	JMR	JPR	NDL	Mean	HSR	JMR	JPR	NDL	Mean	JMR	JPR	Mean	HSR	JMR	JPR	NDL	Mean
0	MH 2709	27.70	27.27	26.47	23.45	26.22	93.82	38.25	61.93	68.54	65.63	47.3	58.0	52.7	254.3	177.3	204.3	207.3	210.8
	MH 2712	30.75	29.38	26.49	22.38	27.25	100.92	44.31	61.98	64.96	68.04	50.0	49.7	49.8	275.0	193.7	202.0	212.7	220.8
	MH 2717	32.63	28.76	25.58	21.89	27.22	102.04	42.25	59.82	66.77	67.72	48.7	52.3	50.5	250.0	183.0	191.7	205.3	207.5
	AHB 1200 (C)	25.28	17.51	16.45	19.55	19.70	86.57	25.28	38.51	61.64	53.00	43.0	46.3	44.7	206.7	157.9	198.3	200.0	190.7
	86M86 (C)	29.52	21.14	16.45	21.60	22.18	90.84	35.25	38.50	61.94	56.63	48.7	49.7	49.2	238.3	180.7	208.3	210.3	209.4
	86M84 (C)	27.54	25.18	18.33	20.14	22.80	98.96	37.91	42.90	58.53	59.57	49.3	49.0	49.2	255.0	181.8	198.3	208.3	210.9
	KBH 108 (C)	27.57	23.24	14.49	18.51	20.95	101.37	37.07	33.91	60.03	58.09	50.7	51.7	51.2	275.0	187.5	202.7	207.3	218.1
	MP 7878 (C)	26.41	28.76	13.06	11.88	20.03	102.21	43.60	30.55	46.46	55.70	51.0	47.3	49.2	273.3	191.0	198.3	208.3	217.7
	Mean	28.42	25.16	19.67	19.93	23.29	97.09	37.99	46.01	61.11	60.55	48.6	50.5	49.5	253.5	181.6	200.5	207.5	210.8
30	MH 2709	32.38	31.32	29.89	26.38	29.99	104.85	40.28	69.92	78.92	73.49	48.7	61.7	55.2	261.7	182.8	235.0	240.7	230.0
	MH 2712	34.34	32.77	27.68	26.67	30.36	112.64	51.60	64.73	74.70	75.92	50.7	51.7	51.2	281.7	201.8	214.3	232.0	232.5
	MH 2717	37.08	32.52	27.12	25.47	30.55	115.09	47.11	63.46	77.80	75.86	50.0	51.3	50.7	261.3	188.7	216.0	226.0	223.0
	AHB 1200 (C)	30.09	19.36	17.38	23.21	22.51	101.68	29.18	40.64	71.92	60.86	44.7	48.3	46.5	213.3	163.3	181.7	205.0	190.8
	86M86 (C)	33.50	24.35	17.66	24.89	25.10	106.38	42.86	41.33	70.75	65.33	50.0	52.7	51.3	252.7	185.5	205.0	220.7	216.0
	86M84 (C)	32.65	27.27	20.71	24.10	26.18	110.43	41.94	48.46	68.96	67.45	50.7	50.3	50.5	262.3	188.6	191.7	227.0	217.4
	KBH 108 (C)	33.27	26.27	16.57	22.01	24.53	114.71	41.32	38.78	68.59	65.85	52.0	54.7	53.3	280.0	191.3	188.3	223.0	220.7
	MP 7878 (C)	33.03	32.18	16.62	14.72	24.14	113.28	45.00	38.89	52.72	62.48	52.7	50.3	51.5	276.7	198.7	196.7	213.7	221.4
	Mean	33.29	28.26	21.70	23.43	26.67	109.88	42.41	50.78	70.55	68.40	49.9	52.6	51.3	261.2	187.6	203.6	223.5	219.0
60	MH 2709	36.91	34.67	30.10	32.24	33.48	110.94	43.28	70.45	87.23	77.97	49.0	61.7	55.3	267.3	190.6	217.7	247.3	230.7
	MH 2712	38.73	35.77	28.33	30.01	33.21	117.10	54.55	66.31	84.22	80.55	52.7	53.7	53.2	285.7	209.3	240.0	243.7	244.7
	MH 2717	40.80	37.10	27.29	29.31	33.62	119.91	49.32	63.84	85.27	79.58	51.3	54.3	52.8	266.7	190.3	190.0	238.0	221.2
	AHB 1200 (C)	33.10	22.19	17.70	27.85	25.21	106.94	31.42	41.40	78.11	64.47	45.0	48.3	46.7	217.7	166.9	191.7	218.0	198.6
	86M86 (C)	36.78	26.10	18.10	29.25	27.56	111.02	46.40	42.35	78.33	69.53	51.0	53.7	52.3	258.0	188.3	206.7	237.7	222.7
	86M84 (C)	36.42	31.50	21.16	27.46	29.14	116.75	45.01	49.51	72.22	70.87	51.0	52.0	51.5	266.7	191.7	220.0	235.7	228.5
	KBH 108 (C)	37.50	28.43	17.77	26.31	27.50	120.24	43.22	41.59	77.64	70.67	52.7	58.3	55.5	285.0	199.1	218.3	234.0	234.1
	MP 7878 (C)	36.86	33.11	20.11	16.69	26.69	119.36	48.24	47.05	60.45	68.77	53.0	52.3	52.7	280.0	203.5	243.3	219.7	236.6
	Mean	37.14	31.11	22.57	27.39	29.55	115.28	45.18	52.81	77.94	72.80	50.7	54.3	52.5	265.9	192.5	216.0	234.3	227.1

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Table II.4: PMAT 1a: Performance of pearl millet medium and late advance hybrids entries for grain yield, stover yield, days to 50% flowering and plant height as affected by nitrogen levels in Zone A during *kharif* 2024

Treatment		Grain yield (q/ha)					Stover yield (q/ha)					Days to 50% Flowering			Plant height (cm)				
N(kg/ha)	Entries	HSR	JMR	JPR	NDL	Mean	HSR	JMR	JPR	NDL	Mean	JMR	JPR	Mean	HSR	JMR	JPR	NDL	Mean
90	MH 2709	39.10	37.60	33.57	34.38	36.16	115.57	47.92	78.53	88.40	82.60	50.3	61.3	55.8	270.3	195.1	228.3	254.7	237.1
	MH 2712	41.96	40.11	31.49	33.67	36.81	122.35	58.54	73.67	87.35	85.48	53.7	54.7	54.2	289.3	219.5	240.0	250.3	249.8
	MH 2717	44.18	37.57	29.56	31.76	35.77	125.30	50.94	69.14	86.55	82.98	52.7	56.3	54.5	268.3	195.5	219.0	241.0	231.0
	AHB 1200 (C)	34.90	26.92	19.92	29.02	27.69	110.48	34.34	46.61	82.21	68.41	46.0	48.0	47.0	220.3	169.9	198.3	222.0	202.6
	86M86 (C)	39.69	29.41	18.22	32.03	29.84	116.17	49.59	42.63	83.46	72.96	52.0	53.7	52.8	262.3	203.1	206.7	247.3	229.9
	86M84 (C)	38.57	37.81	27.14	29.99	33.38	120.42	47.04	63.49	77.22	77.04	52.0	51.0	51.5	269.7	198.2	220.0	241.3	232.3
	KBH 108 (C)	40.43	31.12	21.18	28.64	30.34	122.50	47.26	49.57	76.42	73.94	53.3	59.0	56.2	289.3	205.1	218.3	236.3	237.3
	MP 7878 (C)	40.39	36.66	19.56	16.98	28.40	121.95	52.08	45.76	61.12	70.23	54.3	53.0	53.7	284.3	208.9	238.3	221.0	238.1
	Mean	39.90	34.65	25.08	29.56	32.30	119.34	48.46	58.68	80.34	76.71	51.8	54.6	53.2	269.3	199.4	221.1	239.3	232.3
Entries Mean	MH 2709	34.02	32.72	30.01	29.11	31.46	106.29	42.43	70.21	80.77	74.93	48.8	60.7	54.8	263.4	186.5	221.3	237.5	227.2
	MH 2712	36.44	34.51	28.50	28.18	31.91	113.25	52.25	66.67	77.81	77.50	51.8	52.4	52.1	282.9	206.1	224.1	234.7	236.9
	MH 2717	38.67	33.99	27.39	27.11	31.79	115.59	47.40	64.06	79.10	76.54	50.7	53.6	52.1	261.6	189.4	204.2	227.6	220.7
	AHB 1200 (C)	30.84	21.50	17.86	24.91	23.78	101.42	30.05	41.79	73.47	61.68	44.7	47.8	46.2	214.5	164.5	192.5	211.3	195.7
	86M86 (C)	34.87	25.25	17.61	26.94	26.17	106.10	43.53	41.20	73.62	66.11	50.4	52.4	51.4	252.8	189.4	206.7	229.0	219.5
	86M84 (C)	33.79	30.44	21.83	25.42	27.87	111.64	42.97	51.09	69.23	68.73	50.8	50.6	50.7	263.4	190.1	207.5	228.1	222.3
	KBH 108 (C)	34.69	27.27	17.50	23.87	25.83	114.71	42.22	40.96	70.67	67.14	52.2	55.9	54.0	282.3	195.8	206.9	225.2	227.5
	MP 7878 (C)	34.17	32.68	17.34	15.07	24.81	114.20	47.23	40.56	55.19	64.30	52.8	50.8	51.8	278.6	200.5	219.2	215.7	228.5
CD (5%)	N	1.32	2.69	1.32	1.40		1.97	4.37	3.07	2.07		2.1	0.6		6.0	7.2	10.0	5.5	
	E	1.58	2.59	2.29	2.56		3.84	4.23	5.33	5.13		1.3	1.3		4.4	5.3	10.9	9.4	
	N x E	NS	NS	NS	NS		NS	NS	NS	NS		NS	NS		NS	NS	22.5	NS	
	E x N	NS	NS	NS	NS		NS	NS	NS	NS		NS	NS		NS	NS	22.6	NS	
CV (%)		5.6	10.6	12.5	12.4		4.2	11.8	12.5	8.6		3.3	2.9		2.1	3.4	6.3	5.1	

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Table II.5: PMAT 1a: Effect of N levels on total & effective tillers/plant, test weight and plant population of pearl millet medium and late advance hybrids entries in Zone A during *kharif* 2024

Treatment		Total tillers/plant					Effective Tillers/plant					Test weight (g)					Plant population ('000/ha)				
N(kg/ha)	Entries	HSR	JMR	JPR	NDL	Mean	HSR	JMR	JPR	NDL	Mean	HSR	JMR	JPR	NDL	Mean	HSR	JMR	JPR	NDL	Mean
0	MH 2709	2.6	3.1	2.7	2.9	2.8	2.3	2.2	1.7	1.9	2.0	10.7	9.9	11.4	9.5	10.4	132.3	161.11	163.3	168.5	156.3
	MH 2712	2.9	3.4	2.7	2.8	3.0	2.5	2.6	2.0	2.0	2.3	9.9	10.9	11.2	9.2	10.3	128.3	160.42	163.7	169.7	155.5
	MH 2717	3.0	3.3	2.3	2.8	2.8	2.7	2.5	1.4	1.9	2.1	10.9	10.1	11.1	9.6	10.4	129.8	164.24	162.3	167.8	156.1
	AHB 1200 (C)	2.3	2.5	2.0	2.2	2.3	1.9	2.0	1.1	1.4	1.6	10.4	8.3	11.0	8.5	9.6	127.7	160.07	166.3	168.5	155.7
	86M86 (C)	2.9	2.7	2.7	2.9	2.8	2.6	2.1	1.7	2.0	2.1	10.7	8.5	11.5	9.2	10.0	124.2	163.19	166.3	169.4	155.8
	86M84 (C)	2.7	3.1	2.7	2.9	2.8	2.5	2.3	1.8	1.8	2.1	10.5	9.8	10.5	9.2	10.0	126.8	162.50	166.0	169.1	156.1
	KBH 108 (C)	3.0	2.9	2.7	2.9	2.9	2.7	2.1	1.7	1.9	2.1	10.8	9.3	10.3	8.7	9.7	126.5	163.54	169.3	170.9	157.6
	MP 7878 (C)	2.9	3.1	3.0	2.8	3.0	2.5	2.3	2.0	1.9	2.2	10.7	10.1	11.0	6.9	9.7	125.5	161.81	164.3	168.1	154.9
	Mean	2.8	3.0	2.6	2.8	2.8	2.5	2.3	1.7	1.9	2.1	10.6	9.6	11.0	8.9	10.0	127.6	162.11	165.2	169.0	156.0
30	MH 2709	2.8	3.2	3.3	3.1	3.1	2.4	2.4	2.2	2.2	2.3	10.8	10.4	11.4	10.1	10.7	134.2	162.50	166.7	171.2	158.6
	MH 2712	3.1	3.6	3.3	3.0	3.3	2.6	2.9	2.4	2.4	2.6	10.0	12.3	11.2	9.6	10.8	128.0	162.85	169.0	166.1	156.5
	MH 2717	3.3	3.5	3.0	3.0	3.2	2.8	2.7	2.2	2.0	2.4	11.0	11.2	11.1	9.9	10.8	130.2	161.11	174.7	168.2	158.5
	AHB 1200 (C)	2.7	2.9	2.0	2.3	2.5	2.0	2.3	2.1	1.5	2.0	10.5	9.1	11.0	8.9	9.9	126.7	162.85	168.7	168.6	156.7
	86M86 (C)	3.1	3.0	2.7	3.2	3.0	2.7	2.4	1.7	2.3	2.3	10.8	9.4	11.6	9.7	10.3	125.8	162.15	165.7	167.6	155.3
	86M84 (C)	3.0	3.1	2.9	3.1	3.0	2.6	2.5	1.9	2.3	2.3	10.6	10.4	10.8	9.7	10.4	127.2	162.15	166.0	169.9	156.3
	KBH 108 (C)	3.2	3.3	2.7	3.1	3.1	2.8	2.3	2.1	2.2	2.4	10.9	10.1	10.7	9.1	10.2	127.3	162.85	166.3	170.5	156.8
	MP 7878 (C)	3.1	3.4	2.8	3.0	3.1	2.6	2.7	2.1	2.1	2.4	10.8	10.5	10.8	7.9	10.0	126.5	162.85	169.0	171.7	157.5
	Mean	3.0	3.3	2.8	3.0	3.0	2.6	2.5	2.1	2.1	2.3	10.7	10.4	11.1	9.4	10.4	128.2	162.41	168.3	169.2	157.0
60	MH 2709	2.9	3.3	3.7	3.4	3.3	2.5	2.7	2.4	2.7	2.6	10.9	10.8	11.9	10.4	11.0	133.2	163.19	166.0	170.0	158.1
	MH 2712	3.2	3.7	4.0	3.3	3.6	2.7	3.1	2.6	2.6	2.7	10.1	13.3	11.3	10.5	11.3	130.3	162.20	166.3	168.2	156.8
	MH 2717	3.4	3.5	4.0	3.2	3.5	2.9	3.1	2.4	2.2	2.7	11.1	11.4	11.2	10.6	11.1	130.7	162.50	167.0	169.9	157.5
	AHB 1200 (C)	2.9	3.2	2.7	2.5	2.8	2.1	2.4	2.2	2.2	2.2	10.5	9.3	11.2	9.9	10.2	128.1	162.15	164.0	171.4	156.4
	86M86 (C)	3.2	3.3	3.0	3.5	3.3	2.8	2.6	1.9	2.6	2.5	10.9	10.0	11.8	10.4	10.8	126.3	161.81	166.7	169.2	156.0
	86M84 (C)	3.1	3.4	3.3	3.5	3.3	2.7	2.7	2.2	2.5	2.5	10.7	10.8	10.6	10.2	10.6	127.5	162.84	163.0	170.7	156.0
	KBH 108 (C)	3.3	3.5	2.6	3.4	3.2	2.9	2.4	2.4	2.5	2.6	11.1	10.7	11.5	10.0	10.8	128.5	162.85	167.3	169.9	157.1
	MP 7878 (C)	3.2	3.5	2.7	3.3	3.2	2.7	2.7	2.1	2.1	2.4	11.0	10.8	10.9	8.2	10.2	127.9	164.93	173.3	171.6	159.5
	Mean	3.2	3.4	3.2	3.3	3.3	2.7	2.7	2.3	2.4	2.5	10.8	10.9	11.3	10.0	10.7	129.1	162.81	166.7	170.1	157.2

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Table II.5: PMAT 1a: Effect of N levels on total & effective tillers/plant, test weight and plant population of pearl millet medium and late advance hybrids entries in Zone A during *kharif* 2024

Treatment		Total tillers/plant					Effective Tillers/plant					Test weight (g)					Plant population ('000/ha)				
N(kg/ha)	Entries	HSR	JMR	JPR	NDL	Mean	HSR	JMR	JPR	NDL	Mean	HSR	JMR	JPR	NDL	Mean	HSR	JMR	JPR	NDL	Mean
90	MH 2709	3.0	3.5	4.0	3.5	3.5	2.6	3.1	2.7	2.9	2.8	10.9	11.4	12.4	11.1	11.5	133.3	162.85	165.7	170.0	158.0
	MH 2712	3.3	3.9	4.0	3.3	3.6	2.8	3.5	2.8	3.0	3.0	10.2	13.9	11.5	11.0	11.6	130.3	163.89	166.0	170.3	157.6
	MH 2717	3.5	3.7	4.2	3.2	3.7	2.9	3.2	2.6	2.9	2.9	11.1	11.9	11.7	10.7	11.3	131.2	162.50	166.3	170.7	157.7
	AHB 1200 (C)	3.0	3.3	2.7	2.7	2.9	2.2	2.5	2.4	2.4	2.4	10.6	10.1	11.7	9.8	10.6	129.2	164.93	169.0	170.2	158.3
	86M86 (C)	3.3	3.4	3.0	3.4	3.3	2.8	2.7	2.1	2.9	2.6	11.0	10.3	12.3	10.6	11.0	126.7	162.50	166.0	170.6	156.4
	86M84 (C)	3.2	3.5	3.0	3.4	3.3	2.7	2.9	2.4	2.9	2.7	10.8	11.4	11.1	10.7	11.0	128.3	163.54	166.3	170.2	157.1
	KBH 108 (C)	3.4	3.7	3.7	3.5	3.6	3.0	2.7	2.7	2.9	2.8	11.1	10.9	10.8	10.6	10.8	128.5	163.19	167.0	169.2	157.0
	MP 7878 (C)	3.3	3.8	2.7	3.3	3.3	2.7	2.9	2.3	2.2	2.5	11.1	11.1	11.4	8.2	10.4	128.3	163.19	164.0	169.2	156.2
	Mean	3.3	3.6	3.4	3.3	3.4	2.7	2.9	2.5	2.8	2.7	10.8	11.4	11.6	10.3	11.0	129.5	163.33	166.3	170.0	157.3
Entries Mean	MH 2709	2.8	3.3	3.4	3.2	3.2	2.5	2.6	2.3	2.4	2.4	10.8	10.6	11.8	10.3	10.9	133.3	162.41	165.4	169.9	157.8
	MH 2712	3.1	3.7	3.5	3.1	3.4	2.6	3.0	2.5	2.5	2.7	10.1	12.6	11.3	10.1	11.0	129.3	162.34	166.3	168.6	156.6
	MH 2717	3.3	3.5	3.4	3.0	3.3	2.8	2.9	2.2	2.3	2.5	11.0	11.2	11.3	10.2	10.9	130.5	162.59	167.6	169.1	157.4
	AHB 1200 (C)	2.7	3.0	2.3	2.4	2.6	2.1	2.3	2.0	1.9	2.0	10.5	9.2	11.2	9.3	10.1	127.9	162.50	167.0	169.7	156.8
	86M86 (C)	3.1	3.1	2.8	3.2	3.1	2.7	2.5	1.8	2.4	2.4	10.8	9.5	11.8	10.0	10.5	125.8	162.41	166.2	169.2	155.9
	86M84 (C)	3.0	3.3	3.0	3.2	3.1	2.6	2.6	2.1	2.4	2.4	10.6	10.6	10.8	9.9	10.5	127.4	162.76	165.3	170.0	156.4
	KBH 108 (C)	3.3	3.4	2.9	3.2	3.2	2.9	2.4	2.2	2.4	2.5	11.0	10.2	10.8	9.6	10.4	127.7	163.11	167.5	170.1	157.1
	MP 7878 (C)	3.1	3.5	2.8	3.1	3.1	2.6	2.7	2.1	2.1	2.4	10.9	10.6	11.0	7.8	10.1	127.1	163.19	167.7	170.2	157.0
CD (5%)	N	0.2	0.2	0.4	0.2		NS	0.2	0.1	0.3		NS	0.7	0.1	0.3		NS	NS	NS	NS	
	E	0.2	0.2	0.5	0.4		0.3	0.2	0.4	0.3		0.3	0.7	0.4	0.6		1.6	NS	NS	NS	
	N x E	NS	NS	NS	NS		NS	NS	NS	NS		NS	NS	NS	NS		NS	NS	NS	NS	
	E x N	NS	NS	NS	NS		NS	NS	NS	NS		NS	NS	NS	NS		NS	NS	NS	NS	
CV (%)		9.4	6.7	19.9	17.1		12.8	8.8	20.0	16.8		2.9	8.2	4.5	8.2		1.5	1.8	3.9	2.6	

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Table II.6: PMAT 1b: Effect of N levels on productivity of pearl millet medium and late advance hybrids entries in Zone B during *kharif* 2024

Treatments		Grain yield (q/ha)				Zonal mean	Dry fodder yield (q/ha)				Zonal mean
N(kg/ha)	Entries	ABD1	DHL	VYP	CBE		ABD1	DHL	VYP	CBE	
0	MH 2682	20.53	-	9.66	29.24	19.81	41.36	-	31.02	45.76	39.38
	MH 2717	18.52	-	8.21	31.86	19.53	39.51	-	29.35	49.38	39.41
	AHB 1200 (c)	22.38	-	8.42	24.15	18.31	46.30	-	29.21	37.07	37.53
	86M86 (c)	16.94		8.49	31.19	18.87	39.20		29.03	50.00	39.41
	Pratap (c)	14.17	-	7.34	26.81	16.11	33.64	-	22.69	42.63	32.99
	86 M 01(c)	22.62	-	7.77	29.18	19.86	36.42	-	28.33	45.67	36.81
	AHB 1269 (c)	24.07	-	7.40	20.67	17.38	46.91	-	28.43	31.62	35.65
	NHB 4903 (c)	16.21	-	9.68	28.24	18.04	39.51	-	31.44	44.37	38.44
	Kaveri Super Boss (c)	18.70	-	9.25	32.18	20.04	41.67	-	30.93	50.78	41.13
	Mean	19.35	-	8.47	28.17	18.66	40.50	-	28.94	44.14	37.86
30	MH 2682	21.30	21.95	13.52	34.29	22.76	44.45	40.68	37.73	53.60	44.11
	MH 2717	20.19	23.65	11.49	35.29	22.65	43.21	46.17	34.68	55.02	44.77
	AHB 1200 (c)	25.00	20.89	12.00	28.67	21.64	47.53	37.31	31.39	45.18	40.35
	86M86 (c)	18.86	20.34	10.95	35.14	21.32	40.43	35.29	32.27	55.01	40.75
	Pratap (c)	16.05	15.26	11.63	31.05	18.50	38.58	26.29	30.14	48.51	35.88
	86 M 01(c)	23.85	19.95	12.75	36.27	23.21	41.36	34.62	32.13	56.30	41.10
	AHB 1269 (c)	25.93	20.65	11.77	24.34	20.67	48.15	36.89	31.62	39.16	38.95
	NHB 4903 (c)	18.98	19.65	12.55	33.18	21.09	43.83	36.20	36.06	51.88	41.99
	Kaveri Super Boss (c)	19.44	19.96	12.78	36.28	22.12	47.22	38.47	34.26	55.91	43.96
	Mean	21.07	20.26	12.16	32.72	21.55	43.86	36.88	33.36	51.17	41.32
60	MH 2682	22.84	24.65	16.94	38.15	25.65	48.77	45.68	41.34	58.61	48.60
	MH 2717	20.55	26.65	15.19	39.27	25.42	46.60	52.03	39.12	60.24	49.50
	AHB 1200 (c)	27.47	22.74	14.73	30.24	23.79	53.40	40.62	37.18	45.74	44.23
	86M86 (c)	20.68	22.27	12.41	37.42	23.20	43.52	38.64	38.66	57.17	44.50
	Pratap (c)	18.37	17.07	13.04	33.15	20.41	41.67	29.41	35.65	50.87	39.40
	86 M 01(c)	25.32	21.97	13.00	38.51	24.70	45.99	38.12	36.57	59.17	44.96
	AHB 1269 (c)	28.09	22.75	13.97	28.67	23.37	54.01	40.63	39.40	42.90	44.24
	NHB 4903 (c)	22.22	22.80	16.53	35.94	24.37	47.84	42.00	41.71	55.21	46.69
	Kaveri Super Boss (c)	22.84	23.06	16.38	39.67	25.49	50.62	44.44	40.46	60.04	48.89
	Mean	23.15	22.66	14.69	35.67	24.04	48.05	41.28	38.90	54.44	45.67

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Table II.6: PMAT 1b: Effect of N levels on productivity of pearl millet medium and late advance hybrids entries in Zone B during *kharif* 2024

Treatments		Grain yield (q/ha)				Zonal mean	Dry fodder yield (q/ha)				Zonal mean
N(kg/ha)	Entries	ABD1	DHL	VYP	CBE		ABD1	DHL	VYP	CBE	
90	MH 2682	23.96	26.89	20.87	39.91	27.91	51.15	49.83	49.35	61.17	52.88
	MH 2717	21.56	28.03	18.71	41.18	27.37	48.89	54.72	46.25	62.09	52.99
	AHB 1200 (c)	28.81	24.88	17.54	32.09	25.83	56.01	44.44	43.89	48.49	48.21
	86M86 (c)	21.69	24.95	17.63	38.28	25.64	45.65	43.29	44.07	58.08	47.77
	Pratap (c)	19.26	20.96	17.21	34.29	22.93	43.71	36.12	42.13	51.86	43.45
	86 M 01(c)	26.74	23.95	16.44	39.62	26.69	53.58	41.56	46.53	60.27	50.48
	AHB 1269 (c)	29.46	25.62	18.13	30.08	25.82	56.66	45.76	45.09	44.82	48.08
	NHB 4903 (c)	23.31	24.85	19.95	36.82	26.23	50.18	45.77	48.06	55.73	49.94
	Kaveri Super Boss (c)	23.96	26.53	19.32	40.84	27.66	53.10	51.13	47.18	62.13	53.38
	Mean	24.31	25.18	18.42	37.01	26.23	50.99	45.84	45.84	56.07	49.69
Entries Mean	MH 2682	22.16	24.50	15.25	35.40	24.32	46.43	45.40	39.86	54.78	46.62
	MH 2717	20.21	26.11	13.40	36.90	24.15	44.55	50.97	37.35	56.68	47.39
	AHB 1200 (c)	25.91	22.84	13.17	28.79	22.68	50.81	40.79	35.42	44.12	42.78
	86M86 (c)	19.54	22.52	12.37	35.51	22.49	42.20	39.07	36.01	55.07	43.09
	Pratap (c)	16.96	17.76	12.31	31.33	19.59	39.40	30.61	32.65	48.47	37.78
	86 M 01(c)	24.63	21.96	12.49	35.90	23.74	44.34	38.10	35.89	55.35	43.42
	AHB 1269 (c)	26.89	23.01	12.82	25.94	22.16	51.43	41.09	36.13	39.62	42.07
	NHB 4903 (c)	20.18	22.43	14.68	33.55	22.71	45.34	41.32	39.32	51.80	44.44
	Kaveri Super Boss (c)	21.24	23.18	14.43	37.24	24.02	48.15	44.68	38.21	57.22	47.06
CD (5%)	N	2.32	NS	1.01	3.00		5.23	NS	1.61	4.53	
	E	2.54	2.41	1.06	2.85		4.18	4.31	1.90	4.35	
	N x E	NS	NS	NS	NS		NS	NS	NS	NS	
	E x N	NS	NS	NS	NS		NS	NS	NS	NS	
CV (%)		14.1	8.9	9.7	10.4		11.2	8.7	6.3	10.3	

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Table II.7: PMAT 1b: Effect of N levels on total & effective tillers/plant of pearl millet medium and late advance hybrid entries in Zone B during kharif 2024

Treatment		Total tillers/plant					Effective Tillers/plant				
N(kg/ha)	Entries	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean
0	MH 2682	3.1	-	3.2	3.3	3.2	2.2	-	2.5	2.6	2.4
	MH 2717	3.8	-	2.9	3.4	3.4	2.9	-	2.3	2.5	2.6
	AHB 1200 (c)	3.6	-	2.8	3.3	3.2	2.5	-	2.5	2.5	2.5
	86M86 (c)	3.8	-	2.9	4.2	3.6	2.8	-	2.4	3.3	2.9
	Pratap (c)	3.3	-	3.1	4.1	3.5	2.6	-	2.4	3.2	2.7
	86 M 01(c)	3.5	-	2.9	4.0	3.5	2.5	-	2.4	3.1	2.7
	AHB 1269 (c)	3.5	-	2.9	3.5	3.3	2.5	-	2.4	2.6	2.5
	NHB 4903 (c)	3.7	-	3.1	3.4	3.4	2.6	-	2.5	2.5	2.5
	Kaveri Super Boss (c)	3.6	-	2.9	3.4	3.3	2.5	-	2.4	2.5	2.5
	Mean	3.6	-	3.0	3.6	3.4	2.6	-	2.4	2.8	2.6
30	MH 2682	3.9	2.9	3.3	3.9	3.5	2.6	2.1	2.8	3.0	2.6
	MH 2717	3.5	3.3	3.3	4.0	3.5	2.6	2.4	2.5	3.1	2.6
	AHB 1200 (c)	3.7	3.2	3.3	3.7	3.5	2.7	2.5	2.5	2.8	2.6
	86M86 (c)	3.2	3.0	3.3	4.9	3.6	2.4	2.0	2.4	4.0	2.7
	Pratap (c)	3.7	2.5	3.2	4.5	3.5	2.7	2.0	2.7	3.6	2.8
	86 M 01(c)	4.0	2.7	3.1	4.3	3.5	2.9	2.0	2.5	3.4	2.7
	AHB 1269 (c)	3.4	2.9	3.3	4.0	3.4	2.5	2.0	2.5	3.1	2.5
	NHB 4903 (c)	3.3	2.5	3.4	4.0	3.3	2.3	2.1	2.7	3.1	2.5
	Kaveri Super Boss (c)	3.7	3.4	3.4	3.8	3.6	2.7	2.3	2.8	2.9	2.7
	Mean	3.6	2.9	3.3	4.1	3.5	2.6	2.2	2.6	3.2	2.6
60	MH 2682	4.1	3.2	3.7	4.1	3.8	3.1	2.5	3.0	3.2	2.9
	MH 2717	3.5	4.1	3.5	4.3	3.9	2.5	2.9	2.5	3.4	2.8
	AHB 1200 (c)	4.0	3.6	3.2	3.7	3.6	3.0	2.4	2.5	2.8	2.7
	86M86 (c)	4.1	3.2	3.5	5.1	4.0	3.1	2.4	2.5	4.2	3.0
	Pratap (c)	3.7	3.0	3.3	5.3	3.8	2.7	2.3	2.4	4.4	2.9
	86 M 01(c)	4.1	3.2	3.3	4.5	3.8	3.1	2.7	2.6	3.6	3.0
	AHB 1269 (c)	4.0	3.1	3.5	4.1	3.7	3.0	2.2	2.6	3.2	2.8
	NHB 4903 (c)	3.8	2.9	3.7	4.2	3.6	2.9	2.3	2.9	3.3	2.8
	Kaveri Super Boss (c)	4.8	3.9	3.5	4.0	4.0	3.8	2.7	2.9	3.1	3.1
	Mean	4.0	3.3	3.5	4.3	3.8	3.0	2.5	2.7	3.5	2.9
90	MH 2682	4.2	4.7	3.9	4.1	4.2	3.2	2.8	3.1	3.2	3.1
	MH 2717	4.1	4.9	3.6	4.3	4.2	3.3	3.2	3.0	3.4	3.2
	AHB 1200 (c)	4.7	4.7	3.6	3.8	4.2	3.9	2.8	2.9	2.9	3.1
	86M86 (c)	4.6	4.1	3.6	5.1	4.3	3.4	2.9	2.9	4.2	3.3
	Pratap (c)	3.6	3.3	3.5	4.8	3.8	2.7	2.7	2.7	3.9	3.0
	86 M 01(c)	4.0	3.4	3.5	4.6	3.9	3.0	3.0	3.0	3.7	3.2
	AHB 1269 (c)	5.2	3.4	3.7	4.1	4.1	4.3	3.0	2.9	3.2	3.3
	NHB 4903 (c)	4.9	3.4	3.9	4.2	4.1	3.9	3.0	3.1	3.3	3.3
	Kaveri Super Boss (c)	5.2	4.3	3.8	4.0	4.3	4.2	3.0	3.1	3.2	3.4
	Mean	4.5	4.0	3.7	4.3	4.1	3.5	2.9	3.0	3.4	3.2
Entries Mean	MH 2682	3.8	3.6	3.5	3.8	3.7	2.8	2.5	2.9	3.0	2.8
	MH 2717	3.7	4.1	3.3	4.0	3.8	2.8	2.8	2.6	3.1	2.8
	AHB 1200 (c)	4.0	3.8	3.2	3.6	3.7	3.0	2.6	2.6	2.7	2.7
	86M86 (c)	3.9	3.4	3.3	4.8	3.9	2.9	2.4	2.6	3.9	3.0
	Pratap (c)	3.6	2.9	3.3	4.6	3.6	2.7	2.3	2.6	3.8	2.8
	86 M 01(c)	3.9	3.1	3.2	4.3	3.6	2.9	2.5	2.6	3.5	2.9
	AHB 1269 (c)	4.0	3.1	3.4	3.9	3.6	3.1	2.4	2.6	3.0	2.8
	NHB 4903 (c)	3.9	2.9	3.5	3.9	3.6	2.9	2.4	2.8	3.1	2.8
	Kaveri Super Boss (c)	4.3	3.9	3.4	3.8	3.8	3.3	2.7	2.8	2.9	2.9
CD (5%)	N	0.3	0.6	0.1	0.2		0.2	0.4	0.0	0.2	
	E	0.2	0.8	0.1	0.3		0.2	NS	0.1	0.3	
	N x E	0.4	NS	0.2	NS		0.5	NS	0.2	NS	
	E x N	0.5	NS	0.2	NS		0.5	NS	0.2	NS	
CV (%)		6.4	19.4	2.7	10.1		9.5	18.6	4.3	12.8	

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Table II.8: PMAT 1b: Effect of N levels on plant population and plant height of pearl millet medium and late advance hybrids and population entries in Zone B during *kharif* 2024

Treatment		Plant population ('000/ha)					Plant height (cm)				
N(kg/ha)	Entries	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean
0	MH 2682	205.6	-	134.7	125.0	155.1	147.7	-	146.1	148.5	147.4
	MH 2717	206.2	-	132.6	124.0	154.3	158.1	-	140.9	143.4	147.5
	AHB 1200 (c)	207.7	-	136.1	124.0	155.9	149.3	-	129.9	153.2	144.1
	86M86 (c)	205.2	-	138.0	124.0	155.7	148.6	-	129.2	164.3	147.4
	Pratap (c)	205.6	-	137.5	126.0	156.4	138.5	-	109.4	152.7	133.5
	86 M 01(c)	203.4	-	136.1	123.0	154.2	148.1	-	133.4	164.8	148.8
	AHB 1269 (c)	207.1	-	136.8	124.0	156.0	140.4	-	131.3	172.5	148.1
	NHB 4903 (c)	204.3	-	135.2	124.0	154.5	156.7	-	135.7	179.5	157.3
	Kaveri Super Boss (c)	202.2	-	138.9	123.0	154.7	157.5	-	132.2	203.1	164.3
	Mean	205.2	-	136.2	124.1	155.2	149.4	-	132.0	164.7	148.7
30	MH 2682	206.5	134.9	135.2	133.0	152.4	149.5	169.8	160.8	154.6	158.7
	MH 2717	206.2	135.1	134.5	134.0	152.4	153.0	183.8	163.3	148.3	162.1
	AHB 1200 (c)	206.5	133.9	135.6	132.0	152.0	151.3	174.5	141.9	165.5	158.3
	86M86 (c)	205.2	134.2	138.7	132.0	152.5	150.7	182.0	141.9	176.2	162.7
	Pratap (c)	203.4	134.4	135.9	130.0	150.9	140.4	143.7	115.7	158.3	139.5
	86 M 01(c)	204.6	134.3	141.7	132.0	153.1	150.5	179.7	146.8	173.4	162.6
	AHB 1269 (c)	206.2	132.7	134.7	128.0	150.4	148.6	176.5	139.7	179.4	161.1
	NHB 4903 (c)	207.4	134.8	135.9	129.0	151.8	157.9	178.8	166.7	186.4	172.4
	Kaveri Super Boss (c)	205.6	134.6	136.1	133.0	152.3	154.3	185.5	157.0	212.4	177.3
	Mean	205.7	134.3	136.5	131.4	152.0	150.7	174.9	148.2	172.7	161.6
60	MH 2682	207.7	135.1	138.2	135.0	154.0	150.1	183.0	181.4	163.6	169.5
	MH 2717	205.2	135.5	138.2	138.0	154.2	157.4	179.0	175.7	158.3	167.6
	AHB 1200 (c)	206.5	133.9	135.9	138.0	153.6	156.6	178.0	171.3	176.2	170.5
	86M86 (c)	206.8	134.2	135.4	135.0	152.8	157.8	189.5	168.0	182.3	174.4
	Pratap (c)	204.9	134.4	135.4	132.0	151.7	150.2	150.5	140.9	165.3	151.7
	86 M 01(c)	205.2	134.3	140.0	135.0	153.6	155.7	187.5	170.7	180.4	173.6
	AHB 1269 (c)	203.4	132.7	136.6	131.0	150.9	155.9	180.5	173.9	184.1	173.6
	NHB 4903 (c)	205.6	134.3	135.4	134.0	152.3	161.1	182.3	183.0	193.2	179.9
	Kaveri Super Boss (c)	207.1	134.7	138.2	138.0	154.5	166.9	192.0	181.2	223.7	190.9
	Mean	205.8	134.3	137.0	135.1	153.1	156.9	180.3	171.8	180.8	172.4
90	MH 2682	206.8	135.6	137.3	141.0	155.2	155.1	199.5	183.5	172.3	177.6
	MH 2717	205.2	135.8	138.0	138.0	154.3	161.2	203.4	182.5	162.4	177.4
	AHB 1200 (c)	206.8	134.6	134.0	143.0	154.6	160.6	186.8	177.0	182.3	176.7
	86M86 (c)	207.7	133.8	133.1	130.0	151.1	163.1	193.1	169.0	188.4	178.4
	Pratap (c)	206.2	132.7	135.4	139.0	153.3	153.1	160.5	128.8	169.4	153.0
	86 M 01(c)	205.9	134.4	136.6	130.0	151.7	163.4	193.1	176.3	185.2	179.5
	AHB 1269 (c)	204.9	133.2	137.5	146.0	155.4	160.5	184.0	179.9	188.2	178.1
	NHB 4903 (c)	206.2	132.7	135.4	130.0	151.1	165.7	185.5	185.9	199.4	184.1
	Kaveri Super Boss (c)	207.4	134.8	139.4	136.0	154.4	175.1	195.6	184.6	232.4	196.9
	Mean	206.3	134.2	136.3	137.0	153.4	162.0	189.1	174.2	186.7	178.0
Entries Mean	MH 2682	206.6	135.2	136.3	133.5	152.9	150.6	184.1	168.0	159.8	165.6
	MH 2717	205.7	135.5	135.8	133.5	152.6	157.4	188.7	165.6	153.1	166.2
	AHB 1200 (c)	206.9	134.1	135.4	134.3	152.7	154.4	179.8	155.0	169.3	164.6
	86M86 (c)	206.2	134.0	136.3	130.3	151.7	155.1	188.2	152.0	177.8	168.3
	Pratap (c)	205.0	133.8	136.1	131.8	151.7	145.6	151.6	123.7	161.4	145.6
	86 M 01(c)	204.8	134.3	138.6	130.0	151.9	154.4	186.8	156.8	176.0	168.5
	AHB 1269 (c)	205.4	132.9	136.4	132.3	151.7	151.3	180.3	156.2	181.1	167.2
	NHB 4903 (c)	205.9	133.9	135.5	129.3	151.1	160.4	182.2	167.8	189.6	175.0
	Kaveri Super Boss (c)	205.6	134.7	138.1	132.5	152.7	163.4	191.0	163.7	217.9	184.0
CD (5%)	N	NS	NS	NS	4.9		1.6	NS	3.6	8.3	
	E	1.3	1.2	NS	NS		1.3	21.0	3.1	8.1	
	N x E	2.7	NS	NS	NS		2.7	NS	6.5	NS	
	E x N	2.7	NS	NS	NS		2.9	NS	6.8	NS	
CV (%)		0.8	0.7	2.0	6.1		1.0	9.7	2.4	5.6	

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Table II.9: PMAT 1b: Effect of N levels on days to 50% flowering and test weight of pearl millet medium and late advance hybrids and population entries in Zone B during kharif 2024

Treatment		Days to 50% flowering					Test weight (g)				
N(kg/ha)	Entries	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean
0	MH 2682	58.0	-	50.0	44.0	50.7	10.5	-	10.7	10.6	10.6
	MH 2717	57.0	-	49.5	45.0	50.5	10.9	-	10.8	10.4	10.7
	AHB 1200 (c)	55.0	-	48.5	45.0	49.5	12.5	-	11.0	10.1	11.2
	86M86 (c)	58.0	-	49.5	44.0	50.5	11.7	-	10.6	11.2	11.2
	Pratap (c)	53.7	-	48.0	45.0	48.9	11.4	-	10.9	12.0	11.4
	86 M 01(c)	55.0	-	50.5	45.0	50.2	9.9	-	10.4	12.3	10.9
	AHB 1269 (c)	55.7	-	48.0	45.0	49.6	10.0	-	11.2	10.1	10.4
	NHB 4903 (c)	56.3	-	48.5	44.0	49.6	10.8	-	10.5	11.5	10.9
	Kaveri Super Boss (c)	58.0	-	50.5	46.0	51.5	10.0	-	10.9	12.8	11.2
	Mean	56.3	-	49.2	44.8	50.1	10.9	-	10.8	11.2	10.9
30	MH 2682	55.0	39.5	50.0	46.0	47.6	11.2	12.1	11.2	10.9	11.3
	MH 2717	55.0	40.5	49.5	46.0	47.8	11.4	12.2	11.2	10.6	11.3
	AHB 1200 (c)	53.0	40.0	48.5	47.0	47.1	13.2	11.9	11.6	10.3	11.8
	86M86 (c)	56.3	40.0	49.5	46.0	48.0	11.9	11.9	11.3	11.4	11.6
	Pratap (c)	53.0	41.0	47.5	46.0	46.9	11.8	11.8	11.0	12.2	11.7
	86 M 01(c)	54.0	41.0	50.0	47.0	48.0	10.5	11.8	11.2	12.7	11.5
	AHB 1269 (c)	55.0	38.5	47.5	44.0	46.3	10.4	12.0	11.6	10.3	11.0
	NHB 4903 (c)	54.0	40.5	48.5	46.0	47.3	11.1	11.8	11.3	11.8	11.5
	Kaveri Super Boss (c)	56.0	39.5	50.5	48.0	48.5	10.5	12.0	11.3	13.0	11.7
	Mean	54.6	40.1	49.1	46.2	47.5	11.3	11.9	11.3	11.4	11.5
60	MH 2682	54.0	40.5	49.0	47.0	47.6	11.8	12.2	11.4	11.1	11.6
	MH 2717	55.0	41.5	50.0	46.0	48.1	11.3	12.3	11.3	10.8	11.4
	AHB 1200 (c)	53.0	42.0	49.5	48.0	48.1	13.8	12.0	11.8	10.3	12.0
	86M86 (c)	57.0	43.5	50.5	48.0	49.8	12.9	11.9	11.7	11.7	12.1
	Pratap (c)	54.0	41.5	49.0	47.0	47.9	12.6	11.8	11.7	12.4	12.1
	86 M 01(c)	55.0	41.5	49.5	46.0	48.0	11.6	11.9	11.5	12.9	12.0
	AHB 1269 (c)	54.7	41.0	49.5	44.0	47.3	11.4	12.2	11.9	10.3	11.5
	NHB 4903 (c)	56.0	41.5	50.0	47.0	48.6	11.9	11.9	11.2	12.0	11.7
	Kaveri Super Boss (c)	56.3	41.5	51.5	49.0	49.6	11.6	12.1	11.6	13.1	12.1
	Mean	55.0	41.6	49.8	46.9	48.3	12.1	12.0	11.6	11.6	11.8
90	MH 2682	53.0	41.0	50.5	47.0	47.9	12.1	12.4	11.6	11.2	11.8
	MH 2717	52.3	44.5	50.0	47.0	48.5	11.5	12.5	11.7	10.9	11.7
	AHB 1200 (c)	53.7	45.0	49.5	48.0	49.0	14.1	12.1	12.2	10.4	12.2
	86M86 (c)	55.7	45.5	51.0	48.0	50.0	13.4	12.1	11.7	11.8	12.2
	Pratap (c)	52.0	43.5	49.5	47.0	48.0	12.9	11.9	11.6	12.6	12.2
	86 M 01(c)	54.0	43.5	50.0	46.0	48.4	12.5	12.0	11.4	13.1	12.2
	AHB 1269 (c)	54.0	42.0	50.0	44.0	47.5	11.9	12.3	11.9	10.5	11.6
	NHB 4903 (c)	53.7	42.5	50.5	47.0	48.4	12.3	12.0	11.3	12.2	12.0
	Kaveri Super Boss (c)	54.0	43.5	52.0	49.0	49.6	12.1	12.3	11.9	13.2	12.4
	Mean	53.6	43.4	50.3	47.0	48.6	12.5	12.2	11.7	11.8	12.0
Entries Mean	MH 2682	55.0	40.3	49.9	46.0	47.8	11.4	12.2	11.2	11.0	11.4
	MH 2717	54.8	42.2	49.8	46.0	48.2	11.3	12.3	11.2	10.7	11.4
	AHB 1200 (c)	53.7	42.3	49.0	47.0	48.0	13.4	12.0	11.6	10.3	11.8
	86M86 (c)	56.8	43.0	50.1	46.5	49.1	12.5	11.9	11.3	11.5	11.8
	Pratap (c)	53.2	42.0	48.5	46.3	47.5	12.2	11.8	11.3	12.3	11.9
	86 M 01(c)	54.5	42.0	50.0	46.0	48.1	11.1	11.9	11.2	12.7	11.7
	AHB 1269 (c)	54.8	40.5	48.8	44.3	47.1	10.9	12.1	11.6	10.3	11.2
	NHB 4903 (c)	55.0	41.5	49.4	46.0	48.0	11.5	11.9	11.1	11.9	11.6
	Kaveri Super Boss (c)	56.1	41.5	51.1	48.0	49.2	11.0	12.1	11.4	13.0	11.9
CD (5%)	N	0.8	2.0	0.3	1.2		0.3	0.0	0.2	0.1	
	E	0.9	1.4	0.5	1.2		0.5	0.1	0.3	0.1	
	N x E	NS	NS	1.1	NS		NS	NS	NS	NS	
	E x N	NS	NS	1.0	NS		NS	NS	NS	NS	
CV (%)		1.9	2.8	1.3	3.1		5.2	0.5	3.3	1.3	

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Table II.10: PMAT 2a1: Effect of foliar application of nano urea on productivity, plant height and test weight of pearl millet in Zone A1 during *kharif* 2024

Treatments	Grain yield (q/ha)			Stover yield (q/ha)			Plant height (cm)			Test weight (g)		
	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean
T ₁ : Control (No nitrogen)	17.33	10.67	14.00	32.67	18.90	25.78	131.0	129.4	130.2	7.8	8.6	8.2
T ₂ : RDN (½ at basal + ½ at 25-30 DAS)	25.23	19.13	22.18	49.57	38.43	44.00	151.0	160.2	155.6	7.9	8.9	8.4
T ₃ : 75% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	23.33	14.70	19.02	44.53	28.03	36.28	145.4	145.3	145.4	8.0	8.6	8.3
T ₄ : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	20.50	15.60	18.05	41.07	29.10	35.08	145.2	152.7	149.0	8.0	8.8	8.4
T ₅ : 75% RDN + foliar spray of urea @ 2.5% at 3 and 5 WAS	23.77	15.33	19.55	47.43	26.77	37.10	150.7	147.5	149.1	8.0	8.7	8.4
T ₆ : 75% RDN + foliar spray of nano urea @ 4 ml/l at 3-4 WAS	21.67	16.97	19.32	44.70	32.90	38.80	143.7	156.7	150.2	8.1	8.8	8.5
T ₇ : 50% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	20.13	12.63	16.38	40.37	23.13	31.75	144.5	138.8	141.7	8.0	8.9	8.5
T ₈ : 50% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	15.83	13.33	14.58	38.43	24.87	31.65	137.8	140.2	139.0	8.1	8.9	8.5
T ₉ : 50% RDN + foliar spray of urea @ 2.5 % at 3 and 5 WAS	18.73	12.87	15.80	38.27	23.97	31.12	141.7	139.8	140.7	8.1	9.0	8.6
T ₁₀ : 50% RDN + foliar spray of nano urea @ 4 ml/l at 3-4 WAS	19.00	14.07	16.53	36.67	26.43	31.55	137.2	142.8	140.0	8.0	8.9	8.5
CD at 5 %	3.33	2.88		7.33	6.01		NS	8.8		NS	NS	
CV (%)	9.4	11.5		10.3	12.7		5.3	3.5		3.0	2.8	

Table II.11: PMAT 2a1: Effect of foliar application of nano urea on yield attributes and economics of pearl millet in Zone A1 during *kharif* 2024

Treatments	Plant population ('000/ha)			Total tillers/plant			Effective tillers/plant			Mandor		
	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean	Gross return (Rs/ha)	Net return (Rs/ha)	BC ratio
T ₁ : Control (No nitrogen)	126.7	94.9	110.8	3.9	2.5	3.2	3.2	1.7	2.5	40285	16985	1.73
T ₂ : RDN (½ at basal + ½ at 25-30 DAS)	131.1	99.6	115.4	5.3	4.1	4.7	4.5	3.4	4.0	75207	49707	2.95
T ₃ : 75% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	129.2	96.3	112.8	5.3	3.3	4.3	4.4	2.7	3.6	56810	31110	2.21
T ₄ : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	129.9	99.1	114.5	5.2	3.7	4.4	4.4	3.1	3.7	59865	33365	2.26
T ₅ : 75% RDN + foliar spray of urea @ 2.5% at 3 and 5 WAS	128.9	97.3	113.1	5.3	3.5	4.4	4.5	2.9	3.7	57648	31948	2.24
T ₆ : 75% RDN + foliar spray of nano urea @ 4 ml/l at 3-4 WAS	127.3	98.7	113.0	5.1	3.7	4.4	4.2	3.2	3.7	65923	38623	2.41
T ₇ : 50% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	127.3	94.7	111.0	4.2	2.9	3.6	3.5	2.0	2.8	48200	22800	1.90
T ₈ : 50% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	127.7	95.0	111.3	4.8	3.1	4.0	4.0	2.3	3.2	51164	24964	1.96
T ₉ : 50% RDN + foliar spray of urea @ 2.5 % at 3 and 5 WAS	128.6	95.9	112.3	4.0	3.0	3.5	3.3	2.2	2.8	49354	23854	1.94
T ₁₀ : 50% RDN + foliar spray of nano urea @ 4 ml/l at 3-4 WAS	127.2	95.6	111.4	4.7	3.2	4.0	3.9	2.5	3.2	54107	27107	2.00
CD at 5 %	NS	NS		NS	0.5		NS	0.5		11406	11406	0.44
CV (%)	4.8	2.2		17.1	9.3		18.1	10.8		11.8	22.0	11.7

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Table II.12: PMAT 2a1: Effect of foliar application of nano urea on protein, N and P content in grain of pearl millet in Zone A1 during kharif 2024

Treatment	Protein content in grain (%)	N Content from grain (%)	P Content from grain (%)
T1 : Control (No nitrogen)	7.04	1.13	0.25
T2 : RDN (½ at basal + ½ at 25-30 DAS)	9.17	1.47	0.32
T3 : 75% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	8.22	1.32	0.28
T4 : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	8.62	1.38	0.30
T5 : 75% RDN + foliar spray of urea @ 2.5% at 3 and 5 WAS	8.28	1.33	0.29
T6 : 75% RDN + foliar spray of nano urea @ 4 ml/l at 3 -4 WAS	8.99	1.44	0.31
T7 : 50% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	7.54	1.21	0.25
T8 : 50% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	8.03	1.29	0.27
T9 : 50% RDN + foliar spray of urea @ 2.5 % at 3 and 5 WAS	7.75	1.24	0.26
T10: 50% RDN + foliar spray of nano urea @ 4 ml/l at 3-4 WAS	8.12	1.30	0.28
CD at 5 %	0.71	0.11	0.01
CV (%)	5.0	5.0	2.32

Table II.13: PMAT 2a1: Effect of foliar application of nano urea on N and P content in fodder of pearl millet in Zone A1 during kharif 2024

Treatment	N Content from fodder (%)	P Content from fodder (%)
T1 : Control (No nitrogen)	0.72	0.16
T2 : RDN (½ at basal + ½ at 25-30 DAS)	1.14	0.23
T3 : 75% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	0.98	0.20
T4 : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	1.03	0.22
T5 : 75% RDN + foliar spray of urea @ 2.5% at 3 and 5 WAS	1.00	0.21
T6 : 75% RDN + foliar spray of nano urea @ 4 ml/l at 3 -4 WAS	1.07	0.20
T7 : 50% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	0.79	0.18
T8 : 50% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	0.92	0.20
T9 : 50% RDN + foliar spray of urea @ 2.5 % at 3 and 5 WAS	0.89	0.19
T10: 50% RDN + foliar spray of nano urea @ 4 ml/l at 3-4 WAS	0.95	0.19
CD at 5 %	0.08	0.02
CV (%)	5.1	4.5

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Table II.14: PMAT 2a: Effect of foliar application of nano urea on productivity, plant height and plant population of pearl millet in Zone A during *kharif* 2024

Treatment	Grain yield (q/ha)				Stover yield (q/ha)				Plant height (cm)				Plant population ('000/ha)			
	HSR	JMR	JPR	Mean	HSR	JMR	JPR	Mean	HSR	JMR	JPR	Mean	HSR	JMR	JPR	Mean
T ₁ : Control (No nitrogen)	24.32	16.92	20.52	20.59	71.90	34.61	52.35	52.95	184.3	169.2	162.0	171.8	139.8	158.0	168.0	155.3
T ₂ : RDN (½ at basal + ½ at 25-30 DAS)	39.71	31.30	25.38	32.13	115.44	48.23	60.50	74.73	217.7	195.9	172.0	195.2	141.4	161.5	170.7	157.8
T ₃ : 75% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	33.09	24.51	26.33	27.98	101.11	42.86	62.26	68.74	202.0	186.6	177.0	188.5	141.2	161.1	178.3	160.2
T ₄ : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	34.45	28.91	25.89	29.75	104.97	45.10	60.70	70.26	201.0	188.4	179.0	189.5	141.3	158.7	177.7	159.2
T ₅ : 75% RDN + foliar spray of urea @ 2.5% at 3 and 5 WAS	35.19	25.98	27.35	29.51	106.65	43.03	64.42	71.37	207.7	187.4	177.7	190.9	141.2	161.8	179.7	160.9
T ₆ : 75% RDN + foliar spray of nano urea @ 4 ml/l at 3- 4 WAS	35.87	30.16	27.56	31.20	107.93	46.16	64.86	72.98	213.3	189.5	188.0	197.0	142.3	159.4	181.0	160.9
T ₇ : 50% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	30.88	19.23	25.46	25.19	93.57	37.54	60.22	63.78	191.3	174.9	182.7	183.0	141.3	160.4	174.0	158.6
T ₈ : 50% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	32.14	21.08	25.75	26.32	97.80	41.03	59.61	66.15	192.7	179.9	181.3	184.6	140.8	162.9	171.0	158.2
T ₉ : 50% RDN + foliar spray of urea @ 2.5 % at 3 and 5 WAS	33.63	20.04	26.61	26.76	102.03	38.72	62.21	67.65	200.0	176.7	183.0	186.6	141.7	161.5	176.0	159.7
T ₁₀ : 50% RDN + foliar spray of nano urea @ 4 ml/l at 3 - 4 WAS	34.78	23.43	26.70	28.30	104.15	41.11	64.79	70.02	202.7	183.1	179.7	188.5	141.2	160.8	178.7	160.2
CD at 5 %	3.45	4.54	3.22		6.83	7.32	7.01		8.8	12.7	13.2		NS	NS	NS	
CV (%)	6.0	10.9	7.2		3.9	10.1	6.6		2.5	4.0	4.3		1.5	3.3	3.1	

Table II.15: PMAT 2a: Effect of foliar application of nano urea on total & effective tillers/plant, test weight, av. PK in soil after harvest of pearl millet in Zone A during *kharif* 2024

Treatment	Total tillers/plant				Effective tillers/plant				Test weight (g)				K in Grain (%)	K in Straw (%)	Av. P in soil (kg/ha)	Av. K in soil (kg/ha)
	HSR	JMR	JPR	Mean	HSR	JMR	JPR	Mean	HSR	JMR	JPR	Mean	HSR	HSR	HSR	HSR
T ₁ : Control (No nitrogen)	1.7	3.5	3.9	3.0	1.3	1.8	1.4	1.5	9.8	9.6	9.8	9.8	0.23	1.55	21.96	153.4
T ₂ : RDN (½ at basal + ½ at 25-30 DAS)	2.7	4.3	4.2	3.8	2.3	3.3	1.9	2.5	10.9	11.8	10.4	11.0	0.27	1.75	21.24	146.9
T ₃ : 75% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	2.3	3.9	4.4	3.6	1.6	2.7	2.1	2.1	10.3	10.7	10.3	10.4	0.25	1.71	21.52	148.7
T ₄ : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	2.4	4.1	4.2	3.6	1.7	3.0	2.4	2.4	10.5	11.3	10.3	10.7	0.26	1.72	21.47	147.8
T ₅ : 75% RDN + foliar spray of urea @ 2.5% at 3 and 5 WAS	2.4	4.0	5.0	3.8	1.7	2.8	2.6	2.3	10.4	11.1	10.4	10.6	0.26	1.72	21.20	148.4
T ₆ : 75% RDN + foliar spray of nano urea @ 4 ml/l at 3- 4 WAS	2.5	4.3	4.6	3.8	2.0	3.1	2.9	2.7	10.6	11.5	10.5	10.9	0.27	1.73	21.10	147.4
T ₇ : 50% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	2.1	3.7	4.4	3.4	1.4	2.1	2.0	1.9	10.0	9.9	10.4	10.1	0.24	1.70	21.78	148.9
T ₈ : 50% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	2.2	3.7	4.4	3.4	1.5	2.2	2.2	2.0	10.2	10.1	10.4	10.2	0.24	1.70	21.61	148.4
T ₉ : 50% RDN + foliar spray of urea @ 2.5 % at 3 and 5 WAS	2.2	3.6	4.6	3.5	1.6	2.0	2.6	2.1	10.1	10.0	10.5	10.2	0.25	1.71	21.64	148.7
T ₁₀ : 50% RDN + foliar spray of nano urea @ 4 ml/l at 3 - 4 WAS	2.4	3.8	4.7	3.6	1.7	2.3	2.8	2.3	10.3	10.3	10.4	10.4	0.25	1.71	21.30	147.6
CD at 5 %	0.5	0.5	NS		NS	0.4	0.5		NS	1.2	0.4		NS	0.06	NS	NS
CV (%)	12.3	7.0	11.0		19.9	9.1	12.4		3.4	6.5	2.1		6.5	1.9	5.5	1.8

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Table II.16: PMAT 2a: Effect of foliar application of nano urea on N and P content of grain and fodder after harvesting of pearl millet in Zone A during kharif 2024

Treatment	N Content from grain (%)			P Content from grain (%)			N Content from fodder (%)			P Content from fodder (%)		
	HSR	JMR	Mean	HSR	JMR	Mean	HSR	JMR	Mean	HSR	JMR	Mean
T ₁ : Control (No nitrogen)	1.18	1.40	1.29	0.34	0.27	0.31	0.44	0.94	0.69	0.17	0.19	0.18
T ₂ : RDN (½ at basal + ½ at 25-30 DAS)	1.28	1.81	1.54	0.39	0.33	0.36	0.55	1.43	0.99	0.21	0.24	0.23
T ₃ : 75% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	1.23	1.59	1.41	0.36	0.30	0.33	0.50	1.12	0.81	0.18	0.22	0.20
T ₄ : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	1.25	1.69	1.47	0.37	0.32	0.35	0.52	1.28	0.90	0.19	0.24	0.21
T ₅ : 75% RDN + foliar spray of urea @ 2.5% at 3 and 5 WAS	1.25	1.62	1.43	0.37	0.31	0.34	0.51	1.21	0.86	0.19	0.23	0.21
T ₆ : 75% RDN + foliar spray of nano urea @ 4 ml/l at 3- 4 WAS	1.26	1.70	1.48	0.38	0.34	0.36	0.53	1.35	0.94	0.21	0.24	0.22
T ₇ : 50% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	1.21	1.52	1.37	0.35	0.27	0.31	0.46	0.98	0.72	0.18	0.20	0.19
T ₈ : 50% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	1.22	1.56	1.39	0.34	0.29	0.32	0.47	1.05	0.76	0.19	0.21	0.20
T ₉ : 50% RDN + foliar spray of urea @ 2.5 % at 3 and 5 WAS	1.23	1.53	1.38	0.36	0.28	0.32	0.48	1.04	0.76	0.20	0.21	0.20
T ₁₀ : 50% RDN + foliar spray of nano urea @ 4 ml/l at 3 - 4 WAS	1.24	1.57	1.41	0.36	0.30	0.33	0.49	1.07	0.78	0.21	0.22	0.21
CD at 5 %	0.05	0.16		NS	0.02		0.05	0.10		NS	0.02	
CV (%)	2.4	5.6		5.7	4.0		5.9	4.9		8.6	4.0	

Table II.17: PMAT 2a: Effect of foliar application of nano urea on economics and protein content of pearl millet in Zone A during kharif 2024

Treatment	Gross returns (Rs/ha)			Net returns (Rs/ha)			BC ratio			Protein content (%)		
	HSR	JMR	Mean	HSR	JMR	Mean	HSR	JMR	Mean	HSR	JMR	Mean
T ₁ : Control (No nitrogen)	78219	45761	61990	27092	22416	24754	1.53	1.96	1.74	7.36	8.76	8.06
T ₂ : RDN (½ at basal + ½ at 25-30 DAS)	127327	83073	105200	73005	58749	65877	2.34	3.42	2.88	7.98	11.33	9.65
T ₃ : 75% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	107091	65561	86326	53281	40840	47060	1.99	2.65	2.32	7.67	9.93	8.80
T ₄ : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	111433	76785	94109	56821	51250	54035	2.04	3.01	2.53	7.81	10.57	9.19
T ₅ : 75% RDN + foliar spray of urea @ 2.5% at 3 and 5 WAS	113695	69253	91474	59788	44503	52146	2.11	2.80	2.45	7.81	10.12	8.96
T ₆ : 75% RDN + foliar spray of nano urea @ 4 ml/l at 3- 4 WAS	115744	80016	97880	60232	53625	56929	2.09	3.03	2.56	7.88	10.65	9.26
T ₇ : 50% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	99782	51829	75806	46482	27352	36917	1.87	2.12	2.00	7.58	9.50	8.54
T ₈ : 50% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	103920	56803	80361	49818	31512	40665	1.92	2.25	2.09	7.63	9.77	8.70
T ₉ : 50% RDN + foliar spray of urea @ 2.5 % at 3 and 5 WAS	108692	53972	81332	55295	29466	42381	2.04	2.2	2.12	7.71	9.53	8.62
T ₁₀ : 50% RDN + foliar spray of nano urea @ 4 ml/l at 3 - 4 WAS	112135	62686	87410	57133	36539	46836	2.04	2.4	2.22	7.77	9.82	8.80
CD at 5 %	-	-		-	-		-	-		0.32	0.97	0.64
CV (%)	-	-		-	-		-	-		2.4	5.6	4.0

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Table II.18: PMAT 2b: Effect of foliar application of nano urea on grain yield, dry fodder yield and plant population of pearl millet in Zone B during *kharif* 2024

Treatment	Grain yield (q/ha)					Stover yield (q/ha)					Plant population ('000/ha)				
	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean
T ₁ : Control (No nitrogen)	16.57	19.29	15.15	19.01	17.51	37.13	35.20	46.88	24.77	36.00	213.94	129.4	135.0	123.0	150.3
T ₂ : RDN (½ at basal + ½ at 25-30 DAS)	24.00	30.95	23.77	27.72	26.61	53.76	56.49	56.41	42.22	52.22	219.3	135.8	136.6	130.0	155.4
T ₃ : 75% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	23.60	27.83	20.99	27.11	24.88	54.52	50.79	51.78	41.17	49.57	215.4	135.1	136.1	133.0	154.9
T ₄ : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	23.86	28.13	20.18	30.78	25.74	55.12	51.34	50.93	45.69	50.77	216.62	135.2	137.0	131.7	155.1
T ₅ : 75% RDN + foliar spray of urea @ 2.5% at 3 and 5 WAS	24.20	29.57	22.09	29.84	26.42	55.90	53.96	54.22	44.02	52.02	214.91	135.5	136.1	130.3	154.2
T ₆ : 75% RDN + foliar spray of nano urea @ 4 ml/l at 3-4 WAS	27.05	26.55	20.84	31.12	26.39	62.48	48.46	52.50	47.09	52.63	216.13	135.1	140.0	131.3	155.7
T ₇ : 50% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	23.49	23.09	17.50	23.47	21.89	52.62	42.13	49.75	36.43	45.23	214.42	133.4	135.4	130.7	153.5
T ₈ : 50% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	23.64	24.22	16.01	24.20	22.02	52.95	44.20	45.93	35.87	44.74	218.08	133.8	137.3	129.0	154.5
T ₉ : 50% RDN + foliar spray of urea @ 2.5 % at 3 and 5 WAS	23.83	25.51	21.19	24.60	23.78	53.38	46.56	52.29	35.80	47.01	213.21	134.5	134.0	128.3	152.5
T ₁₀ : 50% RDN + foliar spray of nano urea @ 4 ml/l at 3-4 WAS	26.56	22.30	19.96	25.72	23.63	59.49	40.69	51.78	38.58	47.64	215.64	133.3	138.2	128.0	153.8
CD at 5 %	4.48	3.63	3.23	4.35		10.09	6.62	NS	5.87		3.42	2.1	NS	5.1	
CV (%)	10.9	8.2	9.4	9.5		10.9	8.2	9.8	8.7		0.92	0.9	2.1	2.3	

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Table II.19: PMAT 2b: Effect of foliar application of nano urea on protein content, N and P content from grain and fodder after harvesting of pearl millet in Zone B during *kharif* 2024

Treatment	Protein content (%)				N Content from grain(%)				P Content from grain (%)				N Content from fodder (%)				P Content from fodder (%)			
	DHL	VYP	CBE	Mean	DHL	VYP	CBE	Mean	DHL	VYP	CBE	Mean	DHL	VYP	CBE	Mean	DHL	VYP	CBE	Mean
T ₁ : Control (No nitrogen)	9.6	11.2	9.3	10.0	1.54	1.79	1.16	1.50	0.47	0.27	0.21	0.32	0.99	0.38	0.50	0.62	0.30	0.08	0.12	0.17
T ₂ : RDN (½ at basal + ½ at 25-30 DAS)	9.8	13.0	11.8	11.6	1.57	2.09	1.60	1.75	0.48	0.31	0.27	0.35	1.03	0.47	0.56	0.69	0.31	0.14	0.17	0.21
T ₃ : 75% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	9.8	13.2	11.9	11.6	1.57	2.11	1.63	1.77	0.48	0.30	0.27	0.35	1.03	0.47	0.55	0.68	0.31	0.10	0.17	0.20
T ₄ : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	9.9	12.8	12.2	11.6	1.58	2.05	1.71	1.78	0.48	0.28	0.28	0.35	1.04	0.42	0.58	0.68	0.31	0.10	0.19	0.20
T ₅ : 75% RDN + foliar spray of urea @ 2.5% at 3 and 5 WAS	9.9	13.2	12.2	11.8	1.58	2.12	1.69	1.79	0.48	0.32	0.28	0.36	1.04	0.48	0.58	0.70	0.31	0.12	0.18	0.21
T ₆ : 75% RDN + foliar spray of nano urea @ 4 ml/l at 3-4 WAS	9.9	12.8	12.4	11.7	1.59	2.06	1.73	1.79	0.48	0.30	0.28	0.36	1.06	0.42	0.59	0.69	0.32	0.12	0.19	0.21
T ₇ : 50% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	9.8	12.3	11.4	11.2	1.56	1.98	1.27	1.60	0.48	0.25	0.25	0.33	1.02	0.42	0.51	0.65	0.31	0.10	0.14	0.18
T ₈ : 50% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	9.8	12.1	11.6	11.1	1.56	1.93	1.42	1.64	0.48	0.28	0.25	0.34	1.02	0.38	0.52	0.64	0.31	0.09	0.15	0.18
T ₉ : 50% RDN + foliar spray of urea @ 2.5 % at 3 and 5 WAS	9.8	12.8	11.5	11.3	1.56	2.04	1.43	1.68	0.48	0.29	0.26	0.34	1.02	0.43	0.53	0.66	0.31	0.11	0.15	0.19
T ₁₀ : 50% RDN + foliar spray of nano urea @ 4 ml/l at 3- 4 WAS	9.8	12.3	11.8	11.3	1.57	1.97	1.51	1.68	0.48	0.30	0.26	0.35	1.03	0.43	0.53	0.66	0.31	0.12	0.16	0.20
CD at 5 %	NS	1.2	0.5		NS	0.19	0.16		NS	NS	0.02		NS	NS	0.02		NS	NS	0.02	
CV (%)	2.5	5.4	2.7		6.4	5.4	6.0		7.7	18.8	4.7		5.0	15.7	2.2		9.7	23.7	7.2	

Table II.20: PMAT 2b: Effect of foliar application of nano urea on yield attributes of pearl millet in Zone B during *kharif* 2024

Treatment	Total tillers/plant					Effective tillers/plant					Test weight (g)					Plant height (cm)				
	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean
T ₁ : Control (No nitrogen)	2.6	3.3	2.9	3.0	2.9	1.8	1.9	2.2	2.1	2.0	13.2	11.5	10.9	9.8	11.3	171.6	181.3	167.6	141.3	165.5
T ₂ : RDN (½ at basal + ½ at 25-30 DAS)	3.7	4.5	3.6	4.0	3.9	2.7	3.0	2.7	2.9	2.8	14.6	12.2	12.0	12.0	12.7	182.4	200.7	183.5	172.4	184.7
T ₃ : 75% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	3.3	4.2	3.5	3.9	3.7	2.3	3.0	2.7	3.0	2.7	14.3	12.0	11.6	11.9	12.5	184.7	198.6	179.3	170.5	183.3
T ₄ : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	3.7	4.3	3.3	4.2	3.9	2.7	3.0	2.5	3.5	2.9	14.3	12.1	11.1	13.3	12.7	188.4	198.7	175.2	179.5	185.4
T ₅ : 75% RDN + foliar spray of urea @ 2.5% at 3 and 5 WAS	3.8	4.3	3.5	4.1	3.9	2.8	3.0	2.7	3.3	3.0	14.3	12.1	12.0	13.0	12.9	185.5	198.7	181.8	173.4	184.8
T ₆ : 75% RDN + foliar spray of nano urea @ 4 ml/l at 3-4 WAS	4.4	4.2	3.5	4.4	4.1	3.4	3.0	2.6	3.8	3.2	14.7	12.0	11.7	13.6	13.0	191.5	198.5	177.6	183.6	187.8
T ₇ : 50% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	3.0	4.2	3.1	3.5	3.5	2.1	2.9	2.4	2.3	2.4	13.1	11.9	11.3	10.9	11.8	181.5	197.7	170.4	146.4	174.0
T ₈ : 50% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	3.4	4.2	3.0	3.7	3.6	2.5	3.0	2.2	2.6	2.6	13.3	12.0	11.0	11.2	11.9	181.9	198.0	168.4	153.4	175.4
T ₉ : 50% RDN + foliar spray of urea @ 2.5 % at 3 and 5 WAS	3.5	4.2	3.2	3.6	3.6	2.6	3.0	2.4	2.5	2.6	13.3	12.0	11.4	11.1	11.9	190.6	198.3	174.6	152.3	179.0
T ₁₀ : 50% RDN + foliar spray of nano urea @ 4 ml/l at 3- 4 WAS	4.0	4.1	3.1	3.8	3.8	3.1	2.9	2.3	2.67	2.7	13.4	11.9	11.6	11.6	12.1	188.4	196.8	171.3	162.4	179.8
CD at 5 %	0.5	0.6	0.3	0.3		0.5	0.1	0.3	0.3		NS	0.3	NS	0.5		NS	5.6	9.2	12.0	
CV (%)	8.3	7.9	5.5	4.8		10.6	3.0	7.4	5.3		6.0	1.6	6.7	2.6		3.6	1.6	3.1	4.3	

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Table II.21: PMAT 2b: Effect of foliar application of nano urea on economics of pearl millet in Zone B during *kharif* 2024

Treatment	Gross returns (Rs/ha)					Net returns (Rs/ha)					B:C				
	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean
T ₁ : Control (No nitrogen)	56327	51033	35593	47570	47631	28827	22707	21277	10526	20834	2.05	1.80	2.49	1.28	1.90
T ₂ : RDN (½ at basal + ½ at 25-30 DAS)	81555	81903	55862	69372	72173	50055	51809	38885	29684	42608	2.59	2.72	3.29	1.75	2.59
T ₃ : 75% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	80527	73641	49323	67845	67834	49727	42797	31425	27711	37915	2.61	2.39	2.75	1.69	2.36
T ₄ : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	81417	74672	47413	77027	70132	51017	44090	28322	36143	39893	2.68	2.44	2.48	1.88	2.37
T ₅ : 75% RDN + foliar spray of urea @ 2.5% at 3 and 5 WAS	82564	78014	51918	74658	71789	51564	47064	33917	34506	41763	2.66	2.52	2.88	1.86	2.48
T ₆ : 75% RDN + foliar spray of nano urea @ 4 ml/l at 3 -4 WAS	92283	70134	48991	77862	72318	62083	39072	30400	37978	42383	3.06	2.26	2.64	1.95	2.48
T ₇ : 50% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	79816	61144	41114	58721	60199	50016	30492	23454	17578	30385	2.68	2.00	2.33	1.43	2.11
T ₈ : 50% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	80313	64190	37633	60554	60672	50913	33800	18780	19138	30658	2.73	2.11	2.00	1.46	2.08
T ₉ : 50% RDN + foliar spray of urea @ 2.5 % at 3 and 5 WAS	80975	67215	49785	61562	64885	50975	36457	32022	20439	34973	2.70	2.19	2.80	1.50	2.30
T ₁₀ : 50% RDN + foliar spray of nano urea @ 4 ml/l at 3 -4 WAS	90249	58009	46891	64350	64875	61049	27139	28538	23934	35165	3.09	1.88	2.55	1.59	2.28
CD at 5 %	15232	9666	7697	-		15232	9666	7697	-		0.5	0.3	0.4	-	
CV (%)	10.9	8.2	9.6	-		17.4	14.9	15.5	-		10.8	8.1	9.9	-	

Table II.22: PMAT 2b: Effect of foliar application of nano urea on physio-chemical properties of soil after harvesting of pearl millet crop in Zone B during *kharif* 2024

Treatment	Soil status after harvest											
	OC (%)	pH	EC	Available N (kg/ha)			Available P (kg/ha)			Available K (kg/ha)		
	DHL	DHL	DHL	DHL	VYP	Mean	DHL	VYP	Mean	DHL	VYP	Mean
T ₁ : Control (No nitrogen)	0.46	8.21	0.41	176.0	189.5	182.8	15.5	23.7	19.6	480	415	447
T ₂ : RDN (½ at basal + ½ at 25-30 DAS)	0.48	8.19	0.43	202.0	177.1	189.6	15.7	20.3	18.0	474	388	431
T ₃ : 75% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	0.48	8.20	0.42	198.0	181.5	189.8	15.7	21.9	18.8	476	394	435
T ₄ : 75% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	0.48	8.20	0.42	196.0	183.0	189.5	15.7	22.8	19.2	476	414	445
T ₅ : 75% RDN + foliar spray of urea @ 2.5% at 3 and 5 WAS	0.48	8.20	0.42	198.0	178.6	188.3	15.7	22.5	19.1	476	406	441
T ₆ : 75% RDN + foliar spray of nano urea @ 4 ml/l at 3 -4 WAS	0.48	8.20	0.42	198.0	180.2	189.1	15.7	21.2	18.4	475	397	436
T ₇ : 50% RDN + foliar spray of urea @ 1.5% at 3 and 5 WAS	0.47	8.21	0.41	182.0	184.8	183.4	15.7	21.8	18.8	479	409	444
T ₈ : 50% RDN + foliar spray of nano urea @ 2 ml/l at 3 and 5 WAS	0.48	8.21	0.41	178.0	178.5	178.2	15.7	23.5	19.6	479	415	447
T ₉ : 50% RDN + foliar spray of urea @ 2.5 % at 3 and 5 WAS	0.47	8.21	0.41	180.0	182.3	181.2	15.7	23.2	19.4	478	414	446
T ₁₀ : 50% RDN + foliar spray of nano urea @ 4 ml/l at 3 -4 WAS	0.47	8.21	0.41	180.0	185.5	182.7	15.7	22.4	19.1	478	403	441
CD at 5 %	-	-	-	-	NS		-	NS		-	NS	
CV (%)	-	-	-	-	4.0		-	6.5		-	5	
Initial value (Dhule)	0.48	8.20	0.41	206.0	-		15.2	-		472	-	

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Table II.23: PMAT 3A1: Effect of foliar application of nano DAP on grain yield, stover yield and plant height of pearl millet in Zone A1 during *kharif* 2024

Treatment	Grain yield (q/ha)			Stover yield (q/ha)			Plant height (cm)		
	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean
T ₁ : Control	19.53	11.60	15.57	47.33	20.60	33.97	130.0	133.0	131.5
T ₂ : RDP	28.23	20.23	24.23	71.37	40.53	55.95	152.9	163.5	158.2
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	23.97	15.43	19.70	68.47	29.30	48.88	148.8	157.6	153.2
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	21.00	13.77	17.38	62.63	25.73	44.18	147.0	155.0	151.0
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 WAS	24.90	16.00	20.45	70.47	27.97	49.22	153.3	158.2	155.8
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 WAS	23.97	16.57	20.27	73.33	30.87	52.10	150.7	159.9	155.3
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	24.47	17.37	20.92	70.37	31.80	51.08	154.6	160.7	157.7
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	24.20	14.23	19.22	62.70	26.70	44.70	143.2	155.6	149.4
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	25.33	18.03	21.68	70.53	33.57	52.05	151.6	161.4	156.5
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	23.33	14.60	18.97	60.47	27.40	43.93	146.3	156.4	151.4
CD at 5 %	NS	3.01		12.15	5.79		8.6	7.7	
CV (%)	18.6	11.0		10.7	11.4		3.4	2.9	

Table II.24: PMAT 3A1: Effect of foliar application of nano DAP on plant population, total and effective tillers/plant of pearl millet in Zone A1 during *kharif* 2024

Treatment	Plant population ('000/ha)			Total tillers/plant			Effective tillers/plant		
	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean
T ₁ : Control	129.6	97.6	113.6	3.4	2.6	3.0	3.0	1.8	2.4
T ₂ : RDP	134.7	103.3	119.0	5.9	4.2	5.0	5.2	3.6	4.4
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	132.3	98.1	115.2	4.9	3.5	4.2	4.3	2.7	3.5
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	132.9	97.7	115.3	4.7	3.1	3.9	4.1	2.4	3.3
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 WAS	132.2	98.7	115.4	5.5	3.6	4.5	4.8	2.9	3.9
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 WAS	130.4	99.2	114.8	5.2	3.7	4.4	4.5	3.0	3.8
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	130.5	100.4	115.4	4.5	3.8	4.2	3.9	3.1	3.5
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	130.8	97.9	114.3	4.9	3.2	4.0	4.3	2.4	3.3
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	131.7	102.7	117.2	5.0	3.9	4.4	4.4	3.3	3.8
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	130.3	98.1	114.2	4.5	3.4	4.0	4.0	2.5	3.2
CD at 5 %	NS	3.3		1.0	0.4		0.9	0.4	
CV (%)	5.3	1.9		12.1	6.9		12.2	8.2	

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Table II.25: PMAT 3A1: Effect of foliar application of nano DAP on test weight, protein content, N and P content in grain of pearl millet in Zone A1 during *kharif* 2024

Treatments	Test weight (g)			Mandor		
	BKR	MDR	Mean	Protein content in grain (%)	N Content grain (%)	P Content grain (%)
T ₁ : Control	7.9	8.7	8.3	7.06	1.13	0.24
T ₂ : RDP	8.3	8.9	8.6	9.25	1.48	0.33
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	8.3	8.7	8.5	8.13	1.30	0.28
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	8.2	8.8	8.5	7.92	1.27	0.26
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 weeks after sowing	8.2	8.7	8.5	8.25	1.32	0.28
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 weeks after sowing	8.3	8.8	8.6	8.61	1.38	0.29
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 weeks after sowing	8.3	8.9	8.6	8.66	1.39	0.30
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 weeks after sowing	8.3	8.9	8.6	7.61	1.22	0.27
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 weeks after sowing	8.2	9.0	8.6	8.98	1.44	0.31
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 weeks after sowing	8.3	8.8	8.5	8.03	1.28	0.27
CD at 5 %	NS	NS		0.90	0.144	0.01
CV (%)	2.8	1.8		6.3	6.3	2.88

Table II.26: PMAT 3A1: Effect of foliar application of nano DAP on N and P content of fodder and economics of pearl millet in Mandor centre (Zone A1) during *kharif* 2024

Treatments	Mandor				
	N Content fodder (%)	P Content fodder (%)	Gross return (Rs/ha)	Net return (Rs/ha)	BC ratio
T ₁ : Control	0.60	0.16	43840	20540	1.88
T ₂ : RDP	0.99	0.23	79459	53959	3.12
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	0.76	0.20	59558	33858	2.32
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	0.69	0.19	52865	26365	2.00
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 weeks after sowing	0.77	0.20	60178	34478	2.34
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 weeks after sowing	0.79	0.21	63551	36251	2.33
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 weeks after sowing	0.82	0.21	66258	40858	2.61
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 weeks after sowing	0.72	0.18	54718	28518	2.09
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 weeks after sowing	0.86	0.22	69156	43656	2.71
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 weeks after sowing	0.74	0.19	56135	29135	2.08
CD at 5 %	0.09	0.01	11607	11607	0.44
CV (%)	7.1	3.1	11.1	19.3	10.9

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Table II.27: PMAT 3A: Effect of foliar application of nano DAP on grain yield, stover yield and plant height of pearl millet in Zone A during *kharif* 2024

Treatment	Grain yield (q/ha)				Stover yield (q/ha)				Plant height (cm)			
	HSR	JMR	JPR	Mean	HSR	JMR	JPR	Mean	HSR	JMR	JPR	Mean
T ₁ : Control	20.54	14.20	23.65	19.46	70.67	27.49	56.40	51.52	190.7	175.5	164.0	176.7
T ₂ : RDP	37.12	24.71	25.13	28.99	114.87	41.33	59.97	72.06	214.7	198.1	177.7	196.8
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	30.61	19.38	26.37	25.45	102.32	32.26	62.82	65.80	205.7	185.1	179.0	189.9
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	27.92	17.30	26.39	23.87	96.47	29.28	63.14	62.96	200.0	181.9	179.7	187.2
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 weeks after sowing	31.90	19.64	27.76	26.44	105.13	33.56	66.29	68.33	208.0	188.2	179.7	192.0
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 weeks after sowing	32.92	20.16	27.56	26.88	107.05	35.63	65.57	69.42	210.0	189.3	180.0	193.1
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	33.16	21.96	30.19	28.44	108.30	37.43	72.12	72.62	211.7	191.5	184.7	195.9
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	29.91	17.61	29.45	25.66	100.73	29.83	70.15	66.90	205.0	183.1	183.3	190.5
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	33.29	24.41	30.93	29.55	109.04	39.14	73.51	73.90	212.3	194.8	185.0	197.4
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	31.02	18.59	30.78	26.80	103.80	30.49	73.56	69.28	207.7	183.5	189.0	193.4
CD at 5 %	3.50	4.92	4.31		6.32	6.06	8.41		6.78	12.44	NS	
CV (%)	6.6	14.4	9.0		3.6	10.4	7.3		1.9	3.8	4.2	

Table II.28: PMAT 3A: Effect of foliar application of nano DAP on total tillers/plant, effective tillers/plant and test weight of pearl millet in Zone A during *kharif* 2024

Treatment	Total tillers/plant				Effective tillers/plant				Test weight (g)			
	HSR	JMR	JPR	Mean	HSR	JMR	JPR	Mean	HSR	JMR	JPR	Mean
T ₁ : Control	2.7	3.3	3.7	3.2	1.7	2.0	1.6	1.7	10.0	9.1	9.7	9.6
T ₂ : RDP	3.3	4.1	4.0	3.8	2.8	3.1	1.6	2.5	11.3	11.4	10.1	10.9
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	2.8	3.6	4.7	3.7	2.4	2.5	2.0	2.3	10.6	10.0	9.7	10.1
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	2.4	3.4	4.1	3.3	2.0	2.3	1.9	2.1	10.4	9.4	9.8	9.8
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 weeks after sowing	2.9	3.7	4.2	3.6	2.4	2.7	1.9	2.4	10.6	10.2	9.9	10.3
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 weeks after sowing	2.8	3.8	4.7	3.8	2.5	2.8	2.0	2.4	10.8	10.4	9.9	10.4
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	3.0	3.9	4.8	3.9	2.6	2.9	2.9	2.8	10.6	10.9	10.0	10.5
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	2.7	3.5	4.7	3.6	2.3	2.4	2.5	2.4	10.3	9.5	10.0	9.9
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	3.1	4.0	4.9	4.0	2.6	3.0	2.8	2.8	10.8	11.2	10.3	10.8
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	3.0	3.5	4.8	3.8	2.4	2.5	2.8	2.6	10.5	9.8	10.0	10.1
CD at 5 %	NS	0.4	0.7		0.5	0.4	0.5		0.5	1.1	NS	
CV (%)	14.4	6.5	9.2		12.3	9.8	13.1		2.6	6.1	2.7	

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Table II.29: PMAT 3A: Effect of foliar application of nano DAP on economics of pearl millet in Zone A during kharif 2024

Treatment	Gross returns (Rs/ha)			Net returns (Rs/ha)			BC ratio		
	HSR	JMR	Mean	HSR	JMR	Mean	HSR	JMR	Mean
T ₁ : Control	68052	38249	53150	17350	17479	17414	1.34	1.84	1.59
T ₂ : RDP	120415	65908	93161	66093	41773	53933	2.22	2.73	2.47
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	100816	51676	76246	47946	28087	38016	1.91	2.19	2.05
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	92585	46178	69381	40643	23157	31900	1.78	2.01	1.90
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 WAS	104764	52456	78610	49514	27139	38327	1.90	2.07	1.98
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 WAS	107832	53963	80898	50782	27218	39000	1.89	2.02	1.96
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	108706	58643	83674	51076	31598	41337	1.89	2.17	2.03
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	98667	47008	72838	41935	20531	31233	1.74	1.78	1.76
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	109194	64939	87067	47964	35038	41501	1.78	2.17	1.98
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	102180	49524	75852	41848	20191	31019	1.69	1.69	1.69

Table II.30: PMAT 3A: Effect of foliar application of nano DAP on protein content, N and P content in grain of pearl millet in Zone A during kharif 2024

Treatment	Protein content (%)			N Content in grain (%)			P Content in grain (%)		
	HSR	JMR	Mean	HSR	JMR	Mean	HSR	JMR	Mean
T ₁ : Control	8.67	8.92	8.79	1.39	1.37	1.38	0.33	0.26	0.30
T ₂ : RDP	9.38	10.70	10.04	1.50	1.65	1.57	0.38	0.34	0.36
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	8.92	9.67	9.30	1.43	1.49	1.46	0.36	0.30	0.33
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	8.73	9.15	8.94	1.40	1.41	1.40	0.33	0.28	0.31
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 WAS	9.02	9.72	9.37	1.44	1.50	1.47	0.37	0.31	0.34
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 WAS	9.08	9.80	9.44	1.45	1.51	1.48	0.38	0.31	0.35
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	9.11	10.39	9.75	1.46	1.60	1.53	0.38	0.32	0.35
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	8.88	9.24	9.06	1.42	1.42	1.42	0.35	0.29	0.32
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	9.19	10.55	9.87	1.47	1.62	1.55	0.38	0.33	0.36
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	8.94	9.48	9.21	1.43	1.46	1.44	0.36	0.29	0.32
CD at 5 %	0.26	0.59		0.04	0.09		0.03	0.02	
CV (%)	1.7	3.5		1.7	3.5		4.3	3.7	

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Table II.31: PMAT 3A: Effect of foliar application of nano DAP on plant population, N, P & K content in fodder, K content in grain, Av. P and K in soil after harvesting of pearl millet in Zone A during kharif 2024

Treatment	N Content fodder (%)			P Content fodder (%)			K in Grain (%)	K in fodder (%)	Av. P in soil (%)	Av. K in soil (%)	Plant population ('000/ha)			
	HSR	JMR	Mean	HSR	JMR	Mean	HSR (After harvest of pearl millet)				HSR	JMR	JPR	Mean
T ₁ : Control	0.34	1.01	0.67	0.18	0.19	0.19	0.23	1.52	20.20	174.8	138.2	158.0	174.7	156.9
T ₂ : RDP	0.42	1.36	0.89	0.23	0.25	0.24	0.31	1.73	21.80	176.6	141.3	161.5	172.0	158.3
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	0.37	1.15	0.76	0.19	0.21	0.20	0.27	1.68	20.77	174.3	140.8	161.1	184.3	162.1
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	0.33	1.02	0.67	0.16	0.19	0.18	0.25	1.65	20.57	174.6	140.5	158.7	183.0	160.7
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 WAS	0.39	1.22	0.81	0.20	0.22	0.21	0.28	1.69	20.97	174.3	140.8	161.8	184.3	162.3
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 WAS	0.40	1.30	0.85	0.21	0.23	0.22	0.29	1.70	21.13	174.1	142.2	159.4	182.3	161.3
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	0.40	1.31	0.85	0.22	0.23	0.22	0.30	1.70	21.17	174.0	141.5	160.4	186.0	162.6
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	0.35	1.03	0.69	0.20	0.19	0.19	0.26	1.66	20.80	174.5	141.2	162.9	174.7	159.6
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	0.40	1.35	0.88	0.22	0.24	0.23	0.30	1.70	21.30	174.1	141.3	161.5	183.3	162.0
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	0.36	1.05	0.70	0.21	0.20	0.20	0.27	1.67	20.97	174.4	141.2	160.8	180.3	160.8
CD at 5 %	0.04	0.08		0.04	0.01		0.04	0.05	NS	NS	NS	NS	NS	
CV (%)	5.9	4.1		10.7	3.9		8.4	1.8	3.7	1.7	1.3	3.3	3.4	

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Table II.32: PMAT 3B: Effect of foliar application of nano DAP on grain yield, stover yield and plant population of pearl millet in Zone B during *kharif* 2024

Treatments	Grain yield (q/ha)					Stover yield (q/ha)					Plant population ('000/ha)				
	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean
T ₁ : Control	16.08	18.06	17.79	22.33	18.57	34.84	33.47	54.82	33.42	39.14	215.5	129.3	133.8	125.7	151.1
T ₂ : RDP	26.93	30.78	22.17	30.63	27.63	58.48	57.04	62.41	46.74	56.17	217.8	135.2	133.1	142.7	157.2
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	23.63	26.40	19.83	27.00	24.22	50.44	48.92	59.35	39.65	49.59	214.8	134.6	136.1	134.0	154.9
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	22.42	22.68	18.82	25.74	22.41	48.24	42.03	57.71	37.37	46.34	215.2	132.8	132.6	133.0	153.4
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 WAS	24.15	27.10	20.19	31.09	25.63	52.14	50.21	62.89	47.81	53.27	215.6	134.8	135.6	143.0	157.3
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 WAS	25.71	28.42	20.89	28.69	25.93	55.19	52.66	63.19	43.98	53.76	214.7	134.9	134.3	138.3	155.5
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	24.59	29.13	22.21	31.93	26.97	52.27	53.98	61.04	48.44	53.93	214.2	135.0	138.7	143.3	157.8
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	23.03	24.79	21.34	27.77	24.23	56.28	45.93	58.66	41.38	50.56	217.1	133.7	133.8	135.7	155.1
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	26.75	23.64	24.68	31.99	26.77	57.02	43.81	62.75	48.92	53.12	215.9	133.3	138.7	144.3	158.1
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	24.37	25.58	22.11	28.53	25.15	50.20	47.39	59.91	42.92	50.11	217.1	134.0	136.3	137.0	156.1
CD at 5 %	5.20	4.89	NS	3.57		9.86	9.06	NS	4.76		NS	2.0	NS	7.8	
CV (%)	12.7	11.0	12.2	7.2		11.1	11.0	7.3	6.4		0.9	0.9	2.5	3.3	

Table II.33: PMAT 3B: Effect of foliar application of nano DAP on total tillers/plant, effective tillers/plant and test weight of pearl millet in Zone B during *kharif* 2024

Treatments	Total tillers/plant					Effective tillers/plant					Test weight (g)				
	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean
T ₁ : Control	3.7	3.3	3.1	3.2	3.3	2.7	2.1	2.6	3.1	2.6	13.5	11.6	11.3	11.4	11.9
T ₂ : RDP	5.9	4.2	3.5	4.4	4.5	4.9	3.2	3.0	4.1	3.8	16.8	12.2	12.7	13.6	13.8
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	5.4	4.1	3.3	3.9	4.2	4.4	3.1	2.7	3.4	3.4	15.7	12.1	12.1	12.6	13.1
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	4.7	4.0	3.2	3.5	3.9	3.7	2.9	2.9	3.3	3.2	15.8	12.0	11.1	12.4	12.8
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 WAS	5.3	4.1	3.5	4.4	4.3	4.3	3.1	3.1	4.1	3.6	16.1	12.1	12.2	13.5	13.5
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 WAS	5.6	4.1	3.6	4.2	4.4	4.6	3.1	3.2	4.0	3.7	16.6	12.1	12.6	12.9	13.5
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	5.3	4.2	3.6	4.4	4.4	4.3	3.1	3.1	4.2	3.7	15.6	12.2	12.8	13.6	13.5
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	5.1	4.0	3.3	4.0	4.1	4.1	3.0	2.9	3.7	3.4	16.0	12.0	11.8	12.6	13.1
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	5.8	4.0	3.7	4.4	4.5	4.9	2.9	3.1	4.2	3.8	16.8	12.0	13.8	13.6	14.1
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	5.1	4.0	3.5	4.2	4.2	4.1	3.0	2.9	3.89	3.5	16.2	12.0	12.4	12.7	13.3
CD at 5 %	1.1	0.4	NS	0.3		0.9	0.3	0.3	0.3		1.8	0.3	NS	0.4	
CV (%)	12.2	6.5	7.7	4.9		12.3	6.8	5.5	4.5		6.6	1.3	9.1	1.6	

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Table II.34: PMAT 3B: Effect of foliar application of nano DAP on economics of pearl millet in Zone B during *kharif* 2024

Treatments	Gross returns (Rs/ha)					Net returns (Rs/ha)					BC ratio				
	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean
T ₁ : Control	54410	47828	41800	55883	49980	27910	19984	26539	19795	23557	2.05	1.72	2.74	1.55	2.02
T ₂ : RDP	91124	81513	52103	76645	75346	59624	51419	35126	38557	46181	2.89	2.71	3.07	2.01	2.67
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	79812	69915	46592	67559	65969	49362	40364	30015	29721	37365	2.62	2.37	2.81	1.79	2.40
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	75794	60064	44225	64398	61120	46594	31076	28077	27060	33202	2.59	2.07	2.74	1.72	2.28
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 WAS	81663	71766	47446	77788	69666	51013	40015	28897	40450	40094	2.66	2.26	2.56	2.08	2.39
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 WAS	86872	75260	49089	71791	70753	56122	41959	29040	34203	40331	2.82	2.26	2.45	1.91	2.36
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	82981	77148	52206	79906	73060	52131	43147	31657	40068	41751	2.69	2.27	2.54	2.01	2.38
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	79184	65648	50155	69479	66117	49784	34410	30035	29891	36030	2.69	2.10	2.49	1.76	2.26
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	90329	62608	57999	80057	72748	59479	28657	34450	41469	41014	2.93	1.84	2.47	2.07	2.33
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	81920	67732	51967	71381	68250	52420	34244	28847	33543	37263	2.78	2.02	2.25	1.89	2.24
CD at 5 %	16614	12950	NS	-		16614	12950	NS	-		NS	0.4	NS	-	
CV (%)	12.0	11.0	12.2	-		19.1	20.5	19.9	-		12.1	11.4	13.3	-	

Table II.35: PMAT 3B: Effect of foliar application of nano DAP on soil chemical properties after harvest of pearl millet in Zone B during *kharif* 2024

Treatments	Soil status after harvest											
	OC (%)	pH	EC	Available N (kg/ha)			Available P (kg/ha)			Available K (kg/ha)		
		DHL		DHL	VYP	Mean	DHL	VYP	Mean	DHL	VYP	Mean
T ₁ : Control	0.47	8.19	0.40	198.0	186.1	192.1	13.6	18.3	16.0	478	389	433
T ₂ : RDP	0.47	8.22	0.44	202.0	197.7	199.9	15.9	21.9	18.9	472	414	443
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	0.47	8.21	0.43	198.0	193.9	196.0	15.9	20.6	18.2	474	402	438
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	0.47	8.21	0.42	198.0	188.1	193.0	15.9	19.6	17.7	474	398	436
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 WAS	0.47	8.21	0.43	192.0	192.2	192.1	15.9	20.9	18.4	476	411	443
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 WAS	0.47	8.21	0.43	192.0	197.2	194.6	15.9	20.9	18.4	475	401	438
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	0.46	8.21	0.43	193.0	193.0	193.0	15.9	21.3	18.6	474	409	442
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	0.47	8.20	0.42	194.0	196.7	195.4	15.9	19.5	17.7	476	411	443
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	0.47	8.21	0.43	194.0	194.2	194.1	15.9	20.5	18.2	475	400	438
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	0.47	8.20	0.42	195.0	189.9	192.5	15.9	19.5	17.7	476	411	444
CD at 5 %	-	-	-	-	NS		-	NS		-	NS	
CV (%)	-	-	-	-	3.8		-	6.5		-	3.4	
Initial (Dhule)	0.5	8.2	0.4	204.0	-		15.4	-		469	-	

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Table II.36: PMAT 3B: Effect of foliar application of nano DAP on protein content, N and P content from grain after harvest of pearl millet in Zone B during kharif

Treatment	Protein content (%)				N Content from grain (%)				P Content from grain (%)			
	DHL	VYP	CBE	Mean	DHL	VYP	CBE	Mean	DHL	VYP	CBE	Mean
T ₁ : Control	9.63	11.48	10.32	10.48	1.56	1.84	1.18	1.53	0.46	0.24	0.19	0.30
T ₂ : RDP	9.81	13.18	11.18	11.39	1.56	2.11	1.39	1.69	0.48	0.37	0.25	0.37
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	9.81	12.70	10.56	11.02	1.56	2.03	1.22	1.60	0.47	0.29	0.23	0.33
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	9.88	11.28	10.48	10.55	1.56	1.81	1.18	1.52	0.47	0.27	0.22	0.32
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 WAS	9.88	11.84	11.28	11.00	1.57	1.90	1.41	1.63	0.49	0.28	0.26	0.34
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 WAS	9.94	12.47	10.86	11.09	1.58	2.00	1.33	1.64	0.50	0.34	0.24	0.36
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	9.75	12.80	11.32	11.29	1.57	2.05	1.43	1.68	0.50	0.29	0.26	0.35
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	9.75	11.05	10.68	10.49	1.57	1.77	1.28	1.54	0.49	0.32	0.23	0.35
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	9.75	12.34	11.35	11.15	1.58	1.98	1.46	1.67	0.50	0.35	0.27	0.37
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	9.81	12.09	10.73	10.88	1.57	1.94	1.31	1.60	0.49	0.31	0.24	0.35
CD at 5 %	NS	NS	0.42		NS	NS	0.17		NS	0.07	0.02	
CV (%)	1.8	18.9	2.2		3.4	18.9	7.4		10.3	13.6	5.5	

Table II.37: PMAT 3B: Effect of foliar application of nano DAP on plant height, N & P content from fodder after harvest of pearl millet in Zone B during kharif 2024

Treatment	N Content from fodder (%)				P Content from fodder (%)				Plant height (cm)				
	DHL	VYP	CBE	Mean	DHL	VYP	CBE	Mean	ABD1	DHL	VYP	CBE	Mean
T ₁ : Control	1.00	0.20	0.50	0.57	0.29	0.08	0.13	0.17	170.3	189.5	172.6	151.5	171.0
T ₂ : RDP	1.02	0.33	0.58	0.64	0.31	0.13	0.18	0.21	191.7	200.7	181.8	182.3	189.1
T ₃ : 75% RDP + seed treatment of nano DAP 5 ml/kg seed	1.01	0.23	0.53	0.59	0.30	0.12	0.14	0.19	193.1	195.5	179.0	168.6	184.0
T ₄ : 50% RDP + seed treatment of nano DAP 5 ml/kg seed	1.01	0.22	0.52	0.58	0.30	0.10	0.14	0.18	179.7	194.6	175.4	163.9	178.4
T ₅ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 WAS	1.03	0.20	0.58	0.61	0.32	0.12	0.18	0.21	191.6	196.0	182.2	182.5	188.1
T ₆ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 WAS	1.03	0.22	0.56	0.61	0.32	0.12	0.17	0.20	191.2	197.0	182.6	176.1	186.7
T ₇ : T ₃ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	1.04	0.25	0.59	0.62	0.33	0.12	0.18	0.21	180.6	198.3	184.5	182.8	186.6
T ₈ : T ₄ + foliar spray of nano DAP 2.5 ml/l at 3 & 5 WAS	1.03	0.26	0.54	0.61	0.32	0.12	0.15	0.20	190.0	195.0	176.7	173.9	183.9
T ₉ : T ₃ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	1.05	0.32	0.59	0.65	0.33	0.13	0.18	0.21	194.6	194.7	184.8	183.6	189.4
T ₁₀ : T ₄ + foliar spray of nano DAP 5.0 ml/l at 3 & 5 WAS	1.04	0.28	0.56	0.62	0.33	0.12	0.16	0.21	193.9	195.3	178.7	175.0	185.7
CD at 5 %	NS	NS	0.03		NS	NS	0.02		3.2	NS	NS	5.8	
CV (%)	6.0	30.7	3.1		14.5	15.9	8.7		1.0	2.0	3.6	1.9	

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Table II.38: PMAT 4A: Effect of millets & mungbean based intercropping systems on grain yield, dry fodder yield and pearl millet grain equivalent yield under rainfed conditions during kharif 2024 in Zone A

Treatment	Grain yield (q/ha)			Fodder yield (q/ha)			PMGEY (q/ha)		
	HSR	JMR	Mean	HSR	JMR	Mean	HSR	JMR	Mean
T1: Sole pearl millet (45 cm x 10 cm)	41.88	24.49	33.19	118.57	37.27	77.92	50.92	24.49	37.70
T2: Sole Proso millet (30 cm x 5 cm)	5.42	11.30	8.36	26.28	13.89	20.09	9.23	22.58	15.90
T3: Sole Foxtail millet (30 cm x 5 cm)	3.93	10.28	7.10	20.46	12.10	16.28	1.56	20.56	11.06
T4: Sole Little millet (30 cm x 5 cm)	-	20.18	20.18	66.02	63.52	64.77	11.01	32.28	21.65
T5: Sole Barnyard millet (30 cm x 5 cm)	9.65	23.38	16.51	55.33	55.52	55.43	18.93	37.40	28.16
T6: Sole mungbean (30 cm x 5 cm)	3.90	12.67	8.29	10.77	13.21	11.99	13.83	38.01	25.92
T7: Pearl millet + Proso millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm	37.57	13.95	25.76	111.21	21.40	66.30	46.59	27.37	36.98
T8: Pearl millet + Foxtail millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm	38.11	14.77	26.44	113.19	21.58	67.39	47.86	27.51	37.69
T9: Pearl millet + Little millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm	37.84	12.61	25.22	116.41	19.69	68.05	47.67	30.53	39.10
T10: Pearl millet + Barnyard millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm	32.92	12.54	22.73	99.68	18.42	59.05	47.72	34.72	41.22
T11: Pearl millet + mungbean (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm	39.07	19.99	29.53	116.53	29.64	73.08	50.69	41.43	46.06
CD at 5 %							3.41	7.21	
CV (%)							6.3	10.4	

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Table II.39: PMAT 4A: Effect of millets & mungbean based intercropping systems on gross returns, net returns and BC ratio of pearl millet under rainfed conditions during kharif 2024 in Zone A

Treatment	Gross returns (Rs/ha)			Net returns (Rs/ha)			BC ratio		
	HSR	JMR	Mean	HSR	JMR	Mean	HSR	JMR	Mean
T1: Sole pearl millet (45 cm x 10 cm)	133657	61225	97441	86159	33438	59799	2.81	2.20	2.51
T2: Sole Proso millet (30 cm x 5 cm)	24221	56450	40335	-22827	30476	3824	0.51	2.17	1.34
T3: Sole Foxtail millet (30 cm x 5 cm)	4095	51400	27748	-43003	25426	-8789	0.09	1.98	1.03
T4: Sole Little millet (30 cm x 5 cm)	28909	80700	54805	-18139	54726	18294	0.61	3.11	1.86
T5: Sole Barnyard millet (30 cm x 5 cm)	49683	93500	71592	2585	67526	35056	1.05	3.60	2.33
T6: Sole mungbean (30 cm x 5 cm)	36312	95025	65668	-12525	65574	26524	0.74	3.23	1.99
T7: Pearl millet + Proso millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm	122307	68425	95366	73312	35116	54214	2.50	2.05	2.27
T8: Pearl millet + Foxtail millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm	125640	68775	97208	76595	35466	56031	2.56	2.06	2.31
T9: Pearl millet + Little millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm	125142	76325	100733	76217	43016	59616	2.56	2.29	2.42
T10: Pearl millet + Barnyard millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm	125265	86800	106033	76220	53491	64856	2.55	2.61	2.58
T11: Pearl millet + mungbean (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm	133061	103575	118318	84963	68527	76745	2.77	2.96	2.86

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Table II.40: PMAT 4B: Effect of millets & mungbean based intercropping systems on grain yield, dry fodder yield and pearl millet grain equivalent yield under rainfed conditions during kharif 2024 in Zone B

Treatments	Grain yield (q/ha)				Fodder yield (q/ha)				PMGEY (q/ha)			
	ABD1	CBE	VYP	Mean	ABD1	CBE	VYP	Mean	ABD1	CBE	VYP	Mean
T1: Sole pearl millet (45 cm x 10 cm)	26.83	33.96	17.10	25.96	58.35	46.25	53.63	52.74	30.79	33.96	17.10	27.28
T2: Sole Proso millet (30 cm x 5 cm)	10.45	19.66	14.62	14.91	24.24	37.98	35.71	32.64	18.94	47.17	21.77	29.29
T3: Sole Foxtail millet (30 cm x 5 cm)	9.69	12.28	12.69	11.55	22.48	36.56	38.57	32.54	17.57	17.68	21.60	18.95
T4: Sole Little millet (30 cm x 5 cm)	11.55	14.46	11.41	12.47	27.02	50.77	37.35	38.38	20.95	39.32	16.99	25.75
T5: Sole Barnyard millet (30 cm x 5 cm)	8.69	22.88	13.73	15.10	19.56	62.25	41.65	41.15	15.73	54.90	23.38	31.34
T6: Sole mungbean (30 cm x 5 cm)	9.04	8.01	10.41	9.15	16.28	16.69	59.38	30.78	22.01	43.79	17.72	27.84
T7: Pearl millet + Proso millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm	14.76	23.87	15.65	18.09	28.21	34.78	36.93	33.31	27.06	40.10	25.14	30.77
T8: Pearl millet + Foxtail millet (2:2) 2 rows of PM at 30 cm: 2 rows of intercrop at 30 cm	15.03	21.31	17.25	17.86	34.88	31.57	37.79	34.75	27.20	27.13	28.26	27.53
T9: Pearl millet + Little millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm	13.95	25.79	15.84	18.53	26.92	36.14	36.67	33.24	26.63	39.94	23.99	30.18
T10: Pearl millet + Barnyard millet (2:2) 2 rows of PM at 30 cm: 2 rows of intercrop at 30 cm	14.22	20.18	16.82	17.07	33.59	30.44	36.03	33.35	24.98	39.62	26.81	30.47
T11: Pearl millet + mungbean (2:2) 2 rows of PM paired at 30 cm	16.10	26.15	15.40	19.22	28.42	32.98	34.76	32.05	31.09	37.83	26.30	31.74
CD at 5 %									6.81	16.28	2.99	
CV (%)									16.6	18.8	7.7	

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Table II.41: PMAT 4B: Effect of millets & mungbean based intercropping systems on gross returns, net returns and BC ratio of pearl millet under rainfed conditions during kharif 2024 in Zone B

Treatments	Gross returns (Rs/ha)				Net returns (Rs/ha)				BC ratio			
	ABD1	VYP	CBE	Mean	ABD1	VYP	CBE	Mean	ABD1	VYP	CBE	Mean
T1: Sole pearl millet (45 cm x 10 cm)	59830	40193	84957	61660	3079	23616	45871	24189	2.93	2.43	2.17	2.51
T2: Sole Proso millet (30 cm x 5 cm)	27887	51156	117968	65670	1894	35558	81736	39729	2.00	3.28	3.26	2.85
T3: Sole Foxtail millet (30 cm x 5 cm)	23821	50759	44245	39608	1757	35161	8013	14977	1.85	3.25	1.22	2.11
T4: Sole Little millet (30 cm x 5 cm)	33794	39941	98345	57360	2095	24343	62113	29517	2.20	2.56	2.71	2.49
T5: Sole Barnyard millet (30 cm x 5 cm)	18398	54940	137312	70217	1573	39342	101330	47415	1.66	3.52	3.82	3.00
T6: Sole mungbean (30 cm x 5 cm)	36935	41636	72087	50219	2201	25312	30977	19497	2.32	2.55	1.75	2.21
T7: Pearl millet + Proso millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm	47823	59086	100317	69075	2706	41488	60855	35016	2.50	3.36	2.54	2.80
T8: Pearl millet + Foxtail millet (2:2) 2 rows of PM at 30 cm: 2 rows of intercrop at 30 cm	48236	66396	67879	60837	2720	48798	28417	26645	2.51	3.77	1.72	2.67
T9: Pearl millet + Little millet (2:2) 2 rows of PM paired at 30 cm: 2 rows of intercrop at 30 cm	46560	56368	99909	67612	2663	38770	60447	33960	2.46	3.20	2.53	2.73
T10: Pearl millet + Barnyard millet (2:2) 2 rows of PM at 30 cm: 2 rows of intercrop at 30 cm	41697	63009	99117	67941	2498	45411	59755	35888	2.30	3.58	2.52	2.80
T11: Pearl millet + mungbean (2:2) 2 rows of PM paired at 30 cm	59707	61812	94634	72051	3109	43488	53940	33512	2.87	3.37	2.33	2.86
CD at 5 %	20090	7029	-		681	7029	-		0.69	0.42	-	
CV (%)	29.0	7.7	-		16.6	11.2	-		17.4	7.7	-	

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Table II.42: PMAT 7A1: Effect of organic and natural farming on grain yield of pearl millet crop during kharif 2022, 2023 and 2024 in Zone A1

Treatment	Grain yield (q/ha)								Zonal Mean
	BKR				MDR				
	2022	2023	2024	Mean	2022	2023	2024	Mean	
T ₁ :Control	19.34	19.10	16.53	18.32	7.53	6.37	10.67	8.19	13.26
T ₂ : RDN* through Farm yard manure (FYM)	15.55	15.57	18.03	16.38	15.63	14.67	13.90	14.73	15.56
T ₃ : RDN through Vermicompost (VC)	16.39	17.50	18.67	17.52	14.73	13.83	14.50	14.36	15.94
T ₄ : RDN through Sheep or Goat manure	15.96	17.73	18.20	17.30	15.80	15.63	14.87	15.43	16.37
T ₅ : RDN through FYM+ Biofertilizer	14.28	17.17	21.30	17.58	18.53	18.03	15.73	17.43	17.51
T ₆ : RDN through Vermicompost+ Biofertilizer	16.47	18.27	23.77	19.50	17.43	16.93	16.03	16.80	18.15
T ₇ : RDN through Poultry manure + Biofertilizer	16.01	18.33	24.00	19.45	17.83	17.70	16.63	17.39	18.42
T ₈ : *** Cow based bio formulation	16.44	17.13	23.13	18.90	16.73	18.53	13.00	16.09	17.50
T ₉ : RDF**	20.51	19.97	26.00	22.16	19.83	18.73	19.37	19.31	20.74
CD at 5 %	3.02	NS	3.13		2.90	2.91	3.33		
CV (%)	9.6	10.6	8.5		10.4	10.7	12.8		

Table II.43: PMAT 7A1: Effect of organic and natural farming on stover of pearl millet crop during kharif 2022, 2023 and 2024 in Zone A1

Treatment	Stover yield (q/ha)								Zonal Mean
	BKR				MDR				
	2022	2023	2024	Mean	2022	2023	2024	Mean	
T ₁ :Control	38.46	37.20	37.30	37.65	14.13	10.57	18.00	14.23	25.94
T ₂ : RDN* through Farm yard manure (FYM)	32.43	28.87	43.53	34.94	31.17	23.90	24.70	26.59	30.77
T ₃ : RDN through Vermicompost (VC)	30.55	33.27	45.77	36.53	29.40	22.57	26.27	26.08	31.30
T ₄ : RDN through Sheep or Goat manure	31.48	33.90	44.43	36.60	32.73	26.73	27.87	29.11	32.86
T ₅ : RDN through FYM+ Biofertilizer	27.16	30.53	44.10	33.93	38.70	31.47	29.13	33.10	33.52
T ₆ : RDN through Vermicompost+ Biofertilizer	32.10	34.13	51.63	39.29	34.20	30.10	31.23	31.84	35.57
T ₇ : RDN through Poultry manure + Biofertilizer	29.21	34.10	57.70	40.34	35.93	28.83	31.53	32.10	36.22
T ₈ : *** Cow based bio formulation	30.79	33.77	49.63	38.06	33.03	33.53	23.50	30.02	34.04
T ₉ : RDF**	40.52	39.80	59.00	46.44	41.37	33.90	35.17	36.81	41.63
CD at 5 %	7.29	5.63	13.09		5.47	5.98	5.63		
CV (%)	6.9	9.5	15.6		9.7	12.8	11.7		

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Table II.44: PMAT 7A1: Effect of organic and natural farming on growth and yield attributes of pearl millet crop during kharif 2024 in Zone A1

Treatment	Plant height (cm)			Plant population ('000/ha)			Total tillers/plant			Effective tillers/plant			Test wt. (g)		
	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean	BKR	MDR	Mean
T ₁ :Control	138.3	131.4	134.9	-	106.7	106.7	3.7	2.5	3.1	3.0	1.9	2.5	7.4	8.7	8.0
T ₂ : RDN* through Farm yard manure (FYM)	146.2	141.9	144.1	-	108.0	108.0	4.0	3.1	3.6	3.3	2.1	2.7	7.9	8.6	8.2
T ₃ : RDN through Vermicompost (VC)	147.7	144.2	146.0	-	108.5	108.5	4.3	3.2	3.8	3.6	2.3	3.0	7.9	8.7	8.3
T ₄ : RDN through Sheep or Goat manure	147.2	145.4	146.3	-	107.8	107.8	4.0	3.3	3.6	3.3	2.5	2.9	8.1	8.7	8.4
T ₅ : RDN through FYM+ Biofertilizer	150.0	148.0	149.0	-	109.9	109.9	4.2	3.4	3.8	3.5	2.6	3.0	7.8	8.8	8.3
T ₆ : RDN through Vermicompost+ Biofertilizer	151.8	156.2	154.0	-	109.3	109.3	4.4	3.5	4.0	3.7	2.8	3.2	8.1	8.9	8.5
T ₇ : RDN through Poultry manure + Biofertilizer	153.4	152.1	152.8	-	111.1	111.1	4.4	3.7	4.1	3.6	2.9	3.3	8.1	8.7	8.4
T ₈ : *** Cow based bio formulation	151.7	135.3	143.5	-	109.1	109.1	4.4	2.7	3.6	3.6	2.2	2.9	7.7	8.7	8.2
T ₉ : RDF**	158.3	159.9	159.1	-	112.1	112.1	4.6	4.1	4.4	3.7	3.5	3.6	8.2	8.8	8.5
CD at 5 %	NS	16.1		-	NS		NS	0.4		NS	0.4		NS	NS	
CV (%)	5.8	6.3		-	3.4		22.1	7.7		22.9	8.2		4.4	2.2	

Table II.45: PMAT 7A1: Effect of organic and natural farming on economics of pearl millet crop during kharif 2023 and 2024 in Zone A1

Treatment	Gross returns (Rs./ha)				Zonal mean	Net returns (Rs./ha)				Zonal mean	BC ratio (%)				Zonal mean
	BKR	MDR				BKR	MDR				BKR	MDR			
	2023	2023	2024	Mean		2023	2023	2024	Mean		2023	2023	2024	Mean	
T ₁ :Control	63468	22257	39683	30970	47219	33468	5292	20618	12955	23211	2.1	1.3	2.1	1.7	1.9
T ₂ : RDN* through Farm yard manure (FYM)	50998	51007	52543	51775	51387	14998	17865	24743	21304	18151	1.4	1.5	1.9	1.7	1.6
T ₃ : RDN through Vermicompost (VC)	57750	48123	55136	51630	54690	27250	14315	26336	20326	23788	1.9	1.4	1.9	1.7	1.8
T ₄ : RDN through Sheep or Goat manure	58615	55123	57139	56131	57373	28115	29648	30664	30156	29136	1.9	2.2	2.2	2.2	2.0
T ₅ : RDN through FYM+ Biofertilizer	55592	63963	60237	62100	58846	31592	30920	31737	31329	31460	2.3	1.9	2.1	2.0	2.2
T ₆ : RDN through Vermicompost+ Biofertilizer	59929	60393	62389	61391	60660	29429	26684	28680	27682	28556	1.9	1.8	1.9	1.8	1.9
T ₇ : RDN through Poultry manure + Biofertilizer	60117	61550	64160	62855	61486	29617	36174	36460	36317	32967	2.0	2.4	2.3	2.4	2.2
T ₈ : *** Cow based bio formulation	57138	66453	49400	57927	57533	28138	42733	27400	35067	31603	2.0	2.8	2.2	2.5	2.2
T ₉ : RDF**	66797	67173	73696	70435	68616	37797	46801	48196	47499	42648	2.3	3.3	2.9	3.1	2.7
CD at 5 %	8095	9857	12248			8095	9857	12248			0.3	0.4	0.5		
CV (%)	7.9	10.2	12.3			16.0	20.3	23.0			8.0	11.3	12.2		

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Table II.46: PMAT 7A1: Effect of organic and natural farming on the enzymatic activities in pearl millet under rainfed conditions during kharif 2024 in Mandor center Zone A1

Treatments	Dehydrogenase ($\mu\text{g TPF (g soil)}^{-1} \text{ (day)}^{-1}$)	Alkaline phosphatase ($\mu\text{g (g soil)}^{-1} \text{ (h)}^{-1}$)	Acid phosphatase ($\mu\text{g (g soil)}^{-1} \text{ (h)}^{-1}$)	Urease ($\mu\text{mol NH}_3 \text{ (g soil)}^{-1} \text{ (h)}^{-1}$)
T ₁ :Control	172.0	5.67	2.62	8.22
T ₂ : RDN* through Farm yard manure (FYM)	271.7	5.87	3.13	10.77
T ₃ : RDN through Vermicompost (VC)	286.8	5.99	3.25	10.72
T ₄ : RDN through Sheep or Goat manure	301.1	6.86	3.77	10.20
T ₅ : RDN through FYM+ Biofertilizer	458.1	10.83	4.19	14.70
T ₆ : RDN through Vermicompost+ Biofertilizer	444.9	10.53	4.16	13.47
T ₇ : RDN through Poultry manure + Biofertilizer	377.0	9.61	4.34	14.06
T ₈ : *** Cow based bio formulation	243.8	6.11	3.57	9.58
T ₉ : RDF**	252.6	6.22	2.54	8.25
CD at 5 %	37.9	0.62	0.84	1.55
CV (%)	7.0	4.7	13.7	8.0

Table II.47: PMAT 7A1: Effect of organic and natural farming on the soil microbial counts in pearl millet under rainfed conditions during kharif 2024 in Mandor center Zone A1

Treatments	SMBC ($\mu\text{g (g soil)}^{-1}$)	Bacterial population $\log_{10}(\text{CFU (g soil)}^{-1})$	Fungal population $\log_{10}(\text{CFU (g soil)}^{-1})$	Actinomycetes population $\log_{10}(\text{CFU (g soil)}^{-1})$
T ₁ :Control	300.17	9.43	5.52	7.39
T ₂ : RDN* through Farm yard manure (FYM)	358.67	9.81	5.85	7.92
T ₃ : RDN through Vermicompost (VC)	367.53	9.71	5.94	7.78
T ₄ : RDN through Sheep or Goat manure	432.83	10.33	6.24	7.97
T ₅ : RDN through FYM+ Biofertilizer	475.70	11.26	6.58	9.17
T ₆ : RDN through Vermicompost+ Biofertilizer	455.30	11.10	6.96	9.31
T ₇ : RDN through Poultry manure + Biofertilizer	440.30	10.96	6.90	8.84
T ₈ : *** Cow based bio formulation	364.43	9.74	6.16	8.29
T ₉ : RDF**	324.77	9.57	5.54	7.80
CD at 5 %	74.48	0.51	0.43	0.42
CV (%)	10.91	2.86	3.96	2.88

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Table II.48: PMAT 7A1: Effect of organic and natural farming on productivity, growth and yield attributes of chickpea crop during Rabi 2022-23 and 2023-24 in Mandor centre of Zone A1

Treatments	Seed yield (q/ha)			Straw yield (q/ha)			Plant height (cm)	Number of primary branches/plant	Number of pods/plant	Test wt. (g)
	2022-23	2023-24	Mean	2022-23	2023-24	Mean				
T ₁ :Control	10.97	14.93	12.95	17.90	21.97	19.93	38.6	2.9	26.6	138.5
T ₂ : RDN* through Farm yard manure (FYM)	18.90	19.30	19.10	24.40	27.90	26.15	46.0	3.4	31.9	141.8
T ₃ : RDN through Vermicompost (VC)	18.13	19.67	18.90	27.13	28.33	27.73	49.6	3.6	33.1	143.1
T ₄ : RDN through Sheep or Goat manure	21.20	20.63	20.92	29.90	28.80	29.35	50.2	3.7	35.3	143.3
T ₅ : RDN through FYM+ Biofertilizer	22.93	21.07	22.00	32.20	29.30	30.75	51.9	3.9	37.4	144.2
T ₆ : RDN through Vermicompost+ Biofertilizer	22.13	21.93	22.03	30.43	30.60	30.52	53.7	4.1	39.0	145.1
T ₇ : RDN through Poultry manure + Biofertilizer	22.43	23.00	22.72	31.60	31.47	31.53	55.3	4.3	43.3	146.5
T ₈ : *** Cow based bio formulation	24.27	19.13	21.70	33.17	27.73	30.45	43.3	3.2	30.4	140.0
T ₉ : RDF**	26.43	25.80	26.12	35.83	33.93	34.88	58.8	4.7	48.8	150.3
CD at 5 %	3.08	2.85		4.88	2.47		5.8	0.4	6.3	4.6
CV (%)	8.5	7.9		9.6	4.9		6.6	6.5	9.9	1.9

Table II.49: PMAT 7A1: Effect of organic and natural farming on economics of chickpea crop during Rabi 2022-23 and 2023-24 in Mandor centre of Zone A1

Treatments	Gross returns (Rs./ha)			Net returns (Rs./ha)			BC ratio (%)		
	2023	2024	Mean	2023	2024	Mean	2023	2024	Mean
T ₁ :Control	72827	101007	86917	48862	72007	60435	3.07	3.48	3.28
T ₂ : RDN* through Farm yard manure (FYM)	120436	130102	125269	85274	96302	90788	3.40	3.85	3.63
T ₃ : RDN through Vermicompost (VC)	118379	132487	125433	80551	94687	87619	3.13	3.50	3.32
T ₄ : RDN through Sheep or Goat manure	137022	138165	137594	96527	102690	99609	3.37	3.90	3.63
T ₅ : RDN through FYM+ Biofertilizer	148149	140973	144561	112702	103473	108087	4.20	3.76	3.98
T ₆ : RDN through Vermicompost+ Biofertilizer	142428	146857	144643	104315	104148	104232	3.73	3.44	3.59
T ₇ : RDN through Poultry manure + Biofertilizer	144972	153440	149206	104192	116740	110466	3.53	4.18	3.86
T ₈ : *** Cow based bio formulation	156006	129045	142526	125286	95245	110266	5.07	3.82	4.44
T ₉ : RDF**	169686	170892	170289	142314	136392	139353	6.20	4.96	5.58
CD at 5 %	19785	17549		19785	17549		0.57	0.51	0.54
CV (%)	8.4	7.3		11.3	9.8		8.2	7.5	7.8

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Table II.50: PMAT 7A1: Effect of organic and natural farming on the enzymatic activities in chickpea under rainfed conditions during Rabi 2023-24 in Mandor center Zone A1

Treatments	Dehydrogenase ($\mu\text{g TPF}$) (g soil)-1 (day)-1	Alkaline phosphatase (μg) (g soil)-1 (h)-1	Acid phosphatase (μg) (g soil)-1 (h)-1	Urease ($\mu\text{mol NH}_3$) (g soil)-1(h)-1
T ₁ :Control	163.8	5.43	2.60	8.14
T ₂ : RDN* through Farm yard manure (FYM)	262.7	5.63	3.10	10.66
T ₃ : RDN through Vermicompost (VC)	278.2	5.73	3.23	10.62
T ₄ : RDN through Sheep or Goat manure	281.0	6.57	3.60	9.71
T ₅ : RDN through FYM+ Biofertilizer	409.9	7.37	3.80	13.36
T ₆ : RDN through Vermicompost+ Biofertilizer	392.7	7.20	3.77	12.25
T ₇ : RDN through Poultry manure + Biofertilizer	335.5	6.60	3.97	12.78
T ₈ : *** Cow based bio formulation	235.2	5.87	3.53	9.49
T ₉ : RDF**	225.7	6.00	2.50	8.17
CD at 5 %	34.0	0.56	0.81	1.48
CV (%)	6.8	5.1	13.9	8.0

Table II.51: PMAT 7A1: Effect of organic and natural farming on the soil microbial counts in chickpea under rainfed conditions during Rabi 2023-24 in Mandor center Zone A1

Treatments	SMBC (μg) (g soil)-1	Bacterial population $\log_{10}(\text{CFU})$ (g soil)-1	Fungal population $\log_{10}(\text{CFU})$ (g soil)-1	Actinomycetes population $\log_{10}(\text{CFU})$ (g soil)-1
T ₁ :Control	297.2	9.33	5.46	7.32
T ₂ : RDN* through Farm yard manure (FYM)	355.1	9.71	5.79	7.85
T ₃ : RDN through Vermicompost (VC)	363.9	9.61	5.88	7.71
T ₄ : RDN through Sheep or Goat manure	412.2	9.84	5.95	7.59
T ₅ : RDN through FYM+ Biofertilizer	432.4	10.24	5.98	8.34
T ₆ : RDN through Vermicompost+ Biofertilizer	413.9	10.10	6.32	8.46
T ₇ : RDN through Poultry manure + Biofertilizer	400.3	9.96	6.28	8.03
T ₈ : *** Cow based bio formulation	360.8	9.64	6.09	8.20
T ₉ : RDF**	321.6	9.48	5.48	7.73
CD at 5 %	71.5	0.49	0.41	0.39
CV (%)	11.0	2.9	4.0	2.8

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Table II.52: PMAT 7A: Effect of organic and natural farming on grain yield of pearl millet crop during kharif 2022, 2023 and 2024 in Zone A

Treatments	Grain yield (q/ha)															Zonal mean
	HSR				JMR				JPR				JMU			
	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2024	Mean	
T ₁ :Control	21.36	24.59	22.14	22.70	9.99	13.81	10.85	11.55	30.34	16.24	19.88	22.15	18.19	19.79	18.99	18.85
T ₂ : RDN* through Farm yard manure (FYM)	27.71	30.26	31.40	29.79	12.71	17.35	12.28	14.11	33.31	18.78	20.39	24.16	19.73	20.09	19.91	22.00
T ₃ : RDN through Vermicompost (VC)	28.91	31.35	31.52	30.59	11.42	16.69	11.81	13.31	37.72	23.17	22.02	27.64	20.29	21.19	20.74	23.07
T ₄ : RDN through Poultry manure(PM)	29.88	32.23	33.18	31.76	15.50	19.44	18.16	17.70	38.54	22.76	24.57	28.62	21.39	23.06	22.23	25.08
T ₅ : RDN through FYM+ Biofertilizer	31.32	32.51	33.11	32.31	14.64	20.67	20.18	18.50	37.49	21.20	22.67	27.12	23.21	23.56	23.39	25.33
T ₆ : RDN through Vermicompost+ Biofertilizer	32.09	33.52	33.58	33.07	12.65	18.23	14.48	15.12	40.14	26.42	24.61	30.39	24.03	24.10	24.07	25.66
T ₇ : RDN through Poultry manure + Biofertilizer	33.28	34.23	34.57	34.03	19.37	24.25	22.63	22.08	39.72	24.66	26.60	30.33	24.90	25.66	25.28	27.93
T ₈ : *** Cow based bio formulation	26.26	27.13	26.62	26.67	13.32	21.80	20.38	18.50	38.06	23.46	25.55	29.02	20.83	21.91	21.37	23.89
T ₉ : RDF**	40.56	40.69	39.15	40.13	25.46	28.05	24.39	25.97	39.34	23.71	26.14	29.73	28.96	29.97	29.46	31.32
CD at 5 %	3.04	3.20	4.35		3.59	6.11	4.26		4.34	3.83	3.23		4.46	4.41		
CV (%)	5.8	5.8	7.9		13.7	17.5	14.2		6.7	9.8	7.8		11.4	10.9		

Table II.53: PMAT 7A: Effect of organic and natural farming on stover yield of pearl millet crop during kharif 2022, 2023 and 2024 in Zone A

Treatments	Stover yield (q/ha)															Zonal mean
	HSR				JMR				JPR				JMU			
	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2024	Mean	
T ₁ :Control	64.90	79.92	62.43	69.08	23.43	28.95	19.95	24.11	79.75	39.67	45.19	54.87	37.12	38.76	37.94	41.76
T ₂ : RDN* through Farm yard manure (FYM)	75.97	101.36	88.49	88.60	28.33	35.24	22.67	28.75	87.31	47.23	50.12	61.55	39.25	41.68	40.47	49.70
T ₃ : RDN through Vermicompost (VC)	77.61	104.43	92.13	91.39	26.85	34.15	21.26	27.42	98.88	56.37	52.63	69.29	41.38	42.98	42.18	52.21
T ₄ : RDN through Poultry manure(PM)	84.14	106.15	93.17	94.49	31.08	36.44	29.61	32.38	96.42	57.89	51.80	68.70	42.09	43.87	42.98	54.45
T ₅ : RDN through FYM+ Biofertilizer	85.87	107.05	97.05	96.66	31.33	40.30	31.93	34.52	98.33	57.95	51.03	69.10	43.35	44.47	43.91	55.92
T ₆ : RDN through Vermicompost+ Biofertilizer	87.10	108.49	99.10	98.23	30.12	35.42	26.41	30.65	98.23	64.26	53.75	72.08	46.44	46.09	46.26	56.26
T ₇ : RDN through Poultry manure + Biofertilizer	90.15	109.13	101.17	100.15	36.76	43.78	35.18	38.58	97.33	63.14	54.80	71.76	45.40	48.11	46.76	58.94
T ₈ : *** Cow based bio formulation	75.56	87.94	74.83	79.44	30.81	41.46	32.19	34.82	99.82	57.97	55.87	71.22	41.91	43.77	42.84	51.71
T ₉ : RDF**	111.79	116.81	107.95	112.19	42.12	49.92	38.24	43.43	97.11	57.79	56.14	70.35	50.64	51.77	51.21	63.86
CD at 5 %	8.71	6.02	5.82		5.87	8.27	4.80		10.69	8.21	5.69		NS	5.69		
CV (%)	6.0	3.4	3.7		10.8	12.3	9.6		6.5	8.4	6.2		10.1	7.3		

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Table II.54: PMAT 7A: Effect of organic and natural farming on growth and yield attributes of pearl millet crop during kharif 2024 in Zone A

Treatment	Total tillers/plant					Effective tillers/plant					Earhead Length (cm)					Plant height (cm)				
	HSR	JMR	JPR	JMU	Mean	HSR	JMR	JPR	JMU	Mean	HSR	JMR	JPR	JMU	Mean	HSR	JMR	JPR	JMU	Mean
T ₁ :Control	2.0	2.2	3.9	3.2	2.8	1.3	1.4	2.2	2.3	1.8	20.7	19.4	25.0	23.3	22.1	185.0	155.5	158.3	185.6	171.1
T ₂ : RDN* through Farm yard manure (FYM)	2.7	2.5	4.0	3.3	3.1	2.0	1.6	2.8	2.5	2.2	22.3	20.1	26.5	23.8	23.2	206.7	159.7	171.7	186.1	181.0
T ₃ : RDN through Vermicompost (VC)	2.8	2.4	5.2	3.5	3.5	2.1	1.5	3.1	2.6	2.3	22.7	19.7	27.0	23.9	23.3	200.0	156.5	185.0	194.5	184.0
T ₄ : RDN through Poultry manure(PM)	3.0	2.7	5.1	3.7	3.6	2.2	2.0	3.3	2.7	2.6	22.8	20.5	27.0	25.2	23.9	198.3	164.0	189.3	198.4	187.5
T ₅ : RDN through FYM+ Biofertilizer	2.8	2.9	4.8	3.9	3.6	2.2	2.1	3.1	3.2	2.7	20.8	21.1	27.3	25.6	23.7	193.3	170.1	185.0	198.6	186.8
T ₆ : RDN through Vermicompost+ Biofertilizer	2.9	2.6	5.3	3.9	3.7	2.3	1.8	3.3	3.2	2.7	22.7	20.2	27.0	25.9	23.9	188.3	163.4	192.3	200.8	186.2
T ₇ : RDN through Poultry manure + Biofertilizer	3.0	3.5	5.2	4.1	3.9	2.4	2.7	3.7	3.3	3.0	22.0	23.2	28.5	26.2	25.0	202.7	174.3	191.7	201.1	192.4
T ₈ : *** Cow based bio formulation	2.3	3.1	5.0	3.6	3.5	1.7	2.4	3.2	2.6	2.5	20.7	21.7	28.0	24.6	23.8	178.3	171.4	183.3	193.5	181.6
T ₉ : RDF**	3.3	3.6	5.3	4.1	4.1	2.6	2.9	3.7	3.3	3.1	24.7	25.1	28.5	26.4	26.2	210.0	178.4	191.7	205.1	196.3
CD at 5 %	0.6	0.5	0.6	NS		0.6	0.4	0.5	NS		2.3	3.0	2.0	NS		17.5	15.0	19.6	NS	
CV (%)	12.0	9.4	6.8	12.2		15.8	12.1	8.4	16.4		6.0	8.1	4.3	7.8		5.1	5.2	6.1	5.7	

Table II.55: PMAT 7A: Effect of organic and natural farming on test weight, protein content and earhead girth of pearl millet crop during kharif 2024 in Zone A

Treatment	Test weight (g)					Protein content (%)				Earhead Girth (cm)					Plant population ('000/ha)		
	HSR	JMR	JPR	JMU	Mean	HSR	JMR	JPR	Mean	HSR	JMR	JPR	JMU	Mean	HSR	JPR	Mean
T ₁ :Control	9.0	9.1	10.7	11.9	10.2	8.6	9.2	8.9	8.9	36.1	2.5	28.1	30.8	24.4	138.6	167.7	153.2
T ₂ : RDN* through Farm yard manure (FYM)	10.3	10.1	10.9	11.7	10.8	9.0	9.4	9.0	9.2	38.0	2.8	30.1	33.1	26.0	140.5	166.0	153.3
T ₃ : RDN through Vermicompost (VC)	10.4	9.7	11.6	12.8	11.1	9.2	10.3	9.1	9.5	37.1	2.7	32.0	33.6	26.4	140.7	168.3	154.5
T ₄ : RDN through Poultry manure(PM)	10.5	10.3	11.5	12.9	11.3	9.2	8.7	9.2	9.0	37.7	3.0	32.2	34.6	26.8	141.2	170.3	155.8
T ₅ : RDN through FYM+ Biofertilizer	10.5	10.4	11.0	13.1	11.3	9.2	11.2	9.1	9.8	38.2	3.1	30.6	36.6	27.1	142.7	165.7	154.2
T ₆ : RDN through Vermicompost+ Biofertilizer	10.6	10.1	11.6	13.3	11.4	9.4	10.1	9.2	9.6	36.1	2.8	32.3	37.5	27.2	142.8	170.0	156.4
T ₇ : RDN through Poultry manure + Biofertilizer	10.9	10.8	11.6	13.5	11.7	9.5	11.1	9.3	10.0	36.6	3.3	32.8	37.8	27.6	143.2	168.0	155.6
T ₈ : *** Cow based bio formulation	9.9	10.5	11.1	12.1	10.9	8.8	11.3	9.0	9.7	37.1	3.2	29.1	34.3	25.9	141.7	167.0	154.4
T ₉ : RDF**	11.0	11.1	11.4	15.3	12.2	10.1	10.0	8.9	9.7	38.0	3.5	31.5	40.7	28.4	142.3	169.0	155.7
CD at 5 %	0.5	1.1	NS	NS		0.3	0.7	NS		NS	0.4	2.4	NS		NS	NS	
CV (%)	3.0	6.3	3.9	8.9		4.2	3.8	3.5		4.0	8.1	4.5	13.5		1.4	2.3	

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Table II.56: PMAT 7A: Effect of organic and natural farming on soil chemical properties after pearl millet crop harvest during kharif 2022, 2023 and 2024 in Zone A

Treatment	Soil status after harvest																
	OC (%)								Zonal Mean	pH				EC			
	HSR				JMR					HSR							
	2022	2023	2024	Mean	2022	2023	2024	Mean		2022	2023	2024	Mean	2022	2023	2024	Mean
T ₁ :Control	0.32	0.33	0.32	0.32	0.51	0.49	0.47	0.49	0.41	8.31	8.20	8.16	8.22	0.27	0.31	0.30	0.30
T ₂ : RDN* through Farm yard manure (FYM)	0.35	0.38	0.40	0.38	0.62	0.63	0.65	0.64	0.51	8.29	8.17	8.13	8.20	0.26	0.35	0.33	0.31
T ₃ : RDN through Vermicompost (VC)	0.34	0.37	0.38	0.36	0.58	0.60	0.63	0.60	0.48	8.29	8.12	8.14	8.19	0.25	0.36	0.31	0.31
T ₄ : RDN through Poultry manure(PM)	0.34	0.35	0.37	0.35	0.65	0.66	0.68	0.66	0.51	8.30	8.15	8.16	8.21	0.26	0.32	0.31	0.30
T ₅ : RDN through FYM+ Biofertilizer	0.36	0.39	0.42	0.39	0.66	0.69	0.71	0.69	0.54	8.28	8.15	8.08	8.17	0.25	0.34	0.31	0.30
T ₆ : RDN through Vermicompost+ Biofertilizer	0.35	0.38	0.39	0.37	0.64	0.65	0.68	0.65	0.51	8.28	8.16	8.10	8.18	0.25	0.34	0.30	0.30
T ₇ : RDN through Poultry manure + Biofertilizer	0.36	0.37	0.38	0.37	0.68	0.71	0.72	0.70	0.54	8.29	8.25	8.12	8.22	0.25	0.34	0.30	0.29
T ₈ : *** Cow based bio formulation	0.33	0.34	0.34	0.34	0.59	0.60	0.63	0.61	0.47	8.30	8.22	8.13	8.22	0.27	0.35	0.30	0.31
T ₉ : RDF**	0.30	0.32	0.33	0.32	0.46	0.45	0.44	0.45	0.38	8.32	8.23	8.19	8.25	0.28	0.34	0.32	0.32
CD at 5 %	0.03	0.02	0.02		0.04	0.02	0.07			0.02	NS	0.05		0.02	0.03	NS	
CV (%)	5.3	4.1	3.2		3.9	2.1	6.7			0.2	0.8	0.5		4.7	6.4	5.1	

Table II.57: PMAT 7A: Effect of organic and natural farming on available N, P and K status of soil after pearl millet harvest during kharif 2022, 2023 and 2024 in Zone A

Treatment	Soil status after harvest																
	Available N (kg/ha)								Zonal Mean	Av. P (kg/ha)				Av. K(kg/ha)			
	HSR				JMR					JMR				JMR			
	2022	2023	2024	Mean	2022	2023	2024	Mean		2022	2023	2024	Mean	2022	2023	2024	Mean
T ₁ :Control	183.3	183.5	179.7	182.2	186.1	183.5	182.5	184.0	182.9	18.2	18.0	17.5	17.9	296.4	293.5	291.6	294
T ₂ : RDN* through Farm yard manure (FYM)	188.3	191.7	194.8	191.6	191.6	192.6	192.8	192.3	191.6	22.3	22.8	22.9	22.7	299.7	300.8	301.7	301
T ₃ : RDN through Vermicompost (VC)	188.7	192.0	192.7	191.1	190.5	191.9	192.1	191.5	191.0	22.2	22.4	22.7	22.4	308.8	310.6	311.7	310
T ₄ : RDN through Poultry manure(PM)	189.0	193.3	193.7	192.0	198.3	200.1	201.2	199.9	193.3	25.0	25.4	25.4	25.3	317.3	319.9	320.8	319
T ₅ : RDN through FYM+ Biofertilizer	189.0	194.2	195.3	192.8	188.6	189.9	190.5	189.6	192.0	24.4	24.6	24.9	24.6	315.7	317.4	318.4	317
T ₆ : RDN through Vermicompost+ Biofertilizer	190.0	196.0	193.8	193.3	199.6	201.8	202.0	201.2	194.5	24.9	25.1	25.2	25.0	320.5	321.6	322.2	321
T ₇ : RDN through Poultry manure + Biofertilizer	191.0	196.7	194.5	194.0	202.9	205.0	205.6	204.5	195.8	27.0	27.6	27.8	27.5	322.0	323.9	324.1	323
T ₈ : *** Cow based bio formulation	186.7	188.6	183.7	186.3	196.6	199.0	199.1	198.2	188.4	24.4	24.8	24.9	24.7	317.0	318.2	319.0	318
T ₉ : RDF**	186.7	187.3	192.7	188.9	225.4	223.4	220.2	223.0	196.2	27.2	27.2	28.3	27.5	311.3	309.8	315.7	312
CD at 5 %	3.1	5.0	4.3		10.5	9.6	20.0			1.6	2.2	4.3		10.5	9.3	19.4	
CV (%)	1.0	1.5	1.3		3.0	2.8	5.8			3.9	5.2	10.1		1.9	1.7	3.5	

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Table II.58: PMAT 7A: Effect of organic and natural farming on gross and net returns of pearl millet crop during kharif 2022, 2023 and 2024 in Zone A

Treatment	Gross returns (Rs./ha)								Zonal mean	Net returns (Rs./ha)								Zonal mean
	HSR				JMR					HSR				JMR				
	2022	2023	2024	Mean	2022	2023	2024	Mean		2022	2023	2024	Mean	2022	2023	2024	Mean	
T ₁ :Control	63175	77459	70595	70410	24658	47220	34545	35474	52942	3703	8349	24438	12163	6828	29390	15075	17098	14631
T ₂ : RDN* through Farm yard manure (FYM)	80320	95929	100115	92121	31066	59098	39107	43090	67606	5361	18721	36815	20299	5236	33268	11637	16714	18506
T ₃ : RDN through Vermicompost (VC)	83460	99254	101165	94626	28202	56898	37556	40885	67756	-8327	199	17793	3222	-5628	23068	6086	7842	5532
T ₄ : RDN through Poultry manure(PM)	87053	101798	105731	98194	37193	65606	57441	53413	75804	18389	31728	50688	33602	17363	37776	27971	27703	30653
T ₅ : RDN through FYM+ Biofertilizer	90770	102685	106316	99924	35549	70072	63733	56451	78188	15703	25327	42910	27980	9719	44242	36263	30075	29027
T ₆ : RDN through Vermicompost+ Biofertilizer	92832	105506	107975	102104	31328	61774	46081	46394	74249	937	6301	24499	10579	-2652	27794	14461	13201	11890
T ₇ : RDN through Poultry manure + Biofertilizer	96246	107400	110972	104873	46085	81508	71408	66334	85603	27473	37180	55825	40159	26105	53528	41788	40474	40316
T ₈ : *** Cow based bio formulation	76816	85406	84852	82358	32799	73692	64359	56950	69654	9206	18623	29036	18955	10194	51012	39994	33733	26344
T ₉ : RDF**	117668	125088	124367	122374	59325	80134	76994	72151	97262	49854	56178	69883	58638	37967	58776	53717	50153	54396

Table II.59: PMAT 7A: Effect of organic and natural farming on BC ratio of pearl millet crop during kharif 2022, 2023 and 2024 in Zone A

Treatment	BC ratio (%)								Zonal mean
	HSR				JMR				
	2022	2023	2024	Mean	2022	2023	2024	Mean	
T ₁ :Control	1.06	1.12	1.53	1.24	1.38	2.65	1.77	1.93	1.59
T ₂ : RDN* through Farm yard manure (FYM)	1.07	1.24	1.58	1.30	1.20	2.29	1.42	1.64	1.47
T ₃ : RDN through Vermicompost (VC)	0.91	1.00	1.21	1.04	0.83	1.68	1.19	1.23	1.14
T ₄ : RDN through Poultry manure(PM)	1.27	1.45	1.92	1.55	1.88	2.36	1.95	2.06	1.81
T ₅ : RDN through FYM+ Biofertilizer	1.21	1.33	1.68	1.40	1.38	2.71	2.32	2.14	1.77
T ₆ : RDN through Vermicompost+ Biofertilizer	1.01	1.06	1.29	1.12	0.92	1.82	1.46	1.40	1.26
T ₇ : RDN through Poultry manure + Biofertilizer	1.40	1.53	2.01	1.65	2.31	2.91	2.41	2.54	2.10
T ₈ . *** Cow based bio formulation	1.14	1.28	1.52	1.31	1.45	3.25	2.64	2.45	1.88
T ₉ : RDF**	1.74	1.82	2.28	1.94	2.78	3.75	3.31	3.28	2.61

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Table II.60: PMAT 7: Effect of organic and natural farming on the soil microbial counts after pearl millet crop harvest at Hisar during kharif 2022, 2023 and 2024 Zone A

Treatment	Bacterial count				Fungal count (10^5 cfu/g soil)				Actinomycetes count ($10^{6/5}$ cfu/g soil)			
	HSR ($10^{9/7}$ cfu/g soil)				HSR				HSR			
	2022	2023	2024*	Mean	2022	2023	2024*	Mean	2022	2023	2024*	Mean
T ₁ :Control	3.30	4.54	4.10	3.98	3.35	3.32	2.80	3.16	2.20	2.77	10.83	5.27
T ₂ : RDN* through Farm yard manure (FYM)	4.50	5.86	5.57	5.31	3.53	3.71	3.48	3.57	2.42	3.10	11.93	5.82
T ₃ : RDN through Vermicompost (VC)	4.60	5.94	5.37	5.30	3.52	3.41	4.03	3.65	2.40	3.23	13.92	6.52
T ₄ : RDN through Poultry manure(PM)	4.40	5.73	5.05	5.06	3.51	3.63	4.52	3.89	2.36	3.35	13.83	6.51
T ₅ : RDN through FYM+ Biofertilizer	5.20	6.46	5.82	5.82	3.64	3.75	6.52	4.64	2.54	3.33	14.51	6.79
T ₆ : RDN through Vermicompost+ Biofertilizer	5.40	6.66	5.75	5.94	3.58	3.67	7.12	4.79	2.61	3.37	16.52	7.50
T ₇ : RDN through Poultry manure + Biofertilizer	5.35	6.07	5.52	5.64	3.54	3.69	7.47	4.90	2.54	3.40	15.70	7.21
T ₈ : *** Cow based bio formulation	5.50	6.13	5.25	5.63	4.51	3.60	4.50	4.20	2.88	3.32	13.98	6.73
T ₉ : RDF**	3.18	4.91	4.95	4.35	3.12	3.33	3.53	3.32	2.02	2.98	11.85	5.62
0-15 cm before sowing (Initial status)	3.20	4.96	4.34		3.15	3.36	3.46		2.12	3.15	12.06	5.78
CD at 5 %	1.05	0.21	0.38		0.92	NS	0.36		0.56	0.17	0.68	
CV (%)	7.6	2.1	4.2		8.7	5.4	4.3		7.5	3.1	2.9	

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Table II.61: PMAT 7A: Effect of organic and natural farming on seed yield of mustard crop in Pearl millet-mustard cropping system during Rabi 2022-23 and 2023-24 in Zone A

Treatment	Seed yield (q/ha)									Zonal mean
	HSR			JMR			JPR			
	2022-23	2023-24	Mean	2022-23	2023-24	Mean	2022-23	2023-24	Mean	
T ₁ :Control	5.26	5.45	5.36	5.81	4.65	5.23	8.68	8.55	8.62	6.40
T ₂ : RDN* through Farm yard manure (FYM)	7.50	7.84	7.67	7.99	5.62	6.81	11.17	10.33	10.75	8.41
T ₃ : RDN through Vermicompost (VC)	8.02	7.54	7.78	8.48	6.33	7.40	11.94	11.76	11.85	9.01
T ₄ : RDN through Poultry manure(PM)	8.27	7.61	7.94	9.97	7.49	8.73	12.59	11.44	12.01	9.56
T ₅ : RDN through FYM+ Biofertilizer	8.32	8.62	8.47	9.33	8.27	8.80	12.33	10.86	11.59	9.62
T ₆ : RDN through Vermicompost+ Biofertilizer	8.45	8.14	8.30	10.90	9.49	10.20	12.13	12.75	12.44	10.31
T ₇ : RDN through Poultry manure + Biofertilizer	8.48	8.36	8.42	13.35	11.77	12.56	12.62	12.56	12.59	11.19
T ₈ : *** Cow based bio formulation	6.12	6.25	6.19	8.32	6.65	7.49	12.08	10.29	11.18	8.29
T ₉ : RDF**	14.64	13.52	14.08	17.71	15.57	16.64	11.74	11.75	11.74	14.15
CD at 5 %	1.57	0.88		2.93	1.95		1.39	1.37		
CV (%)	10.8	6.2		16.5	13.2		6.8	7.0		

Table II.62: PMAT 7A: Effect of organic and natural farming on straw yield of mustard crop in Pearl millet-mustard cropping system during Rabi 2022-23 and 2023-24 in Zone A

Treatment	Straw yield (q/ha)									Zonal mean
	HSR			JMR			JPR			
	2022-23	2023-24	Mean	2022-23	2023-24	Mean	2022-23	2023-24	Mean	
T ₁ :Control	23.84	27.47	25.66	13.88	12.16	13.02	19.45	18.99	19.22	19.30
T ₂ : RDN* through Farm yard manure (FYM)	30.89	34.79	32.84	17.25	13.99	15.62	25.77	25.35	25.56	24.67
T ₃ : RDN through Vermicompost (VC)	31.07	32.65	31.86	17.91	14.02	15.96	27.70	27.29	27.49	25.11
T ₄ : RDN through Poultry manure(PM)	31.23	33.49	32.36	19.64	15.72	17.68	29.08	28.67	28.88	26.31
T ₅ : RDN through FYM+ Biofertilizer	33.94	37.56	35.75	20.77	17.14	18.96	28.56	27.48	28.02	27.58
T ₆ : RDN through Vermicompost+ Biofertilizer	34.54	36.49	35.52	21.43	18.87	20.15	28.11	27.66	27.88	27.85
T ₇ : RDN through Poultry manure + Biofertilizer	34.94	37.09	36.02	24.03	21.58	22.81	29.25	28.83	29.04	29.29
T ₈ : *** Cow based bio formulation	25.77	31.17	28.47	18.66	14.23	16.45	28.00	27.58	27.79	24.24
T ₉ : RDF**	48.03	47.89	47.96	28.42	24.30	26.36	27.12	26.70	26.91	33.74
CD at 5 %	4.66	3.36		4.78	3.17		3.12	3.59		
CV (%)	8.2	5.4		13.5	10.8		6.6	7.7		

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Table II.63: PMAT 7A: Effect of organic and natural farming on siliqua/plant, no. of siliqua in main shoot, plant height, siliqua length and oil content of mustard crop in Pearl millet-mustard cropping system during Rabi 2023-24 in Zone A

Treatment	Siliquae/plant				No. of siliquae on main shoot	Plant height (cm)	Length of siliqua (cm)	Oil content (%)
	HSR	JMR	JPR	Mean	HSR	JMR	JMR	HSR
T ₁ :Control	261.0	324.3	154.2	246.5	49.3	162.0	4.5	39.1
T ₂ : RDN* through Farm yard manure (FYM)	383.0	357.3	165.0	301.8	60.7	164.7	4.8	40.2
T ₃ : RDN through Vermicompost (VC)	359.0	354.7	183.2	298.9	56.3	169.7	5.2	39.6
T ₄ : RDN through Poultry manure(PM)	379.0	372.3	191.1	314.1	59.0	172.2	5.4	40.0
T ₅ : RDN through FYM+ Biofertilizer	400.0	379.3	167.8	315.7	63.0	174.3	5.4	40.4
T ₆ : RDN through Vermicompost+ Biofertilizer	384.0	400.0	190.1	324.7	61.7	179.1	5.5	40.2
T ₇ : RDN through Poultry manure + Biofertilizer	390.0	460.3	196.0	348.8	62.3	182.8	6.0	40.3
T ₈ : *** Cow based bio formulation	276.0	362.3	175.6	271.3	53.3	173.0	5.1	39.5
T ₉ : RDF**	541.0	513.0	170.7	408.2	89.0	189.3	6.1	40.5
CD at 5 %	33.0	71.8	15.6		6.2	13.6	0.8	NS
CV (%)	5.1	10.5	5.1		5.8	4.5	9.0	2.1

Table II.64: PMAT 7A: Effect of organic and natural farming on seeds/siliqua and test weight of mustard crop in Pearl millet-mustard cropping system during Rabi 2023-24 in Zone A

Treatment	No. of seeds/siliqua				Test weight (g)			
	HSR	JMR	JPR	Mean	HSR	JMR	JPR	Mean
T ₁ :Control	12.00	13.00	8.28	11.09	4.90	2.49	4.22	3.87
T ₂ : RDN* through Farm yard manure (FYM)	13.30	14.53	9.47	12.43	5.20	2.99	4.47	4.22
T ₃ : RDN through Vermicompost (VC)	12.90	14.67	10.87	12.81	5.10	2.74	4.79	4.21
T ₄ : RDN through Poultry manure(PM)	13.00	15.27	11.61	13.29	5.20	3.35	5.16	4.57
T ₅ : RDN through FYM+ Biofertilizer	14.40	15.47	11.07	13.65	5.50	3.43	4.95	4.63
T ₆ : RDN through Vermicompost+ Biofertilizer	14.20	15.60	11.97	13.92	5.30	3.13	5.22	4.55
T ₇ : RDN through Poultry manure + Biofertilizer	14.20	15.87	12.42	14.16	5.40	3.79	5.24	4.81
T ₈ : *** Cow based bio formulation	12.40	15.20	12.08	13.23	5.00	3.68	5.06	4.58
T ₉ : RDF**	15.60	17.80	12.16	15.19	5.60	4.55	5.12	5.09
CD at 5 %	0.90	2.18	0.81		0.30	0.62	0.45	
CV (%)	4.0	8.2	4.2		2.9	10.6	5.3	

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Table II.65: PMAT 7A: Effect of organic and natural farming on yield attributes and PMEY of mustard crop in Pearl millet-mustard cropping system during Rabi 2023-24 in Zone A

Treatment	Primary branches per plant			Secondary branches per plant			PMEY (q/ha)
	JMR	JPR	Mean	JMR	JPR	Mean	HSR
T ₁ :Control	4.9	3.1	4.0	7.5	8.1	7.8	47.2
T ₂ : RDN* through Farm yard manure (FYM)	5.3	3.7	4.5	8.2	8.8	8.5	61.1
T ₃ : RDN through Vermicompost (VC)	5.4	4.7	5.1	8.7	10.7	9.7	61.8
T ₄ : RDN through Poultry manure(PM)	5.9	5.1	5.5	9.7	11.4	10.5	63.1
T ₅ : RDN through FYM+ Biofertilizer	6.0	4.7	5.3	10.1	10.3	10.2	66.0
T ₆ : RDN through Vermicompost+ Biofertilizer	6.7	5.1	5.9	10.3	10.7	10.5	66.0
T ₇ : RDN through Poultry manure + Biofertilizer	7.4	5.8	6.6	12.3	13.1	12.7	67.4
T ₈ : *** Cow based bio formulation	5.7	5.3	5.5	9.4	12.0	10.7	52.7
T ₉ : RDF**	9.1	5.2	7.2	15.5	11.6	13.6	87.8
CD at 5 %	1.1	0.7		2.5	1.9		-
CV (%)	9.8	8.2		14.2	10.0		-

Table II.66: PMAT 7A: Effect of organic and natural farming on soil OC, available NPK of soil and economics of mustard crop after harvest in Pearl millet-mustard cropping system during Rabi 2023-24 in Jamnagar Zone A

Treatment	Soil after harvest				Gross returns (Rs./ha)	Net returns (Rs./ha)	B:C
	OC (%)	Available N (kg/ha)	Available P (kg/ha)	Available K (kg/ha)			
T ₁ :Control	0.47	181.4	17.6	287.3	34088	11864	1.53
T ₂ : RDN* through Farm yard manure (FYM)	0.65	193.3	23.1	303.2	41235	14011	1.51
T ₃ : RDN through Vermicompost (VC)	0.61	195.5	22.6	311.0	46277	14053	1.44
T ₄ : RDN through Poultry manure(PM)	0.68	200.9	25.2	321.4	54714	26240	1.92
T ₅ : RDN through FYM+ Biofertilizer	0.70	188.6	24.6	316.2	60401	33177	2.22
T ₆ : RDN through Vermicompost+ Biofertilizer	0.67	201.3	25.2	318.5	69272	36898	2.14
T ₇ : RDN through Poultry manure + Biofertilizer	0.70	204.8	27.5	324.4	85751	57127	3.00
T ₈ : *** Cow based bio formulation	0.62	198.8	24.7	316.9	48592	21593	1.80
T ₉ : RDF**	0.44	225.0	27.3	314.9	94635	65936	3.30
CD at 5 %	0.07	17.1	3.6	20.5	-	-	-
CV (%)	6.2	4.9	8.5	3.7	-	-	-

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Table II.67: PMAT 7B: Effect of organic and natural farming on grain yield of pearl millet crop during kharif 2022, 2023 and 2024 in Zone B

Treatment	Grain yield (q/ha)																				Zonal Mean
	ABD				DHL				VYP				CBE				PML				
	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean	
T ₁ :Control	19.38	15.04	14.1	16.18	10.65	13.30	14.63	12.86	17.16	16.45	14.38	15.99	17.49	17.49	16.24	17.07	12.29	14.35	13.40	13.35	15.09
T ₂ : RDN* through Farm yard manure (FYM)	20.72	17.90	17.4	18.66	15.59	20.99	21.23	19.27	22.56	19.87	21.11	21.18	20.28	20.28	19.53	20.03	21.94	24.16	23.19	23.10	20.45
T ₃ : RDN through Vermicompost (VC)	21.88	18.31	18.1	19.41	14.72	19.28	20.83	18.28	23.86	20.95	21.67	22.16	20.84	20.84	20.18	20.62	22.97	25.40	24.32	24.23	20.94
T ₄ : RDN through Poultry manure(PM)	22.83	18.43	18.3	19.85	14.09	18.96	19.37	17.47	22.24	20.62	20.56	21.14	19.68	19.68	19.24	19.53	23.92	29.54	25.11	26.19	20.84
T ₅ : RDN through FYM+ Biofertilizer	25.00	20.83	22.0	22.61	18.29	24.32	25.40	22.67	24.84	21.01	22.41	22.75	20.49	20.49	21.69	20.89	30.07	28.86	27.82	28.92	23.57
T ₆ : RDN through Vermicompost+ Biofertilizer	25.72	21.76	22.2	23.23	17.37	23.40	24.45	21.74	26.03	21.82	24.59	24.15	22.58	22.58	22.61	22.59	23.59	28.54	26.70	26.28	23.60
T ₇ : RDN through Poultry manure + Biofertilizer	26.39	22.36	23.4	24.04	16.72	22.12	23.10	20.65	23.93	21.65	20.16	21.91	23.41	23.41	22.11	22.98	27.40	27.96	26.90	27.42	23.40
T ₈ : *** Cow based bio formulation	22.43	18.29	19.2	19.98	12.85	17.95	18.85	16.55	21.61	19.81	19.84	20.42	22.85	22.85	24.39	23.37	22.92	23.33	14.39	20.22	20.11
T ₉ : RDF**	33.52	25.46	26.3	28.42	19.50	25.69	26.21	23.80	26.77	20.71	22.09	23.19	28.87	28.87	27.43	28.39	32.67	33.08	28.47	31.41	27.04
CD at 5 %	5.45	3.51	4.8		2.77	2.60	4.77		3.15	2.41	3.45		3.54	3.54	3.66		6.12	5.82	5.22		
CV (%)	12.9	10.1	13.7		10.2	7.2	12.7		7.8	6.8	9.5		9.3	9.3	9.7		14.5	12.7	12.8		

Table II.68: PMAT 7B: Effect of organic and natural farming on stover yield of pearl millet crop during kharif 2022, 2023 and 2024 in Zone B

Treatment	Stover yield (q/ha)																				Zonal Mean
	ABD				DHL				VYP				CBE				PML				
	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean	
T ₁ :Control	38.89	39.12	30.56	36.19	20.97	22.37	26.81	23.39	47.60	49.71	43.71	47.00	29.18	29.18	28.19	28.85	27.29	21.74	20.83	23.29	31.74
T ₂ : RDN* through Farm yard manure (FYM)	41.37	46.52	37.73	41.87	32.85	35.29	38.90	35.68	54.98	51.27	51.18	52.48	33.26	33.26	32.58	33.04	38.93	36.87	23.84	33.21	39.26
T ₃ : RDN through Vermicompost (VC)	43.66	47.61	39.82	43.69	29.97	32.49	38.16	33.54	55.12	52.55	49.54	52.40	32.66	32.66	33.64	32.99	41.71	37.80	36.80	38.77	40.28
T ₄ : RDN through Poultry manure(PM)	44.45	47.91	40.28	44.21	27.18	31.90	35.49	31.52	54.21	51.50	51.55	52.42	21.18	21.18	31.91	24.76	42.89	40.97	40.97	41.61	38.90
T ₅ : RDN through FYM+ Biofertilizer	46.87	55.21	43.29	48.46	35.42	40.91	46.54	40.96	57.29	53.61	52.59	54.50	31.23	31.23	33.94	32.13	48.43	44.31	44.61	45.78	44.37
T ₆ : RDN through Vermicompost+ Biofertilizer	47.34	57.66	47.45	50.82	33.80	39.35	44.79	39.31	59.54	54.70	54.07	56.10	34.57	34.57	34.59	34.58	46.81	40.07	45.83	44.24	45.01
T ₇ : RDN through Poultry manure + Biofertilizer	47.11	59.27	48.38	51.59	31.83	37.21	42.31	37.12	55.16	55.23	51.76	54.05	35.67	35.67	34.87	35.40	44.07	44.54	43.05	43.89	44.41
T ₈ : *** Cow based bio formulation	44.21	47.54	40.05	43.93	24.67	30.20	34.54	29.81	52.04	51.69	48.98	50.90	34.27	34.27	36.59	35.04	44.86	40.37	36.04	40.42	40.02
T ₉ : RDF**	58.10	66.20	57.41	60.57	37.05	43.21	48.02	42.76	61.25	52.39	51.25	54.96	40.28	40.28	41.25	40.60	53.15	48.61	46.99	49.58	49.69
CD at 5 %	7.45	9.21	9.05	8.57	8.10	4.35	8.74		6.02	NS	5.37		4.15	4.15	5.05		6.95	5.42	7.76		
CV (%)	9.3	10.2	12.1	10.5	15.3	7.2	12.7		6.2	5.5	6.1		7.3	7.3	8.5		9.2	7.9	11.8		

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Table II.69: PMAT 7B: Effect of organic and natural farming on earhead girth, plant height, plant population and test weight of pearl millet crop during kharif 2024 in Zone B

Treatment	Earhead girth (mm)				Plant height (cm)						Plant population ('000/ha)					Test weight (g)					
	DHL	VYP	CBE	Mean	ABD	DHL	VYP	CBE	PML	Mean	ABD	CBE	VYP	PML	Mean	ABD	VYP	DHL	PML	CBE	Mean
T ₁ :Control	28.0	31.5	25.7	28.4	172.9	178.7	161.1	165.4	123.0	160.2	204.4	132.0	134.3	147.0	154.4	13.4	10.8	11.4	9.8	13.2	11.7
T ₂ : RDN* through Farm yard manure (FYM)	29.6	32.0	31.6	31.1	177.0	190.7	170.5	174.6	151.0	172.7	207.4	138.0	134.0	146.5	156.5	14.1	11.1	11.9	12.8	12.6	12.5
T ₃ : RDN through Vermicompost (VC)	29.3	32.6	31.9	31.3	181.2	184.3	175.5	176.4	165.0	176.5	209.0	141.0	137.3	147.3	158.7	14.5	11.4	12.0	13.0	13.9	12.9
T ₄ : RDN through Poultry manure(PM)	29.1	32.5	32.4	31.4	184.3	183.9	174.3	173.8	169.0	177.1	206.3	143.0	138.0	146.6	158.5	14.8	11.3	11.9	13.9	13.7	13.1
T ₅ : RDN through FYM+ Biofertilizer	29.8	33.4	35.5	32.9	189.5	187.0	179.1	186.4	167.0	181.8	207.4	145.0	136.6	148.1	159.3	14.8	12.0	12.1	14.2	14.4	13.5
T ₆ : RDN through Vermicompost+ Biofertilizer	29.5	34.1	35.9	33.2	191.2	186.7	180.1	185.7	174.0	183.5	205.6	146.0	135.2	148.2	158.7	15.0	12.2	11.9	14.7	14.8	13.7
T ₇ : RDN through Poultry manure + Biofertilizer	29.4	33.0	36.5	33.0	194.0	185.0	178.2	187.8	175.0	184.0	207.4	145.0	133.8	148.4	158.6	15.0	11.3	12.1	15.0	14.7	13.6
T ₈ : *** Cow based bio formulation	29.0	31.9	37.9	32.9	180.5	184.3	168.8	190.7	164.0	177.7	204.2	149.0	132.4	148.1	158.4	14.0	11.2	12.1	13.3	14.9	13.1
T ₉ : RDF**	29.9	33.2	39.5	34.2	192.8	192.7	177.6	193.4	178.0	186.9	207.4	151.0	134.7	148.5	160.4	15.8	12.1	12.2	15.1	14.4	13.9
CD at 5 %	1.0	NS	2.3		13.6	NS	8.9	10.3	8.1		NS	NS	NS	0.8		1.1	0.8	NS	1.1	1.0	
CV (%)	2.0	3.5	3.9		4.2	2.7	2.9	3.3	2.8		1.0	5.0	1.6	0.3		4.4	4.1	2.6	4.6	4.1	

Table II.70: PMAT 7B: Effect of organic and natural farming on total tillers/plant, effective tillers/plant and earhead length of pearl millet crop during kharif 2024 in Zone B

Treatment	Total tillers/plant						Effective tillers/plant						Earhead Length (cm)			
	ABD	DHL	VYP	CBE	PML	Mean	ABD	DHL	VYP	CBE	PML	Mean	DHL	VYP	CBE	Mean
T ₁ :Control	3.0	3.0	3.1	3.6	2.5	3.2	1.9	1.7	2.5	2.7	1.5	2.1	17.4	17.1	22.7	19.1
T ₂ : RDN* through Farm yard manure (FYM)	4.2	3.7	3.3	4.5	3.7	3.9	3.1	2.5	2.5	3.6	2.5	2.9	20.4	18.9	25.9	21.7
T ₃ : RDN through Vermicompost (VC)	4.5	3.6	3.4	4.4	4.0	4.0	3.4	2.4	2.6	3.5	3.5	3.1	19.9	19.3	25.4	21.5
T ₄ : RDN through Poultry manure(PM)	4.5	3.4	3.3	4.4	3.7	3.9	3.5	2.4	2.7	3.5	3.5	3.1	19.6	19.0	25.7	21.4
T ₅ : RDN through FYM+ Biofertilizer	4.9	4.0	3.5	4.7	3.9	4.3	3.8	2.6	2.7	3.9	3.0	3.2	20.8	20.2	28.1	23.0
T ₆ : RDN through Vermicompost+ Biofertilizer	5.3	4.0	3.5	4.6	4.0	4.3	4.2	2.5	2.7	3.6	3.5	3.3	20.5	21.4	28.3	23.4
T ₇ : RDN through Poultry manure + Biofertilizer	5.4	3.6	3.3	4.7	4.2	4.3	4.5	2.4	2.6	3.7	3.8	3.4	20.4	19.5	28.7	22.9
T ₈ : *** Cow based bio formulation	4.4	3.4	3.3	4.8	3.5	4.0	3.3	2.4	2.5	4.1	2.0	2.9	20.2	18.6	30.6	23.1
T ₉ : RDF**	5.7	4.1	3.3	5.1	4.4	4.6	4.9	2.9	2.6	4.5	4.2	3.8	20.8	19.8	32.3	24.3
CD at 5 %	1.01	0.31	0.21	0.68	0.98		0.77	0.35	NS	0.69	0.43		0.7	1.2	2.9	
CV (%)	12.4	4.9	3.6	8.6	14.9		12.2	8.2	6.0	10.7	8.0		2.0	3.6	6.0	

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Table II.71: PMAT 7B: Effect of organic and natural farming on gross returns of pearl millet crop during kharif 2022, 2023 and 2024 in Zone B

Treatment	Gross returns (Rs./ha)																Zonal Mean
	ABD				DHL				CBE				PML				
	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean	
T ₁ :Control	59892	48780	47766	52146	28298	35042	38730	34023	32645	32645	74852	46714	39328	57413	48763	48501	45346
T ₂ : RDN* through Farm yard manure (FYM)	64006	58011	58762	60259	41603	55283	56196	51028	37797	37797	86440	54011	70208	96640	83287	83378	62169
T ₃ : RDN through Vermicompost (VC)	67578	59362	61227	62722	39197	50805	55118	48374	38689	38689	89000	55459	73515	101587	88679	87927	63621
T ₄ : RDN through Poultry manure(PM)	70322	59737	62002	64020	37394	49959	51265	46206	35569	35569	82953	51364	76530	118147	92543	95740	64332
T ₅ : RDN through FYM+ Biofertilizer	76719	67719	73530	72656	48556	64077	67230	59954	37950	37950	89535	55145	96235	115453	104024	105237	73248
T ₆ : RDN through Vermicompost+ Biofertilizer	78771	70728	75046	74849	46124	61632	64706	57487	41843	41843	91661	58449	75499	114160	103452	97704	72122
T ₇ : RDN through Poultry manure + Biofertilizer	80578	72700	78646	77308	44346	58277	61128	54584	43369	43369	92525	59754	87691	111853	106584	102043	73422
T ₈ : *** Cow based bio formulation	69200	59286	64688	64391	34092	47306	49899	43766	42278	42278	96616	60391	73344	93333	49392	72023	60143
T ₉ : RDF**	102053	82551	88987	91197	51720	67675	69374	62923	53107	53107	109167	71794	104563	132320	109106	115330	85311
CD at 5 %	15746	11393	14819		7301	6836	12632		-	-	-		19575	23262	19515		
CV (%)	12.1	10.1	12.5		10.1	7.2	12.7		-	-	-		14.5	12.7	12.8		

Table II.72: PMAT 7B: Effect of organic and natural farming on net returns of pearl millet crop during kharif 2022, 2023 and 2024 in Zone B

Treatment	Net returns (Rs./ha)																Zonal Mean
	ABD				DHL				CBE				PML				
	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean	
T ₁ :Control	32892	21780	20266	24979	8781	13183	13811	11925	15745	15745	43452	24981	11828	18913	10263	13668	18888
T ₂ : RDN* through Farm yard manure (FYM)	33006	27011	27262	29093	16975	27699	24752	23142	-14103	-18331	42540	3369	39208	54140	40787	44712	25079
T ₃ : RDN through Vermicompost (VC)	36078	27862	29227	31056	4628	12088	10981	9232	-6171	-6171	34670	7443	41014	58753	45679	48482	24053
T ₄ : RDN through Poultry manure(PM)	38322	27737	29502	31854	12809	22424	19875	18369	-4665	-4665	28219	6296	43030	74647	49043	55573	28023
T ₅ : RDN through FYM+ Biofertilizer	45219	36219	41530	40989	23903	36466	35753	32041	-14550	-14550	44785	5228	64435	72453	61024	65971	36057
T ₆ : RDN through Vermicompost+ Biofertilizer	46771	38728	42546	42682	11530	22886	20536	18317	-3617	-3617	37051	9939	42199	70660	59952	57604	32135
T ₇ : RDN through Poultry manure + Biofertilizer	48078	40200	45646	44641	19734	30712	29704	26717	2535	-26874	42541	6067	53491	67853	62584	61309	34684
T ₈ : *** Cow based bio formulation	40200	30286	35188	35225	12633	23272	22500	19468	15378	15378	60216	30324	44344	53833	21059	39745	31191
T ₉ : RDF**	72053	52551	57987	60864	29761	43081	41337	38060	21197	21197	70267	37554	74563	90820	67606	77663	53535
CD at 5 %	15746	11393	14819		7301	6837	12632		-	-	-		19574	23283	19460		
CV (%)	20.7	19.4	23.2		26.7	15.2	29.7		-	-	-		24.4	21.4	24.0		

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Table II.73: PMAT 7B: Effect of organic and natural farming on BC ratio of pearl millet crop during kharif 2022, 2023 and 2024 in Zone B

Treatment	BC ratio (%)																Zonal Mean
	ABD				DHL				CBE				PML				
	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean	
T ₁ :Control	2.22	1.80	1.74	1.92	1.45	1.60	1.55	1.54	1.93	1.93	2.38	2.08	1.43	1.49	1.26	1.39	1.73
T ₂ : RDN* through Farm yard manure (FYM)	2.06	1.87	1.87	1.93	1.69	2.01	1.79	1.83	0.73	0.67	1.97	1.12	2.26	2.27	1.95	2.16	1.76
T ₃ : RDN through Vermicompost (VC)	2.14	1.88	1.91	1.98	1.14	1.31	1.25	1.23	0.86	0.86	1.64	1.12	2.26	2.36	2.06	2.23	1.64
T ₄ : RDN through Poultry manure(PM)	2.20	1.87	1.91	1.99	1.52	1.81	1.63	1.66	0.88	0.88	1.52	1.09	2.29	2.71	2.12	2.37	1.78
T ₅ : RDN through FYM+ Biofertilizer	2.43	2.15	2.30	2.29	1.97	2.32	2.14	2.14	0.72	0.72	2.00	1.15	3.02	2.68	2.42	2.71	2.07
T ₆ : RDN through Vermicompost+ Biofertilizer	2.46	2.21	2.31	2.33	1.33	1.59	1.46	1.46	0.92	0.92	1.68	1.17	2.27	2.63	2.37	2.42	1.85
T ₇ : RDN through Poultry manure + Biofertilizer	2.48	2.24	2.38	2.36	1.80	2.12	1.95	1.96	1.06	0.62	1.85	1.18	2.56	2.54	2.42	2.51	2.00
T ₈ : *** Cow based bio formulation	2.39	2.04	2.19	2.21	1.59	1.97	1.82	1.79	1.57	1.57	2.65	1.93	2.53	2.36	1.73	2.21	2.03
T ₉ : RDF**	3.40	2.75	2.87	3.01	2.36	2.75	2.47	2.53	1.66	1.66	2.81	2.04	3.48	3.19	2.62	3.10	2.67
CD at 5 %	0.52	0.37	0.49		0.28	0.24	0.39		-	-	-		0.62	0.56	0.46		
CV (%)	12.4	10.1	12.9		9.7	7.0	12.5		-	-	-		14.6	13.0	12.6		

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Table II.74: PMAT 7B: Effect of organic and natural farming on chemical properties of soil after harvesting of pearl millet during kharif 2022, 2023 and 2024 in Zone B

Treatment	After harvest																			
	pH									Zonal Mean	EC (ds/m)									Zonal Mean
	DHL	VYP				PML					DHL	VYP				PML				
		2022	2022	2023	2024	Mean	2022	2023	2024			Mean	2022	2022	2023	2024	Mean	2022	2023	
T ₁ :Control	7.90	8.21	8.21	8.17	8.20	7.49	7.50	7.46	7.48	7.86	0.42	0.32	0.33	0.33	0.33	0.47	0.44	0.47	0.46	0.40
T ₂ : RDN* through Farm yard manure (FYM)	7.86	8.22	8.21	8.18	8.20	7.49	7.51	7.55	7.52	7.86	0.39	0.33	0.32	0.33	0.33	0.45	0.50	0.48	0.47	0.40
T ₃ : RDN through Vermicompost (VC)	7.88	8.22	8.23	8.20	8.22	7.54	7.50	7.54	7.53	7.87	0.39	0.33	0.32	0.32	0.33	0.50	0.47	0.51	0.49	0.40
T ₄ : RDN through Poultry manure(PM)	7.90	8.22	8.22	8.21	8.22	7.56	7.53	7.42	7.50	7.87	0.42	0.33	0.31	0.34	0.32	0.50	0.48	0.49	0.49	0.41
T ₅ : RDN through FYM+ Biofertilizer	7.86	8.20	8.22	8.19	8.21	7.52	7.46	7.57	7.52	7.86	0.39	0.33	0.33	0.33	0.33	0.53	0.47	0.54	0.51	0.41
T ₆ : RDN through Vermicompost+ Biofertilizer	7.88	8.20	8.23	8.20	8.21	7.54	7.54	7.47	7.52	7.87	0.39	0.33	0.32	0.33	0.33	0.51	0.49	0.53	0.51	0.41
T ₇ : RDN through Poultry manure + Biofertilizer	7.90	8.23	8.23	8.16	8.20	7.46	7.51	7.55	7.51	7.87	0.42	0.34	0.32	0.33	0.33	0.50	0.45	0.50	0.48	0.41
T ₈ : *** Cow based bio formulation	7.88	8.16	8.20	8.17	8.18	7.55	7.50	7.53	7.53	7.86	0.41	0.32	0.33	0.32	0.33	0.48	0.48	0.54	0.50	0.41
T ₉ : RDF**	7.92	8.27	8.23	8.18	8.23	7.44	7.54	7.58	7.52	7.89	0.43	0.33	0.34	0.33	0.33	0.50	0.46	0.52	0.50	0.42
CD at 5 %	-	NS	NS	NS		NS	NS	NS			-	NS	0.01	NS		NS	NS	NS		
CV (%)	-	0.8	0.4	1.0		1.2	0.7	2.1			-	2.5	2.1	2.3		5.5	7.1	9.8		

Table II.75: PMAT 7B: Effect of organic and natural farming on available N and P of soil after harvesting of pearl millet during kharif 2022, 2023 and 2024 in Zone B

Treatment	Available N&P after harvest (kg/ha)																			
	Available N									Zonal Mean	Available P									Zonal Mean
	DHL	VYP				PML					DHL	VYP				PML				
		2022	2022	2023	2024	Mean	2022	2023	2024			Mean	2022	2022	2023	2024	Mean	2022	2023	
T ₁ :Control	178.7	182.1	174.2	174.4	176.9	183.9	221.7	209.0	204.9	186.8	16.3	18.7	18.2	18.3	18.4	58.8	34.3	35.3	42.8	25.8
T ₂ : RDN* through Farm yard manure (FYM)	213.4	212.2	203.5	205.3	207.0	196.5	238.3	246.7	227.2	215.8	17.1	21.2	23.3	23.6	22.7	59.5	39.7	37.3	45.5	28.5
T ₃ : RDN through Vermicompost (VC)	209.2	223.2	210.5	212.8	215.5	188.1	250.7	254.7	231.1	218.6	17.1	21.7	24.2	23.1	23.0	68.7	41.7	39.7	50.0	30.0
T ₄ : RDN through Poultry manure(PM)	202.5	208.4	205.4	207.7	207.1	192.3	246.7	242.7	227.2	212.3	16.9	20.8	24.3	24.1	23.0	60.3	44.7	44.3	49.8	29.9
T ₅ : RDN through FYM+ Biofertilizer	213.7	221.5	211.1	211.1	214.6	183.9	250.7	234.3	223.0	217.1	17.2	21.9	24.6	24.4	23.6	56.5	42.0	42.7	47.1	29.3
T ₆ : RDN through Vermicompost+ Biofertilizer	210.7	223.7	215.6	215.9	218.4	204.8	234.0	246.7	228.5	219.2	17.1	22.1	25.4	25.2	24.2	67.6	49.3	52.7	56.5	32.6
T ₇ : RDN through Poultry manure + Biofertilizer	203.4	219.5	212.2	218.6	216.8	217.4	255.0	242.3	238.2	219.5	17.0	21.0	24.8	24.4	23.4	67.2	47.7	53.0	55.9	32.1
T ₈ : *** Cow based bio formulation	206.2	215.6	192.1	193.7	200.5	167.2	276.0	242.3	228.5	211.7	16.4	22.0	22.7	22.7	22.5	68.1	40.0	58.3	55.5	31.4
T ₉ : RDF**	197.3	211.5	179.4	182.9	191.3	209.0	242.3	263.3	238.2	208.9	17.2	20.7	21.7	21.4	21.3	67.9	39.7	55.0	54.2	30.9
CD at 5 %	-	15.6	11.4	10.8		NS	NS	21.1			-	1.9	2.0	2.3		9.0	4.4	7.6		
CV (%)	-	4.2	3.2	3.1		9.1	8.7	5.0			-	5.2	5.0	5.7		8.1	6.0	9.3		

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Table II.76: PMAT 7B: Effect of organic and natural farming on available K and OC of soil after harvesting of pearl millet during kharif 2022, 2023 and 2024 in Zone B

Treatment	Available K (kg/ha) and OC (%) after harvest																					
	Available K										Zonal Mean	OC (%)										Zonal Mean
	DHL	VYP				PML				DHL		VYP				PML						
		2022	2022	2023	2024	Mean	2022	2023	2024			Mean	2022	2022	2023	2024	Mean	2022	2023	2024	Mean	
T ₁ :Control	542.0	389.7	383.0	377.8	383.5	221.3	167.7	175.3	188.1	371.2	0.48	0.65	0.62	0.60	0.63	0.49	0.36	0.39	0.41	0.51		
T ₂ : RDN* through Farm yard manure (FYM)	556.0	411.5	415.9	417.6	415.0	239.0	179.0	188.7	202.2	391.1	0.58	0.71	0.68	0.68	0.69	0.51	0.42	0.43	0.45	0.57		
T ₃ : RDN through Vermicompost (VC)	556.0	416.6	418.2	422.2	419.0	220.3	194.7	229.3	214.8	396.6	0.56	0.68	0.69	0.70	0.69	0.50	0.43	0.43	0.45	0.57		
T ₄ : RDN through Poultry manure(PM)	552.0	402.3	410.2	413.8	408.8	248.0	192.3	201.7	214.0	391.6	0.56	0.68	0.68	0.68	0.68	0.51	0.42	0.43	0.45	0.56		
T ₅ : RDN through FYM+ Biofertilizer	558.0	423.5	417.4	419.2	420.0	233.7	190.3	204.7	209.6	395.9	0.58	0.70	0.69	0.70	0.69	0.50	0.44	0.45	0.46	0.58		
T ₆ : RDN through Vermicompost+ Biofertilizer	556.0	428.5	421.3	425.5	425.1	258.0	203.0	206.7	222.6	401.2	0.56	0.71	0.70	0.69	0.70	0.50	0.44	0.47	0.47	0.58		
T ₇ : RDN through Poultry manure + Biofertilizer	556.0	408.8	411.3	412.1	410.8	219.0	204.7	210.7	211.4	392.7	0.56	0.68	0.68	0.69	0.68	0.50	0.46	0.46	0.48	0.57		
T ₈ . *** Cow based bio formulation	557.0	414.9	406.9	396.8	406.2	272.3	172.7	187.7	210.9	391.4	0.57	0.67	0.62	0.64	0.64	0.51	0.43	0.45	0.46	0.56		
T ₉ : RDF**	568.0	395.1	390.7	387.3	391.0	213.0	199.3	198.0	203.4	387.5	0.56	0.66	0.62	0.62	0.63	0.50	0.42	0.41	0.44	0.55		
CD at 5 %	-	22.1	8.8	NS		23.5	19.5	27.0			-	NS	0.03	0.04		NS	NS	NS				
CV (%)	-	3.1	1.2	5.4		5.7	5.9	7.7			-	5.4	3.0	3.5		2.3	11.7	16.2				

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Table II.77: PMAT 7B: Effect of organic and natural farming on protein, Fe & Zn content of pearl millet during kharif 2022, 2023 and 2024 in Zone B

Treatment	Protein content (%)						Fe (mg/kg)				Zn (mg/kg)			
	VYP			CBE			VYP							
	2023	2024	Mean	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean
T ₁ :Control	11.64	10.49	11.06	9.32	9.45	9.39	8.04	8.56	8.76	8.45	0.70	0.61	0.59	0.63
T ₂ : RDN* through Farm yard manure (FYM)	12.66	11.89	12.28	11.37	11.49	11.43	10.39	9.82	10.48	10.23	0.77	0.68	0.68	0.72
T ₃ : RDN through Vermicompost (VC)	13.10	13.12	13.11	12.06	12.12	12.09	9.92	10.08	10.91	10.30	0.73	0.70	0.71	0.71
T ₄ : RDN through Poultry manure(PM)	13.33	13.49	13.41	11.84	11.95	11.89	9.03	9.46	10.15	9.55	0.71	0.65	0.66	0.68
T ₅ : RDN through FYM+ Biofertilizer	13.56	13.00	13.28	11.63	11.78	11.71	10.61	10.01	10.89	10.50	0.75	0.70	0.68	0.71
T ₆ : RDN through Vermicompost+ Biofertilizer	13.74	13.68	13.71	12.02	12.08	12.05	10.78	10.27	11.53	10.86	0.75	0.69	0.70	0.72
T ₇ : RDN through Poultry manure + Biofertilizer	14.03	13.87	13.95	11.53	11.63	11.58	9.40	9.90	10.67	9.99	0.70	0.67	0.67	0.68
T ₈ : *** Cow based bio formulation	12.49	12.13	12.31	11.86	11.95	11.91	10.03	9.62	9.97	9.88	0.71	0.63	0.66	0.67
T ₉ : RDF**	13.11	12.93	13.02	11.76	11.83	11.80	11.21	8.90	9.68	9.93	0.78	0.64	0.63	0.68
CD at 5 %	1.21	1.75		0.41	0.53		NS	NS	NS		NS	0.06	NS	
CV (%)	5.3	7.9		2.1	2.6		13.5	8.7	8.7		9.7	4.9	6.3	

Table II.78: PMAT 7B: Effect of organic and natural farming on bacterial & fungi counts of soil after harvest of pearl millet during kharif 2022, 2023 and 2024 in Zone B

Treatment	Bacteria (10 ⁶ CFU/ml)								Fungi (10 ⁴ CFU/ml)			
	VYP				PML				PML			
	2022	2023	2024	Mean	2022	2023	2024	Mean	2022	2023	2024	Mean
T ₁ :Control	30.67	38.67	34.00	34.44	3.33	7.00	7.67	6.00	6.00	3.00	3.67	4.22
T ₂ : RDN* through Farm yard manure (FYM)	36.00	51.67	59.00	48.89	3.67	10.00	11.33	8.33	11.00	4.33	5.67	7.00
T ₃ : RDN through Vermicompost (VC)	38.67	52.00	64.33	51.67	8.33	8.67	9.00	8.67	14.00	6.00	8.00	9.33
T ₄ : RDN through Poultry manure(PM)	33.33	43.67	55.67	44.22	12.67	8.33	9.33	10.11	8.67	5.33	7.00	7.00
T ₅ : RDN through FYM+ Biofertilizer	42.33	49.33	64.33	52.00	11.00	10.33	11.00	10.78	10.67	5.67	7.00	7.78
T ₆ : RDN through Vermicompost+ Biofertilizer	47.00	51.67	73.67	57.44	9.33	11.00	12.33	10.89	11.67	6.67	8.00	8.78
T ₇ : RDN through Poultry manure + Biofertilizer	34.00	48.67	59.00	47.22	12.33	10.00	11.33	11.22	13.00	5.67	6.33	8.33
T ₈ : *** Cow based bio formulation	42.00	46.33	65.33	51.22	13.00	11.67	12.33	12.33	6.67	6.00	6.67	6.44
T ₉ : RDF**	36.33	40.33	43.33	40.00	5.33	8.67	8.67	7.56	6.67	4.33	4.33	5.11
CD at 5 %	NS	NS	20.32		4.17	1.41	1.46		2.64	1.16	1.55	
CV (%)	19.0	11.7	20.2		27.2	8.5	8.1		15.4	12.8	14.1	

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Table II.79: PMAT 7B: Effect of organic and natural farming on seed yield of chickpea crop in Pearl millet-chickpea cropping sysytem during Rabi 2022-23 and 2023-24 in Zone B

Treatment	Seed yield (q/ha)										Zonal mean
	VYP			CBE			PML			DHL	
	2022-23	2023-24	Mean	2022-23	2023-24	Mean	2023-24	2024-25	Mean	2023-24	
T ₁ :Control	10.73	10.82	10.78	6.52	6.88	6.70	14.99	6.86	10.93	7.90	10.09
T ₂ : RDN* through Farm yard manure (FYM)	14.63	12.38	13.51	10.26	10.89	10.58	16.32	8.65	12.49	11.64	13.01
T ₃ : RDN through Vermicompost (VC)	16.27	13.15	14.71	10.38	10.73	10.55	16.99	9.20	13.10	10.79	13.26
T ₄ : RDN through Poultry manure(PM)	15.54	13.01	14.28	10.63	10.68	10.66	17.05	9.83	13.44	9.51	12.87
T ₅ : RDN through FYM+ Biofertilizer	17.31	14.46	15.88	11.11	11.45	11.28	19.53	12.98	16.26	14.43	15.28
T ₆ : RDN through Vermicompost+ Biofertilizer	18.65	15.11	16.88	11.08	11.26	11.17	19.53	12.72	16.13	13.57	15.29
T ₇ : RDN through Poultry manure + Biofertilizer	17.60	15.04	16.32	11.42	11.19	11.31	19.56	13.88	16.72	12.82	15.00
T ₈ : *** Cow based bio formulation	14.99	13.13	14.06	12.62	12.91	12.77	17.32	8.40	12.86	9.34	13.37
T ₉ : RDF**	17.18	14.04	15.61	13.55	14.08	13.82	20.22	13.84	17.03	16.18	16.46
CD at 5 %	2.86	1.45		2.02	1.77		NS	1.62		1.30	
CV (%)	10.3	6.2		10.7	9.1		11.8	8.7		6.3	

Table II.80: PMAT 7B: Effect of organic and natural farming on straw yield of chickpea crop in Pearl millet-chickpea cropping sysytem during Rabi 2022-23 and 2023-24 in Zone B

Treatment	Straw yield (q/ha)										Zonal mean
	VYP			CBE			PML			DHL	
	2022-23	2023-24	Mean	2022-23	2023-24	Mean	2023-24	2024-25	Mean	2023-24	
T ₁ :Control	15.95	17.67	16.81	8.01	10.72	9.36	-	-	-	13.71	13.29
T ₂ : RDN* through Farm yard manure (FYM)	21.69	20.70	21.19	11.81	13.45	12.63	-	-	-	20.20	18.01
T ₃ : RDN through Vermicompost (VC)	22.61	21.31	21.96	12.06	13.24	12.65	-	-	-	18.71	17.78
T ₄ : RDN through Poultry manure(PM)	21.82	20.85	21.34	11.94	13.18	12.56	-	-	-	16.50	16.80
T ₅ : RDN through FYM+ Biofertilizer	22.51	21.69	22.10	12.68	14.29	13.49	-	-	-	25.04	20.21
T ₆ : RDN through Vermicompost+ Biofertilizer	24.01	22.15	23.08	12.43	13.33	12.88	-	-	-	23.54	19.83
T ₇ : RDN through Poultry manure + Biofertilizer	20.21	21.12	20.67	12.84	13.39	13.12	-	-	-	22.24	18.67
T ₈ : *** Cow based bio formulation	20.12	19.62	19.87	14.35	15.46	14.91	-	-	-	16.20	16.99
T ₉ : RDF**	25.04	19.94	22.49	15.27	17.05	16.16	-	-	-	28.07	22.24
CD at 5 %	NS	NS		1.71	2.02		-	-	-	2.25	
CV (%)	14.0	8.6		7.9	8.4		-	-	-	6.3	

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Table II.81: PMAT 7B: Effect of organic and natural farming on growth and yield attributes of chickpea crop in pearl millet-chickpea cropping sysytem during Rabi 2023-24 in Zone B

Treatment	Plant height (cm)				No of primary branches/plant				No of secondary branches/plant				Number of pods/plant			
	VYP	CBE	PML	Mean	VYP	CBE	PML	Mean	VYP	CBE	PML	Mean	VYP	CBE	PML	Mean
T ₁ :Control	26.9	22.4	40.9	30.0	1.9	2.5	2.0	2.2	6.2	7.8	15.3	9.8	23.2	29.4	29.3	27.3
T ₂ : RDN* through Farm yard manure (FYM)	30.7	29.2	45.3	35.1	2.3	3.2	2.9	2.8	7.0	9.8	17.2	11.3	32.5	40.1	30.8	34.5
T ₃ : RDN through Vermicompost (VC)	31.0	29.4	46.2	35.5	2.4	3.1	2.8	2.8	7.5	9.9	18.9	12.1	34.6	41.0	32.3	36.0
T ₄ : RDN through Poultry manure(PM)	29.8	29.6	45.9	35.1	2.3	3.2	2.6	2.7	7.5	9.9	16.5	11.3	33.2	41.4	35.6	36.7
T ₅ : RDN through FYM+ Biofertilizer	31.4	35.6	50.2	39.1	2.4	3.4	2.8	2.9	7.5	10.6	21.3	13.1	34.3	46.6	46.0	42.3
T ₆ : RDN through Vermicompost+ Biofertilizer	32.8	36.8	49.0	39.5	2.4	3.4	2.6	2.8	7.6	10.3	19.2	12.4	35.0	47.1	43.6	41.9
T ₇ : RDN through Poultry manure + Biofertilizer	30.7	38.1	49.2	39.3	2.3	3.5	2.9	2.9	7.5	10.2	21.0	12.9	33.6	47.7	46.3	42.5
T ₈ : *** Cow based bio formulation	30.7	42.2	47.2	40.0	2.3	3.6	2.5	2.8	7.2	11.3	19.5	12.7	32.5	50.2	38.2	40.3
T ₉ : RDF**	31.1	45.9	52.0	43.0	2.3	3.9	2.9	3.0	7.3	13.5	23.8	14.9	32.3	51.7	48.3	44.1
CD at 5 %	NS	6.1	NS		0.2	0.5	NS		0.4	NS	2.2		2.1	4.5	4.8	
CV (%)	6.0	10.2	7.5		4.9	7.8	21.9		3.5	20.4	6.5		3.6	5.8	7.0	

Table II.82: PMAT 7B: Effect of organic and natural farming on growth and yield attributes of chickpea crop in pearl millet-chickpea cropping sysytem during Rabi 2023-24 in Zone B

Treatment	Number of seeds/pod				Seed index (g) (100 seed weight)				Protein content (%)				Plant population (000/ha)			
	VYP	CBE	PML	Mean	VYP	CBE	PML	Mean	VYP	CBE	PML	Mean	VYP	CBE	PML	Mean
T ₁ :Control	1.9	1.4	-	1.6	28.5	18.8	20.6	22.6	21.5	22.5	-	22.0	-	326.0	-	326.0
T ₂ : RDN* through Farm yard manure (FYM)	1.9	1.5	-	1.7	30.8	24.2	21.3	25.4	22.9	25.3	-	24.1	-	338.7	-	338.7
T ₃ : RDN through Vermicompost (VC)	2.0	1.5	-	1.8	31.1	23.9	20.6	25.2	23.1	26.1	-	24.6	-	340.7	-	340.7
T ₄ : RDN through Poultry manure(PM)	1.9	1.6	-	1.8	31.0	23.4	21.3	25.2	23.0	27.2	-	25.1	-	327.0	-	327.0
T ₅ : RDN through FYM+ Biofertilizer	2.0	1.6	-	1.8	31.2	28.2	22.0	27.1	23.3	27.4	-	25.4	-	327.7	-	327.7
T ₆ : RDN through Vermicompost+ Biofertilizer	2.0	1.7	-	1.8	31.0	28.7	22.4	27.4	23.4	28.2	-	25.8	-	335.7	-	335.7
T ₇ : RDN through Poultry manure + Biofertilizer	1.9	1.7	-	1.8	31.4	29.1	21.5	27.3	23.6	28.6	-	26.1	-	339.7	-	339.7
T ₈ : *** Cow based bio formulation	1.9	1.7	-	1.8	30.4	31.5	22.0	28.0	22.9	29.1	-	26.0	-	341.7	-	341.7
T ₉ : RDF**	1.9	1.9	-	1.9	30.2	31.8	23.9	28.6	22.4	29.7	-	26.0	-	337.7	-	337.7
CD at 5 %	NS	0.1	-		NS	4.2	1.8		NS	3.7	-		-	NS	-	
CV (%)	4.8	2.8	-		3.2	9.1	4.7		5.0	7.7	-		-	4.9	-	

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Table II.83: PMAT 7B: Effect of organic and natural farming on soil available NPK after harvesting of chickpea crop in Pearl millet-chickpea cropping sysytem during Rabi 2022-23 and 2023-24 in Coimbatore in Zone B

Treatment	Soil available N (kg/ha)			Soil available P (kg/ha)			Soil available K (kg/ha)		
	CBE			CBE			CBE		
	2022-23	2023-24	Mean	2022-23	2023-24	Mean	2022-23	2023-24	Mean
T ₁ :Control	224.0	193.0	208.5	8.00	10.00	9.00	357.7	443.0	400.3
T ₂ : RDN* through Farm yard manure (FYM)	272.3	207.0	239.7	18.00	19.00	18.50	437.3	513.0	475.2
T ₃ : RDN through Vermicompost (VC)	246.0	209.0	227.5	16.67	18.00	17.33	453.7	518.0	485.8
T ₄ : RDN through Poultry manure(PM)	243.3	213.0	228.2	17.33	18.00	17.67	462.3	524.0	493.2
T ₅ : RDN through FYM+ Biofertilizer	234.0	225.0	229.5	14.00	15.00	14.50	512.3	548.0	530.2
T ₆ : RDN through Vermicompost+ Biofertilizer	240.7	237.0	238.8	14.67	16.00	15.33	533.7	552.0	542.8
T ₇ : RDN through Poultry manure + Biofertilizer	262.3	242.0	252.2	14.33	15.00	14.67	548.0	564.0	556.0
T ₈ : *** Cow based bio formulation	257.7	248.0	252.8	14.67	16.00	15.33	561.7	572.0	566.8
T ₉ : RDF**	250.3	264.0	257.2	14.00	15.00	14.50	574.3	567.0	570.7
CD at 5 %	NS	34.6		2.77	4.37		40.0	41.5	
CV (%)	7.8	8.8		10.9	15.9		4.6	4.5	

Table II.84: PMAT 7B: Effect of organic and natural farming on soil OC, pH and EC after harvesting of chickpea crop in Pearl millet-chickpea cropping sysytem during Rabi 2022-23 and 2023-24 in Coimbatore in Zone B

Treatment	Soil OC at harvest (%)			Soil pH at harvest (kg/ha)			Soil EC at harvest (dSm-1)		
	CBE			CBE			CBE		
	2022-23	2023-24	Mean	2022-23	2023-24	Mean	2022-23	2023-24	Mean
T ₁ :Control	0.41	0.41	0.41	8.38	0.41	4.40	0.35	0.38	0.37
T ₂ : RDN* through Farm yard manure (FYM)	0.42	0.43	0.42	8.24	0.43	4.33	0.36	0.35	0.35
T ₃ : RDN through Vermicompost (VC)	0.41	0.42	0.41	8.28	0.42	4.35	0.35	0.34	0.35
T ₄ : RDN through Poultry manure(PM)	0.42	0.43	0.42	8.27	0.43	4.35	0.34	0.33	0.34
T ₅ : RDN through FYM+ Biofertilizer	0.42	0.43	0.42	8.19	0.43	4.31	0.35	0.34	0.34
T ₆ : RDN through Vermicompost+ Biofertilizer	0.42	0.43	0.43	8.16	0.43	4.30	0.35	0.34	0.34
T ₇ : RDN through Poultry manure + Biofertilizer	0.43	0.43	0.43	8.15	0.43	4.29	0.34	0.33	0.34
T ₈ : *** Cow based bio formulation	0.43	0.44	0.43	8.13	0.44	4.28	0.35	0.34	0.35
T ₉ : RDF**	0.42	0.41	0.41	8.41	0.41	4.41	0.36	0.37	0.37
CD at 5 %	0.01	0.02		0.08	0.02		0.01	0.02	
CV (%)	1.4	2.3		0.5	2.3		1.5	3.3	

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Table II.85: PMAT 7B: Effect of organic and natural farming on economics after harvesting of chickpea crop in Pearl millet-chickpea cropping sysytem during Rabi 2022-23, 2023-24 and 2024-25 in Zone B

Treatment	Gross Returns (Rs./ha)					Zonal mean	Net Returns (Rs./ha)					Zonal mean	B:C ratio					Zonal mean
	CBE			DHL	PML		CBE			DHL	PML		CBE			DHL	PML	
	2022-23	2023-24	Mean	2023-24	2024-25		2022-23	2023-24	Mean	2023-24	2024-25		2022-23	2023-24	Mean	2023-24	2024-25	
T ₁ :Control	50846	56317	53582	75253	34300	64417	25446	28917	27182	30648	5550	28915	2.00	2.06	2.03	1.69	1.19	1.86
T ₂ : RDN* through Farm yard manure (FYM)	59383	88330	73857	109996	43250	91926	18891	45838	32365	54391	14483	43378	1.47	2.08	1.78	1.98	1.50	1.88
T ₃ : RDN through Vermicompost (VC)	60106	86979	73543	104970	46000	89256	22154	47027	34591	28108	17233	31349	1.58	2.18	1.88	1.37	1.60	1.62
T ₄ : RDN through Poultry manure(PM)	61450	86626	74038	95222	49150	84630	25118	48294	36706	39805	20400	38256	1.69	2.26	1.98	1.72	1.69	1.85
T ₅ : RDN through FYM+ Biofertilizer	64294	92882	78588	133930	64900	106259	20610	47198	33904	78200	36150	56052	1.47	2.03	1.75	2.40	2.25	2.08
T ₆ : RDN through Vermicompost+ Biofertilizer	64028	91161	77595	127395	63600	102495	22884	48017	35451	50495	34583	42973	1.56	2.11	1.84	1.66	2.21	1.75
T ₇ : RDN through Poultry manure + Biofertilizer	66021	90656	78339	120362	69400	99350	26497	49132	37815	64927	40650	51371	1.67	2.18	1.93	2.17	2.42	2.05
T ₈ : *** Cow based bio formulation	72998	104589	88794	93064	42000	90929	37598	67189	52394	44201	13217	48297	2.06	2.80	2.43	1.90	1.46	2.17
T ₉ : RDF**	78362	114113	96238	144152	69200	120195	40040	73791	56916	94249	40450	75582	2.04	2.83	2.44	2.89	2.40	2.66
CD at 5 %	-	-		12002	8093		-			12057	8189		-			0.22	0.29	
CV (%)	-	-		6.2	8.7		-			12.8	19.0		-			6.4	9.0	

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Table II.86: PMAT 7B: Effect of organic and natural farming on gross returns, net returns and BC ratio of Pearlmillet-chickpea cropping sequence during 2024-25 in Perumallapalle and total PM equivalent yield of sequence in Dhule during 2023-24 in Zone B

Treatment	Gross returns, Net returns and BC ratio of Pearlmillet-chickpea cropping sequence			Total PM equivalent yield of sequence
	PML GR	PML NR	PML B:C	DHL 2023-24
T ₁ :Control	83063	15813	1.23	30.10
T ₂ : RDN* through Farm yard manure (FYM)	126537	55270	1.77	44.00
T ₃ : RDN through Vermicompost (VC)	134696	62912	1.88	41.99
T ₄ : RDN through Poultry manure(PM)	141693	69443	1.91	38.09
T ₅ : RDN through FYM+ Biofertilizer	176367	97174	1.93	53.57
T ₆ : RDN through Vermicompost+ Biofertilizer	168171	94535	2.28	50.96
T ₇ : RDN through Poultry manure + Biofertilizer	178200	103234	2.39	48.15
T ₈ : *** Cow based bio formulation	93469	34275	1.58	37.22
T ₉ : RDF**	172098	108056	2.72	57.66
CD at 5 %	15692	19532	0.46	4.80
CV (%)	6.3	15.7	13.4	6.2

CHAPTER IV

PLANT PATHOLOGY

PLANT PATHOLOGY

In the Kharif/summer season of 2024, a total of nine trials were carried out, focusing on different facets of pathology. The trials took place in Mandor, Jaipur, and Hisar within Zone A1, as well as in Mandor, Jaipur, Hisar, Gwalior, and Jamnagar in Zone A, and in Mysore, Aurangabad, Dhule, Coimbatore, and Patancheru in Zone B. A comprehensive screening was conducted on 200 entries for their resistance to downy mildew, smut, rust, blast, and ergot diseases. Furthermore, all the centres conducted farmer field surveys across various states to assess the overall disease situation throughout the crop season. The research was conducted by focusing on examining the diversity of downy mildew and blast pathogens, along with the epidemiological aspects related to the progression of blast disease. The outcome of the trial will be discussed in the following paragraphs.

Pearl Millet Plant Pathology Trial (PMPT-I): Downy mildew pressure at 30 DAS was higher in Zone B than in Zones A1 and A, according to test entries. In A1 and A Zones, the mean disease infestation at 30 DAS across locations and entries was 1.1%, 0.8%, and 1.4% in Zone B. The range of downy mildew in both A1 and A Zones was 0.0–4.6% and 0.0–3.1%, and in Zone B it was 0.0–11.0%. At 60 DAS, the downy mildew incidence was also higher in Zone B compared to Zone A1 and Zone A. At 60 DAS, the mean downy mildew incidence in Zone A1 was 4.6%, and in Zone A it was 3.5%, whereas in Zone B it was 5.1%. The range of downy mildew in Zones A1 and A was 0.0–8.0% and 0.0–18.6%, and in Zone B it was 0.3–17.4%. Across zones, the mean downy mildew at 30 DAS was 6.4 %, and at 60 DAS, it was 18.1%. The mean disease pressure at 60 DAS in the indicator rows IR I (7042S) and IR II (local susceptible) was 93.3% and 79.8%, respectively. The incidence of blast disease at 60 days after sowing (DAS) was higher in Zone B than in Zones A1 and A, according to the test entries. In Zones A1 and A, the mean disease incidence at 60 DAS across locations and entries was 3.6% and 4.0%, while Zone B recorded 4.9%. Overall, across all zones, the mean blast disease occurrence at 60 DAS was 4.4% (Table IV).

Pearl Millet Plant Pathology Trial (PMPT-II): Downy mildew pressure at 30 DAS was higher in Zone B than in Zones A1 and A, according to test entries. In Zones A1 and A, the mean disease at 30 DAS across locations and entries was 0.6%, 0.6%, and 1.0% in Zone B. The range of downy mildew in A1 and A Zones was 0.0–3.0% and 0.0–2.7%, and in Zone B it was 0.0–3.4%. At 60 DAS, the downy mildew incidence was higher in Zone B compared to Zones A1 and A. At 60 DAS, the mean downy mildew incidence in Zone A1 was 1.1%, and in A it was 1.0%, whereas in Zone B it was 1.5%. The range of downy mildew in Zones A1 and A was 0.0–4.7%, 0.0–4.3%, and 0.3–5.2% in Zone B. At 30 DAS, the mean downy mildew was 0.8% across zones, and at 60 DAS, it was 1.3%. The mean disease pressure at 60 DAS in the indicator rows IR I (7042S) and IR II (local susceptible) was 94.2% and 81.1%, respectively. The incidence of blast disease at 60 days after sowing (DAS) was higher in Zone B than in Zones A1 and A, according to the test entries. In Zones A1 and A, the mean disease incidence at 60 DAS across locations and entries was 2.1% and 2.2%, while Zone B recorded 2.4%. Overall, across all zones, the mean blast disease occurrence at 60 DAS was 2.3% (Table IV).

Pearl Millet Plant Pathology Trial (PMPT-III): Downy mildew pressure at 30 DAS was higher in Zone B than in Zones A1 and A, according to test entries. In Zones A1 and A, the mean

disease at 30 DAS across locations and entries was 0.8%, 1.0 %, and 1.0% in Zone B. The range of downy mildew in A1 and A Zones was 0.0–4.9% and 0.0–3.8%, and in Zone B it was 0.0–2.6%. At 60 DAS, the downy mildew incidence was higher in Zone B compared to Zones A1 and A. At 60 DAS, the mean downy mildew incidence in Zone A1 was 1.5%, and in A it was 1.7%, whereas in Zone B it was 1.4%. The range of downy mildew in Zones A1 and A was 0.0–5.4%, 0.0–5.6%, and 0.3–3.3% in Zone B. At 30 DAS, the mean downy mildew was 1.0% across zones, and at 60 DAS, it was 1.6%. The mean disease pressure at 60 DAS in the indicator rows IR I (7042S) and IR II (local susceptible) was 93.2% and 81.4%, respectively (Table IV). The incidence of blast disease at 60 days after sowing (DAS) was higher in Zone B than in Zones A1 and A, according to the test entries. In Zones A1 and A, the mean disease incidence at 60 DAS across locations and entries was 2.4% and 2.6%, while Zone B recorded 2.0%. Overall, across all zones, the mean blast disease occurrence at 60 DAS was 2.3% (Table IV).

Table IV: An Overview of different diseases in coordinated trials

Downy mildew (%)	Zone A₁		Zone A		Zone B	
30 DAS	Range	Mean	Range	Mean	Range	Mean
PMPT I (IHT/IPT entries)	0.0-4.6	1.1	0.0-3.1	0.8	0.0-11.0	1.4
PMPT II (AHT/APT entries)	0.0-3.0	0.6	0.0-2.7	0.6	0.0-3.4	1.0
PMPT III (RHVT entries)	0.0-4.9	0.8	0.0-3.8	1.0	0.0-2.6	1.0
Downy mildew (%) 60 DAS						
PMPT I (IHT/IPT entries)	0.0-8.0	4.6	0.0-18.6	3.5	0.3-17.4	5.1
PMPT II (AHT/APT entries)	0.0-4.7	1.1	0.0-4.3	1.0	0.0-5.2	1.5
PMPT III (RHVT entries)	0.0-5.4	1.5	0.0-5.6	1.7	0.3-3.3	1.4
Blast (Score) 30 DAS						
PMPT I (IHT/IPT entries)	0.4-1.8	1.0	0.2-1.4	0.6	0.0-1.6	0.6
PMPT II (AHT/APT entries)	0.6-1.7	1.0	0.3-1.0	0.6	0.0-1.8	0.5
PMPT III (RHVT entries)	0.7-1.5	1.1	0.4-1.1	0.6	0.0-1.8	0.5
Blast (Score) 45 DAS						
PMPT I (IHT/IPT entries)	0.0-2.6	1.6	0.5-2.3	1.3	0.0-3.1	1.2
PMPT II (AHT/APT entries)	0.6-2.6	1.5	0.4-1.9	1.1	0.0-3.0	1.1
PMPT III (RHVT entries)	1.2-2.2	1.6	0.8-2.0	1.4	0.0-2.9	1.1
Blast (Score) 60 DAS						
PMPT I (IHT/IPT entries)	0.9-3.6	2.1	1.1- 4.0	2.3	0.0-4.9	2.0
PMPT II (AHT/APT entries)	0.9-3.3	2.1	0.8-3.9	2.2	1.0-4.9	2.4
PMPT III (RHVT entries)	1.7-3.2	2.4	1.5-3.9	2.6	1.4-4.2	2.3
Rust (% leaf area) 60 DAS						
PMPT I (IHT/IPT entries)	0.0-9.3	0.4	0.0-6.2	0.3	0.0-25.3	8.2
PMPT II (AHT/APT entries)	0.0-1.3	0.1	0.0-0.8	0.0	7.1-25.8	15.9
PMPT III (RHVT entries)	0.0-3.3	0.1	0.0-2.2	0.1	2.4-18.4	8.4
Smut (severity %)						
PMPT I (IHT/IPT entries)	0.0-18.3	2.4	0.0-23.5	6.1	0.0-3.8	0.2
PMPT II (AHT/APT entries)	0.0-8.3	0.6	0.0-18.3	4.2	0.0-2.5	0.3
PMPT III (RHVT entries)	0.0-17.8	2.2	0.0-21.5	6.3	0.0-1.3	0.1

Ergot (severity %)						
PMPT I (IHT/IPT entries)	0.0-5.0	0.4	0.0-4.5	0.7	0.0-4.6	1.0
PMPT II (AHT/APT entries)	0.0-7.5	1.3	0.0-4.2	1.3	0.0-2.0	0.4
PMPT III (RHVT entries)	0.0-9.0	1.5	0.0-4.5	0.7	0.0-0.0	0.0

Farmers Field Survey: To determine the natural occurrence of diseases in pearl millet, a field survey was carried out in different states during the kharif season. The field survey revealed that blast and rust diseases were more severe than other pearl millet diseases. The incidence of downy mildew in the farmer's field ranged from 0% to 15%. Downy mildew infected most of the fields surveyed around Rajasthan (0-15%), Karnataka (0-9%), Tamil Nadu (0-8%), Gujarat (0-15%), and Haryana (0-4%). In Madhya Pradesh and Maharashtra, a field survey revealed that most fields were free from downy mildew. In general, on the farmer's field, the downy mildew disease incidence was on par with the previous year's field survey. The states, like Rajasthan, Maharashtra, and Gujarat, were observing an increase in blast and rust severity, with reports of up to 70% blast and 20% rust incidence. The blast was found to have a 0-12% incidence in the fields of Tamil Nadu, 5-21% in Karnataka, 1-20% in Rajasthan, and 0-5% in Gujarat. In Haryana it was 1-50%, and in Maharashtra, it was 5-70%; incidences were observed. Smut incidence was high in Rajasthan (up to 30%), and in Gujarat it was 0-4.5%; in all the other surveyed states, there were no smut disease incidences reported, and the highest incidence of ergot was observed in the fields of Tamil Nadu and Gujarat, ranging from 0 to 8%. The other states, Rajasthan, Maharashtra, Madhya Pradesh, and Karnataka, had very little ergot disease incidence. The findings suggest a significant variation in disease prevalence across different regions, highlighting the need for targeted management strategies. Further research is essential to understand the underlying factors contributing to these discrepancies and to develop effective interventions for affected areas.

PLANT PROTECTION - 2024

Downy Mildew, blast and other diseases

All the centres were assigned to conduct the trial in a sick plot using infector rows raised from a mixture of 7042S (universal susceptible check) and local susceptible lines before 21 days of sowing test entries. It was suggested to maintain 40 plants in a single row of 5 m in length with two replications and to ensure a minimum of 70% disease incidence on the susceptible check line (indicator line). The downy mildew incidence at different centres was recorded using the following scale: 0-5% (resistant), 5-10% (moderately resistant), 10-25% (susceptible), and >25% (highly susceptible). The incidences of rust, smut, and ergot were recorded on a scale as follows: 0-20% (resistant) and >20% (susceptible). The scale for blast incidence was as follows: score: (0) Highly resistant, (0.1-3) Resistant, (>3-5) Moderately resistant, (>5-7) Susceptible, and (>7-9) Highly susceptible.

Downy Mildew	Blast	Rust	Smut	Ergot
0-5% (Resistant)	Score (0) Highly resistant	0-20% (Resistant)	0-20% (Resistant)	0-20% (Resistant)
5-10% (Moderately resistant)	0.1-3: Resistant			
10-25% (Susceptible)	>3-5: Moderately Resistant	>20% (Susceptible)	>20% (Susceptible)	>20% (Susceptible)
>25% (Highly susceptible)	>5-7: Susceptible			
	>7-9: Highly susceptible			

PMPT I: Disease Screening Trial of Initial Pearl Millet Hybrids and Varieties

One hundred and fourteen entries were screened in this trial at nine different centres. The overview of the results of the trial at different centres is tabulated in Table IV B. All the entries included in the trial were scored for downy mildew disease incidence at 30 DAS (tillering stage) and 60 DAS (soft-dough stage), and a comparison was made. The details of the downy mildew reaction on different initial pearl millet hybrids and varieties both at the tillering (30 DAS) and soft dough (60 DAS) stages were given on a zonal basis.

ZONE A1: At 30 DAS, the mean downy mildew incidence for the entries tested ranged from 0.0 to 4.6%. All the entries demonstrated a highly resistant reaction, exhibiting disease incidences between 0.0 and 4.6%, with the two entries (MH 2828 and RHB 223) displaying the highest disease reactions at 4.6% and 3.9%, respectively (Table IV.1). At 60 DAS, the mean disease incidence in Zone A1 for the entries tested ranged from 0.0 to 8.0%. One hundred and nine entries exhibited a highly resistant reaction, showing disease incidences between 0.0 and 4.9%, followed by five entries (MH2823, MH2825, MH2819, MH2828, and MH2849) that displayed a moderately resistant reaction, and none of the entries showing a susceptible reaction (Table IV.2).

ZONE A: At 30 DAS, the average incidence of downy mildew for the tested entries varied from 0.0% to 3.1%. All entries exhibited a markedly resistant response, demonstrating disease incidences ranging from 0.0 to 3.1%; specifically, entries MH 2872 and MH 2828 displayed the most significant disease reactions, with incidences of 3.1 and 2.8, respectively (Table IV.1). At 60 days after sowing, the average disease incidence in Zone A for the tested entries varied from 0.0% to 18.6%. One hundred and ten entries exhibited high resistance, demonstrating disease incidence ranging from 0.0 to 4.9%, while four entries—MH2828, MH2823, MH2825, and MPMH35—showed moderate resistance to downy mildew (Table IV.2).

Zone B: At 30 DAS, the mean disease incidence for the entries tested ranged from 0.0 to 11%. One hundred and twelve entries were classified as highly resistant (0.0–4.0%); one entry, MP 645, was moderately resistant, and one entry, MH 2828, is susceptible to downy mildew by exhibiting an 11.0% disease reaction (Table IV.1). At 60 DAS, the mean disease incidence for the entries tested in Zone B varied from 0.3 to 17.4%. One hundred and ten entries were highly resistant (0.3–4.6%), followed by one entry, MH 2857, which was moderately resistant, showing a 5.1% disease reaction. Additionally, three entries, MH 2828 (17.4%), MP 645 (12.7%), and MH 2858 (10.4%), were identified as susceptible to downy mildew (Table IV.2)

All India: At 30 DAS, the mean disease incidence for the entries tested ranged from 0.0 to 6.4%. One hundred and thirteen entries were highly resistant (0.3–4.9%), and one entry, MH 2828, was moderately resistant to the downy mildew reaction (Table IV.1). At 60 DAS, the mean disease incidence for the entries tested ranged from 0.5 to 18.1%. One hundred and eleven entries were highly resistant (0.8–4.7%), while two entries, MP 645 (6.7%) and MH 2858 (6.2%), were moderately resistant. One entry, MH 2828 (18.1%), is showing susceptibility to the downy mildew reaction (Table IV.2).

PMPT I - Other Diseases: An overview of the disease entries for Blast, Rust, Smut, and Ergot is summarised in Table IV.F.

Blast: At 30 DAS, the mean blast incidence in Zones A1, A, and B was 1.0, 0.6, and 0.6, scores, respectively (Table IV.3).

Zone A1: None of the entries are showing a resistant reaction. All the entries were resistant, showing a disease severity score of 0.8 to 1.8 (Table IV.3).

Zone A: None of the entries are showing a resistant reaction. All the entries were resistant, showing a disease severity score of 0.2 to 1.4 (Table IV.3).

Zone B: Seven entries—MH 2814, MH 2819, MH 2840, MH 2842, MH 2875, MH 2880, and MH 2881—showed a highly resistant reaction; one hundred and seven entries showed a resistant reaction with a disease severity score of 0.1 to 1.6 (Table IV.3).

Blast: At 45 DAS, the mean blast incidence in Zones A1, A, and B was 1.6, 1.3, and 1.2 scores, respectively (Table IV.3A).

Zone A1: All the entries were highly resistant, showing a disease severity scale of 0.6 to 2.6 (Table IV.3A).

Zone A: All the entries were highly resistant, showing a disease severity scale of 0.5 to 2.3 (Table IV.3A).

Zone B: Two entries, MH2840 and MH2875, showed the highly resistant reaction; one hundred and eleven entries were showing resistant reaction with a disease severity score of 0.0 to 2.9, and the one entry, Pratap, demonstrated the moderately resistant reaction by showing the disease score of 3.1 (Table IV.3A).

Blast: At 60 DAS, the mean blast incidence in Zones A1, A, and B was 2.3, 2.3, and 2.0, respectively (Table IV.3B).

Zone A1: 88 entries showed a resistant reaction with a disease score of 0.9–2.9, and 26 entries demonstrated a moderately resistant reaction to blast disease with a disease score ranging from 3.1 to 3.9 (Table IV.3B).

Zone A: 90 entries showed a resistant reaction with a disease score of 1.1–3.0, and 24 entries were moderately resistant to blast disease with a disease score ranging from 3.1 to 4.0 (Table IV.3B).

Zone B: Two entries, MH 2840 and MH 2875, are demonstrating a highly resistant disease reaction; 96 entries were showing a resistant reaction, with the disease score ranging from 0.5 to 3.0, and 16 entries were moderately resistant to blast (3.1–4.9 scale) (Table IV.3B).

All India: 98 entries demonstrated resistant disease reactions, with scores ranging from 0.6 - 2.9, while 16 entries were moderately resistant to blast disease, with scores between 3.1 - 3.4 (Table IV.3B).

Rust: At 60 DAS, Coimbatore, Mysore, and Dhule had the highest disease incidences of 30% (MH 2811), 32% (MH 2813), and 32.5 % (MH 2811), respectively. The mean rust incidence in Zones A1, A, and B was 0.2%, 0.3%, and 8.3%, respectively. All the entries tested were resistant to rust incidence in Zone A1, ranging from 0.0 to 9.3%; in Zone A, the incidence ranges from 0.0 to 0.0–6.2%; and in Zone B, all the entries showed a resistance reaction, except the one entry, MH 2811, which is demonstrating a susceptible reaction, and the incidence ranges from 0.0 to 25.3%. Overall in India, all the entries were found to be resistant, with the incidence ranging from 0.0 to 15.5% (Table IV.3C).

Smut: At 60 DAS, the Gwalior Centre recorded the highest disease incidence of 75% (MH 2840), with 35 entries classified as exhibiting susceptible disease reactions, ranging from 22.5% to 75%. The mean smut incidence in Zones A1, A, and B was recorded at 2.3%, 6.0%, and 0.2%, respectively; Zone B is not considered for promotion. In Zone A1, smut incidence ranges from 0.0% to 18.3%; in Zone A, it ranges from 0.0% to 23.5%; and in Zone B, it ranges from 0.0% to 3.8%. Overall, in India, all entries were found to be resistant, with the incidence ranging from 0.0% to 11.9% (Table IV.3D).

Ergot: At 60 DAS, the mean ergot incidence in Zones A1, A, and B was recorded at 0.4%, 0.6%, and 0.9%, respectively. All entries tested were found to be resistant to ergot disease across Zones A1, A, and B, respectively (Table IV.3E).

PMPT II: Disease Screening Trial of Advanced Pearl Millet Hybrids and Varieties

Downy Mildew: A total of forty-nine entries were screened in this trial at ten different centres for pearl millet diseases. The overview of the results of this trial at different centres is summarised in Table IV.C.

Zone A1: At 30 days after sowing (DAS), the mean disease incidence for the entries tested ranged from 0.0% to 3.0%. All the entries exhibited highly resistant to downy mildew disease (Table IV.4).

Zone A: At 30 DAS, the mean disease incidence for the entries tested ranged from 0.0 to 2.7%. All the entries were highly resistant to downy mildew disease (Table IV.4).

Zone B: At 30 DAS, the mean disease incidence for the entries tested ranged between 0.0 and 3.4%. All the tested entries were highly resistant to downy mildew disease (Table IV.4).

At 60 DAS, the mean disease incidence for the entries tested ranged from 0.0 to 5.4%.

Zone A1: The average of mean disease incidence for the entries tested is 1.1%. All the entries were highly resistant, with disease incidence ranging from 0.0 to 4.7% (Table IV.5).

Zone A: The average of mean disease incidence for the entries tested is 1%. All the entries were highly resistant, with disease incidence ranging from 0.0 to 4.3% (Table IV.5).

Zone B: The average of mean disease incidence for the entries tested is 1.5%. All the tested entries were highly resistant to downy mildew disease (0.0–4.3%), and the one entry Pratap is showing a moderately resistant disease reaction with a 5.2% incidence (Table IV.4).

At 60 DAS, across all of India, the mean disease incidence ranged between 0.0 and 3.4%, with the mean average disease incidence at 1.8%. All the entries were highly resistant to downy mildew disease (Table IV.5)

Other Diseases (PMPT II): An overview of Blast, Rust, Smut, and Ergot of highly resistant entries is summarised in Table IV.6.

Blast: At 30 DAS, the mean blast severity recorded in Zones A1, A, and B was 0.7, 0.6, and 0.5, respectively (Table IV.6).

Zone A1: All 49 entries exhibited resistance to blast disease, demonstrating a severity scale ranging from 0.6 to 1.7 (Table IV.6).

Zone A: All 49 entries exhibited resistance to blast disease, demonstrating a severity scale ranging from 0.3 to 1.0 (Table IV.6).

Zone B: All 49 entries exhibited resistance to blast disease, demonstrating a severity scale ranging from 0.0 to 1.8 (Table IV.6).

At All India, all 49 entries demonstrated resistance to blast disease, with a severity scale ranging from 0.2 to 1.2.

Blast: At 45 DAS, the mean blast severity in Zones A1, A, and B was 1.3, 1.1, and 1.1 scores, respectively (Table IV.6A).

Zone A1: All 49 entries demonstrated resistance to blast disease, exhibiting a severity scale that ranged from 0.6 to 2.5 (Table IV.6). **Zone A:** All 49 entries demonstrated resistance to blast disease, exhibiting a severity scale that ranged from 0.4 to 1.9 (Table IV.6A).

Zone B: All 49 entries demonstrated resistance to blast disease, exhibiting a severity scale that ranged from 0.0 to 3.0 (Table IV.6A).

At All India, all 49 entries demonstrated resistance to blast disease, exhibiting a severity scale that ranged from 0.4 to 2.4 (Table IV.6A)..

Blast: At 60 DAS, the mean blast severity in Zones A1, A, and B was 2.1, 2.2, and 2.4, respectively (Table IV.6B).

Zone A1: 47 entries showed resistant reactions with the severity score ranging from 1.4 to 3.0, and two entries demonstrated moderately resistant reactions by scoring 3.3 on the severity scale of the blast (Table IV.6B).

Zone A: 42 entries showed resistant reactions, with the severity score ranging from 0.8 to 0.8–3.0, and seven entries were recorded as moderately resistant reactions with a 3.1–3.9 severity score to blast (Table IV.6B).

Zone B: 40 entries showed resistant reactions with the severity score ranging from 1.0 to 1.0–3.0, and nine entries were recorded as moderately resistant reactions with a 3.1–4.9 severity score to blast disease (Table IV.6B).

At All India: 41 entries showed resistant reactions with the severity score ranging from 1.2 to 3.0, and eight entries were recorded as moderately resistant to blast disease with a 3.1 to 4.4 scale of severity (Table IV.6B)..

Rust: At 60 DAS, Patencheru, Coimbatore, Mysore, and Dhule had the highest disease incidences of 65% (Raj 171), 28% (MH 2743), and 32.5 % (Raj 171), respectively. The mean rust incidence in Zones A1, A, and B was 0.0%, 0.0%, and 15.9%, respectively. All the entries tested were resistant to rust incidence in Zones A1 and A, ranging from 0.0 to 0.5%; and in Zone B, all the entries showed a resistance reaction, except for the one entry, Raj 171, which is demonstrating a susceptible reaction, and the incidence ranges from 7.1 to 25.8%. Overall in India, all entries were found to be resistant, with the incidence ranging from 4.4% to 16.1% (Table IV.6C).

Smut: At 60 DAS, the Gwalior Centre recorded the highest disease incidence of 72.5% (MH 2775), with 35 entries classified as exhibiting susceptible disease reactions, ranging from 22.5% to 75%. The mean smut incidence in Zones A1, A, and B was recorded at 0.6%, 4.2%, and 0.3%, respectively; Zone B is not considered for promotion. In Zone A1, smut incidence ranges from 0.0% to 8.3%; in Zone A, it ranges from 0.0% to 18.4%; and in Zone B, it ranges from 0.0% to 2.5%. Overall, in India, all entries were found to be resistant, with the incidence ranging from 0.0% to 8.2% (Table IV.6D).

Ergot: The mean incidence of ergot in Zones A1, A, and B was recorded at 1.3%, 1.3%, and 0.4%, respectively. The mean incidence of ergot for the test entries across the zones ranged from 0.0% to 2.5%. All tested entries were found to be resistant to ergot disease in Zones A1, A, and B (Table IV.6E).

PMPT III: Monitoring Disease Resistance Stability of Released Popular Hybrids/Varieties

Downy mildew: A total of 37 entries were screened across nine different centres (Table IV D). All entries included in this trial were assessed for downy mildew disease incidence at 30 days after sowing (DAS) during the pre-tillering stage and at 60 DAS during the soft-dough stage. **Blast:** The incidence of blast disease was recorded at 30, 45, and 60 DAS.

Zone A1: At 30 DAS, the downy mildew incidence range was 0.0–4.9%. All 37 entries tested were highly resistant to downy mildew (Table IV.7).

At 60 DAS, the mean disease incidence for the evaluated entries ranged between 0.0 and 5.4 %. Thirty-six entries were highly resistant (0.0–4%), and one entry, RHB 223 (5.4), was recorded as moderately resistant to downy mildew disease (Table IV.8).

Zone A: At 30 DAS, the downy mildew incidence range was 0.0–3.8%. All the entries tested were highly resistant to downy mildew disease (Table IV.7).

At 60 DAS, the mean disease incidence for the entries evaluated ranged between 0.0% and 5.6%. Thirty-five entries were highly resistant (0.0–3.6%), and two entries, Pusa Composite 701 (5.6%) and RHB 223 (5.3), were moderately resistant to downy mildew disease (Table IV.8).

Zone B: At 30 DAS, the mean disease incidence for the entries evaluated ranged between 0.0 and 2.6%. All the entries tested were highly resistant to downy mildew disease (Table IV.7).

At 60 DAS, the mean disease incidence for the entries evaluated ranged between 0.3% and 3.3%. All entries were highly resistant to downy mildew disease (Table IV.8).

At all India levels, at 30 DAS, the downy mildew incidence range was 0.0–2.9%. All the entries tested were highly resistant to downy mildew disease (Table IV.7).

At 60 DAS, the mean disease incidence for the evaluated entries ranged between 0.2% and 3.9%. All entries were highly resistant to downy mildew (Table IV.8).

Other diseases (PMPT III): An overview of smut, rust, blast, and ergot of highly resistant entries is summarised in Table IV.

Blast: At 30 DAS, the mean blast scores in Zones A1, A, and B were 1.1, 0.6, and 0.5 scores, respectively (Table IV.9).

Zone A1: All the entries were resistant to blast (0.0 to 1.1 severity scale) (Table IV.9).

Zone A: All the entries were resistant to blast (0.4 to 1.1 severity scale) (Table IV.9).

Zone B: All the entries were resistant to blast (0.6 to 1.8 severity scale) (Table IV.9).

Blast: At 45 DAS, the mean blast scores in Zones A1, A, and B were 1.6, 1.4, and 1.1 scores, respectively (Table IV.9A).

Zone A1: All the entries were resistant to blast (0.1 to 1.5 severity scale) (Table IV.9A).

Zone A: All the entries were resistant to blast (0.8 to 2.0 severity scale) (Table IV.9A).

Zone B: All the entries were highly resistant to blast (0.0 to 2.9 scale) (Table IV.9A).

Blast: At 60 DAS, the mean blast scores in Zones A1, A, and B were 2.4, 2.6, and 2.0 severity scores, respectively (Table IV.9B).

Zone A1: 36 entries were resistant to blast (on a scale of 1.7 to 3.0), and one entry, Pratap (3.2), showed a moderate disease reaction (Table IV.9B).

Zone A: Nine entries recorded moderately diseased scores ranging from 3.1 to 3.9, and 28 entries were scored resistant to disease reactions ranging from 1.5 to 3.0 on the scale (Table IV.9B).

Zone B: Four entries were recorded with moderately resistant disease scores ranging from 3.1 to 4.3, and 33 entries were scored with resistant disease reactions ranging from 0.6 to 0.6 to 2.9 (Table IV.9B).

All-India level: Six entries were moderately resistant with a disease score of 3.2 to 4.1 on the severity scale, and 31 entries were moderately resistant on the 1.4–2.9 severity scale to blast (Table IV.9B).

Rust: At 60 DAS, the mean rust incidence in Zones A1 and A was 0.1% and 0.1%, respectively, and in Zone B it was 8.4%. In Zones A1, A, and B, all the entries tested resistant to rust (Table IV.9C).

Smut: The mean disease incidence across the zones was 3.1%. Gwalior had the highest mean incidence, at 18.5%. The mean smut incidence in Zones A1, A, and B was 2.2%, 6.1%, and 0.1%, respectively. In Zones A1, A, and B, all the entries were resistant to smut. Zone B is not considered for promotion (Table IV.9D).

Ergot: The mean ergot incidence in Zones A1, A, and B was 1.3%, 0.7%, and 0.4%, respectively. All the entries tested were resistant to ergot incidence in A1, A, and Zone B (Table IV.9E).

PMPT IV: Characterization of Pathogen Diversity in Downy Mildew of Pearl Millet

The virulence nursery analysed the pathogenic diversity. In this experiment, we recorded the incidence of downy mildew disease at both the pre-tillering and soft dough stages across the zones.

The Pearl Millet Downy Mildew Virulence Nursery (PMDMVN) is a research project that ICAR (AICRP on PM) and ICRISAT are working together on. It provides information on the different types of virulence in *S. graminicola* populations as well as the stability of resistance in pearl millet lines grown in different locations. We observed a reliable disease pressure (>80% DM) on 7042S at the soft-dough stage across all locations. In general, there was an increase in disease incidence from the pre-tillering stage (Table IV.10) to the soft-dough stage (Table IV.11).

Out of the 40 test entries evaluated in PMDMVN 2024, four entries (ICPMDML-6, ICPMDML-10, ICPMDML-32, and ICPMDML-33) showed a high level of downy mildew resistance at 60 DAS; these lines recorded an incidence of less than 5% downy mildew across all test locations. Whereas eleven lines (ICPMDML-7, ICPMDML-8, ICPMDML-11, ICPMDML-13, ICPMDML-15, ICPMDML-19, ICPMDML-24, ICPMDML-27, ICPMDML-29, ICPMDML-38) were resistant at 9 locations. Eight entries (ICPMDML-2, ICPMDML-9, ICPMDML-12, ICPMDML-14, ICPMDML-20, ICPMDML-23, ICPMDML-28, ICPMDML-35, and

ICPMDML-38) were resistant at 8 locations, and five lines (ICPMDML-1, ICPMDML-16, ICPMDML-17, ICPMDML-26, and ICPMDML-37) were resistant at 7 locations; eight lines at 6 locations; two lines at 5 locations; and one line at 4 locations.

The mean DM incidence at Mysore was highest among test locations, with 10.9% mean downy mildew across entries, followed by 10.7% mean DM across entries at Pateneru. Coimbatore had the lowest mean DM incidence (2.5%).

The variation in pathogen populations was evident from the variable DM incidence among test locations, indicating a variation in pathogen population distribution. At the soft-dough stage, the disease incidence indicated that the pathogen population at the Mysore location was more virulent, with 25 entries showing over 5% DM incidence, followed by Mandor with 24 entries above 5% DM and Patencheru with 15 entries showing >5% incidence. The pathogen population in Coimbatore had the lowest virulence, with no entries above 5% disease incidence; all the entries exhibited resistance at the Coimbatore location. This variation underscores the importance of geographical factors in disease dynamics, suggesting that environmental conditions may significantly influence pathogen virulence.

PMPT V: Pearl Millet Blast Variability Nursery (PMBVN)

The PMBVN-2024, which consists of 60 advanced breeding and germplasm lines alongside a susceptible check, was evaluated at the AICRP on PM centres located in Aurangabad, Dhule, Jaipur, Jamnagar, Gwalior, Hisar, Mysore, IARI-New Delhi, Mandor Vizianagaram, and Tirupati, as well as at ICRISAT in Patancheru, during the kharif season of 2024.

The blast severity was recorded at the soft dough stage using a progressive 0-9 scale, as follows: 0 = no infection; 1 = small brown specks of pinhead size; 2 = larger brown specks; 3 = small, roundish to slightly elongated, necrotic grey spots approximately 1-2 mm in diameter with a brown margin; 4 = typical blast lesions usually confined to the area between the main veins, covering less than 5% of the leaf area; 5 = typical blast lesions covering 6–10% of the leaf area; 6 = typical blast lesions covering 11-25% of the leaf area; 7 = typical blast lesions covering 26–50% of the leaf area; 8 = typical blast lesions covering 51–75% of the leaf area, with many leaves dead; 9 = all leaves are dead.

The virulence nursery analysed the pathogenic diversity. In this experiment, we recorded the incidence of blast disease at 30 DAS, 45 DAS and 60 DAS across the zones.

The Pearl Millet Blast Virulence Nursery (PMBMVN) is a research project that ICAR (AICRP on PM) and ICRISAT are collaborating on. It provides information on the various types of virulence found in *M. grisea* populations, as well as the stability of resistance in pearl millet lines cultivated in different locations. We observed consistent disease pressure (>5.6 severity) on ICMB 95444 at 60 DAS across all locations. Generally, there was an increase in disease incidence from the pre-tillering stage to the soft-dough stage (Table IV.12B).

At 30 DAS

Out of the 60 test entries evaluated in PMBVN 2024, **TWENTY ONE** entries (ICPMBL-14, ICPMBL-16, ICPMBL-17, ICPMBL-18, ICPMBL-22, ICPMBL-21, ICPMBL-23, ICPMBL-25, ICPMBL-26, ICPMBL-27, ICPMBL-30, ICPMBL-31, ICPMBL-32, ICPMBL-36, ICPMBL-37,

ICPMBL-39, ICPMBL-40, ICPMBL-41, ICPMBL-49, ICPMBL-50, and ICPMBL-55) showed a resistance disease reaction at 30 DAS; these lines recorded an incidence of less than <3% disease severity score across all test locations. Whereas **FOURTEEN** entries—**ICPMBL-3, ICPMBL-9, ICPMBL-10, ICPMBL-12, ICPMBL-13, ICPMBL-15, ICPMBL-19, ICPMBL-20, ICPMBL-28, ICPMBL-35, ICPMBL-48, ICPMBL-52, ICPMBL-57, and ICPMBL-58**—**were resistant at 11 test locations. SIXTEEN** entries ICPMBL-4, ICPMBL-5, ICPMBL-6, ICPMBL-7, ICPMBL-8, ICPMBL-11, ICPMBL-29, ICPMBL-33, ICPMBL-34, ICPMBL-38, ICPMBL-42, ICPMBL-43, ICPMBL-47, ICPMBL-53, ICPMBL-56, and ICPMBL-60 were resistant at 10 locations; **SEVEN** entries, ICPMBL-1, ICPMBL-2, ICPMBL-44, ICPMBL-45, ICPMBL-51, ICPMBL-54, and ICPMBL-59, at 9 locations; **TWO** entries, ICPMDML-24 and ICPMDML-46, were resistant in **EIGHT** locations.

45 DAS

Out of the 60 test entries evaluated in PMBVN 2024, **ONE** entry (ICPMBL-30) showed a resistance disease reaction at 45 DAS; these lines recorded an incidence of less than a <3% disease severity score across all test locations. Whereas **SEVEN** entries – ICPMBL-18, ICPMBL-21, ICPMBL-25, ICPMBL-36, ICPMBL-37, ICPMBL-39, and ICPMBL-50 – were resistant at 11 test locations. **THIRTEEN** entries, ICPMBL-9, ICPMBL-14, ICPMBL-15, ICPMBL-16, ICPMBL-17, ICPMBL-20, ICPMBL-22, ICPMBL-26, ICPMBL-27, ICPMBL-40, ICPMBL-41, ICPMBL-55, and ICPMBL-58, were resistant at 10 locations; **SEVENTEEN** entries, ICPMBL-35, ICPMBL-6, ICPMBL-8, ICPMBL-10, ICPMBL-13, ICPMBL-23, ICPMBL-31, ICPMBL-32, ICPMBL-34, ICPMBL-35, ICPMBL-38, ICPMBL-42, ICPMBL-48, ICPMBL-49, ICPMBL-52, and ICPMBL-53, were resistant in **EIGHT** locations; **NINE** entries, ICPMBL-1, ICPMBL-11, ICPMBL-12, ICPMBL-19, ICPMBL-54, ICPMBL-56, ICPMBL-57, ICPMBL-59, and ICPMBL-60, were resistant in **SEVEN** locations. **EIGHT** entries ICPMBL-2, ICPMBL-4, ICPMBL-28, ICPMBL-29, ICPMBL-43, ICPMBL-44, ICPMBL-45 and ICPMBL-47 were resistant in 7 locations; **FOUR** entries, ICPMBL-7, ICPMBL-33, ICPMBL-46, and ICPMBL-51, were resistant in 6 locations; and **ONE** entry, ICPMBL-24, showed resistance in 3 test locations.

At 60 DAS:

Out of the 60 test entries evaluated in PMBVN 2024, **FIVE** entries (ICPMBL-16, ICPMBL-18, ICPMBL-21, ICPMBL-22 and ICPMBL-49) showed a high level of resistance at 60 DAS; these lines recorded an incidence of less than <3 severity scale across **ELVEN** test locations. Whereas **Eight** entries (**FIVE** entries (ICPMBL-14, ICPMBL-17, ICPMBL-23, ICPMBL-26, ICPMBL-27, ICPMBL-32, ICPMBL-37 and ICPMBL-39) were resistant at 10 locations, and six entries (ICPMBL-8, ICPMBL-15, ICPMBL-30, ICPMBL-34, ICPMBL-40 and ICPMBL-50) were resistant at 9 locations; three entries (ICPMBL-35, ICPMBL-48 and 52) were resistant at 8 locations; seven entries (ICPMBL-3, ICPMBL-10, ICPMBL-13, ICPMBL-25, ICPMBL-36, ICPMBL-41, ICPMBL-58) were resistant at 7 locations; 10 entries (ICPMBL-4, ICPMBL-5, ICPMBL-12, ICPMBL-19, ICPMBL-20, ICPMBL-29, ICPMBL-31, ICPMBL-38, ICPMBL-42, and ICPMBL-53) were resistant at 6 locations; 10 entries (ICPMBL-9, ICPMBL-11, ICPMBL-33, ICPMBL-44, ICPMBL-47, ICPMBL-55, ICPMBL-56, ICPMBL-57, ICPMBL-59, and ICPMBL-60) were resistant at 5 locations; five entries (ICPMBL-2, ICPMBL-6, ICPMBL-7, ICPMBL-28, and ICPMBL-51) were resistant at 4 locations; four entries (ICPMBL-1, ICPMBL-

43, ICPMBL-45, and ICPMBL-54) were resistant at 3 locations; one entry ICPMBL-46 was resistant at two location. None of the entry showing resistant reaction at all the locations.

The variation in the pathogen population was evident from the mean severity levels and the differential reactions of the test entries at various locations. The mean blast severity across pearl millet lines was highest at Vizianagaram (5.4 mean score), followed by Patencheru (4.7 mean score), New Delhi (4.7 mean blast score), Dhule (3.4 mean score), and Mysore (3.1 mean score). Conversely, the lowest mean blast severity was observed for pathogen populations at Tirupati (2.1 mean score) and Jamnagar (2.2 mean score), with Aurangabad (2.4 mean score), Hisar (2.5 mean score), Gwalior (2.6 mean score), Jaipur (2.9 mean score), and Mandore (3.1 mean score) following. At Tirupati, 50 entries were resistant to blast disease, while at Jamnagar, 46 entries were resistant to blast disease.

PMPT VI: BASIC RESEARCH

1. Genetic analysis through DNA markers: Variability in downy mildew pathogen and grouping of pathotypes based on the pathogenicity test

All the existing pathotypes of pearl millet downy mildew pathogens were collected from different regions of pearl millet-growing areas and maintained under greenhouse conditions, and oospore samples and host differentials are being maintained. These samples will facilitate further research into the genetic diversity and pathogenicity of the downy mildew pathogens. Additionally, the results will enable the development of resistant pearl millet varieties to combat the disease effectively.

2. *Magnaporthe grisea* pathogenic variability and host differential screening for blast disease resistance source identification

Pathogenic variability: Blast disease in pearl millet, caused by *Magnaporthe grisea*, poses a significant threat in India, impacting both forage and grain production. A study investigating pathogenic variation in 26 isolates of *M. grisea* collected from fields in Karnataka, Hisar, and Rajasthan in 2024 revealed diverse responses. The isolates were classified into virulent and avirulent groups according to their reaction types, with virulent isolates receiving a score of 4 or higher and avirulent isolates scoring 3 or lower. This classification highlights the complexity of the pathogen's behaviour and its potential to adapt to varying environmental conditions. Understanding these variations is crucial for developing effective management strategies to mitigate the impact of blast disease on pearl millet yields. **Host differentials:** Differential hosts refer to groups of plant cultivars used to identify virulent isolates by studying the qualitative differences in their responses between resistant and susceptible cultivars. To study the host differentials, a selection of ten pearl millet genotypes ICMB 02444, ICMB 02777, ICMB 06444, ICMB 93333, ICMB 96666, ICMB 97222, ICMB 99444, 863B, ICMR 06222, and ICMB 95444 exhibiting varied responses in the pearl millet blast variability nursery, evaluated across various locations in India, were collected from ICRISAT for the present study. These genotypes were subjected to controlled experiments to assess their resistance levels under controlled environmental conditions. This approach aimed to enhance our understanding of the genetic factors influencing resistance to pearl millet blasts and provide information for breeding programmes for developing more resilient cultivars against blast disease.

Spathe Blight and Leaf Spot Disease of Pearl Millet in India: In July 2021, fields of pearl millet in Karnataka, India, were inspected for spathe blight and leaf spot disease. The pathogen, *Curvularia* sp., was identified based on morphological characteristics and confirmed using molecular tools. The isolates UOMPM1 and UOMPM2 were identified molecularly, and a phylogenetic study validated the identification of *C. spicifera*. This study represents the first report of *C. spicifera* causing leaf spot and spathe blight in pearl millet in India, impacting grain yield and necessitating comprehensive disease control measures. The findings underscore the pressing need for effective management strategies to alleviate the effects of these diseases on pearl millet production. Future research should investigate potential resistant varieties and integrated pest management practices to protect the crop from these pathogens.

PMPT VII: Management of downy mildew by using organic practices.

During the year, the Integrated Disease Module, which included the moderately resistant host (Dhanshakti), Metalaxyl 35 SD @ 6 g/kg, was used for bio-control treatments [T1-(Seed Treatment @ 8.0 g/kg Microb Cons. (Combination of Trichod/Bacillus/Pseudom.), T2-(Seed Treatment @ 8.0 g/kg)+(Soil Amendment @ 8.0 g/lit) (Combination of Trichod/Bacillus/Pseudom.), T3-(Seed Treatment @ 8.0 g/kg Microb Cons. (Combination of Mycorrh/PSB/Pseudo/Tricho), T4-(Soil Amendment @ 8.0 g/kg Microb Cons. (Combination of Mycorrh/PSB/Pseudo/ Tricho), T4-Soil Amendment @ 8.0 g/kg Microb Cons. (Combination of Mycorrh/PSB/Pseudo/Tricho). T5-(Seed Treatment @ 8.0 g/kg) +(Soil Amendment @ 8.0 g/lit) (Combination of Mycorrh/PSB/Pseudo/Tricho); T6- Seed Treatment @ 8.0 g/kg of Pseudom. +Soil amendment @ 1.0% of Biochar); T7: (Seed Treatment @ 8.0 g/kg of Trichoderma + Soil Amendment @ 1.0% of Biochar) T8-Seed Treatment Metalaxyl 35 SD (6 g/kg) and T9-Control were conducted for the evaluation of the IDM package against pearl millet downy mildew disease. The trials also assessed the impact of this module on seed germination, fodder, and grain yield. The performance of the biological agent was positive in enhancing seed germination percentage, grain yield, fodder yield, and protection against downy mildew disease (Table IV.13).

PMPT VIII: Management of blast disease by using chemical and bioagents.

During the year, the Integrated Disease Module, which included the moderately resistant host (Dhanshakti), and Chemicals - Bio-control combinational treatments [T1- Spray Propiconazole @ 1 ml/lit on 20 DAS + 1 Spray *Pseudomonas fluorescens* @ 10g/lit on 35 DAS., T2- Seed Treatment @ 8.0g/kg Microb Cons. (Combination of 4 microbes)] Mycorrhiza/PSB/*Pseudomonas*/Trichoderma + Spray with Tricyclazole 75% WP on 35 DAS., T3- Seed Treatment @ 10g/lit with *P. fluorescens* + and spray Trifloxystrobin + Tebuconazole @ 0.04% at 35 DAS., T4- Spray Trifloxystrobin + Tebuconazole @ 0.04% at 20 DAS and *Bacillus subtilis* @ 10g/lit on 35 DAS., T5- Spray Trifloxystrobin + Tebuconazole @ 0.04% on 35 DAS., T6- Spray Trifloxystrobin + Tebuconazole @ 0.04% on 20 and 35 DAS., T7- Seed treatment @ 8g/kg with *P. fluorescens* + Soil amendment with Biochar @ 1% at sowing + Spray *P. fluorescens* @ 10g/lit on 35 DAS., T8- Seed treatment @ 8g/kg with Trichoderma + Soil amendment with Biochar @ 1% at sowing + Spray Trichoderma @ 10g/lit on 35 DAS., and T9-Control] was conducted for the evaluation of the IDM package against pearl millet blast disease. The trial also evaluated the impact of this module on seed germination, fodder, and grain yield. The performances of chemical and biological agents were positive in enhancing seed

germination percentage, grain yield, fodder yield, and protection against blast disease (Table IV.14).

PMPT IX: Pearl Millet diseases monitoring on farmer's Field

Rajasthan: The Kharif 2024 field survey revealed that blast, smut, and downy mildew were the most prevalent diseases, with smut and blast accounting for the highest incidence (1–30%) and blast (1–15%) recorded. (Table IV.16).

Jaipur: A survey conducted in Rajasthan during Kharif 2024 in eight districts found that the blast in the fields ranged from 1 to 15%, downy mildew 1 to 15%, and smut 0 to 30% were observed; there is no rust, and ergot disease was observed in the farmers' fields (Table IV.16A).

Mandore: A survey conducted during Kharif 2024 in three districts found that in the fields, blast ranged from 1 to 4%, downy mildew 1 to 6%, and smut 1 to 6% were observed; there is no rust, and ergot disease was observed in the farmers' field (Table IV.16B).

Gujarat: The pearl millet disease survey was conducted in Gujarat during Kharif 2024. They surveyed 71 fields and recorded a downy mildew incidence of 1-15%, blast 0-5%, and smut 0-4.5%; there was no incidence of ergot, and rust was observed (Table IV.16C).

Madhya Pradesh: Field surveys were conducted to monitor the pearl millet diseases. A total of 3.7 ha of area were surveyed for downy mildew, smut, and blast diseases. Overall, we did not observe any incidence of downy mildew. Smut incidence was recorded in traces, and the blast score was 7–10% in the surveyed fields (Table IV.16D).

Hisar: During Kharif 2024, the field survey included 6 districts. Downy mildew incidence in the fields ranged from 1 to 4% and blast from 1 to 5.6%; there was no smut, rust, and ergot observed (Table IV.16E).

Maharashtra: The Kharif 2024 field survey revealed that blast and rust, ergot, and smut were the most prevalent diseases, with rust and blast accounting for the highest incidences (1–70%) and rust (1–40%) recorded.

Dhule: a pearl millet field survey was conducted in 3 different districts; in the fields, blast ranged from 1 to 1–70%, rust was 1 to 1–20%, ergot was 0 to 1%, and smut 0 to 5% were observed. There was no downy mildew disease observed in the farmers' field (Table IV.16F).

Aurangabad: A pearl millet field survey was conducted in 4 different districts. Downy mildew incidence in the fields ranged from 1% to 6%; rust was 1–16%; and ergot was 1 to 6%. There was no blast, and smut disease incidence was observed in the farmers' fields (Table IV.16G).

Karnataka: A survey conducted in Karnataka during Kharif 2024 assessed the prevalence of downy mildew, blast, rust, and ergot in around 70 hectares of pearl millet crops across four districts, namely Bagalkote, Bijapur, Bellary, and Koppala, to assess the prevalence of downy mildew, blast, rust, and ergot. The results showed varying degrees of disease presence, with most fields having moderate to less rainfall and legume intercropping. Hybrids in Karnataka showed minimal downy mildew incidence, with an average of 1-9% and blast incidence of up to 21%. Ergot severity ranged from 0 to 1%, and rust incidence was 5 to 20% (Table IV.16H).

Tamil Nadu: During Kharif 2024, the field survey included 5 districts. Downy mildew incidence in the fields ranged from 1 to 8%; rust was 1 to 12%; and ergot was 1 to 8% (Table IV.16-I).

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Table IV.B: An Overview of Downy Mildew Disease Reaction of Initial Pearl Millet Hybrids and Varieties at Different Centres - PMPT I

Range of DM incidence (%)	No. of entries showing mean disease incidence at Zone A and B																	
	Zone A										Zone B							
	MDR		JPR		HSR		JMR		GJR		MYS		DHL		ABD1		CBE	
	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS
>0-5	113	102	111	100	109	107	111	98	114	112	110	94	99	99	110	108	114	114
>5-10	1	12	2	3	4	3	3	8	0	2	3	17	11	11	4	5	0	0
>10-25	0	0	1	1	1	4	0	7	0	0	1	2	2	2	0	1	0	0
>25	0	0	0	0	0	0	0	1	0	0	0	1	2	2	0	0	0	0

Table IV. C: An Overview of Downy Mildew Disease Reaction of Advanced Pearl Millet Hybrids and Varieties at Different Centres - PMPT II

Range of DM incidence (%)	No. of entries showing mean disease incidence at Zone A and B																					
	Zone A										Zone B											
	MDR		JPR		HSR		JMR		GLR		MYS		DHL		ABD1		CBE		PTR			
	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS
>0-5	49	48	46	46	48	48	49	46	48	47	49	44	44	44	49	49	49	49	40	34		
>5-10	0	1	3	3	1	1	0	3	1	2	0	5	5	5	0	0	0	0	6	6		
>10-25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	8		
>25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		

Table IV.D: An Overview of Downy Mildew Disease Reaction of Initial Pearl Millet Hybrids and Varieties at Different Centres - PMPT III

Range of DM incidence (%)	No. of entries showing mean disease incidence at Zone A and B																	
	Zone A										Zone B							
	MDR		JPR		HSR		JMR		GLR		MYS		DHL		ABD1		CBE	
	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS	30 DAS	60 DAS
>0-5	37	36	34	34	36	36	37	32	30	28	37	37	37	36	29	29	36*	36*
>5-10	0	1	3	3	1	1	0	3	7	9	0	0	0	1	8	8	0	0
>10-25	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
>25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*one entry not germinated

Disease categorations

Downy Mildew

0-5%: Resistant

5-10%: Moderately Resistant

10-25%: Susceptible

>25%: Highly Susceptible

Blast

Score (0) Highly resistant

0.1-3: Resistant

>3-5: Moderately Resistant

>5-7: Susceptible

>7-9: Highly Susceptible

Rust

0-20%: Resistant

>20%: Susceptible

Smut

0-20%: Resistant

>20%: Susceptible

Ergot

0-20%: Resistant

>20%: Susceptible

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Table IV.1: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Downy mildew (%) at 30 DAS-Kharif 2024															
Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
IR I		72.6	76.3	91.9	71.4	70.6	85.3	95.2	83.8	93.9	80.2	76.6	89.5	82.3	95.2
IRII		71.2	77.5	91.3	65.7	11.0	88.0	65.0	73.8	88.7	80.0	63.3	78.9	70.2	88.7
PIT 101	MH 2811	2.4	0.0	0.0	0.0	1.6	2.0	0.0	0.0	1.7	0.8	0.8	0.9	0.9	2.0
PIT 102	MH 2812	2.4	0.0	0.0	0.0	0.0	5.2	6.5	2.6	0.0	0.8	0.5	3.6	1.9	6.5
PIT 103	MH 2813	1.6	0.0	0.0	0.0	1.5	2.0	0.0	0.0	0.0	0.5	0.6	0.5	0.6	2.0
PIT 104	MH 2814	0.0	0.0	0.0	0.0	0.0	4.0	5.3	0.0	0.0	0.0	0.0	2.3	1.0	5.3
PIT 105	MH 2815	3.6	4.3	0.0	0.0	1.3	3.0	0.0	1.3	0.0	2.6	1.8	1.1	1.5	3.0
IR I		73.1	75.0	97.1	66.2	68.2	87.0	100.0	71.3	92.7	81.7	75.9	87.7	81.2	100.0
IRII		69.8	70.3	93.8	62.1	8.1	85.2	63.8	73.1	95.7	78.0	60.8	79.5	69.1	95.7
PIT 106	MH 2816	2.9	0.0	0.0	1.5	0.0	3.0	3.0	5.3	0.0	1.0	0.9	2.8	1.7	5.3
PIT 107	MH 2817	0.0	1.3	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.4	0.3	0.5	0.4	2.0
PIT 108	MH 2818	1.2	2.5	0.0	5.7	0.0	3.0	2.2	0.0	1.6	1.2	1.9	1.7	1.8	3.0
PIT 109	MH 2819	1.3	0.0	3.3	0.0	3.0	4.0	5.3	0.0	0.0	1.5	1.5	2.3	1.9	5.3
PIT 110	MH 2820	2.6	0.0	0.0	0.0	0.0	2.0	0.0	1.3	0.0	0.9	0.5	0.8	0.7	2.0
IR I		73.8	69.7	92.6	66.2	79.1	84.0	100.0	72.5	97.0	78.7	76.3	88.4	81.6	100.0
IRII		72.0	60.1	96.6	57.9	10.1	81.0	71.9	72.2	90.1	76.2	59.3	78.8	68.0	90.1
PIT 111	MH 2821	3.2	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.6	1.1	0.6	0.6	0.6	1.6
PIT 112	MH 2822	3.1	0.0	0.0	2.1	0.0	4.0	4.7	0.0	0.0	1.0	1.1	2.2	1.5	4.7
PIT 113	MH 2823	1.6	0.0	7.7	2.7	0.0	3.0	0.0	0.0	0.0	3.1	2.4	0.8	1.7	3.1
PIT 114	MH 2824	0.0	1.3	3.4	8.2	0.0	5.0	0.0	1.3	0.0	1.6	2.6	1.6	2.1	5.0
PIT 115	MH 2825	2.5	1.3	4.0	2.1	2.8	4.0	0.2	0.0	0.0	2.6	2.5	1.1	1.9	4.0
IR I		74.7	71.3	97.7	70.6	64.5	83.5	100.0	84.8	94.9	81.2	75.8	90.8	82.4	100.0
IRII		72.3	70.7	89.3	67.1	11.3	81.7	66.2	74.0	0.0	77.4	62.1	55.5	59.2	81.7
PIT 116	MH 2826	1.5	1.3	0.0	0.0	0.0	2.0	0.0	2.8	0.0	0.9	0.5	1.2	0.8	2.8
PIT 117	MH 2827	2.9	0.0	4.3	0.0	0.0	3.0	15.0	6.3	0.0	2.4	1.5	6.1	3.5	15.0
PIT 118	MH 2828	2.2	11.7	0.0	0.0	0.0	15.0	20.3	8.8	0.0	4.6	2.8	11.0	6.4	20.3
PIT 119	MH 2829	0.0	1.3	0.0	0.0	0.0	2.0	1.0	2.6	0.0	0.4	0.3	1.4	0.8	2.6
PIT 120	MH 2830	3.5	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	1.2	0.7	0.8	0.7	3.0
IR I		72.5	76.7	93.1	72.4	67.6	78.5	98.0	83.8	93.8	80.8	76.5	88.5	81.8	98.0
IR II		69.2	68.9	94.7	60.3	12.0	79.2	74.0	73.8	88.2	77.6	61.0	78.8	68.9	88.2
PIT 121	MH 2831	5.5	0.0	0.0	0.0	1.4	3.0	0.0	0.0	0.0	1.8	1.4	0.8	1.1	3.0

CHAPTER IV: PLANT PATHOLOGY

Table IV.1: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Downy mildew (%) at 30 DAS-Kharif 2024															
Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 122	MH 2832	1.9	0.0	0.0	0.0	0.0	2.0	0.9	0.0	0.0	0.6	0.4	0.7	0.5	2.0
PIT 123	MH 2833	0.0	0.0	0.0	0.0	1.3	1.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	1.3
PIT 124	MH 2834	1.4	0.0	0.0	0.0	0.0	1.0	0.0	1.4	0.0	0.5	0.3	0.6	0.4	1.4
PIT 125	MH 2835	2.3	0.0	0.0	0.0	1.6	2.0	0.0	0.0	0.0	0.8	0.8	0.5	0.6	2.0
IR I		72.0	76.3	93.2	62.5	74.2	80.1	97.9	83.5	94.2	80.5	75.6	88.9	81.5	97.9
IR II		69.4	77.5	84.8	49.1	9.7	82.5	65.5	87.3	88.3	77.3	58.1	80.9	68.2	88.3
PIT 126	MH 2836	1.8	0.0	0.0	0.0	0.0	3.0	5.8	0.0	0.0	0.6	0.4	2.2	1.2	5.8
PIT 127	MH 2837	2.0	2.5	0.0	0.0	1.6	4.0	4.9	0.0	0.0	1.5	1.2	2.2	1.7	4.9
PIT 128	MH 2838	1.8	0.0	0.0	0.0	1.4	2.0	2.4	0.0	0.0	0.6	0.6	1.1	0.8	2.4
PIT 129	MH 2839	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.4	0.0	0.0	0.0	0.6	0.3	1.4
PIT 130	MH 2840	1.5	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.5	0.3	0.3	0.3	1.0
IR I		74.4	70.3	91.9	61.7	60.9	83.5	63.0	78.8	92.6	78.8	71.8	79.4	75.2	92.6
IR II		70.5	68.5	97.1	55.7	11.5	80.0	84.9	75.0	95.0	78.7	60.7	83.7	70.9	95.0
PIT 131	MH 2841	5.0	0.0	0.0	0.0	0.0	2.0	0.9	0.0	0.0	1.7	1.0	0.7	0.9	2.0
PIT 132	MH 2842	1.5	0.0	3.2	0.0	0.0	2.0	0.0	0.0	0.0	1.6	0.9	0.5	0.7	2.0
PIT 133	MH 2843	1.6	1.3	0.0	0.0	0.0	3.0	0.8	0.0	0.0	0.9	0.6	1.0	0.7	3.0
PIT 134	MH 2844	0.0	0.0	0.0	0.0	1.4	2.0	1.9	0.0	0.0	0.0	0.3	1.0	0.6	2.0
PIT 135	MH 2845	2.8	0.0	0.0	0.0	0.0	2.0	1.0	1.3	0.0	0.9	0.6	1.1	0.8	2.0
IR I		74.7	71.3	91.7	73.3	78.0	77.2	98.3	77.6	93.5	79.2	77.8	86.7	81.7	98.3
IR II		72.0	66.5	91.2	61.5	14.1	79.5	57.4	92.8	89.3	76.5	61.0	79.7	69.4	92.8
PIT 136	MH 2846	1.6	0.0	0.0	0.0	0.0	1.0	1.5	1.3	0.0	0.5	0.3	0.9	0.6	1.5
PIT 137	MH 2847	1.7	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.6	0.3	0.5	0.4	2.0
PIT 138	MH 2848	2.9	0.0	0.0	1.8	0.0	2.0	0.0	0.0	0.0	1.0	0.9	0.5	0.7	2.0
PIT 139	MH 2849	3.7	7.5	0.0	0.0	0.0	3.0	2.0	0.0	0.0	3.7	2.2	1.3	1.8	3.7
PIT 140	MH 2850	2.8	1.3	0.0	0.0	0.0	3.0	2.4	0.0	0.0	1.3	0.8	1.4	1.1	3.0
IR I		74.4	66.5	100.0	61.0	69.0	81.5	100.0	72.5	94.3	80.3	74.2	87.1	79.9	100.0
IR II		71.8	70.5	96.3	54.7	9.2	83.5	60.5	89.3	91.0	79.5	60.5	81.1	69.7	91.0
PIT 141	MH 2851	4.4	1.3	0.0	3.3	0.0	3.0	3.7	0.0	0.0	1.9	1.8	1.7	1.7	3.7
PIT 142	MH 2852	1.9	0.0	0.0	1.5	0.0	2.0	2.5	0.0	0.0	0.6	0.7	1.1	0.9	2.5
PIT 143	MH 2853	2.3	0.0	0.0	0.0	0.0	2.0	2.1	0.0	0.0	0.8	0.5	1.0	0.7	2.1
PIT 144	MH 2854	1.5	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.5	0.3	0.3	0.3	1.0

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Table IV.1: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Downy mildew (%) at 30 DAS-Kharif 2024															
Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 145	MH 2855	2.5	0.0	0.0	0.0	0.0	1.0	0.0	1.3	0.0	0.8	0.5	0.6	0.5	1.3
IR I		73.3	69.2	92.0	68.9	63.1	82.0	98.2	75.0	92.0	78.2	73.3	86.8	79.3	98.2
IR II		70.7	64.5	90.9	56.7	7.1	81.0	62.9	88.4	90.6	75.4	58.0	80.7	68.1	90.6
PIT 146	MH 2856	2.0	1.4	0.0	0.0	0.0	2.0	1.9	0.0	0.0	1.1	0.7	1.0	0.8	2.0
PIT 147	MH 2857	1.6	0.0	0.0	0.0	0.0	4.0	9.1	2.8	0.0	0.5	0.3	4.0	1.9	9.1
PIT 148	MH 2858	1.6	0.0	2.7	0.0	1.4	6.0	25.6	0.0	0.0	1.4	1.1	7.9	4.1	25.6
PIT 149	MH 2859	1.5	2.5	0.0	5.2	0.0	4.0	3.3	0.0	0.0	1.3	1.8	1.8	1.8	4.0
PIT 150	MH 2860	3.3	3.2	0.0	0.0	0.0	3.0	3.1	0.0	0.0	2.2	1.3	1.5	1.4	3.1
IR I		72.8	70.3	93.3	68.9	71.0	80.0	100.0	87.0	91.0	78.8	75.2	89.5	81.6	100.0
IR II		70.3	68.5	92.0	64.4	12.9	80.2	68.2	76.3	93.5	76.9	61.6	79.6	69.6	93.5
PIT 151	MH 2861	4.1	0.0	0.0	0.0	0.0	3.0	3.8	0.0	1.6	1.4	0.8	2.1	1.4	3.8
PIT 152	MH 2862	1.9	0.0	0.0	0.0	0.0	2.0	5.8	0.0	0.0	0.6	0.4	2.0	1.1	5.8
PIT 153	MH 2863	1.6	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.5	0.3	0.5	0.4	2.0
PIT 154	MH 2864	1.3	0.0	0.0	0.0	0.0	3.0	3.7	0.0	0.0	0.4	0.3	1.7	0.9	3.7
PIT 155	MH 2865	1.2	0.0	0.0	0.0	0.0	3.0	3.1	0.0	0.0	0.4	0.2	1.5	0.8	3.1
IR I		71.4	76.3	97.0	67.3	72.1	80.0	100.0	78.8	93.5	81.5	76.8	88.1	81.8	100.0
IR II		70.5	77.5	87.9	65.3	9.5	81.0	53.3	94.4	90.6	78.6	62.1	79.8	70.0	94.4
PIT 156	MH 2866	1.9	2.5	0.0	0.0	0.0	1.0	1.1	1.4	0.0	1.5	0.9	0.9	0.9	1.5
PIT 157	MH 2867	2.2	0.0	0.0	1.9	0.0	1.0	0.0	0.0	0.0	0.7	0.8	0.3	0.6	1.0
PIT 158	MH 2868	2.0	0.0	0.0	0.0	0.0	1.0	1.4	1.3	0.0	0.7	0.4	0.9	0.6	1.4
PIT 159	MH 2869	1.9	2.5	0.0	0.0	1.4	2.0	2.7	0.0	0.0	1.5	1.2	1.2	1.2	2.7
PIT 160	MH 2870	3.1	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	1.0	0.6	0.5	0.6	2.0
IR I		71.4	75.0	90.9	68.3	74.6	82.0	100.0	71.3	95.3	79.1	76.1	87.1	81.0	100.0
IR II		69.7	70.3	100.0	68.7	11.9	81.0	73.5	86.8	86.9	80.0	64.1	82.1	72.1	86.9
PIT 161	MH 2871	3.9	0.0	0.0	0.0	0.0	3.0	0.9	1.3	0.0	1.3	0.8	1.3	1.0	3.0
PIT 162	MH 2872	1.9	2.5	5.4	4.3	1.5	3.0	2.1	0.0	0.0	3.2	3.1	1.3	2.3	3.2
PIT 163	MH 2873	2.1	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.7	0.4	0.3	0.3	1.0
PIT 164	MH 2874	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	1.0
PIT 165	MH 2875	1.4	0.0	0.0	0.0	0.0	1.0	0.8	0.0	0.0	0.5	0.3	0.5	0.4	1.0
IR I		72.4	69.7	91.7	64.3	77.9	89.0	94.7	74.6	93.9	77.9	75.2	88.1	80.9	94.7
IR II		70.9	60.1	100.0	67.6	7.9	86.0	70.0	83.1	90.7	77.0	61.3	82.5	70.7	90.7

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Table IV.1: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Downy mildew (%) at 30 DAS-Kharif 2024															
Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 166	MH 2876	1.2	0.0	0.0	0.0	0.0	1.0	0.0	1.3	0.0	0.4	0.2	0.6	0.4	1.3
PIT 167	MH 2877	1.2	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.4	0.2	0.3	0.2	1.0
PIT 168	MH 2878	0.0	0.0	3.7	0.0	0.0	2.0	0.9	0.0	0.0	1.2	0.7	0.7	0.7	2.0
PIT 169	MH 2879	1.4	0.0	0.0	0.0	0.0	2.0	6.8	0.0	0.0	0.5	0.3	2.2	1.1	6.8
PIT 170	MH 2880	4.0	0.0	0.0	0.0	0.0	1.0	4.6	0.0	0.0	1.3	0.8	1.4	1.1	4.6
IR I		71.3	71.3	87.9	60.7	75.8	87.0	96.4	71.3	91.1	76.8	73.4	86.4	79.2	96.4
IR II		70.5	70.7	90.9	53.7	7.4	89.0	80.0	71.3	94.1	77.4	58.6	83.6	69.7	94.1
PIT 171	MH 2881	3.6	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.2	0.7	0.3	0.5	1.2
PIT 172	MH 2882	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	1.0
PIT 173	MH 2883	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 174	MH 2884	2.5	3.0	0.0	0.0	0.0	2.0	0.0	0.0	1.6	1.8	1.1	0.9	1.0	2.0
PIT 175	MH 2885	1.3	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.4	0.4	0.3	0.6	0.4	1.4
IR I		70.8	76.3	94.4	58.9	78.3	86.0	82.2	71.3	92.3	80.5	75.8	82.9	79.0	92.3
IR II		70.0	77.5	96.8	53.7	8.9	86.0	67.3	76.0	91.5	81.4	61.4	80.2	69.7	91.5
PIT 176	MH 2886	1.4	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.5	0.3	0.3	0.3	1.0
PIT 177	MP 640	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	1.0
PIT 178	MP 641	2.1	2.5	0.0	0.0	1.4	1.0	2.7	0.0	1.7	1.5	1.2	1.3	1.3	2.7
PIT 179	MP 642	0.0	0.0	0.0	0.0	4.9	2.0	0.0	0.0	0.0	0.0	1.0	0.5	0.8	4.9
PIT 180	MP 643	2.2	0.0	3.8	0.0	0.0	2.0	0.0	1.3	0.0	2.0	1.2	0.8	1.0	2.0
IR I		71.8	75.0	86.7	62.3	76.7	88.0	99.0	71.3	95.5	77.8	74.5	88.4	80.7	99.0
IR II		67.1	70.3	89.7	52.9	13.0	90.0	71.3	75.3	95.6	75.7	58.6	83.1	69.5	95.6
PIT 181	MP 644	4.4	0.0	2.9	0.0	1.5	3.0	0.0	6.3	0.0	2.5	1.8	2.3	2.0	6.3
PIT 182	MP 645	2.2	0.0	0.0	0.0	3.4	9.0	27.9	1.4	0.0	0.7	1.1	9.6	4.9	27.9
PIT 183	MP 646	0.0	0.0	5.3	0.0	1.7	4.0	6.9	1.3	0.0	1.8	1.4	3.0	2.1	6.9
PIT 184	MP 647	0.0	1.3	0.0	0.0	0.0	4.0	5.4	0.0	0.0	0.4	0.3	2.4	1.2	5.4
PIT 185	MP 648	2.9	1.4	0.0	1.6	0.0	5.0	7.0	1.3	0.0	1.4	1.2	3.3	2.1	7.0
IR I		74.1	69.7	93.1	81.3	79.3	89.0	89.6	72.2	93.6	79.0	79.5	86.1	82.4	93.6
IR II		71.1	60.1	100.0	60.0	4.9	86.0	76.1	88.9	97.1	77.1	59.2	87.0	71.6	97.1
PIT 186	MP 649	1.6	3.8	0.0	0.0	0.0	5.0	6.6	0.0	0.0	1.8	1.1	2.9	1.9	6.6
PIT 187	MP 650	1.4	1.3	2.6	1.8	0.0	3.0	4.7	0.0	0.0	1.8	1.4	1.9	1.6	4.7
PIT 188	MP 651	1.6	1.3	0.0	0.0	0.0	2.0	3.3	0.0	0.0	0.9	0.6	1.3	0.9	3.3

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Table IV.1: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Downy mildew (%) at 30 DAS-Kharif 2024															
Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 189	PB 1756	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	0.0	0.0	0.5	0.2	1.0
PIT 190	RHB 223	1.5	0.0	10.3	0.0	0.0	3.0	2.2	0.0	0.0	3.9	2.4	1.3	1.9	3.9
IR I		74.4	71.3	94.4	75.7	78.3	87.0	96.7	71.3	93.9	80.0	78.8	87.2	82.6	96.7
IR II		70.5	70.7	96.8	67.7	10.8	84.0	80.4	72.5	95.2	79.3	63.3	83.0	72.1	95.2
PIT 191	MPMH 35	0.0	7.5	0.0	3.6	0.0	3.0	0.0	0.0	0.0	2.5	2.2	0.8	1.6	3.0
PIT 192	HHB 67 Imp.	0.0	0.0	0.0	2.1	0.0	2.0	0.0	0.0	0.0	0.0	0.4	0.5	0.5	2.0
PIT 193	PB 1852	1.2	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.4	0.2	0.5	0.4	2.0
PIT 194	86M94	0.0	0.0	0.0	0.0	0.0	3.0	3.1	0.0	0.0	0.0	0.0	1.5	0.7	3.1
PIT 195	DHBH 1397	0.0	0.0	5.4	0.0	0.0	2.0	2.7	0.0	1.7	1.8	1.1	1.6	1.3	2.7
IR I		73.4	75.0	100.0	59.2	76.8	88.0	99.0	74.0	94.0	82.8	76.9	88.8	82.2	99.0
IR II		71.8	70.3	94.3	63.8	6.8	90.0	72.5	92.5	95.4	78.8	61.4	87.6	73.0	95.4
PIT 196	AHB 1269	1.5	0.0	0.0	0.0	0.0	2.0	1.8	0.0	0.0	0.5	0.3	1.0	0.6	2.0
PIT 197	Pratap	3.2	3.8	0.0	0.0	0.0	3.0	4.6	0.0	1.4	2.3	1.4	2.3	1.8	4.6
PIT 198	86M01	1.6	2.5	0.0	0.0	0.0	2.0	1.0	0.0	0.0	1.4	0.8	0.8	0.8	2.0
PIT 199	86M84	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	1.0
PIT 100	KBH 108	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	1.5	0.7	0.4	0.9	0.6	2.0
IR I		71.8	70.3	94.1	67.7	79.7	89.0	94.6	79.7	94.1	78.7	76.7	89.4	82.3	94.6
IR II		69.4	68.5	88.9	62.1	9.2	88.5	68.1	80.3	95.4	75.6	59.6	83.1	70.1	95.4
PIT 201	MP 7878	1.9	0.0	0.0	3.4	0.0	2.0	1.8	0.0	0.0	0.6	1.1	1.0	1.0	2.0
PIT 202	86M86	0.0	0.0	0.0	0.0	0.0	3.0	2.6	0.0	0.0	0.0	0.0	1.4	0.6	3.0
PIT 203	Kaveri S Boss	0.0	2.5	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.8	0.5	0.3	0.4	1.0
PIT 204	NBH 4903	1.5	1.3	0.0	1.6	0.0	2.0	0.0	3.9	0.0	0.9	0.9	1.5	1.1	3.9
PIT 205	AHB 1200	1.6	0.0	0.0	0.0	0.0	1.0	0.0	4.0	1.8	0.5	0.3	1.7	0.9	4.0
IR I		72.6	76.3	90.9	73.8	73.8	88.0	99.0	81.0	95.6	79.9	77.5	90.9	83.4	99.0
IR II		71.2	77.5	96.7	64.6	8.8	90.0	59.3	87.0	92.7	81.8	63.8	82.3	72.0	92.7
PIT 206	Raj 171	2.9	1.4	0.0	0.0	1.6	2.0	1.2	2.6	0.0	1.4	1.2	1.4	1.3	2.6
PIT 207	JBV 2	1.6	0.0	3.4	0.0	3.4	3.0	0.0	4.2	0.0	1.7	1.7	1.8	1.7	4.2
PIT 208	Dhanshakti	2.8	0.0	0.0	0.0	1.7	3.0	0.8	0.0	1.7	0.9	0.9	1.4	1.1	3.0
PIT 209	ICMV 221	1.4	0.0	3.8	0.0	0.0	2.0	0.9	0.0	0.0	1.8	1.1	0.7	0.9	2.0
PIT 210	Pusa Comp. 383	2.5	0.0	0.0	0.0	0.0	3.0	4.8	0.0	0.0	0.8	0.5	1.9	1.1	4.8
IR I		74.4	78.3	85.7	71.4	81.4	87.0	100.0	71.3	93.7	79.4	78.2	88.0	82.6	100.0

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Table IV.1: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Downy mildew (%) at 30 DAS-Kharif 2024															
Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
IR II		70.4	75.5	85.7	69.7	10.5	85.0	72.3	81.6	90.5	77.2	62.4	82.4	71.3	90.5
PIT 211	Pusa Comp. 701	1.4	3.8	0.0	3.6	1.4	2.0	2.5	3.8	0.0	1.7	2.0	2.1	2.1	3.8
PIT 212	ABV 04	1.4	0.0	0.0	0.0	0.0	2.0	1.0	0.0	0.0	0.5	0.3	0.8	0.5	2.0
PIT 213	Pusa Comp. 612	1.5	0.0	0.0	0.0	1.5	3.0	2.5	0.0	0.0	0.5	0.6	1.4	1.0	3.0
PIT 214	ICMV 155	3.1	0.0	0.0	0.0	0.0	3.0	0.0	0.0	1.7	1.0	0.6	1.2	0.9	3.0
IR I		71.6	69.2	100.0	66.7	72.2	88.0	81.5	78.8	94.0	80.3	75.9	85.6	80.2	94.0
IR II		70.1	72.5	90.0	67.8	9.8	89.0	70.1	84.4	95.4	77.5	62.0	84.7	72.1	95.4
	Mean Entries	1.8	0.8	0.7	0.5	0.4	2.5	2.4	0.6	0.2	1.1	0.8	1.4	1.1	2.5
	Mean IR I	72.9	72.8	93.4	67.5	73.5	84.6	95.1	76.5	93.8	79.7	76.0	87.5	81.1	95.1
	Mean IR II	70.4	70.3	93.2	67.5	73.5	84.6	95.1	76.5	93.8	78.0	75.0	87.5	80.6	95.1

IR - 7042S

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Table IV.2: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Downy mildew (%) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
IR I		100.0	83.8	94.6	87.1	95.6	100.0	96.2	93.8	98.5	92.8	92.2	97.1	94.4	100.0
IRII		97.3	80.3	93.5	82.1	15.1	99.0	68.8	87.5	92.9	90.3	73.6	87.0	79.6	99.0
PIT 101	MH 2811	3.7	0.0	0.0	0.0	4.9	5.0	1.0	0.0	4.9	1.2	1.7	2.7	2.2	5.0
PIT 102	MH 2812	3.7	0.0	0.0	0.0	0.0	8.0	6.5	3.8	0.0	1.2	0.7	4.6	2.4	8.0
PIT 103	MH 2813	1.6	0.0	0.0	0.0	1.5	4.0	0.0	0.0	0.0	0.5	0.6	1.0	0.8	4.0
PIT 104	MH 2814	2.6	0.0	0.0	0.0	0.0	6.0	5.3	0.0	0.0	0.9	0.5	2.8	1.5	6.0
PIT 105	MH 2815	5.4	5.7	0.0	0.0	3.8	6.0	0.0	1.3	0.0	3.7	3.0	1.8	2.5	6.0
IR I		100.0	76.3	100.0	87.8	95.5	100.0	100.0	95.0	92.7	92.1	91.9	96.9	94.1	100.0
IRII		96.8	77.5	93.8	77.3	16.2	100.0	67.6	89.7	95.7	89.4	72.3	88.3	79.4	100.0
PIT 106	MH 2816	2.9	0.0	0.0	4.6	0.0	4.0	3.0	6.6	0.0	1.0	1.5	3.4	2.3	6.6
PIT 107	MH 2817	1.3	1.3	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.8	0.5	1.0	0.7	4.0
PIT 108	MH 2818	3.7	3.8	0.0	14.3	0.0	5.0	4.4	1.4	3.0	2.5	4.4	3.5	4.0	5.0
PIT 109	MH 2819	3.9	0.0	13.3	0.0	3.0	6.0	5.3	0.0	0.0	5.7	4.1	2.8	3.5	6.0
PIT 110	MH 2820	3.9	0.0	0.0	0.0	0.0	6.0	0.0	1.3	0.0	1.3	0.8	1.8	1.2	6.0
IR I		100.0	71.3	96.3	86.2	95.5	98.0	100.0	95.0	97.0	89.2	89.9	97.5	93.3	100.0
IRII		98.8	62.4	96.6	92.1	18.8	98.0	78.1	96.2	90.1	85.9	73.7	90.6	81.2	98.0
PIT 111	MH 2821	4.8	0.0	0.0	0.0	0.0	4.0	0.0	0.0	3.1	1.6	1.0	1.8	1.3	4.0
PIT 112	MH 2822	4.7	0.0	0.0	10.6	0.0	5.0	4.7	1.4	0.0	1.6	3.1	2.8	2.9	5.0
PIT 113	MH 2823	4.8	0.0	19.2	12.0	0.0	6.0	0.0	0.0	0.0	8.0	7.2	1.5	4.7	8.0
PIT 114	MH 2824	0.0	1.3	3.4	16.3	0.0	5.0	0.0	2.6	0.0	1.6	4.2	1.9	3.2	5.0
PIT 115	MH 2825	3.7	1.3	16.0	4.2	2.8	4.0	0.2	0.0	0.0	7.0	5.6	1.1	3.6	7.0
IR I		100.0	76.3	97.7	86.3	100.0	98.0	100.0	92.4	94.9	91.3	92.0	96.3	94.0	100.0
IRII		96.4	77.5	92.9	71.1	16.9	97.0	80.9	90.9	94.9	88.9	70.9	90.9	79.8	97.0
PIT 116	MH 2826	1.5	1.3	0.0	0.0	0.0	4.0	1.1	4.2	0.0	0.9	0.5	2.3	1.3	4.2
PIT 117	MH 2827	4.4	0.0	4.3	0.0	0.0	8.0	15.0	7.5	0.0	2.9	1.8	7.6	4.4	15.0
PIT 118	MH 2828	6.5	13.3	0.0	72.9	0.0	31.0	27.5	11.3	0.0	6.6	18.6	17.4	18.1	31.0
PIT 119	MH 2829	1.4	2.5	0.0	0.0	1.4	4.0	1.0	2.6	0.0	1.3	1.1	1.9	1.4	4.0
PIT 120	MH 2830	3.5	0.0	0.0	0.0	0.0	4.0	1.1	0.0	0.0	1.2	0.7	1.3	0.9	4.0
IR I		100.0	71.7	96.6	96.6	94.4	98.0	100.0	93.8	93.8	89.4	91.8	96.4	93.9	100.0
IR II		97.4	70.4	94.7	91.2	17.3	97.0	82.0	87.5	88.2	87.5	74.2	88.7	80.6	97.0
PIT 121	MH 2831	7.3	0.0	0.0	0.0	1.4	6.0	0.0	0.0	0.0	2.4	1.7	1.5	1.6	6.0

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Table IV.2: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Downy mildew (%) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 122	MH 2832	3.7	0.0	0.0	0.0	0.0	4.0	0.9	0.0	0.0	1.2	0.7	1.2	1.0	4.0
PIT 123	MH 2833	0.0	0.0	0.0	0.0	1.3	2.0	0.0	0.0	0.0	0.0	0.3	0.5	0.4	2.0
PIT 124	MH 2834	2.9	0.0	0.0	0.0	0.0	3.0	0.0	1.4	0.0	1.0	0.6	1.1	0.8	3.0
PIT 125	MH 2835	4.6	0.0	0.0	0.0	3.1	4.0	0.0	0.0	0.0	1.5	1.5	1.0	1.3	4.0
IR I		100.0	76.3	97.7	93.8	96.8	97.0	100.0	89.9	94.2	91.3	92.9	95.3	94.0	100.0
IR II		98.6	77.5	84.8	78.2	14.5	95.0	69.0	98.6	88.3	87.0	70.7	87.7	78.3	98.6
PIT 126	MH 2836	3.6	0.0	0.0	0.0	0.0	5.0	5.8	0.0	0.0	1.2	0.7	2.7	1.6	5.8
PIT 127	MH 2837	2.0	2.5	0.0	0.0	3.1	6.0	4.9	0.0	0.0	1.5	1.5	2.7	2.1	6.0
PIT 128	MH 2838	1.8	0.0	0.0	0.0	4.2	4.0	2.4	0.0	0.0	0.6	1.2	1.6	1.4	4.2
PIT 129	MH 2839	0.0	0.0	0.0	0.0	0.0	2.0	0.0	1.4	0.0	0.0	0.0	0.8	0.4	2.0
PIT 130	MH 2840	1.5	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.5	0.3	0.5	0.4	2.0
IR I		100.0	75.1	94.6	86.7	95.3	96.0	94.4	87.5	92.6	89.9	90.3	92.6	91.4	96.0
IR II		98.7	68.5	97.1	86.9	11.5	99.0	84.9	86.8	95.0	88.1	72.5	91.4	80.9	99.0
PIT 131	MH 2841	6.3	0.0	0.0	0.0	0.0	4.0	0.9	0.0	0.0	2.1	1.3	1.2	1.2	4.0
PIT 132	MH 2842	3.0	0.0	3.2	0.0	0.0	4.0	0.0	0.0	0.0	2.1	1.3	1.0	1.1	4.0
PIT 133	MH 2843	3.2	1.3	0.0	0.0	0.0	5.0	0.8	0.0	1.6	1.5	0.9	1.9	1.3	5.0
PIT 134	MH 2844	1.9	0.0	0.0	0.0	2.7	3.0	1.9	0.0	1.4	0.6	0.9	1.6	1.2	3.0
PIT 135	MH 2845	4.2	0.0	0.0	0.0	0.0	5.0	1.0	1.3	0.0	1.4	0.8	1.8	1.3	5.0
IR I		100.0	71.3	100.0	91.1	96.6	98.0	98.3	84.2	93.5	90.4	91.8	93.5	92.6	98.3
IR II		98.8	68.6	91.2	71.2	17.2	99.0	68.9	95.7	89.3	86.2	69.4	88.2	77.8	99.0
PIT 136	MH 2846	3.2	0.0	0.0	0.0	0.0	3.0	1.5	1.3	0.0	1.1	0.6	1.4	1.0	3.0
PIT 137	MH 2847	3.5	0.0	0.0	0.0	0.0	4.0	2.4	0.0	0.0	1.2	0.7	1.6	1.1	4.0
PIT 138	MH 2848	4.3	0.0	0.0	10.7	0.0	4.0	0.0	1.3	1.8	1.4	3.0	1.8	2.5	4.0
PIT 139	MH 2849	5.6	10.0	0.0	0.0	0.0	6.0	2.0	0.0	0.0	5.2	3.1	2.0	2.6	6.0
PIT 140	MH 2850	4.2	1.3	0.0	0.0	0.0	5.0	4.9	0.0	0.0	1.8	1.1	2.5	1.7	5.0
IR I		100.0	68.4	100.0	96.6	96.6	98.0	100.0	90.0	94.3	89.5	92.3	95.6	93.8	100.0
IR II		97.7	70.5	96.3	92.5	12.3	97.0	69.7	97.3	91.0	88.1	73.9	88.8	80.5	97.3
PIT 141	MH 2851	6.5	1.3	0.0	8.2	0.0	5.0	3.7	0.0	0.0	2.6	3.2	2.2	2.7	5.0
PIT 142	MH 2852	1.9	0.0	3.6	2.9	0.0	3.0	2.5	2.9	0.0	1.8	1.7	2.1	1.9	3.0
PIT 143	MH 2853	2.3	0.0	0.0	0.0	0.0	3.0	3.1	0.0	0.0	0.8	0.5	1.5	0.9	3.1
PIT 144	MH 2854	1.5	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.5	0.3	1.0	0.6	4.0

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Table IV.2: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Downy mildew (%) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 145	MH 2855	2.5	0.0	0.0	0.0	0.0	3.0	0.0	1.3	0.0	0.8	0.5	1.1	0.8	3.0
IR I		100.0	70.3	96.0	100.0	95.4	98.0	98.2	87.5	92.0	88.8	92.3	93.9	93.0	98.2
IR II		98.7	68.8	90.9	76.1	10.7	99.0	71.0	94.2	90.6	86.1	69.0	88.7	77.8	99.0
PIT 146	MH 2856	2.0	1.4	0.0	0.0	0.0	6.0	4.8	0.0	0.0	1.1	0.7	2.7	1.6	6.0
PIT 147	MH 2857	3.1	0.0	0.0	0.0	0.0	7.0	9.1	4.3	0.0	1.0	0.6	5.1	2.6	9.1
PIT 148	MH 2858	4.7	0.0	2.7	5.1	1.4	16.0	25.6	0.0	0.0	2.5	2.8	10.4	6.2	25.6
PIT 149	MH 2859	3.0	2.5	0.0	12.1	0.0	5.0	3.3	0.0	0.0	1.8	3.5	2.1	2.9	5.0
PIT 150	MH 2860	5.0	3.2	0.0	0.0	0.0	5.0	3.1	0.0	0.0	2.7	1.6	2.0	1.8	5.0
IR I		100.0	75.6	100.0	88.5	96.8	96.0	100.0	98.7	91.0	91.9	92.2	96.4	94.1	100.0
IR II		97.3	73.8	92.0	82.2	14.5	95.0	75.8	88.2	93.5	87.7	72.0	88.1	79.1	95.0
PIT 151	MH 2861	6.1	0.0	0.0	0.0	0.0	4.0	3.8	0.0	1.6	2.0	1.2	2.3	1.7	4.0
PIT 152	MH 2862	3.9	0.0	0.0	4.4	0.0	5.0	5.8	0.0	0.0	1.3	1.7	2.7	2.1	5.8
PIT 153	MH 2863	3.1	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	1.0	0.6	0.8	0.7	3.0
PIT 154	MH 2864	1.3	0.0	0.0	0.0	0.0	4.0	3.7	0.0	0.0	0.4	0.3	1.9	1.0	4.0
PIT 155	MH 2865	1.2	0.0	0.0	0.0	0.0	4.0	3.1	0.0	0.0	0.4	0.2	1.8	0.9	4.0
IR I		100.0	83.8	100.0	94.5	100.0	99.0	100.0	95.0	93.5	94.6	95.7	96.9	96.2	100.0
IR II		98.7	80.3	87.9	78.7	13.5	97.0	58.9	98.6	90.6	89.0	71.8	86.3	78.2	98.6
PIT 156	MH 2866	3.7	2.5	0.0	0.0	0.0	3.0	1.1	1.4	0.0	2.1	1.2	1.4	1.3	3.0
PIT 157	MH 2867	4.4	0.0	0.0	1.9	0.0	3.0	0.0	0.0	0.0	1.5	1.3	0.8	1.0	3.0
PIT 158	MH 2868	2.0	0.0	0.0	0.0	0.0	2.0	1.4	1.3	0.0	0.7	0.4	1.2	0.7	2.0
PIT 159	MH 2869	3.9	2.5	0.0	0.0	2.9	3.0	2.7	0.0	0.0	2.1	1.8	1.4	1.7	3.0
PIT 160	MH 2870	4.7	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	1.6	0.9	1.0	1.0	4.0
IR I		100.0	76.3	95.5	95.0	96.8	97.0	100.0	95.0	95.3	90.6	92.7	96.8	94.5	100.0
IR II		98.5	77.5	100.0	91.0	15.3	100.0	79.4	92.1	86.9	92.0	76.4	89.6	82.3	100.0
PIT 161	MH 2871	5.9	0.0	0.0	0.0	0.0	4.0	0.9	1.3	1.4	2.0	1.2	1.9	1.5	4.0
PIT 162	MH 2872	3.7	3.8	5.4	8.7	2.9	4.0	2.1	0.0	0.0	4.3	4.9	1.5	3.4	4.9
PIT 163	MH 2873	4.2	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	1.4	0.8	0.5	0.7	2.0
PIT 164	MH 2874	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	1.0
PIT 165	MH 2875	1.4	0.0	0.0	0.0	0.0	2.0	0.8	0.0	0.0	0.5	0.3	0.7	0.5	2.0
IR I		100.0	71.3	91.7	94.6	100.0	98.0	94.7	96.2	93.9	87.7	91.5	95.7	93.4	100.0
IR II		98.7	62.4	100.0	82.4	12.7	98.0	74.2	98.7	90.7	87.0	71.2	90.4	79.8	98.7

CHAPTER IV: PLANT PATHOLOGY

Table IV.2: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Downy mildew (%) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 166	MH 2876	1.2	0.0	0.0	0.0	0.0	2.0	0.0	1.3	0.0	0.4	0.2	0.8	0.5	2.0
PIT 167	MH 2877	2.4	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.8	0.5	0.5	0.5	2.0
PIT 168	MH 2878	0.0	0.0	3.7	0.0	0.0	3.0	0.9	0.0	0.0	1.2	0.7	1.0	0.8	3.0
PIT 169	MH 2879	4.1	0.0	0.0	3.0	0.0	5.0	6.8	0.0	0.0	1.4	1.4	3.0	2.1	6.8
PIT 170	MH 2880	5.3	0.0	0.0	0.0	0.0	3.0	4.6	0.0	0.0	1.8	1.1	1.9	1.4	4.6
IR I		100.0	76.3	87.9	93.4	96.8	99.0	96.4	95.0	91.1	88.0	90.9	95.4	92.9	99.0
IR II		96.2	77.5	90.9	79.1	11.8	100.0	84.8	92.5	94.1	88.2	71.1	92.8	80.8	100.0
PIT 171	MH 2881	4.8	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	1.6	1.0	0.8	0.9	3.0
PIT 172	MH 2882	1.8	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.6	0.4	0.8	0.5	3.0
PIT 173	MH 2883	1.9	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.6	0.4	0.5	0.4	2.0
PIT 174	MH 2884	5.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	1.6	2.7	1.6	1.1	1.4	3.0
PIT 175	MH 2885	1.3	0.0	0.0	0.0	0.0	4.0	0.0	0.0	2.9	0.4	0.3	1.7	0.9	4.0
IR I		100.0	83.8	97.2	75.0	100.0	97.0	91.8	95.0	92.3	93.7	91.2	94.0	92.5	100.0
IR II		97.1	80.3	96.8	64.2	17.9	98.0	72.1	93.3	91.5	91.4	71.3	88.7	79.0	98.0
PIT 176	MH 2886	1.4	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.5	0.3	0.5	0.4	2.0
PIT 177	MP 640	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	2.0
PIT 178	MP 641	4.2	3.8	0.0	0.0	2.8	4.0	2.7	0.0	1.7	2.6	2.1	2.1	2.1	4.0
PIT 179	MP 642	0.0	0.0	0.0	0.0	6.6	4.0	0.0	0.0	0.0	0.0	1.3	1.0	1.2	6.6
PIT 180	MP 643	6.7	0.0	3.8	0.0	0.0	3.0	1.8	2.5	0.0	3.5	2.1	1.8	2.0	3.5
IR I		100.0	76.3	93.3	85.2	96.7	98.0	99.0	76.3	95.5	89.9	90.3	92.2	91.1	99.0
IR II		98.6	77.5	93.1	89.7	18.5	99.0	71.3	78.1	95.6	89.7	75.5	86.0	80.2	99.0
PIT 181	MP 644	6.7	0.0	2.9	0.0	1.5	7.0	0.0	7.5	0.0	3.2	2.2	3.6	2.8	7.5
PIT 182	MP 645	4.4	0.0	0.0	0.0	5.1	19.0	28.9	2.8	0.0	1.5	1.9	12.7	6.7	28.9
PIT 183	MP 646	3.3	0.0	5.3	0.0	1.7	7.0	7.9	1.3	0.0	2.8	2.0	4.0	2.9	7.9
PIT 184	MP 647	2.1	1.3	0.0	3.4	0.0	6.0	5.4	0.0	0.0	1.1	1.3	2.9	2.0	6.0
PIT 185	MP 648	2.9	1.4	0.0	3.2	0.0	8.0	7.0	1.3	0.0	1.4	1.5	4.1	2.6	8.0
IR I		100.0	71.3	96.6	73.4	94.8	99.0	92.5	96.2	93.6	89.3	87.2	95.3	90.8	99.0
IR II		97.6	62.4	100.0	71.7	11.5	96.0	85.2	93.1	97.1	86.7	68.6	92.8	79.4	97.1
PIT 186	MP 649	4.7	5.0	0.0	0.0	3.6	6.0	6.6	1.3	0.0	3.2	2.7	3.5	3.0	6.6
PIT 187	MP 650	2.7	1.3	2.6	7.1	0.0	5.0	4.7	0.0	0.0	2.2	2.7	2.4	2.6	5.0
PIT 188	MP 651	3.1	1.3	0.0	0.0	0.0	3.0	3.3	0.0	0.0	1.5	0.9	1.6	1.2	3.3

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Table IV.2: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Downy mildew (%) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 189	PB 1756	0.0	0.0	0.0	0.0	0.0	2.0	0.9	0.0	0.0	0.0	0.0	0.7	0.3	2.0
PIT 190	RHB 223	1.5	0.0	10.3	0.0	0.0	5.0	3.3	0.0	0.0	3.9	2.4	2.1	2.2	5.0
IR I		100.0	75.3	97.2	85.1	95.0	97.0	98.4	95.0	93.9	90.8	90.5	96.1	93.0	98.4
IR II		97.4	79.5	96.8	73.8	13.8	98.0	87.0	85.0	95.2	91.2	72.3	91.3	80.7	98.0
PIT 191	MPMH 35	0.0	10.0	0.0	16.4	1.7	4.0	0.0	0.0	0.0	3.3	5.6	1.0	3.6	5.6
PIT 192	HHB 67 Imp.	0.0	0.0	0.0	6.4	0.0	3.0	0.0	1.3	0.0	0.0	1.3	1.1	1.2	3.0
PIT 193	PB 1852	1.2	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.4	0.2	0.8	0.5	3.0
PIT 194	86M94	0.0	0.0	0.0	0.0	0.0	4.0	3.1	0.0	0.0	0.0	0.0	1.8	0.8	4.0
PIT 195	DHBH 1397	1.5	0.0	5.4	0.0	0.0	3.0	2.7	0.0	3.3	2.3	1.4	2.3	1.8	3.3
IR I		100.0	76.3	100.0	83.1	95.7	98.0	99.0	84.4	94.0	92.1	91.0	93.9	92.3	99.0
IR II		98.7	77.5	97.1	81.0	13.6	97.0	74.2	93.8	95.4	91.1	73.6	90.1	80.9	97.0
PIT 196	AHB 1269	1.5	0.0	0.0	0.0	0.0	3.0	1.8	0.0	0.0	0.5	0.3	1.2	0.7	3.0
PIT 197	Pratap	4.8	5.0	0.0	0.0	0.0	5.0	4.6	0.0	3.0	3.3	2.0	3.2	2.5	5.0
PIT 198	86M01	3.2	2.5	0.0	2.3	0.0	3.0	1.0	1.3	0.0	1.9	1.6	1.3	1.5	3.0
PIT 199	86M84	1.8	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.6	0.4	0.5	0.4	2.0
PIT 100	KBH 108	3.9	0.0	0.0	0.0	1.9	3.0	0.0	0.0	1.5	1.3	1.2	1.1	1.1	3.0
IR I		100.0	78.3	94.1	100.0	96.6	98.0	96.7	84.8	94.1	90.8	93.8	93.4	93.6	98.0
IR II		97.2	72.8	91.7	92.4	13.8	98.5	76.9	84.2	95.4	87.2	73.6	88.8	80.3	98.5
PIT 201	MP 7878	3.7	0.0	0.0	5.2	0.0	3.0	1.8	0.0	0.0	1.2	1.8	1.2	1.5	3.0
PIT 202	86M86	2.0	0.0	0.0	0.0	0.0	4.0	2.6	2.6	0.0	0.7	0.4	2.3	1.2	4.0
PIT 203	Kaveri S Boss	1.8	2.5	0.0	4.5	0.0	3.0	0.0	0.0	0.0	1.4	1.8	0.8	1.3	3.0
PIT 204	NBH 4903	4.5	2.5	0.0	1.6	0.0	5.0	0.0	5.1	0.0	2.3	1.7	2.5	2.1	5.1
PIT 205	AHB 1200	1.6	0.0	0.0	0.0	0.0	2.0	0.0	4.0	3.3	0.5	0.3	2.3	1.2	4.0
IR I		100.0	83.8	93.9	96.9	96.7	98.0	99.0	91.1	95.6	92.6	94.3	95.9	95.0	99.0
IR II		97.3	80.3	96.7	87.7	12.3	99.0	62.7	94.8	92.7	91.4	74.8	87.3	80.4	99.0
PIT 206	Raj 171	4.3	1.4	0.0	0.0	1.6	5.0	1.2	2.6	0.0	1.9	1.4	2.2	1.8	5.0
PIT 207	JBV 2	4.7	0.0	3.4	0.0	3.4	5.0	0.0	5.6	0.0	2.7	2.3	2.6	2.5	5.6
PIT 208	Dhanshakti	5.6	0.0	0.0	7.0	1.7	4.0	2.5	0.0	1.7	1.9	2.9	2.0	2.5	4.0
PIT 209	ICMV 221	4.2	0.0	3.8	0.0	0.0	3.0	0.9	0.0	0.0	2.7	1.6	1.0	1.3	3.0
PIT 210	Pusa Comp. 383	3.8	0.0	0.0	0.0	0.0	4.0	4.8	0.0	0.0	1.3	0.8	2.2	1.4	4.8
IR I		100.0	81.3	89.3	89.6	98.3	98.0	100.0	87.5	93.7	90.2	91.7	94.8	93.1	100.0

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Table IV.2: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Downy mildew (%) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
IR II		96.3	77.8	96.4	76.3	14.0	100.0	76.6	85.5	90.5	90.2	72.2	88.2	79.3	100.0
PIT 211	Pusa Comp. 701	1.4	3.8	0.0	5.4	2.9	4.0	4.2	5.0	0.0	1.7	2.7	3.3	3.0	5.0
PIT 212	ABV 04	2.9	0.0	0.0	4.0	0.0	3.0	1.0	0.0	0.0	1.0	1.4	1.0	1.2	3.0
PIT 213	Pusa Comp. 612	3.1	0.0	0.0	0.0	3.0	4.0	2.5	0.0	0.0	1.0	1.2	1.6	1.4	4.0
PIT 214	ICMV 155	4.6	0.0	0.0	4.5	0.0	5.0	0.9	0.0	3.1	1.5	1.8	2.2	2.0	5.0
IR I		100.0	78.3	100.0	79.6	98.1	99.0	90.1	85.0	94.0	92.8	91.2	92.0	91.6	99.0
IR II		98.7	77.5	93.3	72.9	15.7	99.0	79.2	93.5	95.4	89.8	71.6	91.8	80.6	99.0
	Mean Entries	6.3	3.4	4.2	2.3	1.2	7.7	5.1	4.0	3.5	4.6	3.5	5.1	4.2	7.7
	Mean IR I	100.0	76.2	96.3	89.4	96.8	98.0	97.7	91.0	94.0	90.8	91.7	95.2	93.3	98.0
	Mean IR II	97.9	74.0	94.4	80.9	14.1	98.0	75.2	91.5	92.4	88.8	72.3	89.3	79.8	98.0

IR - 7042S

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Table IV.3: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Blast (0-9 scale) 30 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 101	MH 2811	0.0	1.0	1.3	0.1	0.0	0.0	1.5	1.0	0.0	0.8	0.5	0.6	0.5	1.5
PIT 102	MH 2812	0.0	1.0	1.8	0.0	0.0	0.0	2.0	0.5	0.0	0.9	0.6	0.6	0.6	2.0
PIT 103	MH 2813	0.0	1.0	1.2	0.2	0.0	0.5	1.5	0.5	0.0	0.7	0.5	0.6	0.5	1.5
PIT 104	MH 2814	0.0	1.0	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.0	0.2	1.1
PIT 105	MH 2815	0.5	1.0	1.9	0.0	0.5	0.5	2.5	0.0	0.0	1.1	0.8	0.8	0.8	2.5
PIT 106	MH 2816	0.5	1.0	2.1	0.1	0.0	0.5	2.5	1.5	0.5	1.2	0.7	1.3	1.0	2.5
PIT 107	MH 2817	0.0	1.0	1.6	0.3	0.0	0.5	3.0	1.0	0.0	0.9	0.6	1.1	0.8	3.0
PIT 108	MH 2818	1.0	1.5	1.5	0.4	1.0	0.5	4.0	1.0	1.0	1.3	1.1	1.6	1.3	4.0
PIT 109	MH 2819	0.0	1.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.0	0.3	1.5
PIT 110	MH 2820	1.0	1.0	1.9	0.0	0.0	0.5	1.0	0.0	0.0	1.3	0.8	0.4	0.6	1.9
PIT 111	MH 2821	1.0	1.0	1.4	0.0	0.0	1.0	2.0	1.0	0.5	1.1	0.7	1.1	0.9	2.0
PIT 112	MH 2822	1.0	1.5	1.8	0.1	0.0	0.5	2.0	1.5	0.0	1.4	0.9	1.0	0.9	2.0
PIT 113	MH 2823	0.0	1.0	1.6	0.1	0.0	0.5	3.0	1.0	0.0	0.9	0.5	1.1	0.8	3.0
PIT 114	MH 2824	0.0	1.0	1.3	0.1	0.0	0.5	2.0	0.5	0.0	0.8	0.5	0.8	0.6	2.0
PIT 115	MH 2825	0.0	1.0	1.5	0.0	0.0	0.5	1.0	0.0	0.0	0.8	0.5	0.4	0.4	1.5
PIT 116	MH 2826	1.0	0.5	2.1	0.1	0.0	1.0	2.0	1.0	0.0	1.2	0.7	1.0	0.9	2.1
PIT 117	MH 2827	0.0	0.5	1.5	0.1	0.0	1.0	1.5	0.0	0.0	0.7	0.4	0.6	0.5	1.5
PIT 118	MH 2828	0.5	0.5	1.3	0.5	0.0	0.0	0.5	0.0	0.0	0.8	0.6	0.1	0.4	1.3
PIT 119	MH 2829	0.5	1.5	2.8	0.2	0.0	1.0	2.0	0.0	0.0	1.6	1.0	0.8	0.9	2.8
PIT 120	MH 2830	1.0	0.5	2.6	0.1	0.0	1.0	1.5	0.0	0.0	1.4	0.8	0.6	0.7	2.6
PIT 121	MH 2831	0.5	0.5	2.2	0.3	0.0	1.0	1.5	0.0	0.0	1.1	0.7	0.6	0.7	2.2
PIT 122	MH 2832	0.0	1.0	1.3	0.1	0.0	1.0	2.5	0.0	0.0	0.8	0.5	0.9	0.7	2.5
PIT 123	MH 2833	0.5	1.0	1.5	0.0	0.0	1.0	2.0	0.0	0.0	1.0	0.6	0.8	0.7	2.0
PIT 124	MH 2834	0.0	1.0	1.2	0.1	0.0	0.5	0.0	0.0	0.0	0.7	0.5	0.1	0.3	1.2
PIT 125	MH 2835	0.0	0.5	1.3	0.1	0.0	0.0	1.0	0.0	0.0	0.6	0.4	0.3	0.3	1.3
PIT 126	MH 2836	0.5	1.0	1.4	0.1	0.0	0.0	1.5	0.0	0.0	1.0	0.6	0.4	0.5	1.5
PIT 127	MH 2837	0.0	1.0	1.5	0.4	0.0	0.5	1.0	0.0	0.0	0.8	0.6	0.4	0.5	1.5
PIT 128	MH 2838	0.0	1.0	1.4	0.0	0.0	0.0	1.0	0.0	0.0	0.8	0.5	0.3	0.4	1.4
PIT 129	MH 2839	0.0	1.0	1.3	0.0	0.0	1.0	1.5	0.0	1.0	0.8	0.5	0.9	0.6	1.5

CHAPTER IV: PLANT PATHOLOGY

Table IV.3: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Blast (0-9 scale) 30 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 130	MH 2840	0.0	1.0	1.2	0.0	0.5	0.0	0.0	0.0	0.0	0.7	0.5	0.0	0.3	1.2
PIT 131	MH 2841	0.5	1.0	1.9	0.0	0.5	0.0	1.5	0.0	0.0	1.1	0.8	0.4	0.6	1.9
PIT 132	MH 2842	0.0	0.5	1.5	0.0	1.0	0.0	0.0	0.0	0.0	0.7	0.6	0.0	0.3	1.5
PIT 133	MH 2843	1.0	1.0	3.4	0.1	1.5	0.5	3.5	0.0	0.0	1.8	1.4	1.0	1.2	3.5
PIT 134	MH 2844	0.0	0.5	1.2	0.1	0.0	0.0	0.5	0.0	0.0	0.6	0.4	0.1	0.3	1.2
PIT 135	MH 2845	0.5	1.0	2.2	0.3	0.5	0.0	3.0	0.0	0.0	1.2	0.9	0.8	0.8	3.0
PIT 136	MH 2846	0.0	0.0	1.1	0.0	0.0	0.0	0.5	0.0	0.0	0.4	0.2	0.1	0.2	1.1
PIT 137	MH 2847	0.5	0.0	1.7	0.4	0.0	0.5	2.0	0.0	0.0	0.7	0.5	0.6	0.6	2.0
PIT 138	MH 2848	0.0	0.0	1.4	0.2	0.0	0.5	1.5	0.0	0.5	0.5	0.3	0.6	0.5	1.5
PIT 139	MH 2849	0.0	1.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	1.0	0.6	0.5	0.6	2.0
PIT 140	MH 2850	0.0	1.0	1.5	0.1	0.0	0.5	1.5	0.0	0.0	0.8	0.5	0.5	0.5	1.5
PIT 141	MH 2851	0.0	1.0	2.2	0.0	0.0	0.5	2.0	0.0	0.0	1.1	0.6	0.6	0.6	2.2
PIT 142	MH 2852	0.0	1.0	1.7	0.0	0.0	0.5	0.5	0.0	0.0	0.9	0.5	0.3	0.4	1.7
PIT 143	MH 2853	0.0	1.0	1.3	0.0	0.0	0.5	0.5	0.0	0.0	0.8	0.5	0.3	0.4	1.3
PIT 144	MH 2854	0.0	1.0	1.7	0.0	0.0	0.5	0.0	0.0	0.0	0.9	0.5	0.1	0.4	1.7
PIT 145	MH 2855	0.0	0.0	1.8	0.1	0.0	1.0	1.0	0.0	0.0	0.6	0.4	0.5	0.4	1.8
PIT 146	MH 2856	0.5	0.5	1.8	0.2	0.0	1.0	2.5	0.0	0.0	0.9	0.6	0.9	0.7	2.5
PIT 147	MH 2857	0.0	0.5	2.5	0.4	0.0	1.0	2.5	0.0	0.0	1.0	0.7	0.9	0.8	2.5
PIT 148	MH 2858	0.5	0.5	2.6	0.6	0.0	1.0	3.0	0.0	0.5	1.2	0.8	1.1	1.0	3.0
PIT 149	MH 2859	0.0	0.0	1.1	0.0	0.0	1.0	0.0	0.0	0.0	0.4	0.2	0.3	0.2	1.1
PIT 150	MH 2860	0.0	0.0	1.3	0.0	0.5	0.5	3.0	0.0	0.0	0.4	0.4	0.9	0.6	3.0
PIT 151	MH 2861	1.0	1.0	2.7	0.5	1.0	1.0	3.5	1.0	0.5	1.6	1.2	1.5	1.4	3.5
PIT 152	MH 2862	0.0	1.0	2.0	0.1	0.0	0.5	2.0	0.0	0.0	1.0	0.6	0.6	0.6	2.0
PIT 153	MH 2863	0.0	0.5	1.3	0.0	0.0	0.5	0.0	0.0	0.0	0.6	0.4	0.1	0.3	1.3
PIT 154	MH 2864	0.0	1.0	1.2	0.0	0.0	0.5	1.0	0.0	0.0	0.7	0.4	0.4	0.4	1.2
PIT 155	MH 2865	0.0	1.0	1.4	0.1	0.0	0.5	2.5	0.0	0.0	0.8	0.5	0.8	0.6	2.5
PIT 156	MH 2866	0.0	0.5	1.2	0.3	0.0	0.0	0.5	0.0	0.0	0.6	0.4	0.1	0.3	1.2
PIT 157	MH 2867	0.5	0.5	1.2	0.0	0.0	0.0	1.5	0.0	0.0	0.7	0.4	0.4	0.4	1.5
PIT 158	MH 2868	0.0	1.0	2.3	0.1	0.0	0.5	2.0	0.0	0.0	1.1	0.7	0.6	0.7	2.3

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Table IV.3: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Blast (0-9 scale) 30 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 159	MH 2869	0.0	1.0	2.3	0.1	0.0	0.5	1.5	0.0	0.0	1.1	0.7	0.5	0.6	2.3
PIT 160	MH 2870	0.0	1.0	1.6	0.0	0.0	0.0	2.0	0.0	0.0	0.9	0.5	0.5	0.5	2.0
PIT 161	MH 2871	0.0	1.0	1.2	0.1	0.0	0.0	0.5	0.0	0.0	0.7	0.5	0.1	0.3	1.2
PIT 162	MH 2872	0.0	1.0	1.6	0.1	0.0	0.0	1.0	0.0	0.0	0.9	0.5	0.3	0.4	1.6
PIT 163	MH 2873	0.0	0.5	1.2	0.0	0.0	0.5	0.0	0.0	0.0	0.6	0.3	0.1	0.2	1.2
PIT 164	MH 2874	0.0	0.5	1.0	0.1	0.0	0.5	0.0	0.0	0.0	0.5	0.3	0.1	0.2	1.0
PIT 165	MH 2875	0.0	0.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.0	0.2	1.1
PIT 166	MH 2876	0.0	0.5	1.2	0.0	1.0	0.5	1.5	0.0	0.0	0.6	0.5	0.5	0.5	1.5
PIT 167	MH 2877	0.0	0.5	1.8	0.1	0.0	1.0	2.0	0.0	0.0	0.8	0.5	0.8	0.6	2.0
PIT 168	MH 2878	0.0	0.5	1.6	0.1	0.0	1.0	0.0	0.0	0.0	0.7	0.4	0.3	0.4	1.6
PIT 169	MH 2879	0.5	0.5	2.2	0.0	0.0	0.5	1.5	0.0	0.0	1.1	0.6	0.5	0.6	2.2
PIT 170	MH 2880	0.0	0.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.0	0.2	1.1
PIT 171	MH 2881	0.0	1.0	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.0	0.2	1.0
PIT 172	MH 2882	1.0	1.0	2.1	0.0	0.0	0.5	1.5	0.0	0.0	1.4	0.8	0.5	0.7	2.1
PIT 173	MH 2883	0.0	1.0	1.1	0.0	0.0	0.5	2.0	0.0	0.0	0.7	0.4	0.6	0.5	2.0
PIT 174	MH 2884	0.0	1.0	2.2	0.3	0.5	0.5	3.0	0.0	0.5	1.1	0.8	1.0	0.9	3.0
PIT 175	MH 2885	0.0	1.0	2.2	0.0	0.0	0.0	1.0	0.0	0.0	1.1	0.6	0.3	0.5	2.2
PIT 176	MH 2886	0.5	1.0	1.9	0.0	1.5	0.0	2.0	0.0	0.0	1.1	1.0	0.5	0.8	2.0
PIT 177	MP 640	0.5	1.0	2.0	0.0	0.0	0.0	2.5	0.0	0.0	1.2	0.7	0.6	0.7	2.5
PIT 178	MP 641	0.0	1.0	2.6	0.0	0.0	0.0	2.0	0.0	0.0	1.2	0.7	0.5	0.6	2.6
PIT 179	MP 642	0.0	1.0	2.3	0.0	0.0	1.0	2.0	0.0	0.0	1.1	0.7	0.8	0.7	2.3
PIT 180	MP 643	0.0	1.0	2.2	0.2	0.0	0.5	2.0	0.0	0.0	1.1	0.7	0.6	0.7	2.2
PIT 181	MP 644	0.0	1.0	1.6	0.1	0.0	0.5	1.5	0.0	0.0	0.9	0.5	0.5	0.5	1.6
PIT 182	MP 645	0.0	1.0	1.6	0.0	0.0	0.5	1.5	0.0	0.0	0.9	0.5	0.5	0.5	1.6
PIT 183	MP 646	0.5	1.0	2.4	0.1	0.0	1.0	2.5	0.0	0.0	1.3	0.8	0.9	0.8	2.5
PIT 184	MP 647	0.5	1.0	2.0	0.1	0.0	1.0	2.5	0.0	0.0	1.2	0.7	0.9	0.8	2.5
PIT 185	MP 648	0.5	1.0	2.2	0.2	0.0	2.0	2.0	0.0	0.0	1.2	0.8	1.0	0.9	2.2
PIT 186	MP 649	0.5	1.0	1.8	0.3	0.0	1.0	2.0	0.0	0.0	1.1	0.7	0.8	0.7	2.0
PIT 187	MP 650	0.0	1.0	1.6	0.0	0.0	1.0	2.0	0.0	0.0	0.9	0.5	0.8	0.6	2.0

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Table IV.3: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Blast (0-9 scale) 30 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 188	MP 651	0.0	1.0	1.3	0.0	0.0	1.0	2.5	0.0	0.0	0.8	0.5	0.9	0.6	2.5
PIT 189	PB 1756	0.0	1.0	1.1	0.2	0.0	0.5	1.0	0.0	0.0	0.7	0.5	0.4	0.4	1.1
PIT 190	RHB 223	0.0	1.0	1.5	0.2	0.0	1.0	1.5	0.0	0.0	0.8	0.5	0.6	0.6	1.5
PIT 191	MPMH 35	0.0	1.0	1.3	0.2	0.0	0.5	1.5	0.0	0.0	0.8	0.5	0.5	0.5	1.5
PIT 192	HHB 67 Imp.	0.5	1.0	2.2	0.1	1.0	0.5	2.5	0.0	0.0	1.2	1.0	0.8	0.9	2.5
PIT 193	PB 1852	0.0	1.0	1.4	0.0	0.5	0.5	1.0	0.0	0.0	0.8	0.6	0.4	0.5	1.4
PIT 194	86M94	0.5	1.0	1.6	0.0	0.0	1.0	2.5	0.0	0.0	1.0	0.6	0.9	0.7	2.5
PIT 195	DHBH 1397	0.5	1.0	1.6	0.3	1.0	0.5	1.0	0.0	0.0	1.0	0.9	0.4	0.7	1.6
PIT 196	AHB 1269	0.5	1.0	2.9	0.5	0.5	1.0	4.0	0.0	1.0	1.5	1.1	1.5	1.3	4.0
PIT 197	Pratap	1.5	1.0	2.8	0.5	0.0	0.5	3.5	0.0	2.0	1.8	1.2	1.5	1.3	3.5
PIT 198	86M01	1.0	1.0	2.8	0.0	0.0	1.0	4.0	0.0	0.5	1.6	1.0	1.4	1.1	4.0
PIT 199	86M84	0.5	1.0	2.6	0.0	0.0	1.0	1.5	0.0	0.0	1.4	0.8	0.6	0.7	2.6
PIT 200	KBH 108	0.5	1.0	2.2	0.0	0.0	0.5	3.5	0.0	0.0	1.2	0.7	1.0	0.9	3.5
PIT 201	MP 7878	0.0	1.0	2.2	0.2	1.0	0.5	1.5	0.0	0.0	1.1	0.9	0.5	0.7	2.2
PIT 202	86M86	0.0	1.0	1.4	0.0	0.0	1.0	1.0	0.0	0.0	0.8	0.5	0.5	0.5	1.4
PIT 203	Kaveri S Boss	0.0	1.0	1.3	0.0	0.0	1.0	2.0	0.0	0.0	0.8	0.5	0.8	0.6	2.0
PIT 204	NBH 4903	1.0	1.0	1.8	0.3	1.0	0.5	3.5	0.0	0.0	1.3	1.0	1.0	1.0	3.5
PIT 205	AHB 1200	0.0	1.0	1.7	0.4	1.0	1.0	4.0	0.0	0.5	0.9	0.8	1.4	1.1	4.0
PIT 206	Raj 171	0.0	1.0	1.6	0.2	0.0	1.0	2.5	0.0	0.0	0.9	0.6	0.9	0.7	2.5
PIT 207	JBV 2	0.0	1.0	1.3	0.0	0.0	0.5	1.0	0.0	0.0	0.8	0.5	0.4	0.4	1.3
PIT 208	Dhanshakti	1.0	1.0	1.8	0.2	0.0	0.5	3.5	0.0	0.0	1.3	0.8	1.0	0.9	3.5
PIT 209	ICMV 221	1.0	1.0	2.1	0.0	1.0	0.5	3.0	0.0	0.0	1.4	1.0	0.9	1.0	3.0
PIT 210	Pusa Comp. 383	0.5	1.0	2.0	0.1	0.0	0.5	2.0	0.0	0.0	1.2	0.7	0.6	0.7	2.0
PIT 211	Pusa Comp. 701	0.0	1.0	1.6	0.0	0.0	1.0	2.0	0.0	0.0	0.9	0.5	0.8	0.6	2.0
PIT 212	ABV 04	1.0	1.0	2.2	0.0	0.0	0.5	2.5	0.0	0.0	1.4	0.8	0.8	0.8	2.5
PIT 213	Pusa Comp. 612	1.0	1.0	1.7	0.0	1.0	1.0	2.0	0.0	0.0	1.2	0.9	0.8	0.9	2.0
PIT 214	ICMV 155	0.0	1.0	2.0	0.2	0.0	0.5	3.0	1.0	0.0	1.0	0.6	1.1	0.9	3.0
Entry Mean		0.3	0.9	1.7	0.1	0.2	0.6	1.7	0.1	0.1	1.0	0.6	0.6	0.6	1.7

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Table IV.3A: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Blast (0-9 scale) 45 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 101	MH 2811	0.5	2.0	1.8	0.3	0.0	1.0	3.5	1.0	0.0	1.4	0.9	1.4	1.1	3.5
PIT 102	MH 2812	1.0	2.0	2.1	0.2	0.5	0.0	3.5	0.5	0.0	1.7	1.2	1.0	1.1	3.5
PIT 103	MH 2813	0.5	2.0	1.4	0.5	1.0	1.0	2.5	0.5	0.0	1.3	1.1	1.0	1.0	2.5
PIT 104	MH 2814	0.5	2.0	1.4	0.3	0.5	0.0	1.0	0.0	0.0	1.3	0.9	0.3	0.6	2.0
PIT 105	MH 2815	1.5	2.0	2.0	0.3	2.0	1.0	3.5	0.0	0.0	1.8	1.6	1.1	1.4	3.5
PIT 106	MH 2816	1.5	2.0	2.1	0.2	1.0	1.0	3.0	2.0	1.0	1.9	1.4	1.8	1.5	3.0
PIT 107	MH 2817	2.5	2.0	2.1	0.9	1.0	1.0	4.0	1.0	0.0	2.2	1.7	1.5	1.6	4.0
PIT 108	MH 2818	2.5	2.0	1.5	1.3	2.0	1.0	4.5	1.0	2.5	2.0	1.9	2.3	2.0	4.5
PIT 109	MH 2819	1.0	2.5	1.2	0.2	1.0	0.0	2.0	0.0	0.0	1.6	1.2	0.5	0.9	2.5
PIT 110	MH 2820	1.0	2.0	2.1	0.0	1.0	1.0	2.5	0.0	0.0	1.7	1.2	0.9	1.1	2.5
PIT 111	MH 2821	1.5	2.0	1.6	0.2	1.0	1.0	4.0	2.0	1.5	1.7	1.3	2.1	1.6	4.0
PIT 112	MH 2822	1.5	2.0	2.2	0.3	1.0	1.0	4.5	2.0	0.0	1.9	1.4	1.9	1.6	4.5
PIT 113	MH 2823	1.0	2.0	1.8	0.5	1.0	1.0	4.5	1.5	0.5	1.6	1.3	1.9	1.5	4.5
PIT 114	MH 2824	1.0	2.0	1.6	0.3	1.0	1.0	4.0	0.5	0.5	1.5	1.2	1.5	1.3	4.0
PIT 115	MH 2825	1.5	2.0	1.5	0.0	1.0	1.0	3.5	0.0	0.0	1.7	1.2	1.1	1.2	3.5
PIT 116	MH 2826	1.0	1.5	2.2	0.3	1.0	2.0	5.0	2.0	0.0	1.6	1.2	2.3	1.7	5.0
PIT 117	MH 2827	0.0	1.0	1.5	0.8	0.0	1.0	2.5	0.0	0.0	0.8	0.7	0.9	0.8	2.5
PIT 118	MH 2828	0.5	1.5	1.4	1.4	0.5	0.0	1.5	0.0	0.0	1.1	1.1	0.4	0.8	1.5
PIT 119	MH 2829	1.0	2.0	3.3	0.5	1.0	2.0	4.5	0.0	0.5	2.1	1.6	1.8	1.6	4.5
PIT 120	MH 2830	2.0	1.5	2.8	0.2	1.0	1.0	3.0	0.0	0.0	2.1	1.5	1.0	1.3	3.0
PIT 121	MH 2831	1.0	1.5	2.4	0.7	0.0	2.0	3.5	0.0	0.0	1.6	1.1	1.4	1.2	3.5
PIT 122	MH 2832	1.0	2.0	1.9	0.2	0.5	2.0	4.0	0.0	0.0	1.6	1.1	1.5	1.3	4.0
PIT 123	MH 2833	1.0	2.0	1.6	0.0	1.0	1.0	3.5	0.0	0.0	1.5	1.1	1.1	1.1	3.5
PIT 124	MH 2834	0.0	2.0	1.5	0.3	1.0	1.0	1.0	0.5	0.0	1.2	1.0	0.6	0.8	2.0
PIT 125	MH 2835	0.0	1.0	1.5	0.5	0.5	0.0	1.5	0.5	0.0	0.8	0.7	0.5	0.6	1.5
PIT 126	MH 2836	0.5	2.0	1.6	0.5	0.0	0.0	2.5	0.0	0.0	1.4	0.9	0.6	0.8	2.5
PIT 127	MH 2837	0.0	2.0	1.6	1.1	0.0	1.0	2.5	0.0	0.0	1.2	0.9	0.9	0.9	2.5
PIT 128	MH 2838	0.0	2.0	1.4	0.3	0.0	0.0	2.5	0.0	0.5	1.1	0.7	0.8	0.7	2.5
PIT 129	MH 2839	0.0	2.0	1.5	0.1	1.0	2.0	2.5	0.0	2.0	1.2	0.9	1.6	1.2	2.5

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Table IV.3A: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Blast (0-9 scale) 45 DAS-Kharif 2024

PIT 130	MH 2840	0.5	1.5	1.4	0.0	1.5	0.0	0.0	0.0	0.0	1.1	1.0	0.0	0.5	1.5
PIT 131	MH 2841	0.5	2.0	2.0	0.0	2.0	0.0	2.5	0.0	0.0	1.5	1.3	0.6	1.0	2.5
PIT 132	MH 2842	0.5	1.0	1.7	0.1	2.0	0.0	1.0	0.0	0.0	1.1	1.1	0.3	0.7	2.0
PIT 133	MH 2843	2.0	2.0	3.8	0.4	3.5	0.5	4.5	0.0	0.5	2.6	2.3	1.4	1.9	4.5
PIT 134	MH 2844	0.5	1.5	1.3	0.4	1.5	0.0	1.0	0.0	0.5	1.1	1.0	0.4	0.7	1.5
PIT 135	MH 2845	1.5	2.0	2.3	0.8	2.0	0.0	3.5	0.0	0.5	1.9	1.7	1.0	1.4	3.5
PIT 136	MH 2846	0.0	1.0	1.2	0.7	1.0	0.0	1.5	0.0	0.0	0.7	0.8	0.4	0.6	1.5
PIT 137	MH 2847	0.5	1.0	1.7	1.1	0.5	1.0	3.0	0.5	0.0	1.1	1.0	1.1	1.0	3.0
PIT 138	MH 2848	1.0	1.0	2.0	0.4	0.0	1.0	3.0	0.0	0.5	1.3	0.9	1.1	1.0	3.0
PIT 139	MH 2849	0.5	2.0	2.4	0.2	1.5	0.0	4.0	0.0	0.0	1.6	1.3	1.0	1.2	4.0
PIT 140	MH 2850	1.5	1.5	2.2	0.5	2.5	1.0	1.5	0.5	0.0	1.7	1.6	0.8	1.2	2.5
PIT 141	MH 2851	0.0	1.5	2.2	0.0	1.0	3.0	3.0	0.0	0.0	1.2	0.9	1.5	1.2	3.0
PIT 142	MH 2852	0.0	1.5	1.8	0.0	0.0	1.0	1.0	0.0	0.0	1.1	0.7	0.5	0.6	1.8
PIT 143	MH 2853	0.0	1.5	1.9	0.0	1.0	1.0	1.5	0.0	0.0	1.1	0.9	0.6	0.8	1.9
PIT 144	MH 2854	0.5	1.5	1.6	0.1	0.5	1.0	1.5	0.0	0.0	1.2	0.8	0.6	0.7	1.6
PIT 145	MH 2855	0.0	0.5	1.9	0.3	0.0	2.0	2.0	0.0	0.0	0.8	0.5	1.0	0.7	2.0
PIT 146	MH 2856	1.0	1.5	2.2	0.8	1.0	2.0	4.5	0.0	0.0	1.6	1.3	1.6	1.4	4.5
PIT 147	MH 2857	2.5	1.5	2.6	0.9	1.0	3.0	4.0	0.0	0.0	2.2	1.7	1.8	1.7	4.0
PIT 148	MH 2858	2.0	1.5	2.7	1.1	1.5	3.0	4.0	0.0	1.0	2.1	1.8	2.0	1.9	4.0
PIT 149	MH 2859	0.0	0.5	1.2	0.4	1.0	1.0	1.5	1.0	0.0	0.6	0.6	0.9	0.7	1.5
PIT 150	MH 2860	2.5	1.0	1.3	0.0	2.0	1.0	4.0	1.0	0.0	1.6	1.4	1.5	1.4	4.0
PIT 151	MH 2861	3.0	2.0	2.7	1.4	2.0	3.0	5.0	2.0	1.5	2.6	2.2	2.9	2.5	5.0
PIT 152	MH 2862	0.0	2.0	2.3	0.3	1.0	2.0	4.0	1.0	0.0	1.4	1.1	1.8	1.4	4.0
PIT 153	MH 2863	0.0	1.0	1.5	0.4	0.0	1.0	2.0	0.0	0.0	0.8	0.6	0.8	0.7	2.0
PIT 154	MH 2864	0.0	2.0	1.5	0.3	0.0	1.0	2.0	0.0	0.0	1.2	0.8	0.8	0.8	2.0
PIT 155	MH 2865	2.5	2.0	1.5	0.3	1.5	1.0	4.0	0.0	0.0	2.0	1.6	1.3	1.4	4.0
PIT 156	MH 2866	0.0	1.5	1.3	0.6	0.0	1.0	2.0	0.0	0.0	0.9	0.7	0.8	0.7	2.0
PIT 157	MH 2867	0.5	1.5	1.3	0.0	0.5	1.0	3.0	0.5	0.0	1.1	0.8	1.1	0.9	3.0
PIT 158	MH 2868	0.5	2.0	2.4	0.3	1.0	1.0	2.5	0.0	0.0	1.6	1.2	0.9	1.1	2.5
PIT 159	MH 2869	2.5	2.0	2.4	0.5	2.0	1.0	2.5	0.0	0.5	2.3	1.9	1.0	1.5	2.5
PIT 160	MH 2870	0.0	2.0	1.8	1.0	1.0	1.0	2.5	1.0	0.5	1.3	1.2	1.3	1.2	2.5

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Table IV.3A: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Blast (0-9 scale) 45 DAS-Kharif 2024

PIT 161	MH 2871	0.0	2.0	1.3	0.3	1.5	0.0	1.0	0.0	0.0	1.1	1.0	0.3	0.7	2.0
PIT 162	MH 2872	0.0	2.0	1.8	0.8	0.5	0.0	1.5	0.0	0.0	1.3	1.0	0.4	0.7	2.0
PIT 163	MH 2873	0.0	1.0	1.7	0.3	0.0	1.0	1.0	0.0	0.0	0.9	0.6	0.5	0.6	1.7
PIT 164	MH 2874	0.0	1.0	1.2	0.2	1.0	1.0	1.0	0.0	0.0	0.7	0.7	0.5	0.6	1.2
PIT 165	MH 2875	0.5	1.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.6	0.0	0.3	1.3
PIT 166	MH 2876	0.0	1.0	1.6	0.0	2.0	1.0	2.5	0.0	0.0	0.9	0.9	0.9	0.9	2.5
PIT 167	MH 2877	0.0	1.5	2.2	0.4	1.0	2.0	4.0	0.5	0.0	1.2	1.0	1.6	1.3	4.0
PIT 168	MH 2878	0.5	1.0	2.1	0.5	1.5	1.0	1.5	0.5	0.0	1.2	1.1	0.8	1.0	2.1
PIT 169	MH 2879	0.5	1.0	2.3	0.0	1.0	1.0	3.0	0.0	0.0	1.3	1.0	1.0	1.0	3.0
PIT 170	MH 2880	0.0	1.0	1.2	0.1	0.0	0.0	0.0	0.5	0.0	0.7	0.5	0.1	0.3	1.2
PIT 171	MH 2881	0.0	1.0	1.2	0.2	0.0	0.0	1.0	0.0	0.0	0.7	0.5	0.3	0.4	1.2
PIT 172	MH 2882	1.0	1.0	2.3	0.0	0.0	1.0	2.5	2.0	0.0	1.4	0.9	1.4	1.1	2.5
PIT 173	MH 2883	0.5	1.5	1.3	0.3	1.0	1.0	3.0	0.5	0.0	1.1	0.9	1.1	1.0	3.0
PIT 174	MH 2884	1.5	1.5	2.3	0.7	2.0	1.0	4.5	1.0	1.5	1.8	1.6	2.0	1.8	4.5
PIT 175	MH 2885	0.5	2.0	2.5	0.6	1.0	1.0	2.0	0.5	0.5	1.7	1.3	1.0	1.2	2.5
PIT 176	MH 2886	2.5	2.0	2.0	0.5	3.5	1.0	2.5	1.0	0.5	2.2	2.1	1.3	1.7	3.5
PIT 177	MP 640	0.5	2.0	2.2	0.4	1.0	1.0	3.5	0.5	0.5	1.6	1.2	1.4	1.3	3.5
PIT 178	MP 641	2.5	1.5	3.0	0.7	1.5	1.0	3.5	1.0	0.0	2.3	1.8	1.4	1.6	3.5
PIT 179	MP 642	2.0	1.5	2.5	0.6	1.0	1.0	2.5	0.5	0.0	2.0	1.5	1.0	1.3	2.5
PIT 180	MP 643	3.0	2.0	2.5	0.4	1.5	2.0	4.0	1.0	0.0	2.5	1.9	1.8	1.8	4.0
PIT 181	MP 644	0.5	2.0	1.7	0.3	1.0	1.0	2.0	2.0	0.0	1.4	1.1	1.3	1.2	2.0
PIT 182	MP 645	0.0	1.5	1.8	0.5	1.0	1.0	2.0	1.0	0.0	1.1	1.0	1.0	1.0	2.0
PIT 183	MP 646	0.5	1.5	2.4	0.8	1.5	2.0	3.5	0.5	1.0	1.5	1.3	1.8	1.5	3.5
PIT 184	MP 647	0.5	1.5	2.1	0.2	2.0	2.0	3.5	0.0	0.0	1.4	1.3	1.4	1.3	3.5
PIT 185	MP 648	0.5	1.5	2.4	0.4	1.0	2.0	3.5	1.0	0.0	1.5	1.2	1.6	1.4	3.5
PIT 186	MP 649	3.0	2.0	2.1	0.6	1.5	2.0	3.5	0.0	0.0	2.4	1.8	1.4	1.6	3.5
PIT 187	MP 650	0.5	2.0	2.0	0.0	2.0	2.0	3.5	1.0	0.0	1.5	1.3	1.6	1.4	3.5
PIT 188	MP 651	0.0	1.5	1.5	0.1	0.0	2.0	3.5	0.0	0.0	1.0	0.6	1.4	1.0	3.5
PIT 189	PB 1756	0.0	1.5	1.3	0.3	1.0	1.0	3.0	1.0	0.0	0.9	0.8	1.3	1.0	3.0
PIT 190	RHB 223	0.0	1.0	1.7	0.5	0.0	1.0	3.5	0.0	0.0	0.9	0.6	1.1	0.9	3.5
PIT 191	MPMH 35	0.0	2.0	1.4	0.3	1.0	1.0	3.0	0.0	0.0	1.1	0.9	1.0	1.0	3.0

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Table IV.3A: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Blast (0-9 scale) 45 DAS-Kharif 2024

PIT 192	HHB 67 Imp.	1.0	2.0	2.6	1.0	2.5	2.0	4.0	0.0	0.0	1.9	1.8	1.5	1.7	4.0
PIT 193	PB 1852	0.0	1.5	1.6	0.4	2.0	1.0	2.5	1.0	0.0	1.0	1.1	1.1	1.1	2.5
PIT 194	86M94	1.0	1.5	1.7	0.0	1.5	1.0	2.5	1.0	0.0	1.4	1.1	1.1	1.1	2.5
PIT 195	DHBH 1397	1.0	1.5	1.8	1.5	2.0	1.0	2.5	0.0	0.5	1.4	1.6	1.0	1.3	2.5
PIT 196	AHB 1269	2.5	2.0	3.3	1.0	2.0	3.0	5.0	0.0	2.0	2.6	2.2	2.5	2.3	5.0
PIT 197	Pratap	2.0	2.0	3.4	1.4	1.5	3.0	5.0	1.5	3.0	2.5	2.1	3.1	2.5	5.0
PIT 198	86M01	2.5	2.0	3.0	0.2	1.0	2.0	5.0	1.0	1.0	2.5	1.7	2.3	2.0	5.0
PIT 199	86M84	2.5	2.0	2.8	0.0	1.5	1.0	2.5	1.0	0.5	2.4	1.8	1.3	1.5	2.8
PIT 200	KBH 108	1.0	2.0	2.4	0.6	1.0	2.0	4.0	0.0	0.0	1.8	1.4	1.5	1.4	4.0
PIT 201	MP 7878	3.0	2.0	2.4	0.8	2.5	1.0	2.5	0.0	0.5	2.5	2.1	1.0	1.6	3.0
PIT 202	86M86	0.0	2.0	1.6	0.2	1.0	1.0	2.5	0.0	0.0	1.2	1.0	0.9	0.9	2.5
PIT 203	Kaveri S Boss	2.5	1.5	1.7	0.3	1.5	1.0	3.0	0.0	0.0	1.9	1.5	1.0	1.3	3.0
PIT 204	NBH 4903	2.0	2.0	2.0	0.7	3.0	2.0	4.5	1.0	0.0	2.0	1.9	1.9	1.9	4.5
PIT 205	AHB 1200	2.0	2.0	1.8	1.5	2.0	4.0	4.0	1.5	0.5	1.9	1.9	2.5	2.1	4.0
PIT 206	Raj 171	2.5	2.0	1.8	0.6	1.5	1.0	3.5	2.0	0.0	2.1	1.7	1.6	1.7	3.5
PIT 207	JBV 2	2.5	2.0	1.5	0.1	1.5	1.0	2.0	1.0	0.0	2.0	1.5	1.0	1.3	2.5
PIT 208	Dhanshakti	2.5	2.0	1.8	0.9	1.5	2.0	4.0	2.0	0.5	2.1	1.7	2.1	1.9	4.0
PIT 209	ICMV 221	3.0	2.0	2.2	0.5	2.0	2.0	4.0	3.0	0.5	2.4	1.9	2.4	2.1	4.0
PIT 210	Pusa Comp. 383	2.5	1.5	1.9	0.2	1.0	1.0	3.0	0.5	0.0	2.0	1.4	1.1	1.3	3.0
PIT 211	Pusa Comp. 701	3.0	2.0	1.7	0.0	1.5	1.0	3.5	1.0	0.0	2.2	1.6	1.4	1.5	3.5
PIT 212	ABV 04	2.5	2.0	2.4	0.0	1.0	1.0	3.0	0.0	0.0	2.3	1.6	1.0	1.3	3.0
PIT 213	Pusa Comp. 612	3.0	2.0	1.9	0.3	2.0	2.0	4.0	0.0	0.0	2.3	1.8	1.5	1.7	4.0
PIT 214	ICMV 155	2.5	2.0	2.2	0.5	1.0	2.0	4.0	2.0	0.5	2.2	1.6	2.1	1.9	4.0
	Entry Mean	1.0	1.7	2.0	0.4	1.1	1.2	2.9	0.5	0.2	1.6	1.3	1.2	1.2	2.9

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Table IV.3B: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Blast (0-9 scale) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 101	MH 2811	1.5	3.0	2.2	1.4	1.0	2.0	4.5	2.5	1.0	2.2	1.8	2.5	2.1	4.5
PIT 102	MH 2812	2.0	2.5	2.8	0.6	1.5	1.0	4.5	1.5	0.5	2.4	1.9	1.9	1.9	4.5
PIT 103	MH 2813	2.0	3.0	1.7	2.6	2.0	2.0	3.0	1.0	0.5	2.2	2.3	1.6	2.0	3.0
PIT 104	MH 2814	2.0	3.0	1.8	1.8	2.0	1.0	2.0	0.0	0.5	2.3	2.1	0.9	1.6	3.0
PIT 105	MH 2815	3.5	3.0	2.2	1.6	3.5	2.0	5.0	1.0	1.0	2.9	2.8	2.3	2.5	5.0
PIT 106	MH 2816	4.0	3.0	2.6	0.6	2.5	2.0	5.0	3.5	2.5	3.2	2.5	3.3	2.9	5.0
PIT 107	MH 2817	4.5	3.0	2.0	5.0	3.0	2.0	5.5	2.5	1.0	3.2	3.5	2.8	3.2	5.5
PIT 108	MH 2818	4.5	3.0	2.5	5.6	3.5	1.0	6.5	1.5	5.5	3.3	3.8	3.6	3.7	6.5
PIT 109	MH 2819	2.5	3.0	2.3	1.1	2.5	1.0	2.5	1.0	0.0	2.6	2.3	1.1	1.8	3.0
PIT 110	MH 2820	2.5	3.0	2.4	0.4	2.5	2.0	4.0	0.0	0.5	2.6	2.2	1.6	1.9	4.0
PIT 111	MH 2821	3.5	3.0	2.1	1.7	2.5	3.0	5.5	4.5	3.5	2.9	2.6	4.1	3.3	5.5
PIT 112	MH 2822	3.5	3.0	2.6	0.5	2.0	3.0	5.5	4.0	0.5	3.0	2.3	3.3	2.7	5.5
PIT 113	MH 2823	3.5	3.0	2.1	3.3	2.5	3.0	5.5	3.0	1.0	2.9	2.9	3.1	3.0	5.5
PIT 114	MH 2824	3.5	3.0	2.0	2.5	3.0	3.0	5.0	1.0	1.0	2.8	2.8	2.5	2.7	5.0
PIT 115	MH 2825	2.0	3.0	1.9	0.4	3.0	2.0	4.0	0.0	0.0	2.3	2.1	1.5	1.8	4.0
PIT 116	MH 2826	1.5	2.0	2.5	0.8	3.0	4.0	6.0	4.5	0.5	2.0	2.0	3.8	2.8	6.0
PIT 117	MH 2827	0.5	1.5	1.8	2.3	1.5	2.0	3.0	0.0	1.0	1.3	1.5	1.5	1.5	3.0
PIT 118	MH 2828	1.0	2.5	1.9	3.3	1.5	1.0	2.0	0.0	0.5	1.8	2.0	0.9	1.5	3.3
PIT 119	MH 2829	3.5	3.0	3.9	1.7	3.0	1.0	6.0	0.0	1.0	3.5	3.0	2.0	2.6	6.0
PIT 120	MH 2830	3.5	2.0	3.2	1.4	2.0	2.0	4.0	1.0	0.5	2.9	2.4	1.9	2.2	4.0
PIT 121	MH 2831	2.0	2.0	2.3	2.3	1.0	3.0	4.0	0.0	0.0	2.1	1.9	1.8	1.8	4.0
PIT 122	MH 2832	2.0	3.0	2.4	1.9	2.0	3.0	5.5	0.0	0.0	2.5	2.3	2.1	2.2	5.5
PIT 123	MH 2833	2.0	3.0	2.0	1.4	2.0	2.0	4.5	0.0	0.0	2.3	2.1	1.6	1.9	4.5
PIT 124	MH 2834	0.5	3.0	2.0	2.2	2.5	2.0	0.0	1.5	0.0	1.8	2.0	0.9	1.5	3.0
PIT 125	MH 2835	0.5	2.0	1.8	1.4	2.0	1.0	2.0	1.0	0.0	1.4	1.5	1.0	1.3	2.0
PIT 126	MH 2836	0.5	3.0	1.8	3.2	1.0	1.0	3.5	0.0	1.5	1.8	1.9	1.5	1.7	3.5
PIT 127	MH 2837	0.5	3.0	2.0	3.1	1.0	1.0	3.5	0.0	1.0	1.8	1.9	1.4	1.7	3.5
PIT 128	MH 2838	0.0	3.0	2.3	2.2	1.0	2.0	3.5	0.0	1.5	1.8	1.7	1.8	1.7	3.5
PIT 129	MH 2839	0.0	3.0	1.7	2.6	2.5	1.0	3.5	0.0	3.0	1.6	2.0	1.9	1.9	3.5
PIT 130	MH 2840	1.0	2.5	1.7	0.3	3.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	0.9	3.0
PIT 131	MH 2841	0.5	3.0	2.5	2.1	3.0	1.0	3.5	0.0	0.5	2.0	2.2	1.3	1.8	3.5

CHAPTER IV: PLANT PATHOLOGY

Table IV.3B: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Blast (0-9 scale) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 132	MH 2842	2.5	2.0	2.4	0.6	3.5	1.0	1.5	0.0	0.0	2.3	2.2	0.6	1.5	3.5
PIT 133	MH 2843	3.5	2.5	4.2	2.7	5.5	3.0	5.5	0.0	1.5	3.4	3.7	2.5	3.2	5.5
PIT 134	MH 2844	0.5	2.0	1.6	1.6	3.0	0.5	1.5	0.0	1.0	1.4	1.7	0.8	1.3	3.0
PIT 135	MH 2845	3.5	3.0	2.3	5.0	4.0	3.0	5.5	0.0	1.5	2.9	3.6	2.5	3.1	5.5
PIT 136	MH 2846	0.0	1.0	1.7	2.3	3.0	1.0	2.5	0.0	0.0	0.9	1.6	0.9	1.3	3.0
PIT 137	MH 2847	1.0	1.5	2.3	3.1	2.0	3.0	4.5	2.0	0.5	1.6	2.0	2.5	2.2	4.5
PIT 138	MH 2848	1.5	1.5	2.5	1.8	1.0	2.0	4.0	0.5	1.0	1.8	1.7	1.9	1.8	4.0
PIT 139	MH 2849	1.5	3.0	2.7	2.2	3.0	3.0	4.5	0.0	0.5	2.4	2.5	2.0	2.3	4.5
PIT 140	MH 2850	3.5	2.5	2.3	2.6	5.0	2.0	2.5	1.5	0.0	2.8	3.2	1.5	2.4	5.0
PIT 141	MH 2851	1.0	2.5	2.1	1.8	3.0	4.0	4.0	0.5	0.5	1.9	2.1	2.3	2.2	4.0
PIT 142	MH 2852	0.0	2.5	2.9	0.6	2.0	2.0	1.5	0.0	0.0	1.8	1.6	0.9	1.3	2.9
PIT 143	MH 2853	0.0	2.5	1.8	0.9	3.0	1.0	2.5	0.0	1.0	1.4	1.6	1.1	1.4	3.0
PIT 144	MH 2854	1.0	2.5	1.5	0.8	2.0	1.0	2.5	0.0	0.0	1.7	1.6	0.9	1.3	2.5
PIT 145	MH 2855	0.5	1.0	1.9	1.4	1.0	2.0	2.5	0.0	0.0	1.1	1.2	1.1	1.1	2.5
PIT 146	MH 2856	1.5	2.5	2.5	4.1	2.5	2.0	6.0	0.0	0.0	2.2	2.6	2.0	2.3	6.0
PIT 147	MH 2857	3.5	2.5	3.1	3.8	2.5	4.0	5.0	0.0	0.5	3.0	3.1	2.4	2.8	5.0
PIT 148	MH 2858	4.0	2.5	3.1	5.9	3.0	3.0	5.0	0.0	2.0	3.2	3.7	2.5	3.2	5.9
PIT 149	MH 2859	0.5	1.5	2.3	1.1	2.0	2.0	2.0	2.0	1.0	1.4	1.5	1.8	1.6	2.3
PIT 150	MH 2860	4.5	2.0	1.5	1.8	4.0	2.0	5.5	2.5	1.0	2.7	2.8	2.8	2.8	5.5
PIT 151	MH 2861	3.5	2.5	3.2	6.5	3.5	4.0	6.5	4.5	2.5	3.1	3.8	4.4	4.1	6.5
PIT 152	MH 2862	0.0	2.5	2.6	2.5	3.0	3.0	5.5	2.5	1.0	1.7	2.1	3.0	2.5	5.5
PIT 153	MH 2863	0.0	1.0	1.9	1.9	1.0	1.0	3.0	0.0	1.0	1.0	1.2	1.3	1.2	3.0
PIT 154	MH 2864	0.0	2.5	1.9	1.8	1.0	2.0	3.0	0.0	0.0	1.5	1.4	1.3	1.4	3.0
PIT 155	MH 2865	3.5	2.5	3.1	3.4	3.0	1.0	5.5	0.0	0.5	3.0	3.1	1.8	2.5	5.5
PIT 156	MH 2866	0.5	2.0	2.3	4.3	2.0	2.0	2.0	0.0	0.5	1.6	2.2	1.1	1.7	4.3
PIT 157	MH 2867	0.5	2.0	1.8	0.9	1.5	2.0	4.0	1.0	0.5	1.4	1.3	1.9	1.6	4.0
PIT 158	MH 2868	1.0	3.0	2.6	3.2	3.0	1.0	4.0	0.0	1.0	2.2	2.6	1.5	2.1	4.0
PIT 159	MH 2869	3.5	2.5	2.7	4.0	3.5	2.0	4.0	0.0	1.5	2.9	3.2	1.9	2.6	4.0
PIT 160	MH 2870	0.5	2.5	2.6	3.9	3.0	2.0	3.5	1.5	1.5	1.9	2.5	2.1	2.3	3.9
PIT 161	MH 2871	0.0	2.0	1.7	2.2	3.0	0.0	1.0	0.0	1.0	1.2	1.8	0.5	1.2	3.0
PIT 162	MH 2872	0.0	2.5	2.1	0.6	1.5	1.0	2.0	0.0	0.5	1.5	1.3	0.9	1.1	2.5

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Table IV.3B: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Blast (0-9 scale) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 163	MH 2873	0.0	1.5	2.0	1.1	1.0	2.0	1.5	0.0	0.0	1.2	1.1	0.9	1.0	2.0
PIT 164	MH 2874	0.0	1.5	1.8	1.3	3.0	2.0	1.5	0.0	0.0	1.1	1.5	0.9	1.2	3.0
PIT 165	MH 2875	0.5	1.5	2.2	0.3	1.0	0.0	0.0	0.0	0.0	1.4	1.1	0.0	0.6	2.2
PIT 166	MH 2876	0.5	1.5	2.0	0.3	3.5	1.0	3.0	0.0	0.0	1.3	1.6	1.0	1.3	3.5
PIT 167	MH 2877	0.5	2.0	2.3	2.7	3.0	3.0	5.0	1.0	1.0	1.6	2.1	2.5	2.3	5.0
PIT 168	MH 2878	1.0	1.5	2.3	2.8	3.0	1.0	2.0	1.0	0.0	1.6	2.1	1.0	1.6	3.0
PIT 169	MH 2879	0.5	1.5	2.7	1.1	2.5	2.0	3.5	0.0	1.0	1.6	1.7	1.6	1.6	3.5
PIT 170	MH 2880	0.0	1.5	2.5	1.2	1.0	0.0	0.0	1.0	1.0	1.3	1.2	0.5	0.9	2.5
PIT 171	MH 2881	0.0	2.0	1.7	0.5	2.0	1.0	1.0	0.0	1.0	1.2	1.2	0.8	1.0	2.0
PIT 172	MH 2882	1.5	2.0	2.7	0.8	1.0	2.0	3.5	3.0	0.0	2.1	1.6	2.1	1.8	3.5
PIT 173	MH 2883	0.5	2.5	1.5	1.3	2.5	2.0	3.5	2.5	0.0	1.5	1.7	2.0	1.8	3.5
PIT 174	MH 2884	3.5	2.5	2.7	2.3	3.5	3.0	5.5	3.5	3.5	2.9	2.9	3.9	3.3	5.5
PIT 175	MH 2885	1.0	3.0	3.0	2.4	3.0	2.0	3.0	1.0	1.0	2.3	2.5	1.8	2.2	3.0
PIT 176	MH 2886	3.5	3.0	2.3	1.5	5.0	2.0	4.0	2.0	1.5	2.9	3.1	2.4	2.8	5.0
PIT 177	MP 640	0.5	3.0	2.6	2.7	3.0	2.0	4.0	1.5	0.5	2.0	2.4	2.0	2.2	4.0
PIT 178	MP 641	3.5	2.5	3.5	2.5	3.0	3.0	4.5	2.0	1.0	3.2	3.0	2.6	2.8	4.5
PIT 179	MP 642	3.0	2.5	3.1	2.9	3.0	2.0	3.0	1.5	0.5	2.9	2.9	1.8	2.4	3.1
PIT 180	MP 643	4.0	3.0	2.7	2.5	3.5	2.0	5.5	3.0	0.0	3.2	3.1	2.6	2.9	5.5
PIT 181	MP 644	1.0	3.0	2.6	1.1	2.5	2.0	2.0	3.0	0.0	2.2	2.0	1.8	1.9	3.0
PIT 182	MP 645	0.5	2.5	2.1	1.4	2.5	2.0	2.5	4.0	0.0	1.7	1.8	2.1	1.9	4.0
PIT 183	MP 646	1.0	2.5	2.6	3.9	2.0	3.0	4.0	2.0	1.5	2.0	2.4	2.6	2.5	4.0
PIT 184	MP 647	0.5	2.5	2.4	4.0	3.0	3.0	5.0	1.5	0.0	1.8	2.5	2.4	2.4	5.0
PIT 185	MP 648	0.5	2.5	3.0	1.7	3.0	3.0	5.0	1.5	0.5	2.0	2.1	2.5	2.3	5.0
PIT 186	MP 649	3.5	3.0	2.5	3.8	3.5	2.0	4.5	1.0	0.0	3.0	3.3	1.9	2.6	4.5
PIT 187	MP 650	0.5	3.0	2.1	1.2	3.0	3.0	5.0	2.0	0.0	1.9	2.0	2.5	2.2	5.0
PIT 188	MP 651	0.5	2.5	2.0	0.9	1.0	3.0	5.5	0.0	0.0	1.7	1.4	2.1	1.7	5.5
PIT 189	PB 1756	0.5	2.5	1.6	0.9	2.0	2.0	3.5	2.0	0.0	1.5	1.5	1.9	1.7	3.5
PIT 190	RHB 223	0.5	2.0	2.1	1.0	1.5	3.0	5.5	0.5	0.5	1.5	1.4	2.4	1.8	5.5
PIT 191	MPMH 35	0.5	3.0	2.1	2.0	3.0	1.0	4.5	0.0	0.0	1.9	2.1	1.4	1.8	4.5
PIT 192	HHB 67 Imp.	1.5	3.0	3.1	4.7	4.5	3.0	5.5	0.0	0.0	2.5	3.4	2.1	2.8	5.5
PIT 193	PB 1852	0.5	2.5	2.3	1.6	3.5	1.0	3.0	2.0	0.0	1.8	2.1	1.5	1.8	3.5

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Table IV.3B: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Blast (0-9 scale) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 194	86M94	2.5	2.5	2.0	0.4	3.5	2.0	3.5	2.0	0.5	2.3	2.2	2.0	2.1	3.5
PIT 195	DHBH 1397	1.5	2.5	2.1	3.3	3.5	1.0	4.0	0.0	1.5	2.0	2.6	1.6	2.2	4.0
PIT 196	AHB 1269	3.5	3.0	3.6	2.6	3.5	4.0	6.5	2.0	3.0	3.4	3.2	3.9	3.5	6.5
PIT 197	Pratap	3.5	3.0	3.8	6.0	3.5	4.0	7.5	3.0	5.0	3.4	4.0	4.9	4.4	7.5
PIT 198	86M01	4.0	3.0	3.7	4.1	3.0	3.0	5.5	3.0	2.0	3.6	3.6	3.4	3.5	5.5
PIT 199	86M84	3.0	3.0	3.1	1.1	3.0	2.0	3.5	3.0	2.0	3.0	2.6	2.6	2.6	3.5
PIT 200	KBH 108	2.5	3.0	2.7	2.5	3.0	3.0	5.5	0.0	1.0	2.7	2.7	2.4	2.6	5.5
PIT 201	MP 7878	4.0	3.0	2.9	2.7	4.0	2.0	3.5	0.0	0.5	3.3	3.3	1.5	2.5	4.0
PIT 202	86M86	2.0	3.0	2.0	0.7	3.0	1.0	3.0	0.0	0.0	2.3	2.1	1.0	1.6	3.0
PIT 203	Kaveri S Boss	3.5	2.5	2.0	1.8	3.5	2.0	3.5	0.0	0.5	2.7	2.7	1.5	2.1	3.5
PIT 204	NBH 4903	3.5	3.0	1.9	5.4	4.5	3.0	5.5	4.0	0.5	2.8	3.7	3.3	3.5	5.5
PIT 205	AHB 1200	3.5	3.0	2.0	5.5	4.0	4.0	6.0	4.0	2.0	2.8	3.6	4.0	3.8	6.0
PIT 206	Raj 171	3.5	3.0	2.0	3.4	3.5	2.0	4.0	1.5	0.5	2.8	3.1	2.0	2.6	4.0
PIT 207	JBV 2	4.0	3.0	2.1	2.3	3.5	1.0	2.5	3.0	0.0	3.0	3.0	1.6	2.4	4.0
PIT 208	Dhanshakti	4.5	3.0	2.9	4.6	3.5	3.0	6.0	4.0	1.0	3.5	3.7	3.5	3.6	6.0
PIT 209	ICMV 221	4.5	3.0	2.6	3.2	4.0	3.0	6.0	5.0	1.0	3.4	3.5	3.8	3.6	6.0
PIT 210	Pusa Comp. 383	4.5	2.5	2.4	2.3	3.0	1.0	3.5	1.0	0.5	3.1	2.9	1.5	2.3	4.5
PIT 211	Pusa Comp. 701	3.5	3.0	2.8	0.4	3.5	1.0	4.0	1.5	1.0	3.1	2.6	1.9	2.3	4.0
PIT 212	ABV 04	3.5	3.0	2.9	0.2	3.5	2.0	4.0	1.0	0.5	3.1	2.6	1.9	2.3	4.0
PIT 213	Pusa Comp. 612	3.5	3.0	2.5	2.3	3.5	3.0	5.0	1.0	0.5	3.0	3.0	2.4	2.7	5.0
PIT 214	ICMV 155	3.5	3.0	3.1	3.9	3.5	2.0	5.0	4.0	1.5	3.2	3.4	3.1	3.3	5.0
	Entry Mean	1.8	2.5	2.4	2.2	2.7	2.1	3.8	1.2	0.8	2.3	2.3	2.0	2.2	3.8

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Table IV.3C: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Rust (% leaf area) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 101	MH 2811		0.0	7.5	0.0		30.0	30.0	8.5	32.5	3.8	2.5	25.3	15.5	32.5
PIT 102	MH 2812		0.0	7.0	0.0		21.0	5.0	3.0	31.0	3.5	2.3	15.0	9.6	31.0
PIT 103	MH 2813		0.0	0.0	0.0		32.0	3.5	0.5	25.0	0.0	0.0	15.3	8.7	32.0
PIT 104	MH 2814		0.0	0.0	0.0		21.0	0.0	1.0	17.5	0.0	0.0	9.9	5.6	21.0
PIT 105	MH 2815		0.0	0.0	0.0		11.0	0.0	0.0	6.5	0.0	0.0	4.4	2.5	11.0
PIT 106	MH 2816		0.0	0.0	0.0		13.0	0.0	1.5	6.5	0.0	0.0	5.3	3.0	13.0
PIT 107	MH 2817		0.0	0.0	0.0		15.0	0.0	3.0	11.0	0.0	0.0	7.3	4.1	15.0
PIT 108	MH 2818		0.0	0.0	0.0		14.0	0.0	6.0	7.5	0.0	0.0	6.9	3.9	14.0
PIT 109	MH 2819		0.0	0.0	0.0		15.0	15.0	10.0	6.5	0.0	0.0	11.6	6.6	15.0
PIT 110	MH 2820		0.0	0.0	0.0		17.0	7.5	12.5	27.5	0.0	0.0	16.1	9.2	27.5
PIT 111	MH 2821		0.0	0.0	0.0		19.0	0.0	0.0	10.0	0.0	0.0	7.3	4.1	19.0
PIT 112	MH 2822		0.0	0.0	0.0		21.0	0.0	3.0	18.5	0.0	0.0	10.6	6.1	21.0
PIT 113	MH 2823		0.0	0.0	0.0		24.0	7.5	3.0	15.0	0.0	0.0	12.4	7.1	24.0
PIT 114	MH 2824		0.0	0.0	0.0		27.0	5.0	5.0	21.0	0.0	0.0	14.5	8.3	27.0
PIT 115	MH 2825		0.0	0.0	0.0		18.0	7.5	0.0	11.0	0.0	0.0	9.1	5.2	18.0
PIT 116	MH 2826		0.0	0.0	0.0		19.0	10.0	3.0	22.5	0.0	0.0	13.6	7.8	22.5
PIT 117	MH 2827		0.0	0.0	0.0		18.0	0.0	0.0	23.5	0.0	0.0	10.4	5.9	23.5
PIT 118	MH 2828		0.0	0.0	0.0		18.0	0.0	0.5	7.5	0.0	0.0	6.5	3.7	18.0
PIT 119	MH 2829		0.0	0.0	0.0		21.0	7.5	0.0	13.5	0.0	0.0	10.5	6.0	21.0
PIT 120	MH 2830	DNP	0.0	0.0	0.0	DNP	11.0	5.0	4.0	7.5	0.0	0.0	6.9	3.9	11.0
PIT 121	MH 2831		0.0	18.5	0.0		13.0	5.0	0.0	8.5	9.3	6.2	6.6	6.4	18.5
PIT 122	MH 2832		0.0	13.5	0.0		18.0	10.0	3.0	23.5	6.8	4.5	13.6	9.7	23.5
PIT 123	MH 2833		0.0	16.5	0.0		16.0	0.0	0.0	12.5	8.3	5.5	7.1	6.4	16.5
PIT 124	MH 2834		0.0	0.0	0.0		15.0	7.5	3.0	12.5	0.0	0.0	9.5	5.4	15.0
PIT 125	MH 2835		0.0	7.5	0.0		12.0	0.0	0.0	11.0	3.8	2.5	5.8	4.4	12.0
PIT 126	MH 2836		0.0	0.0	0.0		18.0	0.0	0.0	15.0	0.0	0.0	8.3	4.7	18.0
PIT 127	MH 2837		0.0	0.0	0.0		19.0	0.0	1.0	16.5	0.0	0.0	9.1	5.2	19.0
PIT 128	MH 2838		0.0	0.0	0.0		17.0	0.0	0.5	10.0	0.0	0.0	6.9	3.9	17.0
PIT 129	MH 2839		0.0	0.0	0.0		21.0	0.0	0.0	13.5	0.0	0.0	8.6	4.9	21.0
PIT 130	MH 2840		0.0	0.0	0.0		4.0	0.0	2.5	0.0	0.0	0.0	1.6	0.9	4.0
PIT 131	MH 2841		0.0	0.0	0.0		11.0	0.0	1.0	6.5	0.0	0.0	4.6	2.6	11.0
PIT 132	MH 2842		0.0	0.0	0.0		16.0	5.0	0.5	7.5	0.0	0.0	7.3	4.1	16.0

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Table IV.3C: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Rust (% leaf area) at 60 DAS-Kharif 2024

PIT 133	MH 2843		0.0	0.0	0.0		17.0	0.0	2.0	10.0	0.0	0.0	7.3	4.1	17.0
PIT 134	MH 2844		0.0	0.0	0.0		13.0	5.0	0.5	7.5	0.0	0.0	6.5	3.7	13.0
PIT 135	MH 2845		0.0	0.0	0.0		19.0	0.0	0.0	11.0	0.0	0.0	7.5	4.3	19.0
PIT 136	MH 2846		0.0	0.0	0.0		11.0	7.5	0.0	5.0	0.0	0.0	5.9	3.4	11.0
PIT 137	MH 2847		0.0	0.0	0.0		13.0	0.0	0.0	6.5	0.0	0.0	4.9	2.8	13.0
PIT 138	MH 2848		0.0	0.0	0.0		14.0	0.0	0.0	12.5	0.0	0.0	6.6	3.8	14.0
PIT 139	MH 2849		0.0	0.0	0.0		14.0	0.0	2.5	6.5	0.0	0.0	5.8	3.3	14.0
PIT 140	MH 2850		0.0	0.0	0.0		17.0	15.0	0.0	7.5	0.0	0.0	9.9	5.6	17.0
PIT 141	MH 2851		0.0	0.0	0.0		21.0	7.5	2.5	16.5	0.0	0.0	11.9	6.8	21.0
PIT 142	MH 2852		0.0	0.0	0.0		15.0	0.0	0.0	7.5	0.0	0.0	5.6	3.2	15.0
PIT 143	MH 2853		0.0	0.0	0.0		21.0	0.0	3.0	12.5	0.0	0.0	9.1	5.2	21.0
PIT 144	MH 2854		0.0	0.0	0.0		19.0	0.0	0.0	7.5	0.0	0.0	6.6	3.8	19.0
PIT 145	MH 2855		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 146	MH 2856		0.0	0.0	0.0		21.0	0.0	3.0	12.5	0.0	0.0	9.1	5.2	21.0
PIT 147	MH 2857		0.0	0.0	0.0		16.0	0.0	5.0	12.5	0.0	0.0	8.4	4.8	16.0
PIT 148	MH 2858		0.0	0.0	0.0		17.0	10.0	3.0	11.0	0.0	0.0	10.3	5.9	17.0
PIT 149	MH 2859		0.0	0.0	0.0		15.0	0.0	0.0	7.5	0.0	0.0	5.6	3.2	15.0
PIT 150	MH 2860		0.0	0.0	0.0		16.0	10.0	0.0	11.5	0.0	0.0	9.4	5.4	16.0
PIT 151	MH 2861		0.0	0.0	0.0		17.0	0.0	0.5	7.5	0.0	0.0	6.3	3.6	17.0
PIT 152	MH 2862		0.0	0.0	0.0		13.0	0.0	1.0	5.0	0.0	0.0	4.8	2.7	13.0
PIT 153	MH 2863		0.0	0.0	0.0		19.0	0.0	3.5	10.0	0.0	0.0	8.1	4.6	19.0
PIT 154	MH 2864		0.0	0.0	0.0		21.0	0.0	6.0	11.0	0.0	0.0	9.5	5.4	21.0
PIT 155	MH 2865		0.0	0.0	0.0		15.0	0.0	4.5	6.5	0.0	0.0	6.5	3.7	15.0
PIT 156	MH 2866		0.0	0.0	0.0		17.0	0.0	0.0	5.0	0.0	0.0	5.5	3.1	17.0
PIT 157	MH 2867		0.0	0.0	0.0		15.0	0.0	0.0	7.5	0.0	0.0	5.6	3.2	15.0
PIT 158	MH 2868		0.0	0.0	0.0		16.0	0.0	5.0	6.5	0.0	0.0	6.9	3.9	16.0
PIT 159	MH 2869		0.0	0.0	0.0		19.0	0.0	6.0	12.5	0.0	0.0	9.4	5.4	19.0
PIT 160	MH 2870		0.0	0.0	0.0		15.0	0.0	11.0	13.5	0.0	0.0	9.9	5.6	15.0
PIT 161	MH 2871		0.0	0.0	0.0		15.0	7.5	0.5	6.5	0.0	0.0	7.4	4.2	15.0
PIT 162	MH 2872		0.0	0.0	0.0		9.0	0.0	1.0	5.0	0.0	0.0	3.8	2.1	9.0
PIT 163	MH 2873		0.0	0.0	0.0		14.0	3.5	0.5	7.5	0.0	0.0	6.4	3.6	14.0
PIT 164	MH 2874		0.0	0.0	0.0		0.0	3.5	0.0	0.0	0.0	0.0	0.9	0.5	3.5
PIT 165	MH 2875		0.0	0.0	0.0		9.0	10.0	0.5	5.0	0.0	0.0	6.1	3.5	10.0
PIT 166	MH 2876		0.0	0.0	0.0		0.0	0.0	1.0	0.0	0.0	0.0	0.3	0.1	1.0

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Table IV.3C: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Rust (% leaf area) at 60 DAS-Kharif 2024

PIT 167	MH 2877		0.0	0.0	0.0		19.0	0.0	4.5	10.0	0.0	0.0	8.4	4.8	19.0
PIT 168	MH 2878		0.0	0.0	0.0		15.0	0.0	0.5	6.5	0.0	0.0	5.5	3.1	15.0
PIT 169	MH 2879		0.0	0.0	0.0		17.0	10.0	1.0	7.5	0.0	0.0	8.9	5.1	17.0
PIT 170	MH 2880		0.0	0.0	0.0		18.0	0.0	0.0	5.0	0.0	0.0	5.8	3.3	18.0
PIT 171	MH 2881		0.0	0.0	0.0		15.0	5.0	3.0	6.5	0.0	0.0	7.4	4.2	15.0
PIT 172	MH 2882		0.0	0.0	0.0		16.0	3.5	0.0	6.5	0.0	0.0	6.5	3.7	16.0
PIT 173	MH 2883		0.0	0.0	0.0		15.0	0.0	1.5	7.5	0.0	0.0	6.0	3.4	15.0
PIT 174	MH 2884		0.0	0.0	0.0		15.0	0.0	1.0	7.5	0.0	0.0	5.9	3.4	15.0
PIT 175	MH 2885		0.0	0.0	0.0		11.0	0.0	0.5	5.0	0.0	0.0	4.1	2.4	11.0
PIT 176	MH 2886		0.0	0.0	0.0		15.0	0.0	1.0	7.5	0.0	0.0	5.9	3.4	15.0
PIT 177	MP 640		0.0	0.0	0.0		17.0	3.5	0.5	17.5	0.0	0.0	9.6	5.5	17.5
PIT 178	MP 641		0.0	0.0	0.0		18.0	0.0	0.0	12.5	0.0	0.0	7.6	4.4	18.0
PIT 179	MP 642		0.0	0.0	0.0		13.0	0.0	2.0	6.5	0.0	0.0	5.4	3.1	13.0
PIT 180	MP 643		0.0	0.0	0.0		17.0	0.0	1.0	12.5	0.0	0.0	7.6	4.4	17.0
PIT 181	MP 644		0.0	0.0	0.0		20.0	0.0	1.0	11.0	0.0	0.0	8.0	4.6	20.0
PIT 182	MP 645		0.0	0.0	0.0		3.0	20.0	2.0	17.5	0.0	0.0	10.6	6.1	20.0
PIT 183	MP 646		0.0	0.0	0.0		11.0	0.0	0.5	15.0	0.0	0.0	6.6	3.8	15.0
PIT 184	MP 647		0.0	0.0	0.0		5.0	15.0	1.0	7.5	0.0	0.0	7.1	4.1	15.0
PIT 185	MP 648		0.0	0.0	0.0		9.0	7.5	2.0	7.5	0.0	0.0	6.5	3.7	9.0
PIT 186	MP 649		0.0	0.0	0.0		14.0	15.0	6.0	16.5	0.0	0.0	12.9	7.4	16.5
PIT 187	MP 650		0.0	0.0	0.0		17.0	0.0	12.5	12.5	0.0	0.0	10.5	6.0	17.0
PIT 188	MP 651		0.0	0.0	0.0		18.0	10.0	1.0	7.5	0.0	0.0	9.1	5.2	18.0
PIT 189	PB 1756		0.0	0.0	0.0		16.0	0.0	6.0	8.5	0.0	0.0	7.6	4.4	16.0
PIT 190	RHB 223		0.0	0.0	0.0		15.0	7.5	4.5	7.5	0.0	0.0	8.6	4.9	15.0
PIT 191	MPMH 35		0.0	4.0	0.0		17.0	15.0	2.0	12.5	2.0	1.3	11.6	7.2	17.0
PIT 192	HHB 67 Imp.		0.0	0.0	0.0		19.0	7.5	4.5	17.5	0.0	0.0	12.1	6.9	19.0
PIT 193	PB 1852		0.0	0.0	0.0		11.0	0.0	2.5	5.0	0.0	0.0	4.6	2.6	11.0
PIT 194	86M94		0.0	0.0	0.0		14.0	0.0	3.0	5.0	0.0	0.0	5.5	3.1	14.0
PIT 195	DHBH 1397		0.0	0.0	0.0		17.0	7.5	0.5	17.5	0.0	0.0	10.6	6.1	17.5
PIT 196	AHB 1269		0.0	0.0	0.0		15.0	15.0	4.5	22.5	0.0	0.0	14.3	8.1	22.5
PIT 197	Pratap		0.0	0.0	0.0		16.0	7.5	11.0	6.5	0.0	0.0	10.3	5.9	16.0
PIT 198	86M01		0.0	0.0	0.0		8.0	0.0	0.0	5.0	0.0	0.0	3.3	1.9	8.0
PIT 199	86M84		0.0	0.0	0.0		16.0	0.0	4.5	7.5	0.0	0.0	7.0	4.0	16.0
PIT 200	KBH 108		0.0	0.0	0.0		14.0	7.5	0.0	12.5	0.0	0.0	8.5	4.9	14.0

CHAPTER IV: PLANT PATHOLOGY

Table IV.3C: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Rust (% leaf area) at 60 DAS-Kharif 2024

PIT 201	MP 7878		0.0	0.0	0.0		6.0	2.5	1.0	0.0	0.0	0.0	2.4	1.4	6.0
PIT 202	86M86		0.0	0.0	0.0		10.0	15.0	0.5	7.5	0.0	0.0	8.3	4.7	15.0
PIT 203	Kaveri S Boss		0.0	0.0	0.0		12.0	0.0	8.5	5.0	0.0	0.0	6.4	3.6	12.0
PIT 204	NBH 4903		0.0	0.0	0.0		14.0	7.5	10.0	7.5	0.0	0.0	9.8	5.6	14.0
PIT 205	AHB 1200		0.0	0.0	0.0		16.0	15.0	6.0	12.5	0.0	0.0	12.4	7.1	16.0
PIT 206	Raj 171		0.0	0.0	0.0		14.0	10.0	5.5	8.5	0.0	0.0	9.5	5.4	14.0
PIT 207	JBV 2		0.0	0.0	0.0		17.0	10.0	7.5	7.5	0.0	0.0	10.5	6.0	17.0
PIT 208	Dhanshakti		0.0	0.0	0.0		16.0	0.0	4.5	12.5	0.0	0.0	8.3	4.7	16.0
PIT 209	ICMV 221		0.0	0.0	0.0		19.0	20.0	11.0	17.5	0.0	0.0	16.9	9.6	20.0
PIT 210	Pusa Comp. 383		0.0	0.0	0.0		5.0	15.0	9.5	11.0	0.0	0.0	10.1	5.8	15.0
PIT 211	Pusa Comp. 701		0.0	0.0	0.0		4.0	12.5	1.0	16.5	0.0	0.0	8.5	4.9	16.5
PIT 212	ABV 04		0.0	0.0	0.0		6.0	2.5	0.5	9.0	0.0	0.0	4.5	2.6	9.0
PIT 213	Pusa Comp. 612		0.0	0.0	0.0		7.0	12.5	4.0	17.5	0.0	0.0	10.3	5.9	17.5
PIT 214	ICMV 155		0.0	0.0	0.0		3.0	0.0	2.0	5.0	0.0	0.0	2.5	1.4	5.0
	Entry Mean		0.0	0.6	0.0		14.6		2.6	10.1	0.3	0.2	8.1	4.7	

* Data Not Provided - (DNP)

CHAPTER IV: PLANT PATHOLOGY

Table IV.3D: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Smut (severity %) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 101	MH 2811		0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	2.5	20.0
PIT 102	MH 2812		7.0	1.7	6.5	20.0	0.0	0.0	0.0	0.0	4.4	8.8	0.0	4.4	20.0
PIT 103	MH 2813		1.0	19.0	0.0	25.0	1.0	0.0	0.0	0.0	10.0	11.3	0.3	5.8	25.0
PIT 104	MH 2814		1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.4	0.0	0.2	1.0
PIT 105	MH 2815		0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	1.3	10.0
PIT 106	MH 2816		0.0	2.5	0.0	7.5	0.0	0.0	0.0	0.0	1.3	2.5	0.0	1.3	7.5
PIT 107	MH 2817		0.0	0.6	0.0	7.5	0.0	0.0	0.0	0.0	0.3	2.0	0.0	1.0	7.5
PIT 108	MH 2818		1.5	3.0	12.5	20.0	0.0	0.0	0.0	0.0	2.3	9.3	0.0	4.6	20.0
PIT 109	MH 2819		0.0	1.5	3.0	7.5	0.0	7.5	0.0	0.0	0.8	3.0	1.9	2.4	7.5
PIT 110	MH 2820		0.0	1.0	2.5	20.0	0.0	0.0	0.0	0.0	0.5	5.9	0.0	2.9	20.0
PIT 111	MH 2821		0.0	12.0	10.0	35.0	0.0	0.0	0.0	0.0	6.0	14.3	0.0	7.1	35.0
PIT 112	MH 2822		0.0	24.5	3.0	32.5	0.0	0.0	0.0	0.0	12.3	15.0	0.0	7.5	32.5
PIT 113	MH 2823		1.5	4.1	0.0	5.0	0.0	0.0	0.0	0.0	2.8	2.7	0.0	1.3	5.0
PIT 114	MH 2824		5.5	2.0	3.0	10.0	0.0	3.0	0.0	0.0	3.8	5.1	0.8	2.9	10.0
PIT 115	MH 2825		1.0	1.5	0.0	7.5	0.0	4.0	0.0	0.0	1.3	2.5	1.0	1.8	7.5
PIT 116	MH 2826		0.0	6.6	0.0	42.5	0.0	15.0	0.0	0.0	3.3	12.3	3.8	8.0	42.5
PIT 117	MH 2827		0.0	11.0	4.5	60.0	0.0	0.0	0.0	0.0	5.5	18.9	0.0	9.4	60.0
PIT 118	MH 2828		1.0	8.0	0.0	27.5	0.0	0.0	0.0	0.0	4.5	9.1	0.0	4.6	27.5
PIT 119	MH 2829		0.0	16.0	8.5	60.0	0.0	4.0	0.0	0.0	8.0	21.1	1.0	11.1	60.0
PIT 120	MH 2830		0.0	0.1	6.5	2.5	0.0	0.0	0.0	0.0	0.1	2.3	0.0	1.1	6.5
PIT 121	MH 2831		0.0	1.0	0.0	5.0	0.0	0.0	0.0	0.0	0.5	1.5	0.0	0.8	5.0
PIT 122	MH 2832		1.0	1.1	0.0	25.0	0.0	4.0	0.0	0.0	1.1	6.8	1.0	3.9	25.0
PIT 123	MH 2833		0.0	1.0	3.0	10.0	0.0	0.0	0.0	0.0	0.5	3.5	0.0	1.8	10.0
PIT 124	MH 2834	DNP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 125	MH 2835		0.0	0.5	0.0	6.5	0.0	0.0	0.0	0.0	0.3	1.8	0.0	0.9	6.5
PIT 126	MH 2836		2.5	34.0	0.0		1.0	0.0	0.0	0.0	18.3	12.2	0.3	5.4	34.0
PIT 127	MH 2837		2.0	31.5	10.5	50.0	1.0	0.0	0.0	0.0	16.8	23.5	0.3	11.9	50.0
PIT 128	MH 2838		2.5	15.0	0.0	72.5	0.0	0.0	0.0	0.0	8.8	22.5	0.0	11.3	72.5
PIT 129	MH 2839		2.0	15.5	7.0	22.5	0.0	0.0	0.0	0.0	8.8	11.8	0.0	5.9	22.5
PIT 130	MH 2840		0.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	18.8	0.0	9.4	75.0
PIT 131	MH 2841		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 132	MH 2842		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CHAPTER IV: PLANT PATHOLOGY

Table IV.3D: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Smut (severity %) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 133	MH 2843		1.5	8.1	0.0	7.5	0.0	0.0	0.0	0.0	4.8	4.3	0.0	2.1	8.1
PIT 134	MH 2844		0.0	2.0	0.0	4.0	0.0	0.0	0.0	0.0	1.0	1.5	0.0	0.8	4.0
PIT 135	MH 2845		0.0	0.5	0.0	15.0	0.0	0.0	0.0	0.0	0.3	3.9	0.0	1.9	15.0
PIT 136	MH 2846		0.0	0.5	0.0	22.5	0.0	0.0	0.0	0.0	0.3	5.8	0.0	2.9	22.5
PIT 137	MH 2847		0.0	1.0	0.0	7.5	0.0	0.0	0.0	0.0	0.5	2.1	0.0	1.1	7.5
PIT 138	MH 2848		0.0	4.0	0.0	35.0	0.0	0.0	0.0	0.0	2.0	9.8	0.0	4.9	35.0
PIT 139	MH 2849		0.0	1.5	0.0	27.5	0.0	0.0	0.0	0.0	0.8	7.3	0.0	3.6	27.5
PIT 140	MH 2850		1.0	20.0	0.0	32.5	0.0	0.0	0.0	0.0	10.5	13.4	0.0	6.7	32.5
PIT 141	MH 2851		0.0	10.0	7.0	10.5	0.0	7.5	0.0	0.0	5.0	6.9	1.9	4.4	10.5
PIT 142	MH 2852		0.0	0.7	12.5	22.5	0.0	0.0	0.0	0.0	0.4	8.9	0.0	4.5	22.5
PIT 143	MH 2853		0.0	2.5	0.0	22.5	0.0	0.0	0.0	0.0	1.3	6.3	0.0	3.1	22.5
PIT 144	MH 2854		1.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.5	15.3	0.0	7.6	60.0
PIT 145	MH 2855		0.0	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.9	7.5
PIT 146	MH 2856		0.0	2.5	7.0	15.0	0.0	0.0	0.0	0.0	1.3	6.1	0.0	3.1	15.0
PIT 147	MH 2857		0.0	8.5	0.0	20.0	0.0	0.0	0.0	0.0	4.3	7.1	0.0	3.6	20.0
PIT 148	MH 2858		2.0	2.0	0.0	22.5	0.0	0.0	0.0	0.0	2.0	6.6	0.0	3.3	22.5
PIT 149	MH 2859		0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	2.5	20.0
PIT 150	MH 2860		0.0	9.5	0.0	6.5	0.0	0.0	0.0	0.0	4.8	4.0	0.0	2.0	9.5
PIT 151	MH 2861		1.0	12.0	0.0	47.5	0.0	0.0	0.0	0.0	6.5	15.1	0.0	7.6	47.5
PIT 152	MH 2862		0.0	0.5	0.0	15.0	0.0	0.0	0.0	0.0	0.3	3.9	0.0	1.9	15.0
PIT 153	MH 2863		0.0	0.0	0.0	22.5	0.0	0.0	0.0	0.0	0.0	5.6	0.0	2.8	22.5
PIT 154	MH 2864		0.0	10.5	0.0	27.5	0.0	0.0	0.0	0.0	5.3	9.5	0.0	4.8	27.5
PIT 155	MH 2865		0.0	6.6	0.0	67.5	0.0	3.5	0.0	0.0	3.3	18.5	0.9	9.7	67.5
PIT 156	MH 2866		0.0	11.0	9.0	15.0	0.0	0.0	0.0	0.0	5.5	8.8	0.0	4.4	15.0
PIT 157	MH 2867		0.0	8.5	6.5	47.5	1.0	0.0	0.0	0.0	4.3	15.6	0.3	7.9	47.5
PIT 158	MH 2868		2.5	9.5	0.0	62.5	1.0	5.0	0.0	0.0	6.0	18.6	1.5	10.1	62.5
PIT 159	MH 2869		3.0	16.5	0.0	22.5	0.0	0.0	0.0	0.0	9.8	10.5	0.0	5.3	22.5
PIT 160	MH 2870		7.5	3.0	0.0	15.0	0.0	0.0	0.0	0.0	5.3	6.4	0.0	3.2	15.0
PIT 161	MH 2871		1.0	4.6	0.0	40.0	0.0	0.0	0.0	0.0	2.8	11.4	0.0	5.7	40.0
PIT 162	MH 2872		0.0	1.0	0.0	20.0	0.0	0.0	0.0	0.0	0.5	5.3	0.0	2.6	20.0
PIT 163	MH 2873		3.0	0.5	6.5	15.0	0.0	3.5	0.0	0.0	1.8	6.3	0.9	3.6	15.0
PIT 164	MH 2874		0.0	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	1.9	15.0
PIT 165	MH 2875		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CHAPTER IV: PLANT PATHOLOGY

Table IV.3D: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Smut (severity %) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 166	MH 2876		0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.3	0.0	0.6	5.0
PIT 167	MH 2877		0.0	0.0	10.5	10.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	2.6	10.5
PIT 168	MH 2878		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 169	MH 2879		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 170	MH 2880		0.0	0.0	1.0	2.5	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.4	2.5
PIT 171	MH 2881		0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.5
PIT 172	MH 2882		0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.3	2.5
PIT 173	MH 2883		2.0	0.0	2.5	5.0	0.0	0.0	0.0	0.0	1.0	2.4	0.0	1.2	5.0
PIT 174	MH 2884		1.5	1.5	0.0	5.0	0.0	0.0	0.0	0.0	1.5	2.0	0.0	1.0	5.0
PIT 175	MH 2885		0.0	3.7	3.0	7.5	0.0	0.0	0.0	0.0	1.9	3.6	0.0	1.8	7.5
PIT 176	MH 2886		1.5	2.5	0.0	15.0	0.0	0.0	0.0	0.0	2.0	4.8	0.0	2.4	15.0
PIT 177	MP 640		0.0	2.5	0.0	7.5	0.0	0.0	0.0	0.0	1.3	2.5	0.0	1.3	7.5
PIT 178	MP 641		0.0	1.5	0.0	5.0	0.0	0.0	0.0	0.0	0.8	1.6	0.0	0.8	5.0
PIT 179	MP 642		0.0	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.9	7.5
PIT 180	MP 643		0.0	1.5	3.0	5.0	0.0	5.0	0.0	0.0	0.8	2.4	1.3	1.8	5.0
PIT 181	MP 644		0.0	0.6	0.0	7.5	0.0	2.5	0.0	0.0	0.3	2.0	0.6	1.3	7.5
PIT 182	MP 645		1.0	0.5	2.5	10.0	0.0	0.0	0.0	0.0	0.8	3.5	0.0	1.8	10.0
PIT 183	MP 646		0.0	1.0	0.0	27.5	0.0	0.0	0.0	0.0	0.5	7.1	0.0	3.6	27.5
PIT 184	MP 647		0.0	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	1.9	15.0
PIT 185	MP 648		0.0	0.5	0.0	7.5	0.0	0.0	0.0	0.0	0.3	2.0	0.0	1.0	7.5
PIT 186	MP 649		0.0	1.0	0.0	17.5	0.0	0.0	0.0	0.0	0.5	4.6	0.0	2.3	17.5
PIT 187	MP 650		0.0	5.0	0.0	15.0	0.0	0.0	0.0	0.0	2.5	5.0	0.0	2.5	15.0
PIT 188	MP 651		1.0	2.0	4.0	27.5	1.0	0.0	0.0	0.0	1.5	8.6	0.3	4.4	27.5
PIT 189	PB 1756		1.0	2.0	0.0	7.5	0.0	0.0	0.0	0.0	1.5	2.6	0.0	1.3	7.5
PIT 190	RHB 223		1.5	0.5	3.0	5.0	0.0	0.0	0.0	0.0	1.0	2.5	0.0	1.3	5.0
PIT 191	MPMH 35		1.0	2.0	0.0	60.0	0.0	2.0	0.0	0.0	1.5	15.8	0.5	8.1	60.0
PIT 192	HHB 67 Imp.		4.5	1.0	6.5	7.5	0.0	3.5	0.0	0.0	2.8	4.9	0.9	2.9	7.5
PIT 193	PB 1852		0.0	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	1.9	15.0
PIT 194	86M94		0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.6	5.0
PIT 195	DHBH 1397		1.0	3.0	0.0	20.0	0.0	0.0	0.0	0.0	2.0	6.0	0.0	3.0	20.0
PIT 196	AHB 1269		2.0	23.0	0.0	35.0	0.0	0.0	0.0	0.0	12.5	15.0	0.0	7.5	35.0
PIT 197	Pratap		0.0	0.0	6.0	5.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	1.4	6.0
PIT 198	86M01		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CHAPTER IV: PLANT PATHOLOGY

Table IV.3D: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Smut (severity %) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 199	86M84		0.0	0.0	0.0	17.5	0.0	0.0	0.0	0.0	0.0	4.4	0.0	2.2	17.5
PIT 200	KBH 108		0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.3	2.5
PIT 201	MP 7878		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 202	86M86		1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.0	0.1	1.0
PIT 203	Kaveri S Boss		0.0	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.9	7.5
PIT 204	NBH 4903		0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.5	4.0
PIT 205	AHB 1200		1.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.6	0.0	0.3	1.5
PIT 206	Raj 171		2.0	1.0	0.0	12.5	0.0	0.0	0.0	0.0	1.5	3.9	0.0	1.9	12.5
PIT 207	JBV 2		1.5	0.6	1.7	7.5	0.0	0.0	0.0	0.0	1.1	2.8	0.0	1.4	7.5
PIT 208	Dhanshakti		1.0	2.1	0.0	10.0	0.0	0.0	0.0	0.0	1.6	3.3	0.0	1.6	10.0
PIT 209	ICMV 221		2.0	2.6	0.0	2.5	0.0	0.0	0.0	0.0	2.3	1.8	0.0	0.9	2.6
PIT 210	Pusa Comp. 383		0.0	0.0	6.5	5.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	1.4	6.5
PIT 211	Pusa Comp. 701		2.0	0.0	1.7	42.5	0.0	2.5	0.0	0.0	1.0	11.5	0.6	6.1	42.5
PIT 212	ABV 04		0.0	1.0	0.0	32.5	0.0	0.0	0.0	0.0	0.5	8.4	0.0	4.2	32.5
PIT 213	Pusa Comp. 612		1.5	0.5	0.0	7.5	0.0	0.0	0.0	0.0	1.0	2.4	0.0	1.2	7.5
PIT 214	ICMV 155		1.0	0.5	1.7	27.5	1.0	2.5	0.0	0.0	0.8	7.7	0.9	4.3	27.5
	Entry Mean		0.7	3.9	1.6	5.0	0.1	0.7	0.0	0.0	2.3	6.0	0.2	3.1	5.0

* Data Not Provided - (DNP)

CHAPTER IV: PLANT PATHOLOGY

Table IV.3E: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Ergot severity at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 101	MH 2811		0.0		0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.9	0.5	3.5
PIT 102	MH 2812		0.0		0.0	0.0	2.0	0.0	3.0	4.0	0.0	0.0	2.3	1.3	4.0
PIT 103	MH 2813		0.0		0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	2.5	1.4	5.0
PIT 104	MH 2814		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 105	MH 2815		0.0		0.0	0.0	2.0	0.0	4.5	9.0	0.0	0.0	3.9	2.2	9.0
PIT 106	MH 2816		0.0		0.0	0.0	2.0	0.0	4.0	4.0	0.0	0.0	2.5	1.4	4.0
PIT 107	MH 2817		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 108	MH 2818		0.0		0.0	0.0	1.0	0.0	3.0	6.0	0.0	0.0	2.5	1.4	6.0
PIT 109	MH 2819		0.0		0.0	0.0	3.0	0.0	6.5	9.0	0.0	0.0	4.6	2.6	9.0
PIT 110	MH 2820		5.0		0.0	0.0	0.0	0.0	0.0	0.0	5.0	1.7	0.0	0.7	5.0
PIT 111	MH 2821		0.0		0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	2.5	1.4	5.0
PIT 112	MH 2822		1.0		0.0	0.0	2.0	0.0	2.5	7.5	1.0	0.3	3.0	1.9	7.5
PIT 113	MH 2823		0.0		0.0	2.5	1.0	0.0	1.5	2.5	0.0	0.8	1.3	1.1	2.5
PIT 114	MH 2824		0.0		0.0	0.0	1.0	0.0	2.0	1.0	0.0	0.0	1.0	0.6	2.0
PIT 115	MH 2825		1.0		0.0	0.0	0.0	0.0	0.0	1.5	1.0	0.3	0.4	0.4	1.5
PIT 116	MH 2826		1.0		0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.1	1.0
PIT 117	MH 2827		0.0		0.0	0.0	1.0	0.0	1.0	2.5	0.0	0.0	1.1	0.6	2.5
PIT 118	MH 2828	DNP	0.0	DNP	0.0	0.0	1.0	0.0	3.5	2.5	0.0	0.0	1.8	1.0	3.5
PIT 119	MH 2829		0.0		0.0	0.0	1.0	0.0	5.0	6.0	0.0	0.0	3.0	1.7	6.0
PIT 120	MH 2830		0.0		0.0	2.5	0.0	0.0	2.0	0.0	0.0	0.8	0.5	0.6	2.5
PIT 121	MH 2831		0.0		0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.8	0.4	3.0
PIT 122	MH 2832		0.0		0.0	2.5	0.0	0.0	0.0	0.0	0.0		0.0	0.4	2.5
PIT 123	MH 2833		1.0		0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.1	1.0
PIT 124	MH 2834		0.0		0.0	7.5	0.0	0.0	1.0	0.0	0.0	2.5	0.3	1.2	7.5
PIT 125	MH 2835		0.0		0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.5	0.3	2.0
PIT 126	MH 2836		1.5		0.0	5.0	1.0	0.0	3.5	6.5	1.5	2.2	2.8	2.5	6.5
PIT 127	MH 2837		1.0		0.0	12.5	0.0	0.0	1.0	0.0	1.0	4.5	0.3	2.1	12.5
PIT 128	MH 2838		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 129	MH 2839		0.0		0.0	10.0	1.0	0.0	2.5	1.5	0.0	3.3	1.3	2.1	10.0
PIT 130	MH 2840		0.0		0.0	12.5	0.0	0.0	2.0	0.0	0.0	4.2	0.5	2.1	12.5
PIT 131	MH 2841		0.0		0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.8	0.4	3.0
PIT 132	MH 2842		0.0		0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.8	0.4	3.0

CHAPTER IV: PLANT PATHOLOGY

Table IV.3E: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Ergot severity at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 133	MH 2843		0.0		0.0	0.0	2.0	0.0	0.0	6.5	0.0	0.0	2.1	1.2	6.5
PIT 134	MH 2844		0.0		0.0	0.0	1.0	0.0	1.0	1.5	0.0	0.0	0.9	0.5	1.5
PIT 135	MH 2845		0.0		0.0	12.5	1.0	0.0	2.0	4.0	0.0	4.2	1.8	2.8	12.5
PIT 136	MH 2846		0.0		0.0	2.5	0.0	0.0	4.0	0.0	0.0	0.8	1.0	0.9	4.0
PIT 137	MH 2847		0.0		0.0	5.0	0.0	0.0	5.0	0.0	0.0	1.7	1.3	1.4	5.0
PIT 138	MH 2848		0.0		0.0	7.5	1.0	0.0	3.0	3.5	0.0	2.5	1.9	2.1	7.5
PIT 139	MH 2849		0.0		0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.4	2.5
PIT 140	MH 2850		1.0		0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.1	1.0
PIT 141	MH 2851		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 142	MH 2852		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 143	MH 2853		1.0		0.0	0.0	0.0	0.0	2.0	1.5	1.0	0.3	0.9	0.6	2.0
PIT 144	MH 2854		1.0		0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.1	1.0
PIT 145	MH 2855		0.5		0.0	6.5	0.0	0.0	3.0	0.0	0.5	2.3	0.8	1.4	6.5
PIT 146	MH 2856		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 147	MH 2857		2.0		0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.7	0.0	0.3	2.0
PIT 148	MH 2858		0.0		0.0	0.0	1.0	0.0	4.0	3.0	0.0	0.0	2.0	1.1	4.0
PIT 149	MH 2859		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 150	MH 2860		1.0		0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.1	1.0
PIT 151	MH 2861		1.0		0.0	0.0	1.0	0.0	3.5	7.5	1.0	0.3	3.0	1.9	7.5
PIT 152	MH 2862		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 153	MH 2863		0.0		0.0	0.0	1.0	0.0	5.5	1.5	0.0	0.0	2.0	1.1	5.5
PIT 154	MH 2864		1.0		0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.1	1.0
PIT 155	MH 2865		0.0		0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.4	0.2	1.5
PIT 156	MH 2866		1.0		0.0	7.5	0.0	0.0	0.0	0.0	1.0	2.8	0.0	1.2	7.5
PIT 157	MH 2867		0.0		0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.4	2.5
PIT 158	MH 2868		1.5		0.0	0.0	1.0	0.0	2.0	1.0	1.5	0.5	1.0	0.8	2.0
PIT 159	MH 2869		1.0		0.0	0.0	0.0	0.0	3.0	0.0	1.0	0.3	0.8	0.6	3.0
PIT 160	MH 2870		5.0		0.0	0.0	1.0	0.0	0.0	5.0	5.0	1.7	1.5	1.6	5.0
PIT 161	MH 2871		2.0		0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.7	0.0	0.3	2.0
PIT 162	MH 2872		0.0		0.0	12.5	0.0	0.0	0.0	0.0	0.0	4.2	0.0	1.8	12.5
PIT 163	MH 2873		0.0		0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.8	0.4	3.0
PIT 164	MH 2874		1.0		0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.1	1.0
PIT 165	MH 2875		0.0		0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.6	0.4	2.5

CHAPTER IV: PLANT PATHOLOGY

Table IV.3E: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Ergot severity at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 166	MH 2876		0.0		0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.4	0.2	1.5
PIT 167	MH 2877		0.0		0.0	0.0	0.0	0.0	4.5	1.0	0.0	0.0	1.4	0.8	4.5
PIT 168	MH 2878		0.0		0.0	2.5	0.0	0.0	5.0	0.0	0.0	0.8	1.3	1.1	5.0
PIT 169	MH 2879		0.0		0.0	2.5	0.0	0.0	3.0	0.0	0.0	0.8	0.8	0.8	3.0
PIT 170	MH 2880		1.0		0.0	0.0	0.0	0.0	2.0	0.0	1.0	0.3	0.5	0.4	2.0
PIT 171	MH 2881		1.0		0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.1	1.0
PIT 172	MH 2882		0.0		0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.4	2.5
PIT 173	MH 2883		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 174	MH 2884		0.0		0.0	2.5	0.0	0.0	0.0	4.0	0.0	0.8	1.0	0.9	4.0
PIT 175	MH 2885		0.0		0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.4	2.5
PIT 176	MH 2886		0.0		0.0	2.5	0.0	0.0	1.0	0.0	0.0	0.8	0.3	0.5	2.5
PIT 177	MP 640		0.0		0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.4	0.2	1.5
PIT 178	MP 641		0.0		0.0	0.0	1.0	0.0	0.0	2.5	0.0	0.0	0.9	0.5	2.5
PIT 179	MP 642		0.0		0.0	2.5	0.0	0.0	3.5	0.0	0.0	0.8	0.9	0.9	3.5
PIT 180	MP 643		0.0		0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.8	0.4	3.0
PIT 181	MP 644		0.0		0.0	2.5	0.0	0.0	4.0	0.0	0.0	0.8	1.0	0.9	4.0
PIT 182	MP 645		0.0		0.0	2.5	1.0	0.0	3.5	0.0	0.0	0.8	1.1	1.0	3.5
PIT 183	MP 646		1.0		0.0	2.5	1.0	0.0	5.0	5.0	1.0	1.2	2.8	2.1	5.0
PIT 184	MP 647		1.0		0.0	0.0	0.0	0.0	4.5	0.0	1.0	0.3	1.1	0.8	4.5
PIT 185	MP 648		0.0		0.0	5.0	0.0	0.0	3.5	0.0	0.0	1.7	0.9	1.2	5.0
PIT 186	MP 649		1.0		0.0	2.5	0.0	0.0	4.0	0.0	1.0	1.2	1.0	1.1	4.0
PIT 187	MP 650		0.0		0.0	5.0	1.0	0.0	3.5	0.0	0.0	1.7	1.1	1.4	5.0
PIT 188	MP 651		2.0		0.0	2.5	0.0	0.0	4.0	0.0	2.0	1.5	1.0	1.2	4.0
PIT 189	PB 1756		1.0		0.0	0.0	1.0	0.0	2.5	2.5	1.0	0.3	1.5	1.0	2.5
PIT 190	RHB 223		0.0		0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.8	0.4	3.0
PIT 191	MPMH 35		2.0		0.0	2.5	0.0	0.0	2.0	0.0	2.0	1.5	0.5	0.9	2.5
PIT 192	HHB 67 Imp.		1.0		0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.1	1.0
PIT 193	PB 1852		0.0		0.0	2.5	0.0	0.0	1.5	0.0	0.0	0.8	0.4	0.6	2.5
PIT 194	86M94		0.0		0.0	2.5	1.0	0.0	2.5	0.0	0.0	0.8	0.9	0.9	2.5
PIT 195	DHBH 1397		1.0		0.0	0.0	1.5	0.0	3.0	1.5	1.0	0.3	1.5	1.0	3.0
PIT 196	AHB 1269		1.0		0.0	0.0	1.0	0.0	4.0	2.5	1.0	0.3	1.9	1.2	4.0
PIT 197	Pratap		0.0		0.0	0.0	1.0	0.0	3.0	0.0	0.0	0.0	1.0	0.6	3.0
PIT 198	86M01		0.0		0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	2.0	1.1	4.0

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Table IV.3E: Disease screening of Initial Pearl Millet Hybrids and Varieties (PMPT I): Ergot severity at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	Mean				MAX
											Zone A ₁	Zone A	Zone B	India	
PIT 199	86M84		0.0		0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.4	2.5
PIT 200	KBH 108		0.0		0.0	2.5	1.0	0.0	3.0	0.0	0.0	0.8	1.0	0.9	3.0
PIT 201	MP 7878		0.0		0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.5	0.3	2.0
PIT 202	86M86		0.0		0.0	0.0	6.0	0.0	1.0	6.0	0.0	0.0	3.3	1.9	6.0
PIT 203	Kaveri S Boss		0.0		0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.1	0.1	0.5
PIT 204	NBH 4903		0.0		0.0	0.0	1.0	0.0	1.5	0.0	0.0	0.0	0.6	0.4	1.5
PIT 205	AHB 1200		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 206	Raj 171		0.0		0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	2.5	1.4	5.0
PIT 207	JBV 2		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PIT 208	Dhanshakti		0.0		0.0	0.0	1.0	0.0	0.0	4.0	0.0	0.0	1.3	0.7	4.0
PIT 209	ICMV 221		0.0		0.0	0.0	1.0	0.0	0.0	7.5	0.0	0.0	2.1	1.2	7.5
PIT 210	Pusa Comp. 383		0.0		0.0	2.5	0.0	0.0	3.0	0.0	0.0	0.8	0.8	0.8	3.0
PIT 211	Pusa Comp. 701		0.0		0.0	0.0	5.0	0.0	2.0	5.0	0.0	0.0	3.0	1.7	5.0
PIT 212	ABV 04		0.0		0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	1.0	0.6	4.0
PIT 213	Pusa Comp. 612		2.0		0.0	0.0	1.0	0.0	2.5	7.5	2.0	0.7	2.8	1.9	7.5
PIT 214	ICMV 155		0.0		0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.1	0.1	0.5
Entry Mean			0.4		0.0	1.6	0.6	0.0	1.8	1.3	0.4	0.6	0.9	0.8	1.8

* Data Not Provided - (DNP)

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Table IV.4: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Downy mildew (%) at 30 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	PTR	Mean				MAX	MAX
												Zone A ₁	Zone A	Zone B	India		
IR I		72.8	76.3	100.0	66.1	70.0	88.0	89.9	71.8	92.5	87.2	83.0	77.0	85.5	80.8	100.0	100.0
IR II		70.1	77.5	90.0	61.0	3.2	90.0	70.1	81.6	88.2	80.0	79.2	60.4	82.5	70.2	90.0	90.0
PAT 201	MH 2672	2.3	0.0	0.0	0.0	3.1	4.0	6.7	0.0	0.0	1.3	0.8	1.1	2.7	1.8	6.7	6.7
PAT 202	MH 2673	0.0	0.0	0.0	0.0	0.0	3.0	3.5	0.0	0.0	0.6	0.0	0.0	1.6	0.7	3.5	3.5
PAT 203	MH 2675	1.4	0.0	0.0	1.4	0.0	2.0	0.0	0.0	0.0	0.0	0.5	0.6	0.5	0.5	2.0	2.0
PAT 204	MH 2678	0.0	0.0	0.0	0.0	0.0	3.0	6.8	1.5	1.5	6.7	0.0	0.0	3.2	1.4	6.8	6.8
PAT 205	MH 2743	1.2	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	11.4	0.4	0.2	0.3	0.2	1.2	11.4
IR I		74.4	75.0	93.3	74.2	73.0	90.0	100.0	89.9	87.5	90.9	80.9	78.0	91.8	84.1	100.0	100.0
IR II		71.1	70.3	90.9	69.8	7.5	87.0	64.5	85.5	88.9	76.6	77.4	61.9	81.5	70.6	90.9	90.9
PAT 206	MH 2744	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.8	0.0	0.0	0.3	0.1	1.0	1.0
PAT 207	MH 2746	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.6	0.0	0.0	0.3	0.1	1.0	1.0
PAT 208	MH 2747	1.3	2.5	0.0	0.0	0.0	1.0	0.9	0.0	0.0	22.7	1.3	0.8	0.5	0.6	2.5	22.7
PAT 209	MH 2748	1.3	0.0	0.0	0.0	2.9	1.0	3.0	1.4	0.0	3.5	0.4	0.8	1.4	1.1	3.0	3.5
PAT 210	MH 2749	0.0	0.0	0.0	4.1	5.1	2.0	1.0	0.0	0.0	1.5	0.0	1.8	0.7	1.3	5.1	5.1
IR I		73.9	71.3	91.3	66.7	72.9	88.0	95.4	82.1	89.0	90.5	78.8	75.2	88.6	81.2	95.4	95.4
IR II		71.3	70.7	73.3	65.1	9.7	88.0	78.5	72.2	87.0	92.4	71.8	58.0	81.4	68.4	88.0	92.4
PAT 211	MH 2754	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	1.0	1.0
PAT 212	MH 2758	0.0	0.0	0.0	1.9	0.0	3.0	5.7	0.0	1.6	6.0	0.0	0.4	2.6	1.4	5.7	6.0
PAT 213	MH 2682	0.0	0.0	0.0	0.0	0.0	2.0	1.4	0.0	0.0	0.0	0.0	0.0	0.9	0.4	2.0	2.0
PAT 214	MH 2767	1.6	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.5	0.3	0.3	0.3	1.6	1.6
PAT 215	MH 2773	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.6	0.0	0.0	0.3	0.1	1.0	1.0
IR I		71.8	76.7	93.3	65.0	72.1	90.0	100.0	77.9	87.9	89.1	80.6	75.8	89.0	81.6	100.0	100.0
IR II		69.7	68.9	96.6	62.5	12.1	92.0	86.3	92.1	86.6	75.3	78.4	62.0	89.3	74.1	96.6	96.6
PAT 216	MH 2775	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.7	0.0	0.0	0.3	0.1	1.0	1.0
PAT 217	MH 2777	0.0	0.0	0.0	0.0	0.0	1.0	2.2	0.0	0.0	0.0	0.0	0.0	0.8	0.4	2.2	2.2
PAT 218	MH 2784	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	1.0	1.0
PAT 219	MH 2709	0.0	0.0	0.0	1.5	0.0	1.0	1.1	0.0	0.0	0.0	0.0	0.3	0.5	0.4	1.5	1.5

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Table IV.4: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Downy mildew (%) at 30 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	PTR	Mean				MAX	MAX
												Zone A ₁	Zone A	Zone B	India		
PAT 220	MH 2712	0.0	0.0	0.0	0.0	0.0	1.0	1.3	0.0	0.0	0.7	0.0	0.0	0.6	0.3	1.3	1.3
IR I		71.4	76.3	92.9	68.3	74.6	82.0	100.0	88.3	97.1	9.4	80.2	76.7	91.9	83.4	100.0	100.0
IR II		69.9	77.5	88.9	69.2	4.9	80.0	69.5	75.0	90.5	81.3	78.7	62.1	78.7	69.5	90.5	90.5
PAT 221	MH 2717	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAT 222	MH 2795	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.0	0.0	0.0	0.0	0.5	0.2	1.1	1.1
PAT 223	MH 2796	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAT 224	MH 2797	1.4	1.3	0.0	3.2	0.0	3.0	0.0	0.0	1.7	3.7	0.9	1.2	1.2	1.2	3.2	3.7
PAT 225	MH 2798	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IR I		73.2	70.3	93.1	64.4	79.7	86.0	95.9	83.8	98.6	91.5	78.9	76.1	91.1	82.8	98.6	98.6
IR II		70.9	68.5	90.0	58.5	9.8	83.0	77.2	81.0	84.2	81.3	76.5	59.5	81.3	69.2	90.0	90.0
PAT 226	MH 2801	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.4	7.7	0.0	0.0	0.6	0.3	1.4	7.7
PAT 227	MH 2806	0.0	1.3	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.4	0.3	0.5	0.4	2.0	2.0
PAT 228	MH 2808	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.3	0.0	0.0	0.0	0.0	0.6	0.3	1.3	1.3
PAT 229	MP 637	0.0	0.0	0.0	1.7	0.0	2.0	1.6	0.0	1.7	0.0	0.0	0.3	1.3	0.8	2.0	2.0
PAT 230	HHB 67 Imp.	0.0	1.6	0.0	0.0	1.4	2.0	0.0	0.0	0.0	0.6	0.5	0.6	0.5	0.6	2.0	2.0
IR I		71.4	76.3	93.8	68.9	70.8	86.0	98.3	90.5	92.8	71.7	80.5	76.2	91.9	83.2	98.3	98.3
IR II		70.5	77.5	93.3	61.3	4.4	85.0	80.5	86.7	92.5	76.6	80.4	61.4	86.2	72.4	93.3	93.3
PAT 231	PB 1756	0.0	0.0	0.0	0.0	0.0	2.0	3.3	0.0	0.0	0.0	0.0	0.0	1.3	0.6	3.3	3.3
PAT 232	MPMH 35	0.0	5.0	0.0	0.0	1.6	3.0	1.7	0.0	0.0	1.3	1.7	1.3	1.2	1.2	5.0	5.0
PAT 233	RHB 223	1.9	0.0	4.8	1.6	0.0	3.0	4.9	0.0	1.6	0.0	2.2	1.6	2.4	2.0	4.9	4.9
PAT 234	AHB 1269	0.0	0.0	0.0	0.0	0.0	2.0	2.2	0.0	0.0	0.0	0.0	0.0	1.0	0.5	2.2	2.2
PAT 235	86M01	2.4	5.1	0.0	4.9	0.0	3.0	0.0	0.0	0.0	3.2	2.5	2.5	0.8	1.7	5.1	5.1
IR I		71.2	75.0	92.9	70.0	72.5	85.0	90.5	78.2	90.5	83.8	79.7	76.3	86.1	80.6	92.9	92.9
IR II		69.7	70.3	91.9	61.5	6.2	81.0	72.1	90.7	89.4	75.2	77.3	59.9	83.3	70.3	91.9	91.9
PAT 236	Pratap	0.0	2.6	0.0	0.0	0.0	4.0	7.1	2.5	0.0	0.0	0.9	0.5	3.4	1.8	7.1	7.1
PAT 237	KBH 108	0.0	0.0	0.0	1.6	0.0	2.0	0.0	1.3	0.0	0.0	0.0	0.3	0.8	0.6	2.0	2.0
PAT 238	86M86	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	1.0	1.0

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Table IV.4: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Downy mildew (%) at 30 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	PTR	Mean				MAX	MAX
												Zone A ₁	Zone A	Zone B	India		
PAT 239	86M84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.6
PAT 240	MP 7878	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IR I		71.1	71.3	78.0	73.5	83.8	80.0	94.9	80.3	90.2	77.6	73.5	75.5	86.3	80.3	94.9	94.9
IR II		70.5	70.7	85.3	65.8	9.7	81.0	80.0	86.3	90.5	77.7	75.5	60.4	84.4	71.1	90.5	90.5
PAT 241	Kaveri S Boss	2.2	3.4	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	1.9	1.1	0.5	0.8	3.4	3.4
PAT 242	NBH 4903	1.3	7.7	0.0	0.0	0.0	2.0	1.0	0.0	0.0	0.0	3.0	1.8	0.8	1.3	7.7	7.7
PAT 243	AHB 1200	0.0	1.3	0.0	1.6	0.0	4.0	6.0	0.0	1.5	1.6	0.4	0.6	2.9	1.6	6.0	6.0
PAT 244	Raj 171	1.7	4.5	0.0	2.6	4.5	3.0	2.8	2.5	0.0	9.1	2.0	2.7	2.1	2.4	4.5	9.1
PAT 245	JBV 2	2.2	2.7	0.0	0.0	3.1	2.0	3.5	0.0	0.0	5.9	1.6	1.6	1.4	1.5	3.5	5.9
IR I		72.7	76.3	91.4	65.3	75.7	83.0	92.7	77.2	93.1	88.0	80.1	76.3	86.5	80.8	93.1	93.1
IR II		70.0	77.5	93.9	62.7	6.0	82.0	82.9	87.5	87.1	66.1	80.5	62.0	84.9	72.2	93.9	93.9
PAT 246	Dhanshakti	1.9	6.8	0.0	1.5	0.0	2.0	2.3	0.0	0.0	9.6	2.9	2.1	1.1	1.6	6.8	9.6
PAT 247	ICMV 221	2.1	1.4	0.0	1.9	0.0	3.0	1.1	0.0	0.0	2.7	1.2	1.1	1.0	1.1	3.0	3.0
PAT 248	Pusa Comp. 383	0.0	0.0	2.5	0.0	0.0	3.0	1.0	2.6	0.0	2.2	0.8	0.5	1.7	1.0	3.0	3.0
PAT 249	Pusa Comp. 701	0.0	0.0	5.7	3.1	0.0	2.0	0.0	0.0	1.6	11.9	1.9	1.8	0.9	1.4	5.7	11.9
IR I		72.0	75.0	90.0	68.2	64.7	83.0	89.0	83.5	93.9	88.0	79.0	74.0	87.4	79.9	93.9	93.9
IR II		70.1	70.3	93.1	58.7	6.6	85.0	77.3	81.1	95.6	66.1	77.8	59.8	84.7	70.9	95.6	95.6
Mean Entries		0.5	1.0	0.3	0.7	0.4	1.8	1.5	0.3	0.3	2.4	0.6	0.6	1.0	0.8	1.8	2.4
Mean IR I		72.4	74.5	91.8	68.2	73.6	85.5	95.1	83.1	92.1	78.8	79.6	76.1	89.0	81.8	95.1	95.1
Mean IR II		70.3	72.7	89.8	63.3	7.3	84.9	76.3	83.6	89.1	77.1	77.6	60.7	83.5	70.8	89.8	89.8

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Table IV.5: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Downy mildew (%) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	PTR	Mean				MAX	MAX
												Zone A ₁	Zone A	Zone B	India		
IR I		100.0	79.8	100.0	85.7	96.7	100.0	94.2	92.3	98.5	97.9	93.3	92.4	96.3	94.1	100.0	100.0
IR II		97.4	82.3	93.3	82.9	11.1	98.0	74.7	92.1	97.1	90.0	91.0	73.4	90.5	81.0	98.0	98.0
PAT 201	MH 2672	4.7	0.0	0.0	0.0	3.1	8.0	6.7	0.0	0.0	2.0	1.6	1.6	3.7	2.5	8.0	8.0
PAT 202	MH 2673	0.0	0.0	0.0	0.0	0.0	5.0	4.3	1.3	0.0	0.6	0.0	0.0	2.7	1.2	5.0	5.0
PAT 203	MH 2675	1.4	0.0	0.0	2.9	0.0	4.0	0.9	1.4	0.0	0.0	0.5	0.9	1.6	1.2	4.0	4.0
PAT 204	MH 2678	0.0	0.0	0.0	0.0	0.0	5.0	6.8	0.0	1.5	7.4	0.0	0.0	3.3	1.5	6.8	7.4
PAT 205	MH 2743	1.2	0.0	3.2	1.7	0.0	3.0	0.0	0.0	0.0	12.4	1.5	1.2	0.8	1.0	3.2	12.4
IR I		100.0	79.8	96.7	95.5	93.7	100.0	100.0	92.4	95.8	98.8	92.2	93.1	97.1	94.9	100.0	100.0
IR II		97.6	77.5	93.9	77.4	13.2	100.0	77.6	92.1	95.9	98.1	89.7	71.9	91.4	80.6	100.0	100.0
PAT 206	MH 2744	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.8	0.0	0.0	0.3	0.1	1.0	1.0
PAT 207	MH 2746	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.4	0.0	0.6	0.0	0.0	0.6	0.3	1.4	1.4
PAT 208	MH 2747	3.8	2.5	0.0	0.0	1.4	3.0	0.9	0.0	0.0	58.4	2.1	1.5	1.0	1.3	3.8	58.4
PAT 209	MH 2748	3.8	0.0	0.0	0.0	2.9	2.0	3.0	1.4	0.0	4.3	1.3	1.3	1.6	1.4	3.8	4.3
PAT 210	MH 2749	3.3	0.0	0.0	6.1	6.8	5.0	1.9	0.0	0.0	6.2	1.1	3.2	1.7	2.6	6.8	6.8
IR I		100.0	80.3	95.7	90.9	96.6	98.0	95.4	94.9	93.0	100.0	92.0	92.7	95.3	93.9	100.0	100.0
IR II		96.3	76.4	83.3	76.7	9.7	99.0	84.6	92.4	97.1	98.9	85.3	68.5	93.3	79.5	99.0	99.0
PAT 211	MH 2754	2.4	0.0	0.0	0.0	0.0	4.0	2.9	0.0	0.0	0.7	0.8	0.5	1.7	1.0	4.0	4.0
PAT 212	MH 2758	2.2	0.0	0.0	3.8	0.0	6.0	5.7	1.3	3.2	8.1	0.7	1.2	4.1	2.5	6.0	8.1
PAT 213	MH 2682	1.9	0.0	0.0	0.0	0.0	4.0	1.4	0.0	0.0	0.0	0.6	0.4	1.4	0.8	4.0	4.0
PAT 214	MH 2767	3.2	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	1.1	0.6	1.0	0.8	4.0	4.0
PAT 215	MH 2773	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	1.2	0.0	0.0	0.5	0.2	2.0	2.0
IR I		100.0	83.8	96.7	88.3	100.0	100.0	100.0	90.9	94.7	99.0	93.5	93.8	96.4	94.9	100.0	100.0
IR II		98.7	71.8	100.0	75.0	13.6	100.0	86.3	93.4	92.6	96.3	90.2	71.8	93.1	81.3	100.0	100.0
PAT 216	MH 2775	0.0	0.0	0.0	1.6	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.3	0.5	0.4	2.0	2.0
PAT 217	MH 2777	0.0	0.0	0.0	0.0	0.0	3.0	2.2	0.0	0.0	0.0	0.0	0.0	1.3	0.6	3.0	3.0
PAT 218	MH 2784	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	1.5	0.0	0.0	0.0	0.9	0.4	2.0	2.0
PAT 219	MH 2709	0.0	0.0	0.0	3.1	0.0	3.0	1.1	2.7	0.0	0.0	0.0	0.6	1.7	1.1	3.1	3.1

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Table IV.5: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Downy mildew (%) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	PTR	Mean				MAX	MAX
												Zone A ₁	Zone A	Zone B	India		
PAT 220	MH 2712	1.3	0.0	0.0	0.0	0.0	2.0	1.3	0.0	0.0	1.4	0.4	0.3	0.8	0.5	2.0	2.0
IR I		100.0	84.2	96.4	100.0	95.8	98.0	100.0	92.2	100.0	99.0	93.5	95.3	97.6	96.3	100.0	100.0
IR II		97.3	85.0	92.6	78.5	11.5	100.0	82.9	97.4	98.5	95.0	91.6	73.0	94.7	82.6	100.0	100.0
PAT 221	MH 2717	1.4	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.5	0.3	0.3	0.3	1.4	1.4
PAT 222	MH 2795	0.0	0.0	0.0	0.0	0.0	2.0	1.1	0.0	0.0	0.0	0.0	0.0	0.8	0.3	2.0	2.0
PAT 223	MH 2796	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAT 224	MH 2797	2.7	1.3	0.0	9.7	0.0	4.0	0.9	1.4	5.0	12.3	1.3	2.7	2.8	2.8	9.7	12.3
PAT 225	MH 2798	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.6	0.0	0.0	0.0	0.9	0.4	1.6	1.6
IR I		100.0	77.5	96.6	96.6	98.4	100.0	95.9	87.5	98.6	100.0	91.4	93.8	95.5	94.6	100.0	100.0
IR II		97.5	72.8	93.3	81.1	11.5	100.0	80.7	96.2	94.4	100.0	87.9	71.2	92.8	80.8	100.0	100.0
PAT 226	MH 2801	0.0	0.0	0.0	2.3	0.0	3.0	0.0	0.0	1.4	10.3	0.0	0.5	1.1	0.8	3.0	10.3
PAT 227	MH 2806	1.8	1.3	0.0	0.0	0.0	3.0	1.0	0.0	0.0	0.0	1.0	0.6	1.0	0.8	3.0	3.0
PAT 228	MH 2808	0.0	0.0	0.0	0.0	0.0	2.0	0.0	1.3	0.0	0.0	0.0	0.0	0.8	0.4	2.0	2.0
PAT 229	MP 637	3.8	0.0	0.0	1.7	0.0	3.0	1.6	0.0	1.7	0.0	1.3	1.1	1.6	1.3	3.8	3.8
PAT 230	HHB 67 Imp.	0.0	1.6	0.0	0.0	1.4	3.0	0.0	0.0	0.0	0.6	0.5	0.6	0.8	0.7	3.0	3.0
IR I		100.0	83.3	93.8	89.2	95.4	99.0	98.3	94.6	98.6	100.0	92.4	92.3	97.6	94.7	100.0	100.0
IR II		98.7	86.3	93.3	88.7	11.8	100.0	84.4	93.3	97.0	94.5	92.8	75.8	93.7	83.7	100.0	100.0
PAT 231	PB 1756	1.3	0.0	0.0	1.9	0.0	4.0	3.3	2.6	0.0	0.0	0.4	0.6	2.5	1.5	4.0	4.0
PAT 232	MPMH 35	0.0	5.0	0.0	0.0	1.6	5.0	1.7	1.4	0.0	9.5	1.7	1.3	2.0	1.6	5.0	9.5
PAT 233	RHB 223	1.9	0.0	4.8	4.8	0.0	5.0	4.9	0.0	1.6	11.3	2.2	2.3	2.9	2.5	5.0	11.3
PAT 234	AHB 1269	2.4	0.0	0.0	0.0	0.0	4.0	2.2	0.0	0.0	1.2	0.8	0.5	1.5	1.0	4.0	4.0
PAT 235	86M01	4.8	5.1	0.0	4.9	0.0	5.0	0.0	0.0	0.0	3.2	3.3	2.9	1.3	2.2	5.1	5.1
IR I		100.0	76.4	92.9	94.0	94.2	100.0	94.6	91.0	96.1	100.0	89.8	91.5	95.4	93.2	100.0	100.0
IR II		97.4	72.8	86.5	75.4	10.8	97.0	76.7	93.3	97.0	90.1	85.5	68.6	91.0	78.5	97.4	97.4
PAT 236	Pratap	4.8	2.6	0.0	0.0	0.0	8.0	9.2	3.8	0.0	0.0	2.5	1.5	5.2	3.2	9.2	9.2
PAT 237	KBH 108	1.7	0.0	0.0	3.3	0.0	4.0	0.0	1.3	0.0	0.0	0.6	1.0	1.3	1.1	4.0	4.0
PAT 238	86M86	1.7	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.6	0.3	0.8	0.5	3.0	3.0

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Table IV.5: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Downy mildew (%) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	DHL	ABD1	CBE	PTR	Mean				MAX	MAX
												Zone A ₁	Zone A	Zone B	India		
PAT 239	86M84	1.5	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.6	0.5	0.3	0.3	0.3	1.5	1.5
PAT 240	MP 7878	2.7	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.9	0.5	0.5	0.5	2.7	2.7
IR I		100.0	77.0	78.0	98.0	100.0	98.0	94.9	88.2	95.8	98.1	85.0	90.6	94.2	92.2	100.0	100.0
IR II		97.4	76.9	88.2	78.9	12.9	97.0	81.4	91.8	96.8	96.4	87.5	70.9	91.8	80.2	97.4	97.4
PAT 241	Kaveri Super Boss	2.2	3.4	0.0	0.0	0.0	4.0	1.1	0.0	0.0	0.0	1.9	1.1	1.3	1.2	4.0	4.0
PAT 242	NBH 4903	3.9	7.7	0.0	0.0	0.0	4.0	1.0	0.0	0.0	0.0	3.8	2.3	1.3	1.8	7.7	7.7
PAT 243	AHB 1200	1.5	1.3	0.0	1.6	0.0	7.0	6.0	0.0	4.4	5.4	0.9	0.9	4.3	2.4	7.0	7.0
PAT 244	Raj 171	5.0	4.5	0.0	3.8	6.1	6.0	2.8	2.5	0.0	14.2	3.2	3.9	2.8	3.4	6.1	14.2
PAT 245	JBV 2	4.4	2.7	0.0	1.4	3.1	5.0	3.5	0.0	0.0	10.6	2.4	2.3	2.1	2.2	5.0	10.6
IR I		100.0	81.2	94.3	90.3	95.7	100.0	94.1	87.3	97.2	98.1	91.8	92.3	94.7	93.3	100.0	100.0
IR II		98.8	80.2	97.0	79.1	11.9	97.0	88.6	93.1	92.9	96.4	92.0	73.4	92.9	82.0	98.8	98.8
PAT 246	Dhanshakti	5.8	8.2	0.0	7.5	0.0	4.0	4.5	0.0	0.0	14.3	4.7	4.3	2.1	3.3	8.2	14.3
PAT 247	ICMV 221	4.2	2.8	0.0	1.9	0.0	4.0	1.1	0.0	0.0	9.6	2.3	1.8	1.3	1.6	4.2	9.6
PAT 248	Pusa Comp. 383	3.8	0.0	2.5	0.0	0.0	4.0	1.0	3.9	0.0	6.7	2.1	1.3	2.2	1.7	4.0	6.7
PAT 249	Pusa Comp. 701	2.9	0.0	5.7	4.7	0.0	3.0	0.0	0.0	4.8	17.9	2.9	2.7	1.9	2.3	5.7	17.9
IR I		100.0	76.5	93.3	86.4	95.6	99.0	95.9	91.0	98.5	99.0	89.9	90.4	96.1	92.9	100.0	100.0
IR II		98.9	78.8	96.6	82.7	10.5	98.0	78.7	90.5	100.0	87.7	91.4	73.5	91.8	81.6	100.0	100.0
Entry Mean		31.2	1.0	28.2	1.4	16.1	32.2	27.9	28.2	29.5	4.7	1.1	1.0	1.5	1.8	32.2	32.2
Mean IR I		100.0	80.0	94.0	92.3	96.5	99.3	96.5	91.9	97.0	99.1	91.3	92.6	96.2	94.2	100.0	100.0
Mean IR II		97.7	78.2	92.6	79.7	11.7	98.7	81.5	93.2	96.3	94.8	89.5	72.0	92.4	81.1	98.7	98.7

IR - 7042S

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Table IV.6: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Blast (0-9 scale) at 30 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	PTR	Mean				MAX
												Zone A ₁	Zone A	Zone B	India	
PAT 201	MH 2672	0.0	1.0	1.5	0.1	0.0	1.0	1.0	2.0	0.5		0.8	0.5	1.1	0.8	2.0
PAT 202	MH 2673	0.0	1.0	1.9	0.1	0.0	1.0	0.5	2.0	0.0		1.0	0.6	0.9	0.7	2.0
PAT 203	MH 2675	0.0	1.0	0.9	0.1	0.0	0.0	0.0	1.5	0.5		0.6	0.4	0.5	0.4	1.5
PAT 204	MH 2678	0.0	1.0	1.0	0.1	0.0	0.0	0.5	1.0	0.0		0.7	0.4	0.4	0.4	1.0
PAT 205	MH 2743	0.0	1.0	1.2	0.2	0.0	0.0	0.0	1.0	0.0		0.7	0.5	0.3	0.4	1.2
PAT 206	MH 2744	0.0	1.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0		0.8	0.5	0.0	0.3	1.5
PAT 207	MH 2746	1.0	1.0	2.0	0.4	0.0	0.0	0.0	2.5	0.5		1.3	0.9	0.8	0.8	2.5
PAT 208	MH 2747	1.0	1.0	1.8	0.2	0.0	1.0	0.0	2.0	0.0		1.3	0.8	0.8	0.8	2.0
PAT 209	MH 2748	0.5	1.0	1.4	0.0	0.0	1.0	0.5	1.5	0.0		1.0	0.6	0.8	0.7	1.5
PAT 210	MH 2749	0.0	1.0	1.4	0.0	0.0	0.0	0.0	0.5	0.0		0.8	0.5	0.1	0.3	1.4
PAT 211	MH 2754	1.0	1.5	1.6	0.2	0.0	0.5	0.5	2.0	0.0		1.4	0.9	0.8	0.8	2.0
PAT 212	MH 2758	0.0	1.0	1.3	0.0	0.0	0.5	0.0	1.5	0.0		0.8	0.5	0.5	0.5	1.5
PAT 213	MH 2682	0.0	1.0	1.2	0.1	0.0	0.0	0.0	0.0	0.0		0.7	0.5	0.0	0.3	1.2
PAT 214	MH 2767	0.0	1.0	1.4	0.2	0.0	0.0	0.0	0.0	0.0		0.8	0.5	0.0	0.3	1.4
PAT 215	MH 2773	0.0	1.0	1.1	0.1	0.0	0.0	0.0	0.0	0.0		0.7	0.4	0.0	0.2	1.1
PAT 216	MH 2775	0.0	1.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0		1.0	0.6	0.0	0.3	1.9
PAT 217	MH 2777	0.5	1.0	1.2	0.0	0.0	0.5	0.0	1.5	0.0		0.9	0.5	0.5	0.5	1.5
PAT 218	MH 2784	0.5	1.0	1.3	0.0	1.0	0.0	0.0	1.0	0.0	DNP	0.9	0.8	0.3	0.5	1.3
PAT 219	MH 2709	1.0	1.0	1.2	0.0	0.0	0.0	0.0	1.5	0.0		1.1	0.6	0.4	0.5	1.5
PAT 220	MH 2712	0.0	1.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0		0.7	0.4	0.0	0.2	1.2
PAT 221	MH 2717	0.5	1.0	1.4	0.0	0.0	0.0	0.0	1.5	0.0		1.0	0.6	0.4	0.5	1.5
PAT 222	MH 2795	0.0	1.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0		0.8	0.5	0.0	0.3	1.3
PAT 223	MH 2796	0.0	1.0	1.2	0.0	0.0	0.0	0.5	0.5	0.0		0.7	0.4	0.3	0.4	1.2
PAT 224	MH 2797	0.0	0.5	1.7	0.1	0.0	0.5	0.5	1.0	0.0		0.7	0.5	0.5	0.5	1.7
PAT 225	MH 2798	0.0	0.5	1.2	0.0	0.0	0.0	0.0	0.0	0.0		0.6	0.3	0.0	0.2	1.2
PAT 226	MH 2801	0.0	0.5	1.2	0.0	0.0	0.0	0.0	0.5	0.0		0.6	0.3	0.1	0.2	1.2
PAT 227	MH 2806	1.0	1.0	2.0	0.1	0.0	0.5	0.0	1.0	0.0		1.3	0.8	0.4	0.6	2.0
PAT 228	MH 2808	0.0	1.0	1.2	0.0	0.5	0.0	0.5	0.0	0.0		0.7	0.5	0.1	0.4	1.2
PAT 229	MP 637	1.0	1.0	1.8	0.3	0.0	0.0	0.5	1.5	0.0		1.3	0.8	0.5	0.7	1.8

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Table IV.6: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Blast (0-9 scale) at 30 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	PTR	Mean				MAX
												Zone A ₁	Zone A	Zone B	India	
PAT 230	HHB 67 Imp.	0.5	1.0	2.5	0.1	1.0	1.0	0.0	3.0	0.5		1.3	1.0	1.1	1.1	3.0
PAT 231	PB 1756	0.0	1.0	1.3	0.0	0.0	0.0	0.0	1.0	0.0		0.8	0.5	0.3	0.4	1.3
PAT 232	MPMH 35	0.5	1.0	1.7	0.0	0.0	0.0	0.0	0.5	0.0		1.1	0.6	0.1	0.4	1.7
PAT 233	RHB 223	0.0	1.0	1.6	0.2	0.0	0.0	0.0	1.5	0.0		0.9	0.6	0.4	0.5	1.6
PAT 234	AHB 1269	0.5	1.0	1.8	0.1	0.0	0.0	0.0	2.0	0.0		1.1	0.7	0.5	0.6	2.0
PAT 235	86M01	0.0	1.0	1.9	0.3	0.0	1.0	0.0	3.0	1.0		1.0	0.6	1.3	0.9	3.0
PAT 236	Pratap	0.0	1.0	2.8	0.2	0.0	1.0	0.5	4.0	1.5		1.3	0.8	1.8	1.2	4.0
PAT 237	KBH 108	0.5	1.0	2.3	0.0	1.0	1.0	0.0	2.5	0.0		1.3	1.0	0.9	0.9	2.5
PAT 238	86M86	0.0	1.0	1.2	0.0	0.0	0.0	0.0	1.5	0.0		0.7	0.4	0.4	0.4	1.5
PAT 239	86M84	0.5	1.0	2.4	0.1	0.0	1.0	0.0	2.0	0.0		1.3	0.8	0.8	0.8	2.4
PAT 240	MP 7878	1.0	0.5	1.6	0.0	0.0	1.0	0.5	2.5	0.0		1.0	0.6	1.0	0.8	2.5
PAT 241	Kaveri S Boss	0.0	1.0	1.8	0.0	0.0	0.0	0.0	1.0	0.0		0.9	0.6	0.3	0.4	1.8
PAT 242	NBH 4903	1.0	1.5	2.5	0.2	0.0	0.0	0.0	2.0	0.0		1.7	1.0	0.5	0.8	2.5
PAT 243	AHB 1200	0.5	1.0	2.3	0.0	1.0	0.5	0.0	3.0	0.5		1.3	1.0	1.0	1.0	3.0
PAT 244	Raj 171	1.0	1.0	1.9	0.0	0.5	0.0	0.0	2.0	0.0		1.3	0.9	0.5	0.7	2.0
PAT 245	JBV 2	0.0	1.0	1.9	0.0	0.0	0.0	0.0	1.5	0.0		1.0	0.6	0.4	0.5	1.9
PAT 246	Dhanshakti	0.0	1.0	1.7	0.1	1.0	0.0	0.0	3.5	1.5		0.9	0.8	1.3	1.0	3.5
PAT 247	ICMV 221	1.0	1.0	1.5	0.3	0.5	1.0	0.0	3.5	0.0		1.2	0.9	1.1	1.0	3.5
PAT 248	Pusa Comp. 383	0.0	1.0	1.9	0.0	0.0	0.5	0.0	1.5	0.0		1.0	0.6	0.5	0.5	1.9
PAT 249	Pusa Comp. 701	1.0	1.0	1.5	0.0	0.0	0.0	0.0	1.5	0.0		1.0	0.7	0.4	0.6	1.5
	Entry Mean	0.3	1.0	1.6	0.1	0.1	0.3	0.1	1.4	0.1		0.7	0.6	0.5	0.6	1.6

CHAPTER IV: PLANT PATHOLOGY

Table IV.6A: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Blast (0-9 scale) at 45 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	PTR	Mean				MAX
												Zone A ₁	Zone A	Zone B	India	
PAT 201	MH 2672	0.0	2.0	1.9	0.5	0.0	2.0	1.5	3.5	1.5		1.3	0.9	2.1	1.4	3.5
PAT 202	MH 2673	0.5	2.0	2.0	0.4	1.0	2.0	1.0	3.0	0.0		1.5	1.2	1.5	1.3	3.0
PAT 203	MH 2675	0.5	1.5	1.0	0.4	0.0	1.0	1.0	3.5	1.0		1.0	0.7	1.6	1.1	3.5
PAT 204	MH 2678	0.5	2.0	1.2	0.4	1.0	1.0	0.5	3.0	0.5		1.2	1.0	1.3	1.1	3.0
PAT 205	MH 2743	0.0	2.0	1.7	0.6	0.0	0.0	1.0	2.5	0.5		1.2	0.9	1.0	0.9	2.5
PAT 206	MH 2744	0.5	1.5	1.6	0.1	0.0	0.0	0.0	1.5	0.0		1.2	0.7	0.4	0.6	1.6
PAT 207	MH 2746	1.5	2.0	2.3	0.8	1.5	1.0	0.5	4.0	1.0		1.9	1.6	1.6	1.6	4.0
PAT 208	MH 2747	1.5	2.0	2.1	0.4	0.0	1.0	0.0	3.5	0.0		1.9	1.2	1.1	1.2	3.5
PAT 209	MH 2748	1.0	2.0	1.6	1.3	0.5	1.0	1.5	2.5	0.0		1.5	1.3	1.3	1.3	2.5
PAT 210	MH 2749	1.0	1.5	1.6	0.3	0.0	1.0	0.5	2.0	0.5		1.4	0.9	1.0	0.9	2.0
PAT 211	MH 2754	1.0	2.5	1.9	0.3	1.0	2.0	0.5	4.0	0.0		1.8	1.3	1.6	1.5	4.0
PAT 212	MH 2758	1.5	1.5	1.5	0.1	0.0	1.0	1.0	2.0	0.5		1.5	0.9	1.1	1.0	2.0
PAT 213	MH 2682	0.0	1.5	1.3	0.3	1.0	0.0	0.0	0.0	0.0	DNP	0.9	0.8	0.0	0.5	1.5
PAT 214	MH 2767	0.0	2.0	1.5	0.4	0.0	0.0	0.0	0.5	0.0		1.2	0.8	0.1	0.5	2.0
PAT 215	MH 2773	0.0	2.0	1.2	0.3	1.0	0.0	1.5	0.0	0.0		1.1	0.9	0.4	0.7	2.0
PAT 216	MH 2775	0.0	2.0	2.3	0.3	1.0	1.0	1.0	1.0	0.5		1.4	1.1	0.9	1.0	2.3
PAT 217	MH 2777	0.5	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0		1.2	1.0	0.9	0.9	1.5
PAT 218	MH 2784	1.5	1.5	1.7	0.0	2.0	1.0	0.0	1.5	0.0		1.6	1.3	0.6	1.0	2.0
PAT 219	MH 2709	1.0	1.5	1.4	0.1	1.0	1.0	0.0	1.5	0.0		1.3	1.0	0.6	0.8	1.5
PAT 220	MH 2712	0.0	1.5	1.5	0.0	0.0	0.0	0.5	0.5	0.0		1.0	0.6	0.3	0.4	1.5
PAT 221	MH 2717	1.5	2.0	1.5	0.2	1.0	0.0	1.0	2.5	0.5		1.7	1.2	1.0	1.1	2.5
PAT 222	MH 2795	0.0	2.0	1.3	0.0	0.0	0.0	0.0	1.0	0.0		1.1	0.7	0.3	0.5	2.0
PAT 223	MH 2796	0.0	2.0	1.4	0.2	0.0	0.0	1.0	1.5	0.0		1.1	0.7	0.6	0.7	2.0
PAT 224	MH 2797	1.0	0.5	1.9	0.3	1.5	1.0	1.0	2.0	0.5		1.1	1.0	1.1	1.1	2.0
PAT 225	MH 2798	0.0	0.5	1.5	0.0	0.0	0.0	0.0	1.0	0.5		0.7	0.4	0.4	0.4	1.5
PAT 226	MH 2801	0.0	0.5	1.4	0.0	0.0	1.0	0.0	1.5	0.0		0.6	0.4	0.6	0.5	1.5
PAT 227	MH 2806	1.5	1.5	2.2	0.3	1.0	1.0	0.0	2.0	0.0		1.7	1.3	0.8	1.1	2.2
PAT 228	MH 2808	0.0	1.5	1.1	0.0	1.5	0.0	1.0	1.5	0.0		0.9	0.8	0.6	0.7	1.5

CHAPTER IV: PLANT PATHOLOGY

Table IV.6A: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Blast (0-9 scale) at 45 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	PTR	Mean				MAX
												Zone A ₁	Zone A	Zone B	India	
PAT 229	MP 637	1.0	1.5	2.0	0.9	1.0	1.0	1.0	2.5	0.5		1.5	1.3	1.3	1.3	2.5
PAT 230	HHB 67 Imp.	1.5	2.0	2.9	0.7	2.0	2.0	0.0	4.0	1.0		2.1	1.8	1.8	1.8	4.0
PAT 231	PB 1756	1.0	2.0	1.7	0.1	1.0	1.0	1.0	2.0	0.0		1.6	1.2	1.0	1.1	2.0
PAT 232	MPMH 35	1.0	1.5	1.8	0.0	1.5	0.0	0.0	2.0	0.5		1.4	1.2	0.6	0.9	2.0
PAT 233	RHB 223	1.0	1.5	1.7	0.4	1.0	1.0	0.0	2.5	0.0		1.4	1.1	0.9	1.0	2.5
PAT 234	AHB 1269	1.0	2.0	2.0	0.4	1.5	1.0	1.0	3.5	1.0		1.7	1.4	1.6	1.5	3.5
PAT 235	86M01	0.5	2.0	2.2	0.8	0.5	2.0	1.0	4.5	2.0		1.6	1.2	2.4	1.7	4.5
PAT 236	Pratap	2.5	2.0	3.1	0.4	1.5	2.0	2.0	5.5	2.5		2.5	1.9	3.0	2.4	5.5
PAT 237	KBH 108	1.5	2.0	2.5	0.4	2.0	2.0	0.0	3.5	0.0		2.0	1.7	1.4	1.5	3.5
PAT 238	86M86	1.0	2.0	1.2	0.1	2.0	1.0	0.0	3.0	0.0		1.4	1.3	1.0	1.1	3.0
PAT 239	86M84	1.5	2.0	2.6	0.4	1.0	1.5	0.0	3.0	0.0		2.0	1.5	1.1	1.3	3.0
PAT 240	MP 7878	1.0	1.0	1.8	0.1	1.0	2.0	1.5	4.0	0.0		1.3	1.0	1.9	1.4	4.0
PAT 241	Kaveri S Boss	0.0	2.0	1.9	0.3	1.0	0.0	0.5	2.0	0.0		1.3	1.0	0.6	0.9	2.0
PAT 242	NBH 4903	1.0	2.5	2.7	0.4	1.0	1.0	0.5	3.5	0.0		2.1	1.5	1.3	1.4	3.5
PAT 243	AHB 1200	0.5	2.0	2.5	0.4	2.5	1.0	1.0	4.0	1.5		1.7	1.6	1.9	1.7	4.0
PAT 244	Raj 171	1.5	2.0	2.0	0.3	2.0	1.0	0.0	3.5	0.0		1.8	1.6	1.1	1.4	3.5
PAT 245	JBV 2	0.5	2.0	2.1	0.0	0.5	1.0	1.0	2.5	0.0		1.5	1.0	1.1	1.1	2.5
PAT 246	Dhanshakti	1.0	2.0	2.0	0.4	2.0	1.0	1.5	5.0	2.5		1.7	1.5	2.5	1.9	5.0
PAT 247	ICMV 221	2.5	2.0	1.6	1.2	1.5	2.0	1.0	5.0	0.5		2.0	1.8	2.1	1.9	5.0
PAT 248	Pusa Comp. 383	1.0	2.0	2.2	0.2	0.0	1.0	2.0	2.5	0.0		1.7	1.1	1.4	1.2	2.5
PAT 249	Pusa Comp. 701	2.5	2.0	1.7	0.0	1.5	0.0	1.0	2.5	0.0		2.3	1.5	0.9	1.2	2.5
	Entry Mean	0.8	1.8	1.8	0.3	0.9	0.9	0.7	2.5	0.4		1.3	1.1	1.1	1.1	2.5

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Table IV.6B: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Blast (0-9 scale) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	PTR	Mean				MAX
												Zone A ₁	Zone A	Zone B	India	
PAT 201	MH 2672	2.0	3.0	2.2	2.8	1.5	3.0	2.5	4.5	2.5	4.0	2.4	2.3	3.3	2.8	4.5
PAT 202	MH 2673	1.0	3.0	2.2	2.0	3.0	2.0	1.5	4.0	1.0	4.5	2.1	2.2	2.6	2.4	4.5
PAT 203	MH 2675	1.0	2.5	1.5	2.3	0.5	3.0	2.0	4.0	2.0	5.0	1.7	1.6	3.2	2.4	5.0
PAT 204	MH 2678	1.0	3.0	1.6	2.4	2.5	3.0	2.0	4.5	1.0	4.5	1.9	2.1	3.0	2.6	4.5
PAT 205	MH 2743	0.5	3.0	2.0	2.9	0.5	0.0	3.0	3.5	1.0	6.0	1.8	1.8	2.7	2.2	6.0
PAT 206	MH 2744	1.5	3.0	2.0	2.9	0.5	1.0	1.0	2.5	0.5	4.5	2.2	2.0	1.9	1.9	4.5
PAT 207	MH 2746	2.5	2.5	2.6	5.0	3.0	4.0	1.0	5.5	2.0	3.0	2.5	3.1	3.1	3.1	5.5
PAT 208	MH 2747	2.5	3.0	2.1	3.5	1.5	3.0	2.0	5.0	0.5	4.0	2.5	2.5	2.9	2.7	5.0
PAT 209	MH 2748	2.5	3.0	2.0	2.7	1.5	2.0	3.5	3.5	1.0	3.5	2.5	2.3	2.7	2.5	3.5
PAT 210	MH 2749	2.5	2.5	1.9	1.7	0.5	2.0	1.0	3.5	0.5	4.0	2.3	1.8	2.2	2.0	4.0
PAT 211	MH 2754	3.5	3.5	3.0	4.5	2.5	3.0	2.5	5.0	0.5	4.0	3.3	3.4	3.0	3.2	5.0
PAT 212	MH 2758	2.5	2.5	2.0	3.2	1.5	2.0	3.0	3.5	1.5	4.5	2.3	2.3	2.9	2.6	4.5
PAT 213	MH 2682	0.0	2.0	1.9	1.7	2.5	0.0	0.0	0.0	1.0	4.5	1.3	1.6	1.1	1.4	4.5
PAT 214	MH 2767	0.0	2.5	2.0	1.8	1.5	1.0	0.0	1.0	0.5	4.0	1.5	1.6	1.3	1.4	4.0
PAT 215	MH 2773	0.0	2.5	1.7	2.4	2.0	0.0	1.5	0.0	0.0	4.0	1.4	1.7	1.1	1.4	4.0
PAT 216	MH 2775	0.0	2.5	2.6	0.9	2.0	1.0	1.5	2.0	1.5	4.0	1.7	1.6	2.0	1.8	4.0
PAT 217	MH 2777	0.5	2.5	1.8	1.3	3.0	2.0	0.0	2.5	2.0	4.5	1.6	1.8	2.2	2.0	4.5
PAT 218	MH 2784	2.5	2.0	1.9	0.4	3.5	1.0	0.0	2.5	0.5	3.5	2.1	2.1	1.5	1.8	3.5
PAT 219	MH 2709	2.0	2.0	2.0	0.7	3.0	1.0	0.0	2.5	0.5	3.0	2.0	1.9	1.4	1.7	3.0
PAT 220	MH 2712	0.0	2.0	2.0	0.7	1.0	0.0	1.5	1.0	0.5	4.5	1.3	1.1	1.5	1.3	4.5
PAT 221	MH 2717	2.5	2.5	1.7	1.7	3.0	1.0	2.0	3.5	1.5	4.5	2.2	2.3	2.5	2.4	4.5
PAT 222	MH 2795	0.5	2.5	1.8	1.9	1.0	0.5	0.0	1.5	0.0	3.0	1.6	1.5	1.0	1.3	3.0
PAT 223	MH 2796	0.0	2.5	1.9	1.5	1.0	1.0	1.5	2.0	0.0	3.5	1.5	1.4	1.6	1.5	3.5
PAT 224	MH 2797	2.0	0.5	2.1	1.3	3.0	2.0	2.0	3.0	1.0	2.5	1.5	1.8	2.1	1.9	3.0
PAT 225	MH 2798	0.0	1.0	1.7	0.3	1.0	0.5	0.5	1.0	1.5	5.0	0.9	0.8	1.7	1.3	5.0
PAT 226	MH 2801	0.0	1.0	1.7	0.3	1.0	1.0	0.5	2.5	0.5	3.5	0.9	0.8	1.6	1.2	3.5
PAT 227	MH 2806	2.0	2.5	2.7	2.4	3.0	2.0	0.0	3.0	0.5	4.5	2.4	2.5	2.0	2.3	4.5
PAT 228	MH 2808	0.0	2.5	1.5	0.7	3.0	1.0	2.0	2.5	0.5	3.0	1.3	1.5	1.8	1.7	3.0
PAT 229	MP 637	2.0	2.5	2.4	2.7	3.0	2.0	2.0	4.0	1.0	3.5	2.3	2.5	2.5	2.5	4.0

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Table IV.6B: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Blast (0-9 scale) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	PTR	Mean				MAX
												Zone A ₁	Zone A	Zone B	India	
PAT 230	HHB 67 Imp.	2.5	3.0	3.0	4.5	4.0	4.0	0.5	6.5	1.0	3.0	2.8	3.4	3.0	3.2	6.5
PAT 231	PB 1756	2.5	3.0	2.2	1.1	3.0	2.0	1.5	3.0	0.5	4.0	2.6	2.4	2.2	2.3	4.0
PAT 232	MPMH 35	1.5	2.5	2.7	0.2	3.5	2.0	0.0	3.0	1.5	4.5	2.2	2.1	2.2	2.1	4.5
PAT 233	RHB 223	2.0	2.5	2.1	2.7	3.0	2.0	1.5	3.5	0.0	4.5	2.2	2.5	2.3	2.4	4.5
PAT 234	AHB 1269	2.0	3.0	2.3	3.0	3.0	3.0	2.5	5.0	2.0	4.0	2.4	2.7	3.3	3.0	5.0
PAT 235	86M01	2.0	3.0	2.5	4.8	2.5	3.0	3.5	5.5	3.0	3.5	2.5	3.0	3.7	3.3	5.5
PAT 236	Pratap	3.5	3.0	3.5	5.8	3.5	4.5	4.0	8.0	4.0	4.0	3.3	3.9	4.9	4.4	8.0
PAT 237	KBH 108	2.5	3.0	2.6	3.3	4.0	3.0	1.0	4.5	0.0	3.5	2.7	3.1	2.4	2.7	4.5
PAT 238	86M86	2.0	3.0	1.8	2.0	3.5	2.0	0.5	4.0	1.0	3.0	2.3	2.5	2.1	2.3	4.0
PAT 239	86M84	2.5	3.0	2.6	1.8	3.0	3.0	0.5	4.0	0.0	3.0	2.7	2.6	2.1	2.3	4.0
PAT 240	MP 7878	1.0	1.5	2.0	1.8	3.0	2.0	2.5	5.0	0.5	3.5	1.5	1.9	2.7	2.3	5.0
PAT 241	Kaveri S Boss	0.0	3.0	2.2	1.3	2.5	1.0	2.5	3.0	1.0	3.5	1.7	1.8	2.2	2.0	3.5
PAT 242	NBH 4903	1.0	3.5	2.6	3.5	3.0	2.0	1.0	4.5	0.5	3.5	2.4	2.7	2.3	2.5	4.5
PAT 243	AHB 1200	2.0	3.0	3.3	4.0	4.0	2.0	3.0	5.5	3.0	3.0	2.8	3.3	3.3	3.3	5.5
PAT 244	Raj 171	2.5	3.0	2.8	2.3	4.0	2.0	0.5	4.5	0.5	3.0	2.8	2.9	2.1	2.5	4.5
PAT 245	JBV 2	2.0	3.0	2.3	1.2	2.5	1.0	2.5	3.5	0.0	5.0	2.4	2.2	2.4	2.3	5.0
PAT 246	Dhanshakti	2.5	3.0	2.3	3.4	4.0	3.0	3.0	7.0	3.5	5.0	2.6	3.0	4.3	3.7	7.0
PAT 247	ICMV 221	3.5	3.0	2.2	5.1	3.5	3.0	2.5	7.0	1.5	4.5	2.9	3.5	3.7	3.6	7.0
PAT 248	Pusa Comp. 383	2.0	3.0	2.6	2.5	1.0	2.0	3.5	3.5	1.0	4.0	2.5	2.2	2.8	2.5	4.0
PAT 249	Pusa Comp. 701	3.0	3.0	2.1	0.2	2.5	1.0	3.0	3.5	0.0	4.5	3.0	2.2	2.4	2.3	4.5
	Entry Mean	1.6	2.6	2.2	2.3	2.4	1.9	1.6	3.6	1.1	3.9	2.1	2.2	2.4	2.3	3.9

CHAPTER IV: PLANT PATHOLOGY

Table IV.6C: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Rust (% leaf area) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	PTR	Mean				MAX
												Zone A ₁	Zone A	Zone B	India	
PAT 201	MH 2672		0.0	0.0	0.0		21.0	0.0	15.0	27.5	40.0	0.0	0.0	20.7	12.9	40.0
PAT 202	MH 2673		0.0	0.0	0.0		23.0	0.5	10.0	22.5	45.0	0.0	0.0	20.2	12.6	45.0
PAT 203	MH 2675		0.0	0.0	0.0		21.0	0.0	12.5	25.0	50.0	0.0	0.0	21.7	13.6	50.0
PAT 204	MH 2678		0.0	0.0	0.0		17.0	0.0	10.0	26.5	50.0	0.0	0.0	20.7	12.9	50.0
PAT 205	MH 2743		0.0	0.0	0.0		19.0	1.0	15.0	28.5	25.0	0.0	0.0	17.7	11.1	28.5
PAT 206	MH 2744		0.0	0.0	0.0		23.0	0.0	15.0	22.5	35.0	0.0	0.0	19.1	11.9	35.0
PAT 207	MH 2746		0.0	0.0	0.0		21.0	0.0	12.5	26.5	30.0	0.0	0.0	18.0	11.3	30.0
PAT 208	MH 2747		0.0	0.0	0.0		24.0	0.0	2.5	16.5	35.0	0.0	0.0	15.6	9.8	35.0
PAT 209	MH 2748		0.0	0.0	0.0		19.0	1.0	7.5	17.5	45.0	0.0	0.0	18.0	11.3	45.0
PAT 210	MH 2749		0.0	1.5	0.0		11.0	2.5	5.0	7.5	40.0	0.8	0.5	13.2	8.4	40.0
PAT 211	MH 2754		0.0	0.0	0.0		15.0	0.0	5.0	13.5	55.0	0.0	0.0	17.7	11.1	55.0
PAT 212	MH 2758		0.0	0.0	0.0		18.0	0.0	5.0	25.0	55.0	0.0	0.0	20.6	12.9	55.0
PAT 213	MH 2682		0.0	0.0	0.0		8.0	0.0	5.0	5.0	40.0	0.0	0.0	11.6	7.3	40.0
PAT 214	MH 2767		0.0	0.0	0.0		13.0	0.0	7.5	15.0	45.0	0.0	0.0	16.1	10.1	45.0
PAT 215	MH 2773		0.0	0.0	0.0		13.0	0.0	7.5	6.5	45.0	0.0	0.0	14.4	9.0	45.0
PAT 216	MH 2775	DNP	0.0	0.0	0.0	DNP	16.0	0.0	7.5	10.0	45.0	0.0	0.0	15.7	9.8	45.0
PAT 217	MH 2777		0.0	2.5	0.0		14.0	0.0	5.0	12.5	55.0	1.3	0.8	17.3	11.1	55.0
PAT 218	MH 2784		0.0	0.0	0.0		12.0	0.0	7.5	6.5	45.0	0.0	0.0	14.2	8.9	45.0
PAT 219	MH 2709		0.0	0.0	0.0		11.0	0.0	2.5	7.5	60.0	0.0	0.0	16.2	10.1	60.0
PAT 220	MH 2712		0.0	0.0	0.0		13.0	0.5	5.0	4.0	25.0	0.0	0.0	9.5	5.9	25.0
PAT 221	MH 2717		0.0	0.0	0.0		17.0	1.0	12.5	12.5	50.0	0.0	0.0	18.6	11.6	50.0
PAT 222	MH 2795		0.0	0.0	0.0		20.0	0.0	5.0	10.0	55.0	0.0	0.0	18.0	11.3	55.0
PAT 223	MH 2796		0.0	0.0	0.0		21.0	3.5	7.5	16.5	50.0	0.0	0.0	19.7	12.3	50.0
PAT 224	MH 2797		0.0	0.0	0.0		21.0	5.0	7.5	7.5	45.0	0.0	0.0	17.2	10.8	45.0
PAT 225	MH 2798		0.0	0.0	0.0		16.0	0.0	20.0	12.5	40.0	0.0	0.0	17.7	11.1	40.0
PAT 226	MH 2801		0.0	0.0	0.0		18.0	0.0	0.0	7.5	10.0	0.0	0.0	7.1	4.4	18.0
PAT 227	MH 2806		0.0	0.0	0.0		19.0	0.0	17.5	12.5	35.0	0.0	0.0	16.8	10.5	35.0
PAT 228	MH 2808		0.0	0.0	0.0		15.0	0.0	7.5	6.5	10.0	0.0	0.0	7.8	4.9	15.0
PAT 229	MP 637		0.0	0.0	0.0		14.0	1.0	10.0	11.5	60.0	0.0	0.0	19.3	12.1	60.0

CHAPTER IV: PLANT PATHOLOGY

Table IV.6C: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Rust (% leaf area) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	PTR	Mean				MAX
												Zone A ₁	Zone A	Zone B	India	
PAT 230	HHB 67 Imp.		0.0	0.0	0.0		13.0	0.0	15.0	17.5	30.0	0.0	0.0	15.1	9.4	30.0
PAT 231	PB 1756		0.0	0.0	0.0		13.0	1.0	0.0	7.5	40.0	0.0	0.0	12.3	7.7	40.0
PAT 232	MPMH 35		0.0	0.0	0.0		12.0	0.0	5.0	5.0	35.0	0.0	0.0	11.4	7.1	35.0
PAT 233	RHB 223		0.0	0.0	0.0		15.0	0.0	5.0	6.5	55.0	0.0	0.0	16.3	10.2	55.0
PAT 234	AHB 1269		0.0	0.0	0.0		17.0	0.0	7.5	7.5	45.0	0.0	0.0	15.4	9.6	45.0
PAT 235	86M01		0.0	0.0	0.0		12.0	0.0	0.0	5.0	45.0	0.0	0.0	12.4	7.8	45.0
PAT 236	Pratap		0.0	0.0	0.0		10.0	0.0	0.0	5.0	45.0	0.0	0.0	12.0	7.5	45.0
PAT 237	KBH 108		0.0	0.0	0.0		11.0	0.0	2.5	14.0	55.0	0.0	0.0	16.5	10.3	55.0
PAT 238	86M86		0.0	0.0	0.0		17.0	0.0	2.5	9.0	35.0	0.0	0.0	12.7	7.9	35.0
PAT 239	86M84		0.0	0.0	0.0		14.0	1.0	2.5	5.0	45.0	0.0	0.0	13.5	8.4	45.0
PAT 240	MP 7878		0.0	0.0	0.0		17.0	0.0	2.5	5.0	35.0	0.0	0.0	11.9	7.4	35.0
PAT 241	Kaveri Super Boss		0.0	0.0	0.0		15.0	0.0	5.0	7.5	45.0	0.0	0.0	14.5	9.1	45.0
PAT 242	NBH 4903		0.0	0.0	0.0		18.0	0.0	2.5	10.0	35.0	0.0	0.0	13.1	8.2	35.0
PAT 243	AHB 1200		0.0	0.0	0.0		19.0	0.0	7.5	12.5	55.0	0.0	0.0	18.8	11.8	55.0
PAT 244	Raj 171		0.0	0.0	0.0		20.0	1.5	25.0	17.5	65.0	0.0	0.0	25.8	16.1	65.0
PAT 245	JBV 2		0.0	0.0	0.0		12.0	0.0	5.0	6.5	35.0	0.0	0.0	11.7	7.3	35.0
PAT 246	Dhanshakti		0.0	0.0	0.0		9.0	0.0	25.0	12.5	15.0	0.0	0.0	12.3	7.7	25.0
PAT 247	ICMV 221		0.0	0.0	0.0		13.0	2.5	12.5	12.5	40.0	0.0	0.0	16.1	10.1	40.0
PAT 248	Pusa Comp. 383		0.0	0.0	0.0		18.0	0.0	5.0	15.0	45.0	0.0	0.0	16.6	10.4	45.0
PAT 249	Pusa Comp. 701		0.0	0.0	0.0		21.0	0.0	20.0	17.5	45.0	0.0	0.0	20.7	12.9	45.0
Entry mean			0.0	0.1	0.0		16.1	0.4	8.2	12.7	42.1	0.0	0.0	15.9	9.9	42.1

* Data Not Provided - (DNP)

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Table IV.6D: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Smut (severity %) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	PTR	Mean				MAX
												Zone A ₁	Zone A	Zone B	India	
PAT 201	MH 2672		0.0	0.0	0.0	17.5	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	1.9	17.5
PAT 202	MH 2673		0.0	0.0	0.0	20.0	0.0	0.5	0.0	0.0	0.0	0.0	5.0	0.1	2.3	20.0
PAT 203	MH 2675		5.0	0.0	11.0	22.5	0.0	0.0	2.5	0.0	2.5	2.5	9.6	1.0	4.8	22.5
PAT 204	MH 2678		4.0	0.0	5.0	15.0	0.0	0.0	2.5	0.0	0.0	2.0	6.0	0.5	2.9	15.0
PAT 205	MH 2743		0.0	0.0	12.0	0.0	0.0	1.0	2.5	0.0	0.0	0.0	3.0	0.7	1.7	12.0
PAT 206	MH 2744		2.5	0.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0	1.3	3.6	0.0	1.6	6.0
PAT 207	MH 2746		8.5	0.0	8.5	25.0	0.0	0.0	7.5	0.0	0.0	4.3	10.5	1.5	5.5	25.0
PAT 208	MH 2747		16.5	0.0	0.0	12.5	0.0	0.0	12.5	0.0	0.0	8.3	7.3	2.5	4.6	16.5
PAT 209	MH 2748		0.0	0.0	0.0	27.5	0.0	1.0	0.0	0.0	0.0	0.0	6.9	0.2	3.2	27.5
PAT 210	MH 2749		0.0	1.5	3.5	15.0	0.0	2.5	5.0	0.0	0.0	0.8	5.0	1.5	3.1	15.0
PAT 211	MH 2754		2.5	0.0	0.0	22.5	0.0	0.0	6.0	0.0	0.0	1.3	6.3	1.2	3.4	22.5
PAT 212	MH 2758		0.0	0.0	0.5	15.0	0.0	0.0	5.0	0.0	0.0	0.0	3.9	1.0	2.3	15.0
PAT 213	MH 2682		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAT 214	MH 2767		0.0	0.0	1.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.4	2.5
PAT 215	MH 2773		0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	2.5	0.0	5.0	0.5	2.5	20.0
PAT 216	MH 2775		1.0	0.0	0.0	72.5	0.0	0.0	0.0	0.0	0.0	0.5	18.4	0.0	8.2	72.5
PAT 217	MH 2777		0.0	2.5	1.0	15.0	0.0	0.0	0.0	0.0	0.0	1.3	4.6	0.0	2.1	15.0
PAT 218	MH 2784	DNP	0.0	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.8	7.5
PAT 219	MH 2709		0.0	0.0	1.5	15.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	1.8	15.0
PAT 220	MH 2712		0.0	0.0	0.0	27.5	0.0	0.5	0.0	0.0	0.0	0.0	6.9	0.1	3.1	27.5
PAT 221	MH 2717		0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	1.0
PAT 222	MH 2795		0.0	0.0	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.5	2.5
PAT 223	MH 2796		2.5	0.0	3.0	15.0	0.0	3.5	0.0	0.0	0.0	1.3	5.1	0.7	2.7	15.0
PAT 224	MH 2797		0.0	0.0	0.0	35.0	0.0	5.0	1.0	0.0	0.0	0.0	8.8	1.2	4.6	35.0
PAT 225	MH 2798		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAT 226	MH 2801		0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.6	5.0
PAT 227	MH 2806		0.0	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.8	7.5
PAT 228	MH 2808		0.0	0.0	0.0	27.5	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	3.1	27.5
PAT 229	MP 637		2.5	0.0	0.0	15.0	0.0	1.0	0.0	0.0	0.0	1.3	4.4	0.2	2.1	15.0

CHAPTER IV: PLANT PATHOLOGY

Table IV.6D: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): Smut (severity %) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	PTR	Mean				MAX
												Zone A ₁	Zone A	Zone B	India	
PAT 230	HHB 67 Imp.		3.0	0.0	4.5	10.0	0.0	0.0	0.0	0.0	0.0	1.5	4.4	0.0	1.9	10.0
PAT 231	PB 1756		0.0	0.0	0.0	10.0	0.0	1.0	0.0	0.0	0.0	0.0	2.5	0.2	1.2	10.0
PAT 232	MPMH 35		0.0	0.0	0.0	27.5	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	3.1	27.5
PAT 233	RHB 223		0.0	0.0	0.0	47.5	0.0	0.0	0.0	0.0	0.0	0.0	11.9	0.0	5.3	47.5
PAT 234	AHB 1269		0.0	0.0	0.0	35.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0	3.9	35.0
PAT 235	86M01		0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.8	7.0
PAT 236	Pratap		0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	1.0
PAT 237	KBH 108		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAT 238	86M86		0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.3	3.0
PAT 239	86M84		0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	1.0
PAT 240	MP 7878		0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.5
PAT 241	Kaveri Super Boss		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAT 242	NBH 4903		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAT 243	AHB 1200		2.5	0.0	7.5	20.0	0.0	0.0	1.0	0.0	0.0	1.3	7.5	0.2	3.4	20.0
PAT 244	Raj 171		1.5	0.0	1.0	15.0	0.0	1.5	0.0	0.0	0.0	0.8	4.4	0.3	2.1	15.0
PAT 245	JBV 2		0.0	0.0	4.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	1.7	11.5
PAT 246	Dhanshakti		0.0	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.8	7.5
PAT 247	ICMV 221		0.0	0.0	0.0	15.0	0.0	2.5	0.0	0.0	0.0	0.0	3.8	0.5	1.9	15.0
PAT 248	Pusa Comp. 383		0.0	0.0	0.0	15.0	0.0	0.0	5.0	0.0	0.0	0.0	3.8	1.0	2.2	15.0
PAT 249	Pusa Comp. 701		0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.6	5.0
	Entry mean		1.1	0.1	1.5	14.2	0.0	0.4	1.0	0.0	0.1	0.6	4.2	0.3	2.0	14.2

* Data Not Provided - (DNP)

CHAPTER IV: PLANT PATHOLOGY

Table IV.6E: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): ERGOT severity at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	PTR	Mean				MAX
												Zone A ₁	Zone A	Zone B	India	
PAT 201	MH 2672		3.0		0.0	0.0	1.0	0.0	0.0	6.5	0.0	3.0	1.0	1.5	1.3	6.5
PAT 202	MH 2673		0.0		0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.3	2.5
PAT 203	MH 2675		2.5		0.0	7.5	0.0	0.5	0.0	1.5	0.0	2.5	3.3	0.4	1.5	7.5
PAT 204	MH 2678		1.5		0.0	2.5	0.0	0.0	0.0	0.0	0.0	1.5	1.3	0.0	0.5	2.5
PAT 205	MH 2743		4.0		0.0	2.5	0.0	0.0	0.0	0.0	0.0	4.0	2.2	0.0	0.8	4.0
PAT 206	MH 2744		2.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.8	0.0	0.3	2.5
PAT 207	MH 2746		6.5		0.0	5.0	0.0	0.0	0.0	5.0	0.0	6.5	3.8	1.0	2.1	6.5
PAT 208	MH 2747		7.5		0.0	2.5	0.0	0.0	0.0	0.0	0.0	7.5	3.3	0.0	1.3	7.5
PAT 209	MH 2748		6.5		0.0	2.5	0.0	0.0	0.0	1.0	0.0	6.5	3.0	0.2	1.3	6.5
PAT 210	MH 2749		0.0		0.0	2.5	0.0	0.5	0.0	0.0	0.0	0.0	0.8	0.1	0.4	2.5
PAT 211	MH 2754		2.5		0.0	10.0	0.0	0.0	0.0	0.0	7.5	2.5	4.2	1.5	2.5	10.0
PAT 212	MH 2758		0.0		0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.8	0.5	4.0
PAT 213	MH 2682		2.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.8	0.0	0.3	2.5
PAT 214	MH 2767		0.0		0.0	5.0	0.0	0.0	0.0	1.0	0.0	0.0	1.7	0.2	0.8	5.0
PAT 215	MH 2773		0.0		0.0	5.0	0.0	1.0	0.0	0.0	0.0	0.0	1.7	0.2	0.8	5.0
PAT 216	MH 2775		0.0		0.0	2.5	0.0	0.0	0.0	2.5	7.5	0.0	0.8	2.0	1.6	7.5
PAT 217	MH 2777	DNP	0.0	DNP	0.0	2.5	0.0	0.0	0.0	4.0	0.0	0.0	0.8	0.8	0.8	4.0
PAT 218	MH 2784		2.5		0.0	2.5	0.0	0.0	0.0	0.0	2.5	2.5	1.7	0.5	0.9	2.5
PAT 219	MH 2709		0.0		0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.3	2.5
PAT 220	MH 2712		3.0		0.0	7.5	0.0	0.0	0.0	0.0	0.0	3.0	3.5	0.0	1.3	7.5
PAT 221	MH 2717		0.0		0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.8	0.5	4.0
PAT 222	MH 2795		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAT 223	MH 2796		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAT 224	MH 2797		0.0		0.0	12.5	1.0	0.0	0.0	0.0	0.0	0.0	4.2	0.2	1.7	12.5
PAT 225	MH 2798		0.0		0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.5	0.3	2.5
PAT 226	MH 2801		0.0		0.0	10.0	1.0	0.0	0.0	5.0	0.0	0.0	3.3	1.2	2.0	10.0
PAT 227	MH 2806		0.0		0.0	2.5	0.0	0.5	0.0	2.5	0.0	0.0	0.8	0.6	0.7	2.5
PAT 228	MH 2808		0.0		0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.3	2.5
PAT 229	MP 637		0.0		0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.6	5.0

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Table IV.6E: Disease screening of Advance Pearl Millet Hybrids and Varieties (PMPT II): ERGOT severity at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	PTR	Mean				MAX
												Zone A ₁	Zone A	Zone B	India	
PAT 230	HHB 67 Imp.		4.0		0.0	2.5	0.0	0.0	0.0	3.0	0.0	4.0	2.2	0.6	1.2	4.0
PAT 231	PB 1756		0.0		0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.3	2.5
PAT 232	MPMH 35		0.0		0.0	0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.0	1.5	0.9	7.5
PAT 233	RHB 223		0.0		0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.3	2.5
PAT 234	AHB 1269		2.5		0.0	0.0	0.0	0.0	0.0	2.5	0.0	2.5	0.8	0.5	0.6	2.5
PAT 235	86M01		0.0		0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	1.0	0.6	5.0
PAT 236	Pratap		0.0		0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.0	0.0	1.5	0.9	7.5
PAT 237	KBH 108		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAT 238	86M86		0.0		0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.2	0.1	1.0
PAT 239	86M84		2.5		0.0	2.5	1.0	0.0	0.0	0.0	0.0	2.5	1.7	0.2	0.8	2.5
PAT 240	MP 7878		0.0		0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.3	2.5
PAT 241	Kaveri S Boss		1.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.5	0.0	0.2	1.5
PAT 242	NBH 4903		0.0		0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.6	5.0
PAT 243	AHB 1200		0.0		0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.5	0.3	2.5
PAT 244	Raj 171		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAT 245	JBV 2		4.0		0.0	5.0	0.0	0.0	0.0	0.0	10.0	4.0	3.0	2.0	2.4	10.0
PAT 246	Dhanshakti		2.0		0.0	2.5	0.0	0.0	0.0	3.0	0.0	2.0	1.5	0.6	0.9	3.0
PAT 247	ICMV 221		2.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.8	0.0	0.3	2.5
PAT 248	Pusa Comp. 383		0.0		0.0	5.0	0.0	0.0	0.0	2.5	0.0	0.0	1.7	0.5	0.9	5.0
PAT 249	Pusa Comp. 701		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Entry mean		1.3		0.0	2.6	0.1	0.05	0.0	1.4	0.7	1.3	1.3	0.45	0.77	2.6

* Data Not Provided - (DNP)

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Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
IR I		73.4	76.7	90.0	64.9	71.2	80.0	85.3	96.4	97.1	80.0	75.3	89.7	81.7	97.1
IR II		70.7	82.4	93.1	52.6	7.7	83.0	86.3	69.6	89.6	82.1	61.3	82.1	70.5	93.1
PRT 301	MPMH 42	0.0	1.3	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.4	0.3	0.3	0.3	1.3
PRT 302	MPMH 35	0.0	2.9	0.0	1.7	0.0	2.0	0.0	3.5	0.0	1.0	0.9	1.4	1.1	3.5
PRT 303	RHB 223	0.0	6.4	8.3	4.1	0.0	2.0	1.3	2.4	0.0	4.9	3.8	1.4	2.7	8.3
PRT 304	PB 1756	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	1.0
PRT 305	HHB 272	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IR I		74.4	76.3	91.3	69.7	82.6	79.0	91.1	96.7	93.4	80.6	78.9	90.1	83.8	96.7
IR II		70.1	77.5	100.0	60.3	5.6	82.0	89.7	75.9	90.8	82.5	62.7	84.6	72.4	100.0
PRT 306	GHB 719	0.0	3.4	2.2	4.3	0.0	3.0	0.0	4.3	0.0	1.9	2.0	1.8	1.9	4.3
PRT 307	GHB 538	0.0	0.0	0.0	0.0	4.0	2.0	0.0	0.0	0.0	0.0	0.8	0.5	0.7	4.0
PRT 308	HHB 67 Imp.	0.0	3.4	0.0	1.9	4.9	2.0	0.0	1.1	0.0	1.1	2.0	0.8	1.5	4.9
PRT 309	86M94	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	1.0
PRT 310	DHBH 1397	0.0	0.0	0.0	0.0	0.0	1.0	0.0	2.1	1.5	0.0	0.0	1.1	0.5	2.1
IR I		74.0	80.3	91.9	61.5	77.6	81.0	85.7	98.3	93.1	82.0	77.1	89.5	82.6	98.3
IR II		70.1	78.5	94.6	56.5	6.3	78.0	80.0	83.3	92.6	81.1	61.2	83.5	71.1	94.6
PRT 311	PB 1852	0.0	0.0	0.0	0.0	2.7	1.0	0.0	0.0	0.0	0.0	0.5	0.3	0.4	2.7
PRT 312	86M01	0.0	4.3	0.0	2.4	0.0	2.0	0.0	2.5	0.0	1.4	1.3	1.1	1.2	4.3
PRT 313	GHB 905	0.0	1.3	1.9	0.0	1.6	1.0	0.0	0.0	0.0	1.0	0.9	0.3	0.6	1.9
PRT 314	RHB 173	0.0	0.0	3.3	0.0	0.0	1.0	0.0	NG	-	1.1	0.7	0.5	0.6	3.3
PRT 315	GHB 732	0.0	0.0	0.0	0.0	1.3	1.0	0.0	2.2	0.0	0.0	0.3	0.8	0.5	2.2
IR I		72.4	76.3	75.7	72.7	73.9	80.0	84.6	94.5	93.3	74.8	74.2	88.1	80.4	94.5
IR II		70.4	77.5	71.4	67.7	8.0	80.0	94.7	75.3	93.7	73.1	59.0	86.0	71.0	94.7
PRT 316	GHB 744	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	1.0
PRT 317	86M80	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	1.0
PRT 318	MP 7878	0.0	0.0	0.0	0.0	0.0	1.0	0.0	2.5	0.0	0.0	0.0	0.9	0.4	2.5
PRT 319	86M84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.3	0.1	1.2
PRT 320	KBH 108	1.2	1.3	0.0	0.0	0.0	1.0	0.0	1.2	0.0	0.8	0.5	0.6	0.5	1.3
IR I		73.0	75.0	80.0	63.2	69.1	78.0	71.8	100.0	93.9	76.0	72.1	85.9	78.2	100.0
IR II		69.9	70.3	70.4	80.4	7.6	81.0	79.5	74.1	95.6	70.2	59.7	82.5	69.8	95.6

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Table IV.7: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): DOWNY MILDEW (%) at 30 DAS-Kharif 2024															
Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
PRT 321	Kaveri S Boss	0.0	4.0	0.0	1.9	0.0	1.0	0.0	0.0	0.0	1.3	1.2	0.3	0.8	4.0
PRT 322	86M86	1.3	3.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.4	0.9	0.3	0.6	3.0
PRT 323	RHB 233	0.0	0.0	0.0	0.0	0.0	2.0	0.0	1.0	0.0	0.0	0.0	0.8	0.3	2.0
PRT 324	RHB 234	0.0	0.0	0.0	0.0	3.0	2.0	0.0	4.6	0.0	0.0	0.6	1.6	1.1	4.6
PRT 325	AHB 1269	0.0	1.4	0.0	1.9	5.3	3.0	0.0	6.5	0.0	0.5	1.7	2.4	2.0	6.5
IR I		72.2	81.3	87.9	75.4	76.3	81.0	87.3	97.2	92.8	80.4	78.6	89.6	83.5	97.2
IR II		71.1	76.7	100.0	59.3	5.9	80.0	94.9	79.8	90.0	82.6	62.6	86.2	73.1	100.0
PRT 326	AHB 1200	1.2	1.4	0.0	0.0	2.7	3.0	0.0	7.1	0.0	0.8	1.0	2.5	1.7	7.1
PRT 327	HHB 299	0.0	1.4	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.5	0.3	0.3	0.3	1.4
PRT 328	Dhanshakti	3.1	0.0	0.0	0.0	0.0	2.0	0.0	6.9	0.0	1.0	0.6	2.2	1.3	6.9
PRT 329	ICMV 221	1.6	1.6	0.0	0.0	6.0	2.0	0.0	6.4	0.0	1.0	1.8	2.1	1.9	6.4
PRT330	Pusa Comp. 701	1.5	4.5	0.0	3.9	6.9	1.0	0.0	1.1	0.0	2.0	3.4	0.5	2.1	6.9
IR I		71.6	86.3	77.3	68.9	72.1	81.0	91.1	100.0	94.1	78.4	75.2	91.6	82.5	100.0
IR II		70.1	77.5	93.9	61.3	8.5	80.0	86.1	68.7	92.7	80.5	62.3	81.9	71.0	93.9
PRT 331	Pusa Comp. 383	0.0	0.0	0.0	0.0	5.4	2.0	0.0	1.1	0.0	0.0	1.1	0.8	0.9	5.4
PRT 332	JBV 2	0.0	3.0	0.0	0.0	5.5	2.0	0.0	3.3	0.0	1.0	1.7	1.3	1.5	5.5
PRT 333	Raj 171	1.5	4.8	0.0	1.4	8.6	3.0	0.0	5.5	1.7	2.1	3.3	2.5	2.9	8.6
PRT 334	Mahabeej 1005	0.0	1.6	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.5	0.3	0.3	0.3	1.6
PRT335	Pratap (MH 1642)	1.4	5.2	0.0	2.6	5.0	3.0	0.0	7.2	0.0	2.2	2.8	2.6	2.7	7.2
IR I		72.3	75.0	85.2	63.2	91.4	79.0	82.5	98.5	93.2	77.5	77.4	88.3	82.3	98.5
IR II		70.5	70.3	85.7	56.9	9.7	82.0	81.1	77.6	96.9	75.5	58.6	84.4	70.1	96.9
PRT336	NBH 4903	0.0	1.4	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.5	0.3	0.3	0.3	1.4
PRT337	Pusa Comp. 612	1.3	6.0	0.0	0.0	5.7	1.0	0.0	8.1	0.0	2.4	2.6	2.3	2.4	8.1
IR I		73.1	81.3	91.4	65.5	71.2	80.0	76.3	89.6	93.8	81.9	76.5	84.9	80.2	93.8
IR II		70.7	80.7	93.9	61.1	11.6	81.0	76.9	80.5	88.2	81.8	63.6	81.7	71.6	93.9
	Mean Entries	0.4	1.7	0.4	0.7	1.9	1.5	0.0	2.3	0.1	0.8	1.0	1.0	1.0	2.3
	Mean IR I	72.9	78.9	82.0	67.2	76.2	79.9	84.0	96.8	93.9	78.0	75.5	88.6	81.3	96.8
	Mean IR II	70.4	76.8	89.2	61.8	7.9	80.8	85.4	76.0	92.2	78.8	61.2	83.6	71.2	92.2

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Table IV.8: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): DOWNY MILDEW (%) at 60 DAS-Kharif 2024															
Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
IR I		100.0	79.8	93.3	84.2	94.5	98.0	96.0	97.6	98.6	91.0	90.4	97.5	93.6	100.0
IR II		97.6	85.3	96.6	80.7	10.3	97.0	87.5	80.4	98.5	93.1	74.1	90.9	81.5	98.5
PRT 301	MPMH 42	0.0	1.3	0.0	0.0	2.0	3.0	0.0	0.0	0.0	0.4	0.7	0.8	0.7	3.0
PRT 302	MPMH 35	0.0	2.9	0.0	3.3	0.0	4.0	1.6	3.5	0.0	1.0	1.2	2.3	1.7	4.0
PRT 303	RHB 223	1.6	6.4	8.3	10.2	0.0	4.0	2.6	2.4	0.0	5.4	5.3	2.2	3.9	10.2
PRT 304	PB 1756	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.8	0.3	3.0
PRT 305	HHB 272	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	2.0
IR I		100.0	79.8	95.7	89.4	97.1	99.0	96.2	96.7	96.1	91.8	92.4	97.0	94.4	100.0
IR II		97.4	86.5	100.0	71.4	12.7	96.0	92.3	79.3	96.9	94.6	73.6	91.1	81.4	100.0
PRT 306	GHB 719	2.5	3.4	2.2	6.4	0.0	4.0	0.0	4.3	0.0	2.7	2.9	2.1	2.5	6.4
PRT 307	GHB 538	3.9	0.0	3.4	0.0	4.0	4.0	0.0	0.0	3.1	2.4	2.3	1.8	2.0	4.0
PRT 308	HHB 67 Imp.	1.6	3.4	0.0	1.9	4.9	3.0	0.0	1.1	0.0	1.7	2.3	1.0	1.8	4.9
PRT 309	86M94	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.8	0.3	3.0
PRT 310	DHBH 1397	1.5	0.0	0.0	0.0	0.0	2.0	0.0	2.1	2.9	0.5	0.3	1.7	0.9	2.9
IR I		100.0	84.3	97.3	92.3	97.0	100.0	88.3	98.3	97.2	93.8	94.2	96.0	95.0	100.0
IR II		98.7	80.4	97.3	76.8	11.1	98.0	87.5	86.4	97.0	92.1	72.9	92.2	81.5	98.7
PRT 311	PB 1852	2.6	0.0	0.0	0.0	2.7	2.0	0.0	0.0	0.0	0.9	1.0	0.5	0.8	2.7
PRT 312	86M01	4.8	4.3	0.0	2.4	0.0	4.0	0.0	2.5	0.0	3.1	2.3	1.6	2.0	4.8
PRT 313	GHB 905	1.2	1.3	1.9	0.0	1.6	2.0	0.0	0.0	0.0	1.4	1.2	0.5	0.9	2.0
PRT 314	RHB 173	4.8	0.0	3.3	0.0	4.8	3.0	0.0	NG	-	2.7	2.6	1.5	2.3	4.8
PRT 315	GHB 732	2.3	0.0	0.0	8.6	2.7	2.0	0.0	2.2	0.0	0.8	2.7	1.0	2.0	8.6
IR I		100.0	83.8	94.6	90.9	94.2	98.0	87.2	97.3	97.4	92.8	92.7	95.0	93.7	100.0
IR II		98.8	81.8	88.6	90.3	9.3	98.0	84.2	79.5	96.9	89.7	73.8	89.6	80.8	98.8
PRT 316	GHB 744	1.5	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.5	0.3	0.5	0.4	2.0
PRT 317	86M80	1.3	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.4	0.3	0.5	0.4	2.0
PRT 318	MP 7878	2.6	0.0	0.0	1.4	0.0	3.0	0.0	2.5	0.0	0.9	0.8	1.4	1.1	3.0
PRT 319	86M84	1.3	0.0	0.0	0.0	0.0	1.0	0.0	1.2	0.0	0.4	0.3	0.5	0.4	1.3
PRT 320	KBH 108	2.4	1.3	0.0	0.0	0.0	2.0	0.0	1.2	0.0	1.2	0.7	0.8	0.8	2.4
IR I		100.0	84.2	90.0	87.7	97.1	99.0	84.6	100.0	98.5	91.4	91.8	95.5	93.5	100.0
IR II		97.6	85.0	74.1	91.1	15.2	98.0	87.2	76.5	100.0	85.6	72.6	90.4	80.5	100.0

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Table IV.8: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): DOWNY MILDEW (%) at 60 DAS-Kharif 2024															
Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
PRT 321	Kaveri S Boss	2.5	4.0	0.0	3.8	0.0	3.0	0.0	2.0	0.0	2.2	2.1	1.2	1.7	4.0
PRT 322	86M86	2.5	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	1.8	1.1	0.8	0.9	3.0
PRT 323	RHB 233	1.2	0.0	0.0	0.0	0.0	3.0	0.0	2.0	0.0	0.4	0.2	1.3	0.7	3.0
PRT 324	RHB 234	1.2	0.0	0.0	1.4	6.0	2.0	0.0	4.6	0.0	0.4	1.7	1.6	1.7	6.0
PRT 325	AHB 1269	2.6	1.4	0.0	5.7	8.8	4.0	0.0	6.5	0.0	1.3	3.7	2.6	3.2	8.8
IR I		100.0	87.5	93.9	100.0	100.0	97.0	88.6	98.6	95.6	93.8	96.3	95.0	95.7	100.0
IR II		98.8	82.8	100.0	86.4	10.3	98.0	82.1	83.2	95.7	93.9	75.7	89.7	81.9	100.0
PRT 326	AHB 1200	1.2	1.4	0.0	0.0	2.7	4.0	0.0	7.1	0.0	0.8	1.0	2.8	1.8	7.1
PRT 327	HHB 299	0.0	1.4	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.5	0.3	0.3	0.3	1.4
PRT 328	Dhanshakti	6.3	0.0	0.0	0.0	0.0	3.0	0.0	6.9	3.3	2.1	1.3	3.3	2.2	6.9
PRT 329	ICMV 221	4.7	1.6	0.0	0.0	6.0	4.0	0.0	6.4	0.0	2.1	2.4	2.6	2.5	6.4
PRT330	Pusa Comp. 701	3.1	4.5	0.0	13.7	6.9	1.0	0.0	1.1	1.6	2.5	5.6	0.9	3.5	13.7
IR I		100.0	83.3	77.3	89.2	95.1	98.0	96.2	100.0	98.5	86.9	89.0	98.2	93.1	100.0
IR II		98.7	84.3	93.9	88.7	13.6	99.0	88.6	78.3	97.1	92.3	75.8	90.7	82.5	99.0
PRT 331	Pusa Comp. 383	4.0	0.0	0.0	0.0	5.4	3.0	0.0	1.1	0.0	1.3	1.9	1.0	1.5	5.4
PRT 332	JBV 2	4.3	3.0	0.0	0.0	5.5	4.0	0.0	4.4	0.0	2.4	2.6	2.1	2.3	5.5
PRT 333	Raj 171	4.5	4.8	0.0	1.4	8.6	4.0	0.0	5.5	1.7	3.1	3.9	2.8	3.4	8.6
PRT 334	Mahabeej 1005	0.0	1.6	0.0	0.0	0.0	2.0	1.5	0.0	0.0	0.5	0.3	0.9	0.6	2.0
PRT335	Pratap (MH 1642)	4.3	5.2	0.0	2.6	6.7	3.0	0.0	7.2	0.0	3.2	3.8	2.6	3.2	7.2
IR I		100.0	76.4	85.2	85.2	96.6	99.0	92.5	98.5	97.3	87.2	88.7	96.8	92.3	100.0
IR II		98.7	72.8	85.7	86.0	14.5	99.0	86.5	88.1	100.0	85.7	71.5	93.4	81.3	100.0
PRT336	NBH 4903	3.3	1.4	0.0	0.0	0.0	3.0	5.3	0.0	0.0	1.6	0.9	2.1	1.5	5.3
PRT337	Pusa Comp. 612	5.0	6.0	0.0	0.0	7.5	2.0	0.0	8.1	0.0	3.7	3.7	2.5	3.2	8.1
IR I		100.0	84.4	92.4	80.0	94.5	98.0	89.5	93.5	93.8	92.3	90.3	93.7	91.8	100.0
IR II		98.7	85.8	95.6	86.1	14.5	98.0	87.2	83.1	89.7	93.4	76.1	89.5	82.1	98.7
	Mean Entries	2.3	1.7	0.5	1.7	2.3	2.8	0.3	2.4	0.3	1.5	1.7	1.4	1.6	2.8
	Mean IR I	100.0	82.6	87.5	88.7	96.2	98.4	91.0	97.8	97.0	90.0	91.0	96.1	93.2	100.0
	Mean IR II	98.3	82.7	92.4	83.7	12.4	97.9	87.0	81.6	96.9	91.2	73.9	90.9	81.4	98.3

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Table IV9: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): BLAST (0-9 scale) 30 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
PRT 301	MPMH 42	0.0	1.0	1.6	0.0	0.0	0.5	0.0	2.0	0.0	0.9	0.5	0.6	0.6	2.0
PRT 302	MPMH 35	0.0	1.0	1.4	0.1	0.0	0.0	0.5	2.0	0.0	0.8	0.5	0.6	0.6	2.0
PRT 303	RHB 223	0.0	1.0	1.6	0.1	0.0	0.0	0.0	1.0	0.0	0.9	0.5	0.3	0.4	1.6
PRT 304	PB 1756	0.5	1.0	1.3	0.0	0.0	0.0	0.5	1.0	0.0	0.9	0.6	0.4	0.5	1.3
PRT 305	HHB 272	0.0	1.0	1.9	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.6	0.3	0.4	1.9
PRT 306	GHB 719	0.0	1.0	1.9	0.0	0.0	1.0	0.0	3.0	0.0	1.0	0.6	1.0	0.8	3.0
PRT 307	GHB 538	2.0	1.0	1.5	0.3	0.5	0.0	0.0	1.0	0.0	1.5	1.1	0.3	0.7	2.0
PRT 308	HHB 67 Imp.	0.5	1.0	2.2	0.4	0.5	0.0	0.5	1.0	0.0	1.2	0.9	0.4	0.7	2.2
PRT 309	86M94	0.5	1.0	2.4	0.0	0.0	0.0	0.5	0.0	0.0	1.3	0.8	0.1	0.5	2.4
PRT 310	DHBH 1397	0.5	1.0	1.3	0.0	0.0	0.0	0.0	1.0	0.0	0.9	0.6	0.3	0.4	1.3
PRT 311	PB 1852	0.0	1.0	1.2	0.0	1.0	0.0	0.0	1.0	0.0	0.7	0.6	0.3	0.5	1.2
PRT 312	86M01	1.0	1.0	1.8	0.1	1.0	0.5	0.0	2.0	1.0	1.3	1.0	0.9	0.9	2.0
PRT 313	GHB 905	0.5	1.0	2.2	0.0	0.0	0.0	0.5	1.0	0.0	1.2	0.7	0.4	0.6	2.2
PRT 314	RHB 173	0.0	1.0	2.2	0.0	0.0	0.0	0.0	NG	-	1.1	0.6	0.0	0.5	2.2
PRT 315	GHB 732	0.0	1.0	1.3	0.0	0.5	0.0	0.0	1.0	0.0	0.8	0.6	0.3	0.4	1.3
PRT 316	GHB 744	0.0	1.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.0	0.3	1.7
PRT 317	86M80	0.0	1.0	1.3	0.0	0.0	0.0	0.0	1.0	0.0	0.8	0.5	0.3	0.4	1.3
PRT 318	MP 7878	1.0	1.0	2.2	0.0	0.0	0.0	0.0	2.0	0.0	1.4	0.8	0.5	0.7	2.2
PRT 319	86M84	1.0	1.0	2.1	0.0	0.0	0.0	0.0	2.0	0.0	1.4	0.8	0.5	0.7	2.1
PRT 320	KBH 108	1.0	1.0	1.6	0.0	0.5	0.0	0.0	3.0	0.0	1.2	0.8	0.8	0.8	3.0
PRT 321	Kaveri S Boss	0.5	1.0	1.3	0.3	1.0	0.0	0.0	1.0	0.0	0.9	0.8	0.3	0.6	1.3
PRT 322	86M86	0.0	1.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.5	0.0	0.3	1.4
PRT 323	RHB 233	0.0	1.0	1.5	0.0	0.0	0.0	0.0	2.0	0.0	0.8	0.5	0.5	0.5	2.0

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Table IV9: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): BLAST (0-9 scale) 30 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
PRT 324	RHB 234	1.0	1.0	1.6	0.0	0.0	0.0	0.0	2.0	0.0	1.2	0.7	0.5	0.6	2.0
PRT 325	AHB 1269	1.0	1.0	2.2	0.1	1.0	0.5	0.0	3.0	0.5	1.4	1.1	1.0	1.0	3.0
PRT 326	AHB 1200	1.0	1.0	1.6	0.0	0.0	0.5	0.5	3.0	0.0	1.2	0.7	1.0	0.8	3.0
PRT 327	HHB 299	0.0	1.0	1.2	0.0	0.0	0.0	0.5	1.0	0.0	0.7	0.4	0.4	0.4	1.2
PRT 328	Dhanshakti	0.5	1.0	1.7	0.5	0.0	0.5	0.0	3.0	1.0	1.1	0.7	1.1	0.9	3.0
PRT 329	ICMV 221	0.5	1.0	2.3	0.2	0.0	0.0	0.0	2.0	0.0	1.3	0.8	0.5	0.7	2.3
PRT330	Pusa Comp. 701	0.5	1.0	2.1	0.0	0.0	0.0	0.0	2.0	0.0	1.2	0.7	0.5	0.6	2.1
PRT 331	Pusa Comp. 383	0.5	1.0	1.3	0.0	1.0	0.0	1.0	2.0	0.5	0.9	0.8	0.9	0.8	2.0
PRT 332	JBV 2	0.5	1.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.6	0.0	0.3	1.4
PRT 333	Raj 171	0.0	1.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.0	0.3	1.6
PRT 334	Mahabeej 1005	1.0	1.0	2.3	0.3	1.0	0.5	0.0	3.0	1.0	1.4	1.1	1.1	1.1	3.0
PRT335	Pratap (MH 1642)	1.0	1.0	2.4	0.2	1.0	1.0	0.0	5.0	1.0	1.5	1.1	1.8	1.4	5.0
PRT336	NBH 4903	1.0	1.0	2.1	0.2	1.0	1.0	0.0	3.0	0.0	1.4	1.1	1.0	1.0	3.0
PRT337	Pusa Comp. 612	1.0	1.0	1.6	0.0	1.0	1.0	0.5	3.0	0.0	1.2	0.9	1.1	1.0	3.0
	Mean Entries	0.5	1.0	1.7	0.1	0.3	0.2	0.1	1.7	0.1	1.1	0.6	0.5	0.6	1.7

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Table IV.9A: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): BLAST (0-9 scale) 45 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
PRT 301	MPMH 42	0.0	2.0	1.8	0.2	0.0	1.0	1.5	3.0	0.0	1.3	0.8	1.4	1.1	3.0
PRT 302	MPMH 35	0.0	2.0	1.6	0.3	0.0	1.0	1.0	3.0	0.0	1.2	0.8	1.3	1.0	3.0
PRT 303	RHB 223	1.0	2.0	1.8	0.4	0.0	1.0	0.5	1.5	0.0	1.6	1.0	0.8	0.9	2.0
PRT 304	PB 1756	1.0	1.5	1.5	0.0	0.5	1.0	0.5	1.5	0.0	1.3	0.9	0.8	0.8	1.5
PRT 305	HHB 272	1.0	2.0	2.0	0.1	1.0	1.0	0.0	3.5	0.0	1.7	1.2	1.1	1.2	3.5
PRT 306	GHB 719	0.0	2.0	2.4	0.1	1.0	2.0	1.0	4.0	0.0	1.5	1.1	1.8	1.4	4.0
PRT 307	GHB 538	2.0	2.0	2.2	0.5	2.0	1.0	0.5	1.5	0.0	2.1	1.7	0.8	1.3	2.2
PRT 308	HHB 67 Improved	2.0	2.0	2.7	1.1	2.0	1.0	1.5	3.0	0.0	2.2	2.0	1.4	1.7	3.0
PRT 309	86M94	0.5	2.0	2.3	0.8	1.0	0.5	0.5	1.5	0.0	1.6	1.3	0.6	1.0	2.3
PRT 310	DHBH 1397	0.5	2.0	1.2	0.0	1.0	0.5	0.0	2.0	0.0	1.2	0.9	0.6	0.8	2.0
PRT 311	PB 1852	1.0	2.0	1.5	0.6	2.5	1.0	0.0	1.5	0.0	1.5	1.5	0.6	1.1	2.5
PRT 312	86M01	1.0	2.0	2.3	0.6	2.0	0.5	0.5	4.0	2.0	1.8	1.6	1.8	1.7	4.0
PRT 313	GHB 905	1.0	2.0	2.1	0.1	2.0	1.0	1.0	2.5	0.0	1.7	1.4	1.1	1.3	2.5
PRT 314	RHB 173	1.0	2.0	2.5	0.0	1.5	1.0	0.0	NG	-	1.8	1.4	0.5	1.1	2.5
PRT 315	GHB 732	1.0	1.5	1.6	0.0	2.5	0.0	1.0	1.0	0.0	1.4	1.3	0.5	1.0	2.5
PRT 316	GHB 744	1.0	1.5	1.8	0.0	0.5	0.5	0.0	0.5	0.0	1.4	1.0	0.3	0.6	1.8
PRT 317	86M80	1.0	1.5	1.5	0.0	1.0	1.0	0.0	1.0	0.0	1.3	1.0	0.5	0.8	1.5
PRT 318	MP 7878	1.5	2.0	2.4	0.0	1.5	1.0	1.0	4.0	0.0	2.0	1.5	1.5	1.5	4.0
PRT 319	86M84	1.5	1.0	2.4	0.0	1.0	1.0	0.5	2.0	0.0	1.6	1.2	0.9	1.0	2.4
PRT 320	KBH 108	1.5	1.5	1.8	0.7	2.5	1.0	0.0	4.5	0.0	1.6	1.6	1.4	1.5	4.5
PRT 321	Kaveri Super Boss	1.0	1.5	1.5	0.6	2.0	0.0	0.0	2.0	0.0	1.3	1.3	0.5	1.0	2.0
PRT 322	86M86	1.0	2.0	1.6	0.3	2.0	0.0	0.0	0.5	0.0	1.5	1.4	0.1	0.8	2.0
PRT 323	RHB 233	1.5	2.0	1.5	0.0	0.0	0.0	0.0	2.0	0.0	1.7	1.0	0.5	0.8	2.0

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Table IV.9A: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): BLAST (0-9 scale) 45 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
PRT 324	RHB 234	2.0	2.0	1.9	0.0	1.5	0.0	1.0	3.5	0.5	2.0	1.5	1.3	1.4	3.5
PRT 325	AHB 1269	2.0	1.5	2.6	0.5	3.5	0.5	0.0	4.5	1.0	2.0	2.0	1.5	1.8	4.5
PRT 326	AHB 1200	1.0	2.0	1.6	0.0	2.0	0.5	0.5	4.0	0.5	1.5	1.3	1.4	1.3	4.0
PRT 327	HHB 299	0.5	2.0	1.9	0.3	0.0	0.0	0.0	1.0	0.0	1.5	0.9	0.3	0.6	2.0
PRT 328	Dhanshakti	1.5	2.0	2.0	1.0	1.5	0.5	1.5	4.0	2.0	1.8	1.6	2.0	1.8	4.0
PRT 329	ICMV 221	1.5	2.0	2.4	0.7	1.0	1.0	0.5	3.5	0.5	2.0	1.5	1.4	1.5	3.5
PRT330	Pusa Composite 701	1.0	2.0	2.3	0.6	2.0	1.0	0.0	3.0	0.0	1.8	1.6	1.0	1.3	3.0
PRT 331	Pusa Composite 383	0.5	1.5	1.7	0.1	2.0	1.0	1.0	3.0	1.0	1.2	1.2	1.5	1.3	3.0
PRT 332	JBV 2	0.5	2.0	1.7	0.2	1.0	0.0	0.0	0.0	0.0	1.4	1.1	0.0	0.6	2.0
PRT 333	Raj 171	1.5	2.0	1.7	0.4	1.0	1.0	1.0	1.0	0.0	1.7	1.3	0.8	1.1	2.0
PRT 334	Mahabeej 1005	2.0	1.5	2.5	1.2	3.0	2.0	1.0	5.0	2.0	2.0	2.0	2.5	2.2	5.0
PRT335	Pratap (MH 1642)	2.0	1.5	1.9	0.7	3.0	2.0	0.5	6.5	2.5	1.8	1.8	2.9	2.3	6.5
PRT336	NBH 4903	1.5	2.0	2.4	0.8	2.0	2.0	0.5	3.5	0.0	2.0	1.7	1.5	1.6	3.5
PRT337	Pusa Comp. 612	1.5	2.0	1.8	0.1	2.5	2.0	0.5	4.0	0.5	1.8	1.6	1.8	1.7	4.0
	Mean Entries	1.1	1.8	2.0	0.4	1.5	0.9	0.5	2.7	0.3	1.6	1.4	1.1	1.2	2.7

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Table IV.9B: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): BLAST (0-9 Scale) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
PRT 301	MPMH 42	0.5	3.0	2.5	1.8	1.0	3.0	2.0	4.5	0.0	2.0	1.8	2.4	2.0	4.5
PRT 302	MPMH 35	0.0	3.0	2.0	1.4	1.0	3.0	1.5	4.5	0.0	1.7	1.5	2.3	1.8	4.5
PRT 303	RHB 223	2.0	3.0	2.3	2.4	1.5	2.0	1.5	2.5	0.0	2.4	2.2	1.5	1.9	3.0
PRT 304	PB 1756	2.0	2.5	2.1	0.1	2.0	2.0	1.5	3.0	0.0	2.2	1.7	1.6	1.7	3.0
PRT 305	HHB 272	2.0	3.0	2.5	1.1	3.0	3.0	0.5	5.0	0.0	2.5	2.3	2.1	2.2	5.0
PRT 306	GHB 719	0.0	3.0	2.7	1.2	3.0	3.0	2.0	5.5	0.0	1.9	2.0	2.6	2.3	5.5
PRT 307	GHB 538	2.0	3.0	2.3	4.2	4.0	2.0	2.0	3.0	0.5	2.4	3.1	1.9	2.6	4.2
PRT 308	HHB 67 Improved	3.0	3.0	2.8	5.6	4.0	2.0	3.5	5.0	0.5	2.9	3.7	2.8	3.3	5.6
PRT 309	86M94	1.0	3.0	2.9	3.0	2.5	1.0	3.5	2.5	0.0	2.3	2.5	1.8	2.2	3.5
PRT 310	DHBH 1397	1.0	3.0	1.7	0.3	2.5	1.0	1.0	3.0	1.0	1.9	1.7	1.5	1.6	3.0
PRT 311	PB 1852	2.0	3.0	1.5	2.4	4.5	2.0	0.5	3.0	0.0	2.2	2.7	1.4	2.1	4.5
PRT 312	86M01	2.5	3.0	2.7	4.5	4.5	2.0	1.0	5.0	3.5	2.7	3.4	2.9	3.2	5.0
PRT 313	GHB 905	2.5	3.0	2.2	1.3	4.0	2.0	1.5	4.0	0.0	2.6	2.6	1.9	2.3	4.0
PRT 314	RHB 173	2.5	3.0	2.3	0.0	3.5	2.0	0.0	NG	-	2.6	2.3	1.0	1.9	3.5
PRT 315	GHB 732	1.5	2.5	2.6	0.3	4.0	1.0	2.5	2.0	0.0	2.2	2.2	1.4	1.8	4.0
PRT 316	GHB 744	2.0	2.5	2.3	1.0	2.0	1.0	1.5	0.5	0.0	2.3	2.0	0.8	1.4	2.5
PRT 317	86M80	1.5	2.5	2.2	1.1	2.5	2.0	1.0	2.0	0.0	2.1	2.0	1.3	1.6	2.5
PRT 318	MP 7878	2.5	3.0	2.7	0.8	3.5	2.0	3.5	5.0	1.0	2.7	2.5	2.9	2.7	5.0
PRT 319	86M84	2.0	1.0	2.7	1.1	3.0	2.0	1.0	3.0	0.0	1.9	2.0	1.5	1.8	3.0
PRT 320	KBH 108	2.0	2.5	1.9	2.5	3.5	2.0	1.5	5.5	0.0	2.1	2.5	2.3	2.4	5.5
PRT 321	Kaveri Super Boss	1.5	2.5	2.0	2.8	4.0	2.0	0.0	3.0	0.0	2.0	2.6	1.3	2.0	4.0
PRT 322	86M86	2.0	3.0	2.2	1.9	3.5	2.0	0.5	1.0	0.5	2.4	2.5	1.0	1.8	3.5
PRT 323	RHB 233	2.5	3.0	2.2	0.2	2.0	1.0	0.0	3.0	0.0	2.6	2.0	1.0	1.5	3.0

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Table IV.9B: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): BLAST (0-9 Scale) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
PRT 324	RHB 234	3.0	3.0	2.7	0.0	3.0	2.0	1.5	4.5	1.0	2.9	2.3	2.3	2.3	4.5
PRT 325	AHB 1269	3.5	2.5	2.9	2.9	5.0	2.0	2.5	6.5	2.0	3.0	3.4	3.3	3.3	6.5
PRT 326	AHB 1200	2.5	3.0	1.9	3.7	4.0	2.0	1.5	6.0	1.0	2.5	3.0	2.6	2.8	6.0
PRT 327	HHB 299	1.0	3.0	1.9	2.8	1.0	1.0	0.0	2.5	1.0	2.0	1.9	1.1	1.6	3.0
PRT 328	Dhanshakti	3.5	3.0	2.6	6.5	3.5	2.0	2.0	5.0	3.5	3.0	3.8	3.1	3.5	6.5
PRT 329	ICMV 221	3.5	3.0	2.6	4.4	2.5	2.0	1.5	5.5	1.5	3.0	3.2	2.6	2.9	5.5
PRT330	Pusa Composite 701	2.5	3.0	2.5	3.5	3.5	2.0	0.0	4.0	1.0	2.7	3.0	1.8	2.4	4.0
PRT 331	Pusa Composite 383	1.5	2.5	1.9	1.4	3.5	2.0	1.5	4.0	1.5	2.0	2.2	2.3	2.2	4.0
PRT 332	JBV 2	3.5	3.0	2.0	0.9	2.5	1.0	0.5	0.0	1.0	2.8	2.4	0.6	1.6	3.5
PRT 333	Raj 171	3.5	3.0	2.3	2.0	3.0	2.0	1.0	1.5	0.5	2.9	2.8	1.3	2.1	3.5
PRT 334	Mahabeej 1005	2.5	2.5	3.5	4.6	4.5	3.0	2.0	6.0	3.0	2.8	3.5	3.5	3.5	6.0
PRT335	Pratap (MH 1642)	3.5	2.5	3.5	5.2	5.0	3.0	1.5	8.0	4.5	3.2	3.9	4.3	4.1	8.0
PRT336	NBH 4903	2.0	3.0	2.6	4.0	4.5	3.0	0.0	4.5	0.5	2.5	3.2	2.0	2.7	4.5
PRT337	Pusa Comp. 612	2.0	3.0	2.1	1.1	4.5	3.0	1.0	5.0	1.0	2.4	2.5	2.5	2.5	5.0
	Mean Entries	2.1	2.8	2.4	2.3	3.2	2.0	1.4	3.8	0.8	2.4	2.6	2.0	2.3	3.8

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Table IV.9C: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): RUST (% leaf area) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
PRT 301	MPMH 42		0.0	0.0	0.0		21.0	0.0	35.0	17.5	0.0	0.0	18.4	10.5	35.0
PRT 302	MPMH 35		0.0	0.0	0.0		20.0	0.0	30.0	17.5	0.0	0.0	16.9	9.6	30.0
PRT 303	RHB 223		0.0	0.0	0.0		14.0	0.5	7.5	12.5	0.0	0.0	8.6	4.9	14.0
PRT 304	PB 1756		0.0	0.0	0.0		10.0	0.0	10.0	13.5	0.0	0.0	8.4	4.8	13.5
PRT 305	HHB 272		0.0	0.0	0.0		21.0	0.0	15.0	27.5	0.0	0.0	15.9	9.1	27.5
PRT 306	GHB 719		0.0	0.0	0.0		23.0	1.0	15.0	24.0	0.0	0.0	15.8	9.0	24.0
PRT 307	GHB 538		0.0	0.0	0.0		17.0	2.0	12.5	6.5	0.0	0.0	9.5	5.4	17.0
PRT 308	HHB 67 Improved		0.0	0.0	0.0		13.0	0.0	5.0	20.0	0.0	0.0	9.5	5.4	20.0
PRT 309	86M94		0.0	0.5	0.0		12.0	0.0	0.0	7.5	0.3	0.2	4.9	2.9	12.0
PRT 310	DHBH 1397	DNP	0.0	0.0	0.0	DNP	20.0	0.0	5.0	22.5	0.0	0.0	11.9	6.8	22.5
PRT 311	PB 1852		0.0	0.0	0.0		7.0	0.0	2.5	0.0	0.0	0.0	2.4	1.4	7.0
PRT 312	86M01		0.0	0.0	0.0		6.0	0.0	2.5	8.5	0.0	0.0	4.3	2.4	8.5
PRT 313	GHB 905		0.0	0.0	0.0		21.0	0.0	15.0	22.5	0.0	0.0	14.6	8.4	22.5
PRT 314	RHB 173		0.0	0.0	0.0		11.0	0.0	NG	-	0.0	0.0	5.5	2.2	11.0
PRT 315	GHB 732		0.0	0.0	0.0		12.0	2.5	0.0	7.5	0.0	0.0	5.5	3.1	12.0
PRT 316	GHB 744		0.0	0.0	0.0		17.0	2.0	5.0	6.5	0.0	0.0	7.6	4.4	17.0
PRT 317	86M80		0.0	0.0	0.0		9.0	0.0	5.0	0.0	0.0	0.0	3.5	2.0	9.0
PRT 318	MP 7878		0.0	0.0	0.0		8.0	1.0	5.0	5.0	0.0	0.0	4.8	2.7	8.0
PRT 319	86M84		0.0	6.5	0.0		6.0	1.0	0.0	7.5	3.3	2.2	3.6	3.0	7.5
PRT 320	KBH 108		0.0	0.0	0.0		7.0	1.0	0.0	11.0	0.0	0.0	4.8	2.7	11.0
PRT 321	Kaveri Super Boss		0.0	0.0	0.0		8.0	0.0	5.0	6.5	0.0	0.0	4.9	2.8	8.0
PRT 322	86M86		0.0	0.0	0.0		5.0	0.5	15.0	7.5	0.0	0.0	7.0	4.0	15.0
PRT 323	RHB 233		0.0	0.0	0.0		11.0	0.0	15.0	12.5	0.0	0.0	9.6	5.5	15.0

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Table IV.9C: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): RUST (% leaf area) at 60 DAS-Kharif 2024

Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
PRT 324	RHB 234		0.0	0.0	0.0		9.0	0.0	2.5	6.5	0.0	0.0	4.5	2.6	9.0
PRT 325	AHB 1269		0.0	0.0	0.0		7.0	0.0	7.5	5.0	0.0	0.0	4.9	2.8	7.5
PRT 326	AHB 1200		0.0	0.0	0.0		13.0	3.5	2.5	17.5	0.0	0.0	9.1	5.2	17.5
PRT 327	HHB 299		0.0	0.0	0.0		16.0	0.0	5.0	18.5	0.0	0.0	9.9	5.6	18.5
PRT 328	Dhanshakti		0.0	0.0	0.0		11.0	1.0	5.0	12.5	0.0	0.0	7.4	4.2	12.5
PRT 329	ICMV 221		0.0	0.0	0.0		16.0	1.0	7.5	18.5	0.0	0.0	10.8	6.1	18.5
PRT 330	Pusa Composite 701		0.0	2.5	0.0		11.0	0.0	5.0	17.5	1.3	0.8	8.4	5.1	17.5
PRT 331	Pusa Composite 383		0.0	0.0	0.0		16.0	0.0	7.5	9.0	0.0	0.0	8.1	4.6	16.0
PRT 332	JBV 2		0.0	0.0	0.0		8.0	0.0	7.5	6.5	0.0	0.0	5.5	3.1	8.0
PRT 333	Raj 171		0.0	0.0	0.0		14.0	1.0	17.5	25.0	0.0	0.0	14.4	8.2	25.0
PRT 334	Mahabeej 1005		0.0	0.0	0.0		3.0	1.0	2.5	12.5	0.0	0.0	4.8	2.7	12.5
PRT 335	Pratap (MH 1642)		0.0	0.0	0.0		2.0	1.0	0.0	17.5	0.0	0.0	5.1	2.9	17.5
PRT 336	NBH 4903		0.0	0.0	0.0		1.0	0.0	0.0	12.5	0.0	0.0	3.4	1.9	12.5
PRT 337	Pusa Comp. 612		0.0	0.0	0.0		18.0	0.0	10.0	26.0	0.0	0.0	13.5	7.7	26.0
	Mean Entries		0.0	0.3	0.0		12.0	0.5	7.9	13.0	0.1	0.1	8.4	4.8	13.0

* Data Not Provided - (DNP)

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Table IV.9D: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): SMUT (severity %) at 60 DAS-Kharif 2024															
Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
PRT 301	MPMH 42		0.0	0.0	3.0	5.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	1.0	5.0
PRT 302	MPMH 35		7.5	2.1	5.5	35.0	0.0	0.0	0.0	0.0	4.8	12.5	0.0	6.3	35.0
PRT 303	RHB 223		1.0	0.0	0.0	52.5	0.0	0.0	0.0	0.0	0.5	13.4	0.0	6.7	52.5
PRT 304	PB 1756		2.5	0.0	0.0	7.5	0.0	0.0	0.0	0.0	1.3	2.5	0.0	1.3	7.5
PRT 305	HHB 272		10.0	2.6	0.0	27.5	0.0	0.0	0.0	0.0	6.3	10.0	0.0	5.0	27.5
PRT 306	GHB 719		5.5	14.0	3.5	5.0	0.0	0.0	0.0	0.0	9.8	7.0	0.0	3.5	14.0
PRT 307	GHB 538		0.0	0.5	0.0	20.0	0.0	0.0	0.0	0.0	0.3	5.1	0.0	2.6	20.0
PRT 308	HHB 67 Improved		4.0	7.6	0.0	5.0	0.0	0.0	0.0	0.0	5.8	4.2	0.0	2.1	7.6
PRT 309	86M94		0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.3	2.5
PRT 310	DHBH 1397		2.5	6.0	8.0	12.5	0.0	0.0	4.0	0.0	4.3	7.3	1.0	4.1	12.5
PRT 311	PB 1852		0.0	0.0	13.5	7.5	0.0	0.0	0.0	0.0	0.0	5.3	0.0	2.6	13.5
PRT 312	86M01		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRT 313	GHB 905	DNP	0.0	0.6	0.0	27.5	0.0	0.0	0.0	0.0	0.3	7.0	0.0	3.5	27.5
PRT 314	RHB 173		0.0	0.0	0.5	20.0	0.0	0.0	NG	0.0	0.0	5.1	0.0	2.9	20.0
PRT 315	GHB 732		3.0	32.5	0.5	17.5	0.0	0.0	0.0	0.0	17.8	13.4	0.0	6.7	32.5
PRT 316	GHB 744		5.0	7.4	2.0	7.5	0.0	0.0	0.0	0.0	6.2	5.5	0.0	2.7	7.5
PRT 317	86M80		0.0	0.5	3.0	0.0	0.0	0.0	0.0	0.0	0.3	0.9	0.0	0.4	3.0
PRT 318	MP 7878		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRT 319	86M84		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRT 320	KBH 108		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRT 321	Kaveri Super Boss		0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.5	4.0
PRT 322	86M86		0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.3	2.5
PRT 323	RHB 233		2.5	3.0	3.0	7.5	0.0	0.0	0.0	0.0	2.8	4.0	0.0	2.0	7.5

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Table IV.9D: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): SMUT (severity %) at 60 DAS-Kharif 2024															
Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
PRT 324	RHB 234		1.0	1.0	2.0	50.0	0.0	0.0	0.0	0.0	1.0	13.5	0.0	6.8	50.0
PRT 325	AHB 1269		2.5	6.5	0.0	22.5	0.0	0.0	0.0	0.0	4.5	7.9	0.0	3.9	22.5
PRT 326	AHB 1200		2.5	10.0	0.0	27.5	0.0	0.0	0.0	0.0	6.3	10.0	0.0	5.0	27.5
PRT 327	HHB 299		4.5	0.0	2.0	25.0	0.0	0.0	5.0	0.0	2.3	7.9	1.3	4.6	25.0
PRT 328	Dhanshakti		2.5	0.0	1.5	7.5	0.0	0.0	0.0	0.0	1.3	2.9	0.0	1.4	7.5
PRT 329	ICMV 221		1.0	0.0	0.0	27.5	0.0	0.0	0.0	0.0	0.5	7.1	0.0	3.6	27.5
PRT 330	Pusa Composite 701		1.0	0.5	0.0	12.5	0.0	0.0	0.0	0.0	0.8	3.5	0.0	1.8	12.5
PRT 331	Pusa Composite 383		0.0	0.5	0.5	40.0	0.0	0.0	0.0	0.0	0.3	10.3	0.0	5.1	40.0
PRT 332	JBV 2		1.0	0.2	0.0	25.0	0.0	0.0	0.0	0.0	0.6	6.6	0.0	3.3	25.0
PRT 333	Raj 171		1.0	0.0	0.0	85.0	0.0	0.0	0.0	0.0	0.5	21.5	0.0	10.8	85.0
PRT 334	Mahabeej 1005		2.5	4.0	0.0	52.5	0.0	0.0	0.0	0.0	3.3	14.8	0.0	7.4	52.5
PRT 335	Pratap (MH 1642)		0.0	0.5	2.5	0.0	0.0	0.0	0.0	0.0	0.3	0.8	0.0	0.4	2.5
PRT 336	NBH 4903		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRT 337	Pusa Comp. 612		1.0	2.0	0.0	42.5	0.0	0.0	0.0	0.0	1.5	11.4	0.0	5.7	42.5
	Mean Entries		1.7	2.8	1.4	18.5	0.0	0.0	0.3	0.0	2.2	6.1	0.1	3.1	18.5

* Data Not Provided - (DNP)

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Table IV.9E: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): ERGOT severity at 60 DAS-Kharif 2024															
Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
PRT 301	MPMH 42		0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PRT 302	MPMH 35		3.0		0.0		0.0	0.0	0.0	0.0	3.0	1.5	0.0	0.5	
PRT 303	RHB 223		0.0		0.0		0.0	0.5	0.0	0.0	0.0	0.0	0.1	0.1	
PRT 304	PB 1756		2.5		0.0		0.0	0.0	0.0	4.0	2.5	1.3	1.0	1.1	
PRT 305	HHB 272		2.5		0.0		0.0	0.0	0.0	0.0	2.5	1.3	0.0	0.4	
PRT 306	GHB 719		2.5		0.0		0.0	0.0	0.0	0.0	2.5	1.3	0.0	0.4	
PRT 307	GHB 538		9.0		0.0		0.0	0.5	0.0	1.5	9.0	4.5	0.5	1.8	
PRT 308	HHB 67 Improved		2.5		0.0		0.0	0.0	0.0	0.0	2.5	1.3	0.0	0.4	
PRT 309	86M94		0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PRT 310	DHBH 1397		0.0		0.0		0.0	0.0	0.0	5.0	0.0	0.0	1.3	0.8	
PRT 311	PB 1852		0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PRT 312	86M01		2.0		0.0		0.0	0.0	0.0	6.5	2.0	1.0	1.6	1.4	
PRT 313	GHB 905	DNP	1.0	DNP	0.0	DNP	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.2	
PRT 314	RHB 173		0.0		0.0		0.0	0.0	NG	-	0.0	0.0	0.0	0.0	
PRT 315	GHB 732		0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PRT 316	GHB 744		0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PRT 317	86M80		0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PRT 318	MP 7878		0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PRT 319	86M84		0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PRT 320	KBH 108		0.0		0.0		0.0	0.0	0.0	3.5	0.0	0.0	0.9	0.6	
PRT 321	Kaveri Super Boss		0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PRT 322	86M86		0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PRT 323	RHB 233		3.5		0.0		0.0	0.0	0.0	0.0	3.5	1.8	0.0	0.6	

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Table IV.9E: Disease screening of Released Pearl Millet Hybrids and Varieties (PMPT III): ERGOT severity at 60 DAS-Kharif 2024															
Project Code	Entry Name	MDR	JPR	HSR	JMR	GLR	MYS	ABD1	DHL	CBE	Mean				MAX.
											Zone A ₁	Zone A	Zone B	India	
PRT 324	RHB 234		2.0		0.0		0.0	0.0	0.0	0.0	2.0	1.0	0.0	0.3	2.0
PRT 325	AHB 1269		6.0		0.0		0.0	0.0	0.0	5.0	6.0	3.0	1.3	1.8	6.0
PRT 326	AHB 1200		2.0		0.0		0.0	0.5	0.0	0.0	2.0	1.0	0.1	0.4	2.0
PRT 327	HHB 299		1.0		0.0		0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.2	1.0
PRT 328	Dhanshakti		1.0		0.0		0.0	0.0	0.0	4.0	1.0	0.5	1.0	0.8	4.0
PRT 329	ICMV 221		0.0		0.0		0.0	0.5	2.5	0.0	0.0	0.0	0.8	0.5	2.5
PRT 330	Pusa Composite 701		0.0		0.0		0.0	0.0	0.0	3.5	0.0	0.0	0.9	0.6	3.5
PRT 331	Pusa Composite 383		1.0		0.0		0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.2	1.0
PRT 332	JBV 2		1.0		0.0		0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.2	1.0
PRT 333	Raj 171		2.5		0.0		0.0	0.0	0.0	0.0	2.5	1.3	0.0	0.4	2.5
PRT 334	Mahabeej 1005		4.0		0.0		0.0	0.0	0.0	5.0	4.0	2.0	1.3	1.5	5.0
PRT 335	Pratap (MH 1642)		0.0		0.0		0.0	0.0	0.0	7.5	0.0	0.0	1.9	1.3	7.5
PRT 336	NBH 4903		0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRT 337	Pusa Comp. 612		0.0		0.0		0.0	0.0	0.0	2.5	0.0	0.0	0.6	0.4	2.5
	Mean Entries		1.3		0.0		0.0	0.1	0.1	1.3	1.3	0.7	0.4	0.5	1.3

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Table IV 10 - Downy Mildew Incidence of PMDMVN-2024 (PMPT IV) entries at -30 DAS-Kharif 2024

Identity	PMDMVN Code-2024	Downy Mildew Incidence (%) 30 DAS										Entry Mean
		ABD	CBE	DHL	GLR	HSR	JPR	MDR	JMR	MYS	PTR	
PMDMVN-1	ICPMDML-1	1.4	0.0	0.0	0.0	0.0	2.2	3.1	0.0	8.0	5.5	2.0
PMDMVN-2	ICPMDML-2	0.0	0.0	1.1	3.6	0.0	0.0	4.8	1.6	6.0	9.5	2.7
PMDMVN-3	ICPMDML-3	0.0	0.0	1.9	2.0	0.0	12.5	6.1	0.0	12.0	19.0	5.3
PMDMVN-4	ICPMDML-4	0.0	2.3	25.0	0.0	0.0	0.0	8.2	11.6	9.0	5.8	6.2
PMDMVN-5	ICPMDML-5	0.0	0.0	10.6	0.0	0.0	0.0	3.9	4.8	7.0	11.0	3.7
PMDMVN-6	ICPMDML-6	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	4.0	1.7	1.0
PMDMVN-7	ICPMDML-7	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	5.0	1.0	0.9
PMDMVN-8	ICPMDML-8	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	2.0	0.6	0.5
PMDMVN-9	ICPMDML-9	1.4	0.0	4.9	0.0	0.0	0.0	2.4	1.7	4.0	0.0	1.4
PMDMVN-10	ICPMDML-10	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	3.0	0.0	0.6
PMDMVN-11	ICPMDML-11	0.0	0.0	0.0	3.9	0.0	1.8	2.2	0.0	3.0	0.6	1.2
PMDMVN-12	ICPMDML-12	0.0	0.0	0.5	0.0	0.0	3.0	2.6	1.9	3.0	3.2	1.4
PMDMVN-13	ICPMDML-13	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	3.0	0.0	0.6
IP 11930	ICPMDML-14	0.0	0.8	2.2	0.0	0.0	0.0	4.8	6.6	2.0	2.7	1.9
IP 6193-2	ICPMDML-15	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	4.0	2.4	1.0
IP 8418-3	ICPMDML-16	0.0	0.0	2.2	0.0	6.7	5.0	5.1	0.0	4.0	1.9	2.5
IP 18292	ICPMDML-17	0.0	0.0	0.0	0.0	0.0	12.0	3.9	7.0	3.0	4.4	3.0
IP 18293	ICPMDML-18	0.0	0.0	0.0	2.8	0.0	0.0	5.7	0.0	7.0	3.6	1.9
IP 9645	ICPMDML-19	0.0	0.0	3.4	0.0	0.0	0.0	3.8	0.0	4.0	3.6	1.5
YG 8	ICPMDML-20	3.8	3.7	7.0	0.0	0.0	0.0	3.3	4.2	3.0	1.1	2.6
834 B	ICPMDML-21	0.0	0.0	0.9	0.0	0.0	0.0	5.4	2.3	5.0	5.3	1.9
IP 5719-3	ICPMDML-22	0.0	0.0	0.5	4.2	2.5	2.4	3.4	0.0	8.0	11.7	3.3
IP 9997	ICPMDML-23	0.0	0.0	2.7	0.0	0.0	0.0	4.3	0.0	7.0	2.6	1.7
IP 18294	ICPMDML-24	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	3.0	0.0	1.0
7042 S	ICPMDML-25	76.6	90.1	97.5	76.4	79.7	70.0	71.8	71.6	89.0	86.6	80.9
ICPMDMR-24-1	ICPMDML-26	0.0	0.0	3.0	0.0	0.0	0.0	5.0	0.0	5.0	7.8	2.1
ICPMDMR-24-2	ICPMDML-27	0.0	0.0	0.6	1.1	0.0	0.0	4.2	0.0	3.0	0.6	1.0
ICPMDMR-24-3	ICPMDML-28	0.0	0.0	0.0	0.0	3.1	0.0	6.3	1.7	3.0	0.0	1.4
ICPMDMR-24-4	ICPMDML-29	1.3	0.0	0.0	0.0	0.0	0.0	3.9	0.0	2.0	1.2	0.8
ICPMDMR-24-12	ICPMDML-30	0.0	0.0	7.1	0.0	*	0.0	3.4	3.0	13.0	9.4	4.0
150-SB-24	ICPMDML-31	0.0	0.0	0.0	0.0	0.0	0.0	3.7	1.6	4.0	1.1	1.0
229-SB-24	ICPMDML-32	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	2.0	0.6	0.5
185-SB-24	ICPMDML-33	0.0	0.0	0.0	0.0	0.0	3.6	2.7	0.0	3.0	0.0	0.9
171-SB-24	ICPMDML-34	0.0	0.0	0.0	0.0	0.0	16.4	5.6	0.0	6.0	18.9	4.7
J-2650	ICPMDML-35	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	4.0	1.9	1.0
J-2539	ICPMDML-36	0.0	0.0	19.6	2.2	0.0	0.0	5.0	0.0	9.0	22.6	5.8
J-2553	ICPMDML-37	0.0	0.0	0.0	3.1	0.0	0.0	4.5	1.8	8.0	0.0	1.7
JMSB20223	ICPMDML-38	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	5.0	0.0	0.8
JMSB20155	ICPMDML-39	0.0	0.0	12.7	0.0	0.0	0.0	4.8	0.0	3.0	6.0	2.7
JMSB20229	ICPMDML-40	0.0	0.0	29.0	7.9	0.0	0.0	6.7	3.3	18.0	56.5	12.1
Location Mean		2.1	2.4	5.8	2.7	2.4	3.2	6.0	3.1	7.4	7.8	

* No germination

Identity	PMDMVN Code-2024	Downy Mildew Incidence (%) 30 DAS									
		ABD	CBE	DHL	GLR	HSR	JPR	MDR	JMR	MYS	PTR
7042 S	ICPMDML-25	76.6	90.1	97.5	76.4	79.7	70.0	71.8	71.6	89.0	86.6

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Table IV 11-Downy Mildew Incidence of PMDMVN-2024 (PMPT IV) entries at -60 DAS-Kharif 2024

Identity	PMDMVN Code-2024	Downy Mildew Incidence (%) 60 DAS										Entry Mean	Resistant ($\leq 5\%$ DM) at number of locations
		ABD	CBE	DHL	GLR	HSR	JPR	MDR	JMR	MYS	PTR		
PMDMVN-1	ICPMDML-1	5.3	0.0	0.0	0.0	0.0	2.2	4.6	0.0	15.0	10.2	3.7	7
PMDMVN-2	ICPMDML-2	1.9	0.0	3.3	4.8	0.0	0.0	4.8	1.6	13.0	17.2	4.7	8
PMDMVN-3	ICPMDML-3	2.0	0.0	1.9	2.9	0.0	12.5	12.1	1.9	19.0	31.2	8.3	6
PMDMVN-4	ICPMDML-4	2.6	2.3	25.0	2.3	0.0	0.0	24.6	27.5	17.0	19.2	12.1	5
PMDMVN-5	ICPMDML-5	1.9	0.0	10.6	0.0	0.0	0.0	9.1	12.7	11.0	20.6	6.6	5
PMDMVN-6	ICPMDML-6	2.6	0.0	0.0	0.0	0.0	0.0	4.8	0.0	4.0	2.7	1.4	10
PMDMVN-7	ICPMDML-7	2.6	0.0	1.4	0.0	0.0	0.0	4.1	0.0	8.0	1.0	1.7	9
PMDMVN-8	ICPMDML-8	0.6	0.0	0.0	0.0	0.0	0.0	5.4	0.0	4.0	0.6	1.1	9
PMDMVN-9	ICPMDML-9	2.7	0.0	4.9	0.0	0.0	0.0	6.0	1.7	7.0	0.0	2.2	8
PMDMVN-10	ICPMDML-10	2.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	4.0	0.0	1.0	10
PMDMVN-11	ICPMDML-11	1.9	0.0	0.9	5.3	0.0	1.8	3.3	0.0	4.0	0.6	1.8	9
PMDMVN-12	ICPMDML-12	1.3	0.0	0.5	0.0	0.0	3.0	6.6	1.9	6.0	4.4	2.4	8
PMDMVN-13	ICPMDML-13	1.3	0.0	0.0	0.0	0.0	0.0	4.5	0.0	5.0	0.7	1.2	9
IP 11930	ICPMDML-14	2.0	0.8	2.2	1.8	0.0	0.0	6.5	13.1	5.0	2.7	3.4	8
IP 6193-2	ICPMDML-15	1.9	0.0	0.0	0.0	0.0	0.0	5.9	0.0	5.0	4.7	1.8	9
IP 8418-3	ICPMDML-16	2.0	0.0	2.2	0.0	6.7	5.0	6.8	4.2	6.0	3.2	3.6	7
IP 18292	ICPMDML-17	1.3	0.0	0.0	0.0	0.0	12.0	11.8	14.0	5.0	5.0	4.9	7
IP 18293	ICPMDML-18	2.0	0.0	2.0	7.0	0.0	0.0	7.1	2.2	10.0	6.0	3.6	6
IP 9645	ICPMDML-19	1.9	0.0	4.5	0.0	0.0	0.0	5.0	0.0	6.0	3.6	2.1	9
YG 8	ICPMDML-20	5.0	3.7	8.5	0.0	0.0	0.0	4.4	10.4	4.0	1.1	3.7	8
834 B	ICPMDML-21	1.3	0.0	1.3	0.0	0.0	0.0	4.8	7.0	9.0	5.8	2.9	6
IP 5719-3	ICPMDML-22	2.5	0.0	0.5	7.3	5.0	2.4	5.2	0.0	15.0	14.4	5.2	6
IP 9997	ICPMDML-23	1.9	0.0	2.7	0.0	0.0	0.0	6.5	0.0	9.0	4.6	2.5	8
IP 18294	ICPMDML-24	2.6	0.0	0.0	0.0	0.0	0.0	9.5	0.0	4.0	0.7	1.7	9
7042 S	ICPMDML-25	78.0	90.1	98.7	93.6	80.0	78.0	88.2	76.6	99.0	99.4	88.2	
ICPMDMR-24-1	ICPMDML-26	2.0	0.0	3.0	0.0	0.0	0.0	7.5	0.0	9.0	10.4	3.2	7
ICPMDMR-24-2	ICPMDML-27	3.2	0.0	0.6	3.4	0.0	0.0	6.3	0.0	4.0	0.6	1.8	9
ICPMDMR-24-3	ICPMDML-28	2.0	0.0	0.0	2.8	6.3	0.0	8.3	3.3	4.0	0.0	2.7	8
ICPMDMR-24-4	ICPMDML-29	3.3	0.0	0.9	0.0	0.0	0.0	4.3	0.0	5.0	1.2	1.5	9
ICPMDMR-24-12	ICPMDML-30	1.9	0.0	7.1	0.0	*	0.0	4.6	3.0	18.0	10.7	5.0	6
150-SB-24	ICPMDML-31	1.3	0.0	4.4	1.9	0.0	0.0	4.9	1.6	6.0	2.2	2.2	9
229-SB-24	ICPMDML-32	1.3	0.0	2.1	0.0	0.0	0.0	4.4	0.0	4.0	0.6	1.2	10
185-SB-24	ICPMDML-33	1.9	0.0	0.0	0.0	0.0	3.6	4.1	0.0	4.0	0.0	1.4	10
171-SB-24	ICPMDML-34	1.9	0.0	0.0	0.0	0.0	16.4	16.7	0.0	8.0	20.8	6.4	6
J-2650	ICPMDML-35	1.3	0.0	0.0	0.0	0.0	0.0	12.8	0.0	7.0	3.8	2.5	8
J-2539	ICPMDML-36	0.6	0.0	19.6	3.3	0.0	0.0	10.0	1.8	16.0	32.2	8.3	6
J-2553	ICPMDML-37	2.6	0.0	0.0	6.2	0.0	0.0	6.8	1.8	11.0	0.0	2.8	7
JMSB20223	ICPMDML-38	1.9	0.0	0.5	1.3	0.0	0.0	5.0	0.0	11.0	0.0	2.0	9
JMSB20155	ICPMDML-39	1.3	0.0	12.7	0.0	0.0	0.0	8.1	0.0	7.0	7.3	3.6	6
JMSB20229	ICPMDML-40	2.5	0.0	29.0	11.1	0.0	0.0	11.7	10.0	27.0	79.0	17.0	4
Location Mean		4.0	2.4	6.3	3.9	2.5	3.4	9.3	4.9	10.9	10.7		

* No germination

Identity	PMDMVN Code-2024	Downy Mildew Incidence (%) 60 DAS									
		ABD	CBE	DHL	GLR	HSR	JPR	MDR	JMR	MYS	PTR
7042 S	ICPMDML-25	78.0	90.1	98.7	93.6	80.0	78.0	88.2	76.6	99.0	99.4

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Table IV 12 -Blast severity of PMBVN-2024 (PMPT-V) entries at -30 DAS- Kharif 2024

Identity	Code-2024	Blast severity score (0-9 scale) 60 DAS												Entry Mean
		ABD	DHL	GLR	HSR	JPR	MDR	MYS	JMR	VZN	Tirupathi	NDL	PTR	
PMBVN -1	ICPMBL-1	0.0	3.5	1.0	1.7	1.0	1.5	0.0	0.1	1.5	1.6	5.0	3.8	1.7
PMBVN -2	ICPMBL-2	0.0	3.5	1.0	2.0	1.0	1.5	1.0	0.0	2.6	1.5	3.0	3.8	1.7
PMBVN -3	ICPMBL-3	1.0	1.0	0.0	2.0	1.0	1.5	0.5	0.1	2.0	*	3.0	2.8	1.4
PMBVN -4	ICPMBL-4	1.0	2.0	0.5	1.6	1.0	1.0	0.5	0.0	1.9	0.6	3.0	3.0	1.3
PMBVN -5	ICPMBL-5	1.0	1.5	0.0	1.3	1.0	1.0	1.0	0.0	2.8	1.0	5.0	3.8	1.6
PMBVN -6	ICPMBL-6	1.0	1.5	0.0	2.5	0.5	1.0	1.0	0.0	2.4	0.1	4.0	4.0	1.5
PMBVN -7	ICPMBL-7	1.0	2.5	0.5	1.8	0.5	1.0	1.0	0.1	1.7	1.1	3.0	4.0	1.5
PMBVN -8	ICPMBL-8	1.0	0.5	0.0	1.4	1.0	1.0	1.0	0.2	2.5	0.0	3.0	3.0	1.2
PMBVN -9	ICPMBL-9	1.0	2.0	0.0	1.3	1.0	1.0	1.0	0.0	2.8	0.8	3.0	4.0	1.5
PMBVN -10	ICPMBL-10	0.0	1.0	0.0	1.2	1.0	1.0	0.5	0.4	2.1	1.1	4.0	1.5	1.2
PMBVN -11	ICPMBL-11	0.0	2.5	0.0	2.0	1.0	1.0	0.5	0.0	3.2	0.8	4.0	2.0	1.4
PMBVN -12	ICPMBL-12	0.0	1.5	0.0	1.0	1.0	1.0	0.5	0.0	2.2	0.7	3.0	2.0	1.1
PMBVN -13	ICPMBL-13	0.0	1.5	0.0	1.4	1.0	1.0	1.0	0.1	2.5	0.0	3.0	2.5	1.2
PMBVN -14	ICPMBL-14	0.5	0.5	0.0	1.5	1.0	1.0	0.0	0.1	2.7	0.0	0.0	2.0	0.8
PBPMPOP 2-206-3-7-5	ICPMBL-15	0.0	0.0	0.0	*	1.0	1.0	0.0	0.1	3.0	*	1.0	1.5	0.8
PBPMPOP 2-72-1-1-4	ICPMBL-16	0.0	0.5	0.0	1.5	1.0	1.0	1.0	0.1	1.9	0.0	1.0	2.0	0.8
PBPMPOP 2-206-3-5-6	ICPMBL-17	0.5	0.5	0.0	1.2	1.0	1.0	0.5	0.3	1.6	0.3	2.0	2.0	0.9
PBPMPOP 2-48-5-1	ICPMBL-18	0.0	0.0	0.0	1.4	0.5	1.0	0.5	0.0	2.8	0.2	1.0	1.5	0.7
PBPMPOP 2-58-11-1	ICPMBL-19	1.0	0.5	0.0	2.4	1.0	1.0	0.0	0.1	1.7	0.6	1.0	3.0	1.0
PBPMPOP 2-210-1-5-2	ICPMBL-20	1.5	2.0	0.0	*	1.0	1.0	0.5	0.0	2.0	0.0	3.0	1.0	1.1
PBPMPOP 2-58-2-1	ICPMBL-21	0.0	0.5	0.0	1.4	1.0	1.0	0.0	0.2	1.6	0.0	1.0	1.5	0.7
ICMR 06444	ICPMBL-22	1.0	0.5	0.0	1.0	1.0	1.0	0.0	0.0	2.2	0.2	0.0	2.0	0.7
IP 21187-P1	ICPMBL-23	1.0	0.5	0.0	1.4	1.0	1.0	0.5	0.4	2.0	0.4	1.0	2.0	0.9
ICMB 95444	ICPMBL-24	1.0	3.0	1.0	2.5	2.0	2.0	3.0	1.5	2.3	3.5	7.0	5.0	2.8
HP-B-458	ICPMBL-25	0.5	0.0	0.0	1.4	0.5	1.0	0.5	0.4	2.3	*	1.0	1.5	0.8
ICMR 06666	ICPMBL-26	0.0	0.0	0.0	1.6	1.0	1.0	0.0	0.0	2.3	0.4	1.0	1.0	0.7
ICMR 10888	ICPMBL-27	0.0	1.0	0.0	1.4	1.0	1.0	0.0	0.1	2.8	0.0	1.0	2.0	0.9
IP 12374-1-1-2	ICPMBL-28	1.0	2.5	0.0	1.6	1.0	1.0	0.0	0.0	1.8	*	3.0	2.5	1.3
HP-B-502	ICPMBL-29	1.0	2.0	0.0	1.6	1.0	1.0	0.0	0.0	2.6	0.0	4.0	3.0	1.4
ICMR 11003	ICPMBL-30	1.0	0.5	0.0	1.5	0.5	1.0	0.5	0.0	1.6	0.5	0.0	1.5	0.7
ICPMBR-24-1	ICPMBL-31	0.5	2.0	0.0	1.2	0.5	1.0	0.0	0.1	1.9	0.5	2.0	1.5	0.9
ICPMBR-24-2	ICPMBL-32	0.0	0.0	0.0	1.6	1.0	1.0	0.0	0.1	1.9	0.4	1.0	2.0	0.8
ICPMBR-24-5	ICPMBL-33	0.5	2.0	0.0	1.9	1.0	1.0	0.0	0.1	3.0	0.1	3.0	2.5	1.3
ICPMBR-24-6	ICPMBL-34	1.0	1.0	0.0	1.2	1.0	1.0	0.5	0.4	3.4	0.0	3.0	2.0	1.2
IP 11353	ICPMBL-35	0.5	0.0	0.0	*	1.0	1.0	0.0	0.1	2.9	0.0	3.0	1.5	0.9

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Table IV 12 -Blast severity of PMBVN-2024 (PMPT-V) entries at -30 DAS- Kharif 2024

Identity	Code-2024	Blast severity score (0-9 scale) 60 DAS												Entry Mean
		ABD	DHL	GLR	HSR	JPR	MDR	MYS	JMR	VZN	Tirupathi	NDL	PTR	
IP 22423	ICPMBL-36	0.5	1.5	0.0	1.5	1.0	1.0	0.0	0.2	2.4	0.8	1.0	2.0	1.0
ICMR100844	ICPMBL-37	0.5	1.5	0.0	1.4	1.0	1.0	0.5	0.3	2.0	0.0	1.0	1.0	0.9
IP 8280	ICPMBL-38	1.0	1.0	0.0	*	1.0	1.0	0.5	0.0	2.3	0.2	3.0	3.0	1.2
IP 12322	ICPMBL-39	0.5	0.0	0.0	1.6	1.0	1.0	0.5	0.0	2.8	0.0	0.0	1.5	0.7
150-SB-24	ICPMBL-40	1.5	0.5	0.0	2.4	1.0	2.0	0.5	0.0	0.9	0.0	1.0	2.5	1.0
217-SB-24	ICPMBL-41	1.5	0.5	0.0	1.2	1.0	1.5	1.0	0.3	2.5	0.7	2.0	2.0	1.2
185-SB-24	ICPMBL-42	0.0	1.0	0.0	1.8	1.0	0.0	0.0	0.0	1.9	0.3	3.0	2.5	1.0
J-26650	ICPMBL-43	1.0	2.0	0.0	1.1	1.0	1.0	1.0	0.4	2.5	0.5	4.0	3.0	1.5
J-2539	ICPMBL-44	1.5	2.0	0.0	1.6	1.0	1.0	1.0	0.1	3.0	0.8	5.0	3.8	1.7
J-2596	ICPMBL-45	1.0	4.0	1.0	2.0	1.0	1.0	0.0	0.1	2.9	1.6	7.0	4.3	2.2
JMSB20208	ICPMBL-46	1.0	5.5	1.0	1.7	1.0	1.5	1.0	0.3	3.2	1.5	7.0	4.0	2.4
JMSBB20202	ICPMBL-47	1.0	4.0	1.0	1.2	1.0	1.0	0.5	0.3	2.1	1.0	7.0	2.0	1.8
24R 39	ICPMBL-48	1.0	1.0	0.0	1.3	1.0	1.0	1.0	0.2	2.0	0.3	2.0	3.0	1.2
24R 44	ICPMBL-49	0.5	1.0	0.0	1.2	1.0	1.0	1.0	0.1	2.4	0.7	1.0	2.0	1.0
24R 45	ICPMBL-50	0.5	0.0	0.0	1.2	0.5	1.0	0.0	0.3	1.9	0.6	1.0	1.5	0.7
24R 54	ICPMBL-51	0.0	3.5	0.0	2.6	1.0	1.0	0.5	0.2	2.6	2.2	4.0	4.0	1.8
128 R	ICPMBL-52	0.5	1.0	0.0	1.2	1.0	1.0	0.0	0.1	2.7	0.6	5.0	2.0	1.3
24R 59	ICPMBL-53	1.0	3.0	0.0	1.7	1.0	1.0	0.0	0.1	1.2	0.1	3.0	1.0	1.1
24R 64	ICPMBL-54	2.0	3.0	0.0	1.4	0.5	2.0	0.5	0.1	2.4	0.8	4.0	3.8	1.7
24R 82	ICPMBL-55	0.0	0.0	0.0	1.8	1.0	1.0	0.5	0.1	1.8	0.0	0.0	2.0	0.7
24R 106	ICPMBL-56	1.0	2.5	0.0	1.2	1.0	1.0	1.0	0.1	2.8	0.5	3.0	3.0	1.4
24R 134	ICPMBL-57	0.0	2.5	0.0	1.5	1.0	1.5	0.5	0.2	2.2	0.0	3.0	2.0	1.2
24R 89 (1356R)	ICPMBL-58	0.0	1.5	1.0	1.7	1.0	1.0	0.5	0.3	2.7	0.0	7.0	1.0	1.5
24R 84	ICPMBL-59	1.0	4.5	0.0	1.6	1.0	1.0	1.0	0.3	2.2	0.9	7.0	4.0	2.0
BL 77 (1439)	ICPMBL-60	0.5	1.5	0.0	1.3	1.0	1.5	1.0	0.6	2.6	0.3	3.0	3.5	1.4
Location Mean		0.6	1.5	0.1	1.6	1.0	1.1	0.5	0.2	2.3	0.5	2.8	2.5	

* No Germination

Check	DAS	Blast severity score (0-9 scale)											
		ABD	DHL	GLR	HSR	JPR	MDR	MYS	JMR	VZM	Tirupathi	NDL	PTR
IR-I: ICMB 95444 = Indicator row	30	1.0	3.0	1.0	2.5	2.0	2.0	3.0	1.5	2.3	3.5	7.0	5.0
	45												
	60												

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Table IV 12A -Blast severity of PMBVN-2024 entries at -45 DAS- Kharif 2024

Identity	Code-2024	Blast severity score (0-9 scale) 60 DAS												Entry Mean
		ABD	DHL	GLR	HSR	JPR	MDR	MYS	JMR	VZN	Tirupathi	NDL	PTR	
PMBVN -1	ICPMBL-1	0.0	5.5	2.5	2.3	2.0	2.0	2.0	0.6	3.3	2.8	7.0	5.8	3.0
PMBVN -2	ICPMBL-2	0.0	4.5	2.0	2.4	2.0	2.0	1.0	0.1	3.8	3.2	5.0	5.8	2.6
PMBVN -3	ICPMBL-3	1.5	2.0	1.5	2.2	2.0	1.5	2.0	0.5	3.1	*	3.0	4.8	2.2
PMBVN -4	ICPMBL-4	1.5	3.0	2.0	2.4	2.0	1.0	3.0	0.1	3.1	1.5	4.0	4.8	2.4
PMBVN -5	ICPMBL-5	1.5	2.5	2.0	1.9	2.0	1.0	2.0	0.0	4.2	1.7	5.0	5.5	2.4
PMBVN -6	ICPMBL-6	2.5	2.5	1.0	2.8	1.0	2.0	2.0	0.0	3.7	1.2	6.0	6.0	2.6
PMBVN -7	ICPMBL-7	1.5	3.5	2.0	2.1	1.0	2.5	3.0	0.3	5.0	3.4	3.0	5.8	2.8
PMBVN -8	ICPMBL-8	1.0	1.5	1.0	2.0	2.0	1.0	2.0	0.7	3.6	0.2	3.0	4.5	1.9
PMBVN -9	ICPMBL-9	2.0	3.0	0.0	1.8	2.0	2.5	2.0	0.0	4.9	2.1	5.0	6.0	2.6
PMBVN -10	ICPMBL-10	0.0	2.0	1.0	1.5	2.0	1.0	1.5	1.2	3.9	3.0	5.0	2.5	2.1
PMBVN -11	ICPMBL-11	0.0	3.5	0.0	2.6	2.0	2.0	1.0	0.2	4.6	1.2	4.0	3.0	2.0
PMBVN -12	ICPMBL-12	0.0	3.0	1.5	1.2	2.0	3.0	2.0	0.4	3.8	1.6	5.0	3.5	2.3
PMBVN -13	ICPMBL-13	0.0	2.5	1.0	1.6	2.0	1.5	3.0	0.3	3.9	0.0	5.0	4.3	2.1
PMBVN -14	ICPMBL-14	2.0	1.0	0.0	1.6	2.0	1.0	1.0	0.2	5.2	0.0	1.0	3.3	1.5
PBPMPOP 2-206-3-7-5	ICPMBL-15	0.0	0.5	0.0	*	2.0	1.0	1.0	0.2	5.0	*	3.0	2.5	1.5
PBPMPOP 2-72-1-1-4	ICPMBL-16	0.0	1.5	0.0	1.9	2.0	1.0	1.0	0.2	3.3	0.0	2.0	3.0	1.3
PBPMPOP 2-206-3-5-6	ICPMBL-17	1.0	1.5	0.0	1.2	2.0	1.0	2.0	0.7	2.8	1.3	3.0	3.0	1.6
PBPMPOP 2-48-5-1	ICPMBL-18	1.0	0.0	1.0	1.5	1.0	1.0	1.0	0.0	4.5	0.3	1.0	2.5	1.2
PBPMPOP 2-58-11-1	ICPMBL-19	2.0	1.0	1.0	3.2	2.0	1.0	1.0	0.2	4.2	1.5	3.0	4.0	2.0
PBPMPOP 2-210-1-5-2	ICPMBL-20	2.5	3.0	0.0	*	2.0	2.5	1.0	0.0	2.9	0.4	5.0	2.0	1.9
PBPMPOP 2-58-2-1	ICPMBL-21	0.0	1.0	0.0	2.6	2.0	1.0	1.0	0.4	3.9	0.0	2.0	2.5	1.4
ICMR 06444	ICPMBL-22	1.5	1.5	0.0	1.7	2.0	1.0	1.0	0.0	4.3	0.5	1.0	3.0	1.5
IP 21187-P1	ICPMBL-23	2.5	1.0	1.0	1.6	2.0	1.0	1.0	0.8	4.3	1.4	3.0	3.0	1.9
ICMB 95444	ICPMBL-24	3.0	4.0	2.0	3.0	2.0	3.0	5.0	3.0	3.3	8.0	9.0	7.3	4.4
HP-B-458	ICPMBL-25	1.0	0.0	0.0	1.5	1.5	2.5	2.0	1.2	3.8	*	2.0	2.5	1.6
ICMR 06666	ICPMBL-26	0.0	0.5	0.0	3.1	2.0	2.0	1.0	0.3	3.6	1.6	1.0	2.0	1.4
ICMR 10888	ICPMBL-27	0.0	2.5	0.0	1.8	2.0	1.0	2.0	0.3	4.0	0.1	2.0	3.0	1.6
IP 12374-1-1-2	ICPMBL-28	2.0	4.5	1.0	1.6	2.0	3.0	2.0	0.0	3.6	*	5.0	4.0	2.6
HP-B-502	ICPMBL-29	2.5	3.0	0.0	2.0	2.0	1.0	3.0	0.0	4.1	0.0	5.0	4.3	2.2
ICMR 11003	ICPMBL-30	2.0	2.0	1.0	1.7	1.0	1.0	2.0	0.3	2.9	1.4	2.0	2.0	1.6
ICPMBR-24-1	ICPMBL-31	2.0	3.0	0.0	1.2	1.0	2.0	1.0	0.6	3.0	1.4	3.0	2.5	1.7
ICPMBR-24-2	ICPMBL-32	0.0	0.0	0.0	1.8	2.0	1.0	2.0	0.2	4.1	1.1	3.0	3.0	1.5
ICPMBR-24-5	ICPMBL-33	1.0	3.0	1.0	2.1	2.0	2.0	3.0	0.4	4.3	0.4	5.0	4.0	2.4
ICPMBR-24-6	ICPMBL-34	1.5	2.0	0.0	2.0	2.0	1.5	1.0	0.9	4.2	0.0	4.0	3.3	1.9

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Table IV 12A -Blast severity of PMBVN-2024 entries at -45 DAS- Kharif 2024

Identity	Code-2024	Blast severity score (0-9 scale) 60 DAS												Entry Mean
		ABD	DHL	GLR	HSR	JPR	MDR	MYS	JMR	VZN	Tirupathi	NDL	PTR	
IP 11353	ICPMBL-35	1.0	0.5	1.0	*	2.0	1.0	1.0	0.4	4.3	0.1	3.0	2.5	1.5
IP 22423	ICPMBL-36	1.0	3.0	0.0	1.7	2.0	2.0	1.0	0.8	4.2	1.4	1.0	2.5	1.7
ICMR100844	ICPMBL-37	1.5	2.5	1.0	1.7	2.0	1.0	1.0	0.8	3.5	0.0	1.0	2.0	1.5
IP 8280	ICPMBL-38	1.5	2.0	0.0	*	2.0	2.5	2.0	0.1	4.2	0.9	5.0	4.8	2.3
IP 12322	ICPMBL-39	1.5	0.0	0.0	2.2	2.0	1.0	1.0	0.6	4.6	0.0	2.0	2.5	1.5
150-SB-24	ICPMBL-40	2.0	2.0	0.0	2.7	2.0	2.0	2.0	0.1	2.4	0.0	3.0	4.5	1.9
217-SB-24	ICPMBL-41	2.5	1.5	1.0	2.2	2.0	1.5	2.0	1.0	4.4	2.1	4.0	2.5	2.2
185-SB-24	ICPMBL-42	0.0	2.5	2.0	1.8	2.0	1.5	1.0	0.0	3.8	0.7	5.0	4.5	2.1
J-26650	ICPMBL-43	3.0	4.0	1.0	2.9	2.0	2.0	2.0	1.0	3.0	1.4	4.0	5.5	2.7
J-2539	ICPMBL-44	2.0	3.0	1.0	1.7	2.0	2.5	3.0	0.4	3.8	1.5	7.0	5.5	2.8
J-2596	ICPMBL-45	2.5	5.5	3.0	2.2	2.0	3.0	1.0	0.6	4.6	3.3	8.0	6.5	3.5
JMSB20208	ICPMBL-46	2.5	6.5	3.0	1.9	2.0	1.5	2.0	1.1	4.1	3.8	9.0	6.3	3.6
JMSBB20202	ICPMBL-47	2.5	5.0	3.0	1.4	2.0	3.0	1.0	0.7	3.8	1.6	9.0	3.8	3.1
24R 39	ICPMBL-48	1.5	2.0	1.0	1.7	2.0	1.0	1.0	0.5	3.7	0.9	3.0	4.8	1.9
24R 44	ICPMBL-49	1.5	1.5	2.0	1.8	2.0	1.0	2.0	0.5	4.0	1.3	3.0	3.0	2.0
24R 45	ICPMBL-50	1.0	0.5	0.0	2.2	1.0	1.0	1.0	0.7	3.1	1.5	2.0	2.5	1.4
24R 54	ICPMBL-51	0.0	4.5	1.0	2.9	2.0	2.5	3.0	0.5	3.7	3.1	5.0	6.0	2.9
128 R	ICPMBL-52	1.5	2.0	0.0	1.5	2.0	1.0	1.0	0.3	4.5	1.4	7.0	4.0	2.2
24R 59	ICPMBL-53	1.5	4.0	1.0	1.9	2.0	2.5	2.0	0.3	3.2	1.1	5.0	2.0	2.2
24R 64	ICPMBL-54	2.5	4.5	1.5	1.5	1.5	2.5	2.0	0.4	3.3	1.5	6.0	5.8	2.7
24R 82	ICPMBL-55	0.0	0.0	0.0	2.5	2.0	1.0	1.0	0.3	4.8	0.0	0.0	3.3	1.2
24R 106	ICPMBL-56	2.0	4.0	1.0	1.9	2.0	2.5	1.0	0.3	3.8	1.3	5.0	4.3	2.4
24R 134	ICPMBL-57	0.0	4.0	1.5	1.8	2.0	2.5	2.0	0.5	3.8	0.0	5.0	3.3	2.2
24R 89 (1356R)	ICPMBL-58	0.0	2.5	2.0	1.9	2.0	1.5	1.0	0.6	4.6	0.4	9.0	2.0	2.3
24R 84	ICPMBL-59	2.5	5.5	0.0	1.8	2.0	1.5	2.0	0.7	3.8	1.8	9.0	5.8	3.0
BL 77 (1439)	ICPMBL-60	1.5	3.0	1.5	1.5	2.0	2.0	2.0	1.4	4.0	1.4	5.0	5.3	2.5
Location Mean		1.3	2.5	0.9	2.0	1.9	1.7	1.7	0.5	3.9	1.3	4.2	3.9	

* No Germination

Check	DAS	Blast severity score (0-9 scale)											
		ABD	DHL	GLR	HSR	JPR	MDR	MYS	JMR	Izianagara	Tirupathi	NDL	PTR
IR-I: ICMB 95444 = Indicator row	30												
	45	3.0	4.0	2.0	3.0	2.0	3.0	5.0	3.0	3.3	8.0	9.0	7.3
	60												

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Table IV 12B -Blast severity of PMBVN-2024(PMPT-V) entries at -60 DAS- Kharif 2024

Identity	Code-2024	Blast severity score (0-9 scale) 60 DAS												Entry Mean	Resistant (≤ 3.0 score) at no. of locations
		ABD	DHL	GLR	HSR	JPR	MDR	MYS	JMR	VZN	Tirupathi	NDL	PTR		
PMBVN -1	ICPMBL-1	0.0	6.5	5.0	3.5	3.0	5.5	4.0	2.7	4.6	4.4	8.0	7.0	4.5	3
PMBVN -2	ICPMBL-2	0.0	5.5	4.5	2.6	3.0	4.5	4.0	1.1	6.0	3.1	7.0	6.5	4.0	4
PMBVN -3	ICPMBL-3	2.5	3.0	3.5	2.4	3.0	1.5	3.0	2.8	4.3	*	5.0	5.5	3.3	7
PMBVN -4	ICPMBL-4	3.5	4.0	5.0	2.9	3.0	2.5	3.0	0.9	4.2	1.8	6.0	5.5	3.5	6
PMBVN -5	ICPMBL-5	3.0	3.5	4.5	2.5	3.0	2.5	4.0	1.5	5.1	2.1	7.0	6.0	3.7	6
PMBVN -6	ICPMBL-6	5.0	3.5	3.0	3.1	3.0	3.5	4.0	2.1	5.3	2.2	7.0	7.0	4.1	4
PMBVN -7	ICPMBL-7	3.0	4.5	4.0	2.8	1.5	4.0	4.0	1.5	6.3	5.7	5.0	7.0	4.1	4
PMBVN -8	ICPMBL-8	2.5	2.0	3.0	2.3	3.0	1.5	3.0	2.7	5.1	0.9	4.0	5.3	2.9	9
PMBVN -9	ICPMBL-9	4.0	4.0	1.0	2.5	3.0	4.0	3.0	0.4	6.5	3.2	5.0	6.5	3.6	5
PMBVN -10	ICPMBL-10	0.0	3.0	3.0	2.4	3.0	2.0	3.0	5.3	5.4	3.8	7.0	3.5	3.5	7
PMBVN -11	ICPMBL-11	0.0	4.5	1.0	3.4	3.0	4.0	4.0	2.4	6.2	2.5	6.0	4.5	3.5	5
PMBVN -12	ICPMBL-12	0.0	4.0	3.5	2.1	3.0	4.5	3.0	1.2	5.3	2.5	6.0	4.5	3.3	6
PMBVN -13	ICPMBL-13	0.0	3.5	2.5	1.9	3.0	2.0	4.0	1.0	5.3	0.0	5.0	5.0	2.8	7
PMBVN -14	ICPMBL-14	3.0	1.5	1.0	2.1	3.0	1.0	2.0	1.4	6.5	0.0	1.0	3.8	2.2	10
PBPMPOP 2-206-3-7-5	ICPMBL-15	0.0	1.0	1.5	*	3.0	1.5	3.0	0.8	6.6	*	3.0	3.0	2.3	9
PBPMPOP 2-72-1-1-4	ICPMBL-16	0.0	2.0	1.0	2.5	3.0	1.5	2.0	0.9	5.3	0.0	2.0	3.0	1.9	11
PBPMPOP 2-206-3-5-6	ICPMBL-17	2.0	2.0	2.0	1.4	3.0	1.5	3.0	5.0	4.2	1.7	3.0	3.0	2.7	10
PBPMPOP 2-48-5-1	ICPMBL-18	2.5	0.5	3.0	2.0	1.5	1.0	3.0	0.3	5.6	0.8	3.0	3.0	2.2	11
PBPMPOP 2-58-11-1	ICPMBL-19	4.0	2.0	3.5	4.2	3.0	2.0	4.0	1.4	5.7	1.9	3.0	4.5	3.3	6
PBPMPOP 2-210-1-5-2	ICPMBL-20	5.5	4.0	1.0	*	3.0	4.0	2.0	0.5	4.9	1.5	5.0	3.0	3.1	6
PBPMPOP 2-58-2-1	ICPMBL-21	0.0	1.5	1.5	2.8	3.0	1.0	2.0	2.6	5.0	0.1	2.0	3.0	2.0	11
ICMR 06444	ICPMBL-22	3.0	2.0	1.0	2.0	3.0	1.0	2.0	0.3	5.3	0.7	1.0	3.0	2.0	11
IP 21187-P1	ICPMBL-23	4.0	2.0	2.5	1.8	3.0	2.0	2.0	2.2	6.2	2.2	3.0	3.0	2.8	10
ICMB 95444	ICPMBL-24	4.0	5.0	4.0	4.2	4.0	4.5	5.5	4.0	5.5	9.0	9.0	8.5	5.6	0
HP-B-458	ICPMBL-25	1.5	0.0	1.0	2.0	2.0	4.5	3.0	4.8	5.8	*	2.0	3.5	2.7	7
ICMR 06666	ICPMBL-26	0.0	1.0	1.0	3.9	3.0	3.0	2.0	1.5	4.7	2.6	1.0	3.0	2.2	10
ICMR 10888	ICPMBL-27	0.0	3.0	1.5	1.8	3.0	2.0	2.0	2.5	6.2	0.9	2.0	3.8	2.4	10
IP 12374-1-1-2	ICPMBL-28	3.5	5.5	3.5	2.5	3.0	5.5	3.0	0.8	4.5	*	5.0	3.8	3.7	4
HP-B-502	ICPMBL-29	4.5	4.5	1.0	2.3	3.0	1.0	4.0	0.7	5.5	0.0	7.0	4.3	3.1	6
ICMR 11003	ICPMBL-30	3.5	3.0	2.5	2.5	1.5	1.0	2.0	1.4	4.2	3.4	2.0	3.0	2.5	9
ICPMBR-24-1	ICPMBL-31	3.5	4.0	1.5	1.6	1.5	3.5	3.0	3.3	4.1	1.7	3.0	3.5	2.9	6
ICPMBR-24-2	ICPMBL-32	0.0	1.0	1.5	2.2	3.0	1.5	3.0	1.2	5.3	1.3	3.0	4.0	2.3	10
ICPMBR-24-5	ICPMBL-33	3.5	4.5	2.5	2.4	3.0	4.5	4.0	1.9	5.5	0.8	5.0	5.0	3.6	5
ICPMBR-24-6	ICPMBL-34	2.5	2.5	1.5	2.0	3.0	2.0	2.0	3.0	6.2	0.0	4.0	4.0	2.7	9

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Table IV 12B -Blast severity of PMBVN-2024(PMPT-V) entries at -60 DAS- Kharif 2024

Identity	Code-2024	Blast severity score (0-9 scale) 60 DAS												Entry Mean	Resistant (≤ 3.0 score) at no. of locations
		ABD	DHL	GLR	HSR	JPR	MDR	MYS	JMR	VZN	Tirupathi	NDL	PTR		
IP 11353	ICPMBL-35	3.0	1.0	2.5	*	3.0	1.0	3.0	2.4	5.9	0.6	5.0	3.5	2.8	8
IP 22423	ICPMBL-36	2.0	4.0	1.0	2.1	3.0	4.0	3.0	3.9	5.7	2.4	1.0	4.0	3.0	7
ICMR100844	ICPMBL-37	2.5	3.5	2.5	2.3	3.0	2.0	3.0	2.7	5.3	1.9	1.0	3.0	2.7	10
IP 8280	ICPMBL-38	3.0	3.0	1.0	*	3.0	4.0	3.5	1.1	5.2	1.2	6.0	5.3	3.3	6
IP 12322	ICPMBL-39	3.5	0.5	1.0	2.2	3.0	1.5	2.0	2.6	6.4	0.9	2.0	3.0	2.4	10
150-SB-24	ICPMBL-40	2.5	3.0	1.0	3.2	3.0	2.0	3.0	0.8	4.2	0.0	3.0	4.8	2.5	9
217-SB-24	ICPMBL-41	4.5	2.0	2.5	3.2	3.0	1.5	2.0	4.2	5.7	2.7	6.0	3.0	3.4	7
185-SB-24	ICPMBL-42	0.0	3.5	3.5	2.2	3.0	3.0	4.0	2.1	5.0	0.9	6.0	4.8	3.2	6
J-26650	ICPMBL-43	5.5	5.5	3.0	3.6	3.0	4.5	4.0	4.2	3.9	2.2	6.0	6.5	4.3	3
J-2539	ICPMBL-44	3.5	4.5	2.5	2.1	3.0	4.0	4.0	1.8	5.4	2.0	8.0	6.0	3.9	5
J-2596	ICPMBL-45	4.5	6.5	6.0	3.7	3.0	5.0	2.0	2.0	6.6	4.6	9.0	7.0	5.0	3
JMSB20208	ICPMBL-46	4.5	7.5	6.0	2.8	3.0	5.5	3.0	3.8	5.6	8.0	9.0	7.0	5.5	2
JMSBB20202	ICPMBL-47	4.0	6.0	5.5	1.6	3.0	5.5	3.0	1.2	6.1	2.2	9.0	5.0	4.3	5
24R 39	ICPMBL-48	3.0	2.5	3.5	3.1	3.0	2.0	3.0	2.2	4.8	1.2	3.0	5.5	3.1	8
24R 44	ICPMBL-49	2.5	2.5	3.0	2.6	3.0	1.0	2.5	2.5	5.8	1.8	3.0	3.0	2.8	11
24R 45	ICPMBL-50	1.5	1.5	1.0	2.4	3.0	2.0	3.0	3.7	4.4	1.7	2.0	3.5	2.5	9
24R 54	ICPMBL-51	0.5	5.5	3.5	3.7	3.0	4.5	3.0	1.9	5.2	5.5	5.0	6.5	4.0	4
128 R	ICPMBL-52	2.0	3.0	1.0	1.8	3.0	1.0	4.0	1.0	6.0	2.1	8.0	6.0	3.2	8
24R 59	ICPMBL-53	3.0	5.5	3.5	2.5	3.0	4.5	3.0	1.3	4.6	1.4	5.0	4.0	3.4	6
24R 64	ICPMBL-54	5.5	6.5	3.5	2.1	3.0	6.5	4.0	4.0	5.6	1.7	6.0	7.0	4.6	3
24R 82	ICPMBL-55	0.0	0.5	1.0	3.3	3.0	2.0	3.0	1.4	5.6	0.2	0.0	3.5	2.0	5
24R 106	ICPMBL-56	3.5	5.0	3.0	2.6	3.0	4.5	4.0	1.5	4.7	2.9	5.0	5.0	3.7	5
24R 134	ICPMBL-57	0.0	5.0	3.5	2.1	3.0	4.5	3.0	3.9	5.4	1.2	5.0	5.0	3.5	5
24R 89 (1356R)	ICPMBL-58	0.0	3.5	3.5	2.2	3.0	3.0	3.0	2.1	6.5	0.6	9.0	3.5	3.3	7
24R 84	ICPMBL-59	4.0	7.0	2.0	2.1	3.0	4.0	3.0	2.5	5.8	3.1	9.0	6.0	4.3	5
BL 77 (1439)	ICPMBL-60	2.5	4.0	3.0	1.9	3.0	4.5	4.0	5.8	5.3	1.9	5.0	6.0	3.9	5
Location Mean		2.4	3.4	2.6	2.5	2.9	3.0	3.1	2.2	5.4	2.1	4.7	4.7		

* No Germination

Check	DAS	Blast severity score (0-9 scale)											
		ABD	DHL	GLR	HSR	JPR	MDR	MYS	JMR	VZN	Tirupathi	NDL	PTR
ICMB 95444	30												
	45												
	60	4.0	5.0	4.0	4.2	4.0	4.5	5.5	4.0	5.5	9.0	9.0	8.5

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Table IV 13: Management of downy mildew by using organic practices (PMPT VII) *Kharif* 2024

Downy mildew disease incidence (%) at Pre-tillering stage (30 DAS)

T.No.	Treatments	Time and method of applications	Zone A					Zone B				
			MDR	JPR	HSR	GLR	JMR	MYS	CBE	DHL	ABD1	PTR
T1	Microbial Consortia (Combination of 3 microbes) Trichoderma/Bacillus/Pseudomonas	Seed Treatment @ 8.0 g/kg	4.3	*	4.1	1.2	7.6	14.0	1.2	2.4	4.3	3.5
T2	Microb Consortia (Combination of 3 microbes) Trichoderma/Bacillus/Pseudomonas	Seed Treatment @ 8.0 g/kg + Soil amendment @ 8.0 g/lt	3.0	*	5.5	1.6	9.8	15.3	1.0	1.1	3.7	3.2
T3	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Seed Treatment @ 8.0 g/kg	3.8	*	5.8	1.9	10.8	12.4	1.0	1.6	4.3	4.7
T4	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Soil Treatment @ 8.0 g/lt	3.0	*	4.6	1.5	10.0	15.8	0.7	2.6	5.0	4.5
T5	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Seed Treatment @ 8.0 g/kg + Soil amendment @ 8.0 g/lt	2.3	*	5.3	1.1	12.7	11.8	1.0	0.8	4.3	7.9
T6	Pseudomonas + Biochar	Seed Treatment @ 8.0 g/kg + Soil amendment 1 %	3.3	*	5.1	1.3	12.6	12.7	0.8	3.5	5.7	4.7
T7	Trichoderma + Biochar	Seed Treatment @ 8.0 g/kg+ Soil amendment 1 %	1.5	*	4.4	1.2	10.9	14.5	1.0	1.5	4.7	6.2
T8	Seed Treatment Metalaxyl 35 SD (6 g/kg)	Seed treatment	0.5	*	0.5	0.0	7.8	3.4	0.0	0.2	1.7	0.0
T9	Control (moderate resistance)	Water treatment	11.3	*	17.7	2.3	15.5	29.5	1.5	5.4	9.0	9.6
	SE ±		0.4	*	1.2	0.5	1.1	0.7	0.7	0.77	0.4	1.3
	CD at 5%		1.7	*	3.5	1.5	3.3	2.0	2.1	2.3	1.1	3.9
	CV %		22.0	*	40.8	62.8	17.3	9.6	130.9	62.6	13.1	12.8

* No data

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Table IV 13: Management of downy mildew by using organic practices (PMPT VII) *Kharif* 2024

Downy mildew disease incidence (%) at Pre-tillering stage (60 DAS)

T.No.	Treatments	Time and method of applications	Zone A					Zone B				
			MDR	JPR	HSR	GLR	JMR	MYS	CBE	DHL	ABD1	PTR
T1	Microbial Consortia (Combination of 3 microbes) Trichoderma/Bacillus/Pseudomonas	Seed Treatment @ 8.0 g/kg	9.0	9.5	9.9	2.5	14.0	16.0	6.9	3.3	5.0	9.7
T2	Microb Consortia (Combination of 3 microbes) Trichoderma/Bacillus/Pseudomonas	Seed Treatment @ 8.0 g/kg + Soil amendment @ 8.0 g/lt	6.5	8.3	9.0	2.8	14.2	16.5	4.8	2.5	4.7	6.9
T3	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Seed Treatment @ 8.0 g/kg	8.5	8.4	7.3	3.0	12.4	16.3	6.7	2.4	5.3	9.6
T4	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Soil Treatment @ 8.0 g/lt	7.0	8.8	7.2	2.8	12.8	17.3	6.9	3.6	6.0	9.4
T5	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Seed Treatment @ 8.0 g/kg + Soil amendment @ 8.0 g/lt	5.0	6.9	7.1	3.0	14.2	12.5	4.3	2.3	5.0	13.0
T6	Pseudomonas + Biochar	Seed Treatment @ 8.0 g/kg + Soil amendment 1 %	7.3	8.3	8.3	2.3	15.4	14.0	7.0	3.9	5.7	9.3
T7	Trichoderma + Biochar	Seed Treatment @ 8.0 g/kg+ Soil amendment 1 %	3.8	8.7	6.6	3.4	15.7	14.3	7.5	3.0	4.3	11.8
T8	Seed Treatment Metalaxyl 35 SD (6 g/kg)	Seed treatment	1.3	5.9	0.7	1.2	9.9	4.3	3.6	2.3	3.0	3.6
T9	Control (moderate resistance)	Water treatment	16.5	17.1	19.1	4.7	18.0	35.8	10.0	7.2	12.0	17.6
	SE ±		0.5	*	1.1	0.7	0.9	0.6	0.8	0.9	0.3	5.7
	CD at 5%		1.4	*	3.1	1.5	2.7	1.7	2.4	2.7	1.0	2.0
	CV %		13.1	*	25.3	29.5	11.3	7.3	21.5	46.5	10.5	16.8

CHAPTER IV: PLANT PATHOLOGY

Table IV 13: Management of downy mildew by using organic practices (PMPT VII) *Kharif 2024*

Seedling Emergence

T.No.	Treatments	Time and method of applications	Zone A					Zone B				
			MDR	JPR	HSR	GLR	JMR	MYS	CBE	DHL	ABD1	PTR
T1	Microbial Consortia (Combination of 3 microbes) Trichoderma/Bacillus/Pseudomonas	Seed Treatment @ 8.0 g/kg	80	70	71	54	81	90	85	77	83	91
T2	Microb Consortia (Combination of 3 microbes) Trichoderma/Bacillus/Pseudomonas	Seed Treatment @ 8.0 g/kg + Soil amendment @ 8.0 g/lt	80	73	72	55	80	90	82	79	87	90
T3	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Seed Treatment @ 8.0 g/kg	80	72	75	53	82	90	81	83	85	84
T4	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Soil Treatment @ 8.0 g/lt	72	71	68	52	77	87	82	82	83	88
T5	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Seed Treatment @ 8.0 g/kg + Soil amendment @ 8.0 g/lt	80	76	74	51	79	91	83	87	88	88
T6	Pseudomonas + Biochar	Seed Treatment @ 8.0 g/kg + Soil amendment 1 %	78	73	75	52	80	92	81	77	80	81
T7	Trichoderma + Biochar	Seed Treatment @ 8.0 g/kg+ Soil amendment 1 %	79	72	76	55	78	89	81	79	71	81
T8	Seed Treatment Metalaxyl 35 SD (6 g/kg)	Seed treatment	76	82	84	55	79	91	82	87	90	89
T9	Control (moderate resistance)	Water treatment	71	66	69	51	80	81	85	74	67	94
	SE ±		0.56	1.12	1.9	3.0	2.81	1.41	1.82	1.45	2.41	1.48
	CD at 5%		1.66	3.39	5.4	8.9	NS	4.12	5.46	4.32	7.32	4.34
	CV %		1.5	2.67	5.0	9.7	6.13	3.12	3.8	3.95	5.2	3.81

CHAPTER IV: PLANT PATHOLOGY

Table IV 13: Management of downy mildew by using organic practices (PMPT VII) *Kharif* 2024

Grain Yield (Kg/Ha)

T.No.	Treatments	Time and method of applications	Zone A					Zone B				
			MDR	JPR	HSR	GLR	JMR	MYS	CBE	DHL	ABD1	PTR
T1	Microbial Consortia (Combination of 3 microbes) Trichoderma/Bacillus/Pseudomonas	Seed Treatment @ 8.0 g/kg	982.5	657.8	2587.5	1829.2	1840	1438.3	2134.3	1464.3	1378.88	1365.0
T2	Microb Consortia (Combination of 3 microbes) Trichoderma/Bacillus/Pseudomonas	Seed Treatment @ 8.0 g/kg + Soil amendment @ 8.0 g/lt	1535.0	793.7	2650.0	1820.8	2466	1785.8	2619.0	1363.3	1504.04	1387.8
T3	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Seed Treatment @ 8.0 g/kg	1132.5	703.1	2700.0	1841.7	2332	1720.3	2182.0	1561.7	1476.55	1291.3
T4	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Soil Treatment @ 8.0 g/lt	1505.0	595.8	2765.0	1837.5	2240	1716.5	2149.7	1506.0	1615.42	1390.0
T5	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Seed Treatment @ 8.0 g/kg + Soil amendment @ 8.0 g/lt	1548.8	934.3	2677.5	1733.3	2548	1971.8	2744.7	1733.3	1932.05	1262.8
T6	Pseudomonas + Biochar	Seed Treatment @ 8.0 g/kg + Soil amendment 1 %	1460.0	600.6	2800.0	1816.7	2329	1793.5	2502.0	1596.7	1351.13	1462.5
T7	Trichoderma + Biochar	Seed Treatment @ 8.0 g/kg+ Soil amendment 1 %	1625.0	738.8	2735.0	1833.3	2337	1826.0	2389.7	1682.7	1348.63	1281.0
T8	Seed Treatment Metalaxyl 35 SD (6 g/kg)	Seed treatment	1685.0	1210.7	3140.0	1929.2	2483	2044.0	2454.3	1637.0	2084.15	1961.3
T9	Control (moderate resistance)	Water treatment	475.0	524.3	2385.0	1733.3	1788	1016.3	2035.7	1401.7	1128.88	1050.3
	SE ±		21.2	49.75	76.5	123.1	138	14.0	53.1	147.2	60.4	55.4
	CD at 5%		62.4	150.45	223.5	368.8	413	41.1	159.3	441.3	181.2	161.7
	CV %		3.2	11.47	5.6	11.7	10.55	1.7	3.9	16.7	6.8	8.5

CHAPTER IV: PLANT PATHOLOGY

Table IV 13: Management of downy mildew by using organic practices (PMPT VII) *Kharif* 2024

Fodder Yield (Kg/Ha)

T.No.	Treatments	Time and method of applications	Zone A					Zone B				
			MDR	JPR	HSR	GLR	JMR	MYS	CBE	DHL	ABD1	PTR
T1	Microbial Consortia (Combination of 3 microbes) Trichoderma/Bacillus/Pseudomonas	Seed Treatment @ 8.0 g/kg	1572.5	1811.33	6940.0	4533.0	4913	3289.3	3480.7	4500.0	3508.88	4739.0
T2	Microb Consortia (Combination of 3 microbes) Trichoderma/Bacillus/Pseudomonas	Seed Treatment @ 8.0 g/kg + Soil amendment @ 8.0 g/lt	2330.0	2550.17	6890.0	4475.0	5952	3382.3	4748.7	5800.0	4020.82	4730.8
T3	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Seed Treatment @ 8.0 g/kg	1833.8	2407.17	7215.0	4643.0	5579	3320.0	3563.0	6400.0	3872.21	4740.0
T4	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Soil Treatment @ 8.0 g/lt	2317.5	1930.50	7260.0	4659.0	5310	3390.5	3512.3	6500.0	4060.54	4516.0
T5	Microbial Cons. (Combination of 4 microbes) Mycorrhiza/PSB/Pseudomonas/ Trichoderma	Seed Treatment @ 8.0 g/kg + Soil amendment @ 8.0 g/lt	2350.0	3622.67	7487.5	4614.0	6024	3982.8	4641.0	7800.0	4671.4	4097.5
T6	Pseudomonas + Biochar	Seed Treatment @ 8.0 g/kg + Soil amendment 1 %	2255.0	3169.83	7437.5	4594.0	5524	3333.0	4535.3	6400.0	3588.87	4432.5
T7	Trichoderma + Biochar	Seed Treatment @ 8.0 g/kg+ Soil amendment 1 %	2407.5	2979.17	7300.0	4704.0	5960	3341.0	3957.3	6000.0	3410.84	4112.5
T8	Seed Treatment Metalaxyl 35 SD (6 g/kg)	Seed treatment	2595.0	4051.67	7915.0	4880.0	6468	3977.0	4201.3	6900.0	4835.48	5695.0
T9	Control (moderate resistance)	Water treatment	792.5	1382.33	6065.0	4308.0	4397	2977.0	3219.7	5000.0	3258.87	3925.0
	SE ±		16.6	263.77	195.6	220.9	374	9.7	114.8	475.1	115.3	110.6
	CD at 5%		62.1	797.59	571.4	662.8	1120	28.3	344.2	1425.1	345.7	293.8
	CV %		1.6	17.20	5.5	8.9	11.62	0.6	5.1	13.2	5.1	4.4

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Table IV 14: Management of Blast disease by using Chemicals and bioagents (PMPT VIII) *Kharif 2024*.

Blast disease incidence at 30 DAS

T. No	Treatment	Time and method of applications	Zone A					Zone B					
			MDR	JPR	HSR	GLR	JMR	MYS	PTR	DHL	ABD1	VZN	Tirupathi
T ₁	Propiconazole + <i>Pseudomonas fluorescens</i>	Spray treatment with Propiconazole @ 1ml/lit on 20 DAS +1 spray of <i>Pseudomonas fluorescens</i> @ 10 g /lit on 35 DAS	3.9	*	11.4	2.2	18.4	9.3	20.4	14.4	16.4	29.9	7.3
T ₂	Microb Cons. (Combination of 4 microbes) <i>Mycorrhiza</i> /PSB/ <i>Pseudomonas</i> / <i>Trichoderma</i> + Tricyclazole 75% WP	Seed Treatment @ 8.0 g/kg + Spray treatment with Tricyclazole 75% WP on 35 DAS	3.9	*	12.2	11.8	20.6	10.7	27.8	22.2	21.0	26.3	8.8
T ₃	<i>Pseudomonas fluorescens</i> + Trifloxystrobin + Tebuconazole	Seed treatment with <i>Pseudomonas fluorescens</i> @ 10g/lit and spray Trifloxystrobin + Tebuconazole @ 0.04 on 35DAS	2.2	*	9.9	11.8	21.0	7.0	25.9	21.9	14.5	33.1	4.8
T ₄	Trifloxystrobin + Tebuconazole + <i>Bacillus subtilis</i>	Spray treatment with Trifloxystrobin + Tebuconazole @ 0.04 on 20DAS and <i>Bacillus subtilis</i> @ 10 g /lit on 35 DAS	1.7	*	9.8	0.0	22.3	6.7	25.0	15.4	16.2	29.2	11.4
T ₅	Trifloxystrobin + Tebuconazole	0.04% 1 spray on 35DAS	2.2	*	3.5	12.6	20.7	7.3	24.1	19.3	11.3	30.7	15.2
T ₆	Trifloxystrobin + Tebuconazole	0.04%2 sprays on 20 DAS and 35DAS	1.7	*	2.4	0.0	18.8	6.0	16.7	14.0	9.1	27.2	4.8
T ₇	<i>Pseudomonas</i> + Biochar	Seed Treatment @ 8.0 g/kg+ Soil amendment 1 % + Spray <i>Pseudomonas</i> @ 10 g /lit on 35 DAS	3.9	*	18.6	13.3	20.1	8.7	30.6	33.3	21.3	38.0	9.6
T ₈	<i>Trichoderma</i> + Biochar	Seed Treatment @ 8.0 g/kg + Soil amendment 1 % + Spray <i>Trichoderma</i> @ 10 g /lit on 35 DAS	3.9	*	17.1	11.8	19.7	9.2	30.6	34.8	23.5	30.4	11.0
T ₉	Control (moderate resistance)	Water treatment	5.0	*	49.6	13.3	29.1	16.3	39.8	46.3	32.5	35.8	18.5
	SE ±		0.51	*	1.39	1.36	1.31	0.57	1.98	3.34	0.40	2.62	1.09
	CD at 5%		1.51	*	4.07	4.09	3.93	1.70	5.93	10.02	1.21	7.86	3.29
	CV %		32.80	*	18.70	27.60	10.70	10.90	12.80	19.86	18.30	14.60	18.80

* No data

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Table IV 14: Management of Blast disease by using Chemicals and bioagents (PMPT VIII) *Kharif 2024.*

Blast disease incidence at 45 DAS

T. No	Treatment	Time and method of applications	Zone A					Zone B					
			MDR	JPR	HSR	GLR	JMR	MYS	PTR	DHL	ABD1	VZN	Tirupathi
T ₁	Propiconazole + <i>Pseudomonas fluorescens</i>	Spray treatment with Propiconazole @ 1ml/lit on 20 DAS +1 spray of <i>Pseudomonas fluorescens</i> @ 10 g /lit on 35 DAS	19.5	*	16.6	22.2	22.3	18.3	40.7	24.4	21.0	25.9	12.8
T ₂	Microb Cons. (Combination of 4 microbes) Mycorrhiza/PSB/ <i>Pseudomonas</i> / <i>Trichoderma</i> + Tricyclazole 75% WP	Seed Treatment @ 8.0 g/kg + Spray treatment with Tricyclazole 75% WP on 35 DAS	18.9	*	18.1	23.7	27.0	13.3	51.9	31.1	23.2	22.0	16.6
T ₃	<i>Pseudomonas fluorescens</i> + Trifloxystrobin + Tebuconazole	Seed treatment with <i>Pseudomonas fluorescens</i> @ 10g/lit and spray Trifloxystrobin + Tebuconazole @ 0.04 on 35DAS	13.9	*	14.9	21.5	26.5	9.3	48.1	31.1	17.6	28.1	7.7
T ₄	Trifloxystrobin + Tebuconazole + <i>Bacillus subtilis</i>	Spray treatment with Trifloxystrobin + Tebuconazole @ 0.04 on 20DAS and <i>Bacillus subtilis</i> @ 10 g /lit on 35 DAS	13.3	*	14.8	22.9	26.2	9.0	48.1	33.7	19.5	24.7	17.0
T ₅	Trifloxystrobin + Tebuconazole	0.04% 1 spray on 35DAS	15.0	*	5.9	22.9	24.6	9.7	46.7	32.2	14.1	27.7	22.2
T ₆	Trifloxystrobin + Tebuconazole	0.04%2 sprays on 20 DAS and 35DAS	11.7	*	4.7	11.8	21.1	8.3	35.2	22.6	12.9	15.2	7.4
T ₇	<i>Pseudomonas</i> + Biochar	Seed Treatment @ 8.0 g/kg+ Soil amendment 1 % + Spray <i>Pseudomonas</i> @ 10 g /lit on 35 DAS	17.2	*	18.6	28.9	25.8	12.3	49.2	50.7	25.1	36.0	12.6
T ₈	<i>Trichoderma</i> + Biochar	Seed Treatment @ 8.0 g/kg + Soil amendment 1 % + Spray <i>Trichoderma</i> @ 10 g /lit on 35 DAS	16.7	*	17.1	31.8	29.1	12.3	52.1	48.1	26.8	27.4	17.0
T ₉	Control (moderate resistance)	Water treatment	36.1	*	49.6	37.0	36.1	36.7	55.8	64.4	41.2	43.8	23.6
	SE ±		1.00	*	1.65	3.19	1.42	1.08	2.91	1.91	0.32	2.39	1.42
	CD at 5%		2.93	*	4.83	9.54	4.25	3.24	8.72	5.73	0.97	7.18	4.26
	CV %		11.10	*	18.60	22.30	9.25	13.00	10.60	8.83	11.81	14.90	16.20

* No data

CHAPTER IV: PLANT PATHOLOGY

Table IV 14: Management of Blast disease by using Chemicals and bioagents (PMPT VIII) *Kharif 2024*.

Blast disease incidence at 60 DAS

T. No	Treatment	Time and method of applications	Zone A					Zone B					
			MDR	JPR	HSR	GLR	JMR	MYS	PTR	DHL	ABD1	VZN	Tirupathi
T ₁	Propiconazole + <i>Pseudomonas fluorescens</i>	Spray treatment with Propiconazole @ 1ml/lit on 20 DAS +1 spray of <i>Pseudomonas fluorescens</i> @ 10 g /lit on 35 DAS	22.8	4.0	21.5	49.6	30.0	29.7	52.5	32.6	23.3	37.2	23.6
T ₂	Microb Cons. (Combination of 4 microbes) Mycorrhiza/PSB/ <i>Pseudomonas</i> / <i>Trichoderma</i> + Tricyclazole 75% WP	Seed Treatment @ 8.0 g/kg + Spray treatment with Tricyclazole 75% WP on 35 DAS	20.6	3.0	21.8	45.1	33.8	24.0	62.0	37.8	26.3	30.4	24.8
T ₃	<i>Pseudomonas fluorescens</i> + Trifloxystrobin + Tebuconazole	Seed treatment with <i>Pseudomonas fluorescens</i> @ 10g/lit and spray Trifloxystrobin + Tebuconazole @ 0.04 on 35DAS	13.9	3.3	25.8	40.0	34.3	16.0	58.2	30.0	25.1	45.9	17.0
T ₄	Trifloxystrobin + Tebuconazole + <i>Bacillus subtilis</i>	Spray treatment with Trifloxystrobin + Tebuconazole @ 0.04 on 20DAS and <i>Bacillus subtilis</i> @ 10 g /lit on 35 DAS	13.3	3.0	20.3	49.6	33.1	14.3	52.2	28.5	22.5	33.2	24.4
T ₅	Trifloxystrobin + Tebuconazole	0.04% 1 spray on 35DAS	15.0	3.3	15.3	42.2	30.5	14.3	54.3	29.3	20.8	43.8	34.0
T ₆	Trifloxystrobin + Tebuconazole	0.04%2 sprays on 20 DAS and 35DAS	12.2	2.7	13.6	28.1	28.1	10.3	42.2	24.4	18.9	27.8	16.6
T ₇	<i>Pseudomonas</i> + Biochar	Seed Treatment @ 8.0 g/kg+ Soil amendment 1 % + Spray <i>Pseudomonas</i> @ 10 g /lit on 35 DAS	19.5	4.0	20.8	62.2	36.1	13.0	60.2	52.2	29.3	46.4	24.4
T ₈	<i>Trichoderma</i> + Biochar	Seed Treatment @ 8.0 g/kg + Soil amendment 1 % + Spray <i>Trichoderma</i> @ 10 g /lit on 35 DAS	18.3	3.7	21.4	62.9	37.2	15.0	63.9	48.9	31.1	41.9	25.1
T ₉	Control (moderate resistance)	Water treatment	63.9	5.7	63.1	68.8	43.7	51.3	66.4	69.3	48.9	66.2	33.6
	SE ±		1.04	*	1.98	3.38	1.98	1.84	1.57	2.50	0.54	2.96	1.69
	CD at 5%		3.03	*	5.79	10.14	5.94	5.53	4.71	7.49	1.61	6.28	5.07
	CV %		9.41	*	16.01	11.80	10.06	15.30	4.80	11.29	15.11	8.80	11.80

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Table IV 14: Management of Blast disease by using Chemicals and bioagents (PMPT VIII) *Kharif 2024.*

Seedling Emergence

T. No	Treatment	Time and method of applications	Zone A					Zone B					
			MDR	JPR	HSR	GLR	JMR	MYS	PTR	DHL	ABD1	VZN	Tirupathi
T ₁	Propiconazole + <i>Pseudomonas fluorescens</i>	Spray treatment with Propiconazole @ 1ml/lit on 20 DAS +1 spray of <i>Pseudomonas fluorescens</i> @ 10 g /lit on 35 DAS	75	72	70	50	98	90	93	74	82	*	90
T ₂	Microb Cons. (Combination of 4 microbes) Mycorrhiza/PSB/ <i>Pseudomonas</i> / <i>Trichoderma</i> + Tricyclazole 75% WP	Seed Treatment @ 8.0 g/kg + Spray treatment with Tricyclazole 75% WP on 35 DAS	81	72	75	51	98	90	97	83	84	*	91
T ₃	<i>Pseudomonas fluorescens</i> + Trifloxystrobin + Tebuconazole	Seed treatment with <i>Pseudomonas fluorescens</i> @ 10g/lit and spray Trifloxystrobin + Tebuconazole @ 0.04 on 35DAS	79	72	73	51	98	91	97	81	87	*	92
T ₄	Trifloxystrobin + Tebuconazole + <i>Bacillus subtilis</i>	Spray treatment with Trifloxystrobin + Tebuconazole @ 0.04 on 20DAS and <i>Bacillus subtilis</i> @ 10 g /lit on 35 DAS	76	72	70	49	95	92	97	74	90	*	91
T ₅	Trifloxystrobin + Tebuconazole	0.04% 1 spray on 35DAS	75	74	72	49	98	92	98	79	86	*	90
T ₆	Trifloxystrobin + Tebuconazole	0.04%2 sprays on 20 DAS and 35DAS	76	74	69	50	97	90	98	75	90	*	91
T ₇	<i>Pseudomonas</i> + Biochar	Seed Treatment @ 8.0 g/kg+ Soil amendment 1 % + Spray <i>Pseudomonas</i> @ 10 g /lit on 35 DAS	80	76	74	49	98	92	88	81	76	*	91
T ₈	<i>Trichoderma</i> + Biochar	Seed Treatment @ 8.0 g/kg + Soil amendment 1 % + Spray <i>Trichoderma</i> @ 10 g /lit on 35 DAS	80	78	75	49	98	91	93	82	85	*	91
T ₉	Control (moderate resistance)	Water treatment	75	65	69	49	98	83	93	72	69	*	87
	SE ±		0.48	0.89	1.30	2.08	0.75	0.97	1.83	1.71	2.30	*	1.51
	CD at 5%		1.01	2.69	3.70	6.74	NS	2.06	5.49	N.S.	6.81	*	4.52
	CV %		0.92	2.12	3.50	7.31	1.32	1.31	3.30	-	4.71	*	2.90

* No data

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Table IV 14: Management of Blast disease by using Chemicals and bioagents (PMPT VIII) *Kharif 2024.*

Grain Yeild (Kg/Ha)

T. No	Treatment	Time and method of applications	Zone A					Zone B					
			MDR	JPR	HSR	GLR	JMR	MYS	PTR	DHL	ABD1	VZN	Tirupathi
T ₁	Propiconazole + <i>Pseudomonas fluorescens</i>	Spray treatment with Propicanazole @ 1ml/lit on 20 DAS +1 spray of <i>Pseudomonas fluorescens</i> @ 10 g /lit on 35 DAS	983.8	836.6	2857.5	1770.8	2276.4	2361.7	2050.0	1619.0	1423.6	2045.8	1859.7
T ₂	Microb Cons. (Combination of 4 microbes) Mycorrhiza/PSB/ <i>Pseudomonas</i> / <i>Trichoderma</i> + Tricyclazole 75% WP	Seed Treatment @ 8.0 g/kg + Spray treatment with Tricyclazole 75% WP on 35 DAS	997.5	855.6	2702.5	1775.0	2204.9	2386.7	1593.3	1504.0	1433.8	1764.4	2289.7
T ₃	<i>Pseudomonas fluorescens</i> + Trifloxystrobin + Tebuconazole	Seed treatment with <i>Pseudomonas fluorescens</i> @ 10g/lit and spray Trifloxystrobin + Tebuconazole @ 0.04 on 35DAS	1187.5	717.4	2800.0	1762.5	2066.7	2325.0	1566.7	1631.0	1882.4	1490.3	2598.0
T ₄	Trifloxystrobin + Tebuconazole + <i>Bacillus subtilis</i>	Spray treatment with Trifloxystrobin + Tebuconazole @ 0.04 on 20DAS and <i>Bacillus subtilis</i> @ 10 g /lit on 35 DAS	1275.0	896.1	2895.0	1675.0	2263.2	2323.3	2033.3	1724.0	1579.9	1979.2	1788.0
T ₅	Trifloxystrobin + Tebuconazole	0.04% 1 spray on 35DAS	1125.0	841.3	2915.0	1687.5	2356.9	2245.0	1637.0	1649.0	1709.2	1705.1	1955.0
T ₆	Trifloxystrobin + Tebuconazole	0.04%2 sprays on 20 DAS and 35DAS	1325.0	1065.4	3105.0	1762.5	2684.0	2638.0	2231.3	1833.0	1919.5	2194.0	2638.0
T ₇	<i>Pseudomonas</i> + Biochar	Seed Treatment @ 8.0 g/kg+ Soil amendment 1 % + Spray <i>Pseudomonas</i> @ 10 g /lit on 35 DAS	1028.8	634.0	2692.5	1616.7	2067.4	2331.7	1513.3	1472.0	1411.7	1527.3	2307.0
T ₈	<i>Trichoderma</i> + Biochar	Seed Treatment @ 8.0 g/kg + Soil amendment 1 % + Spray <i>Trichoderma</i> @ 10 g /lit on 35 DAS	1080.0	636.4	2662.5	1537.5	2113.9	2209.7	1470.0	1477.0	1423.2	1594.0	1861.0
T ₉	Control (moderate resistance)	Water treatment	610.0	560.1	2510.0	1508.3	1687.5	1732.7	1390.0	1103.0	1193.1	1468.1	1706.0
	SE ±		19.25	31.58	73.50	68.80	137.34	17.47	57.41	1.05	85.60	132.40	5.07
	CD at 5%		56.21	95.49	214.80	206.80	411.77	52.39	172.21	3.16	256.80	412.00	15.20
	CV %		3.60	6.99	5.30	7.10	10.86	1.34	5.80	11.76	9.60	13.60	0.41

CHAPTER IV: PLANT PATHOLOGY

Table IV 14: Management of Blast disease by using Chemicals and bioagents (PMPT VIII) *Kharif 2024.*

Fodder Yeild (Kg/Ha)

T. No	Treatment	Time and method of applications	Zone A					Zone B					
			MDR	JPR	HSR	GLR	JMR	MYS	PTR	DHL	ABD1	VZN	Tirupathi
T ₁	Propiconazole + <i>Pseudomonas fluorescens</i>	Spray treatment with Propicanazole @ 1ml/lit on 20 DAS +1 spray of <i>Pseudomonas fluorescens</i> @ 10 g /lit on 35 DAS	1512.5	1896.7	6815.0	5042.0	5930.6	2976.7	5483.3	6250.0	4029.3	2045.8	2676.0
T ₂	Microb Cons. (Combination of 4 microbes) <i>Mycorhiza</i> /PSB/ <i>Pseudomonas</i> / <i>Trichoderma</i> + Tricyclazole 75% WP	Seed Treatment @ 8.0 g/kg + Spray treatment with Tricyclazole 75% WP on 35 DAS	1517.5	1827.1	6875.0	5004.0	4375.0	2989.3	5005.6	5967.0	4018.6	1764.4	3543.0
T ₃	<i>Pseudomonas fluorescens</i> + Trifloxystrobin + Tebuconazole	Seed treatment with <i>Pseudomonas fluorescens</i> @ 10g/lit and spray Trifloxystrobin + Tebuconazole @ 0.04 on 35DAS	1822.5	1531.5	6925.0	5179.0	4833.3	3003.7	5233.3	5767.0	4984.8	1490.3	3870.0
T ₄	Trifloxystrobin + Tebuconazole + <i>Bacillus subtilis</i>	Spray treatment with Trifloxystrobin + Tebuconazole @ 0.04 on 20DAS and <i>Bacillus subtilis</i> @ 10 g /lit on 35 DAS	1916.3	2406.0	7000.0	4771.0	5472.2	2966.0	5238.9	5700.0	4276.7	1979.2	3382.0
T ₅	Trifloxystrobin + Tebuconazole	0.04% 1 spray on 35DAS	1747.5	2555.9	7420.0	4958.0	5555.6	2987.7	4933.3	6267.0	4654.0	1705.1	3157.0
T ₆	Trifloxystrobin + Tebuconazole	0.04%2 sprays on 20 DAS and 35DAS	1956.3	3142.8	7530.0	5354.0	6340.3	2896.7	6362.2	5767.0	5063.9	2194.0	3762.0
T ₇	<i>Pseudomonas</i> + Biochar	Seed Treatment @ 8.0 g/kg+ Soil amendment 1 % + Spray <i>Pseudomonas</i> @ 10 g /lit on 35 DAS	1565.0	1652.0	7000.0	4313.0	5111.1	3032.3	5638.9	6500.0	3813.0	1527.3	3181.0
T ₈	<i>Trichoderma</i> + Biochar	Seed Treatment @ 8.0 g/kg + Soil amendment 1 % + Spray <i>Trichoderma</i> @ 10 g /lit on 35 DAS	1637.5	1702.8	7080.0	4263.0	5986.1	2963.3	4523.3	5833.0	3775.3	1594.0	2838.0
T ₉	Control (moderate resistance)	Water treatment	835.0	1565.9	6427.5	4421.0	4375.0	2265.0	4028.3	5633.0	2948.8	1468.1	2653.0
	SE ±		17.50	86.24	173.20	265.40	402.77	28.45	373.53	3.05	228.20	151.80	86.40
	CD at 5%		51.00	260.78	505.80	795.60	1207.55	85.30	1119.54	N.S.	684.10	455.80	259.10
	CV %		2.29	7.35	4.90	9.60	13.09	1.71	12.50	-	9.50	8.70	4.60

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TABLE -15 (PMPT IX): Study the Epidemiology and Yield loss assessment of blast disease under natural condition: All AICRP on Pearl millet centres in their respective zones
Location : Mysore

Date/ Period	Max.	Min.	RH (Morn.)	RH (Even.)	Rain	Blast severity					
	Temp (°C)	Temp (°C)	(%)	(%)	fall (mm)	ICMB95444			Susceptible cultivar		
						T1	T2	T3	T1	T2	T3
Aug. 02 – 08	28.5	19.9	78.4	78.7	1.3	0.0	0.0	0.0	0.0	0.0	0.0
Aug. 09– 15	30.3	21	86.6	86.9	8.8	0.0	0.0	0.0	0.0	0.0	0.0
Aug. 16 – 22	30.6	21	84.7	90	2.9	0.0	1.0	1.0	0.0	0.0	1.0
Aug. 23 – 29	29.9	20.6	84.4	75	0.7	0.0	1.0	1.0	0.0	0.0	1.0
Aug. 30 – Sept 5	29.5	20.5	77.3	70.6	1.3	2.0	2.0	3.0	0.0	1.0	2.0
Sept 6 - 12	30.1	20.7	76.1	75.4	2.9	2.0	2.0	3.0	1.0	1.0	3.0
Sept 13 - 19	32	19	71	60	0	2.0	2.0	4.0	2.0	2.0	3.0
Sept 20- 26	31	19.6	76.3	65.1	2.6	3.0	3.0	6.0	2.0	3.0	6.0
Sept 27-October 3	32.2	20.6	80.3	67	4	3.0	3.0	7.0	2.0	3.0	6.0
Oct 4 - 10	30.8	20.4	84.1	79.9	3.8	3.0	4.0	8.0	2.0	3.0	7.0
October 11-17	30.1	20	86.4	80.9	5.4	3.0	5.0	8.0	3.0	4.0	7.0
Oct. 18 – 24	30.2	20.1	68.6	66.1	7.7	3.0	5.0	8.0	3.0	4.0	7.0
Oct 25 - 31	30.7	19.8	80.1	66.9	0.8	4.0	5.0	8.0	3.0	4.0	7.0

Treatments :

1. Fully protected with Nativo (Tebuconazole (50 %) and Trifloxystrobin (25 %) WG sprays @ 0.04 % starting from disease initiation and repeated at 10 days interval.
2. One spray of Nativo (Tebuconazole (50 %) and Trifloxystrobin (25 %) WG at 30 days.
3. Control – Full disease development -No spray.

Method : Two cultivars 1. **ICMB -95444** 2. Blast susceptible variety : **Dhanshakti**

Location : Patancheru -ICRISAT

Standard Week	Max. Temp °C	Min. Temp °C	RH-I	RH -II	Rainy fall (mm)	Blast incidence (%)					
						ICMB95444			Susceptible cultivar		
						T1	T2	T3	T1	T2	T3
29	27.8	22.3	89.0	76.4	13	0.0	0.0	0.0	0.0	0.0	0.0
30	27.6	23.1	88.4	75.0	5	0.0	0.0	0.0	0.0	0.0	0.0
31	31.0	23.6	85.0	63.0	1	4.6	10.0	12.5	2.0	4.5	6.8
32	30.2	22.4	92.8	67.4	17	16.4	20.9	21.9	10.4	17.5	19.9
33	33.8	23.0	93.6	57.4	16	24.7	37.2	44.9	23.1	27.4	33.6
34	30.2	22.7	90.0	68.0	4	33.3	56.1	66.5	34.8	38.7	51.4
35	27.9	21.8	93.4	79.2	34	36.4	58.2	67.6	35.6	41.2	52.4
36	29.1	22.4	93.2	70.2	26	40.1	63.6	72.3	36.0	44.1	56.0
37	30.3	21.6	88.0	57.6	0	45.0	66.5	77.2	37.2	48.6	58.2
38	31.4	21.6	92.6	59.0	3	53.9	77.0	87.9	43.7	57.8	68.4

Treatments :

1. Fully protected with Nativo (Tebuconazole (50 %) and Trifloxystrobin (25 %) WG sprays @ 0.04 % starting from disease initiation and repeated at 10 days interval.
2. One spray of Nativo (Tebuconazole (50 %) and Trifloxystrobin (25 %) WG at 30 days.
3. Control – Full disease development -No spray.

Method : Two cultivars 1. **ICMB -95444** 2. Blast susceptible variety : **Dhanshakti**

CHAPTER IV: PLANT PATHOLOGY

Table 15 (PMPT IX): Study the Epidemiology and Yield loss assessment of blast disease under natural condition: All AICRP on Pearl millet centres in their respective zones

Location : Tirupathi

Standard week	Max.	Min.	RH	RH	Rain	Rainy	Dew fall	Blast incidence (%)					
	Temp (°C)	Temp (°C)	(%)	(%)	fall (mm)	(No.)		ICMB95444			Susceptible cultivar		
								T1	T2	T3	T1	T2	T3
34	24.29	36.17	47.71	73.71	0.6	1							
35	23.31	33.93	58.43	65.71	50	1							
36	22.17	32.71	83.67	58	0	0							
37	23	36.83	66.14	40.71	16	2		1.24	2.23	2.66	-	-	-
38	22.93	35.3	71.29	48.29	39	1		3.01	5.26	8.84	-	-	-
39	22.4	34.5	84.57	54.71	36	2		7.09	9.17	18.8	-	-	-
40	22	34.84	73.57	55.14	0	0		8.99	11.4	23.74	0.9	2.56	7.33
41	21.69	32.46	82	61	14	1		10.23	15.67	26.94	2.07	3.62	9.78
42	21.3	31.06	87.43	73.43	20.86	5		11.24	18.99	32.56	3.58	5.78	12.24

Date of TRANSPLANTING: 23.08.2024

Entry: Dhanshakti

Row length: 4m (4 Rows)

Replication: 03

Location : Aurangabad (ABD1)

Std.	Maxi.	Mini.	R.H.	R.H.	Rain fall (mm.)	Rainy Days	Dew fall	Per cent Disease Index					
M. W.	Tem °c	Tem °c	I	II				(PDI)					
			(%)	(%)				ICMB 95444			Susceptible cultivar		
								T1	T2	T3	T1	T2	T3
31	29.14	23.41	97	86.43	29	3	-	0	0	0	0	0	0
32	29.27	23.07	96.14	78.86	2	0	-	0	0	0	0	0	0
33	31.5	23.61	87.57	70.14	73	3	-	2.12	4.28	8.15	1.56	3.29	5.56
34	30.3	22.77	94.29	83.14	133	5	-	4.05	8.54	14.12	3.74	7.57	11.26
35	29.63	22.76	82.71	70.71	71	2	-	6.93	11	21.29	5.28	9.15	14.58
36	28.3	22.5	95.57	80.71	21	2	-	9.62	16.52	30.41	8.54	14.53	19.62
37	29.59	21.39	88.43	72.43	5	1	-	11.1	22.18	41.6	10.05	22.56	26.91
38	31.27	22.36	85	58.57	0	0	-	14.46	29.85	54.67	13.69	26.04	30.08
39	29.88	22.73	90.84	75.13	62.5	4	-	17.57	32.58	66.52	15.81	30.28	44.51
40	35.14	22.84	89.71	67.57	0	0	-	18.29	40.06	78.47	18.24	34.58	50.17
41	34.19	23.31	82.33	78.67	26	2	-	20.06	53.24	83.89	20.58	49.8	58.45
42	34.32	19.85	86.47	72.18	59	2		22.56	71.64	85.23	22.15	51.28	63.7
43	34.67	19	88	60	46	1		26.54	75.28	87.12	23.81	54.12	69.15

PMPT IX Study the Epidemiology and Yield loss assessment of blast disease on CV. ICMB 95444 and Mahyco 204 under field condition during Kharif 2024.

CHAPTER IV: PLANT PATHOLOGY

Table 15 (PMPT IX): Study the Epidemiology and Yield loss assessment of blast disease under natural condition: All AICRP on Pearl millet centres in their respective zones
Location : Dhule

Cvs/	Blast severity (PDI) with Meteorology Weeks (MW)								
Treats	32	33	34	35	36	37	38	39	40
ICMB-9544									
T1	2.04	7.02	7.73	8.88	8.88	7.73	9.77	14.66	22.39
T2	2.4	6.75	7.82	11.37	14.57	35.01	47.99	60.52	67.19
T3	2.93	18.84	31.86	43.72	62.21	75.81	85.94	94.92	97.5
Susceptible cultivar									
T1	1.06	1.95	4.62	6.75	7.91	8.62	9.24	11.28	16.44
T2	2.13	4.08	5.51	12.35	23.73	34.04	42.84	50.03	54.48
T3	2.66	4.62	15.82	23.37	43.55	46.66	55.81	67.81	72.08

Correlation of weather parameters with blast disease.

Correlation of weather parameters with blast disease						
Cultivars /	Weather parameters					
	Tem	Temp.	Rainfall	Morn.	After	Sun shine
	Max.	Min.		RH	RH	Hrs.
ICMB-9544						
T1	0.617	-0.129	-0.128	0.17	-0.368	0.722
T2	0.671	-0.39	-0.262	-0.139	-0.527	0.604
T3	0.536	-0.599	-0.211	-0.042	-0.546	0.551
Dhanshakti						
T1	0.51	-0.45	-0.202	0.053	-0.464	0.632
T2	0.572	-0.496	-0.311	-0.124	-0.542	0.558
T3	0.494	-0.519	-0.231	-0.022	-0.494	0.509

CHAPTER IV: PLANT PATHOLOGY

Table 15 (PMPT IX): Study the Epidemiology and Yield loss assessment of blast disease under natural condition: All AICRP on Pearl millet centres in their respective zones
Location : Jamnagar

St	Min. Temp. (°C)	Min. Temp. (°C)	RH (Morn.)	RH (Even.)	Rainfall (mm)	Rainy (No.)	Blast incidence (%)					
							ICMB95444			Susceptible		
							T1	T2	T3	T1	T2	T3
30	31.1	27.1	92	80	122	2	0	0	0	0	0	0
31	30.9	26.5	93	83	49	4	0	0	0	0	0	0
32-A	30.8	26.4	90	81	18	3	2.22	5.56	9.63	2.59	5.56	5.93
33	31.6	26.1	91	79	14.5	3	3.7	9.63	12.59	3.7	10.37	11.85
34	33.3	26.7	87	69	27.5	1	5.93	11.85	20	4.44	12.59	15.93
35	29.6	25.2	96	79	604	4	7.41	14.81	25.93	5.56	15.56	19.63
36-S	32	26	94	70	1.5	0	9.26	23.7	35.93	6.67	18.52	25.93
37	32.7	25.1	86	60	0	0	10.37	29.63	41.11	8.52	26.67	32.22
38	32.9	25.1	88	62	0	0	12.59	45.93	67.04	10.37	35.19	50
39	33.2	25.6	89	66	28	2	13.7	54.44	75.56	12.96	39.26	58.15
40-O	33.4	25.5	87	62	0	0	16.3	68.52	87.78	15.19	44.81	67.41

Location : Gwalior

Metriological parameters and blast PDI												
Standard week	Max temp (°C)	Min temp (°C)	RH (Morn.) (%)	RH (Even.) (%)	Rainfall (mm)	Rainy Days (No.)	Actual(cumulative) blast PDI					
							ICMB95444(V1)			Susceptible cultivar		
							V1			V2		
							T1	T2	T3	T1	T2	T3
31 (30 July)	35.3	26.3	83.7	61.6	47.4	2	0	0	0	0	0	0
32 (6th)	32.8	25.8	88.9	69.9	28.4	2	0	1.95	1.6	0	0	0
33 (13th)	34.7	26.4	84.9	56	80.2	5	2.84	8	8.53	0.71	2.04	2.22
34 (20th)	35.1	25.9	86.1	56.6	115.4	4	5.33	11.37	21.51	1.24	4	10.31
35 (27th)	35.7	25.8	84.4	52.1	7	1	6.66	13.86	33.78	1.51	4.35	15.29
36 (3rd)	35.6	25.8	83.1	49.9	3.2	1	8.17	18.04	42.22	1.86	5.6	19.91
37 (10th)	33	24.7	86.1	62.3	252.8	4	10.84	31.64	62.05	3.2	13.77	32.44
38 (17 th)	32.6	23.2	84.29	60.43	141	2	12.26	38.22	79.12	4	18.31	40.89
39 (24th)	33.2	25.2	86	64.43	20.2	3	13.86	47.29	92.63	4.04	26.49	54.05
40 (1st Oct)	36	24.5	70.43	45.57	0	0	14.66	54.94	94.94	6.57	33.78	56.89
41 (8th Oct)	34.2	22.7	76.29	55	0	0	14.93	54.94	95.12	6.57	34.31	57.6

CHAPTER IV: PLANT PATHOLOGY

Table 15 (PMPT IX): Study the Epidemiology and Yield loss assessment of blast disease under natural condition: All AICRP on Pearl millet centres in their respective zones
Location : Hisar

Standard Week	Max. Temp 0C	Min. Temp 0C	RH Morn. (%)	RH Even. (%)	Rain fall (mm)	Rainy days (nos.)	Dew fall	Blast incidence (%)					
								ICMB95444			Susceptible cultivar		
								T1	T2	T3	T1	T2	T3
Week 1	*	*	*	*	*	*	*	4.81	7.04	8.70	5.74	7.96	8.33
Week 2	*	*	*	*	*	*	*	6.48	12.22	11.11	10.00	16.85	17.59
Week 3	*	*	*	*	*	*	*	6.30	20.00	21.48	11.30	21.67	22.41
Week 4	*	*	*	*	*	*	*	6.30	22.22	23.70	12.78	24.81	26.85
Week 5	*	*	*	*	*	*	*	4.81	24.44	26.67	12.59	28.15	30.37
Week 6	*	*	*	*	*	*	*	6.67	26.48	33.15	13.52	29.07	33.89
Week 7	*	*	*	*	*	*	*	7.78	29.81	38.52	14.07	34.44	44.07
Week 8	*	*	*	*	*	*	*	8.70	30.56	55.56	13.15	37.59	69.63
Week 9	*	*	*	*	*	*	*	8.89	37.78	71.48	13.33	38.33	76.48
Week 10	*	*	*	*	*	*	*	9.26	39.26	74.81	12.78	39.63	80.00

CHAPTER IV: PLANT PATHOLOGY

Table 16 (PMPT X) :- Monitoring of Pearl millet diseases on farmers' fields during Kharif 2024
RAJASTHAN-JAIPUR

S. No.	District	Village	Cultivar	Area (ha)	Crop	DM Inci.	Smut (%)	Ergot (%)	Blast	Rust
1	Jaipur	Bhikhawas	Unknown	1.00	HD	0.0	5.0	2.0	5.0	0.0
2		Shyosinghpura	Unknown	0.50	HD	0.0	0.0	5.0	2.0	0.0
3		Chainpura	Unknown	0.25	HD	5.0	0.0	0.0	2.0	0.0
4		Kuli	Unknown	1.00	HD	0.0	2.0	5.0	15.0	0.0
5		Manoharpur	Unknown	1.00	HD	0.0	0.0	1.0	5.0	0.0
6		Nimora Bassi	9001	1.50	HD	0.0	0.0	0.0	0.0	0.0
7		Madanpura	Unknown	2.00	HD	0.0	0.0	0.0	0.0	0.0
8	Sikar	Danta Ramgarh	Sagar Laxmi	1.25	HD	10.0	1.0	2.0	6.0	0.0
9		Maganpur	Unknown	0.50	HD	0.0	0.0	0.0	5.0	0.0
10		Dheengpur	ProAgro	1.00	HD	0.0	2.0	0.0	0.0	0.0
11		Khatoo	Unknown	1.50	HD	10.0	2.0	1.0	5.0	0.0
12		Lampuwa	Unknown	2.00	HD	0.0	2.0	2.0	0.0	0.0
13		Govindgarh	Unknown	2.00	HD	0.0	0.0	5.0	5.0	0.0
14	Dausa	Gothra	Unknown	0.50	HD	0.0	0.0	0.0	0.0	0.0
15		Kalakho	Unknown	0.25	HD	0.0	0.0	0.0	0.0	0.0
16		Reta	Unknown	0.50	HD	0.0	0.0	0.0	20.0	0.0
17		Ramgarh	9001	2.00	HD	0.0	30.0	5.0	0.0	0.0
18	Karauli	Gidani	Unknown	1.00	HD	0.0	2.0	2.0	15.0	0.0
19		Gudhachandraj	Unknown	0.50	HD	0.0	0.0	2.0	15.0	0.0
20		Sop	Unknown	1.00	HD	0.0	0.0	2.0	15.0	0.0
21	Sawai Madhopur	Sawai Madhopur	Unknown	2.00	HD	0.0	0.0	0.0	10.0	0.0
22		Kherla	Unknown	2.00	HD	0.0	5.0	0.0	0.0	0.0
23		Raipur	Unknown	0.50	HD	0.0	0.0	0.0	0.0	0.0
24		Meri	Unknown	1.00	HD	0.0	15.0	0.0	0.0	0.0
25	Bharatpur	Moraka	Pioneer	1.00	HD	0.0	0.0	0.0	0.0	0.0
26		Ranota	Unknown	1.00	HD	0.0	0.0	0.0	5.0	0.0
27		Semla Khurd	Unknown	1.00	HD	0.0	0.0	0.0	5.0	0.0
28	Alwar	Bagar Meo	Unknown	2.00	HD	0.0	5.0	0.0	0.0	0.0
29		Suheta	Unknown	1.00	HD	0.0	0.0	0.0	0.0	0.0
30		Bansur	Unknown	0.50	HD	0.0	0.0	0.0	0.0	0.0
31		Tatarpur	Unknown	0.50	HD	0.0	0.0	0.0	0.0	0.0
32		Dhailawas	Unknown	1.00	HD	0.0	0.0	0.0	0.0	0.0
33		Jalalpur	Unknown	1.00	HD	0.0	0.0	0.0	0.0	0.0
34		Alanpur	Unknown	1.00	HD	0.0	0.0	0.0	10.0	0.0
35		Jhajharpur	Unknown	1.00	HD	0.0	0.0	0.0	5.0	0.0
36		Karoda	Unknown	1.00	HD	0.0	8.0	0.0	0.0	0.0
37		Alwar	Unknown	1.00	HD	0.0	0.0	0.0	0.0	0.0
38		Goonti	Unknown	1.00	HD	0.0	0.0	0.0	0.0	0.0
39	Kotputli (Jaipur)	Mordha	Unknown	1.00	HD	0.0	0.0	0.0	0.0	0.0
40		Kanwarpura	Unknown	2.50	HD	0.0	0.0	0.0	0.0	0.0
41		Bagawas Ahiran	Unknown	1.00	HD	15.0	0.0	0.0	0.0	0.0

CHAPTER IV: PLANT PATHOLOGY

Table 16 (PMPT X): Monitoring of Pearl millet diseases on farmers' fields during Kharif 2024

RAJASTHAN-MANDOR

S. No.	Date	Location	Taluka/	District	Variety	Area	Crop	Rust %	Smut	Blast (0-9	Ergot %	DM
1	24.09.24	Bhandu kallan	Luni	Jodhpur	Unknown hybrid	4	Flowering	0	3	2	0	2
2	24.09.25	Bhandu kallan	Luni	Jodhpur	Unknown hybrid	2.2	Flowering	0	2	2	0	4
3	24.09.26	Dawa	Luni	Jodhpur	Unknown hybrid	3	Flowering	0	1	2	0	3
4	24.09.27	Doli Kalan	Pachpadra	Barmer	Unknown hybrid	5	Flowering	0	1	3	0	5
5	24.09.28	Kalyanpura	Baltora	Barmer	Unknown hybrid	4	Flowering	0	2	3	0	6
6	24.09.29	Samdari	Barmer	Barmer	Unknown hybrid	2	Flowering	0	5	2	0	6
7	24.09.30	Dundada	Luni	Jodhpur	Unknown hybrid	3	Flowering	0	0	2	0	3
8	24.09.31	Pheench	Luni	Jodhpur	Unknown hybrid	2	Flowering	0	0	1	0	4
9	24.09.32	Khejarla	Luni	Jodhpur	Unknown hybrid	1	Flowering	0	6	3	0	4
10	24.09.33	Dangiyawas	Jodhpur	Jodhpur	Unknown hybrid	1	Flowering	0	2	4	0	2
11	24.09.34	Banar	Jodhpur	Jodhpur	Unknown Hybrid	4	Flowering	0	2	4	0	6
12	25.09.24	Bawadi	Bawadi	Jodhpur	Unknown hybrid	3.5	Flowering	0	2	4	0	5
13	25.09.25	Lavera	Bawadi	Jodhpur	Unknown hybrid	2	Flowering	0	1	2	0	6
14	25.09.26	Kherapa	Bhopalgarh	Jodhpur	Unknown hybrid	4	Flowering	0	2	3	0	6
15	25.09.27	Soyla	Jodhpur	Jodhpur	Unknown hybrid	2	Flowering	0	2	3	0	8
16	25.09.28	Lalawas	Kheenvsar	Nagour	Unknown hybrid	1	Maturity	0	2	3	0	6
17	25.09.29	Kheenvsar	Kheenvsar	Nagour	Unknown hybrid	1	Maturity	0	2	3	0	6
18	25.09.30	Tankala	Kheenvsar	Nagaur	Unknown hybrid	1	Maturity	0	2	3	0	5
19	25.09.31	Nagaur	Nagaur	Nagaur	Unknown hybrid	1.2	Maturity	0	1	2	0	3
20	25.09.32	Athiyasan	Nagaur	Nagaur	Unknown hybrid	1.8	Maturity	0	0	3	0	4

CHAPTER IV: PLANT PATHOLOGY

Table 16 (PMPT X): Monitoring of Pearl millet diseases on farmers' fields during Kharif 2024
GUJARAT-JAMANAGAR

Sr. No.	Village/Location	Cultivars/Variety	Area (Acre)	Crop stage	Disease incidence/intensity %				
					DM (%)	Smut (%)	Rust (%)	Ergot	Blast
1	Chotila	Sagar 222	1	EH	0.0	0.0	0.0	0.0	1.8
2	Moldi nani	Sagar 222	1	EH	1.5	3.5	0.0	0.0	0.2
3	Janivadla	Sagar 222	1	EH	0.0	0.0	0.0	0.0	0.3
4	Chanpa	Sagar 222	1	EH	0.0	2.5	0.0	0.0	1.1
5	Kumbhara	Sagar 222	0.5	EH	5.0	0.0	0.0	0.0	1.0
6	Maghrikhada	Avani 44	1	EH	0.0	0.0	0.0	0.0	1.8
7	Nanakandhasar	Avani 44	1	EH	0.0	3.0	0.0	0.0	2.7
8	Vanki	Sagar 222	0.5	EH	0.0	0.0	0.0	0.0	2.0
9	Shapur	Sagar 222	0.5	EH	0.0	0.0	0.0	0.0	0.1
10	Hadala	Sagar 222	1	EH	0.0	0.0	0.0	0.0	0.1
11	Dhedhuki	Sagar 222	1	EH	5.0	3.0	0.0	0.0	0.1
12	Aya	Sagar 222	1	EH	0.0	3.0	0.0	0.0	0.8
13	Doliya	Sagar 222	1	EH	0.0	0.0	0.0	0.0	1.6
14	Gosal	Avani 44	1	EH	5.0	0.0	0.0	0.0	1.6
15	Sayla	Avani 45	1	EH	0.0	0.0	0.0	0.0	0.6
16	Navimorwad	Avani 46	1	EH	0.0	0.0	0.0	0.0	0.3
17	Limbdi	Sagar 222	1	EH	1.0	0.0	0.0	0.0	0.4
18	Isnav	86M20	1	EH	0.0	4.0	0.0	4.0	0.0
19	Sunav	DNA 145	1	EH	0.0	0.0	0.0	0.0	3.0
20	Piplav	Sagar 222	1	EH	0.0	4.5	0.0	5.0	4.2
21	Naar	86M22	1	EH	0.0	0.0	0.0	0.0	2.8
22	Dali	Triveni 972	1	EH	5.0	0.0	0.0	8.0	3.8
23	Sojitra	Avani 44	1	EH	0.0	0.0	0.0	0.0	4.7
24	Rauli	Ekta 31	1	EH	2.5	0.0	0.0	3.0	5.0
25	Ravipura	Kedar 888	1	EH	2.5	0.0	0.0	0.0	2.2
26	Palaj	86M20	1	EH	0.0	0.0	0.0	0.0	3.3
27	Ishwarda	86M22	1	EH	2.0	0.0	0.0	0.0	4.2
28	Mehelav	Avani 44	1	EH	0.0	0.0	0.0	0.0	3.8
29	Bandhani	Adittya 755	1	EH	0.0	3.0	0.0	5.0	3.1
30	Juna katariya	Sagar 222	1	EH	0.0	0.0	0.0	0.0	0.9
31	Lakadiaya	Sagar 222	1	EH	0.0	0.0	0.0	9.0	0.4
32	Nava Katariya	Avani	1	EH	0.0	0.0	0.0	2.0	1.3
33	Samakhiyali	Avani	1	EH	1.0	0.0	0.0	8.0	1.5
34	Chandarani	Desi bajra	1	EH	15.0	0.0	0.0	0.0	1.8
35	Mevasa	Sagar 222	1	EH	7.5	0.0	0.0	0.0	0.7
36	Gagodar	Sagar 222	1	EH	1.0	0.0	0.0	0.0	1.9
37	Mangadh	Sagar 222	1	EH	5.0	0.0	0.0	2.0	2.7
38	Palasva	Sagar 222	1	EH	0.0	0.0	0.0	0.0	3.8
39	Makhel	Sagar 222	1	EH	0.0	0.0	0.0	0.0	3.0
40	Adesar	Sagar 222	1	EH	0.0	0.0	0.0	0.0	1.7
41	Dungrasan	86M22	1	EH	2.5	0.0	0.0	0.0	0.7
42	Shihori	86M11	1	EH	0.0	2.5	0.0	13.0	1.9
43	Kant	86M22	1	EH	2.5	0.0	0.0	0.0	3.8
44	Chekhlā	Sagar 222	1	EH	2.5	0.0	0.0	1.0	3.1
45	Khodla	86M22	1	EH	0.0	1.0	0.0	6.0	1.9
46	Mudetha	86M11	1	EH	5.0	0.0	0.0	0.0	2.2
47	Khetwa	86M22	1	EH	0.0	3.0	0.0	0.0	1.8

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Sr. No.	Village/Location	Cultivars/Variety	Area (Acre)	Crop stage	Disease incidence/intensity %				
					DM (%)	Smut (%)	Rust (%)	Ergot	Blast
48	Lorwada	Dhanya	1	EH	2.5	0.0	0.0	2.0	3.2
49	Vaghpura	Nandi75	1	EH	0.0	0.0	0.0	0.0	1.9
50	Vadaval	86M22	1	EH	2.5	0.5	0.0	6.0	2.2
51	Kunpat	86M22	1	EH	5.0	1.0	0.0	0.0	1.8
52	Malgadh	86M11	1	EH	0.0	0.0	0.0	1.0	2.9
53	Akhol	Kaveri	1	EH	0.0	0.0	0.0	0.0	4.8
54	Vaghol	Nandi75	1	EH	0.0	3.0	0.0	1.0	3.4
55	Motibhakhar	86M22	1	EH	0.0	0.0	0.0	0.0	4.7
56	Nanibhakhar	Sagar 222	1	EH	0.0	0.0	0.0	0.0	3.1
57	Dabhipura	86M22	1	EH	2.5	0.0	0.0	1.0	4.8
58	Dantiwada	86M11	1	EH	10.0	0.0	0.0	1.0	3.9
59	Ganeshpura	86M22	1	EH	0.0	0.0	0.0	0.0	4.5
60	Neelpur	Dhanya	1	EH	0.0	0.0	0.0	2.0	4.7
61	Dangiya	86M22	1	EH	0.0	0.0	0.0	0.0	1.9
62	Madana	Sagar 222	1	EH	0.0	0.0	0.0	0.0	3.8
63	Chandisar	Kaveri	1	EH	0.0	0.0	0.0	0.0	2.6
64	Kushkal	Dhanya	1	EH	0.0	0.0	0.0	0.0	3.4
65	Badarpura	86M11	1	EH	5.0	1.5	0.0	0.0	2.0
66	Chadotar	86M11	1	EH	2.5	0.0	0.0	4.0	1.2
67	Jodnapura	86M11	1	EH	2.5	0.0	0.0	0.0	1.8
68	Sherpura	Sagar 222	1	EH	5.0	0.0	0.0	0.0	3.4
69	Rajosana	Nandi75	1	EH	0.0	1.0	0.0	0.0	1.8
70	Teniwada	Dhanya	1	EH	0.0	0.0	0.0	0.0	3.3
71	Chapi	86M11	1	EH	0.0	0.0	0.0	3.5	3.8
				Mean	1.5	0.6	0.0	1.2	2.3

MADHYA PRADESH-GWALIOR

District	Cultivar	No. Of Field	Area (ha)	Crop	DM inci. (%)	Smut	Blast (%)
Bhind	86M90	2	0.8	HD	0	Tr.	3-5%
	NHV7786	2	1	HD	0	Tr.	7-10%
	JK 2040	1	0.4	HD	0	1	5%
	Proagro 9001	2	0.8	HD	0	Tr.	4-5%
	Unknown Hybrids	2	0.7	HD	0	Tr.	5-10%

HARYANA-HISAR

Name of district / Location	Downy mildew incidence (%)	Blast rating (0-9 scale)
Bhiwani	0.0-2.0	1.0-4.0
Mahendragarh	0.0	1.0-3.2
Rewari	0.0-4.0	1.0-5.0
Jhajjar	0.0	1.0-4.0
Rohtak	0.0	1.0-3..2
Hisar	0.0-2.0	1.0-5.6

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Table 16 (PMPT X): Monitoring of Pearl millet diseases on farmers' fields during Kharif 2024
MAHARASHTRA- DHULE

S. No.	Location	Name of Cultivar	Area (ha)	Percent Disease Incidence					Crop Stage
				DM	Blast	Rust	Smut	Ergot	
I	Dhule	District							
1	Dhamane	Hirkani	0.8	0	20	0	0	0	SDS
2	Devbhane	86M90	0.4	0	5	0	0	0	F
		MDBH-312	1.5	0	50	0	0	0	MS
3	Songir	MLBH-308	0.4	0	10	0	2	1	MS
4	Bahbale	Local	0.4	0	70	0	0	0	MS
5	Pimalkheda	MDBH-312	0.4	0	40	0	0	0	MS
		86M90	0.4	0	0	0	0	0	MS
6	Gorane	MRB-204	0.8	0	0	0	0	0	F
		MDBH-312	0.4	0	30	0	0	0	MS
7	Daswel	MRB -204	0.4	0	20	0	0	0	F
		MDBH-312	0.4	0	40	0	2	0	MS
8	Patan	Veer -552	1	0	30	0	5	0	MS
9	Temlaye	MRB-2240	0.4	0	10	0	0	0	F
		Local	0.4	0	70	0	0	0	MS
		Dhanshakti	0.4	0	40	0	2	0	MS
10	Dattane	Dhanshakti	0.4	0	20	20	0	0	SDS
11	Pimparad	MP-7178	0.6	0	10	0	0	0	F
12	Nardana	MRB-204	0.8	0	10	0	0	0	MS
13	Malich	Adishakti	0.4	0	30	0	0	0	MS
		SBH-7178	0.6	0	30	0	0	0	MS
14	Waghode	MRB-204	0.8	0	30	0	0	0	MS
15	Gondur	MRB-2240	1.2	0	5	0	0	0	MS
16	Nimadale	MDBH-312	1	0	10	0	0	0	MS
17	Mehargaon	MDBH-312	0.6	0	30	0	0	0	MS
		MRB-2232	0.4	0	5	0	0	0	MS
		MDBH-330	0.4	0	10	0	0	0	MS
18	Kavathi	Compact yellowish gr	0.6	0	40	0	5	0	MS
19	Kusumba	MDBH-330	0.8	0	20	0	0	0	SDS
20	Kundane	MP-7178	2	0	0	0	0	0	MS
21	Morane	MRB-204	1.2	0	10	0	0	0	MS
II	Jalgaon	Distict							
22	Mehunbare	NPH-1651	1	0	20	0	0	0	MS
23	Khedgaon	NPH-40	1	0	10	0	0	0	SDS
24	Jamadi	Pioneer	1	0	10	0	0	0	MS
25	Hatale	Nirmal	0.4	0	30	0	0	0	MS
26	Neri	86M94	0.6	0	5	0	0	0	MS
III	Nashik	District							
27	Dhavshivar	Vikas -64	0.4	0	5	0	0	0	MS
28	Aghar	Hanuman	0.4	0	20	0	0	0	MS
		Mahyco	0.4	0	10	0	0	0	MS
29	Pandharun	Vikas -64	0.4	0	10	0	0	0	MS
30	Satana	Balwan	0.4	0	0	0	0	0	MS
31	Malegaon	Pioneer	0.4	0	10	0	0	0	SDS

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Table 16 (PMPT X): Monitoring of Pearl millet diseases on farmers' fields during Kharif 2024
MAHARASHTRA-AURANGABAD

Sr.	Tahesil	Name f armer	Cultivars	Area Acer.	crop stage	Disease incidence / intensity %				
No.		Location with GPS				DM	Rust	Blast	Ergot	
Chh. Sambhajinagar District:										
1	Chh. Sambhaji	Shri . Sukhdev	86M38	1.5	flowerin g	0	2	12	0	
	nagar	Lat: 19.523506								
		Lon: 75.20392								
2		Shri Sadanand Gore	AHB 1200	1	Soft Dough	0	3	10	0	
		Pimpri Raja								
		Lat: 19.523506								
3		Shri. Mangesh More	Local	2	Soft Dough	6	15	20	5	
		Kadrabad								
		Lat: 19.537506								
4	Paithan		1731	1.5	Soft dough	0	7	17	0	
										Shri.Ganesh
										Ranjangaon kuri
5			Shri Bbasahe	Kaveri super Boss	0.5	flowerin g	0	9	15	0
			Bidkin							
			Lat. 19.691702							
6			Shri.Kantilal	Parmanu	3	Soft dough	0	8	21	0
			Rajapur							
			Lat: 19.712853							
7			Shri.Anil Rathod	Mahyco 204	2.5	Soft dough	0	12	24	0
			Tapti Tanda							
			Lat:19.70865							
8			Shri Appasaheb	86M 88	0.5	flowerin g	0	5	10	0
			Dongaon							
			Lat:19.537518							
9			Javed sayad	AHB 1200	2	Soft dough	0	7	12	0
			Chitegaon							
			Lat.19.773953							
10			Shri. Govind	MP 7872	1	Soft dough	0	9	14	0
			Padali							
		Lat.19.774012								
11		Shri Hansaraj	Mahodaya 318	1.5	Soft dough	0	6	16	0	
		NilaJagaon								
		Lat.19.73281								
12		Shri. Lalchand	Shrawari	2	flowerin g	0	10	12	0	
		Porgaon								
		Lat :19.735919								

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Table 16 (PMPT X): Monitoring of Pearl millet diseases on farmers' fields during Kharif 2024
MAHARASHTRA-AURANGABAD

Sr. No.	Tahesil	Name f armer	Cultivars	Area Acer.	crop stage	Disease incidence / intensity %			
		Location with GPS				DM	Rust	Blast	Ergot
13		Long:75.492928	local	3	Soft dough	2	13	25	4
		Shri.Ram Chavan							
		Kachner tanda							
		Lat :19.693724							
14		Long:75.437611	86 M32	4	Soft dough	0	7	20..0	0
		Shri Uttam Salve							
		Kachner							
		Lat :19.698081							
15		Long:75.431741	Nirmal 240	2	Soft dough	0	5	14	0
		Shri. Sharad Sapkal							
		Dabhrul							
		Lat.19.699411							
16		Long75.600314	86M38	4	Soft dough	0	9	13	0
		Shri Rahul Narwade							
		Pachod							
		Lat.19.697851							
	Long75.620512								
	Jalna District								
	17	Badnapur	Javed Sayyad	88036	1	Soft dough	0	12	15
Badnapur									
Lat : 19.869765									
Long: 75.715106									
18	Shri. Ganesh		Pioneer	2..0	Soft dough	0	10	13	0
	Gokulwadi		86 M 88						
	Lat:19.91551								
	Long: 75.70798								
19	Shri. Gajanan		ABH 1200	0.5	Soft dough	0	7	14	0
	Dudhanwadi								
	Lat:19.915629								
	Long: 75.7077561								
20	Shri. Raghnath		Nandi 75	1.5	flowerin g	0	10	16	0
	Lonar Bahagaon								
	Lat:19.717854								
	Long: 75.705875								
21	Shri Parmeshwar	1717	2.5	flowerin g	0	12	18	0	
	Rohilagad								
	Lat : 19.92536								
	Long: 77.788518								
22	Shri. Bharat Rajput	Local	3	Maturity	2	17	224	2	
	Kingaon								
	Lat : 19.694345								
	Long: 75.699516								
23	Shri Pandurang	Mahyco 204	2	flowerin g	0	15	21	0	
	Hasanapur								
	Lat : 19.694345								

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**Table 16 (PMPT X): Monitoring of Pearl millet diseases on farmers' fields during Kharif 2024
MAHARASHTRA-AURANGABAD**

Sr. No.	Tahesil	Name f armer Location with GPS	Cultivars	Area Acer.	crop stage	Disease incidence / intensity % DMRustBlastErgot			
24	Ambad	Long: 75.699516							
		Shri Om Taware	Mahodaya 318	1	Soft dough	0	12	12	0
		Chikangaon							
		Lat : 19.694345							
		Long: 75.720597							
25		Shri Sagar Rajput	Pioneer	2.5	Soft dough	0	10	10	0
		Wadi godari	86 M 38						
		Lat : 19.537013							
		Long: 75.699516							
26		Shri Uttamrao Dange	MP 7872	3	Soft dough	0	8	14	0
		Lat:19.925938							
		Long: 74.7885457							
27		Shri Sandu kawale	Local chiveri	2	Soft dough	3	16	23	5
		Nilsing wadi							
		Lat:19.699858							
	Long: 75.625088								
28	Shri. Youraj kale	Kaveri boss	1.5	Soft dough	0	9	17	0	
	Ghungarde								
	Lat:19.92536								
	Long: 74.788518								

CHAPTER IV: PLANT PATHOLOGY

Table 16 (PMPT X): Monitoring of Pearl millet diseases on farmers' fields during Kharif 2024
KARNATAKA-MYSURU

District	Cultivar	Area	Crop stage	Downy mildew	Blast	Rust	Ergot
		(ha)					
Bellary	Kaveri	5	SD	1	16	11	0
	Shine MP	4	SD	5	14	19	1
	Pratap	4	SD	4	12	18	0
	PAC 909	5	SD	3	14	17	0
	86M64	3	SD	1	9	20	0
	ICMV 221	3	SD	5	14	20	1
Bagalkote	B2308	4	SD	2	20	14	0
	GHB558	3	SD	3	7	19	0
	JK 26	3	F	3	5	10	1
	Advanta 931	4	F	1	13	12	0
	MLHB504	3	SD	2	17	20	0
	MRB163	4	SD	1	11	18	0
	PHI 7688	4	SD	1	18	15	0
Vijayapura	Advanta 931	4	F	1	9	19	1
	SMP7792	3	SD	3	21	14	0
Koppala	GHB558	3	F	1	9	16	0
	Local hybrid	5	F	9	17	14	0
	Nandi 735	2	SD	1	19	10	1
	Samruddhi	3	SD	6	19	17	0

CHAPTER IV: PLANT PATHOLOGY

**Table 16 (PMPT X): Monitoring of Pearl millet diseases on farmers' fields during Kharif 2024
TAMIL NADU-COIMBATORE**

District	Block	Village/ Location	Cultivars	Area (ac)	Crop Stage	Disease incidence (%)			
						DM	Rust	Blast	Ergot
Cuddalore	Vridhachalam	Vilankattur	Local variety	1.5	HD	8	0	5	5
		Ilangiyanur	Private hybrid	2.5	HD	0	0	3	0
			Private hybrid	1	SD	0	5	3	0
		Veerareddikuppam	Ankur hybrid	2	HD	0	3	4	0
		Vijayamanagaram	Local variety	1.5	Maturity	8	0	5	6
		Mathur	Local variety	2	Maturity	4	0	2	3
			Farm saved seed	1	SD	5	0	3	5
		Irusalakuppam	Private hybrid	1.5	SD	1	3	4	0
			local variety	1	HD	5	0	5	8
	Vridhachalam		Hybrid	2	SD	0	0	5	0
	Nallur	Memathur	Ankur hybrid	2	HD	0	0	4	0
			local variety	1.5	Maturity	6	3	5	6
			COH 10	2.5	SD	0	5	3	0
		Nallur	Hybrid	1	HD	0	0	3	0
		Kandappankurichi	Pioneer hybrid	2	HD	0	5	4	0
			Local variety	1.5	Maturity	6	0	5	5
	Maligaimedu		Farm saved seed	1.5	flowering	3	0	5	3
	Kurinjiyadi	Andikuppam	Hybrid	2	HD	0	0	3	0
			Private hybrid	2	HD	0	0	4	0
		Meenatchipettai	local variety	2.5	SD	0	3	5	0
		Paacharapalayam	Pioneer hybrid	2	SD	0	0	4	0
		Vengattankuppam	Private hybrid	2	HD	0	0	5	0
			Local variety	1	SD	2	0	3	5
			Hybrid	2	HD	0	2	5	0
			Private hybrid	1.5	Flowering	0	5	3	0
			Farm saved seed	1	SD	0	3	3	0
		thambipettai	Private hybrid	2	SD	0	0	4	0
		Kullanchavadi	Hybrid	1	HD	0	0	3	0
		Ayanthur	Farm saved seed	1.5	flowering	2	0	5	0
			Private hybrid	1	HD	0	0	5	0
Viluppauram	Kanai	Mambalapattu	Local variety	2	SD	5	0	5	3
	Mogaiyur	Sennagunam	Private hybrid	1.5	HD	0	0	5	0
			farm saved seeds	2	flowering	3	5	4	0
	Thirukkivilur	Ponniyanthal	private hybrid	1	HD	0	0	5	0
			Farm saved seed	1.5	SD	2	0	2	0
	Pavandur		Private hybrid	1	HD	0	0	4	0
Thiruvannamalai	Arani	Panaiyur	local variety	1	Flowering	5	0	2	2
	Thiruvannamalai	Samukudaiyanpattu	farm saved seeds	1.5	Flowering	5	0	2	0
			local variety	1	Flowering	3	0	3	0
		Arudirapattu	farm saved seeds	1.5	Flowering	5	0	2	3
		Perumanam	local variety	1	SD	7	0	3	0
		Devanur	farm saved seeds	2	Flowering	5	0	2	0
			local variety	1	SD	2	0	3	2
	Kadambur		private hybrid	2.5	HD	0	0	3	0
		Nagalapuram	Private hybrid	1	HD	0	5	3	0
			farm saved seeds	1.5	Maturity	1	10	5	0

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Table 16 (PMPT X): Monitoring of Pearl millet diseases on farmers' fields during Kharif 2024
TAMIL NADU-COIMBATORE

District	Block	Village/ Location	Cultivars	Area (ac)	Crop Stage	Disease incidence (%)			
						DM	Rust	Blast	Ergot
Theni	Bodinaickanur		local variety	2	HD	1	8	5	0
		Gopalapuram	COH 10	2	HD	0	10	3	0
			private hybrid	1	SD	0	10	3	0
	Chinnamanur	Chinnamanur	farm saved seeds	1.5	Maturity	0	12	5	0
			local variety	1.5	Maturity	0	10	5	0
		Seepalakkottai	COH 10	2	HD	0	8	3	0
			CO 10	2	HD	0	10	3	0
			Private hybrid	1	SD	0	8	3	0
	Theni	Thappukundu	local variety	1	HD	0	10	5	0
			Private hybrid	2	SD	0	5	3	0
	K. myladumparai	Kandamanur	Private hybrid	1	HD	0	8	5	0
			farm saved seeds	1.5	Maturity	0	12	7	0
			Local variety	1	HD	0	12	5	0
	Andipatti	Andipatti	Local variety	1.5	Maturity	0	10	5	0
Coimbatore		Coimbatore	CO 10	1	F	0	10	2	0
			Co 9 hybrid	1	F	0	12	2	0

CHAPTER V

ENTOMOLOGY

ENTOMOLOGY

Total nine entomological trials (total 8 locations) were conducted at Pearl Millet Research Station, Junagadh Agricultural University, Jamnagar , Regional Research Station, Anand Agricultural University, Anand in Gujarat state, RARI, Duragpura, Jaipur, Fatehpur-Shekhawati, Sikar and ARS mandor Jodhpur in Rajasthan, National Agriculture Research Project, Aurangabad in Maharashtra, CCS HAU, Hisar in Haryana & Anantapur in Andhra Pradesh.

Seasonal features & Insect-pest population build up:

Jamnagar (Gujarat): During, *kharif*-2024, monsoon commenced in the third week of June. Total rainfall i.e. 873.5 mm was received in 20 rainy days during the crop period. Sowing of entomological trials was done on 18th July, 2024. Incidence of various insect-pests on pearl millet crop viz., shoot fly, stem borer, leaf binder, grass hopper, chaffer beetles, hairy cater pillar, grey weevil and *Helicoverpa* were observed during crop period. Natural enemies i.e. lady bird beetle and chrysopa were also observed during the crop period. Amongst major insect-pests, the incidence of shoot fly was higher (av. 12.50%) as compared to stem borer (7.92%). Overall crop condition was good. Harvesting was done in the 3rd week of October (20.10.2024).

Anand (Gujarat): Total 915.00 mm rainfall was recorded from 31 rainy days during the crop period. Sowing of the trials was done during last week of July (26.07.2024). The overall crop condition & weather was good. Harvesting was done during second week of November (08.11.2024). The major insect pests were shoot fly, stem borer, grass hopper, Chaffer beetle, *Helicoverpa* and *Eublema silicula*. Amongst major insect-pests, the incidence of shoot fly (7.31%) was higher as compared to stem borer (4.62%). The natural enemy lady bird beetle was also observed during the season. Overall pest incidence at Anand was low to moderate.

Jaipur (Rajasthan): Total 854.50 mm rainfall with 24 rainy days was recorded at Jaipur. Ofcourse, the rainfall figures are high but it was not scattered rainfall during the crop period. Sowing of the trials was done during fourth week of July (27.07.2024) to get sufficient pest pressure. The overall crop condition & weather was good. Harvesting was done during first week of November (04.11.2024). The major insect-pests were shoot fly, stem borer, leaf roller, chaffer beetle and termite.

Mandor-Jodhpur (Rajasthan): Sowing of the trial was done on 15th July, 2024. Total 429.7 mm rainfall received. The overall crop condition was good. Harvesting was done during last week of October (25.10.2024). The major insect-pests were shoot fly, termite, leaf roller grass hopper, grey weevil, leaf hopper, chaffer beetle, *Helicoverpa* and *Eublema silicula*.

Fatehpur-Shekhawati, Sikar (Rajasthan): During, *kharif*-2024, total rainfall i.e. 309.1 mm was received from 21 rainy days during the crop period. Sowing of entomological trials was done on 13th July, 2024. Incidence of various insect-pests on pearl millet crop viz., shoot fly, stem borer, termite, leaf binder, grey weevil, hairy cater pillar, blister beetles, *Eublema* and *Helicoverpa* were observed during crop period. Natural enemies i.e. lady bird beetle, chrysopa and spiders were also observed during the crop period. Amongst major insect-pests, the incidence of shoot fly was very high (av. 26.25%) as compared to stem borer (3.33%). Overall crop condition was good. Harvesting was done in the 2nd week of October (15.10.2024).

Aurangabad (Maharashtra): During, *kharif*-2024, total rainfall i.e. 316.0 mm was received in 21 rainy days during the crop period. Sowing of the experiment was done on 24th July, 2024. The major insect-pests were shoot fly, stem borer and fall army worm. The average incidence of shoot fly was

12.22%.Whereas, for stem borer it was 7.78%. The Fall Army Worm (FAW) damage was around 10.56%. The natural enemy lady bird beetle & chrysopa were also observed during the crop period. Harvesting was done in the first week of October (04.10.2024).

Hisar (Haryana): Total rainfall was 351.3 mm from 15 rainy days during the crop period. Sowing of the trial was done on 10th July; 2024. Overall pest incidence was very low. However, the major insect-pests were shoot fly, stem borer, grass hopper, Fall Army Worm and *Helicoverpa*. Whereas, the minor insect pests were grey weevil, leaf roller, blister beetle and chafer beetle. The natural enemy lady bird beetle & chrysopa were also observed in few numbers during the crop period.

Anantapur (Andhra Pradesh): There was no any field trial at this centre. However, one laboratory trial was allotted and conducted and it has been reported.

METHODOLOGY AND OBSERVATIONS

1. PMET-1A: Screening of pearl millet lines against major insect pest (Initial lines/ populations). Centres: Jamnagar, Jaipur and Fatehpur-Shekhawati (Total centres: 3)

Methodology: At vegetative stage (28 DAG), observations were recorded from total plants of net plot plants by counting the dead hearts. Thus, shoot fly dead heart percent incidence was worked out. For stem borer, plant showing parallel holes due to stem borer larvae in the leaves were considered as damaged plant and percent damaged plant was calculated. At ear head stage, number of ear heads showing shoot fly (deformed ear head) and stem borer (empty/white ear head) damage were recorded separately and thus percent ear head damage was worked out from ear heads of total plants of net plot. Whereas, for *Helicoverpa armigera*, the population of larvae was counted from 5 ear heads of the randomly selected. Leaf roller damage score (0-10) was worked out on 5 plant basis at ear head stage.

Observations recorded:

- a. **Shoot fly** – Per cent infestation at 28 DAG (Vegetative stage) and ear head stage.
- b. **Stem borer** – Per cent plant damage at 28 DAG (Vegetative stage) and at ear head stage.
- c. ***Helicoverpa* larvae** – Number of larvae/ 5 ear heads.
- d. **Leaf roller** – Damage score (0-10) at ear head stage.
- e. **Grey weevil**- Damage score (0-10) at ear head stage.

Criteria:

- a. Shoot fly – Percent infestation at vegetative stage (28 DAG) & at ear head stage
(Criteria: 0.0%= Resistant, 0.1-5.0%=Moderate resistant, 5.1-10.0% = Tolerant, 10.1-20.00%= Susceptible & Above 20.00% = Highly susceptible)
- b. Stem borer – Percent infestation at vegetative stage (28 DAG) & at ear head stage
(Criteria: 0.0%= Resistant, 0.1-5.0%=Moderate resistant, 5.1-10.0% = Tolerant, 10.1-20.00%= Susceptible & Above 20.00% = Highly susceptible)
- c. *Helicoverpa* larvae – Number of larvae/ 5 ear head
- d. Leaf roller- Damage score (0-10).
- e. Grey weevil- Damage score (0-10).

2. PMET-1B: Screening of pearl millet lines against major insect pest (advance lines).

Centres: Jamnagar, Mandor-Jodhpur, Jaipur and Fatehpur-Shekhawati (Total centres: 4)

N.B.: Methodology, observations recorded and criteria as per PMET-1A experiment.

3. PMET-2: Monitoring of major insect pests of pearl millet

Centres: Jamnagar, Anand, Jaipur, Mandor-Jodhpur, Fatehpur-Shekhawati, Aurangabad & Hisar (Total centres: 7).

Methodology:

- (A) Untreated plot:** Sowing of released pearl millet variety was done over an area of 100 m² which was kept free from insecticidal application during crop season. The whole block was divided into 10 quadrates of 1.0 X 1.0 m. The incidence (%) and population of various insect pests observed during the crop period was recorded at weekly interval from 2 plants of each quadrate randomly selected, 7 days after germination (DAG) of the crop till maturity. Thus total 20 plants were observed at weekly interval. The presence of bio agents was also recorded simultaneously. Weather data also recorded on weekly basis (Standard Meteorological Week) at least, Temperature Minimum & Maximum, RH Morning & Evening, Rainfall mm & Rainy days. If some other facility available than other parameters were recorded for correlation.
- (B) Treated plot:** One treated plot of 100 m² was maintained by taking recommended package of practices for insect pest management to get the information of yield losses.

The following treatments were adopted for treated plot.

1. Shoot fly, stem borer, white grub & termite: Seed treatment imidacloprid 600 FS @ 8.75 ml/kg seed.
2. Shoot fly, stem borer foliar spray: Imidacloprid 17.8 SL 0.009% at 35 DAG
3. *Helicoverpa armigera*: Spray of novaluron 10 EC 0.01%, at ear head stage at pest appearance.
4. Fall Army Worm: *Beauveria bassiana* 5 g/ litre whorl application (1×10^8 cfu/g) at the initiation of pest appearance and repeat it after 10 days if required.
5. Leaf binder, grass hopper, grey weevil, leaf roller, hairy cater pillar and any other leaf feeding insects: Spraying of NSKE 5%.

Observations recorded:

1. From Un-treated plot, per cent incidence and population of various insect pests observed during the crop period was recorded at weekly interval from 20 randomly selected plants (2 plants from each quadrate) 7 days after germination (DAG) of the crop till maturity. The presence of bio agents was also recorded simultaneously.
2. Yield kg/plot converted into hectare from treated as well as Un-treated plot.

4. PMET-3: Survey of major insect pests in *kharif* pearl millet on farmer's fields.

Centres: Jamnagar, Anand, Jaipur, Fatehpur-Shekhawati, Aurangabad and Hisar (**Total centres: 6**)
Survey of insect pests was carried out in pearl millet crop during *Kharif* season at different locations. Incidence of various insect pests infesting pearl millet was recorded. For shoot fly and stem borer per cent incidence was worked out from 20 randomly selected plants. Whereas, for rest of the insects, population was recorded from randomly selected 5 plants/ear heads as the case may be. The population of bio-agents was also recorded from randomly selected 5 plants/ear heads.

5. PMET-4: Management of insect-pest complex of pearl millet through seed treatment and foliar application of bio-pesticides

Centres: Jamnagar, Anand, Jaipur, Mandor-Jodhpur, Fatehpur-Shekhawati & Aurangabad (**Total centres: 6**).

Methodology: Seed treatment was given initially at the time of sowing. While, two foliar applications were given at 30 DAG and ear head stage. At vegetative stage (28 DAG), observations were recorded on 20 plants of net plot plants by counting the dead hearts. Thus, shoot fly percent incidence was worked out. For stem borer, plant showing parallel holes due to stem borer larvae in the leaves was considered as damaged plant and thus percent incidence was recorded. At ear head stage, number of ear heads showing shoot fly (deformed ear head) and stem borer (empty/white ear head) damage was recorded separately and thus per cent ear head damage was worked out from ear heads of 20 plants of net plot. Grass hopper per cent damage was recorded at 45 DAG. Fall Army worm % damage was also recorded at 45 DAG of the crop. Larval population of *Helicoverpa* was recorded on 5 ear heads in each treatment at ear head stage before spray (24 hrs before spray) and after spray 1, 3, and 7 days. Termite and white grub damage was recorded from 20 plants of net plot and thus per cent damage was recorded at ear head stage. Grey

weevil damage score (0-10) was recorded at ear head stage. Grain and fodder yield was recorded from net plot area at harvest and data thus obtained were analyzed statistically. The ICBR was also calculated.

Observations to be recorded:

- Per cent incidence of shoot fly at 28 DAG (vegetative stage) and at ear head stage.
- Per cent incidence of stem borer at 28 DAG (vegetative stage) and at ear head stage.
- Per cent termite and white grub damage at ear head stage.
- Larval population of *Helicoverpa* to be recorded on 5 ear heads in each treatment before & after spray (24 hrs before, 1, 3 & 7 days after spray).
- Grass hopper per cent damage at 45 DAG of the crop.
- Fall Army worm % damage at 45 DAG of the crop.
- Grey weevil damage score at ear head stage (0-10).
- Grain & fodder yield.

6. PMET-5: Management of ear head worm, *Helicoverpa armigera* in pearl millet through chemical insecticides

Centres: Jamnagar, Mandor-Jodhpur and Fatehpur-Shekhawati (Total centres: 3).

Methodology:

The pearl millet crop will be sown followed by all the agronomical practices. If any major incidence of foliage pest (shoot fly, stem borer, grass hopper & FAW) is observed it will be protected with spray of Azadirachtin 1500 ppm (40 ml/10 litres) as a blanket spray. Rest of all the treatments will be given at ear head stage at the appearance of *H. armigera*.

Observations to be recorded:

- Helicoverpa armigera* larval population 24 hrs before spray, 24 hrs, 3 days and 7 days after spray from randomly selected 20 ear heads of net plot.
- Grain and fodder yield will be recorded from the net plot.

7. PMET 7: Survey of insect- pests of summer pearl millet on farmers' fields.

Centres: Jamnagar, Anand and Aurangabad (Total centres: 3)

Survey of insect pests was carried out in pearl millet crop on farmer's field during summer season. Incidence/population of insect pests infesting pearl millet crop was recorded from 20 randomly selected plants per field. For shoot fly and stem borer per cent incidence was worked out from 20 randomly selected plants. Whereas, for rest of the insects, population was recorded from randomly selected 5 plants/ear heads as the case may be. The population of bio-agents was also recorded from randomly selected 5 plants/ear heads.

8. PMET-8: Relative susceptibility of pearl millet advanced entries to storage insect pests

Centres: Jamnagar, Anand, Jaipur, Mandor-Jodhpur and Anantapur (Total centres: 5)

Since installation of storage trial was done after the harvest of *kharif* trial, the observations recorded at 3 & 6 months of period of 2024 will be presented next year, whereas the results of entries of *kharif* 2023 are presented in this year's report.

Observations:

- Number of adults (*Tribolium/Rhizopertha*) emerged at 3 & 6 months period of storage
- Per cent grain damage at 3 & 6 months period of storage
- Per cent weight loss at 3 & 6 months period of storage
- Germination percentage at 6 months

9. PMET-9: Monitoring of Fall Army worm (*Spodoptera frugiperda*) through pheromone traps in *Kharif* pearl millet

Centres: Jamnagar, Anand, Jaipur, Mandor-Jodhpur, Fatehpur-Shekhawati & Aurangabad (Total centres: 6)

Methodology & Observations recorded: The pheromone traps of Fall Army Worm (5 traps) were installed in the general pearl millet crop field of the station. The catches per 5 traps were recorded at weekly interval as per Meteorological Standard week (MSW). The mean catches per week were worked out to know the population fluctuations. Simultaneously, damage per cent was also recorded.

N.B.: The traps were supplied by PI (Entomology), Pearl millet Research Station, JAU, Jamnagar to the above locations.

RESULTS-2021

1. PMET-1A: Screening of pearl millet lines against major insect pests (Initial lines/ populations).

One hundred and fourteen different pearl millet entries were screened for their resistance against major insect pests. This trial was conducted at Jamnagar, Fatehpur-Shekhawati and Jaipur (Table V.1a, V.1b, V.1c and V.1d).

Shoot fly incidence: At vegetative stage, none of the entry was found resistant (0.0%), 10 entries (86M94, MH 2871, MH 2878, MH 2836, MP 7878, MH 2826, 86M86, MH 2829, MH 2830 and MH 2834) were found moderate resistant (0.1 to 5.0% damage). Seventy six entries were found tolerant (5.1-10.0%), 28 entries were found susceptible (10.1-20.0%). None of the entry was highly susceptible (above 20.0%) and the overall range of incidence was 2.76% to 16.70%. The overall average incidence was 8.40%. As far as location wise incidence is concerned the mean incidence was higher at Jaipur (13.96%) as compared to Jamnagar (3.01%) and Fatehpur-Shekhawati (8.23%). At ear head stage, none of the entry was found free from damage (Resistant), forty eight entries were found moderate resistant, 62 entries were found tolerant, four entries were found susceptible and none of the entry was highly susceptible (> 20.00%). The overall range of incidence was 1.40% to 13.24%. As far as location wise incidence is concerned the overall mean incidence was higher at Jaipur (12.36%) as compared to Jamnagar (1.05%) and Fatehpur-Shekhawati (3.78%). The overall incidence was higher at vegetative stage (8.40%) as compared to ear head stage (5.73%), table V.1a & V.1c.

Stem borer incidence: It was observed and recorded at Jamnagar and Fatehpur-Shekhawati only. At vegetative stage, 12 entries (MH 2813, MH 2819, MH 2815, MH 2852, MH 2876, MH 2881, MPMH 35, 86M94, Pratap, KBH 108, 86M86 and AHB 1200) were found resistant (0.0%) or free and 102 entries were found to be moderate resistant. The overall range of incidence was 0.25% to 2.44%. Location wise the overall mean incidence was higher at Jamnagar (1.35%) as compared to Fatehpur-Shekhawati (0.70%). At ear head stage overall incidence was low, 70 entries were found free-resistant, 43 entries were moderate resistant (< 5.0%) and one entry was found tolerant. The overall range was 0.28-7.69%. Location wise the incidence was higher at Fatehpur-Shekhawati (0.96%) as compared to Jamnagar (0.15%). The overall incidence was higher at vegetative stage (1.03%) as compared to ear head stage (0.56%), table V.1a & V.1c.

Helicoverpa armigera: It was observed and recorded at Jamnagar and Fatehpur-Shekhawati. The larval population of *H. armigera* recorded at ear head stage revealed that none of the entry was found free. Fifty entries recorded larval population in the range of 0.1 to 1.0 larvae/5 ear heads, 30 entries recorded larval population in the range of 1.1 to 2.0 larvae/5 ear heads, 15 entries recorded larval population in the range of 2.1-5.0 larvae/5 ear heads and 19 entries recorded larval population above 5.1/ 5 ear heads. The overall range of population was 0.25 to 13.0 larvae/ 5 ear heads and the average population was 2.47 larvae/5 ear heads. The mean population of Jamnagar (2.07 larvae/ 5 ear heads) was lower as compared to Fatehpur-Shekhawati (2.86 larvae/5 ear heads), table V.1b & V.1d

Grey Weevil: It was observed and recorded at Fatehpur-Shekhawati only. At ear head stage, none of the entry was found free. Forty entries recorded Grey Weevil Damage Score (GWDS) in the range of 0.1 to 1.0, 69 entries recorded GWDS in the range of 1.1 to 2.0 and five entries recorded GWDS in the range of 2.1 to 5.0. The overall range was 0.50-3.00 with a mean score of 1.45, table V.1b & V.1d

Leaf roller: It was observed and recorded at Jaipur only. At ear head stage, none of the entry was found free. Sixteen entries were found with the Leaf Roller Damage Score (LRDS) in the range of 0.1 to 1.0, 63

entries recorded LRDS in the range of 1.1 to 2.0 and , 35 entries recorded LRDS in the range of 2.1 to 5.0. The overall range was 0.50 to 3.50 with a mean score of 1.89, table V.1b & V.1d

2. PMET-IB: Screening of pearl millet lines against major insect-pest (advance lines)

Forty nine different advance entries were screened for their resistance against major insect pests. This trial was conducted at Jamnagar, Jaipur, Fatehpur-shekhawati & Jodhpur (Table V.2a, V.2b, V.2c and V.2d).

Shoot fly incidence: At vegetative stage, none of the entry was found resistant (0.0%), five entries (MH 2709, MH 2806, MH 2773, MH 2777 and MP 637) were found moderate resistant (0.1 to 5.0% damage), 26 entries were found tolerant (5.1-10.0%), 18 entries were found susceptible (10.1-20.0%) and the overall range of incidence was 3.77% to 16.23%. The overall average incidence was 8.97%. As far as location wise the overall mean incidence is concerned it was higher at Jaipur (12.02%), Jodhpur (9.99%) and Fatehpur-Shekhawati (10.40%) as compared to Jamnagar (3.47%). At ear head stage, none of the entry was found free from damage (Resistant), 19 entries were found moderate (MH 2801, Raj 171, MH 2796, RHB 223, KBH 108, MH 2758, NBH 4903, MH 2798, MH 2784, Kaveri Super Boss, MH 2712, MH 2797, MH 2717, MH 2808, MH 2744, 86M84, JBV 2, Pusa Comp. 383, MP 7878, MH 2747, MH 2682, MH 2675, Pusa Comp. 701 and MH 2673), 27 entries were found tolerant and three entries were found susceptible. The overall range of incidence was 2.67% to 13.32%. As far as location wise the overall mean incidence is concerned it was highest at Jaipur (11.80%) as compared to Jodhpur (4.39%), Fatehpur-Shekhawati (6.24%) and Jamnagar (1.54%). The overall incidence was higher at vegetative stage (8.97%) as compared to ear head stage (5.99%), table V.2a & V.2c.

Stem borer incidence: Overall during kharif 2024 the incidence of stem borer was very low. It was observed and recorded at Jamnagar and Fatehpur-Shekhawati only. At vegetative stage, seven entries were found resistant or free (MH 2767, MH 2775, MH 2798, AHB 1269, Pratap, MP 7878 and AHB 1200) and 42 entries were found tolerant. The overall range of incidence was 0.0% to 4.73%. The mean incidence was only 1.27%. Location wise the incidence was higher at Jamnagar (1.39%) as compared to Fatehpur-Shekhawati (1.14%). At ear head stage the overall incidence was low at both the locations. Fifteen entries were found free-resistant (MH 2675, MH 2748, MH 2767, MH 2775, MH 2777, MH 2784, MH 2796, MH 2798, 86M01, MP 7878, Kaveri Super Boss, NBH 4903, Raj 171, ICMV 221 and Pusa Comp. 383) and 34 entries were moderate resistant (< 5.0%). Location wise the incidence was higher at Fatehpur-Shekhawati (2.27%) as compared to Jamnagar (0.23%). The overall incidence was almost same at vegetative stage (1.26%) and at ear head stage (1.25%), table V.2a & V.2c.

***Helicoverpa armigera*:** It was observed and recorded at Jamnagar, Jodhpur and Fatehpur-Shekhawati only. The larval population of *H. armigera* recorded at ear head stage revealed that none of the entry was found free. Seven entries (MH 2712, Raj 171, MH 2747, MH 2777, MH 2797, MH 2798 and NBH 4903) recorded larval population in the range of 0.1 to 1.0 larvae/5 ear heads, 13 entries recorded larval population in the range of 1.1 to 2.0 larvae/5 ear heads, 20 entries recorded larval population in the range of 2.1-5.0 larvae/5 ear heads and nine entries recorded larval population above 5.0 larvae/ 5 ear heads. The overall range of population was 0.67 to 7.67 larvae/5 ear heads and the average population was 3.04 larvae/5 ear heads. The mean population of Fatehpur-Shekhawati (5.68 larvae/5 ear heads) was higher than Jamnagar (1.55 larvae/ 5 ear heads) and Jodhpur (1.90 larvae/5 ear heads), table V.2b & V.2d.

Grey Weevil: It was observed and recorded at Jodhpur and Fatehpur-Shekhawati only. At ear head stage, none of the entry was found free. Thirty two entries recorded Grey Weevil Damage Score (GWDS) in the range of 0.1 to 1.0, 16 entries recorded GWDS in the range of 1.1 to 2.0 and one entry recorded GWDS in the range of 2.1-5.0. The overall range was 0.50-2.25 DS with a mean damage score of 1.02, table V.2b & V.2d

Leaf roller: It was observed and recorded at Jaipur only. At ear head stage, none of entry entry was found free. Seven entries (MH 2795, MH 2796, MH 2797, RHB 223, MP 7878, Kaveri Super Boss and NBH 4903) recorded Leaf Roller Damage Score (LRDS) in the range of 0.1 to 1.0, 33 entries recorded LRDS in the range of 1.1 to 2.0 and nine entries recorded LRDS in the range of 2.1-5.0. The overall range was 1.00-3.00, with a mean score of 1.82, table V.2b & V.2d

3. PMET-2: Monitoring of major insect pests of pearl millet

With a view to study the population fluctuation of different insect pests of pearl millet during crop season *i.e.* on station monitoring, a study was conducted at Jamnagar & Anand in Gujarat, Jaipur, Fatehpur-Shekhawati & Mandor-Jodhpur in Rajasthan, Aurangabad in Maharashtra and Hisar in Haryana. Incidence of different insect pests was recorded at weekly intervals. Moreover, correlation of these pests was worked with different weather parameters. The loss caused by insect-pest complex was also worked out.

Centre: Jamnagar

The weekly incidence of insect-pests was recorded on variety GHB 538 at Pearl Millet Research Station, JAU, Jamnagar (Table- V.3a).

Insect-pest incidence: Shoot fly incidence: The initiation of shoot fly incidence (5.00%) was found in 30th Standard Meteorological Week (SMW). The highest shoot fly incidence (20.00%) was observed during 34th SMW. The average incidence was 12.50% during the crop period. **Stem borer incidence:** The initiation of stem borer was found from 31st SMW (5.00%). However, its incidence was found highest (10.00%) during 35th, 36th, 10th and 41st SMW with an average incidence of 7.92% during the crop period. The overall range of other insect pests *viz.*, **leaf roller** (0.0-4.0 damage score), **Grey weevil** damage score (0.0-3.00), **grass hopper (0.0-10.00%)**, **chaffer beetles** (0.0-15.00/20 ear heads), hairy cater pillar (0.0-30.00 larvae/20 ear heads) and *Helicoverpa* (0.0-47.00 larvae/20 ear heads) observed. The natural enemy **lady bird beetle** (0.0-5.00/ 20 plants) and **chrysopa** (0.0-10.00/ 20 plants) were also observed in pearl millet eco-system.

Losses: The treated plot recorded 2903 kg/ha grain and 5848 kg/ha fodder yield. The losses in grain yield were 13.44% and 14.80% in fodder yield, table-V.3b.

Correlation: The correlation (table-V.3c) of shoot fly and stem borer incidence with different weather parameters was non-significant. *Helicoverpa armigera* larval population correlation was found negative and significant with temperature minimum ($r = -0.600^*$) and rainy days ($r = -0.689^*$). Whereas, it was positive and significant with bright sun shine hours ($r = 0.652^*$).

Centre: Anand:

Weekly incidence and population of insect-pests was recorded on pearl millet variety GHB 1129 at Regional Research Station, Anand Agricultural University, Anand (Table-V.3d).

Incidence: Shoot fly: Its incidence initiated in 37th SMW (5.00%) and it was highest during 38th to 43rd SMW (15.00%) with an average of 7.31%. **Stem borer** incidence initiated in 38th SMW (5.0%) and it was highest during 43rd SMW (15.00%) with an average of 4.62%. **Grass hopper** damage ranged from 0.0-10.00% (av. 3.08%). The overall population range of other insect pests *viz.* *Helicoverpa* (0-4/20 ear heads) and *Eublemma silicula* (0-3 larvae/ 20 ear heads). The natural enemy **lady bird beetle** (0-3 beetles/20 plants) was also observed in pearl millet eco-system. **The overall pest incidence was low to moderate.**

N.B.: There was no incidence of fall army worm throughout the crop period.

Losses: There was 8.25% grain and 5.46% fodder losses in pearl millet due to insect-pest complex during Kharif 2024 at Anand (Table V.3e).

Correlation: The correlation (Table V.3f) of major insect-pests with weather parameters has been depicted in table V.3f. The correlation of shoot fly per cent incidence was found positively significant with maximum temperature ($r = 0.672^*$), and bright sun shine hours ($r = 0.562^*$). The correlation was negative and significant with relative humidity evening ($r = -579^*$) and wind speed km/hour ($r = -0.683^*$). The correlation of stem borer per cent incidence was positively significant with maximum temperature ($r = 0.667^*$) and negatively significant with minimum temperature ($r = -0.769^{**}$) relative humidity evening ($r = -0.611^*$) and wind speed ($r = -0.831^{**}$). The correlation of *Helicoverpa* larval population was positively significant with maximum temperature ($r = 0.585^*$) and wind speed ($r = -0.761^{**}$)

Centre: Mandor-Jodhpur:

Incidence: Weekly observations on incidence of various insect pests during *kharif* 2024 on pearl millet crop (variety MPMH 21) was recorded at ARS, Mandor, Jodhpur- Rajasthan (Table V.3g).

Shoot fly: The infestation was noticed during 31st to 42nd MSW and the maximum infestation of 30.00% was recorded in 33rd MSW with an average of 11.92% during the crop period. **Termite:** The incidence initiated in the 31st MSW (20.00%) and it remained till harvest with an average of 18.46%. **Leaf roller:** The damage initiated in 33rd MSW (1.00 damage score) and the maximum was during 39th MSW (5.00 DS) with an average of 1.00 DS during the crop period. **Grass hopper:** The damage initiated during 33rd MSW (5.00%) with maximum of 20.00% during 35th to 37th MSW (20.00%) with an average of 7.31%. **FAW:** The damage of fall army worm was observed only during 34-36th MSW (5.0-10.0%) with an average of 1.92% over the period. **Grey weevil:** The grey weevil damage score ranged from 0.0-3.0, with an average of 1.46 during the season. **Hairy cater pillar:** Its larval population was observed during 35-37th MSW ranging from 0.0-2.0 larvae/ 20 ear heads with an average of 0.46 larvae/ 20 ear heads. **Leaf hopper- jassids:** Its population was observed during mid stage of the crop ranging from 0.0-16.20 adults/ 20 plants with an average of 2.50 adults/20 plants. **Chaffer beetle:** Its average population was 0.77 adults/20 ear heads. **Helicoverpa armigera:** Its larval population was observed during 35-39th MSW, its range was 0.0-10.00 larvae/20 ear heads with an average of 2.15 larvae/20 ear heads. **Eublemma silicula:** Its larval population was during 37-39th MSW with an average of 0.38 larvae/20 ear heads. The natural enemy **lady bird beetle** population was observed in good numbers during 32nd to 39th MSW with an average of 1.77 adults/20 plants during the crop period. Another natural predator, chrysopa was also observed but in few numbers from 32nd to 38th MSW with average of 0.54 adults/20 plants.

Losses: There was 20.00% loss in grain and 20.00% in fodder yield due to pest complex in pearl millet (Table V.3h).

Centre: Fatehpur-Shekhawati:

Weekly observations on incidence of various insect pests during *kharif* 2024 on pearl millet crop (Variety RHB 234) was recorded at ARS, Fatehpur-Shekhawati, Sikar, Rajasthan (Table V.3i).

Incidence: **Shoot fly:** The infestation was noticed during 31st to 41st MSW and the maximum infestation of 35.00% was recorded during 39th to 41st MSW with an average of 26.25% during the crop period. **Stem borer:** Its incidence initiated in 33rd MSW (5.00%) and then after remained present throughout the crop period. The maximum incidence was 10.00% with an average of 6.67%. **Termite:** The incidence initiated in the 34th MSW and it remained till harvest. It was maximum (5.00%) during 34th and 41st MSW with an average of 3.33%. **Leaf roller:** The damage was observed throughout the crop period with an average of 3.08 damage score. **Grey weevil:** The grey weevil damage score ranged from 1.0-3.0, with an average of 2.42 during the season. **Hairy cater pillar:** Its population was observed very low in the range of 0.0-1.00 larvae/20 plants with an average of 0.20 larvae/ 20 plants. **Blister beetles:** It was observed during 39th and 40th MSW with an average of 1.17 beetle/20 ear heads. **Helicoverpa:** Its population was observed during 37th to 41st MSW with an average of 1.25 larvae/ 20 ear heads. The maximum 5 larvae /20 ear heads was recorded during 40th MSW. **Eublemma:** The larva was observed only at ear head stage with very low population with an average of 0.25 larvae/20 ear heads. The natural enemies' viz., lady bird beetle (0.0-5/20 plants), chrysopa (0.0-1.0/20 plants) and spiders (0.0-9.0/20 plants) were observed in good numbers in pearl millet eco-system.

Losses: There was 33.00% loss in grain and 37.00% in fodder yield due to pest complex in pearl millet (Table V.3j).

Correlation: The correlation of major insect-pests with weather parameters has been depicted in table V.3k. The correlation of shoot fly incidence was negatively significant with minimum temperature ($r = -0.657^*$). Whereas, with rest of the parameters it was non-significant. The correlation of stem borer incidence was negatively significant with minimum temperature ($r = -0.630^*$) and positively significant with bright sun shine hours ($r = 0.639^*$).

Centre: Aurangabad:

Weekly incidence and population of insect pests was recorded on pearl millet variety AHB 1200 at National Agriculture Research Project, Aurangabad in Maharashtra (Table V.3l).

Incidence: Shoot fly: Its incidence initiated in 32nd MSW (5.00%) and it was highest during 33rd to 39th MSW (10.00%) with an average of 12.22% during the season. **Stem borer** incidence initiated in 33rd MSW (10.00%) and it was highest (10.00%) during 33rd to 39th MSW (15.00%) with an average of 7.78% during the crop period. **Fall Army Worm:** Its damage was observed during 34th MSW (10.00%) to 39th MSW (20.00%) with an average of 10.56% damage. Hairy caterpillar ranged from 0.0-2.0 larvae/ 20 plants. Chaffer beetle adult population ranged from 0.0-1.0/ 20 ear heads. The natural enemy **lady bird beetle** (0.0-3.00/20 plants) and **chrysopa** (0.0-0.05/ 20 plants) was observed during the crop stage in pearl millet eco-system.

Losses: There was 9.09% loss in grain and 15.56% in fodder due to pest complex in pearl millet (Table V.3m).

Centre: Hisar:

Monitoring of different insect-pest in pearl millet variety HB 299 was done at weekly interval at CCS HAU Hisar (Table V.3n).

Incidence: The incidence of **shoot fly** was observed very low (mean 1.36%) and it was observed only during 30th (5.00%) and 31st MSW (10.00%). **Stem borer** incidence was also very low and it was observed during 32nd (5.00%) to 34th MSW (15.00%). **Grass hopper** damage was observed during the crop period i.e. 32nd MSW (2.00%) to 33rd (3.00%) MSW with an average of 0.45% during the crop period. **Fall army worm** damage ranged from 0.0-15.00% with an average of 1.82%. Mean **grey weevil** damage score was 1.82. **Blister beetle** population was observed during 37th MSW (5 beetles/20 EH) and 38th MSW (2 beetles/20 EH). **Chaffer beetle** was moderate (range 0.0-2.00) with an average of 0.27 adults/20 ear heads. **Helicoverpa** larval population was very low at ear head stage and it was 0.0-2.0 larvae/ 20 ear heads during 37th MSW to 38th MSW with an average of 0.27 larvae/20 ear heads. The natural enemy lady bird beetle (Av.0.23/20 plants) and chrysopa (Av. 0.36/20plants) was observed during mid to stage of the crop.

Losses: The loss in grain was 6.90%, whereas in case of fodder it was 5.13% due to insect- pest complex in pearl millet (Table V.3o).

Centre: Jaipur:

Weekly observations on incidence of various insect pests during kharif 2024 on pearl millet crop (Variety RHB 228) was recorded at RARI, Durgapura, Jaipur, Rajasthan (Table V.3p).

Incidence: Shoot fly: The infestation initiated from 33rd SMW (4.76%) and afterwards it was observed throughout the crop period. The maximum infestation was recorded during 43rd SMW (25.00%) with an average of 11.27%. **Stem borer:** Overall stem borer incidence was very low (2.05%) during the season and it was observed only at few stages. **Termite:** Its incidence was observed very high during 33rd to 44th SMW and the average incidence was 22.27% during the crop period. **Leaf roller:** The damage was observed during 36th to 44th SMW with an average of 3.62 damage score. **Chaffer beetle:** It was observed during 39th to 44th SMW, with an average of 1.62/5 ear heads.

Losses: There was 43.96% loss in grain and 29.52% in fodder yield due to pest complex in pearl millet (Table V.3q).

Correlation: Data presented in table V.3r indicates that, there was non significant correlations of shoot fly and stem borer with different weather parameters. However, in case of termite the correlation was found significant with weather parameters. The Correlation was found negative and significant with minimum temperature ($r = -0.834^{**}$), wind speed ($r = -0.747^{**}$), rainfall ($r = -0.805^{**}$) and rainy days ($r = -0.827^{**}$).

4. PMET-3: Survey of insect pests of kharif pearl millet crop on farmer's field

With a view to examine the intensity of different insect pests of pearl millet on farmer's fields, a field survey was conducted by Jamnagar & Anand centre in Gujarat, Jaipur & Fatehpur-Shekhawati centre in Rajasthan, Aurangabad centre in Maharashtra and Hisar in Haryana.

Centre: Jamnagar & Anand: Scientists of Jamnagar centre (Sr. no. 1 to 71, table- V.4a) carried out survey in pearl millet farmer's fields for insect-pests comprising of four districts (Anand, Banaskantha,

Kutch and Anand) of Gujarat state during *kharif* 2024. Whereas, scientists of RRS, AAU, Anand carried out survey in 38 fields three Districts (Anand, Kheda and Vadodara) at ear head stage (Sr. no.72 to 109, table-V.4 a). Shoot fly, stem borer *Helicoverpa*, blister beetle, chaffer beetle, grass hopper, grey weevil and leaf binder were found pre dominantly in the fields and its intensity was low to moderate. The pest wise intensity has been given in details (Table- V.4a). District wise pest situation is given in table- V.4b.

- (a) **Shoot fly:** Its incidence ranged from 0.0% to 25.0% at different locations/fields with an average of 10.60% in surveyed fields. The highest incidence (25.0%) was observed at Dungrasan (Tehsil, Kankrej, district Banaskantha) in 86M22 variety at ear head stage.
- (b) **Stem borer:** Its incidence ranged from 0.0% to 20.0% at different locations/fields with an average of 8.73% in surveyed fields. The highest incidence (20.0%) was observed at Kosindra (Tehsil, Sankheda and district Vadodara) in Desi variety and Sandesar (Tehsil and district, Anand) in Desi variety at ear head stage.
- (c) **Ear head worm (*Helicoverpa armigera*):** Average population of these larvae was 6.50 larvae/5 ear heads in surveyed fields. Its range was 0.0 to 30.0 larvae/5 ear heads and it was recorded highest (30.0 larvae/5 ear heads) at Dali (Tehsil, Borsad, district Anand) in variety Triveni 972 in surveyed fields.
- (d) **Blister beetle:** The population of blister beetle ranged from 0 to 15.0/5 ear heads (average 2.83 beetles/ 5 ear heads) in surveyed fields. The highest number of blister beetle population (15.0/5 ear heads) were observed at Juna katariya (Tehsil- Bhachau, district Kutch, variety-Sagar 222) and at Malgadh (Tehsil-Deesa, district-Banaskantha, variety-86M11) in surveyed fields.
- (e) **Grass hopper:** The damage of grass hopper was in the range of 0 to 25.0% and it was highest at Chandarani (Tehsil- Anjar, district-Kutch) in Desi Pearl millet variety with an average of 5.98% in surveyed fields.
- (f) **Grey weevil damage score:** Its damage score was in the range of 0.0-7.0 with an average of 2.04 damage score in surveyed fields. It was highest at Moldi nani (Tehsil-Chotila, district-Surendranagar) in variety Sagar 222 at ear head stage in surveyed fields.
- (g) **Chaffer beetle:** It ranged from 0.0 to 15.0/5 ear heads with an average of 2.99/5 ear heads. It was highest (15.0/5 ear heads) at Mehelav (Tehsil-Petlad, district-Anand) in variety Avani 44at ear head stage in surveyed fields.
- (h) **Leaf binder:** Its damage was in the range of 0.0-7.0 with an average of 2.17 damage score. It was highest at Ravipura (Tehsil- Petlad, district Anand) in variety Kedar 888 at ear head stage in surveyed fields.
- (i) **Lady bird beetle:** The natural enemy lady bird beetle (range 0.0-15.0/5 plants) was observed at many places but in few numbers with an average of 190 adults/5 plants.
- (j) **Chrysopa:** The natural enemy chrysopa was observed at few locations surveyed, ranging from 0.0-7.0/5 plants with an average of 1.28/5 plants.

As far as the district wise insect pest situation is concerned, mean shoot fly (16.67%) and stem borer incidence (20.00%) incidence was highest in Vadoadara district in surveyed fields. Mean *Helicoverpa armigera* larval population (8.65 larvae/ 5 ear heads) and blister beetle adult population (6.10 adults/ 5 ear heads) were recorded highest in Banaskantha District in surveyed fields. Whereas, grey weevil damage score was highest in Surendranagar district (5.18 DS) in surveyed fields. Chaffer beetle population (4.64 adults/ 5 ear heads) and grass hopper per cent damage (16.36%) was highest in Kutch Pocket in surveyed fields. Leaf binder was highest in Vadodara district (3.00%) in surveyed fields. The natural enemy lady bird beetle (2.18/5 pl.) was highest in Anand pocket & chrysopa (2.00/5 pl.) was highest in Banaskantha pocket in surveyed fields (Table- V.4b).

Centres: Jaipur & Fatehpur-Shekhawati

A survey of insect pests of pearl millet at farmer's field was carried out in Rajasthan during *kharif* 2024. Total eight districts (Alwar, Bharatpur, Dausa, Ganagapur city, Karauli, Kotputli behror and Sikar) were surveyed by scientists of Fatehpur-Shekhawati (Field number, 1-91 fields) and Jaipur Scientists

(Field number, 92-130). Hence, the results of Rajasthan state are presented combined here based on survey conducted in whole region by both the centres, (Table V.4c).

- a. **Shoot fly:** Its damage was observed in all the fields ranging from 2.00% to 40.00%. The highest damage (40.0%) was recorded at Garinda and Harsawa of Sikar district at vegetative stage in surveyed fields. The mean incidence was 14.51%.
- b. **Stem borer:** Its damage was found in majority of the fields and its range was 0.0-25.00% with an average of 5.55% in surveyed fields. Its incidence was found highest (25.00%) at emla Khurd (Tehsil Barod Mev) in Alwar district in unknown hybrid at ear head stage in surveyed fields.
- c. **White grub % damage:** Its damage was found in many fields and it ranged from 0.0-15.00% with an average of 2.33% in surveyed fields. The highest (15.00%) was recorded at Purohiton ka baas, Devipura, Bassi and Pujari ka baas (Tehsil- Khandela) of Sikar district at vegetative stage in surveyed fields.
- d. **Termite damage %:** Its incidence was found in many of the fields & highest damage (20.00%) was observed at Danta and Behror in unknown hybrid. The mean incidence was 4.19%.
- e. **Helicoverpa:** It was observed at many places with an average of 4.15 larvae/5 ear heads. The overall range was 0.0-45.00 larvae/ 5 ear heads. The highest population was observed at Bathond (Faehpur-Sikar) in Desi variety.
- f. **Grass hopper:** Its infestation was found at many locations with an average of 7.23% infestation in surveyed fields. The overall range was 0.0-30.00%.
- g. **Grey weevil:** Its damage was observed at many places. Its damage was found ranging from 0.0-3.0 damage, with an average of 0.95 damage score.
- h. **Blister beetles:** Its population was found at few locations ranging from 0.0-9.0 adults/ 5 plants with an average of 0.72 adults/ 5 plants.
- i. **Chaffer beetles:** Its population was found low and it was observed only at few locations ranging from 0.0-10.0 adults/ 5 ear heads with an average of 0.25 ear heads/ 5 plants.
- j. **Leaf binder:** Its damage was observed at many places, ranging from 0.0-3.00 damage score with an average of 1.15 damage score (DS).

The natural enemy lady bird beetles ranged from 0.0-3.00 beetles/ 5 plants with an average of 0.22 beetles/5 plants in surveyed fields. Chrysopa adults ranged from 0.0-2.00/ 5 plants with an average of 0.22/ 5 plants.

District wise insect-pest incidence:

The survey of insect-pest incidence was carried out in eight districts and it was found that, **shoot fly** per cent incidence was recorded in almost all Districts and it was highest in Sikar (17.00%) in surveyed fields. Whereas, **stem borer** was low to moderate and it was observed in all the districts and it was highest in Alwar district (8.29%). **White grub** damage was observed in all the districts and it was highest in Jaipur (6.00%) in surveyed fields. **Termite** damage was observed in all the Districts (Av. 3.89%) and it was highest in Dausa (10.00%) in surveyed fields. **Helicoverpa armigera** larval population was observed in all the districts except and it was highest in Gangapur city (7.57 larvae/5 ear heads) in surveyed fields. **Blister beetle** population was observed only in Karauli (3.50adults/ 5 plants), Kotputli behror (0.33 adults/ 5 plants) and Sikar (0.86 adults/ 5 plants) districts. **Chaffer beetle** population was observed in Alwar (1.43 adults/ 5 ear heads), Karauli (1.00 adults/ 5 ear heads) and Kotputli behror (3.33 adults/ 5 ear heads) districts. However, its overall population was very low. **Grass hopper** damage % was observed in all the districts and it was highest in Kotputli behror (15.00%) in surveyed fields. **Grey weevil** damage was observed only in Sikar (1.24 damage score) in surveyed fields. **Leaf binder** % damage was observed in all the Districts and it was highest in Gangapur city (1.57 damage score). **Fall Army Worm** was not observed in any fields surveyed. The natural enemy **lady bird beetle** was observed only in Sikar (0.28 beetles/5 plants). The another natural enemy **Chrysopa** was observed only in Sikar (0.28 adults/ 5 plants) in surveyed fields, table V.4 d.

Centre: Aurangabad:

Survey was carried out in 25 fields of Aurangabad and Jalna district at ear head stage at farmer's fields (Table V.4e).

- a. **Shoot fly:** Its incidence ranged from 0.0% to 40.0% at different locations/fields with an average of 11.20% in surveyed fields. The highest incidence (40.0%) was observed at Koli Bodakha and Rajapur of district Aurangabad) at ear head stage.
- b. **Stem borer:** Its incidence was observed at few locations ranging from 0.0% to 40.0% at different locations/fields with an average of 4.80%.
- c. **Blister beetle:** The population of blister beetle was observed at few locations, ranging from 0.0 to 0.40 adults/5 ear heads (average 0.06 beetles/5 ear heads) in surveyed fields.
- d. **Chaffer beetle:** The population of chaffer beetle was observed at few locations, ranging from 0.0 to 1.00 adults/5 ear heads (average 0.24 beetles/5 ear heads) in surveyed fields.
- e. **Fall Army worm:** The damage ranged from 0.0-40.00% with highest observed at Kingaon (Tehsil- Ambad, district Jalna, variety local) and at Kachner Tanda (Tehsil- Paithan, district- Aurangabad, variety- 7872). The mean damage was 12.80% in these locations in surveyed fields.
- f. **Hairy caterpillar:** It was observed at few locations in surveyed fields.

The natural enemy lady bird beetle (av.0.20 adults/ 5 plants) was observed at few places and in few numbers.

Centre: Hisar:

Survey in Haryana was conducted by CCS HAU, Hisar scientists in 58 farmer's fields of Bhiwani, Hisar, Jhajhar, Mahendragarh Rewari and Rohtak districts (Table- V.4f).

- a. **Shoot fly:** Its damage was observed in few fields ranging from 0.0-4.0%, with an average of 0.33% in surveyed fields.
- b. **Stem borer:** Its damage was found in few fields and its range was 0.0-8.00% with an average of 1.4% in surveyed fields in surveyed fields.
- c. **White grub:** Its range was 0.0-6.0% with an average of 1.26% in surveyed fields.
- d. **Termite:** The termite per cent damage ranged between 0.0-5.0, with an average of 0.52% in surveyed fields.
- e. **Helicoverpa:** It was observed at many places with an average of 0.19 larvae/5 ear heads. The overall range was 0.0-2.00 larvae/ 5 ear heads, in surveyed fields.
- a. **Blister beetles:** Its population was found very low and it was observed only at few locations ranging from 0.0-12 adults/ 5 plants with an average of 1.12 adults/ 5 plants in surveyed fields.
- b. **Chaffer beetles:** Its population was found low and it was observed only at few locations ranging from 0.0-8.0 adults/ 5 ear heads with an average of 1.16 ear heads/ 5 plants in surveyed fields.
- c. **Grass hopper:** Its infestation was found at few locations with an average of 2.41% infestation in surveyed fields.
- d. **Grey weevil:** Its damage was found ranging from 0.0-8.0 damage score, with an average of 2.36 damage score in surveyed fields.
- e. **Fall Army Worm:** Its damage was observed at few places, ranging from 0.0-15.0% with an average of 3.1% in surveyed fields.
- f. **Hairy caterpillar:** The population ranged from 0.0-15.0 larvae/5 ear head with an average of 2.71 larvae/ 5 ear heads.
- g. **Natural enemy-**The population of **lady bird beetle** was found at few locations ranging from 0.0-3.0 with an average of 0.34 adults/5 plants. Whereas, chrysopa was also observed at few locations ranging from 0.0-5.0 adults/5 plants with an average of 0.72 adults/5 plants.

5. PMET-4: Management of insect-pest complex of pearl millet through seed treatment and foliar application of bio-pesticides.

The objective of this trial was to evaluate different foliar applications of bio-pesticides along with seed treatment against Insect-pest complex infesting pearl millet. Total eight combinations were evaluated, (Table V.5a) with control including standard check. This experiment was conducted at Jamnagar, Anand, Mandor-Jodhpur, Fatehpur-Shekhawati Jaipur and Aurangabad during 2024.

Centre: Jamnagar

- (a) **Shoot fly:** Among the different treatments tested for their effectiveness against shoot fly, T₁ (Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana* , 1.15 WP, 0.07%, 60g/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage, recorded lowest shoot fly incidence at vegetative stage (1.53%). However, it was at par with rest of the treatments except T₉-Untreated control. At ear head stage, again T₈ (Seed treatment of imidacloprid 600 FS @ 8.75 ml/kg seed + spray of imidacloprid 17.8 SL 0.009% at 35 DAG, Standard Check) recorded lowest shoot fly incidence (2.07%) and it was at par with T₁ (2.72%) and T₄ (2.30%). Whereas, among bio-pesticides T₄ (Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana* , 1.15 WP, 0.07%, 60g/10 litres of water spray at 30 DAG + *Beauveria bassiana* , 1.15 WP, 0.07%, 60g/10 litres of water spray at ear head stage) recorded least shoot fly incidence (2.30%) incidence at ear head stage. Whereas, 13.07% incidence was recorded in T₉- Untreated-control (Table-V.5a).
- (b) **Stem borer:** At vegetative stage, T₄ (Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana* , 1.15 WP, 0.07%, 60g/10 litres of water spray at 30 DAG + *Beauveria bassiana* , 1.15 WP, 0.07%, 60g/10 litres of water spray at ear head stage) recorded least stem borer damage i.e. 1.89%. However, it was statistically at par with rest of the treatments except T₉-Untreated- control (8.22%). At ear head stage the lowest stem borer incidence i.e. 1.93% was recorded in T₈-Standard check. However, it was at par with T₁ (2.16%), T₂ (2.84%), T₄ (2.03%), T₅ (2.76%, and T₇ (2.77%) as compared to 7.34% in T₉ (Table-V.5a). Amongst bio-pesticides foliar spray, T₄ recorded least stem borer at ear head stage i.e. 2.03%.
- (c) **Grass hopper:** The lowest grass hopper per cent incidence (4.00%) was recorded in T₅ (Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage.). However, it was at par with rest of the treatments, except T₉-untreated control (10.00%), Table-V.5a.
- (d) **Ear head worm (*Helicoverpa armigera*):** The results of before spray were non significant. After 3 days of spray the lowest *H. armigera* population was recorded in T₄ (18.00 larvae/5 ear heads). However, it was at par with rest of the treatments except T₈ (47.00 larvae/5 ear heads) and T₉ (49.33 larvae/5 ear heads). After 7 days of spray, again the lowest population was recorded in T₄ (10.00 larvae/5 ear heads). However, it was at par with rest of the treatments except T₈ (50.00 larvae/5 ear heads) and T₉ (53.33), Table-V.5a
- (e) **Yield:** The Highest grain yield was recorded in T₄ (3171 kg/ha). However, it was at par T₁ (2914 kg/ha), T₅ (3169), T₆ (2979), T₇ (2822 kg/ha) and T₈ (2910 kg/ha) .Whereas, it was 2229 kg/ha in T₉-untreated-control. The results of fodder yield were non-significant. However, the highest yield was recorded in T₄ (6852 kg/ha). Whereas, it was 5157 kg/ha in T₉-Untreated-control, Table-V.5a
- ICBR:** Highest additional income (26940/- per hectare) & net return (Rs. 25330/- per hectare) was recorded in T₄ i.e. Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana* , 1.15 WP, 0.07%, 60g/10 litres of water spray at 30 DAG + *Beauveria bassiana* , 1.15 WP, 0.07%, 60g/10 litres of water spray at ear head stage. . However, ICBR was found highest (1:18.83) in T₈- Seed treatment of imidacloprid 600 FS @ 8.75 ml/kg seed + spray of imidacloprid 17.8 SL 0.009% at 35 DAG (Standard Check). However, amongst foliar application of bio-pesticides, again T₄ recorded highest ICBR (1:16.73), Table-V.5b.

Centre: Anand

- (a) **Shoot fly:** Among the different treatments tested for their effectiveness against shoot fly, T₁ (5.00%), T₅ (5.00%) and T₆ (5.00%), recorded lowest shoot fly incidence at vegetative stage. However, it was at par with rest of the treatments except T₄ (10.00%) and T₉-Untreated control (21.67%). At ear head stage, again T₈ (Seed treatment of imidacloprid 600 FS @ 8.75 ml/kg seed + spray of imidacloprid 17.8 SL 0.009% at 35 DAG, Standard Check) recorded lowest shoot fly incidence (8.33%) and it was at par with T₁ (10.00%) T₂ (11.67%), T₅ (10.00%) and T₆ (11.67%). Whereas, 31.67% incidence was recorded in T₉- Untreated-control (Table-V.5c).

- (b) **Stem borer:** At vegetative stage, incidence was very very low hence not recorded. At ear head stage the lowest stem borer incidence was recorded in T₅ (5.00%) and T₈-Standard check (5.00%). However, it was at par with T₁ (8.33%), T₂ (8.33%) and T₆ (8.33%) as compared to 13.33% in T₉- Untreated-control (Table-V.5c).
- (c) **Ear head worm (*Helicoverpa armigera*):** The results of before spray were non significant. After 3 days of spray the lowest *H. armigera* population was recorded in T₅ (1.67 larvae/5 ear heads). However, it was at par with T₁ (2.33 larvae/5 ear heads), T₂ (3.00 larvae/5 ear heads) and T₆ (2.67 larvae/5 ear heads). After 7 days of spray, again the lowest population was recorded in T₅ (0.67 larvae/5 ear heads). However, it was at par with T₁ (1.33 larvae/5 ear heads) and T₆ (1.66 larvae/5 ear heads), table-V.5c
- (d) **Yield:** The Highest grain yield was recorded in T₅ (2717 kg/ha). However, it was at par T₆ (2640 kg/ha) and T₇ (2308 kg/ha) .Whereas, it was 1468 kg/ha in T₉-untreated-control. The highest fodder yield was recorded in T₅ (4990 kg/ha). Whereas, it was 3659 kg/ha in T₉-Untreated-control, table-V.5c
- (e) **ICBR:** Highest additional income (33887/- per hectare) & net return (Rs. 29977/- per hectare) was recorded in T₅ i.e. Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage. However, ICBR was found highest (1:11.68) in T₆- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at 30 DAG + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at ear head stage (Table-V.5d).
- Centre: Mandor-Jodhpur**
- (f) **Shoot fly:** Among the different treatments tested for their effectiveness against shoot fly (Table-V.5e), T₅ recorded lowest shoot fly incidence at vegetative stage (2.16%). However, it was at par with rest of the treatments except T₉-Untreated control (16.98). At ear head stage, T₈ recorded lowest shoot fly incidence (0.30%) and it was at par with T₅ (0.74%).
- (g) **Grass hopper:** The lowest grass hopper per cent incidence (1.67%) was recorded in T₅ (Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage.). However, it was at par with T₆ (2.33%), table-v.5e.
- (h) **Ear head worm (*Helicoverpa armigera*):** The results of before spray were non significant. After 3 days of spray the lowest *H. armigera* population was recorded in T₅ (20.00 larvae/5 ear heads). However, it was at par with rest of the treatments except, T₄ (36.67 larvae/ 5 ear heads), T₈ (46.67 larvae/5 ear heads) and T₉ (47.33 larvae/5 ear heads). After 7 days of spray, again the lowest population was recorded in T₁ (4.67 larvae/5 ear heads). However, it was at par with T₂ (5.33 larvae/5 ear heads), T₃ (5.67 larvae/5 ear heads), T₅ (6.00 larvae/5 ear heads), T₆ (6.33 larvae/5 ear heads) and T₇ (6.67 larvae/5 ear heads). However, it was 48.67 larvae/5 ear heads in T₉-Untreated control, table-V.5e
- (i) **Yield:** The highest grain yield was recorded in T₅ (1806 kg/ha). However, it was at par T₆ (1764 kg/ha) and T₇ (1681 kg/ha) .Whereas, it was 1056 kg/ha in T₉-untreated-control. The results of fodder yield were found significant and the highest yield was recorded in T₅ (3250 kg/ha) and it was at par with T₁ (2750 kg/ha), T₂ (2700 kg/ha), T₆ (3175 kg/ha and T₇ (3025 kg/ha). Whereas, it was 1900 kg/ha in T₉-Untreated-control, table-V.5e
- (j) **ICBR:** Highest additional income (21450/- per hectare) & net return (Rs. 17540/- per hectare) was recorded in T₅ (Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage. Whereas, ICBR was found highest (1:7.47) in T₆ (Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at 30 DAG + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at ear head stage), table-V.5f.

Centre: Fatehpur-Shekhawati**a. Shoot fly and stem borer incidence:**

At 28 DAG: The seed treatment with imidacloprid 600FS were fine in all the treatments except T₉ which was absolutely untreated plot (control). The maximum incidence of shoot fly (15.19%) and stem borer (5.36%) were recorded in T₉- control and other all treatments were at par with each other.

At ear head stage: Shoot fly: Among the treatments, T₈ recorded the lowest shoot fly incidence (7.15%), which was significantly lower than all other treatments except T₄ (8.51%). In contrast, T₉ exhibited the highest incidence (20.70%), which was significantly higher than all other treatments. Treatments T₁ to T₇ showed comparable shoot fly incidence, ranging from 8.51% to 9.83%, with no significant differences among them. **Stem Borer:** Among the treatments, T₈ recorded the lowest stem borer incidence (1.12%), which was significantly lower than all other treatments except T₄ (1.65%) and T₁ (1.76%). Conversely, T₉ exhibited the highest incidence (7.65%), which was significantly higher than all other treatments. Treatments T₂ to T₇ showed comparable shoot fly incidence, ranging from 2.24% to 2.66%, with no significant differences among them (Table-V.5g).

- b. White grub and termite damage:** The white grub and termite damage percentage at the ear head stage showed minimal variation among treatments, ranging from 1.10% (T₄) to 1.24% (T₉). T₄ recorded the lowest damage (1.10%), while T₉ had the highest (1.24%), though the differences among treatments were statistically non-significant due to the high standard error (SEm $\pm$ 98.47) and a large critical difference (C.D. 5% = 292.56). The coefficient of variation (CV) of 7.08% indicates moderate variability in the data, suggesting that all treatments performed similarly in minimizing white grub and termite damage (Table-V.5g).
- c. Ear head worm *Helicoverp armigera* population:** The *H.armigera* larval population per 20 ear heads was statistically similar among treatments 24 hours before spray (C.D. = NS), indicating uniform infestation levels. However, 24 hours after spraying, T₄ and T₅ recorded the lowest larval counts (35.33), while T₉ had the highest (42.00). At 3 days after spraying, T₄ showed the most effective reduction (15.00 larvae), which was significantly lower than most other treatments, whereas T₉ (46.33) and T₈ (44.00) had the highest larval populations, indicating poor efficacy. At 7 days after spraying, T₄ again had the lowest larval population (7.33), followed by T₁ (8.00), while T₉ (50.33) and T₈ (47.00) continued to have the highest infestation (Table-V.5h).
- d. Yield:** The highest grain yield (Table-V.5i) was recorded in T₈ (2981kg/ha). However, it was at par with T₃ (2500kg/ha), T₄ (2918 kg/ha) and T₆ (2704 kg/ha). However, the highest fodder yield was recorded in T₈ (5425kg/ha) which was at par with T₄ (5311kg/ha), and T₆ (4922 kg/ha).
- e. ICBR:** The highest additional income 24264/- per hectare, net return Rs. 23304/- per hectare and ICBR was recorded in T₈- with 1:25.28 which was standard chemical check but keeping in mind the bio-pesticide treatments, the maximum additional income 22474/- per hectare, net return Rs. 20864/- per hectare and ICBR was recorded in T₄- with 1:13.96, (Table-V.5i).

Centre: Jaipur

- a. Shoot fly:** Among the different treatments tested for their effectiveness against shoot fly (Table-v.5j), T₅ recorded lowest shoot fly incidence at vegetative stage (4.56%). However, it was at par

with rest of the treatments except T₉-Untreated control (17.98). At ear head stage, T₃ recorded lowest shoot fly incidence (2.96%) and it was at par with T₁ (3.60%), T₂ (3.70%), T₅ (4.20%) and T₆ (4.00%). However, it was 15.43% in T₉-Untreated control

- b. **Termite and white grub % incidence:** Significantly the lowest termite and white grub % incidence (1.45%) was recorded in T₁ However, it was 19.28% in T₉-Untreated control, table-V.5j.
- c. **Yield:** The data could not be recorded due to heavy lodging at maturity stage.
- d. **ICBR:** It could not be worked out due to non availability of yield data.

Centre: Aurnagabad

- (a) **Shoot fly:** Among the different treatments tested for their effectiveness against shoot fly, T₃ (Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana* , 1.15 WP, 0.07%, 60g/10 litres of water spray at 30 DAG + Neem oil 3.0%, 30 ml/10 litres of water spray at ear head stage, recorded lowest shoot fly incidence at vegetative stage (5.00%). However, it was at par with rest of the treatments except T₉-Untreated control (20.00%). At ear head stage, significantly T₃ recorded lowest shoot fly incidence (5.00%). Whereas, 25.00% incidence was recorded in T₉- Untreated-control (Table-V.5k).
- (b) **Stem borer:** At vegetative stage, T₂ (Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana* , 1.15 WP, 0.07%, 60g/10 litres of water spray at 30 DAG + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at ear head stage and T₃ (Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana* , 1.15 WP, 0.07%, 60g/10 litres of water spray at 30 DAG + Neem oil 3.0%, 30 ml/10 litres of water spray at ear head stage) recorded least stem borer damage i.e. 5.00%. However, it was statistically at par T₆ (10.00%) and T₇ (10.00%).Whereas, it was 20.00% in T₉-Untreated- control. At ear head stage the lowest stem borer incidence i.e. 5.00% was recorded in T₃ (5.00%). However, it was at par with T₂ (10.00%) as compared to 25.00% in T₉ (Table- V.5k).
- (c) **Fall Army worm damage:** The lowest fall army worm per cent damage (5.00%) was recorded in T₂ (5.00%) and T₃ (5.00%). However, it was at par with T₁ (10.00%), T₅ (10.00%), T₆ (10.00%) and T₈ (10.00%).Whereas. it was 25.00% in T₉-untreated control, table- V.5k.
- (d) **Yield:** The Highest grain yield was recorded in T₃ (2300.00 kg/ha). However, it was at par T₁ (2100.00 kg/ha) and T₇ (2100.00 kg/ha) .Whereas, it was 1800.00 kg/ha in T₉-untreated-control. Incase, of fodder, T₃ recorded significantly the highest fodder yield (4000.00 kg/ha). Whereas, it was 3600.00 kg/ha in T₉-Untreated-control, table- V.5k
- (e) **ICBR:** Highest additional income (17000/- per hectare) & net return (Rs. 10810/- per hectare) was recorded in T₃ i.e. Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana* , 1.15 WP, 0.07%, 60g/10 litres of water spray at 30 DAG + Neem oil 3.0%, 30 ml/10 litres of water spray at ear head stage. However, ICBR was found highest (1:2.87) in T₁- (Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana* , 1.15 WP, 0.07%, 60g/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage,), table- V.5l.

6. PMET-5: Management of ear head worm, *Helicoverpa armigera* in pearl millet through chemical insecticides.

The objective of this trial was to evaluate different chemicals against *Helicoverpa* infesting pearl millet. Total nine chemicals were evaluated, (Table V.6a) with control. This experiment was conducted at Jamnagar, Mandor-Jodhpur and Fatehpur-Shekhawati during 2024.

Centre: Jamnagar

- a. **Ear head worm (*Helicoverpa armigera*) population:** The results of before spray were non significant. After 24 hrs after spray, T₅-Emamectin benzoate 0.002% recorded least larval population (29.00 larvae/20 ear heads) and it was at par with T₃-Spinosad 0.009%

(37.33 larvae/20 ear heads), T₄-Indoxacarb 0.006% (30.67 larvae/ 20 ear heads), T₆-Chlorantraniprole 0.006% (30.67 larvae/ 20 ear heads) and T₇-Lambda-cyhalothrin 0.003% (31.00 larvae/20 ear heads). Whereas, it was 65.00 larvae/20 ear heads in T₁₀-Untreated-control. After 3 days of spray the same trend was observed and the least larval population was recorded in T₅ (10.00 larvae/20 ear heads) and it was at par with T₃ (11.00 larvae/20 ear heads), T₄ (10.33 larvae/20 ear heads), T₆ (10.33 larvae/20 ear heads) and T₇ (10.67 larvae/20 ear heads).). Whereas, it was 66.00 larvae/20 ear heads in T₁₀-Untreated-control. After 7 days of spray, the same trend of effectiveness was found and T₅ recorded 3.00 larvae/20 ear heads larval population and it was at par with T₃ (3.67 larvae/20 ear heads), T₄ (3.33 larvae/20 ear heads), T₆ (3.67 larvae/20 ear heads) and T₇ (3.67 larvae/20 ear heads), table-V.6a

- b. **Yield:** The Highest grain yield was recorded in T₅ (3088 kg/ha). However, it was at par with T₁ (2813 kg/ha), T₃ (3037 kg/ha), T₄ (3042 kg/ha) and T₆ (3006 kg/ha). The results of fodder yield were found non-significant. However, the highest fodder yield was recorded in T₅ (6352 kg/ha), table-V.6a.
- c. **ICBR:** The highest additional income (14724- per hectare), net return (Rs. 13724/- per hectare) and ICBR was recorded in T₅-Emamectin benzoate 0.002% (1:14.72), table-V.6b.

Mandor-Jodhpur

- (a) **Ear head worm (*Helicoverpa armigera*) population:** The results of before 24 hrs and after 24 hrs spray were non significant. After 3 days, T₅-Emamectin benzoate 0.002% recorded least larval population (8.00 larvae/20 ear heads) and it was at par with rest of the treatments except T₁ (14.67 larvae/20 ear heads), T₉ (25.33 larvae/20 ear heads) and T₁₀-Untreated control (55.67 larvae/20 ear heads). After 7 days of spray, the least larval population was recorded in T₅ recorded 1.67 larvae/20 ear heads larval population and it was at par with T₆ (2.67 larvae/20 ear heads). Whereas, it was 57.67 larvae/20 ear heads were recorded in T₁₀-Untreated control, table-V.6c.
- (b) **Yield:** The Highest grain yield was recorded in T₅ (1833 kg/ha). However, it was at par with T₃ (1708 kg/ha), T₄ (1639 kg/ha), T₆ (1819 kg/ha) and T₇ (1764 kg/ha). The results of fodder yield were found significant and the highest fodder yield was recorded in T₅ (3300 kg/ha), table-V.6c.
- (c) **ICBR:** The highest additional income (16365- per hectare), net return (Rs. 15365/- per hectare) was recorded in T₅-Emamectin benzoate 0.002%. But looking to the management cost T₇ recorded highest ICBR (1:20.84), table-V.6d.

Centre: Fatehpur-Shekhawati:

- (a) **Ear head worm *Helicoverpa armigera* population:** The results of before spray were observed non-significant. After 24 hrs after spray, T₅-Emamectin benzoate 0.002% recorded least larval population 16.33 larvae/20 ear heads and it was at par with T₃-Spinosad 0.009%, 18.67 larvae/20 ear heads, T₄-Indoxacarb 0.006% 19.33 larvae/ 20 ear heads, T₆-Chlorantraniprole 0.006%, 19.33 larvae/20 ear heads and T₇-Lambda-cyhalothrin 0.003% 21.33 larvae/20 ear heads. Whereas, it was 51.67 larvae/20 ear heads in T₁₀-Untreated-control. After 3 days of spray, significantly the least larval population was recorded in T₅, 1.67 larvae/20 ear heads followed. Whereas, it was 54.00 larvae/20 ear heads in T₁₀-Untreated-control. After 7 days of spray, T₅ recorded nil larval population which was at par with T₃ 0.33 larvae/20 ear heads. Whereas, 61.67 larvae/20 ear heads in T₁₀-Untreated-control (Table-V.6e).

- (b) **Yield:** The highest grain yield was recorded in T₅, 2667 kg/ha. However, it was at par with T₃, 2500kg/ha, T₄, 2164 kg/ha and T₆, 2417 kg/ha. The results of fodder yield were found non-significant. However, the highest fodder yield was recorded in T₅, 5569 kg/ha (Table-V.6e).
- (c) **ICBR:** The highest additional income per hectare (Rs. 12338/-), net return (Rs. 11238/-) per hectare and ICBR (1:11.22) was recorded in T₅-Emamectin benzoate 0.002% (Table-V.6f).

Conclusion:

The spray of emamectin benzoate 0.002% recorded lowest larval population after 24 hrs, 3 days and 7 days of spray as well as recorded the highest grain and fodder yield.

7. PMET 7: Survey of insect- pests of summer pearl millet on farmers' fields.

Centre: Jamnagar and Anand (Gujarat) and Aurnagabad (Maharashtra).

Survey was carried out in pearl millet at farmer's fields by scientists of Jamnagar centre (Field no. 1-74) and Anand centre (Field no. 75-106) during summer 2024 (Table-V.7a). It was carried out in eight Districts viz., Anand, Banaskantha, Dev. Dwarka, Gandhinagar, Jamnagar, Kutch, Mahesana and Patan, major summer growing pockets of Gujarat. Total 106 fields were observed for insect pests in pearl millet during the survey. The overall pest incidence was low.

- Shoot fly:** The shoot fly per cent incidence ranged from 0.0 to 20.00% with an average of 4.37% in surveyed fields. The highest incidence was recorded at Dedarda (Tehsil- Borsad, district- Anand) at ear head stage in Desi variety in surveyed fields.
- Stem borer:** The stem borer per cent incidence ranged from 0.0 to 20.00% with an average of 5.58% in surveyed fields. The highest incidence was recorded at Dedarda, Kavitha and Pansora of Anand district in Desi variety at ear head stage in surveyed fields.
- Helicoverpa armigera*:** The larval population ranged from 0.0-25.0 larvae/ 5 ear heads with an average of 3.66 larvae/ 5 ear heads at ear head stage in surveyed fields. The highest larval population (25.0 larvae/5 ear heads) was recorded at Mudetha (Tehsi- Deesa, district- B.Kantha, variety- 86M22) at ear head stage in surveyed fields.
- Grey weevil:** The grey weevil damage score ranged from 0.0 to 3.0 with an average of 0.58 in surveyed fields.
- Fall Army worm:** The fall army worm per cent damage ranged from 0.0-5.0 with an average of 0.21%. It was found highest at Dali and Dedarda (Tehsil- Borsad, district- Anand) at ear head stage in surveyed fields.

District-wise insect-pest situation:

Survey was carried out in eight Districts viz., Anand, Banaskantha, Dev.Dwarka, Gandhinagar, Jamnagar, Kutch, Mahesana and Patan, major summer growing pockets of Gujarat (Table-V.7b). The mean **shoot fly** (5.82%), **Stem borer** (7.70%) and **FAW** (0.39%) was recorded in Anand Pocket in surveyed fields. Whereas, ***Helicoverpa armigera*** larval population was highest in Banaskantha (10.50 larvae/ 5 ear heads) in surveyed fields. **Grey weevil damage score** (2.0) was highest in Kutch belt.

Centre: Aurangabad

Survey was carried (Table-V.7c) out in pearl millet at farmer's fields by scientists of Aurnagabad centre (Field no. 1-25) It was carried out in two Districts viz., Jalna and Aurangabad, major summer growing pockets of Maharashtra. Total 25 fields were observed for insect pests in pearl millet during the survey. The overall pest incidence was low to moderate.

- Shoot fly:** The shoot fly per cent incidence ranged from 0.0 to 20.00% with an average of 7.20% in surveyed fields. The highest incidence was recorded at many places (Satara, Gandheli, Mardi, Nihalsing wadi, Kumbhefal, Karkin, Chitegaon, Murumkheda) at ear head stage in different variety in surveyed fields.

- b. **Stem borer:** The stem borer per cent incidence ranged from 0.0 to 20.00% with an average of 4.00% in surveyed fields. The incidence was observed in few fields only. The highest incidence was recorded at Satara, Dhakalgaon, Rohilagad, Badnapur and Karkin in different varieties at ear head stage in surveyed fields.
- c. **Blister beetles:** The blister beetle adult population ranged from 0.0 to 0.40/ 5 ear heads with an average of 0.07 in surveyed fields.
- d. **Chaffer beetle:** Its population ranged from 0.0-1.0 adults/ 5 ear heads with an average of 0.34 in surveyed fields.
- e. **Fall Army worm:** The fall army worm per cent damage ranged from 0.0-40 with an average of 6.40%. It was found highest at Satara (Tehsil and district- Aurangabad) at ear head stage in surveyed fields.
- f. The natural enemy Lady bird beetles (range 0.0-1.0/5 plants) and chrysopa (range 0.0-1.0) in surveyed fields.

8. PMET-8: Relative susceptibility of pearl millet advanced entries to storage insect pests.

This is laboratory trial and it was conducted at 5 locations (Jamnagar, Anand, Jaipur, Mandor-Jodhpur and Anantapur). Since the installation of storage trial was done after the harvest of PMET-1B trial of Kharif season of 2023 and the observations were recorded at 3 & 6 months of period (2023-24). So, the final results have been presented in this year's report.

Centre: Jamnagar

Thirty two advance entries were screened in laboratory at Jamnagar against red rust flour beetle, *Tribolium castaneum* (Table V.8a).

Grain damage: At 3 months storage period, least per cent grain damage (0.25%) was recorded in GHB 1305, APHB-126, MP7214, NBH 5992, JKBH 1870, GHB 1337, HHB 67 Imp. And 86M01. However, these entries were at par PB 1939, MP 7173, US 7773 and Pratap. The highest damage was recorded in HHB 344 (2.13%). At 6 months storage period, least per cent grain damage (3.25%) was recorded in NBH 5992. However, it was at par with JKBH 1870, 86M01, MP 7173, MP 7179, APHB-126, PB 1939, US 7773 and GHB 1337. The highest damage was recorded in Kaveri Super Boss (23.13%).

Adult population (*Tribolium* sp): At 3 months storage period least adult population (37.50 adults/100g seeds) was recorded in NBH 5992. However, it was at par with APHB-126, MP 7173, JKBH 1870, 86M01, GHB 1305, MP 7214, PB 1939, MP 7179, US 7773 and GHB 1337. The highest adult population (23.50 adults/100g seeds) was observed in HHB 344. At 6 months storage period the least adult population was recorded in JKBH 1870 (35.50 adults/100g seeds). However, it was at par with NBH 5992, 86M01, MP7173, APHB-126, GHB 1305, PB 1939, US 7773, MP 7214, MP 7179 and GHB 1337. The highest number of adults was recorded in HHB 344 (222.50 adults/100g seeds).

Weight loss: At 3 months storage period, least per cent weight loss i.e. 0.75% was recorded in NBH 5980 and APHB-126. However, it was at par with GHB 1305, MP 7214, PB 1939, MP 7173, MP 7179, US 7773, 86M01, JKBH 1870, DHBH-21003, KPH 6277, GHB 1337, PB 1756, KBH 10, HHB 67 Imp. , Pratap, CZH 267 and RHB 223. The highest per cent weight loss was observed in HHB 344 (11.00%). At 6 months storage period least per cent weight loss (2.50%) was recorded in NBH 5992. However, it was at par with MP 7173, JKBH 1870, 86M01, APHB-126, PB 1939, US 7773, MP 7179, MP 7214 and GHB 1337. The highest per cent weight loss was recorded in HHB 344 (21.00%).

Germination: At 6 months storage period, the highest germination i.e. 97.00% was recorded in NBH 5992. However, it was at par with JKBH 1870, 86M01, MP 7214, MP 7173, MP 7179, GHB 1337, GHB 1305, APHB-126, PB 1939, US 7773, HHB 67 Imp. and Pratap. The least germination was recorded in Kaveri Super Boss (77.50%).

Conclusion: On the basis of lowest per cent grain damage, adult emergence ,per cent weight loss and highest germination percentage at 6 months storage period APHB-126, PB1939, MP7173, MP7179, NBH 5992, US7773, JKBH1870, GHB 1337 and 86M01 were found to be most promising against *Tribolium* sp at Jamnagar.

Centre: Anand

Thirty two advance entries (Table V.8b) were screened in laboratory at RRS, AAU, Anand against *Rhizopertha dominica*.

Grain damage: At 3 months storage period, least per cent grain damage (1.50 %) was recorded in HHB 344. However, these entries were at par RHB-273, VNR-106, GHB 1305, AHB-126, IIMRPH2, US7773, MP7214, MP7179, 86M01, AHB 1200, MP7173 and Pratap. The highest damage was recorded in KBH 108 (8.00 %). At 6 months storage period, least per cent grain damage (8.00 %) was recorded in GHB 1305, AHB-126, IIMRPH2 and MP7173. However, it was at par with VNR-106, VNR-107, NBH 5992, US7773 and CZH 267. The highest damage was recorded in MP 7878 (36.00 %).

Adult population (*Rhizopertha dominica*): At 3 months storage period least adult population (1.50 adults/100g seeds) was recorded in GHB 1305, AHB-126, IIMRPH2, MP7173 and VNR-106. The highest adult population (8.50 adults/100g seeds) was observed in MP 7878. At 6 months storage period the least adult population was recorded in US7773 (3.00 adults/100g seeds). The highest number of adults was recorded in 86M86 (12.00 adults/100g seeds).

Weight loss: At 3 months storage period, least per cent weight loss i.e. 1.50 % was recorded in GHB 1305, AHB-126, IIMRPH2, MP7173, VNR-106, VNR-107 and NBH 5992. However, it was at par with US7773, MP7179, BLPMH 112, KPH6277, JKBH1870, GHB 1337, PB 1756, MPMH 21, RHB-273, HHB 344, RHB 223, Pratap, AHB 1269 and KBH 108. The highest per cent weight loss was observed in MP 7878 (7.00%). At 6 months storage period least per cent weight loss (3.50%) was recorded in AHB-126 and MP7173. However, it was at par with MP7173, JKBH1870, VNR-107, MPMH 21, BLPMH 112, MP7179 and VNR-106. The highest per cent weight loss was recorded in NBH 4903 (12.50 %).

Germination: At 6 months storage period, the highest germination i.e. 90.00% was recorded in GHB 1305, AHB-126, IIMRPH2 and MP7173. However, it was at par with VNR-106, VNR-107, NBH 5992, MP7179, US7773, BLPMH 112, KPH6277, JKBH1870, GHB 1337, PB 1756, MPMH 21 and RHB 223. The least germination was recorded in MP 7878 (76.00 %).

Conclusion: On the basis of lowest per cent grain damage, adult emergence, per cent weight loss and highest germination percentage at 6 months storage period AHB-126, MP7173, VNR-106 and VNR-107 were found to be most promising against *Rhizopertha dominica* at Anand.

Mandor-Jodhpur:

On the basis of per cent grain damage, adult emergence, per cent weight loss and germination percentage at 6 months storage period (Table V.8c) the entries viz., MH 2711, MH 2712, AHB 1269, Pratap, MH 2713, 86M01, KBH 108, MH 2715, MH 2678 and MH 2675 performed better against *Rhizopertha dominica*

Anantapur:

During 2024-25, 32 entries of pearl millet were evaluated against the lesser grain borer *Rhizopertha dominica* (Table V.8d). The entries were evaluated for their relative susceptibility to *Rhizopertha dominica*. Observations were taken in two replications for every 3 months and six months for adult emergence and per cent grain damage. After six months the entries were evaluated for germination.

After 3 months, the entry 86M86 recorded highest number of adults (174.5/100g seeds). At 6 months RHB 223 recorded highest number of adults of 608.5 (mean of two replications) at six months of storage. With reference to per cent grain damage, highest was observed by the entry number MH 2712 with 77.25 while the same entry showed 78.5 after six months and meanwhile per cent grain damage was also highest in entry number MH 2713 with 83.1 after six months.

With reference to the germination, the lowest per cent germination (7.5) was observed in entry no. Kaveri Super Boss, which showed 155.5 and 426 adults after 3rd and 6th months respectively. The highest germination percentage (64.5) was observed in entry number AHB 1200 at 6 months of storage period.

Centre: Jaipur: See table number V.8e

Grain damage: At 3 months storage period, least per cent grain damage (1.50%) was recorded in CZH 267. However, it was at par with RHB 273, VNR 107, MPMH 21, VNR 106, AHB 126, GHB 1305, DHBH 21003, PB 1756, AHB 1200 and MP 7173. The highest grain damage was recorded in PB 1939

(6.50%). At 6 months storage period, least per cent grain damage (4.50%) was recorded in MPMH 21. However, it was at par with RHB 273, VNR 107, CZH 267, AHB 126, DHBH 21003, AHB 1200 and GHB 1305. The highest grain damage was recorded in 86M01 (40.50%).

Adult population (*Rhizopertha* sp): At 3 month's storage period least adult population (15.50 adults/100g seeds) was recorded in RHB 273. However, it was at par with AHB-126, VNR 107, CZH 267, MPMH 21, GHB 1305, AHB 1200, VNR 106, HHB 344 and DHBH 21003. The highest adult population (78.50 adults/100g seeds) was observed in PB 1939. At 6 months storage period the least adult population was recorded in MPMH 21 (49.00 adults/100g seeds). However, it was at par with VNR 107, RHB 273, AHB 1200, DHBH 21003, AHB 126, CZH 267 and GHB 1305. The highest number of adults was recorded in 86M01 (404.50 adults/100g seeds).

Weight loss: At 3 months storage period, least per cent weight loss was recorded in CZH 267 (0.85%). However, it was at par with, RHB 273, VNR 107, VNR 106, MPMH 21, GHB 1305, PB 1756, AHB 126, DHBH 21003, MP 7173 and AHB 1200. The highest per cent weight loss was observed in PB 1939 (5.80%). At 6 months storage period least per cent weight loss was recorded in RHB 273 (4.20%). However, it was at par with VNR 107, MPMH 21, CZH 267, DHBH 21003, GHB 1305 and AHB 1200. The highest per cent weight loss was recorded in 86M01 (31.65%).

Germination: At 6 months storage period, the highest germination was recorded in VNR 107 (87.50%). However, it was at par with many entries. The least germination was recorded in 86M01 (60.50%).

9. PMET-9: Monitoring of Fall Army worm (*Spodoptera frugiperda*) in Kharif pearl millet.

Centres: Jamnagar, Anand, Mandor-Jodhpur, Fatehpur-Shekhawati, Jaipur, Hisar & Aurangabad.

The study on monitoring of FAW through pheromone traps revealed that there were no catches of male moths of FAW at Anand, Fatehpur-Shekhawati, Mandor-Jodhpur and Jaipur. Whereas, very few catches were recorded at Jamnagar, Hisar and Aurangabad.

Centre: Jamnagar:

The data presented in table V.9a indicates that, observations of FAW moth catches were recorded only during 31st SMW. The numbers of catches were very low during the crop period and its range was 0.0-5.40 adults/ pheromone trap. Simultaneously, there was no any damage in pearl millet.

Centre: Aurangabad:

The data presented in table- V.9b indicates that, observations of FAW moth catches were observed from 34th to 38th MSW. The number of catches was very low during the crop period and its range was 0.0-1.40 adults/ 5 pheromone trap. Simultaneously, damage was also recorded in pearl millet and it was the range of 0.0-10.0%.

Centre: Hisar:

The data presented in table- V.9c indicates that, observations of FAW moth catches were observed during 31st, 32nd 36th and 37th MSW. The number of catches was very low during the crop period and its range was 0.0-7.2 adults/pheromone trap. Simultaneously, damage was also recorded in pearl millet and it was the range of 0.0-10.0%.

Mandor-Jodhpur

The data presented in table- V.9d indicates that, there were no FAW moth catches observed during the crop period. However, larval counts per 20 plants was observed during mid crop stage *i.e.* 34-37th MSW. The damage was also recorded in pearl millet and it was the range of 0.0-10.0%.

CHAPTER V: ENTOMOLOGY

Table-V.1a: (PMET-1A) Screening of pearl millet lines against major insect pests (Initial entries/populations).

Sr.No.	Entry no.	Name of Entry	Shoot fly % Incidence At Veg. stage (28 DAG)				Shoot fly % Incidence At Ear head stage				Stem borer % Incidence At Veg. stage (28 DAG)			Stem borer Incidence At Ear head stage		
			JAM	JP	FPS	Mean	JAM	JP	FPS	Mean	JAM	FPS	Mean	JAM	FPS	Mean
1	PIT 101	MH 2811	3.85	6.49	25.00	11.78	3.33	17.95	13.46	11.58	0.00	1.00	0.50	0.00	9.62	4.81
2	PIT 102	MH 2812	3.75	15.80	3.85	7.80	1.25	8.76	5.77	5.26	1.25	0.00	0.63	0.00	0.00	0.00
3	PIT 103	MH 2813	2.47	14.00	3.85	6.77	0.00	3.78	5.77	3.18	0.00	0.00	0.00	0.00	0.00	0.00
4	PIT 104	MH 2814	3.75	10.09	1.92	5.25	0.00	4.13	1.92	2.02	2.47	0.50	1.49	0.00	0.00	0.00
5	PIT 105	MH 2815	2.47	12.50	15.38	10.12	0.00	12.87	3.85	5.57	0.00	0.00	0.00	0.00	0.00	0.00
6	PIT 106	MH 2816	2.50	6.37	7.69	5.52	0.00	5.66	7.69	4.45	1.25	0.00	0.63	0.00	1.92	0.96
7	PIT 107	MH 2817	2.50	13.16	3.85	6.50	0.83	10.53	15.38	8.91	1.22	0.00	0.61	0.83	0.00	0.42
8	PIT 108	MH 2818	3.81	5.33	11.54	6.89	2.86	14.13	13.46	10.15	1.28	0.00	0.64	0.00	3.85	1.93
9	PIT 109	MH 2819	3.75	9.75	26.92	13.47	4.72	7.66	15.39	9.26	0.00	0.00	0.00	0.00	3.85	1.93
10	PIT 110	MH 2820	2.50	7.83	17.31	9.21	0.71	20.12	15.38	12.07	2.50	0.50	1.50	0.00	3.85	1.93
11	PIT 111	MH 2821	2.38	16.00	26.92	15.10	0.00	14.22	7.69	7.30	1.25	0.50	0.88	0.00	1.92	0.96
12	PIT 112	MH 2822	6.48	7.85	5.77	6.70	2.50	8.04	5.77	5.44	2.60	0.50	1.55	0.00	0.00	0.00
13	PIT 113	MH 2823	2.56	10.29	17.31	10.05	13.75	6.74	19.23	13.24	1.28	2.00	1.64	0.00	5.77	2.89
14	PIT 114	MH 2824	3.81	11.18	19.23	11.41	0.91	8.95	19.23	9.70	2.53	0.50	1.52	0.91	0.00	0.46
15	PIT 115	MH 2825	1.25	21.93	26.92	16.70	3.33	4.61	19.23	9.06	0.00	0.50	0.25	0.00	0.00	0.00
16	PIT 116	MH 2826	3.69	8.69	1.92	4.77	0.77	8.00	0.00	2.92	2.44	0.00	1.22	0.00	1.92	0.96
17	PIT 117	MH 2827	6.19	12.71	9.62	9.51	0.00	15.03	9.62	8.22	1.25	0.50	0.88	0.00	3.85	1.93
18	PIT 118	MH 2828	3.66	14.21	1.92	6.60	3.93	11.51	0.00	5.15	1.22	0.50	0.86	0.00	0.00	0.00
19	PIT 119	MH 2829	2.41	10.42	1.92	4.92	2.78	7.52	0.00	3.43	2.41	0.50	1.46	0.83	0.00	0.42
20	PIT 120	MH 2830	0.00	9.06	5.77	4.94	1.25	10.92	5.77	5.98	1.22	0.50	0.86	0.00	0.00	0.00
21	PIT 121	MH 2831	1.19	16.50	7.69	8.46	1.00	18.95	7.69	9.21	1.19	0.00	0.60	0.00	0.00	0.00
22	PIT 122	MH 2832	3.63	6.37	7.69	5.90	0.00	11.00	11.54	7.51	2.41	0.50	1.46	0.00	0.00	0.00
23	PIT 123	MH 2833	4.88	6.22	11.54	7.55	0.00	7.82	9.62	5.81	1.22	2.00	1.61	0.00	1.92	0.96
24	PIT 124	MH 2834	2.41	8.63	3.85	4.96	0.00	8.92	0.00	2.97	1.22	0.50	0.86	0.00	0.00	0.00
25	PIT 125	MH 2835	3.75	14.50	1.92	6.72	0.00	12.60	1.92	4.84	1.25	1.00	1.13	0.00	1.92	0.96
26	PIT 126	MH 2836	2.50	9.22	1.92	4.55	1.11	15.16	1.92	6.06	2.50	0.50	1.50	0.00	0.00	0.00
27	PIT 127	MH 2837	5.06	19.05	1.92	8.68	0.00	12.14	0.00	4.05	1.28	1.50	1.39	0.00	0.00	0.00
28	PIT 128	MH 2838	2.60	14.43	1.92	6.32	0.00	8.34	0.00	2.78	2.60	0.00	1.30	0.00	0.00	0.00
29	PIT 129	MH 2839	1.28	16.93	3.85	7.35	0.00	12.47	0.00	4.16	0.00	1.00	0.50	0.00	0.00	0.00
30	PIT 130	MH 2840	2.50	16.08	1.92	6.83	0.00	9.19	0.00	3.06	1.25	0.00	0.63	0.00	1.92	0.96
31	PIT 131	MH 2841	1.25	17.79	3.85	7.63	1.43	17.12	0.00	6.18	2.53	1.00	1.77	0.00	1.92	0.96
32	PIT 132	MH 2842	2.50	13.76	9.62	8.63	0.00	12.60	1.92	4.84	1.25	0.00	0.63	0.00	0.00	0.00
33	PIT 133	MH 2843	3.78	19.47	11.54	11.60	0.00	14.91	1.92	5.61	1.28	2.50	1.89	0.00	1.92	0.96
34	PIT 134	MH 2844	1.28	22.56	7.69	10.51	0.00	11.59	0.00	3.86	1.25	1.50	1.38	0.00	0.00	0.00
35	PIT 135	MH 2845	1.28	21.24	3.85	8.79	0.00	23.13	3.85	8.99	2.60	0.00	1.30	0.00	0.00	0.00
36	PIT 136	MH 2846	5.20	12.74	1.92	6.62	0.00	18.59	0.00	6.20	1.25	1.00	1.13	0.00	3.85	1.93
37	PIT 137	MH 2847	3.78	16.81	7.69	9.43	0.00	16.84	5.77	7.54	1.25	0.00	0.63	0.00	0.00	0.00
38	PIT 138	MH 2848	1.25	24.62	13.46	13.11	0.00	18.67	5.77	8.15	2.57	1.00	1.79	0.00	0.00	0.00
39	PIT 139	MH 2849	2.50	11.67	11.54	8.57	0.00	16.36	9.62	8.66	0.00	1.00	0.50	0.00	7.69	3.85
40	PIT 140	MH 2850	5.06	19.61	5.77	10.15	2.50	12.31	5.77	6.86	2.53	1.00	1.77	0.00	0.00	0.00
41	PIT 141	MH 2851	2.57	13.22	3.85	6.55	3.00	11.10	5.77	6.62	2.57	1.00	1.79	0.00	0.00	0.00
42	PIT 142	MH 2852	2.57	19.52	11.54	11.21	0.00	10.01	3.85	4.62	0.00	0.00	0.00	0.00	0.00	0.00
43	PIT 143	MH 2853	3.72	19.46	7.69	10.29	0.00	16.52	5.77	7.43	1.28	1.00	1.14	0.00	0.00	0.00
44	PIT 144	MH 2854	3.72	17.61	7.69	9.67	1.25	11.43	1.92	4.87	1.22	0.00	0.61	0.00	1.92	0.96

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Sr.No.	Entry no.	Name of Entry	Shoot fly % Incidence At Veg. stage (28 DAG)				Shoot fly % Incidence At Ear head stage				Stem borer % Incidence At Veg. stage (28 DAG)			Stem borer Incidence At Ear head stage		
			JAM	JP	FPS	Mean	JAM	JP	FPS	Mean	JAM	FPS	Mean	JAM	FPS	Mean
45	PIT 145	MH 2855	2.92	8.67	9.62	7.07	0.00	6.43	7.69	4.71	1.25	1.00	1.13	0.00	1.92	0.96
46	PIT 146	MH 2856	2.50	14.50	5.77	7.59	0.00	16.22	1.92	6.05	1.25	1.50	1.38	0.00	1.92	0.96
47	PIT 147	MH 2857	4.91	13.14	9.62	9.22	0.00	14.03	11.54	8.52	2.47	2.00	2.24	0.00	0.00	0.00
48	PIT 148	MH 2858	3.63	13.86	3.85	7.11	1.00	12.27	3.85	5.71	0.00	2.00	1.00	0.00	0.00	0.00
49	PIT 149	MH 2859	2.56	14.45	9.62	8.88	0.00	22.11	0.00	7.37	0.00	2.00	1.00	0.00	0.00	0.00
50	PIT 150	MH 2860	2.63	11.25	5.77	6.55	0.00	9.07	0.00	3.02	1.32	0.50	0.91	0.00	0.00	0.00
51	PIT 151	MH 2861	3.88	5.69	11.54	7.04	2.68	13.04	9.62	8.45	1.32	0.00	0.66	0.00	0.00	0.00
52	PIT 152	MH 2862	3.81	11.08	5.77	6.89	3.86	9.02	1.92	4.93	2.53	1.00	1.77	0.00	0.00	0.00
53	PIT 153	MH 2863	3.78	15.19	1.92	6.96	1.67	7.96	0.00	3.21	1.25	2.00	1.63	0.00	0.00	0.00
54	PIT 154	MH 2864	5.00	18.30	7.69	10.33	0.00	22.52	5.77	9.43	0.00	2.50	1.25	0.00	0.00	0.00
55	PIT 155	MH 2865	2.53	7.47	9.62	6.54	1.67	6.48	3.85	4.00	1.28	3.00	2.14	0.00	0.00	0.00
56	PIT 156	MH 2866	3.81	13.02	1.92	6.25	0.00	5.30	0.00	1.77	2.53	1.00	1.77	0.00	0.00	0.00
57	PIT 157	MH 2867	1.22	6.32	9.62	5.72	0.00	6.78	1.92	2.90	2.47	0.00	1.24	0.00	0.00	0.00
58	PIT 158	MH 2868	2.38	4.61	9.62	5.54	0.00	9.28	5.77	5.02	1.19	0.50	0.85	0.00	1.92	0.96
59	PIT 159	MH 2869	2.47	16.22	5.77	8.15	0.00	18.06	0.00	6.02	0.00	1.50	0.75	0.00	0.00	0.00
60	PIT 160	MH 2870	1.22	13.73	5.77	6.91	2.50	6.78	1.92	3.73	1.22	0.00	0.61	0.00	0.00	0.00
61	PIT 161	MH 2871	1.28	8.95	1.92	4.05	0.00	11.69	3.85	5.18	1.28	1.50	1.39	0.00	1.92	0.96
62	PIT 162	MH 2872	2.53	14.30	9.62	8.82	0.00	18.39	7.69	8.69	1.28	1.00	1.14	0.00	15.38	7.69
63	PIT 163	MH 2873	2.47	12.89	3.85	6.40	0.00	17.33	0.00	5.78	2.47	1.00	1.74	0.00	0.00	0.00
64	PIT 164	MH 2874	3.69	22.00	3.85	9.85	1.67	18.09	0.00	6.59	1.25	1.50	1.38	0.00	1.92	0.96
65	PIT 165	MH 2875	2.44	11.46	5.77	6.56	0.00	9.72	0.00	3.24	1.19	1.50	1.35	0.00	0.00	0.00
66	PIT 166	MH 2876	2.44	27.85	5.77	12.02	0.00	18.73	1.92	6.88	0.00	0.00	0.00	0.00	1.92	0.96
67	PIT 167	MH 2877	2.53	19.42	3.85	8.60	0.00	20.07	3.85	7.97	2.53	1.00	1.77	0.00	5.77	2.89
68	PIT 168	MH 2878	1.28	8.34	3.85	4.49	1.67	7.77	0.00	3.15	2.56	1.50	2.03	0.00	0.00	0.00
69	PIT 169	MH 2879	1.25	19.20	7.69	9.38	0.00	8.46	3.85	4.10	1.25	1.00	1.13	0.00	0.00	0.00
70	PIT 170	MH 2880	2.50	24.07	5.77	10.78	1.25	18.10	5.77	8.37	0.00	2.00	1.00	0.00	0.00	0.00
71	PIT 171	MH 2881	2.50	20.90	3.85	9.08	0.00	19.15	0.00	6.38	0.00	0.00	0.00	0.00	0.00	0.00
72	PIT 172	MH 2882	3.63	23.85	9.62	12.37	1.25	24.19	0.00	8.48	0.00	1.00	0.50	0.00	0.00	0.00
73	PIT 173	MH 2883	1.22	16.88	3.85	7.32	0.00	11.26	0.00	3.75	1.22	1.50	1.36	0.00	0.00	0.00
74	PIT 174	MH 2884	2.50	14.59	7.69	8.26	0.00	11.50	3.85	5.12	2.50	0.50	1.50	0.00	9.62	4.81
75	PIT 175	MH 2885	1.25	9.97	5.77	5.66	0.00	11.32	0.00	3.77	1.25	0.50	0.88	0.00	0.00	0.00
76	PIT 176	MH 2886	2.47	25.17	13.46	13.70	0.00	13.81	0.00	4.60	2.47	1.00	1.74	0.83	0.00	0.42
77	PIT 177	MP 640	2.47	6.21	11.54	6.74	0.00	4.52	7.69	4.07	1.19	0.00	0.60	0.00	0.00	0.00
78	PIT 178	MP 641	5.06	26.44	15.38	15.63	2.00	17.74	1.92	7.22	0.00	0.50	0.25	2.00	0.00	1.00
79	PIT 179	MP 642	2.47	6.06	15.38	7.97	0.00	7.02	0.00	2.34	1.22	1.00	1.11	0.00	0.00	0.00
80	PIT 180	MP 643	5.00	6.51	7.69	6.40	1.00	4.85	0.00	1.95	2.50	1.00	1.75	0.00	0.00	0.00
81	PIT 181	MP 644	1.22	18.24	7.69	9.05	0.00	11.23	0.00	3.74	1.22	1.00	1.11	0.00	0.00	0.00
82	PIT 182	MP 645	3.55	25.09	13.46	14.03	0.00	17.30	0.00	5.77	1.28	0.00	0.64	0.00	0.00	0.00
83	PIT 183	MP 646	2.44	19.11	11.54	11.03	0.00	12.64	3.85	5.50	1.25	0.00	0.63	0.00	0.00	0.00
84	PIT 184	MP 647	3.66	19.47	15.38	12.84	0.00	16.14	1.92	6.02	1.22	0.00	0.61	0.00	0.00	0.00
85	PIT 185	MP 648	1.25	13.26	3.85	6.12	2.00	15.86	1.92	6.59	1.25	0.00	0.63	0.00	0.00	0.00
86	PIT 186	MP 649	2.39	8.78	5.77	5.65	1.67	9.81	7.69	6.39	2.39	0.50	1.45	0.00	0.00	0.00
87	PIT 187	MP 650	3.66	9.84	9.62	7.71	1.00	12.55	5.77	6.44	1.28	0.50	0.89	0.00	1.92	0.96
88	PIT 188	MP 651	2.50	18.14	5.77	8.80	3.00	13.43	1.92	6.12	1.25	0.00	0.63	1.00	0.00	0.50
89	PIT 189	PB 1756	3.91	10.65	5.77	6.78	1.67	10.74	1.92	4.78	2.60	0.50	1.55	0.00	1.92	0.96

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Sr.No.	Entry no.	Name of Entry	Shoot fly % Incidence At Veg. stage (28 DAG)				Shoot fly % Incidence At Ear head stage				Stem borer % Incidence At Veg. stage (28 DAG)			Stem borer Incidence At Ear head stage		
			JAM	JP	FPS	Mean	JAM	JP	FPS	Mean	JAM	FPS	Mean	JAM	FPS	Mean
90	PIT 190	RHB 223	1.28	13.15	19.23	11.22	1.43	10.13	5.77	5.78	0.00	0.50	0.25	0.71	0.00	0.36
91	PIT 191	MPMH 35	2.47	16.12	1.92	6.84	0.00	11.51	0.00	3.84	0.00	0.00	0.00	0.56	0.00	0.28
92	PIT 192	HHB 67 Imp.	4.88	19.32	3.85	9.35	7.78	12.95	3.85	8.19	2.44	1.00	1.72	4.44	0.00	2.22
93	PIT 193	PB 1852	2.57	13.25	0.00	5.27	0.00	8.02	0.00	2.67	1.32	0.00	0.66	0.00	0.00	0.00
94	PIT 194	86M94	2.50	5.79	0.00	2.76	0.00	6.76	3.85	3.54	0.00	0.00	0.00	0.00	0.00	0.00
95	PIT 195	DHBH 1397	2.56	13.24	17.31	11.04	0.00	12.09	1.92	4.67	2.53	1.00	1.77	0.00	0.00	0.00
96	PIT 196	AHB 1269	2.57	20.10	21.15	14.61	1.25	16.47	1.92	6.55	1.32	1.00	1.16	0.00	0.00	0.00
97	PIT 197	Pratap	7.50	15.95	11.54	11.66	2.00	11.77	3.85	5.87	0.00	0.00	0.00	0.00	1.92	0.96
98	PIT 198	86M01	2.44	15.47	13.46	10.46	0.00	13.29	1.92	5.07	0.00	1.00	0.50	0.00	0.00	0.00
99	PIT 199	86M84	2.53	16.31	5.77	8.20	0.00	13.98	0.00	4.66	2.53	2.00	2.27	0.00	0.00	0.00
100	PIT 200	KBH 108	3.75	15.33	0.00	6.36	0.00	10.79	0.00	3.60	0.00	0.00	0.00	0.00	0.00	0.00
101	PIT 201	MP 7878	1.25	7.21	5.77	4.74	0.00	7.24	0.00	2.41	1.25	1.00	1.13	1.25	0.00	0.63
102	PIT 202	86M86	2.50	6.31	5.77	4.86	0.00	10.61	0.00	3.54	0.00	0.00	0.00	0.00	1.92	0.96
103	PIT 203	Kaveri S Boss	2.50	11.61	15.38	9.83	0.00	7.57	3.85	3.81	2.57	0.00	1.29	0.00	0.00	0.00
104	PIT 204	NBH 4903	2.53	17.41	9.62	9.85	0.00	11.76	1.92	4.56	1.28	0.00	0.64	0.00	0.00	0.00
105	PIT 205	AHB 1200	3.78	20.51	3.85	9.38	1.25	16.13	1.92	6.43	0.00	0.00	0.00	0.00	0.00	0.00
106	PIT 206	Raj 171	3.75	8.79	9.62	7.39	1.43	8.12	3.85	4.47	1.25	1.00	1.13	0.00	0.00	0.00
107	PIT 207	JBV 2	3.78	16.54	11.54	10.62	0.00	16.95	0.00	5.65	0.00	0.50	0.25	1.00	0.00	0.50
108	PIT 208	Dhanshakti	2.50	11.87	7.69	7.35	6.45	13.72	0.00	6.72	2.50	0.00	1.25	0.91	0.00	0.46
109	PIT 209	ICMV 221	3.81	7.14	5.77	5.57	5.00	9.84	0.00	4.95	2.53	0.00	1.27	1.00	0.00	0.50
110	PIT 210	Pusa Comp. 383	3.78	13.73	7.69	8.40	1.82	15.73	0.00	5.85	1.25	0.00	0.63	0.91	0.00	0.46
111	PIT 211	Pusa Comp. 701	5.00	12.59	9.62	9.07	0.00	18.64	0.00	6.21	1.25	0.50	0.88	0.00	0.00	0.00
112	PIT 212	ABV 04	3.82	8.67	13.46	8.65	1.82	13.17	0.00	5.00	3.88	1.00	2.44	0.00	0.00	0.00
113	PIT 213	Pusa Comp. 612	5.06	9.40	7.69	7.38	0.00	4.21	0.00	1.40	2.53	0.50	1.52	0.00	0.00	0.00
114	PIT 214	ICMV 155	5.00	18.26	5.77	9.68	4.17	20.06	5.77	10.00	1.25	1.00	1.13	0.00	0.00	0.00
		Mean	3.01	13.96	8.23	8.40	1.05	12.36	3.78	5.73	1.35	0.70	1.03	0.15	0.96	0.56
			JAM	JP	FPS	Mean	JAM	JP	FPS	Mean	JAM	FPS	Mean	JAM	FPS	Mean

N.B.: JAM= Jamnagar, FPS= Fatehpur-Shekhawati, Jp=Jaipur.

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Table-V.1b: (PMET-1A) Screening of pearl millet lines against major insect pests (Initial entries/populations).

Sr. No.	Entry no.	Name of Entry	<i>Helicoverpa armigera</i> larvae/ 5 Ear heads			GWDS, Ear head stage	LRDS Ear head stage
			JAM	FPS	Mean	FPS	JP
1	PIT 101	MH 2811	1.00	0.00	0.50	1.50	1.50
2	PIT 102	MH 2812	1.50	11.50	6.50	1.50	2.00
3	PIT 103	MH 2813	2.00	0.50	1.25	1.50	1.50
4	PIT 104	MH 2814	1.00	0.00	0.50	2.00	0.50
5	PIT 105	MH 2815	1.50	2.50	2.00	1.00	1.00
6	PIT 106	MH 2816	1.00	9.50	5.25	1.00	2.00
7	PIT 107	MH 2817	1.00	2.50	1.75	1.00	2.50
8	PIT 108	MH 2818	1.00	11.00	6.00	1.50	2.00
9	PIT 109	MH 2819	1.50	0.00	0.75	1.00	1.50
10	PIT 110	MH 2820	1.00	0.00	0.50	1.00	1.50
11	PIT 111	MH 2821	1.50	0.00	0.75	1.50	1.50
12	PIT 112	MH 2822	1.00	0.00	0.50	1.00	2.00
13	PIT 113	MH 2823	0.50	10.00	5.25	1.50	2.00
14	PIT 114	MH 2824	1.00	0.00	0.50	1.00	2.00
15	PIT 115	MH 2825	1.00	0.00	0.50	2.00	3.00
16	PIT 116	MH 2826	1.50	0.00	0.75	1.00	2.00
17	PIT 117	MH 2827	1.50	3.00	2.25	1.50	2.50
18	PIT 118	MH 2828	2.00	1.50	1.75	1.50	2.00
19	PIT 119	MH 2829	3.00	1.00	2.00	2.50	1.00
20	PIT 120	MH 2830	3.00	0.00	1.50	1.00	1.00
21	PIT 121	MH 2831	2.50	0.00	1.25	1.50	1.50
22	PIT 122	MH 2832	3.50	0.00	1.75	1.50	2.50
23	PIT 123	MH 2833	1.00	8.00	4.50	1.00	3.50
24	PIT 124	MH 2834	1.50	0.00	0.75	1.50	2.00
25	PIT 125	MH 2835	2.00	19.00	10.50	2.00	2.00
26	PIT 126	MH 2836	2.00	0.00	1.00	1.50	1.00
27	PIT 127	MH 2837	2.50	0.00	1.25	2.00	1.50
28	PIT 128	MH 2838	3.50	0.00	1.75	1.00	2.00
29	PIT 129	MH 2839	1.00	0.00	0.50	1.00	2.00
30	PIT 130	MH 2840	1.50	0.00	0.75	1.50	1.50
31	PIT 131	MH 2841	1.50	0.00	0.75	1.00	1.50
32	PIT 132	MH 2842	1.50	0.00	0.75	1.50	1.00
33	PIT 133	MH 2843	1.00	0.00	0.50	1.50	0.50
34	PIT 134	MH 2844	1.50	0.00	0.75	1.50	1.50
35	PIT 135	MH 2845	2.00	0.00	1.00	1.50	1.50
36	PIT 136	MH 2846	2.00	0.00	1.00	1.50	2.00
37	PIT 137	MH 2847	1.50	0.00	0.75	1.00	2.50
38	PIT 138	MH 2848	2.00	0.00	1.00	1.00	2.50
39	PIT 139	MH 2849	2.00	0.00	1.00	1.50	2.50
40	PIT 140	MH 2850	0.50	0.00	0.25	1.00	2.50
41	PIT 141	MH 2851	2.00	3.00	2.50	1.50	1.50
42	PIT 142	MH 2852	2.00	0.00	1.00	1.50	2.50
43	PIT 143	MH 2853	1.00	0.00	0.50	1.50	2.00
44	PIT 144	MH 2854	1.00	0.00	0.50	1.50	1.00
45	PIT 145	MH 2855	0.50	0.00	0.25	1.00	1.50
46	PIT 146	MH 2856	2.00	0.00	1.00	1.00	2.50
47	PIT 147	MH 2857	1.50	13.50	7.50	1.50	2.00
48	PIT 148	MH 2858	1.50	0.00	0.75	1.50	2.00
49	PIT 149	MH 2859	1.00	0.00	0.50	1.50	1.50
50	PIT 150	MH 2860	2.00	0.00	1.00	1.50	2.50
51	PIT 151	MH 2861	1.50	0.00	0.75	2.00	3.00
52	PIT 152	MH 2862	1.50	0.00	0.75	1.00	2.00
53	PIT 153	MH 2863	1.00	0.00	0.50	2.00	1.00
54	PIT 154	MH 2864	1.50	0.00	0.75	1.00	1.00
55	PIT 155	MH 2865	3.00	0.00	1.50	2.00	1.00
56	PIT 156	MH 2866	1.50	0.00	0.75	1.00	1.00
57	PIT 157	MH 2867	2.50	0.00	1.25	2.00	1.50
58	PIT 158	MH 2868	4.00	0.00	2.00	1.50	1.50
59	PIT 159	MH 2869	4.00	0.00	2.00	2.50	1.50
60	PIT 160	MH 2870	5.00	0.00	2.50	1.50	2.50
61	PIT 161	MH 2871	1.00	3.00	2.00	1.50	1.50
62	PIT 162	MH 2872	1.00	0.00	0.50	2.50	2.50

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Sr. No.	Entry no.	Name of Entry	<i>Helicoverpa armigera</i> larvae/ 5 Ear heads			GWDS, Ear head stage	LRDS Ear head stage
			JAM	FPS	Mean	FPS	JP
63	PIT 163	MH 2873	3.50	0.00	1.75	1.50	2.50
64	PIT 164	MH 2874	3.00	0.00	1.50	1.50	2.50
65	PIT 165	MH 2875	2.50	0.00	1.25	2.50	1.50
66	PIT 166	MH 2876	2.00	0.00	1.00	2.00	2.50
67	PIT 167	MH 2877	2.50	0.00	1.25	1.50	1.50
68	PIT 168	MH 2878	1.00	0.00	0.50	2.00	2.00
69	PIT 169	MH 2879	1.50	0.00	0.75	1.50	2.50
70	PIT 170	MH 2880	3.00	0.00	1.50	1.50	1.50
71	PIT 171	MH 2881	5.00	0.00	2.50	2.00	1.00
72	PIT 172	MH 2882	4.00	0.00	2.00	1.50	3.00
73	PIT 173	MH 2883	3.00	0.00	1.50	1.00	3.00
74	PIT 174	MH 2884	1.50	20.50	11.00	1.00	2.00
75	PIT 175	MH 2885	1.00	10.50	5.75	1.00	1.50
76	PIT 176	MH 2886	3.00	14.00	8.50	0.50	2.00
77	PIT 177	MP 640	2.50	4.00	3.25	1.50	2.00
78	PIT 178	MP 641	3.00	3.50	3.25	1.50	2.50
79	PIT 179	MP 642	2.00	8.50	5.25	1.50	2.50
80	PIT 180	MP 643	3.50	0.00	1.75	2.00	2.00
81	PIT 181	MP 644	5.50	0.00	2.75	2.00	1.50
82	PIT 182	MP 645	3.50	0.00	1.75	1.50	2.00
83	PIT 183	MP 646	2.00	0.00	1.00	1.00	2.00
84	PIT 184	MP 647	1.50	0.00	0.75	2.00	2.00
85	PIT 185	MP 648	2.00	0.00	1.00	1.50	2.50
86	PIT 186	MP 649	1.00	0.00	0.50	2.00	2.50
87	PIT 187	MP 650	3.00	0.00	1.50	1.50	1.50
88	PIT 188	MP 651	2.00	20.50	11.25	2.00	0.50
89	PIT 189	PB 1756	3.00	0.00	1.50	2.00	2.50
90	PIT 190	RHB 223	5.00	0.00	2.50	2.00	1.50
91	PIT 191	MPMH 35	3.00	23.00	13.00	3.00	1.50
92	PIT 192	HHB 67 Imp.	2.00	0.00	1.00	1.00	2.00
93	PIT 193	PB 1852	2.00	0.00	1.00	1.00	1.50
94	PIT 194	86M94	2.50	0.00	1.25	1.00	2.50
95	PIT 195	DHBH 1397	3.00	0.00	1.50	1.50	2.50
96	PIT 196	AHB 1269	3.50	0.00	1.75	1.50	2.00
97	PIT 197	Pratap	3.50	1.00	2.25	1.50	2.50
98	PIT 198	86M01	4.00	0.00	2.00	1.00	2.50
99	PIT 199	86M84	1.00	0.00	0.50	1.50	2.00
100	PIT 200	KBH 108	1.00	0.00	0.50	1.00	2.50
101	PIT 201	MP 7878	1.00	0.00	0.50	1.00	2.00
102	PIT 202	86M86	2.00	22.00	12.00	1.00	2.50
103	PIT 203	Kaveri S Boss	2.50	5.50	4.00	1.50	1.50
104	PIT 204	NBH 4903	2.00	13.00	7.50	1.50	1.50
105	PIT 205	AHB 1200	2.50	6.00	4.25	1.50	1.00
106	PIT 206	Raj 171	1.50	6.00	3.75	1.00	1.00
107	PIT 207	JBV 2	1.50	12.00	6.75	1.50	2.50
108	PIT 208	Dhanshakti	2.00	19.00	10.50	1.00	2.50
109	PIT 209	ICMV 221	3.00	10.50	6.75	1.50	2.50
110	PIT 210	Pusa Comp. 383	2.00	11.50	6.75	1.00	2.00
111	PIT 211	Pusa Comp. 701	2.00	8.50	5.25	1.00	2.00
112	PIT 212	ABV 04	2.50	4.00	3.25	1.00	1.50
113	PIT 213	Pusa Comp. 612	1.50	3.00	2.25	1.00	2.00
114	PIT 214	ICMV 155	1.50	0.50	1.00	1.00	2.00
		Mean	2.07	2.86	2.47	1.45	1.89

N.B.: JAM= Jamnagar, FPS= Fatehpur-Shekhawati, JP= Jaipur

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Table-V.1c: Summarized shoot fly & stem borer incidence in pearl millet lines (Initial lines)

Sr. No.	Range of percent infestation	Number of entries showing shoot fly incidence at		Number of entries showing stem borer incidence at	
		Vegetative Stage (28 DAG)	Ear head stage	Vegetative stage (28 DAG)	Ear head stage
1	Free (0.0%)	0	0	12	70
2	0.1 to 5.0% (Moderate resistant)	10	48	102	43
3	5.1 to 10.00% (Tolerant)	76	62	0	1
4	10.1-20.00 (Susceptible)	28	4	0	0
5	Above 20.00% (Highly susceptible)	0	0	0	0
6	Range (Mini. to Maxi.)	2.76-16.70	1.40-13.24	0.25-2.44	0.28-7.69
7	Average	8.40	5.73	1.03	0.56
8	Number of entries tested	114			

Table-V.1d: *Helicoverpa*, Grey weevil and Leaf roller incidence in pearl millet lines (Initial lines)

Sr. No.	Range of larval population/ 5 ear heads/GWDS/ LRDS	Number of entries showing <i>Helicoverpa</i> incidence at ear head stage	Number of entries showing Grey Weevil Damage Score at ear head stage	Number of entries showing Leaf Roller Damage Score at ear head stage
1	Free (0.0)	0	0	0
2	0.1-1.0	50	40	16
3	1.1-2.0	30	69	63
4	2.1-5.0	15	5	35
5	Above 5.0	19	0	0
6	Range Minimum to maximum	0.25-13.0	0.50-3.0	0.50-3.50
7	Average	2.47	1.45	1.89
8	Entries screened	114		

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Table-V.2a: (PMET-1B) Screening of millet lines against major insect pests (Advance lines)

Sr. No.	Entry no.	Name of Entry	Shoot fly % Incidence At Veg. stage (28 DAG)					Shoot fly % Incidence At EH stage					Stem borer Incidence At Veg. Stage (28 DAG)			Stem borer Incidence At EH stage		
			JAM	JP	JOD	FPS	Mean	JAM	JP	JOD	FPS	Mean	JAM	FPS	Mean	JAM	FPS	Mean
1	PET 201	MH 2672	3.81	8.53	7.60	22.12	10.52	0.83	7.25	3.00	17.31	7.10	2.53	0.00	1.27	0.00	1.92	0.96
2	PET 202	MH 2673	6.25	11.63	7.49	14.42	9.95	1.82	9.68	2.72	13.46	6.92	1.25	0.00	0.63	2.00	1.92	1.96
3	PET 203	MH 2675	3.88	6.14	9.03	15.38	8.61	1.11	6.25	2.54	13.46	5.84	1.25	0.00	0.63	0.00	0.00	0.00
4	PET 204	MH 2678	3.75	16.67	12.13	20.19	13.19	1.00	9.60	4.78	9.62	6.25	1.25	1.92	1.59	0.00	5.77	2.89
5	PET 205	MH 2743	2.50	19.89	8.88	18.27	12.39	0.00	16.05	2.80	11.54	7.60	0.00	1.92	0.96	1.00	7.69	4.35
6	PET 206	MH 2744	2.53	8.80	4.91	15.38	7.91	0.00	7.80	2.60	3.85	3.56	1.28	1.92	1.60	0.00	3.85	1.93
7	PET 207	MH 2746	5.06	15.80	12.18	31.73	16.19	5.57	10.51	4.72	5.77	6.64	1.25	0.00	0.63	0.00	1.92	0.96
8	PET 208	MH 2747	2.57	7.78	9.29	14.42	8.52	0.83	6.83	4.03	13.46	6.29	1.32	0.00	0.66	0.83	0.00	0.42
9	PET 209	MH 2748	2.57	12.69	15.10	13.46	10.96	2.44	7.57	7.22	28.85	11.52	2.57	0.00	1.29	0.00	0.00	0.00
10	PET 210	MH 2749	5.26	10.57	10.56	14.42	10.20	2.50	13.75	4.00	13.46	8.43	0.00	1.92	0.96	0.00	5.77	2.89
11	PET 211	MH 2754	2.53	13.53	10.00	14.42	10.12	0.00	18.43	3.70	13.46	8.90	1.28	3.85	2.57	0.00	3.85	1.93
12	PET 212	MH 2758	3.72	13.67	7.67	0.00	6.27	3.11	13.16	2.63	7.69	6.65	0.00	1.92	0.96	0.00	1.92	0.96
13	PET 213	MH 2682	5.06	9.00	20.00	0.00	8.52	0.00	10.69	6.25	3.85	5.20	1.25	1.92	1.59	0.00	7.40	3.70
14	PET 214	MH 2767	1.25	9.79	11.25	0.00	5.57	0.00	8.05	4.29	0.00	3.09	0.00	0.00	0.00	0.00	0.00	0.00
15	PET 215	MH 2773	3.69	7.66	2.50	4.81	4.67	0.00	9.13	2.08	5.77	4.25	1.22	1.92	1.57	0.00	5.77	2.89
16	PET 216	MH 2775	2.47	10.31	8.06	0.00	5.21	1.25	9.89	4.36	1.92	4.36	0.00	0.00	0.00	0.00	0.00	0.00
17	PET 217	MH 2777	3.63	7.69	8.68	0.00	5.00	0.00	7.75	2.92	0.00	2.67	2.44	0.00	1.22	0.00	0.00	0.00
18	PET 218	MH 2784	3.60	19.03	5.91	0.00	7.14	0.00	16.32	2.56	1.92	5.20	1.22	0.00	0.61	0.00	0.00	0.00
19	PET 219	MH 2709	0.00	11.03	4.06	0.00	3.77	0.00	9.27	1.95	0.00	2.81	2.47	1.92	2.20	0.00	7.69	3.85
20	PET 220	MH 2712	2.54	11.44	10.12	4.81	7.23	0.00	11.59	4.38	3.85	4.96	1.22	0.00	0.61	0.00	5.77	2.89
21	PET 221	MH 2717	4.08	10.42	11.61	4.81	7.73	0.00	11.17	5.63	5.77	5.64	1.43	1.92	1.68	0.00	3.85	1.93
22	PET 222	MH 2795	3.72	18.30	16.39	3.85	10.57	0.00	14.00	7.69	1.92	5.90	1.22	1.92	1.57	0.00	1.92	0.96
23	PET 223	MH 2796	2.44	9.91	6.79	4.81	5.99	0.00	11.18	3.24	0.00	3.61	2.44	0.00	1.22	0.00	0.00	0.00
24	PET 224	MH 2797	2.41	10.23	10.94	5.77	7.34	0.00	9.75	4.40	1.92	4.02	2.41	0.00	1.21	0.00	1.92	0.96
25	PET 225	MH 2798	4.88	14.04	4.51	3.85	6.82	0.00	15.02	3.50	0.00	4.63	0.00	0.00	0.00	0.00	0.00	0.00
26	PET 226	MH 2801	1.19	8.36	13.75	0.00	5.83	0.00	8.84	7.18	0.00	4.01	1.19	1.92	1.56	0.00	1.92	0.96
27	PET 227	MH 2806	2.41	8.91	3.13	3.85	4.58	0.00	7.27	2.27	1.92	2.87	0.00	5.77	2.89	0.00	5.77	2.89
28	PET 228	MH 2808	2.50	11.75	16.67	0.00	7.73	1.43	10.82	6.11	0.00	4.59	1.22	0.00	0.61	0.00	1.92	0.96
29	PET 229	MP 637	2.47	8.16	9.38	0.00	5.00	1.43	9.70	5.00	0.00	4.03	1.25	1.92	1.59	1.67	1.92	1.80
30	PET 230	HHB 67 Imp.	3.69	7.69	12.05	30.77	13.55	7.98	12.11	5.06	11.54	9.17	2.47	3.85	3.16	0.00	3.85	1.93
31	PET 231	PB 1756	3.69	19.18	7.63	30.77	15.32	3.85	21.25	3.19	25.00	13.32	0.00	1.92	0.96	0.00	1.92	0.96
32	PET 232	MPMH 35	2.44	21.02	10.68	30.77	16.23	6.43	17.54	4.48	13.46	10.48	1.19	1.92	1.56	1.62	1.92	1.77
33	PET 233	RHB 223	7.38	14.64	2.50	0.00	6.13	0.83	14.40	1.79	3.85	5.22	1.19	0.00	0.60	0.83	0.00	0.42
34	PET 234	AHB 1269	3.66	6.54	16.25	14.42	10.22	3.25	10.69	8.07	11.54	8.39	0.00	0.00	0.00	1.00	0.00	0.50

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Sr. No.	Entry no.	Name of Entry	Shoot fly % Incidence At Veg. stage (28 DAG)					Shoot fly % Incidence At EH stage					Stem borer Incidence At Veg. Stage (28 DAG)			Stem borer Incidence At EH stage		
			JAM	JP	JOD	FPS	Mean	JAM	JP	JOD	FPS	Mean	JAM	FPS	Mean	JAM	FPS	Mean
35	PET 235	86M01	2.22	15.51	27.50	14.42	14.91	0.00	15.24	8.93	11.54	8.93	1.22	0.00	0.61	0.00	0.00	0.00
36	PET 236	Pratap	3.60	20.62	15.13	13.46	13.20	1.11	17.03	4.72	3.85	6.68	0.00	0.00	0.00	1.11	0.00	0.56
37	PET 237	KBH 108	1.32	13.06	6.70	3.85	6.23	0.00	14.15	3.75	3.85	5.44	3.82	1.92	2.87	0.00	1.92	0.96
38	PET 238	86M86	3.78	17.35	19.17	4.81	11.28	0.00	16.65	8.99	3.85	7.37	0.00	1.92	0.96	0.00	3.85	1.93
39	PET 239	86M84	3.81	11.96	8.33	8.65	8.19	0.00	11.54	4.79	7.69	6.01	2.53	1.92	2.23	0.00	3.85	1.93
40	PET 240	MP 7878	3.78	19.54	10.71	0.00	8.51	0.00	19.70	5.00	1.92	6.66	0.00	0.00	0.00	0.00	0.00	0.00
41	PET 241	Kaveri Super Boss	2.50	9.57	10.00	6.73	7.20	0.00	13.55	3.85	1.92	4.83	2.50	0.00	1.25	0.00	0.00	0.00
42	PET 242	NBH 4903	2.50	13.09	11.51	0.00	6.78	0.00	10.42	4.68	0.00	3.78	2.50	0.00	1.25	0.00	0.00	0.00
43	PET 243	AHB 1200	4.94	11.16	19.64	6.73	10.62	2.50	12.58	12.63	1.93	7.41	0.00	0.00	0.00	1.25	0.00	0.63
44	PET 244	Raj 171	4.88	10.71	8.33	0.00	5.98	0.00	10.45	2.50	0.00	3.24	2.44	0.00	1.22	0.00	0.00	0.00
45	PET 245	JBV 2	3.69	10.46	9.38	9.62	8.29	0.00	12.85	5.88	9.62	7.09	3.69	5.77	4.73	0.00	5.77	2.89
46	PET 246	Dhanshakti	4.88	8.13	7.50	32.69	13.30	11.67	11.46	3.57	3.85	7.64	2.44	1.92	2.18	0.00	3.85	1.93
47	PET 247	ICMV 221	6.04	10.01	1.19	33.65	12.72	9.86	9.32	0.83	3.85	5.97	2.41	0.00	1.21	0.00	0.00	0.00
48	PET 248	Pusa Comp. 383	3.57	6.36	2.08	21.15	8.29	3.33	8.71	1.67	1.92	3.91	2.38	0.00	1.19	0.00	0.00	0.00
49	PET 249	Pusa Comp. 701	4.94	10.69	4.41	16.35	9.10	1.25	11.12	2.22	3.85	4.61	2.47	1.92	2.20	0.00	3.85	1.93
		Mean	3.47	12.02	9.99	10.40	8.97	1.54	11.80	4.39	6.24	5.99	1.39	1.14	1.26	0.23	2.27	1.25

N.B.: JAM= Jamnagar, JOD= Mandor-Jodhpur, FPS= Fatehpur-Shekhawati, JP=Jaipur.

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Table-V.2b: (PMET-1B) Screening of pearl millet lines against major insect pests complex (Advance lines)

Sr.No.	Entry no.	Name of Entry	<i>Helicoverpa armigera</i> larval population per 5 Ear heads				Grey Weevil Damage Score (0-10) At Ear head stage			Leaf Roller Damage Score (0-10) At Ear head stage
			JAM	JOD	FPS	Mean	JOD	FPS	Mean	JP
1	PET 201	MH 2672	0.50	1.00	2.00	1.17	0.00	1.50	0.75	1.50
2	PET 202	MH 2673	1.50	3.00	0.00	1.50	3.00	1.50	2.25	2.00
3	PET 203	MH 2675	2.50	1.00	0.00	1.17	0.00	1.50	0.75	2.50
4	PET 204	MH 2678	2.50	5.00	1.50	3.00	2.00	1.00	1.50	2.50
5	PET 205	MH 2743	1.50	1.00	2.00	1.50	0.00	1.00	0.50	1.50
6	PET 206	MH 2744	1.50	4.00	2.50	2.67	0.00	1.00	0.50	1.50
7	PET 207	MH 2746	2.00	3.00	2.00	2.33	2.00	1.50	1.75	2.00
8	PET 208	MH 2747	2.00	1.00	0.00	1.00	0.00	1.50	0.75	2.00
9	PET 209	MH 2748	2.00	3.00	11.00	5.33	2.00	1.50	1.75	2.50
10	PET 210	MH 2749	1.50	3.00	9.00	4.50	0.00	1.00	0.50	1.50
11	PET 211	MH 2754	1.00	3.00	10.00	4.67	2.00	2.00	2.00	1.50
12	PET 212	MH 2758	1.00	1.00	12.00	4.67	0.00	1.00	0.50	1.50
13	PET 213	MH 2682	0.50	5.00	13.00	6.17	1.00	1.00	1.00	2.50
14	PET 214	MH 2767	0.00	1.00	10.50	3.83	1.00	1.50	1.25	2.00
15	PET 215	MH 2773	0.50	1.00	9.50	3.67	2.00	1.50	1.75	3.00
16	PET 216	MH 2775	1.50	2.50	0.00	1.33	0.00	1.00	0.50	2.00
17	PET 217	MH 2777	1.50	1.00	0.50	1.00	0.00	1.50	0.75	2.50
18	PET 218	MH 2784	2.00	3.00	0.00	1.67	1.00	1.50	1.25	2.00
19	PET 219	MH 2709	1.50	1.00	1.00	1.17	0.00	1.50	0.75	2.00
20	PET 220	MH 2712	1.00	1.00	0.00	0.67	2.00	1.00	1.50	2.00
21	PET 221	MH 2717	1.00	3.00	9.00	4.33	0.00	1.50	0.75	1.50
22	PET 222	MH 2795	1.00	1.00	10.00	4.00	0.00	1.00	0.50	1.00
23	PET 223	MH 2796	3.00	4.00	0.00	2.33	1.00	1.00	1.00	1.00
24	PET 224	MH 2797	2.00	1.00	0.00	1.00	0.00	1.00	0.50	1.00
25	PET 225	MH 2798	2.00	1.00	0.00	1.00	2.00	2.00	2.00	2.00
26	PET 226	MH 2801	2.50	3.00	0.00	1.83	0.00	1.50	0.75	2.00
27	PET 227	MH 2806	2.50	1.00	0.00	1.17	0.00	1.50	0.75	2.00
28	PET 228	MH 2808	1.50	1.00	1.00	1.17	1.00	1.50	1.25	1.50
29	PET 229	MP 637	1.00	1.00	5.00	2.33	0.00	1.50	0.75	2.50
30	PET 230	HHB 67 Imp.	1.50	3.00	2.50	2.33	0.00	1.50	0.75	1.50
31	PET 231	PB 1756	2.00	1.00	6.00	3.00	1.00	1.00	1.00	1.50
32	PET 232	MPMH 35	1.00	1.00	8.50	3.50	0.00	1.50	0.75	1.50
33	PET 233	RHB 223	2.00	2.00	12.00	5.33	0.00	1.50	0.75	1.00

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Sr.No.	Entry no.	Name of Entry	<i>Helicoverpa armigera</i> larval population per 5 Ear heads				Grey Weevil Damage Score (0-10) At Ear head stage			Leaf Roller Damage Score (0-10) At Ear head stage
			JAM	JOD	FPS	Mean	JOD	FPS	Mean	JP
34	PET 234	AHB 1269	1.00	1.00	19.50	7.17	2.00	1.50	1.75	1.50
35	PET 235	86M01	3.00	2.00	17.50	7.50	0.00	1.50	0.75	3.00
36	PET 236	Pratap	3.00	1.00	19.00	7.67	0.00	1.50	0.75	2.00
37	PET 237	KBH 108	1.00	1.00	14.50	5.50	2.00	1.00	1.50	2.00
38	PET 238	86M86	1.50	1.00	11.50	4.67	0.00	1.00	0.50	2.00
39	PET 239	86M84	1.50	3.00	5.00	3.17	1.00	1.00	1.00	2.00
40	PET 240	MP 7878	2.00	1.00	12.50	5.17	0.00	2.00	1.00	1.00
41	PET 241	Kaveri Super Boss	1.50	3.00	0.50	1.67	1.00	2.00	1.50	1.00
42	PET 242	NBH 4903	1.50	1.00	0.50	1.00	0.00	1.00	0.50	1.00
43	PET 243	AHB 1200	1.50	2.50	0.50	1.50	1.00	1.50	1.25	2.00
44	PET 244	Raj 171	1.00	1.00	0.00	0.67	0.00	1.50	0.75	1.50
45	PET 245	JBV 2	1.50	3.00	0.00	1.50	0.00	1.50	0.75	2.50
46	PET 246	Dhanshakti	1.00	1.00	6.50	2.83	1.00	1.50	1.25	2.00
47	PET 247	ICMV 221	1.50	1.50	12.50	5.17	0.00	1.50	0.75	1.50
48	PET 248	Pusa Comp. 383	1.50	1.00	10.50	4.33	1.00	1.00	1.00	1.50
49	PET 249	Pusa Comp. 701	1.00	1.50	7.50	3.33	1.00	1.50	1.25	2.00
		Mean	1.55	1.90	5.68	3.04	0.67	1.37	1.02	1.82

N.B.: JAM= Jamnagar, FPS= Fatehpur-Shekhawati, JP=Jaipur.

Table-V.2c: Summarized shoot fly & stem borer incidence in pearl millet lines (Advance lines)

Sr. No.	Range of percent infestation	Number of entries showing shoot fly incidence at		Number of entries showing stem borer incidence at	
		Vegetative stage	Ear head stage	Vegetative stage	Ear head stage
1	Free (0.0%)	0	0	7	15
2	0.1 to 5.0% (Moderate resistant)	5	19	42	34
3	5.1 to 10.00% (Tolerant)	26	27	0	0
4	10.1-20.00 (Susceptible)	18	3	0	0
5	Above 20.00% (Highly susceptible)	0	0	0	0
6	Range (Mini. to Maxi.)	3.77-16.23	2.67-13.32	0.0-4.73	0.0-4.35
7	Average	8.97	5.99	1.27	1.25
8	Number of entries tested	49			

Table-V.2d: *Helicoverpa*, Grey weevil and Leaf roller incidence in pearl millet lines (Advance lines)

Sr. No.	Range of larval population/ 5 ear heads/GWDS (0-10)/ LRDS (0-10)	Number of entries showing <i>Helicoverpa</i> incidence at ear head stage	Number of entries showing Grey Weevil Damage Score at ear head stage	Number of entries showing Leaf Roller Damage Score at ear head stage
1	Free (0.0)	0	0	0
2	0.1-1.0	7	32	7
3	1.1-2.0	13	16	33
4	2.1-5.0	20	1	9
5	Above 5.0	9	0	0
6	Range Minimum to maximum	0.67-7.67	0.50-2.25	1.00-3.00
7	Average	3.04	1.02	1.82
8	Entries screened	49		

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Table-V.3a: PMET-2: Statement showing incidence of insect-pests and population of natural enemies in pearl millet (Centre: Jamnagar)

No.	S M W	Date of Observation	Days After Germi- nation	Shoot fly % incidence	Stem borer % incidence	leaf roller damage score (0- 10)	Grass hopper % damage	Mean Grey weevil damage score (0-10)	Hairy cater pillar /20 pl.	Blister beetles/ 20 EH	Chaffer beetle 20 / EH	<i>Helicoverpa</i> larvae/ 20 EH	Lady bird beetle/ 20 pl.	Chrysopa/ 20 pl.
1	30	29.07.24	7 DAG	5.00	0.00	1.00	0.00	0.00	0	0	0	0	1	0
2	31	05.08.24	14 DAG	10.00	5.00	2.00	0.00	0.00	0	0	0	0	2	0
3	32	12.08.24	21 DAG	15.00	10.00	3.00	0.00	1.00	0	0	0	0	3	3
4	33	19.08.24	28 DAG	15.00	10.00	3.00	0.00	2.00	0	0	0	0	2	5
5	34	26.08.24	35 DAG	20.00	15.00	4.00	0.00	2.00	0	0	0	0	5	10
6	35	02.09.24	42 DAG	15.00	10.00	3.00	5.00	3.00	0	0	0	0	4	0
7	36	09.09.24	49 DAG	10.00	10.00	1.00	10.00	3.00	0	0	2	35	2	0
8	37	16.09.24	56 DAG	10.00	5.00	0.00	10.00	2.00	15	0	3	47	3	0
9	38	23.09.24	63 DAG	10.00	5.00	0.00	5.00	2.00	30	15	4	25	4	0
10	39	30.09.24	70 DAG	10.00	5.00	0.00	0.00	1.00	0	0	5	20	0	0
11	40	07.10.24	77 DAG	15.00	10.00	0.00	0.00	1.00	0	0	10	10	0	0
12	41	14.10.24	84 DAG	15.00	10.00	0.00	0.00	1.00	0	0	15	5	0	0
			Mean	12.50	7.92	1.42	2.50	1.50	3.75	1.25	3.25	11.83	2.17	1.50

N.B.: Date of sowing: 18.07.2024, Harvesting: 20.10.2024, Variety: GHB 538 Imp.

Table-V.3b: PMET-2: Statement showing losses in pearl millet due to insect pest complex (Centre: Jamnagar)

Parameters	Yield kg/ha in treated plot	Yield kg/ha in Un-treated plot	% losses
1. Grain	2903	2513	13.44
2. Fodder	5848	4982	14.80

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Table-V.3c: PMET-2: Correlation of major insect-pests of pearl millet with different weather parameters (Centre: Jamnagar)

No.	S W W	Date of Observation	Days After Germination	Temp. O Maxi.	Temp. O Mini.	R.H. Morn.	R.H. Even.	Wind speed km/hr	BSS (hrs)	Eo (mm)	Rainfall (mm)	Rainy Days
1	30	29.07.24	7 DAG	31.1	27.1	92	80	9.7	1.6	3.0	122.0	2
2	31	05.08.24	14 DAG	30.9	26.5	93	83	8.9	1.4	3.7	49.0	4
3	32	12.08.24	21 DAG	30.8	26.4	90	81	7.9	1.7	3.1	18.0	3
4	33	19.08.24	28 DAG	31.6	26.1	91	79	6.5	3.7	3.3	14.5	3
5	34	26.08.24	35 DAG	33.3	26.7	87	69	8.8	6.8	4.1	27.5	1
6	35	02.09.24	42 DAG	29.6	25.2	96	79	13.1	2.8	1.8	604.0	4
7	36	09.09.24	49 DAG	32.0	26.0	94	70	6.9	6.1	3.7	1.5	0
8	37	16.09.24	56 DAG	32.7	25.1	86	60	8.1	7.8	4.6	0.0	0
9	38	23.09.24	63 DAG	32.9	25.1	88	62	7.1	8.7	4.8	0.0	0
10	39	30.09.24	70 DAG	33.2	25.6	89	66	8.4	6.2	4.5	28.0	2
11	40	07.10.24	77 DAG	33.4	25.5	87	62	6.6	8.1	4.5	0.0	0
12	41	14.10.24	84 DAG	34.5	26.2	81	55	4.8	5.8	4.9	9.0	1
Correlation			Shoot fly	0.230 ^{NS}	0.095 ^{NS}	-0.280 ^{NS}	-0.100 ^{NS}	-0.038 ^{NS}	0.186 ^{NS}	0.007 ^{NS}	0.052 ^{NS}	0.020 ^{NS}
			Stem borer	0.182 ^{NS}	-0.001 ^{NS}	-0.155 ^{NS}	-0.113 ^{NS}	-0.154 ^{NS}	0.204 ^{NS}	-0.042 ^{NS}	0.047 ^{NS}	-0.049 ^{NS}
			Helicoverpa	0.328 ^{NS}	-0.600*	-0.167 ^{NS}	-0.567 ^{NS}	-0.238 ^{NS}	0.652*	0.492 ^{NS}	-0.317 ^{NS}	-0.689*

Table-V.3d: PMET-2: Statement showing incidence of insect-pests and population of natural enemies in pearl millet (Centre: Anand)

No.	S M W	Date of Observation	Days After Germination	Shoot fly % inci.	Stem borer % inci.	Grass hopper % damage	Helicovera larvae/20 EH	<i>Eublemma silicula</i> /20 E.H.	Lady bird beetle/20 pl.
1	31	8/2/2024	7 DAG	0.00	0.00	0.00	0.00	0.00	0.00
2	32	8/9/2024	14 DAG	0.00	0.00	0.00	0.00	0.00	0.00
3	33	8/16/2024	21 DAG	0.00	0.00	0.00	0.00	0.00	0.00
4	34	8/23/2024	28 DAG	0.00	0.00	0.00	0.00	0.00	0.00
5	35	8/30/2024	35 DAG	0.00	0.00	0.00	0.00	0.00	0.00
6	36	9/6/2024	42 DAG	0.00	0.00	0.00	0.00	0.00	0.00
7	37	9/13/2024	49 DAG	5.00	0.00	0.00	0.00	0.00	0.00
8	38	9/20/2024	56 DAG	15.00	5.00	0.00	1.00	0.00	0.00
9	39	9/27/2024	63 DAG	15.00	10.00	5.00	2.00	2.00	0.00
10	40	10/4/2024	70 DAG	15.00	10.00	5.00	4.00	2.00	0.00
11	41	10/11/2024	77 DAG	15.00	10.00	10.00	4.00	3.00	2.00
12	42	10/18/2024	84 DAG	15.00	10.00	10.00	3.00	2.00	3.00
13	43	10/25/2024	91 DAG	15.00	15.00	10.00	2.00	0.00	3.00
			Mean	7.31	4.62	3.08	1.23	0.69	0.62

N.B.: Date of sowing: 26/07/2024, Date of Harvesting: 08.11.2024, Variety: GHB 1129

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Table-V.3e: PMET-2: Statement showing losses in pearl millet due to insect pest complex (Centre: Anand)

Parameters	Yield kg/ha in treated plot	Yield kg/ha in Un-treated plot	% losses
1. Grain	2934	2692	8.25
2. Fodder	5770	5455	5.46

Table-V.3f: PMET-2: Correlation of major insect-pests of pearl millet with different weather parameters (Centre: Anand)

No.	S M W	Date of Observation	Days After Germination	Temp. O Maxi.	Temp. O Mini.	R.H. Morn.	R.H. Even.	Wind speed km/hr	BSS (hrs)	Eo (mm)	Rainfall (mm)	Rainy Days
1	31	8/2/2024	7 DAG	30.9	26.4	91.9	75.0	6.5	1.5	19.6	56.4	4.0
2	32	8/9/2024	14 DAG	31.4	26.1	93.0	79.1	5.5	1.9	19.1	54.0	5.0
3	33	8/16/2024	21 DAG	32.7	26.7	90.3	65.1	4.5	6.2	26.3	55.8	2.0
4	34	8/23/2024	28 DAG	32.5	26.0	92.9	81.9	5.0	3.1	18.5	185.6	2.0
5	35	8/30/2024	35 DAG	30.4	26.0	92.6	75.6	8.2	4.3	20.2	225.8	6.0
6	36	9/6/2024	42 DAG	31.1	25.8	95.3	73.1	5.6	4.0	19.4	132.6	3.0
7	37	9/13/2024	49 DAG	32.6	25.9	88.9	61.8	6.6	7.0	29.7	1.6	0.0
8	38	9/20/2024	56 DAG	33.7	26.7	87.0	59.7	6.0	9.3	32.7	0.0	0.0
9	39	9/27/2024	63 DAG	30.9	24.7	96.6	84.0	4.1	1.5	21.5	132.6	6.0
10	40	10/4/2024	70 DAG	33.6	26.0	88.9	59.0	3.4	8.1	23.4	0.0	1.0
11	41	10/11/2024	77 DAG	33.3	24.9	85.9	61.9	2.9	4.8	22.0	15.8	1.0
12	42	10/18/2024	84 DAG	34.6	25.4	88.0	57.9	2.7	7.9	26.4	54.0	1.0
13	43	10/25/2024	91 DAG	35.0	23.2	87.3	41.7	2.0	9.6	22.3	0.8	0.0
Total											915.0	31.0
Correlation	Shoot fly % incidence		0.672*	-0.537 ^{NS}	-0.540 ^{NS}	-0.579*	-0.683*	0.562*	0.434 ^{NS}	-0.531 ^{NS}	-0.456 ^{NS}	
	Stem borer % incidence		0.667*	-0.769**	-0.454 ^{NS}	-0.611*	-0.831**	0.485 ^{NS}	0.140 ^{NS}	-0.432 ^{NS}	-0.358 ^{NS}	
	Helicoverpa larval population		0.585*	-0.468 ^{NS}	-0.513 ^{NS}	-0.479 ^{NS}	-0.761**	0.391 ^{NS}	0.125 ^{NS}	-0.440 ^{NS}	-0.358 ^{NS}	

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Table-V.3g: PMET-2: Statement showing incidence of insect-pests and population of natural enemies in pearl millet (Centre: Jodhpur)

No.	S M W	Date of Observation	Days After Germi. nation	Shoot fly % inci.	Termite % Inci.	leaf roller amage score (0-10)	Grass hopper % damage	FAW % damage	Mean Grey weevil damage score (0-10)	Hiary cater pillar /20 pl.	Leaf hopper/ plants	Chaffer beetle/ 20 EH	<i>Helicoverp</i> <i>a</i> larvae/ 20 EH	<i>Eublemma</i> <i>silicula</i> / 20 E.H.	Lady bird beetle/ 20 pl.	Chrysopa /20 pl.
1	30	29.07.24	7 DAG	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	31	5.08.24	14 DAG	10.00	20.00	0	0.00	0.00	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	32	12.08.24	21 DAG	25.00	20.00	0	0.00	0.00	1	0.00	0.00	0.00	0.00	0.00	1.00	1.00
4	33	19.08.24	28 DAG	30.00	20.00	1	5.00	0.00	3	0.00	0.00	0.00	0.00	0.00	2.00	1.00
5	34	26.08.24	35 DAG	25.00	20.00	1	10.00	5.00	3	0.00	1.80	0.00	0.00	0.00	4.00	1.00
6	35	2.09.24	42 DAG	20.00	20.00	2	20.00	10.00	2	2.00	5.55	2.00	3.00	0.00	5.00	1.00
7	36	9.09.24	49 DAG	10.00	20.00	2	20.00	10.00	2	2.00	16.20	5.00	10.00	0.00	4.00	1.00
8	37	16.09.24	56 DAG	10.00	20.00	1	20.00	0.00	2	2.00	5.20	2.00	8.00	2.00	4.00	1.00
9	38	23.09.24	63 DAG	5.00	20.00	1	10.00	0.00	1	0.00	3.80	1.00	5.00	2.00	2.00	1.00
10	39	30.09.24	70 DAG	5.00	20.00	5	10.00	0.00	1	0.00	0.00	0.00	2.00	1.00	1.00	0.00
11	40	7.10.24	77 DAG	5.00	20.00	0	0.00	0.00	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	41	14.10.24	84 DAG	5.00	20.00	0	0.00	0.00	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	42	21.10.24	91 DAG	5.00	20.00	0	0.00	0.00	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Mean	11.92	18.46	1.00	7.31	1.92	1.46	0.46	2.50	0.77	2.15	0.38	1.77	0.54

Date of sowing: 15.07.2024, Date of Harvesting: 25.10.24, Variety: MPMH 21, Rainfall=429.7 mm

Table-V.3h: PMET-2: PMET-2: Statement showing losses in pearl millet due to insect pest complex (Centre: Jodhpur)

Parameters	Treated plot (Kg/ha)	Untreated plot (Kg/ha)	% losses
1. Grain	1190.48	952.38	20.00
2. Fodder	2142.86	1714.29	20.00

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Table-V.3i: PMET-2: Statement showing incidence of insect-pests and population of natural enemies in pearl millet (Centre: Fatehpur-Shekhawati)

No.	S M W	Date of Observation	Days After Germin- ation	Shoot fly % incidence	Stem borer % incidence	Termite % Inci.	leaf roller damage score (0- 10)	Mean Grey weevil damage score (0-10)	Hiary cater pillar /20 pl.	Blister beetles/ 20 EH	Helicovera larvae/ 20 EH	<i>Eublemma silicula</i> / 20 E.H.	Lady bird beetle/ 20 pl.	Chrysopa/ 20 pl.	Spider/20 pl.
1	30	27.07.2024	7 DAG	5.00	0.00	0.00	1	1	1	0	0	0	0	0	0
2	31	03.08.2024	14 DAG	10.00	0.00	0.00	2	1	1	0	0	0	0	1	2
3	32	10.08.2024	21 DAG	20.00	0.00	0.00	2	2	0	0	0	0	2	1	2
4	33	17.08.2024	28 DAG	25.00	5.00	0.00	3	2	0	0	0	0	1	1	4
5	34	24.08.2024	35 DAG	30.00	5.00	5.00	3	2	0	0	0	0	4	1	4
6	35	31.08.2024	42 DAG	30.00	10.00	5.00	3	3	0	0	0	0	3	1	5
7	36	07.09.2024	49 DAG	30.00	10.00	5.00	3	3	0	0	0	0	4	1	7
8	37	14.09.2024	56 DAG	30.00	10.00	5.00	4	3	0	0	3	1	2	0	8
9	38	21.09.2024	63 DAG	30.00	10.00	5.00	4	3	0	0	2	1	4	0	9
10	39	9/28/2022	70 DAG	35.00	10.00	5.00	4	3	0	6	4	1	5	0	8
11	40	10/5/2022	77 DAG	35.00	10.00	5.00	4	3	0	8	5	0	1	0	2
12	41	12.10.2024	84 DAG	35.00	10.00	5.00	4	3	0	0	1	0	0	0	8
			Mean	26.25	6.67	3.33	3.08	2.42	0.20	1.17	1.25	0.25	2.17	0.50	4.92

N.B.: Date of sowing: 13-07-2024, Date of Harvesting: 15.10.2024, Variety: RHB-234

Table-V.3j: PMET-2: PMET-2: Statement showing losses in pearl millet due to insect pest complex (Centre: Fatehpur- Shekhawati)

Parameters	Yield kg/ha in treated plot	Yield kg/ha in Un-treated plot	% losses
1. Grain	2021	1360	33.00
2. Fodder	2538	1610	37.00

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Table-V.3k: PMET-2: Correlation of major insect-pests of pearl millet with different weather parameters (Centre: Fatehpur- Shekhawati)

No.	S W W	Date of Observation	DaysAfter Germination	Temp. O Maxi.	Temp. O Mini.	R.H. maxi.	R.H. Min.	Wind speed km/hr	BSS (hrs)	Rainfall (mm)	Rainy Days
1	30	27.07.2024	7 DAG	35.6	26.4	83.1	74.1	1.1	5.3	63.9	2
2	31	03.08.2024	14 DAG	34.3	26.3	88.4	67.6	1.3	5.6	41.2	1
3	32	10.08.2024	21 DAG	30.0	25.1	93.3	83.3	1.7	0.8	38.3	5
4	33	17.08.2024	28 DAG	33.2	25.4	90.4	76.7	0.7	5.3	42.9	2
5	34	24.08.2024	35 DAG	35.6	25.6	88.7	71	1.0	6.1	5.2	1
6	35	31.08.2024	42 DAG	34.5	24.9	90.6	75.4	13.9	5.7	1.8	0
7	36	07.09.2024	49 DAG	32.8	24.3	93.7	79.7	0.7	4.5	98.8	7
8	37	14.09.2024	56 DAG	34.2	23.8	92.0	65.3	1.2	7.2	7.6	2
9	38	21.09.2024	63 DAG	35.0	23.2	90.4	70.1	0.7	6.5	2.2	0
10	39	9/28/2022	70 DAG	37.4	23.8	84	50.6	0.8	8.2	0	0
11	40	10/5/2022	77 DAG	37.7	21.9	83.4	41.7	1.2	9.1	0	0
12	41	12.10.2024	84 DAG	35.7	18.1	83.1	42.7	0.5	7.9	7.2	1
									Total	309.1	21
Correlation			Shoot fly % incidence	0.322 ^{NS}	<u>-0.657*</u>	0.003 ^{NS}	-0.497 ^{NS}	0.078 ^{NS}	0.511 ^{NS}	-0.534 ^{NS}	-0.197 ^{NS}
			Stem borer % incidence	0.431 ^{NS}	<u>-0.630*</u>	-0.033 ^{NS}	-0.478 ^{NS}	0.182 ^{NS}	<u>0.639*</u>	-0.417 ^{NS}	-0.235 ^{NS}

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Table-V.3l: PMET-2: Statement showing incidence of insect-pests and population of natural enemies in pearl millet (Centre: Aurangabad)

No	S W W	Date of Observation	Days After Germination	Shoot fly % incidence	Stem borer % incidence	FAW% damage	Hiary caterpillar /20 pl.	Chaffer beetle 20/EH	Lady bird beetle/ 20 pl.	Chryso pa/ 20 pl.	Temp. O Maxi.	Temp. O Mini.	R.H. Morn.	R.H. Even.	Rainfall (mm)	Rainy Days
1	31	30/7-05/8	7 DAG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.1	23.4	86	97	18.5	3
2	32	06/8-12/8	14 DAG	5.00	0.00	0.00	0.00	0.00	2.00	0.00	29.3	23.1	79	96	4.5	1
3	33	13/8-19/8	21 DAG	15.00	10.00	0.00	0.00	0.00	3.00	0.00	31.5	23.6	70	88	54.5	4
4	34	20/8-26/8	28 DAG	15.00	10.00	10.00	0.00	0.00	2.00	0.00	30.3	22.8	83	94	85.0	4
5	35	27/8-02/9	35 DAG	15.00	10.00	10.00	2.00	1.00	3.00	0.05	29.6	22.8	71	83	72.0	2
6	36	03/9-09/9	42 DAG	15.00	10.00	15.00	2.00	1.00	3.00	0.05	28.3	22.5	81	96	14.5	3
7	37	10/9-16/9	49 DAG	15.00	10.00	20.00	2.00	0.00	2.00	0.00	29.6	21.4	72	88	4.5	1
8	38	17/9-23/9	56 DAG	15.00	10.00	20.00	1.00	1.00	3.00	0.00	31.3	22.4	59	85	0.0	0
9	39	24/9-30/9	63 DAG	15.00	10.00	20.00	0.00	1.00	2.00	0.00	29.9	22.7	75	91	62.5	3
			Mean	12.22	7.78	10.56	0.78	0.44	2.22	0.01	29.88	22.74	75.11	90.89	316.00	21.00
Correlation									Shoot fly % incidence		0.376 ^{NS}	-0.462 ^{NS}	-0.543 ^{NS}	-0.612 ^{NS}	0.371 ^{NS}	0.052 ^{NS}
									Stem borer % incidence		0.375 ^{NS}	-0.447 ^{NS}	-0.509 ^{NS}	-0.617 ^{NS}	0.404 ^{NS}	0.134 ^{NS}
									FAW % incidence		0.015 ^{NS}	-0.824**	-0.448 ^{NS}	-0.397 ^{NS}	-0.089 ^{NS}	-0.367 ^{NS}

N.B.: Date of sowing: 24.07.2024, Variety: AHB-1200, Date of Harvesting: 04.10.2024

Table-V.3m: PMET-2: Statement showing losses in pearl millet due to insect pest complex (Centre: Aurangabad)

No.	Treatments	Treated plot	Untreated plot	% losses
1	Grain yield kg/ha	2200	2000	9.09
2	Fodder yield kg/ha	4500	3800	15.56

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Table- V.3n: PMET-2: Incidence of insect-pests and population) and population of natural enemies in pearl millet (Centre: Hisar)

No .	S M W	Date of Observ ation	Days After Germin ation	Shoot fly% inci.	Stem borer % inci.	Grass hopper % damage	FAW % dama ge	Mean Grey weevil dama ge score (0-10)	Hiar y cate r pillar /20 pl.	Bliste r beetle s/ 20 EH	Chaff er beetl e 20 / EH	Helicov era larvae/ 20 EH	Lady bird beetle/ 20 pl.	Chrysopa / 20 pl.	Temp . O Maxi.	Tem p. O Mini.	R.H. Mor. .	R.H. Eve.	Wind speed km/hr	BSS (hrs)	Eo (mm)	Rainfa ll (mm)	Rainy Days
1	29	19.7.24	7 DAG	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	37.8	28.7	85	60	6.8	6.2	6.3	1.2	0
2	30	26.7.24	14 DAG	5.00	0.00	0.00	0.00	0	0	0	0	0	0	0	37.6	28.8	83	56	4.8	4.3	4.9	8	1
3	31	02.8.24	21 DAG	10.00	0.00	0.00	0.00	5	2	0	0	0	0	0	35.5	28.0	87	68	7.1	5.0	5.5	71	2
4	32	09.8.24	28 DAG	0.00	5.00	2.00	5.00	5	1	0	0	0	0	0	33.4	26.7	93	75	6.8	5.7	4.2	143.8	4
5	33	16.8.24	35 DAG	0.00	10.00	3.00	15.00	10	0	0	0	0	1	0	33.5	27.3	93	70	3.8	5.5	3.2	23.4	1
6	34	23.8.24	42 DAG	0.00	15.00	0.00	0.00	0	0	0	0	0	0	1	34.5	27.2	87	66	4.2	6.6	3.9	9	2
7	35	30.8.24	49 DAG	0.00	0.00	0.00	0.00	0	0	0	0	0	1	2	33.0	26.2	94	72	5.2	5.2	3.2	29.2	2
8	36	06.9.24	56 DAG	0.00	0.00	0.00	0.00	0	0	0	0	0	1	1	31.7	25.7	93	83	3.4	2.4	3.9	46.1	2
9	37	13.9.24	63 DAG	0.00	0.00	0.00	0.00	0	0	5	2	1	0	0	33.9	25.0	92	63	4.6	5.3	3.8	19.6	1
10	38	20.9.24	70 DAG	0.00	0.00	0.00	0.00	0	0	2	1	2	0	0	34.1	24.4	92	60	3.6	5.7	3.2	0	0
11	39	27.9.24	77 DAG	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	35.0	25.2	89	56	5.2	6.1	4.3	0	0
Mean				1.36	2.73	0.45	1.82	1.82	0.27	0.64	0.27	0.27	0.27	0.36	--	--	--	--	--	Total		351.3	15

Table- V.3o: PMET-2: Statement showing losses in pearl millet due to insect pest complex (Centre: Hisar)

Parameters	Yield kg/ha in treated plot	Yield kg/ha in Un-treated plot	% losses
1. Grain	2900	2700	6.90
2. Fodder	3900	3700	5.13

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Table-V.3p: PMET-2: Statement showing incidence of insect-pests and population of natural enemies in pearl millet (Centre: Jaipur)

No.	S M W	Date of Observation	Days After Germi. nation	Shoot fly % incidence	Stem borer % incidence	Termite % Inci.	leaf roller damage score (0-10)	Chaffer beetle 20 / EH	Temp. O Maxi.	Temp. O Mini.	R.H. Morn.	R.H. Even.	Wind speed km/hr	Rainfall (mm)	Rainy Days
1	32	7.8.24	7 DAG	0.00	0.00	0.00	0	0	33.50	24.80	79.40	59.70	6.80	245.00	7.00
2	33	14.8.24	14 DAG	4.76	0.00	1.58	0	0	35.60	25.90	65.10	43.10	6.70	163.50	5.00
3	34	21.8.24	21 DAG	5.00	0.00	4.11	0	0	36.50	24.60	78.30	48.10	7.50	73.00	2.00
4	35	28.8.24	28 DAG	11.11	3.17	12.58	0	0	32.50	24.30	84.10	66.10	6.70	194.00	3.00
5	36	4.9.24	35 DAG	15.87	4.76	14.17	2	0	31.30	24.80	87.60	67.90	5.50	151.00	5.00
6	37	11.9.24	42 DAG	12.69	1.58	18.02	2	0	30.00	24.30	85.40	73.10	7.90	28.00	2.00
7	38	18.9.24	49 DAG	12.69	1.58	21.20	2	0	30.20	23.90	89.70	73.00	7.00	0.00	0.00
8	39	25.9.24	56 DAG	6.25	0.00	29.03	4	2	32.00	24.30	85.30	61.30	6.20	0.00	0.00
9	40	2.10.24	63 DAG	9.37	0.00	30.22	6	3	33.40	23.60	82.60	53.40	4.20	0.00	0.00
10	41	9.10.24	70 DAG	18.75	6.25	31.55	7	6	35.70	21.00	66.00	31.90	3.60	0.00	0.00
11	42	16.10.24	77 DAG	18.75	9.37	39.51	8	6	32.10	19.00	66.70	41.10	4.60	0.00	0.00
12	43	23.10.24	84 DAG	25.00	0.00	43.77	8	3	30.90	17.50	60.10	30.00	5.10	0.00	0.00
13	44	30.10.24	91 DAG	6.25	0.00	43.77	8	1	30.70	13.90	55.30	29.00	3.40	0.00	0.00
			Mean	11.27	2.05	22.27	3.62	1.62					Total	854.50	24.00

N.B.: Date of sowing: 27.7.2024, Date of Harvesting: 04.11.2024, Variety: RHB 228, Total rainfall=854.50, Rainy days= 24.00

Table-V.4q: PMET-2: PMET-2: Statement showing losses in pearl millet due to insect pest complex (Centre: Jaipur)

Yields (kg/ha)	Protected Plot kg/ha	Unprotected Plot kg/ha	Losses %
Grain Yield	1820	1020	43.96
Fodder Yield	3760	2650	29.52

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Table-V.3k: PMET-2: Correlation of major insect-pests of pearl millet with different weather parameters (Centre: Jaipur)

No.	S M W	Date of Observation	Days After Germination	Temp. O Maxi.	Temp. O Mini.	R.H. maxi.	R.H. Min.	Wind speed km/hr	Rainfall (mm)	Rainy Days
1	32	7.8.24	7 DAG	33.50	24.80	79.40	59.70	6.80	245.00	7.00
2	33	14.8.24	14 DAG	35.60	25.90	65.10	43.10	6.70	163.50	5.00
3	34	21.8.24	21 DAG	36.50	24.60	78.30	48.10	7.50	73.00	2.00
4	35	28.8.24	28 DAG	32.50	24.30	84.10	66.10	6.70	194.00	3.00
5	36	4.9.24	35 DAG	31.30	24.80	87.60	67.90	5.50	151.00	5.00
6	37	11.9.24	42 DAG	30.00	24.30	85.40	73.10	7.90	28.00	2.00
7	38	18.9.24	49 DAG	30.20	23.90	89.70	73.00	7.00	0.00	0.00
8	39	25.9.24	56 DAG	32.00	24.30	85.30	61.30	6.20	0.00	0.00
9	40	2.10.24	63 DAG	33.40	23.60	82.60	53.40	4.20	0.00	0.00
10	41	9.10.24	70 DAG	35.70	21.00	66.00	31.90	3.60	0.00	0.00
11	42	16.10.24	77 DAG	32.10	19.00	66.70	41.10	4.60	0.00	0.00
12	43	23.10.24	84 DAG	30.90	17.50	60.10	30.00	5.10	0.00	0.00
13	44	30.10.24	91 DAG	30.70	13.90	55.30	29.00	3.40	0.00	0.00
Correlation			Shoot fly % incidence	-0.329 ^{NS}	-0.401 ^{NS}	-0.221 ^{NS}	-0.252 ^{NS}	-0.372 ^{NS}	-0.473 ^{NS}	-0.480 ^{NS}
			Stem borer % incidence	-0.012 ^{NS}	-0.148 ^{NS}	-0.065 ^{NS}	-0.076 ^{NS}	-0.332 ^{NS}	-0.116 ^{NS}	-0.145 ^{NS}
			Termite % incidence	-0.455 ^{NS}	-0.834^{**}	-0.487 ^{NS}	-0.524 ^{NS}	-0.747^{**}	-0.805^{**}	-0.827^{**}

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Table V.4a: PMET-3: Survey of insect pests of *kharif* pearl millet crop on farmer's fields (Centre: Jamnagar & Anand in Gujarat)

No. of farmer	Date of survey	Location	Taluka/ Tehsil	District	Variety	Area (ha.)	Crop stage	Shoot fly %	Stem borer %	<i>Helicoverpa</i> larvae/ 5 E.H.	Blister beetles/ 5 E.H.	Chaffer beetle/ 5 E.H.	Grass hopper % damage	Grey weevil damage score (0-10)	Leaf binder damage %	Lady bird beetle/ 5 Pl.	Chrysopa/5 Pl.
1	18.09.24	Chotila	Chotila	Sur.nagar	Sagar 222	1.0	EH	15.0	5.0	15	5	10	5.0	5.0	2.0	0	0
2	18.09.24	Moldi nani	Chotila	Sur.nagar	Sagar 222	1.0	EH	15.0	10.0	10	2	5	5.0	7.0	3.0	0	0
3	18.09.24	Janivadla	Chotila	Sur.nagar	Sagar 222	1.0	EH	5.0	10.0	5	2	2	5.0	5.0	2.0	1	1
4	18.09.24	Chanpa	Chotila	Sur.nagar	Sagar 222	1.0	EH	10.0	5.0	5	1	1	5.0	6.0	2.0	1	1
5	18.09.24	Kumbhara	Chotila	Sur.nagar	Sagar 222	0.5	EH	5.0	5.0	2	0	0	5.0	5.0	2.0	0	0
6	18.09.24	Maghrikhada	Chotila	Sur.nagar	Avani 44	1.0	EH	5.0	5.0	5	1	1	5.0	5.0	2.0	0	0
7	18.09.24	Nanakandhasar	Chotila	Sur.nagar	Avani 44	1.0	EH	5.0	5.0	5	1	1	5.0	5.0	2.0	1	1
8	18.09.24	Vanki	Chotila	Sur.nagar	Sagar 222	0.5	EH	5.0	0.0	1	1	2	10.0	6.0	2.0	1	1
9	18.09.24	Shapur	Chotila	Sur.nagar	Sagar 222	0.5	EH	20.0	5.0	1	0	0	5.0	5.0	2.0	1	1
10	18.09.24	Hadala	Sayla	Sur.nagar	Sagar 222	1.0	EH	10.0	5.0	1	1	1	0.0	6.0	1.0	0	0
11	18.09.24	Dhedhuki	Sayla	Sur.nagar	Sagar 222	1.0	EH	10.0	5.0	1	1	5	5.0	6.0	3.0	1	2
12	18.09.24	Aya	Sayla	Sur.nagar	Sagar 222	1.0	EH	10.0	5.0	5	1	10	5.0	4.0	1.0	1	1
13	18.09.24	Doliya	Sayla	Sur.nagar	Sagar 222	1.0	EH	10.0	0.0	4	1	5	10.0	5.0	2.0	2	2
14	18.09.24	Gosal	Sayla	Sur.nagar	Avani 44	1.0	EH	10.0	10.0	5	1	6	5.0	4.0	1.0	1	0
15	18.09.24	Sayla	Sayla	Sur.nagar	Avani 45	1.0	EH	10.0	5.0	10	0	5	5.0	4.0	3.0	3	0
16	18.09.24	Navimorwad	Chuda	Sur.nagar	Avani 46	1.0	EH	10.0	5.0	5	0	2	5.0	5.0	2.0	1	0
17	18.09.24	Limbdi	Sur.nagar	Sur.nagar	Sagar 222	1.0	EH	15.0	5.0	5	2	5	5.0	5.0	2.0	4	0
18	18.09.24	Isnav	Sojitra	Anand	86M20	1.0	EH	10.0	10.0	25	1	5	5.0	2.0	3.0	2	2
19	18.09.24	Sunav	Petlad	Anand	DNA 145	1.0	EH	5.0	15.0	20	2	7	10.0	3.0	4.0	5	4
20	18.09.24	Piplav	Sojitra	Anand	Sagar 222	1.0	EH	5.0	10.0	15	2	6	5.0	3.0	5.0	7	3
21	18.09.24	Naar	Petlad	Anand	86M22	1.0	EH	10.0	10.0	25	1	4	5.0	4.0	4.0	8	5
22	18.09.24	Dali	Borsad	Anand	Triveni 972	1.0	EH	5.0	15.0	30	3	5	5.0	4.0	6.0	9	4
23	18.09.24	Sojitra	Sojitra	Anand	Avani 44	1.0	EH	10.0	10.0	15	5	8	5.0	5.0	5.0	10	6
24	18.09.24	Rauli	Petlad	Anand	Ekta 31	1.0	EH	15.0	10.0	20	4	9	10.0	6.0	4.0	12	5
25	18.09.24	Ravipura	Petlad	Anand	Kedar 888	1.0	EH	10.0	10.0	25	3	10	5.0	2.0	7.0	5	4
26	18.09.24	Palaj	Petlad	Anand	86M20	1.0	EH	10.0	5.0	12	2	12	5.0	4.0	6.0	4	5
27	18.09.24	Ishwarda	Petlad	Anand	86M22	1.0	EH	5.0	10.0	14	5	4	5.0	3.0	5.0	15	6
28	18.09.24	Mehelav	Petlad	Anand	Avani 44	1.0	EH	5.0	10.0	15	4	15	5.0	2.0	6.0	10	5
29	18.09.24	Bandhani	Petlad	Anand	Aditya 755	1.0	EH	5.0	10.0	25	3	10	10.0	2.0	5.0	10	7
30	30.09.24	Juna katariya	Bhachau	Kutch	Sagar 222	1.0	EH	5.0	5.0	5	15	2	10.0	3.0	2.0	2	1
31	30.09.24	Lakadiaya	Bhachau	Kutch	Sagar 222	1.0	EH	5.0	5.0	4	6	5	10.0	3.0	2.0	2	1
2	30.09.24	Nava Katariya	Bhachau	Kutch	Avani	1.0	EH	5.0	5.0	10	2	2	15.0	2.0	2.0	1	1
33	30.09.24	Samakhiyali	Bhachau	Kutch	Avani	1.0	EH	5.0	5.0	5	5	5	20.0	3.0	1.0	1	1
34	30.09.24	Chandarani	Anjar	Kutch	Desi bajra	1.0	EH	5.0	10.0	4	5	2	25.0	2.0	3.0	0	0
35	30.09.24	Mevasa	Rapar	Kutch	Sagar 222	1.0	EH	10.0	5.0	5	5	5	15.0	3.0	2.0	0	0
36	30.09.24	Gagodar	Rapar	Kutch	Sagar 222	1.0	EH	10.0	5.0	5	7	10	10.0	3.0	2.0	1	1
37	30.09.24	Mangadh	Rapar	Kutch	Sagar 222	1.0	EH	5.0	5.0	5	5	5	15.0	3.0	2.0	1	1
38	30.09.24	Palasva	Rapar	Kutch	Sagar 222	1.0	EH	5.0	5.0	5	5	5	20.0	3.0	1.0	1	1
39	30.09.24	Makhel	Rapar	Kutch	Sagar 222	1.0	EH	5.0	5.0	5	5	5	20.0	3.0	1.0	1	1
40	30.09.24	Adesar	Rapar	Kutch	Sagar 222	1.0	EH	5.0	5.0	5	5	5	20.0	3.0	1.0	1	1
41	30.09.24	Dungrasan	Kankrej	B.Kantha	86M22	1.0	EH	25.0	5.0	5	5	2	5.0	2.0	2.0	1	2
42	30.09.24	Shihori	Kankrej	B.Kantha	86M11	1.0	EH	10.0	10.0	10	7	3	0.0	3.0	3.0	2	0

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No. of farmer	Date of survey	Location	Taluka/ Tehsil	District	Variety	Area (ha.)	Crop stage	Shoot fly %	Stem borer %	Helicoverpa larvae/ 5 E.H.	Blister beetles/ 5 E.H.	Chaffer beetle/ 5 E.H.	Grass hopper % damage	Grey weevil damage score (0-10)	Leaf binder damage %	Lady bird beetle/ 5 Pl.	Chrysopa/5 Pl.
43	01.10.24	Kant	Deesa	B.Kantha	86M22	1.0	EH	15.0	5.0	12	9	4	5.0	2.0	4.0	2	1
44	01.10.24	Chekhla	Palanpur	Banaskantha	Sagar 222	1.0	EH	20.0	5.0	15	4	2	0.0	4.0	5.0	3	2
45	01.10.24	Khodla	Palanpur	Banaskantha	86M22	1.0	EH	15.0	5.0	10	5	5	10.0	2.0	2.0	4	3
46	01.10.24	Mudetha	Deesa	Banaskantha	86M11	1.0	EH	15.0	10.0	14	6	6	0.0	3.0	3.0	5	4
47	01.10.24	Khetwa	Deesa	Banaskantha	86M22	1.0	EH	20.0	5.0	12	4	4	0.0	2.0	3.0	2	0
48	01.10.24	Lorwada	Deesa	Banaskantha	Dhanya	1.0	EH	15.0	5.0	10	1	5	5.0	2.0	0.0	3	5
49	01.10.24	Vaghpura	Deesa	Banaskantha	Nandi75	1.0	EH	20.0	5.0	7	5	4	0.0	3.0	2.0	1	0
50	01.10.24	Vadaval	Deesa	Banaskantha	86M22	1.0	EH	15.0	10.0	19	2	2	5.0	4.0	0.0	2	4
51	01.10.24	Kunpat	Deesa	Banaskantha	86M22	1.0	EH	15.0	5.0	20	3	3	10.0	5.0	3.0	0	0
52	01.10.24	Malgadh	Deesa	Banaskantha	86M11	1.0	EH	20.0	10.0	15	15	4	5.0	2.0	0.0	0	2
53	01.10.24	Akhol	Deesa	Banaskantha	Kaveri	1.0	EH	10.0	10.0	14	5	8	5.0	2.0	5.0	0	0
54	01.10.24	Vaghrol	Dantiwada	Banaskantha	Nandi75	1.0	EH	15.0	5.0	10	10	4	0.0	3.0	0.0	5	2
55	01.10.24	Motibhakar	Dantiwada	Banaskantha	86M22	1.0	EH	10.0	10.0	8	5	5	0.0	1.0	6.0	0	2
56	01.10.24	Nanibhakar	Dantiwada	Banaskantha	Sagar 222	1.0	EH	15.0	5.0	4	9	6	0.0	1.0	0.0	1	3
57	01.10.24	Dabhipura	Dantiwada	Banaskantha	86M22	1.0	EH	20.0	5.0	5	8	6	5.0	0.0	0.0	2	5
58	01.10.24	Dantiwada	Dantiwada	Banaskantha	86M11	1.0	EH	15.0	10.0	8	7	5	5.0	1.0	1.0	2	4
59	01.10.24	Ganeshpura	Dantiwada	Banaskantha	86M22	1.0	EH	10.0	10.0	9	6	5	5.0	1.0	2.0	0	3
60	01.10.24	Neelpur	Dantiwada	Banaskantha	Dhanya	1.0	EH	20.0	5.0	6	5	4	5.0	0.0	0.0	3	0
61	01.10.24	Dangiya	Dantiwada	Banaskantha	86M22	1.0	EH	15.0	5.0	5	8	4	5.0	1.0	2.0	5	0
62	01.10.24	Madana	Palanpur	Banaskantha	Sagar 222	1.0	EH	20.0	15.0	4	7	3	0.0	2.0	3.0	8	5
63	01.10.24	Chandisar	Palanpur	Banaskantha	Kaveri	1.0	EH	10.0	5.0	5	4	2	0.0	2.0	2.0	0	4
64	01.10.24	Kushkal	Palanpur	Banaskantha	Dhanya	1.0	EH	15.0	10.0	5	6	1	0.0	2.0	2.0	4	2
65	01.10.24	Badarpura	Vadgam	Banaskantha	86M11	1.0	EH	10.0	5.0	5	8	0	0.0	1.0	3.0	0	2
66	01.10.24	Chadotar	Palanpur	Banaskantha	86M11	1.0	EH	15.0	5.0	4	5	1	0.0	1.0	1.0	1	3
67	01.10.24	Jodnapura	Palanpur	Banaskantha	86M11	1.0	EH	15.0	5.0	8	7	2	5.0	2.0	2.0	2	1
68	01.10.24	Sherpura	Deesa	Banaskantha	Sagar 222	1.0	EH	10.0	5.0	5	6	4	5.0	2.0	3.0	0	0
69	01.10.24	Rajosana	Vadgam	Banaskantha	Nandi75	1.0	EH	10.0	10.0	4	5	5	5.0	1.0	2.0	5	1
70	01.10.24	Teniwada	Vadgam	Banaskantha	Dhanya	1.0	EH	15.0	5.0	5	10	6	5.0	1.0	3.0	0	0
71	01.10.24	Chapi	Vadgam	Banaskantha	86M11	1.0	EH	20.0	5.0	5	2	4	5.0	5.0	1.0	6	2
72	9/27/2024	Navli	Anand	Anand	Dhany	0.5	E.H.	10.00	15.00	2.00	0	0	5.00	0.0	1.00	0.00	0.00
73	9/27/2024	Navli	Anand	Anand	Sagar 222	0.9	E.H.	5.00	2.00	0.00	0	0	0.00	0.0	0.00	0.00	0.00
74	9/27/2024	Napad	Anand	Anand	Advanta 555	0.8	E.H.	5.00	15.00	1.00	0	0	5.00	0.0	1.00	0.00	0.00
75	9/27/2024	Khadol	Anklav	Anand	Dhany 555	0.5	E.H.	5.00	10.00	1.00	0	0	3.00	0.0	1.00	0.00	0.00
76	9/27/2024	Khadol	Anklav	Anand	Advanta	0.2	E.H.	10.00	15.00	2.00	0	0	5.00	0.0	2.00	0.00	0.00
77	9/27/2024	Asodar	Anklav	Anand	Dhany 555	0.4	E.H.	5.00	10.00	1.00	0	0	3.00	0.0	1.00	0.00	0.00
78	9/27/2024	Mujkuva	Anklav	Anand	Advanta	0.4	E.H.	10.00	15.00	2.00	0	0	5.00	0.0	2.00	0.00	0.00
79	9/27/2024	Mujkuva	Anklav	Anand	Pioneer	0.6	E.H.	5.00	10.00	0.00	0	0	2.00	0.0	1.00	0.00	0.00
80	9/27/2024	Kosindra	Sankheda	Vadodara	Desi	0.4	E.H.	20.00	20.00	4.00	0	0	15.00	0.0	3.00	2.00	1.00
81	9/27/2024	Kosindra	Sankheda	Vadodara	Desi	0.7	E.H.	15.00	20.00	3.00	0	0	15.00	0.0	3.00	1.00	0.00
82	9/27/2024	Kosindra	Sankheda	Vadodara	Desi	0.1	E.H.	15.00	20.00	3.00	0	0	10.00	0.0	3.00	1.00	0.00
83	9/27/2024	Sundarana	Petlad	Anand	Sagar	0.5	E.H.	5.00	5.00	0.00	0	0	0.00	0.0	0.00	0.00	0.00
84	9/27/2024	Sundarana	Petlad	Anand	Sagar	0.7	E.H.	5.00	5.00	0.00	0	0	0.00	0.0	0.00	0.00	0.00
85	9/27/2024	Sundarana	Petlad	Anand	Pioneer	0.7	E.H.	5.00	5.00	0.00	0	0	2.00	0.0	1.00	0.00	0.00

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No. of farmer	Date of survey	Location	Taluka/ Tehsil	District	Variety	Area (ha.)	Crop stage	Shoot fly %	Stem borer %	Helicoverpa larvae/ 5 E.H.	Blister beetles/ 5 E.H.	Chaffer beetle/ 5 E.H.	Grass hopper % damage	Grey weevil damage score (0-10)	Leaf binder damage %	Lady bird beetle/ 5 Pl.	Chrysopa/5 Pl.
86	9/27/2024	Shahpur	Petlad	Anand	Advanta 5151	1.1	E.H.	10.00	15.00	2.00	0	0	5.00	0.0	1.00	0.00	0.00
87	9/27/2024	Shahpur	Petlad	Anand	Pioneer	0.9	E.H.	5.00	5.00	0.00	0	0	2.00	0.0	1.00	0.00	0.00
88	9/27/2024	Fangani	Petlad	Anand	Pioneer	1.2	E.H.	5.00	5.00	0.00	0	0	2.00	0.0	1.00	0.00	0.00
89	9/27/2024	Fangani	Petlad	Anand	Balram 222	0.4	E.H.	5.00	15.00	1.00	0	0	5.00	0.0	1.00	0.00	0.00
90	9/27/2024	Sihol	Petlad	Anand	86M84	0.3	E.H.	10.00	15.00	2.00	0	0	5.00	0.0	2.00	0.00	0.00
91	9/27/2024	Sandesar	Anand	Anand	Sagar 222	0.2	E.H.	0.00	0.00	0.00	0	0	0.00	0.0	0.00	0.00	0.00
92	9/27/2024	Sandesar	Anand	Anand	Desi	0.1	E.H.	15.00	20.00	3.00	0	0	10.00	0.0	3.00	1.00	0.00
93	10/4/2024	Valasan	Anand	Anand	Advanta	0.5	E.H.	10.00	15.00	2.00	0	0	5.00	0.0	2.00	0.00	0.00
94	10/4/2024	Valasan	Anand	Anand	Balram	0.9	E.H.	5.00	10.00	1.00	0	0	5.00	0.0	1.00	0.00	0.00
95	10/4/2024	Bandhani	Petlad	Anand	Desi	0.8	E.H.	15.00	15.00	3.00	0	0	10.00	0.0	3.00	1.00	0.00
96	10/4/2024	Mahelav	Petlad	Anand	86M11	0.5	E.H.	15.00	15.00	2.00	0	0	10.00	0.0	2.00	1.00	1.00
97	10/4/2024	Mahelav	Petlad	Anand	86M11	0.2	E.H.	15.00	15.00	2.00	0	0	10.00	0.0	2.00	1.00	0.00
98	10/4/2024	Padgol	Petlad	Anand	Desi	0.4	E.H.	15.00	15.00	3.00	0	0	10.00	0.0	3.00	1.00	0.00
99	10/4/2024	Akhdol	Nadiad	Kheda	Balram	0.4	E.H.	5.00	15.00	1.00	0	0	5.00	0.0	1.00	0.00	0.00
100	10/4/2024	Akhdol	Nadiad	Kheda	Pioneer	0.6	E.H.	5.00	5.00	0.00	0	0	2.00	0.0	1.00	0.00	0.00
101	10/4/2024	Bamroli	Petlad	Anand	86M84	0.4	E.H.	10.00	15.00	2.00	0	0	5.00	0.0	2.00	0.00	0.00
102	10/4/2024	Jol	Anand	Anand	86M84	0.7	E.H.	10.00	15.00	2.00	0	0	5.00	0.0	2.00	0.00	0.00
103	10/7/2024	Dalapura	Anand	Anand	Desi	0.1	E.H.	15.00	15.00	3.00	0	0	10.00	0.0	3.00	1.00	0.00
104	10/7/2024	Tarapur	Tarapur	Anand	Pioneer	0.5	E.H.	5.00	5.00	0.00	0	0	1.00	0.0	0.00	0.00	0.00
105	10/7/2024	Lingda	Umreth	Anand	Pioneer	0.2	E.H.	5.00	5.00	0.00	0	0	0.00	0.0	0.00	0.00	0.00
106	10/7/2024	Pandvania	Thasra	Kheda	86M84	0.4	E.H.	10.00	15.00	2.00	0	0	5.00	0.0	2.00	0.00	0.00
107	10/7/2024	Dhunadara	Thasra	Kheda	86M84	0.4	E.H.	10.00	15.00	2.00	0	0	5.00	0.0	2.00	0.00	0.00
108	10/7/2024	Khambholaj	Anand	Anand	Desi	0.6	E.H.	15.00	15.00	3.00	0	0	10.00	0.0	3.00	1.00	0.00
109	10/7/2024	Sarsa	Anand	Anand	Desi	0.4	E.H.	15.00	15.00	2.00	0	0	10.00	0.0	2.00	1.00	1.00
							Mini.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
							Maxi.	25.00	20.00	30.00	15.00	15.00	25.00	7.00	7.00	15.00	7.00
							Mean	10.60	8.73	6.50	2.83	2.99	5.98	2.04	2.17	1.90	1.28

Table V.4b: PMET-3: District wise insect pest situation on farmer's field in pearl millet in Gujarat (Centre: Jamnagar & Anand)

Districts/pockets	Shoot fly %	Stem borer %	Helicoverpa larvae/ 5 E.H.	Blister beetles/ 5 E.H.	Chaffer beetle/ 5 E.H.	Grass hopper % damage	Grey weevil damage score (0-10)	Leaf binder damage %	Lady bird beetle/5 Pl.	Chrysopa/ 5 Pl.
1. Surendranagar	10.00	5.29	5.00	1.18	3.59	5.29	<u>5.18</u>	2.00	1.06	0.59
2. Anand	8.90	11.74	5.96	0.70	1.90	5.64	0.80	2.38	<u>2.18</u>	1.18
3. Kutch	5.91	5.45	5.27	5.91	<u>4.64</u>	<u>16.36</u>	2.82	1.73	1.00	0.82
4. Banaskantha	15.32	6.94	<u>8.65</u>	<u>6.10</u>	3.84	3.23	2.03	2.10	2.23	<u>2.00</u>
5. Kheda	7.50	12.50	1.25	0.00	0.00	4.25	0.00	1.50	0.00	0.00
6. Vadodara	<u>16.67</u>	<u>20.00</u>	0.00	0.00	0.00	13.33	0.00	<u>3.00</u>	1.33	0.33

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Table V.4 c: PMET-3: Survey of insect pests of *kharif* pearl millet crop on farmer's fields (Centre: Jaipur & Fatehpur Shekhawati in Rajasthan)

No. of farmer	Date of survey	Location	Taluka/ Tehsil	District	Variety	Area (ha.)	Crop stage	Shot fly %	Stem borer %	White grub damage %	Termite damage %	<i>Helicoverpa</i> larvae/ 5 E.H.	Blister beetle s/ 5 E.H.	Chaff er beetle / 5 E.H.	Grass hopper % damage	Grey weevil damage score (0-10)	Leaf binder damage score (0-10)	Lady bird beetle/ 5 Pl.	Chrysopa/ 5 Pl.
1	15.07.24	Madhopura	Palsana	Sikar	Proagro9444	1.0	V.S.	15.0	5.0	0.0	0.0	0.0	0.0	0.0	15.0	2.0	0.0	1.0	0.0
2	15.07.24	Madhopura	Palsana	Sikar	Proagro	2.0	V.S.	15.0	5.0	0.0	0.0	0.0	0.0	0.0	15.0	1.0	0.0	1.0	1.0
3	15.07.24	Todi Madhopura	Palsana	Sikar	Proagro9444	1.0	V.S.	10.0	5.0	5.0	0.0	0.0	0.0	0.0	20.0	1.0	0.0	0.0	0.0
4	15.07.24	Todi Madhopura	Palsana	Sikar	Proagro9444	1.0	V.S.	10.0	5.0	5.0	0.0	0.0	0.0	0.0	20.0	1.0	0.0	0.0	0.0
5	15.07.24	Bagdiyon ki dhani	Palsana	Sikar	Proagro9444	1.0	V.S.	15.0	5.0	0.0	0.0	0.0	0.0	0.0	15.0	1.0	0.0	0.0	1.0
6	15.07.24	Bagdiyon ki dhani	Palsana	Sikar	Proagro9444	1.5	V.S.	15.0	5.0	0.0	0.0	0.0	0.0	0.0	15.0	1.0	0.0	0.0	0.0
7	15.07.24	Bagdiyon ki dhani	Palsana	Sikar	Proagro9444	1.5	V.S.	15.0	5.0	0.0	0.0	0.0	0.0	0.0	15.0	1.0	0.0	0.0	0.0
8	15.07.24	Kalakhet	Palsana	Sikar	Balwan	1.5	V.S.	15.0	5.0	0.0	0.0	0.0	0.0	0.0	10.0	1.0	0.0	0.0	0.0
9	15.07.24	Kalakhet	Palsana	Sikar	Balwan	1.5	V.S.	15.0	5.0	0.0	0.0	0.0	0.0	0.0	10.0	1.0	0.0	0.0	0.0
10	15.07.24	Kalakhet	Palsana	Sikar	Proagro9444	2.0	V.S.	15.0	5.0	0.0	0.0	0.0	0.0	0.0	10.0	1.0	0.0	0.0	0.0
11	15.07.24	Kalakhet	Palsana	Sikar	Balwan	5.0	V.S.	15.0	5.0	0.0	0.0	0.0	0.0	0.0	10.0	1.0	0.0	0.0	0.0
12	15.07.24	Kalakhet	Palsana	Sikar	Balwan	5.0	V.S.	15.0	5.0	0.0	0.0	0.0	0.0	0.0	10.0	1.0	0.0	0.0	0.0
13	15.07.24	Shob	Palsana	Sikar	Proagro9444	2.0	V.S.	10.0	0.0	5.0	0.0	0.0	0.0	0.0	15.0	1.0	0.0	0.0	0.0
14	15.07.24	Palasara	Palsana	Sikar	Proagro9444	1.0	V.S.	15.0	5.0	0.0	0.0	0.0	0.0	0.0	20.0	2.0	0.0	0.0	1.0
15	15.07.24	Palasara	Palsana	Sikar	Proagro9444	2.0	V.S.	15.0	5.0	0.0	0.0	0.0	0.0	0.0	20.0	1.0	0.0	0.0	0.0
16	15.07.24	Shisyu	Palsana	Sikar	Balwan	3.0	V.S.	10.0	5.0	0.0	5.0	0.0	0.0	0.0	20.0	2.0	0.0	0.0	0.0
17	15.07.24	Shisyu	Palsana	Sikar	Balwan	2.0	V.S.	10.0	5.0	0.0	5.0	0.0	0.0	0.0	20.0	1.0	0.0	0.0	0.0
18	15.07.24	Ranoli	Palsana	Sikar	Proagro9444	1.5	V.S.	10.0	5.0	0.0	0.0	0.0	0.0	0.0	20.0	2.0	0.0	0.0	0.0
19	15.07.24	Ranoli	Palsana	Sikar	Proagro9444	1.0	V.S.	10.0	5.0	0.0	0.0	0.0	0.0	0.0	20.0	2.0	0.0	0.0	0.0
20	15.07.24	Ranoli	Palsana	Sikar	Proagro9444	1.0	V.S.	10.0	5.0	0.0	0.0	0.0	0.0	0.0	20.0	2.0	0.0	0.0	0.0
21	15.07.24	Ranoli	Palsana	Sikar	Desi	1.5	V.S.	10.0	5.0	0.0	0.0	0.0	0.0	0.0	20.0	1.0	0.0	0.0	0.0
22	15.07.24	Ranoli	Palsana	Sikar	Desi	1.5	V.S.	10.0	5.0	0.0	0.0	0.0	0.0	0.0	20.0	1.0	0.0	0.0	0.0
23	15.07.24	Ajabpura	Palsana	Sikar	Proagro9444	4.0	V.S.	15.0	5.0	5.0	5.0	0.0	0.0	0.0	15.0	2.0	0.0	1.0	1.0
24	15.07.24	Tapipalya	Khandela	Sikar	Balwan	2.0	V.S.	15.0	0.0	5.0	0.0	0.0	0.0	0.0	20.0	2.0	0.0	0.0	0.0
25	15.07.24	Kotdi Dhaylan	Khandela	Sikar	Proagro9444	2.3	V.S.	15.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	2.0	0.0	0.0	0.0
26	15.07.24	Kotdi Dhaylan	Khandela	Sikar	Proagro9444	1.8	V.S.	15.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	2.0	0.0	0.0	0.0
27	15.07.24	Kotdi Dhaylan	Khandela	Sikar	Proagro9444	2.0	V.S.	15.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	2.0	0.0	0.0	0.0
28	15.07.24	Dadiyarampura	Khandela	Sikar	Proagro9444	2.0	V.S.	10.0	15.0	5.0	5.0	0.0	0.0	0.0	10.0	2.0	0.0	0.0	1.0
29	15.07.24	Dadiyarampura	Khandela	Sikar	Proagro9444	1.6	V.S.	10.0	15.0	5.0	5.0	0.0	0.0	0.0	10.0	2.0	0.0	0.0	0.0
30	15.07.24	Purohiton ka baas	Khandela	Sikar	Proagro 9444	1.5	V.S.	10.0	15.0	15.0	5.0	0.0	0.0	0.0	10.0	1.0	0.0	1.0	0.0
31	15.07.24	Purohiton ka baas	Khandela	Sikar	Proagro 9444	2.0	V.S.	10.0	10.0	15.0	5.0	0.0	0.0	0.0	10.0	1.0	0.0	3.0	1.0
32	15.07.24	Devipura	Khandela	Sikar	Desi	2.5	V.S.	15.0	10.0	15.0	5.0	0.0	0.0	0.0	15.0	1.0	0.0	0.0	0.0
33	15.07.24	Bassi	Khandela	Sikar	Proagro	3.0	V.S.	10.0	10.0	15.0	5.0	0.0	0.0	0.0	10.0	1.0	0.0	0.0	1.0

CHAPTER V: ENTOMOLOGY

No. of farmer	Date of survey	Location	Taluka/ Tehsil	District	Variety	Area (ha.)	Crop stage	Shot fly %	Stem borer %	White grub damage %	Termite damage %	Helicoverpa larvae/ 5 E.H.	Blighter beetle / 5 E.H.	Chaff er beetle / 5 E.H.	Grass hopper % damage	Grey weevil damage score (0-10)	Leaf binder damage score (0-10)	Lady bird beetle/ 5 Pl.	Chrysopa/ 5 Pl.
34	15.07.24	Pujari ka baas	Khandela	Sikar	Proagro	2.0	V.S.	10.0	5.0	15.0	5.0	0.0	0.0	0.0	15.0	1.0	0.0	0.0	0.0
35	25.07.24	Garinda	Fatehpur	Sikar	Desi	1.6	V.S.	35.0	15.0	5.0	5.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	1.0
36	25.07.24	Garinda	Fatehpur	Sikar	Desi	1.0	V.S.	35.0	15.0	5.0	5.0	0.0	0.0	0.0	0.0	3.0	2.0	0.0	0.0
37	25.07.24	Garinda	Fatehpur	Sikar	Balwan	1.5	V.S.	30.0	15.0	5.0	5.0	0.0	0.0	0.0	0.0	3.0	1.0	1.0	0.0
38	25.07.24	Garinda	Fatehpur	Sikar	Desi	1.2	V.S.	40.0	15.0	5.0	5.0	0.0	0.0	0.0	0.0	2.0	3.0	1.0	1.0
39	25.07.24	Harsawa	Fatehpur	Sikar	Desi	1.3	V.S.	30.0	20.0	5.0	5.0	0.0	0.0	0.0	0.0	2.0	1.0	1.0	0.0
40	25.07.24	Harsawa	Fatehpur	Sikar	Balwan	1.5	V.S.	30.0	15.0	5.0	5.0	0.0	0.0	0.0	0.0	2.0	1.0	0.0	0.0
41	25.07.24	Harsawa	Fatehpur	Sikar	Desi	1.1	V.S.	40.0	20.0	5.0	5.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	1.0
42	25.07.24	Harsawa	Fatehpur	Sikar	Proagro9444	1.9	V.S.	40.0	15.0	5.0	5.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	1.0
43	25.07.24	Harsawa	Fatehpur	Sikar	Desi	1.5	V.S.	40.0	15.0	5.0	5.0	0.0	0.0	0.0	0.0	3.0	2.0	0.0	1.0
44	25.07.24	Rinau	Fatehpur	Sikar	Proagro9444	1.0	V.S.	30.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	0.0	0.0
45	25.07.24	Rinau	Fatehpur	Sikar	Local	1.5	V.S.	30.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	0.0	0.0
46	25.07.24	Rinau	Fatehpur	Sikar	Proagro9444	1.9	V.S.	30.0	10.0	10.0	5.0	0.0	0.0	0.0	0.0	1.0	2.0	1.0	0.0
47	25.07.24	Rinau	Fatehpur	Sikar	local	2.0	V.S.	25.0	10.0	10.0	5.0	0.0	0.0	0.0	0.0	1.0	2.0	1.0	0.0
48	25.07.24	Rinau	Fatehpur	Sikar	local	2.5	V.S.	25.0	10.0	5.0	5.0	0.0	0.0	0.0	0.0	1.0	2.0	1.0	1.0
49	25.07.24	Rinau	Fatehpur	Sikar	local	1.0	V.S.	30.0	10.0	5.0	5.0	0.0	0.0	0.0	0.0	1.0	2.0	1.0	1.0
50	25.07.24	Chuwas	Fatehpur	Sikar	local	1.5	V.S.	25.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	0.0	1.0
51	25.07.24	Chuwas	Fatehpur	Sikar	local	1.4	V.S.	25.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	0.0	0.0
52	25.07.24	Chuwas	Fatehpur	Sikar	local	1.6	V.S.	25.0	5.0	5.0	5.0	0.0	0.0	0.0	0.0	1.0	2.0	0.0	1.0
53	25.07.24	Chuwas	Fatehpur	Sikar	Balwan	1.2	V.S.	25.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	0.0	0.0
54	25.07.24	Chuwas	Fatehpur	Sikar	Balwan	2.0	V.S.	20.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	0.0	0.0
55	25.07.24	Chuwas	Fatehpur	Sikar	Desi	1.5	V.S.	20.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	0.0	0.0
56	25.07.24	Chuwas	Fatehpur	Sikar	Balwan	1.0	V.S.	25.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	0.0	0.0
57	25.07.24	Bathond	Fatehpur	Sikar	Desi	1.0	V.S.	30.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
58	25.07.24	Bathond	Fatehpur	Sikar	Desi	1.5	V.S.	30.0	5.0	0.0	5.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0
59	25.07.24	Bathond	Fatehpur	Sikar	Desi	2.0	V.S.	30.0	5.0	0.0	5.0	0.0	0.0	0.0	0.0	1.0	3.0	1.0	0.0
60	25.07.24	Bathond	Fatehpur	Sikar	Desi	2.7	V.S.	25.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	0.0	0.0
61	25.07.24	Bathond	Fatehpur	Sikar	Desi	1.0	V.S.	25.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	1.0	2.0	0.0	0.0
62	25.07.24	Bathond	Fatehpur	Sikar	Desi	1.0	V.S.	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	0.0	2.0
63	25.07.24	Jalalsar	Fatehpur	Sikar	Balwan	1.0	V.S.	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	2.0	0.0
64	25.07.24	Jalalsar	Fatehpur	Sikar	Local	1.0	V.S.	20.0	10.0	0.0	5.0	0.0	0.0	0.0	0.0	3.0	1.0	0.0	0.0
65	25.07.24	Jalalsar	Fatehpur	Sikar	Proagro9444	1.0	V.S.	15.0	10.0	0.0	5.0	0.0	0.0	0.0	0.0	2.0	1.0	0.0	0.0
66	25.07.24	Jalalsar	Fatehpur	Sikar	Balwan	1.5	V.S.	20.0	15.0	0.0	5.0	0.0	0.0	0.0	0.0	3.0	1.0	0.0	0.0
67	25.07.24	Jalalsar	Fatehpur	Sikar	Balwan	1.2	V.S.	30.0	15.0	0.0	5.0	0.0	0.0	0.0	0.0	2.0	1.0	0.0	0.0
68	25.07.24	Jalalsar	Fatehpur	Sikar	Balwan	1.2	V.S.	15.0	15.0	0.0	5.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0
69	25.07.24	Narsara	Fatehpur	Sikar	Desi	3.0	V.S.	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	1.0	1.0
70	25.07.24	Narsara	Fatehpur	Sikar	Desi	2.0	V.S.	20.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
71	21.08.24	Garinda	Fatehpur	Sikar	Desi	1.6	E.H.	20.0	0.0	0.0	5.0	35.0	5.0	0.0	0.0	1.0	2.0	0.0	1.0
72	21.08.24	Garinda	Fatehpur	Sikar	Desi	1.0	E.H.	15.0	0.0	0.0	5.0	30.0	6.0	0.0	0.0	1.0	1.0	0.0	0.0
73	21.08.24	Garinda	Fatehpur	Sikar	Desi	1.2	E.H.	15.0	0.0	0.0	5.0	29.0	9.0	0.0	0.0	1.0	2.0	0.0	0.0
74	22.08.24	Harsawa	Fatehpur	Sikar	Desi	1.3	E.H.	15.0	0.0	0.0	5.0	28.0	8.0	0.0	0.0	1.0	1.0	0.0	0.0
75	22.08.24	Harsawa	Fatehpur	Sikar	Balwan	1.5	E.H.	10.0	0.0	0.0	5.0	30.0	8.0	0.0	0.0	1.0	1.0	0.0	0.0

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No. of farmer	Date of survey	Location	Taluka/ Tehsil	District	Variety	Area (ha.)	Crop stage	Shot fly %	Stem borer %	White grub damage %	Termite damage %	Helicoverpa larvae/ 5 E.H.	Blighter beetle s/ 5 E.H.	Chaff er beetle / 5 E.H.	Grass hopper % damage	Grey weevil damage score (0-10)	Leaf binder damage score (0-10)	Lady bird beetle/ 5 Pl.	Chrysopa/ 5 Pl.
76	22.08.24	Harsawa	Fatehpur	Sikar	Proagro9444	2.0	E.H.	15.0	0.0	0.0	5.0	15.0	7.0	0.0	0.0	1.0	1.0	0.0	1.0
77	22.08.24	Harsawa	Fatehpur	Sikar	Desi	1.5	E.H.	10.0	0.0	0.0	5.0	26.0	8.0	0.0	0.0	1.0	1.0	0.0	1.0
78	24.08.24	Rinau	Fatehpur	Sikar	Proagro9444	2.0	E.H.	10.0	0.0	0.0	0.0	14.0	5.0	0.0	0.0	1.0	1.0	0.0	0.0
79	24.08.24	Rinau	Fatehpur	Sikar	Local	2.0	E.H.	10.0	0.0	0.0	0.0	17.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0
80	24.08.24	Rinau	Fatehpur	Sikar	local	2.0	E.H.	10.0	0.0	0.0	5.0	10.0	1.0	0.0	0.0	1.0	1.0	1.0	0.0
81	24.08.24	Rinau	Fatehpur	Sikar	local	2.5	E.H.	15.0	0.0	0.0	5.0	11.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0
82	24.08.24	Rinau	Fatehpur	Sikar	local	2.0	E.H.	5.0	0.0	0.0	5.0	9.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0
83	26.08.24	Chuwas	Fatehpur	Sikar	local	1.5	E.H.	5.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0
84	02.09.2024	Bathond	Fatehpur	Sikar	Desi	2.0	E.H.	5.0	0.0	0.0	5.0	10.0	0.0	0.0	0.0	1.0	2.0	1.0	0.0
85	2.09.24	Bathond	Fatehpur	Sikar	Desi	2.7	E.H.	10.0	0.0	0.0	0.0	45.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0
86	2.09.24	Bathond	Fatehpur	Sikar	Desi	1.0	E.H.	10.0	0.0	0.0	5.0	4.0	0.0	0.0	0.0	1.0	2.0	0.0	0.0
87	2.09.24	Bathond	Fatehpur	Sikar	Desi	2.0	E.H.	10.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
88	07.09.24	Jalalsar	Fatehpur	Sikar	Balwan	1.0	E.H.	15.0	0.0	0.0	0.0	15.0	5.0	0.0	0.0	1.0	1.0	1.0	0.0
89	07.09.24	Jalalsar	Fatehpur	Sikar	local	1.5	E.H.	10.0	0.0	0.0	0.0	8.0	6.0	0.0	0.0	1.0	2.0	1.0	0.0
90	07.09.24	Jalalsar	Fatehpur	Sikar	local	1.5	E.H.	15.0	0.0	0.0	0.0	10.0	5.0	0.0	0.0	1.0	1.0	1.0	0.0
91	07.09.24	Jalalsar	Fatehpur	Sikar	Proagro	2.0	E.H.	10.0	0.0	0.0	0.0	14.0	9.0	0.0	0.0	1.0	1.0	1.0	1.0
92	4.10.24	Khejrawas	Phulera	Jaipur	Pioneer 86M90	1.00	E.H.	10.00	0.00	10.00	2.00	0.0	0.0	0.0	5.00	0.0	2	0.0	0.0
93	4.10.24	Pratapnagar Kishangarh	Renwal	Jaipur	unknown hybrid	0.50	E.H.	8.00	0.00	6.00	10.00	2.0	0.0	0.0	8.00	0.0	1	0.0	0.0
94	4.10.24	Kalyanpura	Danta Ramgarh	Sikar	unknown hybrid	1.50	E.H.	5.00	0.00	0.00	10.00	0.0	0.0	0.0	12.00	0.0	2	0.0	0.0
95	4.10.24	Kuli	Danta Ramgarh	Sikar	unknown hybrid	0.75	E.H.	5.00	10.00	8.00	5.00	2.0	0.0	0.0	10.00	0.0	1	0.0	0.0
96	4.10.24	Sundriya	Danta Ramgarh	Sikar	unknown hybrid	1.20	E.H.	6.00	2.00	10.00	15.00	2.0	0.0	0.0	15.00	0.0	1	0.0	0.0
97	4.10.24	Danta	Danta Ramgarh	Sikar	unknown hybrid	1.00	E.H.	10.00	0.00	2.00	20.00	1.0	0.0	0.0	8.00	0.0	2	0.0	0.0
98	4.10.24	Maganpur, Bay	Danta Ramgarh	Sikar	unknown hybrid	1.00	E.H.	5.00	0.00	0.00	10.00	0.0	0.0	0.0	8.00	0.0	2	0.0	0.0
99	4.10.24	Kailash, Bay	Danta Ramgarh	Sikar	unknown hybrid	1.00	E.H.	5.00	0.00	0.00	15.00	10.0	0.0	0.0	5.00	0.0	2	0.0	0.0
100	4.10.24	Khatu	Danta Ramgarh	Sikar	unknown hybrid	1.00	E.H.	5.00	2.00	10.00	15.00	1.0	0.0	0.0	5.00	0.0	2	0.0	0.0
101	4.10.24	Lampuwa	Danta Ramgarh	Sikar	unknown hybrid	1.00	E.H.	8.00	2.00	10.00	10.00	1.0	0.0	0.0	12.00	0.0	3	0.0	0.0
102	4.10.24	Govindgarh	Govindgarh	Jaipur	Kaveri super boss	1.50	E.H.	15.00	0.00	2.00	5.00	5.0	0.0	0.0	5.00	0.0	2	0.0	0.0
103	5.10.24	Khori	Bassi	Jaipur	unknown hybrid	2.50	E.H.	5.00	2.00	10.00	10.00	2.0	0.0	0.0	15.00	0.0	1	0.0	0.0
104	5.10.24	Gothra	Bassi	Jaipur	unknown hybrid	1.00	E.H.	5.00	2.00	2.00	12.00	2.0	0.0	0.0	10.00	0.0	1	0.0	0.0

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No. of farmer	Date of survey	Location	Taluka/ Tehsil	District	Variety	Area (ha.)	Crop stage	Shot fly %	Stem borer %	White grub damage %	Termite damage %	Helicoverpa larvae/ 5 E.H.	Blister beetle / 5 E.H.	Chaff beetle / 5 E.H.	Grass hopper % damage	Grey weevil damage score (0-10)	Leaf binder damage score (0-10)	Lady bird beetle / 5 Pl.	Chrysopa/5 Pl.
105	5.10.24	Reta	Sikandara	Dausa	unknown hybrid	1.00	E.H.	5.00	2.00	0.00	10.00	2.0	0.0	0.0	15.00	0.0	1	0.0	0.0
106	5.10.24	Ramgarh	Sikandara	Dausa	unknown hybrid	1.00	E.H.	10.00	0.00	2.00	10.00	5.0	0.0	0.0	10.00	0.0	2	0.0	0.0
107	5.10.24	Gidhani	Gangapurcity	Gangapur city	unknown hybrid	1.20	E.H.	5.00	5.00	0.00	10.00	2.0	0.0	0.0	10.00	0.0	2	0.0	0.0
108	5.10.24	Gudha Chandraji	Gangapurcity	Gangapur city	unknown hybrid	1.00	E.H.	2.00	2.00	0.00	5.00	2.0	0.0	0.0	20.00	0.0	1	0.0	0.0
109	5.10.24	Sahar	Nandoti	Gangapur city	unknown hybrid	0.60	E.H.	2.00	2.00	0.00	5.00	5.0	0.0	0.0	12.00	0.0	0	0.0	0.0
110	5.10.24	Vinega	Nandoti	Gangapur city	unknown hybrid	1.00	E.H.	2.00	2.00	5.00	5.00	10.0	0.0	0.0	10.00	0.0	3	0.0	0.0
111	5.10.24	Raypur	Nandoti	Gangapur city	unknown hybrid	1.00	E.H.	5.00	0.00	10.00	15.00	2.0	0.0	0.0	5.00	0.0	2	0.0	0.0
112	5.10.24	Meri	Vajirpur	Gangapur city	unknown hybrid	1.00	E.H.	2.00	2.00	2.00	5.00	30.0	0.0	0.0	5.00	0.0	1	0.0	0.0
113	5.10.24	Haripura	Vajirpur	Gangapur city	unknown hybrid	1.00	E.H.	5.00	20.00	2.00	5.00	2.0	0.0	0.0	30.00	0.0	2	0.0	0.0
114	5.10.24	Bahadurpur	Bayana	Karoli	unknown hybrid	0.80	E.H.	5.00	2.00	2.00	2.00	5.0	5.0	0.0	10.00	0.0	0	0.0	0.0
115	5.10.24	Milkipur	Bayana	Karoli	unknown hybrid	1.30	E.H.	2.00	5.00	0.00	15.00	5.0	2.0	2.0	5.00	0.0	1	0.0	0.0
116	6.10.24	Moraka	Nagar	Bharatpur	unknown hybrid	1.00	E.H.	10.00	5.00	0.00	5.00	5.0	0.0	0.0	5.00	0.0	1	0.0	0.0
117	6.10.24	Ranota	Nagar	Bharatpur	unknown hybrid	1.00	E.H.	5.00	5.00	0.00	5.00	5.0	0.0	0.0	10.00	0.0	2	0.0	0.0
118	6.10.24	Semla Khurd	Barod Mev	Alwar	unknown hybrid	1.00	E.H.	5.00	25.00	0.00	2.00	2.0	0.0	0.0	10.00	0.0	1	0.0	0.0
119	6.10.24	Bagar Mev	Barod Mev	Alwar	unknown hybrid	1.00	E.H.	5.00	2.00	0.00	10.00	10.0	0.0	10.0	15.00	0.0	1	0.0	0.0
120	6.10.24	Suheta	Alwar	Alwar	unknown hybrid	1.00	E.H.	5.00	2.00	0.00	5.00	10.0	0.0	0.0	5.00	0.0	1	0.0	0.0
121	6.10.24	Tatarpur	khairthal	Alwar	Dhanya 7676	1.00	E.H.	30.00	2.00	0.00	5.00	5.0	0.0	0.0	5.00	0.0	1	0.0	0.0
122	6.10.24	Dhalawas	Bansur	Alwar	Unknown hybrid	1.20	E.H.	5.00	5.00	0.00	5.00	2.0	0.0	0.0	30.00	0.0	2	0.0	0.0
123	6.10.24	Alanpur	Mundawar	Alwar	Unknown hybrid	0.80	E.H.	2.00	2.00	0.00	5.00	10.0	0.0	0.0	10.00	0.0	1	0.0	0.0
124	6.10.24	Jhajarpur	Mundawar	Alwar	Unknown hybrid	1.00	E.H.	20.00	0.00	5.00	5.0	5.0	0.0	0.0	5.00	0.0	2	0.0	0.0
125	6.10.24	Karoda	Kotputli-Behror	Kotputli-Behror	Unknown hybrid	1.40	E.H.	10.00	0.00	5.00	5.0	5.0	0.0	0.0	5.00	0.0	1	0.0	0.0
126	6.10.24	Namol	Behror	Kotputli-	Unknown	0.50	E.H.	5.00	2.00	5.00	0.00	0.0	0.0	0.0	10.00	0.0	0	0.0	0.0

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No. of farmer	Date of survey	Location	Taluka/ Tehsil	District	Variety	Area (ha.)	Crop stage	Shoot fly %	Stem borer %	White grub damage %	Termite damage %	Helicoverpa larvae/ 5 E.H.	Blister beetle s/ 5 E.H.	Chaffer beetle / 5 E.H.	Grass hopper % damage	Grey weevil damage score (0-10)	Leaf binder damage score (0-10)	Lady bird beetle/ 5 Pl.	Chrysopa/ 5 Pl.
127	6.10.24	Behror	Behror	Kotputli-Behror	Unknown hybrid	2.00	E.H.	10.00	5.00	0.00	20.00	2.0	0.0	10.0	20.00	0.0	0	0.0	0.0
128	6.10.24	Goonti	Behror	Kotputli-Behror	Unknown hybrid	1.00	E.H.	5.00	2.00	0.00	10.00	2.0	0.0	10.0	25.00	0.0	0	0.0	0.0
129	6.10.24	Mordha	Behror	Kotputli-Behror	Unknown hybrid	1.00	E.H.	5.00	10.00	0.00	2.00	2.0	0.0	0.0	10.00	0.0	2	0.0	0.0
130	6.10.24	Pragpura	Pavta	Kotputli-Behror	Unknown hybrid	1.00	E.H.	5.00	2.00	0.00	10.00	2.0	2.0	0.0	20.00	0.0	2	0.0	0.0
							Mini.	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
							Maxi.	40.00	25.00	15.00	20.00	45.00	9.00	10.00	30.00	3.00	3.00	3.00	2.00
							Mean	14.51	5.55	2.33	4.19	4.12	0.72	0.25	7.23	0.95	1.15	0.22	0.22

Table V.4 d: PMET-3: District-wise insect-pest situation in Jaipur & Fatehpur-Shekhawati pockets of Rajasthan.

District	Shoot fly %	Stem borer %	White grub damage %	Termite damage %	Helicoverpa larvae/ 5 E.H.	Blister beetles/ 5 E.H.	Chaffer beetle/ 5 E.H.	Grass hopper % damage	Grey weevil damage score (0-10)	Leaf binder damage score (0-10)	Lady bird beetle/ 5 Pl.	Chrysopa/ 5 Pl.
1. Alwar	8.14	8.29	0.00	5.29	6.29	0.00	1.43	11.43	0.00	1.29	0.00	0.00
2. Bharatpur	7.50	5.00	0.00	5.00	5.00	0.00	0.00	7.50	0.00	1.50	0.00	0.00
3. Dausa	7.50	1.00	1.00	10.00	3.50	0.00	0.00	12.50	0.00	1.50	0.00	0.00
4. Gangapur city	3.29	4.71	2.71	7.14	7.57	0.00	0.00	13.14	0.00	1.57	0.00	0.00
5. Jaipur	8.60	0.80	6.00	7.80	2.20	0.00	0.00	8.60	0.00	1.40	0.00	0.00
6. Karauli	3.50	3.50	1.00	8.50	5.00	3.50	1.00	7.50	0.00	0.50	0.00	0.00
7. Kotputli behror	5.33	5.17	0.83	7.83	2.17	0.33	3.33	15.00	0.00	0.83	0.00	0.00
8. Sikar	17.11	5.82	2.47	3.28	3.92	0.86	0.00	5.86	1.24	1.12	0.28	0.28

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Table V.4 e: PMET-3: Survey of insect pests of *kharif* pearl millet crop on farmer's fields (Centre: Aurangabad)

No. of farmer	Date of survey	Location	Taluka/ Tehsil	District	Variety	Area (ha.)	Crop stage	Shoot fly damage %	Stem borer damage %	Blister beetles/ 5 E.H.	Chaffer beetle/ 5 E.H.	Fall Army Worm % damage	Lady bird beetle/ 5 Pl.	If Any other pest observed
1	21.08.24	Konewadi	Aurangabad	Aurangabad	Local	0.4	EH	0.0	0.0	0.2	0.6	20.00	0	Nil
2	21.08.24	Chittepimpalgaon	Pachod	Aurangabad	88-0-36	0.4	EH	20.0	0.0	0	0	0	0	Nil
3	21.08.24	Koli Bodakha	Pachod	Aurangabad	Local	0.4	EH	40.0	0.0	0	0	20	0	Nil
4	21.08.24	Wadigodri	Ambad	Jalna	9285	0.2	EH	0.0	40.0	0	0	0	0	Nil
5	21.08.24	Rohilagad	Ambad	Jalna	1717	0.6	EH	20.0	0.0	0	1	20	0	Nil
6	21.08.24	Rohilagad	Ambad	Jalna	Local	0.2	EH	20.0	0.0	0	0	20	0	4.0 Hairy Cat
7	21.08.24	Shahagad	Ambad	Jalna	355	0.4	EH	0.0	0.0	0	0.6	0	0	Nil
8	21.08.24	Kingaon	Ambad	Jalna	Local	0.8	EH	0.0	20.0	0	0	40	2	Nil
9	30.09.24	Satara	Aurangabad	Aurangabad	Local	0.4	EH	0.0	0.0	0	0	20	0	4.0 Hairy Cat, 1.0 Pyrilla
10	30.09.24	Chittepimpalgaon	Aurangabad	Aurangabad	86-M-38	0.4	EH	20.0	0.0	0	0.2	0	0	Nil
11	30.09.24	Chittepimpalgaon	Aurangabad	Aurangabad	1731	4.0	EH	0.0	0.0	0	0	20	0	Nil
12	30.09.24	Kadhrabad	Paithan	Aurangabad	Local	0.8	EH	0.0	0.0	0.2	0.6	0	0	Nil
13	30.09.24	Kadhrabad	Paithan	Aurangabad	Local	0.4	EH	20.0	20.0	0	0	0	0	5.0 Hairy Cat
14	30.09.24	Kachner Tanda	Paithan	Aurangabad	7872	0.4	EH	0.0	0.0	0	0	40	0	2.0 Hairy Cat
15	30.09.24	Kachner	Paithan	Aurangabad	Local	0.4	EH	0.0	0.0	0.4	0.4	0	0	2.0 Hairy Cat
16	30.09.24	Kachner	Paithan	Aurangabad	Local	1.6	EH	20.0	0.0	0	0	0	0	Nil
17	30.09.24	Kachner	Paithan	Aurangabad	86-M-32	0.4	EH	0.0	0.0	0	0.6	20	1	Nil
18	30.09.24	Dabhrul	Paithan	Aurangabad	Local	0.4	EH	0.0	20.0	0.4	0	0	0	Nil
19	30.09.24	Dabhrul	Paithan	Aurangabad	86-M-84	0.6	EH	20.0	0.0	0	0	0	0	6.0 Hairy Cat
20	30.09.24	Dabhrul	Paithan	Aurangabad	Nirmal 240	0.4	EH	0.0	0.0	0	0	40	1	Nil
21	30.09.24	Dabhrul	Paithan	Aurangabad	Local	0.4	EH	20.0	0.0	0	0	0	0	Nil
22	30.09.24	Rajapur	Paithan	Aurangabad	Pioneer	0.2	EH	20.0	0.0	0	0.6	20	0	Nil
23	30.09.24	Rajapur	Paithan	Aurangabad	Nirmal 240	0.4	EH	40.0	0.0	0.4	0	20	0	Nil
24	30.09.24	Rajapur	Paithan	Aurangabad	Kaveri Boss	0.4	EH	0.0	20.0	0	1	0	0	Nil
25	30.09.24	Rajapur	Paithan	Aurangabad	Pioneer	0.6	EH	20.0	0.0	0	0.4	20	1	1.0 Hairy Cat
							Mini.	0.00	0.00	0.00	0.00	0.00	0.00	
							Maxi.	40.00	40.00	0.40	1.00	40.00	2.00	
							Mean	11.20	4.80	0.06	0.24	12.80	0.20	

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Table V.4f: PMET-3: Survey of insect pests of *kharif* pearl millet crop on farmer's fields (Centre: Hisar)

S. No.	Date of survey	Location	Taluka/ Tehsil	District	Variety	Area (ha.)	Crop stage	Shoot fly damage %	Stem borer damage %	White grub damage %	Termite damage %	<i>Helicoverpa</i> larvae/ 5 E.H.	Blister beetles/ 5 E.H.	Chaffer beetle/ 5 E.H.	Grass hopper % damage	Grey weevil damage score (0-10) / 20 plant	Fall Army Worm % damage	Lady bird beetle/ 5 Pl.	Chrysopa/ 5 Pl.	Hairy caterpillar/ 20 plants
1	7.9.24	Jhabua	Bawal	Rewari	Pioneer	3.0	VS	2.00	0.00	2.00	1.00	0	0	0	5.00	2.0	4.00	0	1	6
2	7.9.24	Raipur	Bawal	Rewari	Pioneer	2.0	VS	4.00	0.00	0.00	0.00	0	0	0	8.00	2.0	2.00	0	0	5
3	7.9.24	Shahpur	Bawal	Rewari	Pioneer	2.0	VS	0.00	0.00	0.00	2.00	0	0	0	3.00	2.0	3.00	0	0	5
4	7.9.24	Ranoli	Bawal	Rewari	Advanta	3.0	VS	3.00	0.00	0.00	0.00	0	0	0	4.00	3.0	3.00	0	0	8
5	11.7.24	Mohmadpur	Bawal	Rewari	Advanta	1.0	VS	2.00	0.00	5.00	5.00	0	0	0	4.00	4.0	5.00	0	0	6
6	11.7.24	Harchandpur	Bawal	Rewari	JK	1.0	VS	3.00	0.00	2.00	2.00	0	0	0	5.00	1.0	0.00	0	0	3
7	18.7.24	Jhabua	Bawal	Rewari	Pioneer	5.0	VS	0.00	0.00	3.00	2.00	0	0	0	8.00	5.0	8.00	0	0	8
8	18.7.24	Dulhera kalan	Bawal	Rewari	Pioneer	2.0	VS	2.00	0.00	3.00	1.00	0	0	6	5.00	5.0	8.00	0	1	14
9	18.7.24	Shekpur	Bawal	Rewari	Pioneer	4.0	VS	1.00	1.00	2.00	0.00	0	0	2	6.00	0.0	10.00	0	2	12
10	19.7.24	Rata Mouhla	Narnaul	Mahender Garh	Pioneer	1.0	VS	0.00	3.00	0.00	0.00	0	0	0	2.00	0.0	2.00	0	0	2
11	19.7.24	Nautana	Kanina	M.Garh	JK	2.0	VS	0.00	0.00	0.00	0.00	0	0	0	1.00	2.0	3.00	0	0	0
12	23.7.24	Chapra salimpur	Ateli	M.Garh	ProA 9001	1.0	VS	0.00	0.00	0.00	0.00	0	0	0	2.00	0.0	0.00	0	0	2
13	23.7.24	Neerpur	Narnaul	M.Garh	ProA 9001	2.0	VS	0.00	0.00	0.00	0.00	0	0	0	3.00	0.0	0.00	0	0	2
14	24.7.24	sunderoh	Kanina	M.Garh	Advanta	1.0	VS	0.00	0.00	0.00	0.00	0	0	0	5.00	0.0	0.00	0	0	1
15	24.7.24	Pali Panihara	M.garh	M.Garh	ProA 9001	1.0	VS	0.00	0.00	0.00	0.00	0	0	0	2.00	0.0	4.00	0	0	2
16	24.7.24	Kanwali	Dahina	Rewari	JK	5.0	VS	2.00	1.00	3.00	2.00	0	0	0	6.00	6.0	15.00	0	2	15
17	24.7.24	Budoli	Dahina	Rewari	Pioneer	2.0	VS	0.00	1.00	4.00	1.00	0	0	0	7.00	5.0	5.00	0	0	10
18	27.7.24	kalanaur	Rohtak	Rohtak	Nandi	1.0	VS	0.00	3.00	0.00	0.00	0	0	0	0.00	0.0	10.00	0	0	0
19	27.7.24	Silani	Jhajjar	Jhajjar	Pioneer	1.0	VS	0.00	0.00	0.00	0.00	0	0	0	0.00	0.0	5.00	0	0	7
20	27.7.24	Dadan pur	Jhajjar	Jhajjar	Pioneer		VS	0.00	0.00	2.00	2.00	0	0	0	0.00	5.0	10.00	0	0	5
21	27.7.24	Khakhana	Jhajjar	Jhajjar	Advanta	1.0	VS	0.00	0.00	0.00	0.00	0	0	0	0.00	4.0	15.00	0	0	2
22	28.7.24	Machhroli	Jhajjar	Jhajjar	Advanta	2.0	VS	0.00	0.00	2.00	0.00	0	0	0	0.00	0.0	5.00	0	0	0
23	3.8.24	Jhabua	Bawal	Rewari	Pioneer	2.0	VS	0.00	2.00	3.00	2.00	0	0	2	8.00	5.0	8.00	0	0	8
24	3.8.24	Dulhera kalan	Bawal	Rewari	Pioneer	2.0	VS	0.00	2.00	3.00	1.00	0	0	6	5.00	5.0	8.00	0	2	6
25	3.8.24	Nagli parsapur	Bawal	Rewari	Pioneer	2.0	VS	0.00	3.00	2.00	2.00	0	0	2	6.00	7.0	10.00	0	2	6
26	3.8.24	Jhook	M.garh	M.Garh	Unknown	1.0	VS	0.00	1.00	2.00	0.00	0	0	0	0.00	2.0	0.00	0	0.0	0.0
27	6.8.24	Rambas	Kanina	M.Garh	Unknown	1.5	VS	0.00	2.00	0.00	0.00	0	0	0	0.00	2.0	0.00	0	0.0	2.0
28	7.8.24	Mandola	M.garh	M.Garh	Unknown	1.0	VS	0.00	0.00	5.00	0.00	0	0	0	0.00	3.0	0.00	0	0.0	3.0
29	21.8.24	Pali	Khol	Rewari	Pioneer	1.0	VS	0.00	4.00	3.00	2.00	0	0	0	6.00	6.0	12.00	1	3	4
30	21.8.24	Nanda	khol	Rewari	Pioneer	2.0	VS	0.00	5.00	4.00	1.00	0	0	0	7.00	5.0	5.00	2	3	2
31	26.8.24	kabrel	hisar	Hisar	HHB 67	2.0	EH	0.00	0.00	0.00	0.00	2	1	2	3.00	2.0	0.00	0	0	0
32	26.8.24	Nauli kalan	hisar	Hisar	HHB 67	1.0	EH	0.00	0.00	0.00	0.00	1	3	0	0.00	0.0	0.00	0	0	0
33	26.8.24	Ludas	hisar	Hisar	Pioneer	1.0	EH	0.00	0.00	0.00	0.00	0	0	0	0.00	0.0	0.00	0	0	0
34	29.8.24	satnali	M.garh	M.garh	JK	2.0	EH	0.00	0.00	5.00	2.00	1	0	0	0.00	0.0	0.00	0	0	0
35	29.8.24	Bakhtawarpur	Shiwani	Bhiwani	proagro	1.0	EH	0.00	5.00	0.00	0.00	1	2	0	0.00	0.0	0.00	0	0	0

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S. No.	Date of survey	Location	Taluka/ Tehsil	District	Variety	Area (ha.)	Crop stage	Shoot fly damage %	Stem borer damage %	White grub damage %	Termite damage %	Helicoverpa larvae/ 5 E.H.	Blister beetles/ 5 E.H.	Chaffer beetle/ 5 E.H.	Grass hopper % damage	Grey weevil damage score (0-10) / 20 plant	Fall Army Worm % damage	Lady bird beetle/ 5 Pl.	Chrysopa/ 5 Pl.	Hairy caterpillar/ 20 plants
		ra																		
36	29.8.24	Bakhtawarpur	Shiwani	Bhiwani	proagro	0.5	VS	0.00	2.00	0.00	0.00	0	0	0	0.00	0.0	0.00	0	0	0
37	29.8.24	Moyela	Shiwani	Bhiwani	Nandi 67	1.0	EH	0.00	2.00	0.00	2.00	0	0	0	0.00	0.0	0.00	0	0	0
38	29.8.24	Kalod	Shiwani	Bhiwani	Proagro	1.0	VS	0.00	3.00	0.00	0.00	0	0	0	5.00	2.0	5.00	0	0	0
39	29.8.24	Kalod	Shiwani	Bhiwani	Proagro	1.0	EH	0.00	2.00	0.00	0.00	1	0	0	0.00	0.0	0.00	0	0	0
40	29.8.24	Kalod	Shiwani	Bhiwani	Pioneer	1.0	EH	0.00	2.00	0.00	0.00	1	2	1	0.00	0.0	0.00	1	1	0
41	29.8.24	Isharwal	Shiwani	Bhiwani	Unknown	1.0	EH	0.00	3.00	0.00	0.00	0	2	0	0.00	0.0	0.00	0	0	0
42	29.8.24	Isharwal	Shiwani	Bhiwani	Hybrid	1.0	EH	0.00	1.00	0.00	0.00	0	0	2	5.00	0.0	0.00	2	0	0
43	29.8.24	Saleempur	Shiwani	Bhiwani	Proagro	2.0	EH	0.00	0.00	0.00	0.00	0.5	0	0	0.00	0.0	0.00	0	0	0
44	29.8.24	Enandawas	Tosham	Bhiwani	JK	2.0	EH	0.00	0.00	0.00	0.00	1	2	2	0.00	0.0	0.00	0	0	0
45	29.8.24	Babarwas	Tosham	Bhiwani	JK	2.0	EH	0.00	0.00	0.00	0.00	0	1	3	1.00	0.0	0.00	1	2	0
46	29.8.24	Chandawas	Tosham	Bhiwani	Nandi	1.5	EH	0.00	0.00	0.00	0.00	0.25	2	2	0.00	0.0	0.00	1	1	1
47	29.8.24	Sungarpur	Tosham	Bhiwani	Proagro	2.0	EH	0.00	0.00	0.00	0.00	0	0	0	0.00	0.0	0.00	0	0	0
48	29.8.24	Shyadwa	Hisar	Hisar	proAgro	1.0	EH	0.00	8.00	0.00	0.00	1.0	2.0	1	0.00	2.0	0.00	0	0	0
49	29.8.24	Shyadwa	Hisar	Hisar	Nandi	1.0	EH	0.00	5.00	0.00	0.00	1.5	1.0	0	0.00	0.0	0.00	0	0	0
50	29.8.24	Talwandi rukka	Hisar	Hisar	Pioneer	2.0	VS	0.00	0.00	0.00	0.00	0	0	0	0.00	2.0	15.00	0	0	3
51	1.9.24	Jhabua	Bawal	Rewari	Pioneer	1.0	EH	0.00	5.00	4.00	0.00	0	12	8	2.00	8.0	0.00	2	3	0
52	1.9.24	Raipur	Bawal	Rewari	Pioneer	2.0	EH	0.00	5.00	6.00	0.00	0	10	6	6.00	7.0	0.00	1	3	0
53	6.9.24	Shahpur	Bawal	Rewari	Pioneer	2.0	EH	0.00	6.00	4.00	0.00	0	2	5	4.00	6.0	0.00	2	4	0
54	8.9.24	Silani	Jhajjar	Jhajjar	Pioneer	1.0	EH	0.00	0.00	0.00	0.00	0	0	0	0.00	2.0	0.00	0	0	1
55	8.9.24	Siilana	Jhajjar	Jhajjar	Proagro	1.0	EH	0.00	0.00	0.00	0.00	0	0	0	0.00	3.0	0.00	0	0	5
56	25.9.24	Mayan	khol	Rewari	Advanta	1.0	EH	0.00	1.00	1.00	0.00	0	12	5	2.00	8.0	0.00	3	2	0
57	25.9.24	Khaleta	Khol	Rewari	Advanta	1.0	EH	0.00	2.00	1.00	0.00	0	6	6	3.00	7.0	0.00	2	5	0
58	25.9.24	Pali	Khol	Rewari	Advanta	1.0	EH	0.00	1.00	2.00	0.00	0	5	6	1.00	7.0	0.00	2	5	1
							Mini.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
							Maxi	4.00	8.00	6.00	5.00	2.00	12.00	8.00	8.00	8.00	15.00	3.00	5.00	15.00
							Mean	0.33	1.40	1.26	0.52	0.19	1.12	1.16	2.41	2.36	3.10	0.34	0.72	2.71

Table-V.5a: Statement showing the incidence of various insect- pests and yield in pearl millet (Jamnagar)

Treatments	Per cent shoot fly incidence		Per cent stem borer incidence		% Grass hopper damage at 45 DAG	<i>Helicoverpa armigera</i> larval population per 5 ear heads			Yield kg/ha.	
	Vegetative stage	Ear head stage	Vegetative stage	Ear head stage		24 hrs before spray	3 days after spray	7 days after spray	Grain	Fodder
T1	7.06* (1.53)	9.40* (2.72)	7.67* (1.93)	8.43* (2.16)	11.90* (4.33)	6.50# (42.33)	4.93# (24.00)	3.39# (11.00)	2914	6005
T2	7.42 (1.68)	10.40 (3.26)	9.09 (2.52)	9.57 (2.84)	12.36 (4.67)	6.62 (44.33)	5.09 (25.67)	3.57 (12.33)	2558	5986
T3	7.80 (1.88)	10.45 (3.32)	8.16 (2.08)	10.03 (3.03)	12.88 (5.00)	6.52 (42.33)	5.03 (25.00)	3.59 (12.67)	2567	6097
T4	7.38 (1.66)	8.71 (2.30)	7.54 (1.89)	8.16 (2.03)	12.46 (4.67)	6.59 (43.33)	4.29 (18.00)	3.29 (10.33)	3171	6852
T5	7.47 (1.70)	10.47 (3.31)	7.65 (1.94)	9.54 (2.76)	11.48 (4.00)	6.47 (42.67)	4.50 (20.00)	3.47 (11.67)	3169	5884
T6	7.78 (1.86)	10.47 (3.31)	8.46 (2.27)	9.31 (2.62)	12.46 (4.67)	6.62 (43.67)	5.21 (26.67)	3.70 (13.33)	2979	5954
T7	7.44 (1.70)	10.52 (3.33)	8.69 (2.31)	9.57 (2.77)	12.75 (5.00)	6.77 (45.33)	5.07 (25.33)	3.66 (13.00)	2822	5523
T8	7.54 (1.74)	8.27 (2.07)	9.07 (2.58)	7.97 (1.93)	17.44 (9.00)	6.61 (44.00)	6.84 (47.00)	7.06 (50.00)	2910	5685
T9	17.55 (9.11)	21.17 (13.07)	16.53(8.22)	15.68 (7.34)	18.38 (10.00)	6.66 (44.33)	7.04 (49.33)	7.32 (53.33)	2229	5157
SEm ±	0.58	0.51	0.74	0.62	0.97	0.48	0.33	0.29	172.43	321.77
C.D. 5%	1.75	1.54	2.21	1.85	2.91	NS	1.00	0.87	516.98	NS
CV %	11.75	8.00	13.89	10.89	12.40	12.69	10.79	11.58	10.62	9.44

N.B.: (*) arcsine transformed values, (#) Square root $\sqrt{X+0.5}$ values, Figure in parenthesis are original values.

1. **Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana*, 1.15 WP, 0.007%, 60g/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage.**
2. **Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana*, 1.15 WP, 0.007%, 60g/10 litres of water spray at 30 DAG + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at ear head stage.**
3. **Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana*, 1.15 WP, 0.007%, 60g/10 litres of water spray at 30 DAG + Neem oil 3.0%, 30 ml/10 litres of water spray at ear head stage.**
4. **Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana*, 1.15 WP, 00.07%, 60g/10 litres of water spray at 30 DAG + *Beauveria bassiana* , 1.15 WP, 0.007%, 60g/10 litres of water spray at ear head stage.**
5. **Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage.**
6. **Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at 30 DAG + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at ear head stage.**
7. **Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Neem oil 3.0%, 30 ml/10 litres of water spray at 30 DAG + Neem oil 3.0%, 30 ml/10 litres of water spray at ear head stage.**
8. **Seed treatment of imidacloprid 600 FS @ 8.75 ml/kg seed + spray of imidacloprid 17.8 SL 0.009% at 35 DAG (Standard Check)**
9. **Untreated control.**

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Table-V.5b: Economics of various treatments for the management of pest complex in pearl millet Jamnagar

Sr. No.	Treatments	Yield increase over control kg/ha		Additional income (Rs.)	Total Expenditure (Rs.)	Net return (Rs.)	I.C.B.R.
		Grain	fodder				
1	T1	685	848	18821	2760	16061	1:6.82
2	T2	329	829	9883	2160	7723	1:4.58
3	T3	338	940	10330	5660	4670	1:1.83
4	T4	942	1695	26940	1610	25330	1:16.73
5	T5	441	727	12479	3910	8569	1:3.19
6	T6	1009	797	26819	2710	24109	1:9.90
7	T7	593	366	15557	9710	5847	1:1.60
8	T8	681	528	18081	960	17121	1:18.83

N.B.:

1. Selling price of Bajra per kg, Rs 25/-
2. Selling price of Fodder per kg Rs. 2.0/-
3. ST of Imida 600 FS 35 ml used for 4.0 kg seed, Rs 210/- ha
4. Cost of Beauveria bassiana 1.15% Rs 150/- per 1.0 kg, 3.0 kg used, total cost 450/- ha.
5. Cost of Azadirachtin 1500 ppm Rs 800 per litre, 2.0 lit used, total cost 1600/- ha
6. Cost of neem oil Rs 300 per litre, 15.0 lit used, total cost 4500/- ha
7. Cost of Neem Seed Kernel Rs 20 per kg, total 25.0 kg required per ha, NSKE 25 kg used + Rs 500 labour charge for preparation total 1000/- ha.
8. Cost of Imidachloprid 17.8 SL, Rs 500/- per 500 ml, Imida 17.8 SL Std Check sp, 250 ml used, Rs 250/- ha.
9. Labour cost per spray per hectare, 500/-

Table-V.5c: Statement showing the incidence of various insect- pests and yield in pearl millet (Anand)

Treatments	Per cent shoot fly incidence		<i>Helicoverpa armigera</i> larval population per 5 ear heads			Yield kg/ha.	
	Vegetative stage	Ear head stage	24 hrs before spray	3 days after spray	7 days after spray	Grain	Fodder
T1	16.43 (5.00)	18.43 (10.00)	2.92 (8.00)	1.68 (2.33)	1.35 (1.33)	2075	4552
T2	18.11 (6.67)	19.97 (11.67)	2.86 (7.67)	1.87 (3.00)	1.58 (2.00)	1797	4332
T3	19.67 (8.33)	25.35 (18.33)	2.86 (7.67)	2.27 (4.67)	2.04 (3.67)	1628	3988
T4	21.13(10.00)	30.00 (25.00)	2.92 (8.00)	2.42 (5.33)	2.20 (4.33)	1536	4547
T5	16.43 (5.00)	18.43 (10.00)	2.80 (7.33)	1.47 (1.67)	1.08 (0.67)	2717	4990
T6	16.43 (5.00)	19.97 (11.67)	2.86 (7.67)	1.78 (2.67)	1.47 (1.67)	2640	4833
T7	19.67 (8.33)	28.88 (23.33)	2.68 (6.67)	1.96 (3.33)	1.68 (2.33)	1808	4050
T8	16.43 (5.00)	16.78 (8.33)	2.80 (7.33)	1.35 (1.33)	1.08 (0.67)	1688	4154
T9	29.78 (21.67)	34.24 (31.67)	2.61 (6.33)	3.39 (11.00)	3.39 (11.00)	1468	3659
SEm ±	1.16	1.53	0.18	0.11	0.14	138.86	167.52
C.D. 5%	3.47	4.59	NS	0.34	0.41	416.31	502.23
CV %	12.36	11.29	11.38	9.62	13.53	12.47	6.68

N.B.: (*) arcsine transformed values, (#) Square root $\sqrt{X+0.5}$ values, Figure in parenthesis are original values.

1. **Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + *Beauveria bassiana* , 1.15 WP, 0.007%, 60g/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage.
2. **Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + *Beauveria bassiana* , 1.15 WP, 0.007%, 60g/10 litres of water spray at 30 DAG + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at ear head stage.
3. **Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + *Beauveria bassiana* , 1.15 WP, 0.007%, 60g/10 litres of water spray at 30 DAG + Neem oil 3.0%, 30 ml/10 litres of water spray at ear head stage.
4. **Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + *Beauveria bassiana* , 1.15 WP, 00.07%, 60g/10 litres of water spray at 30 DAG + *Beauveria bassiana* , 1.15 WP, 0.007%, 60g/10 litres of water spray at ear head stage.
5. **Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage.
6. **Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at 30 DAG + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at ear head stage.
7. **Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + Neem oil 3.0%, 30 ml/10 litres of water spray at 30 DAG + Neem oil 3.0%, 30 ml/10 litres of water spray at ear head stage.
8. **Seed treatment of imidacloprid 600 FS @ 8.75 ml/kg seed** + spray of imidacloprid 17.8 SL 0.009% at 35 DAG (Standard Check)
9. **Untreated control.**

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Table-V.5d: Economics of various treatments for the management of pest complex in pearl millet (Anand)

Sr. No.	Treatments	Yield increase over control kg/ha		Additional income (Rs.)	Total Expenditure (Rs.)	Net return (Rs.)	I.C.B.R.
		Grain	fodder				
1	T1	607	893	16953	2760	14193	6.14
2	T2	329	673	9571	2160	7411	4.43
3	T3	160	329	4658	5660	-1002	0.82
4	T4	68	888	3485	1610	1875	2.16
5	T5	1249	1331	33887	3910	29977	8.67
6	T6	1172	1174	31647	2710	28937	11.68
7	T7	340	391	9282	9710	-428	0.96
8	T8	220	495	6498	960	5538	6.77

N.B.:

1. Selling price of Bajra per kg, Rs 25/-
2. Selling price of Fodder per kg Rs. 2.0/-
3. ST of Imida 600 FS 35 ml used for 4.0 kg seed, Rs 210/- ha
4. Cost of Beauveria bassiana 1.15% Rs 150/- per 1.0 kg, 3.0 kg used, total cost 450/- ha.
5. Cost of Azadirachtin 1500 ppm Rs 800 per litre, 2.0 lit used, total cost 1600/- ha
6. Cost of neem oil Rs 300 per litre, 15.0 lit used, total cost 4500/- ha
7. Cost of Neem Seed Kernel Rs 20 per kg, total 25.0 kg required per ha, NSKE 25 kg used + Rs 500 labour charge for preparation total 1000/- ha.
8. Cost of Imidachloprid 17.8 SL, Rs 500/- per 500 ml, Imida 17.8 SL Std Check sp, 250 ml used, Rs 250/- ha.
9. Labour cost per spray per hectare, 500/-

Table-V.5e: Statement showing the incidence of various insect- pests and yield in pearl millet (Jodhpur)

Treatment	Shoot fly incidence (%)		Grasshopper damage at 45 DAG	<i>Helicoverpa</i> larval population/20 ear heads					
	At 28 DAG	At ear head stage		Before spray	24 hrs after spray	3 days after spray	7 days after spray	Grain yield (kg/ha)	Fodder yield (kg/ha)
T1	2.32 (8.57)	3.20 (10.25)	9.33 (17.78)	45.67 (6.82)	43.33 (6.65)	23.33 (4.91)	4.67 (2.37)	1528	2750
T2	2.25 (8.50)	3.19 (10.29)	9.00 (17.43)	44.00 (6.69)	44.00 (6.68)	25.67 (5.14)	5.33 (2.51)	1500	2700
T3	2.37 (8.69)	3.21 (10.29)	8.67 (17.09)	43.33 (6.64)	42.67 (6.60)	27.67 (5.35)	5.67 (2.58)	1444	2600
T4	2.11 (8.29)	3.89 (11.05)	9.33 (17.78)	43.33 (6.63)	41.33 (6.51)	36.67 (6.12)	29.33 (5.50)	1222	2200
T5	2.16 (8.39)	0.74 (4.90)	1.67 (7.33)	44.33 (6.67)	43.33 (6.63)	20.00 (4.56)	6.00 (2.63)	1806	3250
T6	2.49 (9.07)	0.83 (5.21)	2.33 (8.74)	43.67 (6.66)	42.33 (6.57)	23.67 (4.97)	6.33 (2.70)	1764	3175
T7	2.54 (9.12)	0.85 (5.29)	3.67 (11.01)	45.33 (6.80)	43.33 (6.65)	25.33 (5.12)	6.67 (2.76)	1681	3025
T8	2.39 (8.89)	0.30 (3.08)	9.33 (17.76)	44.00 (6.65)	45.00 (6.73)	46.67 (6.85)	47.33 (6.95)	1167	2100
T9	16.98 (24.32)	4.76 (12.60)	10.00 (18.37)	46.33 (6.86)	47.00 (6.91)	47.33 (6.93)	48.67 (7.05)	1056	1900
C.D.	2.42	2.36	2.03	NS	NS	1.05	0.45	352	633
SE m±	0.80	0.78	0.67	0.39	0.34	0.35	0.15	116.41	209.54

N.B.: Figure in parenthesis is transformed values

- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + *Beauveria bassiana* , 1.15 WP, 0.007%, 60g/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + *Beauveria bassiana* , 1.15 WP, 0.007%, 60g/10 litres of water spray at 30 DAG + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + *Beauveria bassiana* , 1.15 WP, 0.007%, 60g/10 litres of water spray at 30 DAG + Neem oil 3.0%, 30 ml/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + *Beauveria bassiana* , 1.15 WP, 0.007%, 60g/10 litres of water spray at 30 DAG + *Beauveria bassiana* , 1.15 WP, 0.007%, 60g/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at 30 DAG + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + Neem oil 3.0%, 30 ml/10 litres of water spray at 30 DAG + Neem oil 3.0%, 30 ml/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed** + spray of imidachloprid 17.8 SL 0.009% at 35 DAG (Standard Check)
- Untreated control**

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Table-V.5f: Economics of various treatments for the management of pest complex in pearl millet (Jodhpur)

Treatment	Net Grain yield	Net Fodder yield	Additional Income	Total cost	Net return	ICBR
T1	472	850	13500	2760	10740	1:4.89
T2	444	800	12700	2160	10540	1:5.88
T3	388	700	11100	5660	5440	1:1.96
T4	166	300	4750	1610	3140	1:2.95
T5	750	1350	21450	3910	17540	1:5.49
T6	708	1275	20250	2710	17540	1:7.47
T7	625	1125	17875	9710	8165	1:1.84
T8	111	200	3175	960	2215	1:3.31

N.B.:

1. Selling price of Bajra per kg, Rs 25/-
2. Selling price of Fodder per kg Rs. 2.0/-
3. ST of Imida 600 FS 35 ml used for 4.0 kg seed, Rs 210/- ha
4. Cost of Beauveria bassiana 1.15% Rs 150/- per 1.0 kg, 3.0 kg used, total cost 450/- ha.
5. Cost of Azadirachtin 1500 ppm Rs 800 per litre, 2.0 lit used, total cost 1600/- ha
6. Cost of neem oil Rs 300 per litre, 15.0 lit used, total cost 4500/- ha
7. Cost of Neem Seed Kernel Rs 20 per kg, total 25.0 kg required per ha, NSKE 25 kg used + Rs 500 labour charge for preparation total 1000/- ha.
8. Cost of Imidachloprid 17.8 SL, Rs 500/- per 500 ml, Imida 17.8 SL Std Check sp, 250 ml used, Rs 250/- ha.
9. Labour cost per spray per hectare, 500/-

Table-V.5g: Statement showing the incidence of various insect- pests and yield in pearl millet (Fatehpur-Shekhawati)

Treatment No.	Shoot fly incidence at 28 DAG (%)	Stem borer incidence at 28 DAG (%)	Shoot fly incidence at ear head	Stem borer incidence at ear head	White grub and termite damage % at ear head stage
T1	3.15 (10.23)	1.80 (7.71)	9.34 (17.79)	1.76 (7.63)	1.18 (6.23)
T2	3.39 (10.62)	1.36 (6.69)	9.81 (18.26)	2.45 (9.01)	1.15 (6.17)
T3	3.37 (10.58)	1.80 (7.71)	9.83 (18.27)	2.66 (9.39)	1.12 (6.09)
T4	3.36 (10.57)	1.34 (6.65)	8.51 (16.96)	1.65 (7.38)	1.10 (6.02)
T5	3.40 (10.63)	1.37 (6.71)	9.68 (18.13)	2.39 (8.89)	1.12 (6.08)
T6	3.45 (10.70)	1.84 (7.79)	9.68 (18.13)	2.24 (8.61)	1.12 (6.07)
T7	3.19 (10.29)	1.59 (7.25)	9.77 (18.21)	2.40 (8.90)	1.13 (6.10)
T8	3.12 (10.18)	1.56 (7.18)	7.15 (15.51)	1.12 (6.08)	1.12 (6.08)
T9	15.19 (22.94)	5.36 (13.39)	20.70 (27.06)	7.65 (16.06)	1.24 (6.40)
SEm ±	0.56	0.57	0.72	0.11	98.47
C.D. 5%	1.66	1.70	2.16	0.31	292.56
CV %	8.13	12.52	6.68	8.01	7.08

N.B.: Figures in parenthesis is arcsine values.

- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana*** , 1.15 WP, 0.007%, 60g/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana*** , 1.15 WP, 0.007%, 60g/10 litres of water spray at 30 DAG + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana*** , 1.15 WP, 0.007%, 60g/10 litres of water spray at 30 DAG + Neem oil 3.0%, 30 ml/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana*** , 1.15 WP, 0.007%, 60g/10 litres of water spray at 30 DAG + *Beauveria bassiana* , 1.15 WP, 0.007%, 60g/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Azadirachtin 1500 ppm**, 0.0006%, 40 ml/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Neem Seed Kernel Extract**, 5%, 500 g/10 litres of water spray at 30 DAG + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Neem oil 3.0%**, 30 ml/10 litres of water spray at 30 DAG + Neem oil 3.0%, 30 ml/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + spray of imidachloprid 17.8 SL 0.009%** at 35 DAG (Standard Check)
- Untreated control**

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Table-V.5h: Statement showing the incidence of various insect- pests and yield in pearl millet (Fatehpur-Shekhawati)

Treatment No.	<i>Helicoverpaarmigera</i> larval population per 20 ear heads			
	24 hrs before spray	24 hrs after spray	3 days after spray	7 days after spray
T1	47.33 (6.50)	36.00 (6.32)	21.00 (4.93)	8.00 (3.39)
T2	49.33 (6.62)	37.00 (6.37)	22.67 (5.09)	9.33 (3.57)
T3	47.33 (6.52)	36.33 (6.37)	22.00 (5.03)	9.67 (3.59)
T4	48.33 (6.59)	35.33 (6.28)	15.00 (4.29)	7.33 (3.29)
T5	47.67 (6.47)	35.33 (6.22)	17.00 (4.50)	8.67 (3.47)
T6	48.67 (6.62)	37.67 (6.47)	23.67 (5.21)	10.33 (3.70)
T7	50.33 (6.77)	39.00 (6.59)	22.33 (5.07)	10.00 (3.66)
T8	49.00 (6.61)	41.00 (6.69)	44.00 (6.84)	47.00 (7.06)
T9	52.00 (6.66)	42.00 (6.79)	46.33 (7.04)	50.33 (7.32)
SEm ±	0.51	0.58	0.38	
C.D. 5%	NS	1.73	1.13	
CV %	12.64	16.26	13.01	

N.B.: Square root $\sqrt{X+0.5}$ values, Figure in parenthesis are square root values.

Table-V.5i: Economics of various treatments for the management of pest complex in pearl millet (Fatehpur-Shekhawati)

Sr. No.	Yield kg/ha		Yield increase over control		Additional income (Rs.)	Total Expenditure (Rs.)	Net Returns (Rs.)	I.C.B.R.
	Grain	fodder	Grain	fodder				
T ₁	2522.69	4591.29	389	708	11138	2760	8378	4.04
T ₂	2212.50	4077.56	79	194	2356	2160	196	1.09
T ₃	2311.58	4207.07	178	324	5092	5660	-568	0.90
T ₄	2918.52	5311.71	785	1428	22474	1610	20864	13.96
T ₅	2463.43	4483.44	330	600	9441	3910	5531	2.41
T ₆	2704.63	4922.43	571	1039	16349	2710	13639	6.03
T ₇	2430.09	4422.77	296	539	8486	9710	-1224	0.87
T ₈	2981.02	5425.46	847	1542	24264	960	23304	25.28
T ₉	2133.80	3883.51	0	0	0	0	0	0.00
SEm ±	127.09	202.38	-	-	-	-	-	-
C.D. 5%	381.01	606.73	-	-	-	-	-	-
CV %	8.74	7.63	-	-	-	-	-	-

N.B.:

1. Selling price of Bajra per kg, Rs 25/-
2. Selling price of Fodder per kg Rs. 2.0/-
3. ST of Imida 600 FS 35 ml used for 4.0 kg seed, Rs 210/- ha
4. Cost of Beauveria bassiana 1.15% Rs 150/- per 1.0 kg, 3.0 kg used, total cost 450/- ha.
5. Cost of Azadirachtin 1500 ppm Rs 800 per litre, 2.0 lit used, total cost 1600/- ha
6. Cost of neem oil Rs 300 per litre, 15.0 lit used, total cost 4500/- ha
7. Cost of Neem Seed Kernel Rs 20 per kg, total 25.0 kg required per ha, NSKE 25 kg used + Rs 500 labour charge for preparation total 1000/- ha.
8. Cost of Imidachloprid 17.8 SL, Rs 500/- per 500 ml, Imida 17.8 SL Std Check sp, 250 ml used, Rs 250/- ha.
9. Labour cost per spray per hectare, 500/-

Table-V.5j: Statement showing the incidence of various insect- pests and yield in pearl millet (Jaipur)

Treatment	Shoot fly incidence (%)		Termite and white grub % incidence at ear head stage
	At 28 DAG	At ear head stage	
T1	12.32 (4.60)	10.86 (3.60)	6.86 (1.45)
T2	12.82 (5.02)	11.05 (3.70)	13.35 (5.35)
T3	12.25 (4.61)	9.77 (2.96)	13.80 (5.79)
T4	12.62 (4.79)	13.16 (5.25)	12.03 (4.39)
T5	12.09 (4.56)	11.77 (4.20)	12.97 (5.23)
T6	12.76 (5.06)	11.37 (4.00)	17.63 (9.24)
T7	12.87 (5.00)	12.79 (4.92)	14.33 (6.20)
T8	13.99 (5.86)	13.01 (5.07)	17.20 (8.75)
T9	25.07 (17.98)	23.03 (15.43)	26.04 (19.28)
C.D. at 5%	0.84	0.86	1.04
SE m±	2.53	2.59	3.12
C.V.%	10.39	11.51	12.08

N.B.: Figure in brackets is original values, whereas outside figures are arcsine transformed values.
Yield data was not recorded due to heavy lodging at ear head stage.

Table-V.5k: Statement showing the incidence of various insect- pests and yield in pearl millet (Aurangabad)

Treatments	Per cent shoot fly incidence		Per cent stem borer incidence		% Fall Army Worm damage at 45 DAG	Yield kg/ha.	
	Vegetative stage	Ear head stage	Vegetative stage	Ear head stage		Grain	Fodder
T1	18.05* (10.00)	22.60* (15.00)	22.60* (15.00)	26.45* (20.00)	18.05* (10.00)	2100	3800
T2	18.05 (10.00)	22.60 (15.00)	12.92 (5.00)	18.05 (10.00)	12.92 (5.00)	2000	3700
T3	12.92 (5.00)	12.92 (5.00)	12.92 (5.00)	12.92 (5.00)	12.92 (5.00)	2300	4000
T4	22.60 (15.00)	26.45 (20.00)	22.60 (15.00)	22.60 (15.00)	22.60 (15.00)	1900	3800
T5	18.05 (10.00)	22.60 (15.00)	22.60 (15.00)	26.57 (20.00)	18.05 (10.00)	2000	3700
T6	18.05 (10.00)	22.60 (15.00)	18.05 (10.00)	18.05 (10.00)	18.05 (10.00)	2000	3700
T7	18.05 (10.00)	26.45 (20.00)	18.05 (10.00)	18.05 (10.00)	21.90 (15.00)	2100	3800
T8	18.05 (10.00)	22.60 (15.00)	22.60 (15.00)	26.45 (20.00)	18.43 (10.00)	1900	3700
T9	26.45 (20.00)	29.93 (25.00)	26.45 (20.00)	29.93 (25.00)	29.93 (25.00)	1800	3600
SEm ±	2.31	2.23	2.25	2.26	2.57	67.36	64.19
C.D. 5%	6.93	6.70	6.75	6.78	7.72	201.95	192.45
CV %	21.16	16.69	19.65	17.71	23.21	5.80	2.96

N.B.: (*) arcsine transformed values, Figure in parenthesis are original values.

Treatment details:

- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana*** , 1.15 WP, 0.07%, 60g/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana*** , 1.15 WP, 0.07%, 60g/10 litres of water spray at 30 DAG + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana*** , 1.15 WP, 0.07%, 60g/10 litres of water spray at 30 DAG + Neem oil 3.0%, 30 ml/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + *Beauveria bassiana*** , 1.15 WP, 0.07%, 60g/10 litres of water spray at 30 DAG + *Beauveria bassiana* , 1.15 WP, 0.07%, 60g/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Azadirachtin 1500 ppm**, 0.0006%, 40 ml/10 litres of water spray at 30 DAG + Azadirachtin 1500 ppm, 0.0006%, 40 ml/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Neem Seed Kernel Extract**, 5%, 500 g/10 litres of water spray at 30 DAG + Neem Seed Kernel Extract, 5%, 500 g/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + Neem oil 3.0%**, 30 ml/10 litres of water spray at 30 DAG + Neem oil 3.0%, 30 ml/10 litres of water spray at ear head stage.
- Seed treatment of imidachloprid 600 FS @ 8.75 ml/kg seed + spray of imidachloprid 17.8 SL 0.009%** at 35 DAG (Standard Check)
- Untreated control.**

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Table-V.5I: Economics of various treatments for the management of pest complex in pearl millet (Aurnagabad)

Sr. No.	Treatments	Yield increase over control kg/ha		Additional income (Rs.)	Total Expenditure (Rs.)	Net return (Rs.)	I.C.B.R.
		Grain	fodder				
1	T1	300	200	10000	3490	6510	<u>2.87</u>
2	T2	200	100	6500	2690	3810	2.42
3	T3	500	400	<u>17000</u>	6190	<u>10810</u>	2.75
4	T4	100	200	4000	2740	1260	1.46
5	T5	200	100	6500	4240	2260	1.53
6	T6	200	100	6500	2640	3860	2.46
7	T7	300	200	10000	9640	360	1.04
8	T8	100	100	3500	2040	1460	1.72

N.B.:

Cost of treatments

1. Selling price of Bajra per kg, Rs 30/-
2. Selling price of Fodder per kg Rs. 5.0/-
3. ST of Imida 600 FS 35 ml used for 4.0 kg seed, Rs 210/- ha
4. Cost of Beauveria bassiana 1.15% Rs 150/- per 1.0 kg, 3.0 kg used, total cost 450/- ha.
5. Cost of Azadirachtin 1500 ppm Rs 800 per litre, 2.0 lit used, total cost 1600/- ha
6. Cost of neem oil Rs 300 per litre, 15.0 lit used, total cost 4500/- ha
7. Cost of Neem Seed Kernel Rs 20 per kg, total 25.0 kg required per ha, NSKE 25 kg used + Rs 500 labour charge for preparation total 1000/- ha.
8. Cost of Imidachloprid 17.8 SL, Rs 500/- per 500 ml, Imida 17.8 SL Std Check sp, 250 ml used, Rs 250/- ha.
9. Labour cost per spray per hectare, 500/-

Table V.6a: Statement showing the incidence of *Helicoverpa armigera* and yield in pearl millet (Centre: Jamnagar)

No	Treatments	<i>Helicoverpa armigera</i> larval population per 20 ear heads				Yield kg/ha.	
		24 hrs before spray	24 hrs after spray	3 days after spray	7 days after spray	Grain	Fodder
T ₁	Profenophos 50 EC, 0.05%	7.89# (62.00)	6.72# (45.00)	3.89# (14.67)	3.23# (10.00)	2813	5732
T ₂	Quinalphos 25 EC, 0.05%	7.94 (62.67)	6.88 (47.00)	4.02 (15.67)	3.29 (10.33)	2602	5833
T ₃	Spinosad 45% ,0.009%	7.92 (62.33)	6.13 (37.33)	3.38 (11.00)	2.04 (3.67)	3037	5796
T ₄	Indoxacarb 14.5 SC, 0.006%	7.86 (61.33)	5.58 (30.67)	3.29 (10.33)	1.95 (3.33)	3042	6287
T ₅	Emamectin benzoate 5 SG, 0.002%	7.92 (62.33)	5.42 (29.00)	3.24 (10.00)	1.86 (3.00)	3088	6352
T ₆	Chlorantraniprole 18.5 SC,0.006%	7.88 (61.67)	5.58 (30.67)	3.29 (10.33)	2.04 (3.67)	3006	6111
T ₇	Lambda cyhalothrin 5 EC,0.003%	7.77 (60.00)	5.60 (31.00)	3.33 (10.67)	2.04 (3.67)	2606	5852
T ₈	Chlorfenapyre 10 SC, 0.015%	7.89 (62.00)	7.00 (48.67)	4.97 (24.33)	4.33 (18.33)	2595	5736
T ₉	Malathion 50 EC,0.05%	7.88 (62.00)	7.21 (52.00)	5.09 (25.67)	4.26 (17.67)	2647	5574
T ₁₀	Un-treated control	7.90 (62.33)	8.06 (65.00)	8.13 (66.00)	8.24 (67.67)	2481	5176
	SEm ±	0.32	0.28	0.17	0.16	93.67	394.97
	C.D. 5%	NS	0.84	0.52	0.48	278.31	NS
	CV %	6.92	7.65	7.06	8.36	5.81	11.70

N.B.: (*) Square root $\sqrt{X+0.5}$ values, Figure in parenthesis are original values.

Table-V.6b: Economics of various treatments for the management of *H. armigera* in pearl millet (Centre: Jamnagar)

Sr. No	Treatments	Yield increase over control kg/ha		Additional income (Rs.)	Total Expenditure (Rs.)	Net return (Rs.)	I.C.B.R.
		Grain	fodder				
T ₁	Profenophos 50 EC, 0.05%	332	5302	7712	900	6812	1:8.57
T ₂	Quinalphos 25 EC, 0.05%	121	5290	3046	1100	1946	1:2.77
T ₃	Spinosad 45% ,0.009%	556	5375	12786	2900	9886	1:4.41
T ₄	Indoxacarb 14.5 SC, 0.006%	561	5508	13162	1150	12012	1:11.45
T ₅	Emamectin benzoate 5 SG, 0.002%	607	5783	14724	1000	13724	1:14.72
T ₆	Chlorantraniprole 18.5 SC,0.006%	525	5703	12760	2350	10410	1:5.43
T ₇	Lambda cyhalothrin 5 EC,0.003%	126	5460	3496	700	2796	1:4.99
T ₈	Chlorfenapyre 10 SC, 0.015%	114	5444	3200	1000	2200	1:3.20
T ₉	Malathion 50 EC,0.05%	166	5306	4068	950	3118	1:4.28

No.	Inputs	Cost Rs.
1	Cost of Bajra per kg	22.00
2	Cost of Fodder per kg	2.00
3	Profenophos 50 EC, 500 ml	400.00
4	Quinalphos 25 EC, 1000 ml	600.00
5	Spinosad 45%, 100 ml	2400.00
6	Indoxacarb 14.5 SC, 200 ml	650.00
7	Emamectin benzoate 5 SG, 200g	500.00
8	Chlorantraniprole 18.5 SC, 150 ml	1850.00
9	Lambda cyhalothrin 5 EC, 300ml	200.00
10	Chlorfenapyre 10 SC, 750 ml	500.00
11	Malathion 50 EC, 500 ml	450.00
12	Labour cost for one spray per hectare	500.00

Table V.6c: Statement showing the incidence of *Helicoverpa armigera* and yield in pearl millet (Centre: Jodhpur)

No	Treatment	<i>Helicoverpa</i> larval population/20 ear heads					
		Before spray	24 hrs after spray	3 days after spray	7 days after spray	Grain yield (kg/ha)	Fodder yield (kg/ha)
T ₁	Profenophos 50 EC, 0.05%	54.00 (7.41)	47.67 (6.96)	14.67 (3.95)	8.67 (3.10)	1514	2725
T ₂	Quinalphos 25 EC, 0.05%	55.33 (7.50)	47.00 (6.92)	13.00 (3.74)	8.00 (3.00)	1556	2800
T ₃	Spinosad 45%, 0.009%	50.33 (7.15)	46.00 (6.83)	11.00 (3.46)	3.33 (2.08)	1708	3075
T ₄	Indoxacarb 14.5 SC, 0.006%	50.67 (7.18)	46.67 (6.90)	12.67 (3.69)	3.67 (2.16)	1639	2950
T ₅	Emamectin benzoate 5 SG, 0.002%	53.00 (7.34)	39.33 (6.29)	8.00 (3.00)	1.67 (1.63)	1833	3300
T ₆	Chlorantraniprole 18.5 SC, 0.006%	51.33 (7.23)	41.67 (6.51)	8.67 (3.08)	2.67 (1.91)	1819	3275
T ₇	Lambda cyhalothrin 5 EC, 0.003%	50.33 (7.14)	44.67 (6.74)	10.67 (3.40)	3.33 (2.08)	1764	3175
T ₈	Chlorfenapyre 10 SC, 0.015%	53.33 (7.34)	47.00 (6.91)	11.67 (3.54)	5.33 (2.58)	1611	2900
T ₉	Malathion 50 EC, 0.05%	50.00 (7.12)	49.67 (7.10)	25.33 (5.04)	15.00 (4.00)	1333	2400
T ₁₀	Un-treated control	52.00 (7.27)	53.33 (7.35)	55.67 (7.50)	57.67 (7.65)	1194	2150
	C.D.	NS	NS	0.89	0.35	206	372
	SE m±	0.32	0.35	0.30	0.12	69	124

N.B: Figure in brackets is transformed values, whereas those outside are original values

Table-V.6d: Economics of various treatments for the management of *H. armigera* in pearl millet (Centre: Jodhpur)

Sr. No.	Treatment	Net Grain yield	Net Fodder yield	Additional Income	Total cost	Net return	ICBR
T ₁	Profenophos 50 EC, 0.05%	320	575	8188	900	7288	1:9.10
T ₂	Quinalphos 25 EC, 0.05%	362	650	9254	1100	8154	1:8.41
T ₃	Spinosad 45%, 0.009%	514	925	13165	2900	10265	1:4.54
T ₄	Indoxacarb 14.5 SC, 0.006%	445	800	11388	1150	10238	1:9.90
T ₅	Emamectin benzoate 5 SG, 0.002%	639	1150	16365	1000	15365	1:16.37
T ₆	Chlorantraniprole 18.5 SC, 0.006%	625	1125	16010	2350	13660	1:6.81
T ₇	Lambda cyhalothrin 5 EC, 0.003%	570	1025	14588	700	13888	1:20.84
T ₈	Chlorfenapyre 10 SC, 0.015%	417	750	10676	1000	9676	1:10.68
T ₉	Malathion 50 EC, 0.05%	139	250	3565	950	2615	1:3.75

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No.	Inputs	Cost Rs.
1	Cost of Bajra per kg	22.00
2	Cost of Fodder per kg	2.00
3	Profenophos 50 EC, 500 ml	400.00
4	Quinalphos 25 EC, 1000 ml	600.00
5	Spinosad 45%, 100 ml	2400.00
6	Indoxacarb 14.5 SC, 200 ml	650.00
7	Emamectin benzoate 5 SG, 200g	500.00
8	Chlorantraniprole 18.5 SC, 150 ml	1850.00
9	Lambda cyhalothrin 5 EC, 300ml	200.00
10	Chlorfenapyre 10 SC, 750 ml	500.00
11	Malathion 50 EC, 500 ml	450.00
12	Labour cost for one spray per hectare	500.00

Table V.e: Statement showing the incidence of *Helicoverpa armigera* and yield in pearl millet (Centre: Fatehpur-Shekhawati)

Treatment No.	Treatments	<i>Helicoverpa armigera</i> larval population per 20 ear heads				Yield kg/ha.	
		24 hrs before spray	24 hrs after spray	3 days after spray	7 days after spray	Grain	Fodder
T1	Profenophos 50 EC, 0.05%	45.33 (6.76)	28.33 (5.36)	13.6 (3.74)	3.67 (2.04)	2403	5556
T2	Quinalphos 25 EC, 0.05%	47.00 (6.88)	30.00 (5.51)	18.67 (4.37)	5.33 (2.41)	2367	5528
T3	Spinosad 45%, 0.009%	46.00 (6.81)	18.67 (4.37)	3.67 (2.03)	0.33 (0.88)	2500	5567
T4	Indoxacarb 14.5 SC, 0.006%	48.00 (6.96)	19.33 (4.43)	4.00 (2.11)	0.67 (1.05)	2472	5539
T5	Emamectin benzoate 5 SG, 0.002%	47.00 (6.87)	16.33 (4.10)	1.67 (1.46)	0.00 (0.71)	2667	5569
T6	Chlorantraniprole 18.5 SC, 0.006%	48.00 (6.96)	19.33 (4.44)	4.33 (2.20)	1.00 (1.22)	2417	5533
T7	Lambda cyhalothrin 5 EC, 0.003%	47.00 (6.89)	21.33 (4.66)	4.67 (2.27)	3.00 (1.87)	2408	5519
T8	Chlorfenapyre 10 SC, 0.015%	46.67 (6.86)	28.67 (5.39)	18.33 (4.34)	5.00 (2.35)	2389	5542
T9	Malathion 50 EC, 0.05%	45.33 (6.75)	30.00 (5.52)	20.00 (4.51)	5.67 (2.48)	2361	5564
T10	Un-treated control	46.33 (6.83)	51.67 (7.22)	54.00 (7.38)	61.67 (7.88)	2111	5506
	SEm ±	0.24	0.21	0.18	0.11	98.47	109
	C.D. 5%	0.72	0.63	0.54	0.31	292.56	NS
	CV %	6.10	6.84	9.21	8.01	7.08	-

N.B.: Square root $\sqrt{X+0.5}$ values, Figure in parenthesis are original values.

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Table-V.6f: Economics of various treatments for the management of *H. armigera* in pearl millet (Centre: Fatehpur-Shekhawati)

Sr. No	Treatments	Yield increase over control kg/ha		Additional income Rs.	Total Expenditure Rs.	Net return Rs.	I.C.B.R.
		Grain	fodder				
T ₁	Profenophos 50 EC, 0.05%	291	50	6502	1000	5502	6.50
T ₂	Quinalphos 25 EC, 0.05%	255	22	5654	1200	4454	4.71
T ₃	Spinosad 45%, 0.009%	388	61	8658	3000	5658	2.89
T ₄	Indoxacarb 14.5 SC, 0.006%	361	33	8008	1250	6758	6.41
T ₅	Emamectin benzoate 5 SG, 0.002%	555	64	12338	1100	11238	11.22
T ₆	Chlorantraniprole 18.5 SC, 0.006%	305	28	6766	2450	4316	2.76
T ₇	Lambda cyhalothrin 5 EC, 0.003%	297	14	6562	800	5762	8.20
T ₈	Chlorfenapyre 10 SC, 0.015%	277	36	6166	1100	5066	5.61
T ₉	Malathion 50 EC, 0.05%	250	58	5616	1050	4566	5.35

No.	Inputs	Cost Rs.
1	Cost of Bajra per kg	22.00
2	Cost of Fodder per kg	2.00
3	Profenophos 50 EC, 500 ml	400.00
4	Quinalphos 25 EC, 1000 ml	600.00
5	Spinosad 45%, 100 ml	2400.00
6	Indoxacarb 14.5 SC, 200 ml	650.00
7	Emamectin benzoate 5 SG, 200g	500.00
8	Chlorantraniprole 18.5 SC, 150 ml	1850.00
9	Lambda cyhalothrin 5 EC, 300ml	200.00
10	Chlorfenapyre 10 SC, 750 ml	500.00
11	Malathion 50 EC, 500 ml	450.00
12	Labour cost for one spray per hectare	600.00

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Table V.7a: (PMET-7) Survey of insect- pests of summer pearl millet on farmers' fields in Gujarat (Centres: Jamnagar & Anand).

No.	Date of survey	Location	Taluka	District	Variety	Area (ha.)	Crop stage	Shoot fly %	Stem borer %	Heli./5 EH	GWDS	FAW%
1	15.05.24	Jodiya	Jodiya	Jamnagar	Sagar 222	1.0	EH	1.00	2.00	1.00	1.00	0.00
2	15.05.24	Keshiya	Jodiya	Jamnagar	Sagar 222	1.0	EH	2.00	5.00	1.00	1.00	0.00
3	15.05.24	Hajamchora	Jodiya	Jamnagar	Sagar 222	1.0	EH	1.00	1.00	0.00	1.00	0.00
4	15.05.24	Morana	Jodiya	Jamnagar	Sagar 222	0.5	EH	1.00	2.00	1.00	1.00	0.00
5	15.05.24	Balambha	Jodiya	Jamnagar	Sagar 222	1.0	EH	1.00	1.00	1.00	1.00	0.00
6	15.05.24	Meghpar	Jodiya	Jamnagar	Sagar 222	0.5	EH	1.00	0.00	0.00	0.00	0.00
7	15.05.24	Pipalia	Jodiya	Jamnagar	Mahyco	0.5	EH	1.00	5.00	1.00	2.00	0.00
8	15.05.24	Bodka	Jodiya	Jamnagar	Pioneer	0.5	EH	1.00	1.00	1.00	1.00	0.00
9	15.05.24	Maangadh	Jodiya	Jamnagar	Pioneer	0.5	EH	1.00	2.00	1.00	1.00	0.00
10	15.05.24	Palasva	Rapar	Kutch	86M11	1.0	EH	5.00	1.00	2.00	2.00	0.00
11	15.05.24	Radhanpur	Radhanpur	Patan	86M11	1.0	EH	1.00	5.00	5.00	2.00	0.00
12	15.05.24	Ranakpur	Kankrej	B.Kantha	86M11	2.0	EH	2.00	5.00	10.00	2.00	0.00
13	15.05.24	Tharra	Kankrej	B.Kantha	86M22	1.0	EH	1.00	5.00	12.00	1.00	0.00
14	15.05.24	Dungrasan	Kankrej	B.Kantha	86M22	1.0	EH	5.00	5.00	10.00	1.00	0.00
15	15.05.24	Manpura	Vadgam	B.Kantha	86M11	1.0	EH	1.00	1.00	5.00	0.00	0.00
16	15.05.24	Shihori	Kankrej	B.Kantha	85M36	1.0	EH	1.00	1.00	15.00	1.00	0.00
17	15.05.24	Chekhla	Palanpur	B.Kantha	85M36	1.0	EH	1.00	1.00	10.00	1.00	0.00
18	15.05.24	Khodla	Palanpur	B.Kantha	86M11	2.0	EH	2.00	5.00	20.00	1.00	0.00
19	15.05.24	Bhiladi	Deesa	B.Kantha	86M11	1.0	EH	5.00	2.00	10.00	1.00	0.00
20	15.05.24	Mudetha	Deesa	B.Kantha	86M22	2.0	EH	10.00	5.00	25.00	1.00	0.00
21	15.05.24	Khetwa	Deesa	B.Kantha	86M22	1.0	EH	1.00	2.00	10.00	1.00	0.00
22	15.05.24	Dedol	Deesa	B.Kantha	86M11	1.0	EH	5.00	5.00	12.00	1.00	0.00
23	15.05.24	Lorvada	Deesa	B.Kantha	85M36	1.0	EH	2.00	1.00	10.00	1.00	0.00
24	15.05.24	Vadaval	Deesa	B.Kantha	85M36	1.0	EH	5.00	5.00	5.00	1.00	0.00
25	15.05.24	Kumpat	Deesa	B.Kantha	86M11	2.0	EH	2.00	5.00	10.00	0.00	0.00
26	15.05.24	Maalgadh	Deesa	B.Kantha	Advanta 936	1.0	EH	5.00	2.00	7.00	0.00	0.00
27	15.05.24	Deesa	Deesa	B.Kantha	KPH 6311	2.0	EH	5.00	5.00	10.00	0.00	0.00
28	15.05.24	Kant	Deesa	B.Kantha	86M11	1.0	EH	1.00	1.00	5.00	0.00	0.00
29	15.05.24	Bhakhar moti	Dantivada	B.Kantha	Sagar 222	1.0	EH	5.00	5.00	15.00	1.00	0.00
30	15.05.24	Bhakhar nani	Dantivada	B.Kantha	Avani	1.0	EH	2.00	3.00	10.00	1.00	0.00
31	15.05.24	Vaghrol	Dantivada	B.Kantha	86M11	1.0	EH	1.00	1.00	12.00	1.00	0.00
32	15.05.24	Lodpa	Dantivada	B.Kantha	New genes	1.0	EH	5.00	5.00	10.00	1.00	0.00
33	16.05.24	Bhoyan	Deesa	B.Kantha	US 7306	1.0	EH	1.00	2.00	12.00	1.00	0.00
34	16.05.24	Kushkal	Palanpur	B.Kantha	86M11	1.0	EH	5.00	5.00	5.00	1.00	0.00
35	16.05.24	Jodnapura	Palanpur	B.Kantha	86M11	1.0	EH	5.00	10.00	5.00	0.00	0.00
36	16.05.24	Chandisar	Palanpur	B.Kantha	86M11	1.0	EH	5.00	5.00	10.00	0.00	0.00
37	16.05.24	Chadotar	Palanpur	B.Kantha	86M11	1.5	EH	1.00	5.00	8.00	1.00	0.00
38	16.05.24	Devrasan	Mahesana	Mahesana	86M11	0.5	EH	5.00	5.00	2.00	0.00	0.00
39	16.05.24	Gunjala	Visnagar	Mahesana	86M11	1.0	EH	5.00	5.00	1.00	0.00	0.00
40	16.05.24	Dabhla	Vijapur	Mahesana	Sagar 222	1.0	EH	1.00	1.00	5.00	0.00	0.00
41	16.05.24	Devda	Vijapur	Mahesana	Sagar 222	1.0	EH	2.00	5.00	7.00	0.00	0.00

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No.	Date of survey	Location	Taluka	District	Variety	Area (ha.)	Crop stage	Shoot fly %	Stem borer %	Heli./5 EH	GWDS	FAW%
42	16.05.24	Kukarwada	Vijapur	Maheana	Advanta 936	0.5	EH	5.00	5.00	1.00	0.00	0.00
43	16.05.24	Chadasna	Kadi	Maheana	KPH 6311	1.0	EH	1.00	2.00	1.00	0.00	0.00
44	16.05.24	Pilvai	Vijapur	Maheana	86M11	1.0	EH	2.00	2.00	1.00	0.00	0.00
45	16.05.24	Vijapur	Vijapur	Maheana	Sagar 222	1.0	EH	1.00	1.00	1.00	0.00	0.00
46	16.05.24	Motipura	Dehgam	Gandhinagar	Avani	1.0	EH	1.00	1.00	1.00	0.00	0.00
47	16.05.24	Pundra	Mansa	Gandhinagar	86M11	1.0	EH	2.00	1.00	2.00	0.00	0.00
48	16.05.24	Vihar	Mansa	Gandhinagar	New genes	1.0	EH	1.00	1.00	1.00	1.00	0.00
49	16.05.24	Lodra	Mansa	Gandhinagar	US 7306	1.0	EH	5.00	2.00	5.00	2.00	0.00
50	16.05.24	Anand	Anand	Anand	86M11	1.5	EH	1.00	3.00	1.00	1.00	1.00
51	16.05.24	Valasan	Anand	Anand	86M22	0.5	EH	2.00	4.00	0.00	0.00	0.00
52	16.05.24	Ravipura	Petlad	Anand	86M22	1.0	EH	1.00	5.00	1.00	1.00	1.00
53	16.05.24	Dhebakuva	Petlad	Anand	86M11	0.5	EH	1.00	2.00	0.00	2.00	1.00
54	16.05.24	Bandhani	Petlad	Anand	85M36	1.0	EH	2.00	10.00	2.00	1.00	2.00
55	16.05.24	Porda	Petlad	Anand	85M36	2.0	EH	2.00	2.00	0.00	1.00	1.00
56	16.05.24	Piplav	Sojitra	Anand	86M11	1.0	EH	1.00	5.00	3.00	2.00	1.00
57	16.05.24	Petlad	Petlad	Anand	Advanta 936	0.5	EH	1.00	4.00	0.00	2.00	1.00
58	16.05.24	Sunav	Petlad	Anand	KPH 6311	1.0	EH	2.00	3.00	1.00	2.00	1.00
59	16.05.24	Palaj	Petlad	Anand	86M11	2.0	EH	1.00	2.00	1.00	1.00	1.00
60	16.05.24	Isanav	Sojitra	Anand	Sagar 222	0.5	EH	2.00	5.00	2.00	1.00	0.00
61	16.05.24	Sojitra	Sojitra	Anand	Avani	0.5	EH	3.00	2.00	1.00	3.00	0.00
62	16.05.24	Harmanpura	Petlad	Anand	86M11	1.0	EH	2.00	5.00	1.00	2.00	1.00
63	16.05.24	Gada	Sojitra	Anand	New genes	1.0	EH	1.00	2.00	1.00	2.00	1.00
64	16.05.24	Dali	Borsad	Anand	US 7306	1.0	EH	2.00	3.00	1.00	1.00	5.00
65	23.05.24	Pipaliya	Khambalia	Dwarka	GHB 1129	0.5	EH	1.00	0.00	1.00	0.00	0.00
66	23.05.24	Rupamora	Bhanvad	Jamnagar	GHB 1129	0.5	EH	2.00	0.00	2.00	0.00	0.00
67	23.05.24	Verad	Bhanvad	Jamnagar	GHB 1129	0.5	EH	5.00	0.00	1.00	1.00	0.00
68	23.05.24	Arikhana	Lalpur	Jamnagar	Sagar 222	0.5	EH	2.00	0.00	2.00	1.00	0.00
69	23.05.24	Dhichada	Jamnagar	Jamnagar	GHB 1129	0.5	EH	1.00	0.00	1.00	1.00	0.00
70	28.05.24	Hadiana	Jodiya	Jamnagar	GHB 1129	1.0	EH	2.00	0.00	1.00	1.00	0.00
71	28.05.24	Chavda	Jamnagar	Jamnagar	GHB 1129	0.5	EH	1.00	0.00	1.00	0.00	0.00
72	28.05.24	Jivapar	Kalavad	Jamnagar	GHB 1129	1.0	EH	1.00	0.00	1.00	0.00	0.00
73	28.05.24	Khilos	Jamnagar	Jamnagar	GHB 1129	0.5	EH	2.00	0.00	1.00	0.00	0.00
74	28.05.24	Rampar	Jamnagar	Jamnagar	Sagar 222	1.0	EH	1.00	0.00	1.00	0.00	0.00
75	5/7/2024	Navali	Anand	Anand	Advanta 5151	0.8	E.H.	10.00	15.00	2.00	0.00	0.00
76	5/7/2024	Navali	Anand	Anand	Advanta	0.6	E.H.	15.00	15.00	2.00	0.00	0.00
77	5/7/2024	Navali	Anand	Anand	Balram 222	0.9	E.H.	10.00	15.00	2.00	0.00	0.00
78	5/7/2024	Khandhali	Anand	Anand	Advanta 555	0.6	E.H.	10.00	15.00	2.00	0.00	0.00
79	5/7/2024	Khandhali	Anand	Anand	Dhany 555	0.7	E.H.	5.00	5.00	0.00	0.00	0.00
80	5/7/2024	Napa	Anand	Anand	86M84	0.6	E.H.	5.00	15.00	1.00	0.00	0.00
81	5/7/2024	Napa	Anand	Anand	Dhany 555	0.3	E.H.	5.00	5.00	0.00	0.00	0.00
82	5/7/2024	Napa	Anand	Anand	Sagar 555	0.7	E.H.	0.00	0.00	0.00	0.00	0.00
83	5/7/2024	Dedarda	Borsad	Anand	Desi	0.5	E.H.	20.00	20.00	4.00	0.00	5.00

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No.	Date of survey	Location	Taluka	District	Variety	Area (ha.)	Crop stage	Shoot fly %	Stem borer %	Heli./5 EH	GWDS	FAW%
84	5/7/2024	Dedarda	Borsad	Anand	86M84	1.2	E.H.	5.00	10.00	1.00	0.00	0.00
85	5/7/2024	Dedarda	Borsad	Anand	86M84	0.9	E.H.	5.00	10.00	1.00	0.00	0.00
86	5/7/2024	Kavitha	Borsad	Anand	Desi	0.5	E.H.	15.00	20.00	3.00	0.00	0.00
87	5/7/2024	Kavitha	Borsad	Anand	Desi	0.7	E.H.	15.00	20.00	3.00	0.00	0.00
88	5/7/2024	Santokpura	Borsad	Anand	Sagar 222	0.7	E.H.	5.00	5.00	0.00	0.00	0.00
89	5/7/2024	Virol	Sojitra	Anand	Sagar 222	1.1	E.H.	5.00	5.00	0.00	0.00	0.00
90	5/7/2024	Virol	Sojitra	Anand	Advanta 5151	0.9	E.H.	10.00	15.00	2.00	0.00	0.00
91	5/7/2024	Davalpura	Petlad	Anand	Advanta	1.2	E.H.	15.00	15.00	2.00	0.00	0.00
92	5/7/2024	Palaj	Anand	Anand	Pioneer	0.4	E.H.	5.00	5.00	0.00	0.00	0.00
93	5/7/2024	Piplav	Sojitra	Anand	Balram 222	0.3	E.H.	10.00	15.00	2.00	0.00	0.00
94	5/7/2024	Bandhani	Petlad	Anand	86M84	0.2	E.H.	5.00	10.00	1.00	0.00	0.00
95	5/13/2024	Dalapura	Umreth	Anand	Sagar 222	0.1	E.H.	5.00	5.00	0.00	0.00	0.00
96	5/13/2024	Rahtalav	Anand	Anand	Sagar 222	0.5	E.H.	5.00	2.00	0.00	0.00	0.00
97	5/13/2024	Jakhala	Umreth	Anand	Advanta	0.9	E.H.	15.00	15.00	2.00	0.00	0.00
98	5/13/2024	Pansora	Umreth	Anand	Balram 222	0.8	E.H.	10.00	15.00	2.00	0.00	0.00
99	5/13/2024	Pansora	Umreth	Anand	Desi	0.5	E.H.	15.00	20.00	3.00	0.00	0.00
100	5/13/2024	Pansora	Umreth	Anand	86M11	0.2	E.H.	5.00	15.00	1.00	0.00	0.00
101	5/13/2024	Lingada	Umreth	Anand	Desi	0.4	E.H.	15.00	15.00	3.00	0.00	0.00
102	5/13/2024	Bharoda	Umreth	Anand	Desi	0.4	E.H.	15.00	15.00	3.00	0.00	0.00
103	5/13/2024	bharoda	Umreth	Anand	Balram 222	0.6	E.H.	10.00	15.00	2.00	0.00	0.00
104	5/13/2024	Bhandhipur	Umreth	Anand	Advanta 555	0.4	E.H.	10.00	15.00	2.00	0.00	0.00
105	5/13/2024	Bandhipur	Umreth	Anand	Dhany 555	0.7	E.H.	5.00	5.00	0.00	0.00	0.00
106	5/13/2024	ode	Anand	Anand	86M84	0.1	E.H.	5.00	10.00	0.00	0.00	0.00
							Mini.	0.00	0.00	0.00	0.00	0.00
							Maxi.	20.00	20.00	25.00	3.00	5.00
							Mean	4.37	5.58	3.66	0.58	0.21

Table V.7b: (PMET-7) District-wise insect- pest situation of summer pearl millet on farmers' fields in Gujarat (Centres: Jamnagar & Anand).

No	Districts	Shoot fly % Incidence	Stem borer % Incidence	Helicoverpa Larval population /5 Ear heads	Grey Weevil Damage Score	FAW%
1	Anand	5.82	7.70	1.28	0.46	0.39
2	Banaskantha	3.23	3.73	10.50	0.77	0.00
3	Dev.Dwarka	1.00	0.00	1.00	0.00	0.00
4	Gandhinagar	2.25	1.25	2.25	0.75	0.00
5	Jamnagar	1.50	1.06	1.00	0.72	0.00
6	Kutch	5.00	1.00	2.00	2.00	0.00
7	Mahesana	2.75	3.25	2.38	0.00	0.00
8	Patan	1.00	5.00	5.00	2.00	0.00
	Mean	2.34	2.84	4.62	0.84	0.23

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Table V.7c: (PMET-7) Survey of insect- pests of summer pearl millet on farmers' fields in Maharashtra (Centre: Aurangabad).

No. of farmer	Date of survey	Location	Taluka/ Tehsil	District	Variety	Area (ha.)	Crop stage	Shoot fly damage %	Stem borer damage %	Blister beetles/ 5 E.H.	Chaffer beetle/ 5 E.H.	Fall Army Worm % damage	Lady bird beetle / 5 Pl.	Chrysopa/ 5 Pl.	If Any other pest observed
1	20.05.24	Satara	Aurangabad	Aurangabad	86-M-32	0.4	EH	20.0	0.0	0	0	40.00	0	0	Nil
2	20.05.24	Satara	Aurangabad	Aurangabad	Local	0.4	EH	0.0	20.0	0	0.4	20	0	0	Nil
3	20.05.24	Aadul	Paithan	Aurangabad	86-M-32	0.4	EH	20.0	0.0	0	0	0	1	0	Nil
4	20.05.24	Gandheli	Aurangabad	Aurangabad	88-0-36	0.4	EH	20.0	0.0	0.4	0	20	0	0	Nil
5	20.05.24	Pimpri raja	Aurangabad	Aurangabad	Local	0.4	EH	0.0	0.0	0	0.6	0	1	0	Nil
6	21.05.24	Dhakalgaon	Ambad	Jalna	Local	0.4	EH	0.0	20.0	0.4	0	0	0	0	Nil
7	21.05.24	Mardi	Ambad	Jalna	355	0.4	EH	20.0	0.0	0	1	0	0	0	2.0 Hairy Cat
8	21.05.24	Shiradhon	Ambad	Jalna	86-M-38	0.4	EH	0.0	0.0	0	0	0	0	0	Nil
9	21.05.24	Kingaonwadi	Ambad	Jalna	7872	0.8	EH	0.0	0.0	0	0.6	0	1	0	Nil
10	21.05.24	Rohilagad	Badnapur	Jalna	Local	0.4	EH	0.0	20.0	0	0.4	20	1	0	Nil
11	21.05.24	Nihalsing wadi	Badnapur	Jalna	Tata 739	0.8	EH	20.0	0.0	0.4	0	0	0	0	Nil
12	21.05.24	Badnapur	Badnapur	Jalna	Nirmal 240	0.2	EH	0.0	0.0	0	0.6	0	0	1	Nil
13	21.05.24	Badnapur	Badnapur	Jalna	9285	0.4	EH	0.0	0.0	0	0	20	0	0	Nil
14	21.05.24	Badnapur	Badnapur	Jalna	US 7711	0.2	EH	0.0	20.0	0	1	0	0	0	2.0 Hairy Cat
15	22.05.24	Kumbhefal	Aurangabad	Aurangabad	Local	0.4	EH	0.0	0.0	0	0	0	0	0	Nil
16	22.05.24	Kumbhefal	Aurangabad	Aurangabad	Nirmal 240	0.4	EH	0.0	0.0	0	0	0	0	0	3.0 Hairy Cat
17	22.05.24	Kumbhefal	Aurangabad	Aurangabad	204	0.4	EH	20.0	0.0	0	1	0	0	0	2.0 Hairy Cat
18	22.05.24	Bidkin	Aurangabad	Aurangabad	Local	0.4	EH	0.0	0.0	0.4	0.6	20	1	0	Nil
19	22.05.24	Karkin	Aurangabad	Aurangabad	7872	0.4	EH	20.0	20.0	0	0	0	0	0	Nil
20	22.05.24	Chittegaon	Aurangabad	Aurangabad	Local	0.4	EH	0.0	0.0	0	0	0	0	0	Nil
21	22.05.24	Chitegaon	Aurangabad	Aurangabad	86-M-84	0.4	EH	20.0	0.0	0	1	0	0	0	Nil
22	22.05.24	Harsul	Aurangabad	Aurangabad	Local	0.8	EH	0.0	0.0	0	0	0	0	0	Nil
23	22.05.24	Murumkheda	Aurangabad	Aurangabad	Local	0.6	EH	20.0	0.0	0	1	0	0	0	Nil
24	22.05.24	Sultanpur	Aurangabad	Aurangabad	Local	0.4	EH	0.0	0.0	0	0.4	0	0	0	3.0 Hairy Cat
25	22.05.24	Hirapur	Aurangabad	Aurangabad	7872	0.4	EH	0.0	0.0	0.2	0	20	0	0	Nil
							Mini.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
							Maxi.	20.00	20.00	0.40	1.00	40.00	1.00	1.00	
							Mean	7.20	4.00	0.07	0.34	6.40	0.20	0.04	

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Table V.8a: Relative susceptibility of pearl millet advanced entries to storage insect pests (*Tribolium castaneum*) at Jamnagar, Kharif 2023-24

Entry code	Entry name	Decoding	Adult <i>Tribolium</i> population/100g		Per cent grain damage		Per cent weight loss		Germination %
			At 3 months	At 6 months	At 3 months	At 6 months	At 3 months	At 6 months	At 6 months
PET 201	MH 2672	CZH 267	3.94# (14.50)	11.77# (137.50)	6.72* (1.38)	22.07* (14.13)	9.33* (3.00)	21.07* (13.00)	85.50
PET 202	MH 2673	RHB-273	4.18 (16.50)	12.98 (167.50)	7.86 (1.88)	23.27 (15.63)	13.54 (5.50)	23.17 (15.50)	83.50
PET 203	MH 2675	GHB 1305	2.34 (4.50)	6.40 (40.00)	2.87 (0.25)	11.89 (4.25)	5.74 (1.00)	13.54 (5.50)	95.50
PET 204	MH 2678	HHB 344	4.95 (23.50)	14.94 (222.50)	8.38 (2.13)	27.00 (20.63)	19.34 (11.00)	27.26 (21.00)	79.50
PET 205	MH 2682	APHB-126	2.12 (3.50)	6.39 (40.00)	2.87 (0.25)	11.35 (3.88)	4.90 (0.75)	10.75 (3.50)	95.50
PET 206	MH 2705	IIMRPH2	4.36 (18.00)	13.54 (182.50)	7.86 (1.88)	24.71 (17.50)	15.18 (7.00)	24.30 (17.00)	82.50
PET 207	MH 2626	MP7214	2.34 (4.50)	6.44 (40.50)	2.87 (0.25)	11.71 (4.13)	5.74 (1.00)	11.44 (4.00)	96.00
PET 208	MH 2631	PB1939	2.34 (4.50)	6.40 (40.00)	3.46 (0.38)	11.35 (3.88)	5.74 (1.00)	10.75 (3.50)	95.50
PET 209	MH 2709	MP7173	2.12 (3.50)	6.29 (38.50)	3.46 (0.38)	10.97 (3.63)	5.74 (1.00)	9.83 (3.00)	96.00
PET 210	MH 2710	MP7179	2.34 (4.50)	6.44 (40.50)	4.05 (0.50)	11.16 (3.75)	5.74 (1.00)	11.15 (4.00)	96.00
PET 211	MH 2711	DHBH-21003	3.60 (12.00)	10.88 (117.50)	6.08 (1.13)	19.01 (10.63)	6.93 (1.50)	18.90 (10.50)	88.50
PET 212	MH 2712	VNR-106	4.12 (16.00)	12.59 (157.50)	6.72 (1.38)	23.27 (15.63)	12.22 (4.50)	22.37 (14.50)	84.50
PET 213	MH 2713	VNR-107	4.35 (18.00)	13.45 (180.00)	7.86 (1.88)	24.24 (16.88)	15.30 (7.00)	24.33 (17.00)	80.50
PET 214	MH 2715	NBH 5992	1.87 (2.50)	6.20 (37.50)	2.87 (0.25)	10.37 (3.25)	4.90 (0.75)	9.05 (2.50)	97.00
PET 215	MH 2717	US7773	2.34 (4.50)	6.40 (40.00)	3.46 (0.38)	11.35 (3.88)	5.74 (1.00)	10.75 (3.50)	95.50
PET 216	MH 2723	BLPMH 112	4.06 (15.50)	12.29 (150.00)	7.86 (1.88)	23.27 (15.63)	12.22 (4.50)	22.37 (14.50)	84.50
PET 217	MH 2729	KPH6277	3.60 (12.00)	10.88 (117.50)	6.08 (1.13)	19.48 (11.13)	6.93 (1.50)	19.34 (11.00)	86.50
PET 218	MH 2730	KBH1870	2.12 (3.50)	6.04 (35.50)	2.87 (0.25)	10.57 (3.38)	6.38 (1.25)	10.52 (3.50)	96.50
PET 219	MH 2733	GHB 1337	2.34 (4.50)	6.48 (41.00)	2.87 (0.25)	11.35 (3.88)	6.93 (1.50)	11.44 (4.00)	96.00
PET 220	HHB 67 Imp.	HHB 67 Imp.	3.07 (8.50)	9.41 (87.50)	2.87 (0.25)	16.81 (8.38)	9.05 (2.50)	16.39 (8.00)	91.50
PET 221	PB 1756	PB 1756	3.79 (13.50)	11.34 (127.50)	7.01 (1.50)	20.69 (12.50)	7.85 (2.00)	20.24 (12.00)	86.50
PET 222	MPMH 21	MPMH 21	4.35 (18.00)	13.36 (177.50)	7.83 (1.88)	26.10 (19.38)	15.30 (7.00)	24.33 (17.00)	80.50
PET 223	RHB 223	RHB 223	3.99 (15.00)	12.29 (150.00)	7.01 (1.50)	23.27 (15.63)	9.96 (3.50)	21.47 (13.50)	84.50
PET 224	Pratap	Pratap	3.15 (9.00)	9.41 (87.50)	3.46 (0.38)	16.81 (8.38)	9.05 (2.50)	16.94 (8.50)	91.00
PET 225	AHB 1269	AHB 1269	4.06 (15.50)	12.48 (155.00)	6.08 (1.13)	22.27 (14.38)	12.85 (5.00)	22.77 (15.00)	85.50
PET 226	86M01	86M01	2.23 (4.00)	6.24 (38.00)	2.87 (0.25)	10.57 (3.38)	6.09 (1.25)	10.52 (3.50)	96.50
PET 227	KBH 108	KBH 108	3.79 (13.50)	11.66 (135.00)	5.35 (0.88)	21.44 (13.38)	7.85 (2.00)	20.24 (12.00)	87.50
PET 228	86M86	86M86	4.41 (18.50)	13.64 (185.00)	7.86 (1.88)	25.37 (18.38)	15.30 (7.00)	24.33 (17.00)	82.50
PET 229	MP 7878	MP 7878	4.12 (16.00)	12.59 (157.50)	6.08 (1.13)	23.27 (15.63)	11.44 (4.00)	21.95 (14.00)	84.50
PET 230	Kaveri Super Boss	Kaveri Super Boss	4.74 (21.50)	14.78 (217.50)	8.11 (2.00)	28.73 (23.13)	17.94 (9.50)	26.19 (19.50)	77.50
PET 231	NBH 4903	NBH 4903	4.00 (15.00)	12.49 (155.00)	6.72 (1.38)	23.27 (15.63)	12.22 (4.50)	22.37 (14.50)	84.50
PET 232	AHB 1200	AHB 1200	3.99 (15.00)	12.48 (155.00)	6.72 (1.38)	23.27 (15.63)	12.22 (4.50)	22.37 (14.50)	84.50
		SE.m +/-	0.19	0.22	0.37	0.43	1.46	1.24	2.17
		C.D. 5%	0.56	0.63	1.07	1.25	4.21	3.59	6.28
		C.V. %	7.98	3.00	9.60	3.26	10.88	9.62	3.47

N.B.: (#) indicates square root transformed values, (*) indicates arcsine transformed values, figure in brackets are original values.

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Table V.8b: Relative susceptibility of pearl millet advanced entries to storage insect pests (*Rhyzopertha dominica*) at Anand, Kharif 2023-24

Entry code	Entry name	Decoding	Adult <i>Rhyzopertha dominica</i> /100g		Per cent grain damage		Per cent weight loss		Germination %
			At 3 months	At 6 months	At 3 months	At 6 months	At 3 months	At 6 months	At 6 months
PET 201	MH 2672	CZH 267	4.5 (2.24)	11.5 (3.46)	8.0 (16.43)	12.5 (20.7)	4.5 (12.25)	6.5 (14.77)	80.00
PET 202	MH 2673	RHB-273	4.0 (2.12)	4.5 (2.24)	2.0 (8.13)	24.0 (18.91)	3.5 (10.78)	9.5 (17.95)	83.00
PET 203	MH 2675	GHB 1305	1.0 (1.22)	6.0 (2.55)	2.5 (9.10)	8.0 (12.92)	1.5 (7.03)	10.5 (18.91)	90.00
PET 204	MH 2678	HHB 344	4.0 (2.12)	4.0 (2.12)	1.5 (7.03)	24.0 (18.91)	3.5 (10.78)	9.5 (17.95)	83.00
PET 205	MH 2682	APHB-126	1.5 (1.41)	6.5 (2.65)	2.5 (9.10)	8.0 (14.18)	1.5 (7.03)	3.5 (10.78)	90.00
PET 206	MH 2705	IIMRPH2	1.5 (1.41)	4.5 (2.24)	2.5 (9.10)	8.0 (14.18)	1.5 (7.03)	6.5 (14.77)	90.00
PET 207	MH 2626	MP7214	4.5 (2.24)	7.5 (2.83)	3.0 (9.97)	24.0 (18.91)	4 (11.54)	7.0 (15.34)	82.00
PET 208	MH 2631	PB1939	4.5 (2.24)	8.0 (2.92)	4.5 (12.25)	24.0 (19.82)	4.5 (12.25)	6.5 (14.77)	81.00
PET 209	MH 2709	MP7173	1.5 (1.41)	5.5 (2.45)	3.5 (10.78)	8.0 (14.77)	1.5 (7.03)	3.5 (10.78)	90.00
PET 210	MH 2710	MP7179	2.0 (1.58)	4.5 (2.24)	3.0 (9.97)	16.0 (16.43)	2.5 (9.10)	6.0 (14.18)	87.50
PET 211	MH 2711	DHBH-21003	4.5 (2.24)	8.5 (3.00)	6.5 (14.77)	24.0 (19.37)	4.0 (11.54)	7.5 (15.89)	82.00
PET 212	MH 2712	VNR-106	1.5 (1.41)	3.5 (2.00)	2.0 (8.13)	12.0 (14.77)	1.5 (7.03)	6.0 (14.18)	88.00
PET 213	MH 2713	VNR-107	2.0 (1.58)	7.5 (2.83)	6.5 (14.77)	12.0 (15.34)	1.5 (7.03)	4.5 (12.25)	88.00
PET 214	MH 2715	NBH 5992	2.0 (1.58)	8.5 (3.00)	5.5 (13.56)	12.0 (15.34)	1.5 (7.03)	7.5 (15.89)	88.00
PET 215	MH 2717	US7773	2.0 (1.58)	3.0 (1.87)	2.5 (9.10)	12.0 (15.89)	2.0 (8.13)	9.5 (17.95)	87.50
PET 216	MH 2723	BLPMH 112	2.0 (1.58)	8.0 (2.92)	4.0 (11.54)	16.0 (16.43)	2.5 (9.10)	5.0 (12.92)	87.00
PET 217	MH 2729	KPH6277	2.5 (1.73)	10.5 (3.32)	6.0 (14.18)	16.0 (16.95)	2.5 (9.10)	9.0 (17.46)	87.00
PET 218	MH 2730	JKBH1870	3.0 (1.87)	8.0 (2.92)	5.5 (13.56)	16.0 (16.95)	2.5 (9.10)	4.0 (11.54)	87.00
PET 219	MH 2733	GHB 1337	3.0 (1.87)	7.0 (2.74)	4.5 (12.25)	16.0 (16.95)	2.5 (9.10)	7.5 (15.89)	87.00
PET 220	HHB 67 Imp.	HHB 67 Imp.	4.5 (2.24)	8.5 (3.00)	6.0 (14.18)	24.0 (19.82)	4.5 (12.25)	7.0 (15.34)	81.00
PET 221	PB 1756	PB 1756	3.0 (1.87)	9.5 (3.16)	6.5 (14.77)	16.0 (17.46)	2.5 (9.10)	8.5 (16.95)	85.00
PET 222	MPMH 21	MPMH 21	3.0 (1.87)	7.0 (2.74)	5.0 (12.92)	20.0 (17.95)	2.5 (9.10)	4.5 (12.25)	85.00
PET 223	RHB 223	RHB 223	3.0 (1.87)	7.0 (2.74)	4.5 (12.25)	20.0 (17.95)	3.5 (10.78)	8.0 (16.43)	85.00
PET 224	Pratap	Pratap	3.5 (2.00)	5.0 (2.35)	3.5 (10.78)	20.0 (17.95)	3.5 (10.78)	11.0 (19.37)	84.00
PET 225	AHB 1269	AHB 1269	3.5 (2.00)	6.5 (2.65)	5.0 (12.92)	20.0 (17.95)	3.5 (10.78)	9.0 (17.46)	84.00
PET 226	86M01	86M01	5.5 (2.45)	4.5 (2.24)	3.0 (9.97)	24.0 (20.70)	4.5 (12.25)	10.5 (18.91)	80.00
PET 227	KBH 108	KBH 108	4.0 (2.12)	10.5 (3.32)	8.0 (16.43)	20.0 (18.43)	3.5 (10.78)	7.5 (15.89)	83.00
PET 228	86M86	86M86	5.5 (2.45)	12.0 (3.54)	7.5 (15.89)	28.0 (21.97)	4.5 (12.25)	7.5 (15.89)	79.00
PET 229	MP 7878	MP 7878	8.5 (3.00)	7.5 (2.83)	5.5 (13.56)	36.0 (24.16)	7.0 (15.34)	7.0 (15.34)	76.00
PET 230	Kaveri S Boss	Kaveri S Boss	7.5 (2.83)	7.5 (2.83)	6.5 (14.77)	32.0 (22.38)	6.5 (14.77)	8.0 (16.43)	77.00
PET 231	NBH 4903	NBH 4903	5.5 (2.45)	6.0 (2.55)	4.0 (11.54)	28.0 (21.13)	4.5 (12.25)	12.5 (20.7)	79.00
PET 232	AHB 1200	AHB 1200	6.0 (2.55)	3.5 (2.00)	3.0 (9.97)	32.0 (21.97)	5.5 (13.56)	7.0 (15.34)	79.00
		SE.m +/-	0.09	0.07	0.71	1.59	0.85	0.89	1.81
		C.D. 5%	0.27	0.20	2.06	4.57	2.45	2.56	5.21
		C.V. %	6.81	3.67	8.46	12.47	11.87	8.06	3.03

N.B.: (#) indicates square root transformed values, (*) indicates arcsine transformed values, figure in brackets are original values.

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Table V.8b: Relative susceptibility of pearl millet advanced entries to storage insect pests (*Rhyzopertha dominica*) at Jodhpur, Kharif 2023-24

Entry code	Entry name	Decoding	Adult <i>Rhyzopertha</i> population/100g		Per cent grain damage		Per cent weight loss		Germination %
			At 3 months	At 6 months	At 3 months	At 6 months	At 3 months	At 6 months	At 6 months
PET 201	MH 2672	CZH 267	5.33# (27.50)	9.29# (85.50)	23.75* (16.25)	50.88* (58.00)	18.02* (9.70)	56.66* (68.50)	61.00
PET 202	MH 2673	RHB-273	5.19 (26.00)	8.51 (71.50)	21.97 (14.13)	48.12 (55.00)	17.44 (9.25)	51.49 (62.25)	63.50
PET 203	MH 2675	GHB 1305	5.16 (26.00)	8.46 (71.00)	21.64 (13.75)	47.74 (54.25)	17.51 (9.25)	50.62 (59.75)	64.50
PET 204	MH 2678	HHB 344	5.09 (25.00)	8.41 (70.00)	21.33 (13.38)	46.06 (51.75)	17.02 (9.00)	49.51 (57.88)	64.00
PET 205	MH 2682	APHB-126	5.32 (27.50)	9.08 (81.50)	23.37 (16.25)	49.51 (57.50)	17.94 (9.50)	56.70 (68.25)	61.50
PET 206	MH 2705	IIMRPH2	5.55 (30.00)	9.59 (91.00)	25.34 (18.38)	52.58 (62.63)	18.65 (10.50)	56.67 (69.50)	59.00
PET 207	MH 2626	MP7214	5.73 (32.00)	10.46 (110.50)	27.24 (21.25)	54.91 (66.25)	19.40 (11.25)	56.97 (70.25)	55.00
PET 208	MH 2631	PB1939	6.40 (40.00)	10.72 (114.00)	27.68 (21.75)	56.06 (68.25)	19.40 (11.25)	57.42 (71.00)	54.00
PET 209	MH 2709	MP7173	5.55 (30.50)	9.70 (93.50)	25.79 (19.00)	53.32 (63.75)	18.56 (10.25)	56.46 (69.50)	58.50
PET 210	MH 2710	MP7179	5.29 (27.00)	9.06 (81.00)	23.17 (15.88)	49.78 (57.50)	17.65 (9.20)	55.53 (67.75)	61.50
PET 211	MH 2711	DHBH-21003	4.64 (20.50)	7.48 (55.00)	18.78 (10.50)	39.02 (40.00)	15.61 (7.25)	43.61 (47.63)	69.00
PET 212	MH 2712	VNR-106	4.73 (21.50)	7.80 (60.00)	19.16 (10.88)	39.80 (41.25)	15.88 (7.50)	44.11 (48.50)	68.50
PET 213	MH 2713	VNR-107	4.93 (23.50)	8.15 (65.50)	20.64 (12.50)	43.53 (47.50)	16.30 (8.00)	44.69 (49.50)	67.50
PET 214	MH 2715	NBH 5992	5.08 (25.00)	8.21 (67.00)	21.05 (13.13)	45.27 (50.50)	16.91 (8.75)	47.91 (55.00)	66.00
PET 215	MH 2717	US7773	5.24 (26.50)	8.72 (75.00)	22.62 (15.00)	49.35 (57.50)	17.66 (9.25)	54.85 (66.50)	62.00
PET 216	MH 2723	BLPMH 112	5.46 (29.00)	9.44 (88.50)	24.98 (17.88)	52.38 (62.50)	18.34 (10.00)	55.92 (68.00)	60.00
PET 217	MH 2729	KPH6277	6.24 (38.00)	10.70 (113.50)	27.08 (21.25)	55.77 (67.75)	19.78 (11.50)	57.13 (70.50)	55.00
PET 218	MH 2730	JKBH1870	6.93 (47.00)	11.63 (134.50)	29.40 (24.25)	57.68 (71.25)	21.76 (13.75)	57.91 (71.75)	52.50
PET 219	MH 2733	GHB 1337	8.10 (65.00)	12.53 (156.00)	31.58 (27.75)	61.27 (76.88)	22.87 (15.13)	58.84 (73.25)	47.50
PET 220	HHB 67 Imp.	HHB 67 Imp.	5.62 (31.00)	9.97 (98.50)	26.37 (20.25)	54.20 (65.00)	19.19 (11.00)	56.77 (70.00)	57.00
PET 221	PB 1756	PB 1756	5.73 (32.00)	10.42 (108.00)	26.85 (20.88)	55.37 (66.25)	19.81 (11.50)	56.93 (70.25)	55.00
PET 222	MPMH 21	MPMH 21	5.39 (28.00)	9.33 (86.00)	24.80 (17.63)	52.38 (62.25)	18.41 (10.00)	57.03 (69.25)	60.50
PET 223	RHB 223	RHB 223	5.24 (26.50)	8.68 (74.50)	22.58 (14.88)	48.58 (56.25)	17.46 (9.10)	53.88 (65.13)	62.50
PET 224	Pratap	Pratap	4.80 (22.00)	8.12 (65.00)	19.46 (11.13)	43.24 (47.00)	16.14 (8.00)	44.68 (49.50)	68.00
PET 225	AHB 1269	AHB 1269	4.74 (21.50)	7.96 (64.00)	17.81 (10.88)	42.39 (45.50)	16.16 (7.75)	44.47 (49.13)	68.00
PET 226	86M01	86M01	4.84 (24.00)	8.07 (66.00)	21.07 (13.00)	44.26 (48.75)	16.18 (7.85)	47.04 (53.50)	67.00
PET 227	KBH 108	KBH 108	4.89 (24.50)	8.13 (66.00)	21.34 (13.25)	44.92 (49.88)	16.11 (8.25)	47.64 (54.50)	66.50
PET 228	86M86	86M86	5.23 (26.50)	8.54 (72.00)	22.28 (14.50)	48.41 (55.13)	17.80 (9.50)	53.65 (64.75)	63.00
PET 229	MP 7878	MP 7878	6.77 (45.50)	10.88 (118.00)	28.60 (23.00)	59.33 (70.88)	20.66 (12.50)	57.87 (71.75)	53.50
PET 230	Kaveri S Boss	Kaveri S Boss	6.89 (46.50)	11.00 (120.00)	28.98 (23.50)	58.98 (71.25)	21.32 (13.25)	57.72 (71.50)	53.00
PET 231	NBH 4903	NBH 4903	6.63 (43.00)	10.88 (117.50)	28.39 (22.75)	57.52 (70.00)	19.69 (11.40)	57.86 (71.50)	54.00
PET 232	AHB 1200	AHB 1200	7.61 (57.00)	11.92 (141.00)	30.88 (26.38)	59.17 (72.75)	22.17 (14.25)	58.54 (72.75)	48.00
		SE.m +/-	0.50	0.59	3.19	9.23	2.20	5.24	5.66
		C.D. 5%	1.44	1.70	N/A	N/A	N/A	N/A	N/A
		C.V. %	12.50	8.78	18.62	25.75	16.92	13.88	13.29

N.B.: (#) indicates square root transformed values, (*) indicates arcsine transformed values, figure in brackets are original values.

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Table V.8d: Relative susceptibility of pearl millet advanced entries to storage insect pests (*Rhyzopertha dominica*) at Anantapur, Kharif 2023-24.

Sr. No.	Adults emerged		% damage		% weight loss		Germination % at 6 months
	3 months	6 months	3 months	6 months	3 months	6 months	
1	11.04 # (122)	21.14 # (447)	36.5 *(35.5)	54.02 *(65.5)	16.11 *(7.7)	22.07* (14.12)	39.5
2	11 (121)	22.21 (493.5)	55.5(68)	57.49(71.1)	18.38 (9.95)	24.27 (16.9)	30
3	10.77 (116)	22.46 (504.5)	43.8 (48)	64.8 (81.8)	19.55 (11.2)	25.40 (18.4)	31.5
4	9.64 (93)	14.6 (214)	42.1 (45)	58.13 (72.1)	16.95 (8.5)	23.77 (16.25)	28.5
5	7.68 (59)	16.12 (260)	32.8 (29.5)	43.56 (47.5)	6.28 (1.2)	10.30 (3.2)	44.5
6	9.64 (93)	22.44 (504)	43.5 (47.5)	54.40 (66.1)	15.22 (6.9)	20.79 (12.6)	33.5
7	8.63 (74.5)	19.79 (392)	36.8 (36)	56.47 (69.5)	15.28 (6.95)	22.38 (14.5)	22
8	8.66 (75)	16.91 (286)	33.8 (31)	50.40 (59.3)	6.41 (1.25)	13.11 (5.15)	50.5
9	5.65 (32)	12.52 (157)	27.9 (22)	32.89 (29.5)	3.84 (0.45)	13.11 (2.9)	26.5
10	55 (7.41)	16.62 (276.5)	34.1 (31.5)	39.66 (40.7)	8.23 (2.05)	13.18 (5.2)	30
11	10.17 (103.5)	20.71 (429)	34.1 (31.5)	49.38 (57.6)	10.70 (3.45)	16.11 (7.7)	32
12	12.22 (149.5)	22.32 (498.5)	61.51 (77.25)	62.37 (78.5)	17.35 (8.9)	23.38 (15.75)	31
13	13.15 (173)	21.11 (446)	51.35 (61)	65.74 (83.1)	15.83 (7.45)	25.06 (17.95)	32.5
14	8.95 (80.5)	10.51 (110.5)	26.9 (20.5)	39.96 (41.2)	11.60 (4.05)	15.83 (7.45)	40.5
15	9 (81)	16.58 (275)	31.3 (27)	45.78 (51.3)	11.82 (4.2)	18.4 (10.05)	41.5
16	8.68 (75.5)	18.41 (339)	34.7 (32.5)	48.5 (56.1)	7.49 (1.7)	11.16 (3.75)	63.5
17	12.90 (166.5)	22.79 (519.5)	42.7 (46)	62.63 (78.8)	20.5 (12.3)	30.4 (25.75)	21.5
18	8.48 (72)	13.61 (185.5)	27.27 (21)	40.90 (42.8)	2.56 (0.2)	7.49 (1.7)	32.5
19	7.21 (52)	7.21 (218.5)	33.52 (30.5)	50.91 (60.2)	7.90 (1.89)	10.7 (3.5)	21.5
20	8.45 (71.5)	17.90 (320.5)	30.24 (25.375)	47.29 (54)	8.23 (2.05)	13.18 (5.2)	44.5
21	11.93 (142.5)	21 (441)	40.10 (41.5)	58.37 (72.5)	17.05 (8.6)	24.80 (17.6)	22
22	11.61 (135)	19.45 (378.5)	30.3 (25.5)	40.17 (41.6)	10.05 (3.05)	15.17 (6.85)	33
23	12.49 (156)	24.66 (608.5)	58(72)	64.98 (82.1)	21.68 (13.65)	30.09 (25.15)	34
24	11.44 (131)	18.90 (357.5)	47(53.5)	65.45 (82.7)	16.00 (7.6)	23.69 (16.15)	20.5
25	12.44 (155)	20.42 (417)	49.31 (57.5)	55.39 (67.7)	10.86 (3.55)	18.09 (9.65)	15
26	10.60 (112.5)	21.45 (460.5)	34.44 (32)	52.83 (63.5)	15.00 (6.7)	21.68 (13.65)	20
27	11.93 (142.5)	20.78 (432)	36.5 (35.5)	55.5 (68)	10.93 (3.6)	17.60 (9.15)	37
28	13.20 (174.5)	19.67 (387)	51.06 (60.5)	60.08 (75.1)	11.68 (4.1)	16.79 (8.35)	25.5
29	11.87 (141)	20.35 (414.5)	49.96 (58.6)	54.09 (65.5)	15.22 (6.9)	20.35 (12.1)	20
30	12.46 (155.5)	20.63 (426)	34.44 (32)	41.04 (43.1)	9.80 (2.9)	15.11 (6.8)	7.5
31	11.93 (142.5)	20.57 (423.5)	29.66 (24.5)	55.47 (67.8)	12.78 (4.9)	18.62 (10.2)	27.5
32	11.26 (127)	20.85 (435)	40.10 (41.5)	47.29 (54)	12.52 (4.7)	17.95 (9.5)	64.5

N.B.: (#) indicates square root transformed values, (*) indicates arcsine transformed values, figure in brackets are original values.

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Table V.8e: Relative susceptibility of pearl millet advanced entries to storage insect pests (*Rhyzopertha dominica*) at Jaipur, Kharif 2023-24.

Entry code	Entry name	Decoding	Adult <i>Rhyzopertha</i> population/250g		Per cent grain damage		Per cent weight loss		Germination %
			At 3 months	At 6 months	At 3 months	At 6 months	At 3 months	At 6 months	At 6 months
PET 201	MH 2672	CZH 267	4.69# (21.00)	9.37# (87.00)	6.93* (1.50)	14.75 (6.50)	5.23* (0.85)	12.97* (5.05)	84.00
PET 202	MH 2673	RHB-273	4.05 (15.50)	7.91 (62.00)	6.93 (1.50)	13.54 (5.50)	5.36 (0.90)	11.74 (4.20)	86.50
PET 203	MH 2675	GHB 1305	4.89 (23.00)	9.75 (94.50)	9.05 (2.50)	17.43 (9.00)	6.91 (1.45)	16.21 (7.85)	81.50
PET 204	MH 2678	HHB 344	5.43 (28.50)	11.66 (135.0)	9.97 (3.00)	20.24 (12.00)	8.43 (2.15)	18.41 (10.00)	80.00
PET 205	MH 2682	APHB-126	4.67 (21.00)	9.26 (85.50)	8.13 (2.00)	15.81 (7.50)	7.15 (1.55)	19.37 (11.10)	80.00
PET 206	MH 2705	IIMRPH2	6.50 (42.00)	12.03 (144.50)	10.75 (3.50)	21.47 (13.50)	9.80 (2.90)	19.65 (11.35)	79.00
PET 207	MH 2626	MP7214	6.35 (39.50)	13.50 (181.50)	10.75 (3.50)	25.09 (18.00)	9.96 (3.00)	24.78 (17.65)	72.00
PET 208	MH 2631	PB1939	8.90 (78.50)	17.17 (294.50)	14.75 (6.50)	32.23 (28.50)	13.93 (5.80)	30.43 (25.70)	66.50
PET 209	MH 2709	MP7173	6.03 (35.50)	11.98 (143.00)	9.83 (3.00)	21.95 (14.00)	7.94 (2.05)	19.22 (10.85)	79.50
PET 210	MH 2710	MP7179	7.65 (58.00)	15.43 (238.50)	12.92 (5.00)	28.56 (23.00)	11.96 (4.30)	26.39 (19.80)	77.50
PET 211	MH 2711	DHBH-21003	5.44 (29.50)	9.25 (85.50)	9.05 (2.50)	16.30 (8.00)	7.68 (1.80)	14.43 (6.40)	86.00
PET 212	MH 2712	VNR-106	5.37 (28.00)	10.76 (115.50)	7.85 (2.00)	19.29 (11.00)	6.29 (1.35)	18.21 (9.90)	83.00
PET 213	MH 2713	VNR-107	4.68 (21.00)	7.87 (61.00)	6.93 (1.50)	13.54 (5.50)	5.99 (1.10)	12.58 (4.75)	87.50
PET 214	MH 2715	NBH 5992	7.24 (51.50)	14.25 (202.00)	11.53 (4.00)	27.26 (21.00)	8.81 (2.35)	25.09 (18.00)	74.50
PET 215	MH 2717	US7773	7.30 (53.50)	14.63 (217.50)	12.85 (5.00)	27.67 (22.00)	11.82 (4.25)	27.12 (20.95)	72.00
PET 216	MH 2723	BLPMH 112	6.04 (35.50)	12.26 (149.50)	9.97 (3.00)	22.35 (14.50)	8.71 (2.30)	22.21 (14.30)	72.50
PET 217	MH 2729	KPH6277	8.60 (73.50)	17.33 (302.00)	14.13 (6.00)	34.05 (31.50)	13.20 (5.25)	31.13 (26.90)	68.50
PET 218	MH 2730	JKBH1870	6.66 (43.50)	13.42 (179.50)	11.44 (4.00)	24.70 (17.50)	11.05 (3.70)	22.41 (14.55)	83.00
PET 219	MH 2733	GHB 1337	6.00 (35.00)	11.75 (137.50)	9.97 (3.00)	21.52 (13.50)	10.13 (3.10)	18.78 (10.45)	83.00

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Entry code	Entry name	Decoding	Adult <i>Rhizopertha</i> population/250g		Per cent grain damage		Per cent weight loss		Germination %
			At 3 months	At 6 months	At 3 months	At 6 months	At 3 months	At 6 months	At 6 months
PET 220	HHB 67 Imp.	HHB 67 Imp.	7.39 (54.00)	13.38 (178.00)	12.22 (4.50)	25.09 (18.00)	11.75 (4.20)	24.16 (16.85)	77.00
PET 221	PB 1756	PB 1756	6.12 (36.50)	12.55 (158.50)	9.05 (2.50)	24.20 (17.00)	7.13 (1.60)	22.23 (14.90)	78.00
PET 222	MPMH 21	MPMH 21	4.74 (21.50)	7.06 (49.00)	6.93 (1.50)	12.22 (4.50)	6.66 (1.35)	12.65 (4.80)	86.00
PET 223	RHB 223	RHB 223	7.45 (54.50)	14.39 (206.00)	12.22 (4.50)	26.55 (20.00)	10.39 (3.30)	25.86 (19.05)	73.00
PET 224	Pratap	Pratap	6.23 (38.00)	13.40 (179.00)	9.97 (3.00)	25.42 (18.50)	9.00 (2.45)	22.41 (14.55)	77.00
PET 225	AHB 1269	AHB 1269	7.03 (48.50)	14.52 (210.00)	11.53 (4.00)	27.96 (22.00)	10.86 (3.55)	29.69 (24.55)	68.50
PET 226	86M01	86M01	8.72 (76.50)	20.14 (404.50)	13.98 (6.00)	39.51 (40.50)	12.20 (4.55)	34.22 (31.65)	60.50
PET 227	KBH 108	KBH 108	7.38 (53.50)	15.33 (234.50)	11.53 (4.00)	28.63 (23.00)	10.62 (3.40)	26.13 (19.45)	77.00
PET 228	86M86	86M86	5.93 (35.00)	12.66 (161.50)	11.44 (4.00)	23.76 (16.50)	10.22 (3.25)	21.21 (13.45)	79.00
PET 229	MP 7878	MP 7878	7.77 (59.50)	17.76 (315.00)	12.92 (5.00)	34.11 (31.50)	13.47 (5.45)	31.21 (27.05)	64.00
PET 230	Kaveri Super Boss	Kaveri Super Boss	7.34 (53.00)	17.39 (301.50)	12.85 (5.00)	31.90 (28.00)	12.01 (4.40)	30.22 (25.35)	69.00
PET 231	NBH 4903	NBH 4903	6.18 (37.50)	11.42 (129.50)	10.75 (3.50)	21.11 (13.00)	11.28 (3.85)	19.61 (11.30)	79.50
PET 232	AHB 1200	AHB 1200	5.17 (26.00)	9.24 (87.50)	9.05 (2.50)	16.59 (8.50)	8.24 (2.20)	16.46 (4.10)	84.00
		SE.m +/-	0.54	0.89	1.04	1.92	1.08	1.93	3.68
		C.D. 5%	1.58	2.56	3.02	5.54	3.13	5.59	10.66
		C.V. %	12.08	9.80	13.97	11.48	16.10	12.35	6.75

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Table V.9a: PMET-9: Statement showing adult moth catches of FAW along with weather parameters during *kharif*-2023 (Centre: Jamnagar)

No.	S M W	Date of Observation	Days After Germination	Fall army worm adult catches per trap	Fall army worm % damage	Temp. O Maxi.	Temp. O Mini.	R.H. Morn.	R.H. Even.	Wind speed km/hr	BSS (hrs)	Eo (mm)	Rainfall (mm)	Rainy Days
1	30	29.07.24	7 DAG	0	0.00	31.1	27.1	92	80	9.7	1.6	3.0	122.0	2
2	31	05.08.24	14 DAG	5.40	0.00	30.9	26.5	93	83	8.9	1.4	3.7	49.0	4
3	32	12.08.24	21 DAG	0	0.00	30.8	26.4	90	81	7.9	1.7	3.1	18.0	3
4	33	19.08.24	28 DAG	0	0.00	31.6	26.1	91	79	6.5	3.7	3.3	14.5	3
5	34	26.08.24	35 DAG	0	0.00	33.3	26.7	87	69	8.8	6.8	4.1	27.5	1
6	35	02.09.24	42 DAG	0	0.00	29.6	25.2	96	79	13.1	2.8	1.8	604.0	4
7	36	09.09.24	49 DAG	0	0.00	32.0	26.0	94	70	6.9	6.1	3.7	1.5	0
8	37	16.09.24	56 DAG	0	0.00	32.7	25.1	86	60	8.1	7.8	4.6	0.0	0
9	38	23.09.24	63 DAG	0	0.00	32.9	25.1	88	62	7.1	8.7	4.8	0.0	0
10	39	30.09.24	70 DAG	0	0.00	33.2	25.6	89	66	8.4	6.2	4.5	28.0	2
11	40	07.10.24	77 DAG	0	0.00	33.4	25.5	87	62	6.6	8.1	4.5	0.0	0
12	41	14.10.24	84 DAG	0	0.00	34.5	26.2	81	55	4.8	5.8	4.9	9.0	1

N.B.: Date of sowing: 18.07.2024, Harvesting: 20.10.2024, Variety: General pearl millet crop

Table V.9b: PMET-9: Statement showing adult moth catches of FAW along with weather parameters during *kharif*-2023 (Centre: Aurangabad)

No.	SWW	Period of observations	Days after Germi.	FAW adult catches per trap	FAW larval counts per 20 plants	FAW % damaged Plants	Temp °C Maxi.	Temp °C Mini.	RH Morning	RH Evening	Ranfall mm	Rainy days
1	31	30/7-05/8	7 DAG	0.00	0.00	0.00	29.14	23.41	86.43	97.00	18.50	3.00
2	32	06/8-12/8	14 DAG	0.00	0.00	0.00	29.27	23.07	78.86	96.14	4.50	1.00
3	33	13/8-19/8	21 DAG	0.00	0.00	0.00	31.50	23.61	70.14	87.57	54.50	4.00
4	34	20/8-26/8	28 DAG	0.80	1.00	10.00	30.30	22.77	83.14	94.29	85.00	4.00
5	35	27/8-02/9	35 DAG	0.00	0.00	10.00	29.63	22.76	70.71	82.71	72.00	2.00
6	36	03/9-09/9	42 DAG	1.00	1.00	15.00	28.30	22.50	80.71	95.57	14.50	3.00
7	37	10/9-16/9	49 DAG	0.80	0.00	20.00	29.59	21.39	72.43	88.43	4.50	1.00
8	38	17/9-23/9	56 DAG	1.40	1.00	20.00	31.27	22.36	58.57	85.00	0.00	0.00
9	39	24/9-30/9	63 DAG	0.00	0.00	20.00	29.88	22.73	75.13	90.84	62.50	3.00

N.B.: Date of sowing: 24.07.2024, Variety: AHB-1200, Date of Harvesting: 04.10.2024

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Table V.9c: PMET-9: Statement showing adult moth catches of FAW along with weather parameters during *kharif*-2023 (Centre: Hisar)

No.	SWW	Date of Obs.	Days after Germin.	FAW adult catches per trap	FAW larval counts per 20 plants	FAW % damaged Plants	Temp °C Maxi.	Temp °C Mini.	RH Morning	RH Evening	Rainfall mm	Rainy days
1	29	7/20/2024	7 DAG	0	0	0	37.8	28.7	85	60	1.20	0
2	30	7/27/2024	14 DAG	0	0	0	37.6	28.8	83	56	8.00	1
3	31	8/3/2024	21 DAG	3.8	3	2	35.5	28.0	87	68	71.00	2
4	32	8/10/2024	28 DAG	7.2	5	6	33.4	26.7	93	75	143.80	4
5	33	8/17/2024	35 DAG	0	7	10	33.5	27.3	93	70	23.40	1
6	34	8/24/2024	42 DAG	0	0	0	34.5	27.2	87	66	9.00	2
7	35	8/31/2024	49 DAG	0	0	0	33.0	26.2	94	72	29.20	2
8	36	7-09.2024	56 DAG	1.2	0	0	31.7	25.7	93	83	46.10	2
9	37	9/14/2024	63 DAG	1	0	0	33.9	25.0	92	63	19.60	1
10	38	9/21/2024	70 DAG	0	0	0	34.1	24.4	92	60	0.00	0
			Mean	1.32	1.5	1.8	--	--	--	--	--	--

N.B.: Date of sowing: 10.07.2024, Date of Harvesting: 29.09.2024, Variety: HB 299, Total rainfall= 351.3 mm, Rainy days= 15

Table V.9d: PMET-9: Statement showing adult moth catches of FAW along with weather parameters during *kharif*-2023 (Centre: Jodhpur)

No.	S M W	Date of Obs.	Days after Germin.	FAW adult catches per trap	FAW larval counts per 20 plants	FAW % damaged Plants
1	30	29.07.24	7 DAG	0	0	0
2	31	5.08.24	14 DAG	0	0	0
3	32	12.08.24	21 DAG	0	0	0
4	33	19.08.24	28 DAG	0	0	0
5	34	26.08.24	35 DAG	0	2	5
6	35	2.09.24	42 DAG	0	5	10
7	36	9.09.24	49 DAG	0	7	10
8	37	16.09.24	56 DAG	0	1	0
9	38	23.09.24	63 DAG	0	0	0
10	39	30.09.24	70 DAG	0	0	0
11	40	7.10.24	77 DAG	0	0	0
12	41	14.10.24	84 DAG	0	0	0
13	42	21.10.24	91 DAG	0	0	0
			Mean	0	1.15	0

CHAPTER VI
FRONT LINE
DEMONSTRATIONS

FRONTLINE DEMONSTRATIONS

The front line demonstrations (FLD's) on different production aspects of pearl millet were conducted on 874.8 ha area against the target plan of 1000 ha in the states of Rajasthan, Haryana, Gujarat, Punjab, Maharashtra, Karnataka, Andhra Pradesh and Tamil Nadu. The area under *kharif* and *summer* FLD's is 834.8 and 40 ha, respectively. The summary results are given in Table VI.I:

S. No.	Name of the centre	Area (ha)	No. of Demo.	Grain yield (kg/ha)		% imp. in grain yield	Stover yield (kg/ha)		Type of Demonstration
				IP	FP		IP	FP	
1	Bikaner (Rajasthan)	100	100	1213	966	25.6	2785	2472	Improved practices (Bio-fortified hybrid HHB 299 v/s Farmer's practices
2	Jaipur (Rajasthan)	50	50	2498	2074	20.4	55.4	-	Improved practices (Bio-fortified hybrids RHB 233 and RHB 234 v/s Farmer's practices
3	Hisar (Haryana)	19.8	45	2739	2432	12.6	-	-	Improved practices (Bio-fortified hybrid HHB 299; Fe-73 ppm & Zn-41 ppm) v/s Farmer's practices
4	Jamnagar (Gujarat) (Summer)	20	50	4351	3993	9.0	7731	6994	Improved biofortified hybrid (GHB 1129) v/s Farmer's practices
5	Jamnagar (Gujarat) (Kharif)	10	25	1306	1131	15.5	4273	3834	Improved biofortified hybrid (GHB 732) v/s Local variety
6	Ananthapuram (Andhra Pradesh)	20	20	966	759	27.3	2504	2283	Improved practices (Bio-fortified variety ABV 04; Fe-70 ppm & Zn-63 ppm) v/s Farmer's practices
7	Ludhiana (Punjab)	20	20	3952	3209	23.2	7410	7344	Improved practices (Hybrid PCB 167) v/s Farmer's practices
8	Dhule (Maharashtra)	15	37	1898	1683	12.7	3332	2975	Improved practices (Aadishakti) v/s Farmer's practices
9	Vijayapur (Karnataka)	20	20	2005	1746	14.8	5492	2505	Improved practices (Bio-fortified hybrid VPMH 14) v/s Farmer's practices
10	Vizianagaram (Andhra Pradesh) (Kharif)	30	30	2280	1805	26.3	7883	7836	Improved practices (Bio-fortified variety ABV 04; Fe-70 ppm & Zn-63ppm) v/s Farmer's practices
11	Coimbatore (Tamil Nadu)	20	31	3083	2533	21.7	3975	2910	Full Package of practices (Bio-fortified hybrid AHB 1200; Fe-77 ppm & Zn-39 ppm and COH 10) v/s Farmer's practices
12	Aurangabad (Maharashtra)	40	100	2081	1722	20.9	4849	3989	Full Package of practices (Bio-fortified hybrid AHB 1200) v/s Farmer's practices
13	KVK CAZRI, Jodhpur (Rajasthan)	20	20	2059	1664	23.7	3092	2235	Improved practices (Bio-fortified hybrid HHB 299; Fe-73 ppm & Zn-41 ppm) v/s Farmer's practices

CHAPTER VI: FRONT LINE DEMONSTRATIONS

S. No.	Name of the centre	Area (ha)	No. of Demo.	Grain yield (kg/ha)		% imp. in grain yield	Stover yield (kg/ha)		Type of Demonstration
				IP	FP		IP	FP	
14	KVK Chandgothi, Churu (Rajasthan)	100	167	1626	1366	19.0	3022	2369	Improved practices (Bio-fortified hybrid HHB 299; Fe-73 ppm & Zn-41 ppm) v/s Farmer's practices
15	KVK Phalodi Jodhpur (Rajasthan)	20	50	2073	1688	22.9	3173	2791	Improved practices (Bio-fortified hybrid HHB 299; Fe-73 ppm & Zn-41 ppm) v/s Farmer's practices
16	KVK Keshwana, Jalore (Rajasthan)	50	50	2012	1655	21.6	7070	5639	Improved practices v/s Farmer's practices
17	KVK Athiyasan, Nagaur (Rajasthan)	50	63	1942	1566	24.0	6835	5530	Improved practices v/s Farmer's practices
18	KVK Gudamalani, Barmer (Rajasthan)	100	100	1190	827	43.8	1704	1148	Improved practices (Bio-fortified hybrid HHB 299; Fe-73 ppm & Zn-41 ppm) v/s Farmer's practices
19	KVK Pokaran Jaisalmer-II (Rajasthan)	100	125	1025	810	26.5	1885	1455	Improved practices (Bio-fortified hybrid HHB 299; Fe-73 ppm & Zn-41 ppm) v/s Farmer's practices
20	Vizianagaram (Andhra Pradesh) (Summer)	20	20	2312	1792	29.0	7822	7557	Improved practices (Bio-fortified variety ABV 04; Fe-70 ppm & Zn-63ppm) v/s Farmer's practices
21	KVK Bamanwara, Jalore-II (Rajasthan)	30	40	1470	1230	19.5	-	-	Improved practices (Bio-fortified hybrid HHB 299; Fe-73 ppm & Zn-41 ppm) v/s Farmer's practices
22	COA, Sumerpur-Pali (Rajasthan)	20	50	1103	819	34.6	-	-	Improved practices (Bio-fortified hybrid HHB 299; Fe-73 ppm & Zn-41 ppm) v/s Farmer's practices
G. Total		874.8	1213						

Total FLD's allotted (ha.)	1000 ha.	FLD's with Biofortified hybrid/variety		874.8 ha
Total FLD's conducted (ha.)	874.8 ha.	% FLD's with Biofortified hybrid/variety		100%
		Zone	No. of FLD's	Biofortified
FLD's conducted (<i>Kharif</i>)	834.8 ha.	Zone A ₁	590	590
FLD's conducted (<i>Summer</i>)	40 ha.	Zone A	99.8	99.8
		Zone B	145	145
		Summer (Zone A & B)	40	40

Bikaner: During *Kharif* 2024 season, hundred FLD's on improved practices of pearl millet (Full package of practices and use of improved biofortified hybrid HHB 299) v/s farmer's practices in pearl millet were conducted in 100 ha area. The improved package of practices (Full package of practices and biofortified hybrid HHB 299) recorded 25.6% higher grain yield (1213 kg/ha) compared to the 966 kg/ha obtained with farmer's practices.

Jaipur: To demonstrate the production potential of improved hybrids (RHB 233 and RHB 234) fifty frontline demonstrations (50 ha area) were conducted in Jaipur, Kothputli Behror and Ajmer districts of Rajasthan. An average grain yield of 2498 kg/ha was recorded with adoption of improved hybrids as compared to the farmers practices (2074 kg/ha). The average increase in grain yield was to the tune of 20.4% over the farmer's practices.

Hisar: During *Kharif* 2024, forty five FLD's on pearl millet in 19.8 ha area were conducted on different production aspects *i.e.* Improved practices (Use of improved hybrid HHB 299, Recommended dose of Nitrogen & Phosphorus along with Zn, biomix and herbicide Atrazine +1 HW)/v/s Farmer's Practices (Use of Pvt. Hybrid, Suboptimal use of N (40-60 kg/ha) only + 1 HW, negligible or no use of P, ZnSO₄ fertilizers, biomix biofertilizer and herbicide Atrazine.). The overall average increase of 12.6% in grain yield was recorded with adoption of improved practices (2739 kg/ha) as compared to the farmers practice (2432 kg/ha).

Jamnagar (Summer): Fifty FLD's in 20 ha area on improved biofortified hybrid *i.e.* GHB 1129 were conducted at different locations of Gujarat. An average grain yield of 4551 kg/ha was obtained by adoption of improved hybrid as compared to the local variety (3993 kg/ha) and the average increase in the grain yield was 9.0%.

Jamnagar (Kharif): Twenty five FLD's in 10 ha area on improved biofortified hybrid *i.e.* GHB 732 were conducted at different locations of Gujarat. An average grain yield of 1306 kg/ha was obtained by adoption of improved biofortified hybrid (GHB 732) as compared to the local variety (1131 kg/ha) and the average increase in the grain yield was 15.5%.

Ananthapuram: During *Kharif* 2024, twenty FLD's were conducted in 20 ha area on improved practices (varietal aspect of pearl millet *i.e.* comparison ABV 04 v/s farm saved seeds (farmer's practices). The average grain yield of 966 kg/ha was obtained in case of improved practices compared to the 759 kg/ha recorded by the farmer's practices. The average increase in the grain yield was 27.3% over the farmer's practices.

Ludhiana: During *Kharif* 2024, twenty FLD's were conducted in 20 ha area on improved practices of pearl millet (Full package of practices and use of improved hybrid PCB 167) v/s farmer's practices. The average grain yield of 3952 kg/ha was obtained in case of improved practices compared to the 3209 kg/ha recorded by the farmer's practices. The average increase in the grain yield was to the tune of 23.2% over the farmer's practices.

Dhule: During *Kharif* 2043, thirty seven FLD's were conducted in 15 ha area on improved practices (varietal aspect of pearl millet *i.e.* comparison of different hybrid Aadishakti v/s local variety) v/s farmer's practices. The average grain yield of 1898 kg/ha was obtained in case of improved practices compared to the 1683 kg/ha recorded by the farmer's practices. The average increase in the grain yield was 12.7% over the farmer's practices.

Vijayapur: During *Kharif* 2024, twenty FLD's in 20 ha area were conducted on full package of practices (varietal aspect of pearl millet *i.e.* VPMH 14v/s farmer's practices. The mean grain yield of pearl millet 2005 kg/ha was recorded in case of improved practices compared to the 1746 kg/ha obtained with farmer's practices. The average increase in the grain yield was 14.8% over the farmer's practices.

Vizianagaram (Kharif): Thirty FLD's were conducted in 30 ha area on improved practices (varietal aspect of pearl millet *i.e.* comparison ABV 04 v/s Pittaganti) v/s farmer's practices. The average grain yield of 2280 kg/ha was obtained in case of improved practices as compared to the farmer's practices (1805 kg/ha). The average increase in grain yield was 26.3% over the farmer's practices.

Coimbatore: During *kharif* 2024 season, thirty one demonstrations in 20 ha area on popularization of TNAU cumbu hybrid COH10 and AHB 1200 along with improved practices v/s farmers practices (Local variety *i.e.* Nattu cumbu) were conducted at different locations of Coimbatore (Tamil Nadu). The results revealed that average grain yield of 3083 kg/ha with improved crop management practices compared to 2533 kg/ha in farmer's practices (Local variety). It was observed that by adoption of improved hybrids, the grain yield was enhanced by 21.7% over local variety of farmers.

Aurangabad: During *Kharif* 2024, hundred FLD's were conducted in 40 ha area on improved practices (varietal aspect of pearl millet *i.e.* comparison AHB 1200 v/s local variety (MP7333) v/s farmer's practices. The average grain yield of 2081 kg/ha was obtained in case of improved practices compared to the 1722 kg/ha recorded by the farmer's practices. The average increase in the grain yield was 20.9% over the farmer's practices.

ICAR-CAZRI-KVK, Jodhpur: Fifty FLD's were conducted in 20 ha area on improved practices of pearl millet (Full package of practices and use of improved biofortified hybrid HHB 299) v/s farmer's practices. The average grain yield of 2059 kg/ha was obtained in case of improved practices compared to the 1664 kg/ha recorded by the farmer's practices. The average increase in the grain yield was 23.7% over the farmer's practices.

KVK Chandgothi, Churu (SKRAU, Bikaner): One hundred sixty seven FLD's were conducted in 100 ha area on improved practices of pearl millet (Full package of practices and use of improved biofortified hybrid HHB 299) v/s farmer's practices. The average grain yield of 1626 kg/ha was obtained in case of improved practices as compared to the 1366 kg/ha by the farmer's practices. The average increase in grain yield was 19.0% over the farmer's practices.

KVK Phalodi, Jodhpur (Agriculture University, Jodhpur): Fifty FLD's were conducted in 20 ha area on improved practices of pearl millet (Full package of practices and use of improved biofortified hybrid HHB 299) v/s farmer's practices. The average grain yield of 2073 kg/ha was obtained in case of improved practices as compared to the 1688 kg/ha by the farmer's practices. The average increase in grain yield was 22.9% over the farmer's practices.

KVK Keshwana, Jalore (Agriculture University, Jodhpur) (Kharif): Fifty FLD's were conducted in 50 ha area on improved practices of pearl millet (Full package of practices and use of improved biofortified hybrid RHB 223) v/s farmer's practices. The average grain yield of 1702 kg/ha was obtained in case of improved practices as compared to the 1413 kg/ha by the farmer's practices. The average increase in grain yield was 20.4% over the farmer's practices.

KVK Athiyasan, Nagaur-I (Agriculture University, Jodhpur): Sixty three FLD's were conducted in 50 ha area on improved practices of pearl millet (Full package of practices and use of improved hybrid RHB 223) v/s farmer's practices. The average grain yield of 1942 kg/ha was obtained in case of

improved practices as compared to the 1566 kg/ha by the farmer's practices. The average increase in grain yield was 24.0% over the farmer's practices.

KVK Gudamalani, Barmer (Agriculture University, Jodhpur): One hundred FLD's were conducted in 100 ha area on improved practices of pearl millet (Full package of practices and use of improved biofortified hybrid HHB 299) v/s farmer's practices. The average grain yield of 1190 kg/ha was obtained in case of improved practices as compared to the 827 kg/ha by the farmer's practices. The average increase in grain yield was 43.8% over the farmer's practices.

KVK Pokaran, Jaisalmer-II (SKRAU, Bikaner): One hundred twenty five FLD's were conducted in 100 ha area on improved practices of pearl millet (Full package of practices and use of improved biofortified hybrid HHB 299) v/s farmer's practices. The average grain yield of 1025 kg/ha was obtained in case of improved practices as compared to the 810 kg/ha by the farmer's practices. The average increase in grain yield was 26.5% over the farmer's practices.

Vizianagaram (Summer): Twenty FLD's were conducted in 20 ha area on improved practices (varietal aspect of pearl millet i.e. comparison ABV 04 v/s Pittaganti) v/s farmer's practices. The average grain yield of 2312 kg/ha was obtained in case of improved practices as compared to the farmer's practices (1792 kg/ha). The average increase in grain yield was 29.0% over the farmer's practices.

KVK Bamanwara, Jalore-II (Agriculture University, Jodhpur): Forty FLD's were conducted in 30 ha area on improved practices of pearl millet (Full package of practices and use of improved biofortified hybrid HHB 299) v/s farmer's practices. The average grain yield of 1470 kg/ha was obtained in case of improved practices as compared to the 1230 kg/ha by the farmer's practices. The average increase in grain yield was 19.5% over the farmer's practices.

COA, Sumerpur-Pali (Agriculture University, Jodhpur): Twenty FLD's were conducted in 20 ha area on improved practices of pearl millet (Full package of practices and use of improved biofortified hybrid HHB 299) v/s farmer's practices. The average grain yield of 1103 kg/ha was obtained in case of improved practices as compared to the 819 kg/ha by the farmer's practices. The average increase in grain yield was 34.6% over the farmer's practices.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.2: Result of FLD's conducted by ARS (SKRAU), Bikaner - Kharif 2024

Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of Beneficiary	Address	Type of Demon.	Test Variety	Check Variety	Grain Yield (Kg/ha)		% imp. in Grain yield	Fodder Yield (Kg/ha)		GR (Rs./ha)		NR (Rs./ha)	
						IP	FP		IP	FP	IP	FP	IP	FP
1	Sudhir	Kalyanpura, Churu	Full POP	HHB 299	Local	900	700	28.6	2600	2200	31000	25000	16000	11000
2	Gulab Singh	Kalyanpura, Churu	Full POP	HHB 299	Local	1000	800	25.0	2600	2300	33000	27500	18000	13500
3	Shivraj Singh	Kalyanpura, Churu	Full POP	HHB 299	Local	800	700	14.3	2800	2700	30000	27500	15000	13500
4	Dhan Singh	Kalyanpura, Churu	Full POP	HHB 299	Local	1000	800	25.0	3000	2500	35000	28500	20000	14500
5	Pappu Singh	Kalyanpura, Churu	Full POP	HHB 299	Local	1100	800	37.5	2500	2300	34500	27500	19500	13500
6	Om Singh	Kalyanpura, Churu	Full POP	HHB 299	Local	1200	900	33.3	2600	2300	37000	29500	22000	15500
7	Rameshwar Singh	Kalyanpura, Churu	Full POP	HHB 299	Local	1300	1000	30.0	3200	2900	42000	34500	27000	20500
8	Dayal Singh	Kalyanpura, Churu	Weed control	HHB 299	Local	1100	1000	10.0	3000	2800	37000	34000	22000	20000
9	Dharm Singh	Kalyanpura, Churu	Weed control	HHB 299	Local	1500	1000	50.0	3400	2700	47000	33500	32000	19500
10	Raju Dangi	Kalyanpura, Churu	Weed control	HHB 299	Local	1100	600	83.3	2800	2400	36000	24000	21000	10000
11	Mani Ram	Kalyanpura, Churu	Full POP	HHB 299	Local	1100	800	37.5	2600	2500	35000	28500	20000	14500
12	Sisupal Singh	Kalyanpura, Churu	Full POP	HHB 299	Local	1000	700	42.9	2700	2700	33500	27500	18500	13500
13	Kalyan Singh	Kalyanpura, Churu	Full POP	HHB 299	Local	1200	800	50.0	2500	2600	36500	29000	21500	15000
14	Nand Singh	Kalyanpura, Churu	Full POP	HHB 299	Local	1000	700	42.9	2800	2700	34000	27500	19000	13500
15	Vijaypal Singh	Kalyanpura, Churu	Full POP	HHB 299	Local	1100	800	37.5	2600	2400	35000	28000	20000	14000
16	Khiyan Ram Jat	Kalyanpura, Churu	Full POP	HHB 299	Local	1000	800	25.0	2800	3500	34000	33500	19000	19500
17	Bhiyan Ram Jat	Kalyanpura, Churu	Full POP	HHB 299	Local	1200	1000	20.0	2700	2500	37500	32500	22500	18500
18	Bhudha Ram Jat	Kalyanpura, Churu	Full POP	HHB 299	Local	800	500	60.0	3600	2900	34000	24500	19000	10500
19	Vinod Suthar	Kalyanpura, Churu	Full POP	HHB 299	Local	900	700	28.6	2700	2400	31500	26000	16500	12000
20	Mukhram Jat	Kalyanpura, Churu	Full POP	HHB 299	Local	1000	900	11.1	3000	2500	35000	30500	20000	16500
21	Lala Ram Suthar	Kalyanpura, Churu	Full POP	HHB 299	Local	1100	800	37.5	2700	2400	35500	28000	20500	14000
22	Kalu Ram Meghwal	Kalyanpura, Churu	Full POP	HHB 299	Local	900	800	12.5	2700	2500	31500	28500	16500	14500
23	Kailash Singh	Kalyanpura, Churu	Full POP	HHB 299	Local	1000	800	25.0	2800	2700	34000	29500	19000	15500
24	Jaggu dan Charan	Kalyanpura, Churu	Weed control	HHB 299	Local	800	700	14.3	3000	2800	31000	28000	16000	14000
25	Bhagwana Ram	Kalyanpura, Churu	Weed control	HHB 299	Local	1100	900	22.2	2500	2500	34500	30500	19500	16500
26	Santosh Kanwar	Kalyanpura, Churu	Weed control	HHB 299	Local	800	600	33.3	2600	2000	29000	22000	14000	8000

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.2: Result of FLD's conducted by ARS (SKRAU), Bikaner - Kharif 2024

Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of Beneficiary	Address	Type of Demon.	Test Variety	Check Variety	Grain Yield (Kg/ha)		% imp. in Grain yield	Fodder Yield (Kg/ha)		GR (Rs./ha)		NR (Rs./ha)	
						IP	FP		IP	FP	IP	FP	IP	FP
27	Jitendra Singh	Kalyanpura, Churu	Weed control	HHB 299	Local	800	600	33.3	2600	2300	29000	23500	14000	9500
28	Sankutala Kanwar	Kalyanpura, Churu	Weed control	HHB 299	Local	900	700	28.6	2700	2400	31500	26000	16500	12000
29	Usha Kanwar	Kalyanpura, Churu	Weed control	HHB 299	Local	800	600	33.3	2400	2300	28000	23500	13000	9500
30	Tulcha Kanwar	Kalyanpura, Churu	Weed control	HHB 299	Local	1000	800	25.0	2500	2200	32500	27000	17500	13000
31	Madho Singh	Kavni, Churu	Weed control	HHB 299	Local	1500	1000	50.0	3400	3000	47000	35000	32000	21000
32	Radhakrishna	Kavni, Churu	Weed control	HHB 299	Local	1000	900	11.1	3000	2800	35000	32000	20000	18000
33	Jagdish	Kavni, Churu	Weed control	HHB 299	Local	1100	800	37.5	3100	2800	37500	30000	22500	16000
34	Mahesh Kumar	Kavni, Churu	Weed control	HHB 299	Local	1200	900	33.3	2400	2400	36000	30000	21000	16000
35	Kishore Singh	Kavni, Churu	Weed control	HHB 299	Local	800	600	33.3	2300	2100	27500	22500	12500	8500
36	Kani Ram	Kavni, Churu	Weed control	HHB 299	Local	900	700	28.6	2600	2400	31000	26000	16000	12000
37	Kailash Meghwal	Kavni, Churu	Weed control	HHB 299	Local	1000	700	42.9	2700	2500	33500	26500	18500	12500
38	Oma Ram	Kavni, Churu	Weed control	HHB 299	Local	800	600	33.3	2500	2200	28500	23000	13500	9000
39	Baga Ram	Kavni, Churu	Weed control	HHB 299	Local	1300	1000	30.0	3200	2900	42000	34500	27000	20500
40	Chagna Ram	Kavni, Churu	Weed control	HHB 299	Local	1400	1000	40.0	2900	2400	42500	32000	27500	18000
41	Jalla Ram	Kavni, Churu	Full POP	HHB 299	Local	1500	1200	25.0	3400	3000	47000	39000	32000	25000
42	Shivpal Singh	Kavni, Churu	Full POP	HHB 299	Local	1300	1100	18.2	3000	2700	41000	35500	26000	21500
43	Udaybhan Singh	Kavni, Churu	Full POP	HHB 299	Local	1200	1000	20.0	2600	2500	37000	32500	22000	18500
44	Rupa Kanwar	Kavni, Churu	Full POP	HHB 299	Local	1300	1100	18.2	2600	2600	39000	35000	24000	21000
45	Bhika Ram	Kavni, Churu	Full POP	HHB 299	Local	1400	1200	16.7	2900	2600	42500	37000	27500	23000
46	Lal Singh	Dhingsari, Churu	Full POP	HHB 299	Local	1200	1000	20.0	2700	2500	37500	32500	22500	18500
47	Arian Singh	Dhingsari, Churu	Full POP	HHB 299	Local	1300	1100	18.2	2600	2300	39000	33500	24000	19500
48	Bhagirath Singh	Dhingsari, Churu	Full POP	HHB 299	Local	1400	1000	40.0	2800	2400	42000	32000	27000	18000
49	Kishan Singh	Dhingsari, Churu	Full POP	HHB 299	Local	1500	1200	25.0	2500	2300	42500	35500	27500	21500
50	Raghuveer Singh	Dhingsari, Churu	Full POP	HHB 299	Local	1200	1100	9.1	2600	2200	37000	33000	22000	19000
51	Chelu Singh	Dhingsari, Churu	Full POP	HHB 299	Local	1100	1000	10.0	2600	2500	35000	32500	20000	18500
52	Dilip Singh	Dhingsari, Churu	Full POP	HHB 299	Local	1300	1000	30.0	2700	2300	39500	31500	24500	17500

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.2: Result of FLD's conducted by ARS (SKRAU), Bikaner - Kharif 2024

Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of Beneficiary	Address	Type of Demon.	Test Variety	Check Variety	Grain Yield (Kg/ha)		% imp. in Grain yield	Fodder Yield (Kg/ha)		GR (Rs./ha)		NR (Rs./ha)	
						IP	FP		IP	FP	IP	FP	IP	FP
53	Achal Singh	Dhingsari, Churu	Weed control	HHB 299	Local	1400	1200	16.7	3200	2700	44000	37500	29000	23500
54	Jeetu Singh	Dhingsari, Churu	Weed control	HHB 299	Local	1200	1000	20.0	2800	2500	38000	32500	23000	18500
55	Bhanwar Singh	Dhingsari, Churu	Full POP	HHB 299	Local	1300	1100	18.2	3000	2700	41000	35500	26000	21500
56	Shivram	Dhingsari, Churu	Full POP	HHB 299	Local	1200	1000	20.0	2900	2400	38500	32000	23500	18000
57	Chuna Ram	Dhingsari, Churu	Full POP	HHB 299	Local	1200	900	33.3	2800	2500	38000	30500	23000	16500
58	Pahad Singh	Dhingsari, Churu	Weed control	HHB 299	Local	1300	1000	30.0	3000	2600	41000	33000	26000	19000
59	Lal Singh	Dhingsari, Churu	Weed control	HHB 299	Local	1400	1100	27.3	3100	2600	43500	35000	28500	21000
60	Pratap Singh	Dhingsari, Churu	Weed control	HHB 299	Local	1300	1200	8.3	2600	2300	39000	35500	24000	21500
61	Shiv Singh	Dhingsari, Churu	Weed control	HHB 299	Local	1300	1100	18.2	2500	2200	38500	33000	23500	19000
62	Kamal Kanwar	Dhingsari, Churu	Weed control	HHB 299	Local	1200	1000	20.0	2400	2000	36000	30000	21000	16000
63	Chandra Kanwar	Dhingsari, Churu	Weed control	HHB 299	Local	1500	1200	25.0	2600	2100	43000	34500	28000	20500
64	Anup Singh	Dhingsari, Churu	Weed control	HHB 299	Local	1300	900	44.4	2700	2300	39500	29500	24500	15500
65	Jog singh	Dhingsari, Churu	Full POP	HHB 299	Local	1400	1000	40.0	2500	2300	40500	31500	25500	17500
66	Nitesh Upadhyay	Meghsar, Churu	Full POP	HHB 299	Local	1500	1200	25.0	3000	2700	45000	37500	30000	23500
67	Nemchand Upadhyay	Meghsar, Churu	Full POP	HHB 299	Local	1200	1000	20.0	3200	2900	40000	34500	25000	20500
68	Sunita	Meghsar, Churu	Full POP	HHB 299	Local	1400	1000	40.0	3200	3000	44000	35000	29000	21000
69	Swaroop	Meghsar, Churu	Full POP	HHB 299	Local	1300	1100	18.2	2900	2700	40500	35500	25500	21500
70	Ravi Upadhyay	Meghsar, Churu	Full POP	HHB 299	Local	1500	1300	15.4	3100	2500	45500	38500	30500	24500
71	Laxminarayan	Meghsar, Churu	Weed control	HHB 299	Local	1400	1200	16.7	2800	2400	42000	36000	27000	22000
72	Nathmal Upadhyay	Meghsar, Churu	Weed control	HHB 299	Local	1200	1000	20.0	2700	2300	37500	31500	22500	17500
73	Puspa Upadhyay	Meghsar, Churu	Weed control	HHB 299	Local	1200	1000	20.0	2400	2200	36000	31000	21000	17000
74	Sawai Upadhyay	Meghsar, Churu	Weed control	HHB 299	Local	1100	900	22.2	2300	2000	33500	28000	18500	14000
75	Jai shree Upadhyay	Meghsar, Churu	Weed control	HHB 299	Local	1300	1000	30.0	2500	1900	38500	29500	23500	15500
76	Inder chand	Meghsar, Churu	Weed control	HHB 299	Local	1400	1100	27.3	2900	2400	42500	34000	27500	20000
77	Bhanveri Devi	Meghsar, Churu	Weed control	HHB 299	Local	1500	1200	25.0	2800	2500	44000	36500	29000	22500
78	Mahesh Kumar	Meghsar, Churu	Full POP	HHB 299	Local	1600	1400	14.3	3200	2600	48000	41000	33000	27000

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.2: Result of FLD's conducted by ARS (SKRAU), Bikaner - Kharif 2024

Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of Beneficiary	Address	Type of Demon.	Test Variety	Check Variety	Grain Yield (Kg/ha)		% imp. in Grain yield	Fodder Yield (Kg/ha)		GR (Rs./ha)		NR (Rs./ha)	
						IP	FP		IP	FP	IP	FP	IP	FP
79	Bhavna Paliwal	Meghsar, Churu	Full POP	HHB 299	Local	1200	1100	9.1	2500	2200	36500	33000	21500	19000
80	Jaikishan Joshi	Chatargargh, Bikaner	Full POP	HHB 299	Local	1300	1200	8.3	2700	2200	39500	35000	24500	21000
81	Jodhraj Joshi	Chatargargh, Bikaner	Full POP	HHB 299	Local	1600	1400	14.3	2900	2400	46500	40000	31500	26000
82	Raju Joshi	Chatargargh, Bikaner	Weed control	HHB 299	Local	1400	1200	16.7	2800	2400	42000	36000	27000	22000
83	Moola Ram	Chatargargh, Bikaner	Weed control	HHB 299	Local	1500	1300	15.4	3000	2500	45000	38500	30000	24500
84	Sarita Devi	Udasar, Churu	Weed control	HHB 299	Local	1200	1000	20.0	2600	2300	37000	31500	22000	17500
85	Ashis Jajra	Udasar, Churu	Weed control	HHB 299	Local	1300	1000	30.0	2700	2400	39500	32000	24500	18000
86	Lalita Devi	Udasar, Churu	Weed control	HHB 299	Local	1300	1000	30.0	2700	2200	39500	31000	24500	17000
87	Prayag Dutt	Udasar, Churu	Weed control	HHB 299	Local	1300	1200	8.3	2600	2300	39000	35500	24000	21500
88	Pawan Kumar	Udasar, Churu	Weed control	HHB 299	Local	1400	1100	27.3	2800	2400	42000	34000	27000	20000
89	Narpat Singh	Udasar, Churu	Weed control	HHB 299	Local	1400	900	55.6	2900	2500	42500	30500	27500	16500
90	Bhoordas	Bholasar, Churu	Full POP	HHB 299	Local	1400	1000	40.0	3000	2500	43000	32500	28000	18500
91	Bisandas	Bholasar, Churu	Full POP	HHB 299	Local	1200	1000	20.0	2600	2200	37000	31000	22000	17000
92	Sayar Kanwar	Bholasar, Churu	Full POP	HHB 299	Local	1300	1000	30.0	2700	2500	39500	32500	24500	18500
93	Mangi Singh	Bholasar, Churu	Full POP	HHB 299	Local	1300	1100	18.2	2800	2400	40000	34000	25000	20000
94	Gayatri Devi	Bholasar, Churu	Weed control	HHB 299	Local	1300	1000	30.0	2700	2300	39500	31500	24500	17500
95	Jaidayal	Bholasar, Churu	Weed control	HHB 299	Local	1200	1000	20.0	2600	2300	37000	31500	22000	17500
96	Panna Devi	Bithnakh	Weed control	HHB 299	Local	1500	1200	25.0	3000	2500	45000	36500	30000	22500
97	Rajesh Khanna	Bikaner	Weed control	HHB 299	Local	1400	1200	16.7	2900	2400	42500	36000	27500	22000
98	Rashmi Khanna	Bikaner	Weed control	HHB 299	Local	1300	1000	30.0	2900	2600	40500	33000	25500	19000
99	Suresh Khanna	Bikaner	Weed control	HHB 299	Local	1400	1100	27.3	3000	2600	43000	35000	28000	21000
100	Akshat Khanna	Bikaner	Weed control	HHB 299	Local	1300	1000	30.0	2900	2500	40500	32500	25500	18500
Total						121300	96600		278500	247200	3818500	3168000	2318500	1768000
Mean						1213	966	25.6	2785	2472	38185	31680	23185	17680

Full POP: Use of Improved hybrids, Seed treatmet, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.3: Result of FLD's conducted by RARI (SKNAU, Jobner), Jaipur-Kharif 2024

Type of Demonstration: Improved Practices (Varietal trial: Biofortified hybrid RHB 223, RHB 233, RHB 234 and HHB 299) v/s Farmer's Practices

S. No.	Name & Address of Beneficiary	Address	Variety/ Hybrid	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (IP) (kg/ha)
					IP	FP		
1	Sh. Tejpal Singh	Bhaisala, Paota, Jaipur	RHB-223	F ₂ seed	2250	1900	18.4	5540
2	Smt. Bhawar Kavar	Bhaisala, Paota, Jaipur	RHB-223	F ₂ seed	2350	2130	10.3	4900
3	Sh. Ramawatar	Bhaisala, Paota, Jaipur	RHB-223	F ₂ seed	2740	1910	43.5	5540
4	Sh. Pradeep Singh	Bhaisala, Paota, Jaipur	RHB-223	F ₂ seed	2350	1910	23.0	5420
5	Sh. Gulab Kavar	Bhaisala, Paota, Jaipur	RHB-223	F ₂ seed	2570	1960	31.1	5350
6	Sh. Uday Singh	Rajnota, Kotputli, Jaipur	RHB-233	F ₂ seed	2350	1920	22.4	5000
7	Sh. Puspendra Singh	Rajnota, Kotputli, Jaipur	RHB-233	F ₂ seed	2410	2000	20.5	4980
8	Sh. Rohitash Singh	Kerodi	RHB-233	F ₂ seed	2500	2150	16.3	5640
9	Sh. Ramswaroop	Rajnota, Kotputli, Jaipur	RHB-233	F ₂ seed	2350	2200	6.8	4780
10	Sh. Mohan Singh Shekhawat	Rajnota, Kotputli, Jaipur	RHB-233	F ₂ seed	2250	1950	15.4	5500
11	Smt. Laxmi Kanwar	Rajnota, Kotputli, Jaipur	RHB-233	F ₂ seed	2540	1800	41.1	5040
12	Sh. Satish Chand Meena	BagawasChorasi, Jaipur	RHB-233	F ₂ seed	2300	2180	5.5	5500
13	Sh. Abhay Singh	BagawasChorasi, Jaipur	RHB-233	F ₂ seed	2350	2250	4.4	5640
14	Smt. Kailashi Devi	BagawasChorasi, Jaipur	RHB-233	F ₂ seed	2750	1900	44.7	5630
15	Sh. Ganesh Lal	BagawasChorasi, Jaipur	RHB-233	F ₂ seed	2670	2000	33.5	5750
16	Sh. Randheer Singh	Narheda, Kothputli Behror	RHB-233	F ₂ seed	2640	2050	28.8	5020
17	Sh. Suredra Singh	Narheda, Kothputli Behror	RHB-233	F ₂ seed	2200	2100	4.8	5540
18	Sh. Visnu Singh	Narheda, Kothputli Behror	RHB-233	F ₂ seed	2450	2150	14.0	5240
19	Sh. Dinesh Rawat	Paniyala, Kothputli Behror	RHB-233	F ₂ seed	2350	2000	17.5	5140
20	Sh. S. S. Shekhawat	Gonera, Kothputli Behror	RHB-233	F ₂ seed	2623	2170	20.9	5230
21	Smt. Binu kanwar	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2150	2020	6.4	5240
22	Smt. Supyar	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2230	2230	0.0	5540
23	Sh. Omprakash	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2750	2000	37.5	5140
24	Sh. Madam	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2340	2150	8.8	5540
25	Sh. Gopal	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2520	2200	14.5	5130
26	Sh. Gopal	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2540	1950	30.3	5460
27	Sh. Kalu Ram	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2720	2200	23.6	5560
28	Sh. Jasraj	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2230	2180	2.3	5890

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.3: Result of FLD's conducted by RARI (SKNAU, Jobner), Jaipur-Kharif 2024

Type of Demonstration: Improved Practices (Varietal trial: Biofortified hybrid RHB 223, RHB 233, RHB 234 and HHB 299) v/s Farmer's Practices

S. No.	Name & Address of Beneficiary	Address	Variety/ Hybrid	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (IP) (kg/ha)
					IP	FP		
29	Sh. Laxman	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2040	2250	-9.3	5840
30	Sh. Hemaraj	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2850	2120	34.4	5040
31	Sh. Ramkram	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2450	1920	27.6	4950
32	Sh. Nemichand	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2840	2130	33.3	5050
33	Smt. Paras Kanwar	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2340	2200	6.4	5680
34	Smt. Braham Kanwar	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2540	2150	18.1	6050
35	Smt. Nagina	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2010	1930	4.1	6540
36	Smt. Sampti	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2920	1950	49.7	5540
37	Smt. Sharda	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2870	2200	30.5	6120
38	Sh. Ram Dav	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2960	2180	35.8	6550
39	Sh. Suwalal	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2530	2250	12.4	6420
40	Sh. Durgalal	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2650	2130	24.4	6650
41	Sh. Hemaraj	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2510	2200	14.1	6780
42	Sh. Badrinaryan	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2340	1900	23.2	6050
43	Sh. Hari Ram	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2540	2230	13.9	5120
44	Smt. Gyani Devi	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	3020	2120	42.5	5540
45	Sh. Madan Lal	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2410	1820	32.4	5570
46	Sh. Mohan Lal	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2530	2010	25.9	5430
47	Smt. Sunita	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2430	2020	20.3	5750
48	Sh. Rahul	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2450	2120	15.6	5140
49	Sh. Bhagchand	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2350	2310	1.7	4980
50	Sh. Mangi Lal	Davnagar, Pisangan, Ajmer	RHB-234	F ₂ seed	2850	2020	41.1	5520
Total					124903	103720		276190
Mean					2498	2074	20.4	5524

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.4: Results of FLD's conducted by CCS HAU, Hisar during *Kharif 2024*

Type of Demonstration: Improved Practices (Varietal trial: Biofortified hybrid HHB 299) v/s Farmer's Practices

S. No.	Name of Farmer	Fathers/ Husband Name	Address	Vaiety/ Hybrids	Test Variety	Grain Yield (kg/ha)		% improvement in Grain yield
						IP	FP	
1	Balbir Singh	Kurda Ram	Vill. Sarsod, District Hisar	HHB 299	Local	2700	2400	12.5
2	Ramesh Kumar	Ram Savroop	Vill. Balak, District Hisar	HHB 299	Local	3100	2650	17.0
3	Raj Kumar	Krishan Datt	Vill. Dana Khurad, District Hisar	HHB 299	Local	2800	2500	12.0
4	Krishan Kumar	Abhay ram	Vill. Dana Khurad, District Hisar	HHB 299	Local	3000	2450	22.4
5	Ramesh Kumar	Surjeet	Vill. Panihar, District Hisar	HHB 299	Local	Failed		
6	Ajay Kumar	Devender	Vill. Siwani Bolan, District Hisar	HHB 299	Local	2000	1800	11.1
7	Krishan Kumar	Duli Ram	Vill. Ludas, District Hisar	HHB 299	Local	2000	1700	17.6
8	Parkash Chander	Kishan Lal Berwal	Vill. Majra, District Hisar	HHB 299	Local	Failed		
9	Madan lal	Nihal Singh	Vill. Ludas Shahpur, District Hisar	HHB 299	Local	4200	3500	20.0
10	Ravinder	Ram Richpal	Vill. Kaimry, District Hisar	HHB 299	Local	Failed		
11	Rampal Dhull	Partap singh	Vill. Siswal, District Hisar	HHB 299	Local	3000	2500	20.0
12	Subhash Chander	Mani Ram	Vill. Sarsana, District Hisar	HHB 299	Local	2900	2350	23.4
13	Krishan Kumar	Chabil Das	Vill. Gangwa, District Bhiwani	HHB 299	Local	3700	3200	15.6
14	Bhajan Lal	Viswa Ram	Vill. Kaimry, District Hisar	HHB 299	Local	2100	1900	10.5
15	Vikram	Jaswant Singh	Vill. Masudpur, District Hisar	HHB 299	Local	2500	2300	8.7
16	Jaibir	Suresh	Vill. Ludash, District Hisar	HHB 299	Local	3100	2800	10.7
17	Kesari singh	Nathu Ram	Vill. Kaimry, District Hisar	HHB 299	Local	Failed		
18	Paramjit Singh Lamba	Prithwi Singh	Vill. Dolatpur, District Hisar	HHB 299	Local	2900	2600	11.5
19	Kanta lamba	Paramjit Singh	Vill. Dolatpur, District Hisar	HHB 299	Local	2700	2500	8.0
20	Pala Ram	Ramdhari	Vill. Kaimry, District Hisar	HHB 299	Local	2800	2600	7.7
21	Bhoop Singh	Hukmi Chander	Vill. Kaimry, District Hisar	HHB 299	Local	2900	2500	16.0
22	Sanjay	Keshary	Vill. Kaimry, District Hisar	HHB 299	Local	Failed		
23	Raj Kamal	Banwari Lal	Vill. Khirmara, District Hisar	HHB 299	Local	2100	2000	5.0
24	Subham	Bhojraj	Vill. Kabrail, District Hisar	HHB 299	Local	3100	2700	14.8
25	Hetram	Ram Chander	Vill. Neoli Khurd, District Hisar	HHB 299	Local	3000	2600	15.4
26	Anil	Ram Kumar	Vill. Neoli, District Hisar	HHB 299	Local	3100	2700	14.8

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.4: Results of FLD's conducted by CCS HAU, Hisar during *Kharif 2024*

Type of Demonstration: Improved Practices (Varietal trial: Biofortified hybrid HHB 299) v/s Farmer's Practices

S. No.	Name of Farmer	Fathers/ Husband Name	Address	Vaiety/ Hybrids	Test Variety	Grain Yield (kg/ha)		% improvement in Grain yield
						IP	FP	
27	Kamaldeep	Ajit Singh	Vill. Berian, District Hisar	HHB 299	Local	2500	2300	8.7
28	Hari Das	Bhoop Singh	Vill. Kaimry, District Hisar	HHB 299	Local	Failed		
29	Sunil Kumar	Kanwar Singh	Vill. Haluhera, Distt. Rewari	HHB 299	Local	2000	1700	17.6
30	Joginder Singh	Rajender Singh	Vill. Haluhera, Distt. Rewari	HHB 299	Local	2300	1900	21.1
31	Parveen	Balbir singh	Vill. Haluhera, Distt. Rewari	HHB 299	Local	2600	2500	4.0
32	Sahil Kumar	Heera Lal	Vill. Haluhera, Distt. Rewari	HHB 299	Local	2300	2000	15.0
33	Ajad Singh	Chajju Ram	Vill. Bishanpura, District Jind	HHB 299	Local	Failed		
34	Dhoop Singh	Kishan singh	Vill. Lodhar, District Jind	HHB 299	Local	3500	3200	9.4
35	Harjit	Haripal	Vill. Jhinjhar, District Charkhi Dadri	HHB 299	Local	2200	2000	10.0
36	Haripal	Dhilu Ram	Vill. Jhinjhar, District Charkhi Dadri	HHB 299	Local	2100	1900	10.5
37	Harsh	Naresh	Vill. Bondkala, District Charkhi Dadri	HHB 299	Local	2100	2100	0.0
38	Dalel	Naresh	Vill. Bondkala, District Charkhi Dadri	HHB 299	Local	1900	1600	18.8
39	Subhash Chander	Khajan Chand	Vill. Bupp, District Sirsa	HHB 299	Local	Failed		
40	Kuldeep Singh	Baldev Singh	Vill. Taronwal, District Sirsa	HHB 299	Local	3500	3200	9.4
41	Mohammad Ali	Rojdhar	Mewat, District Mewat	HHB 299	Local	Failed		
42	Sadhu ram	Lachu ram	Vill. Hedwala, District Fatehabad	HHB 299	Local	1800	1700	5.9
43	Bhoop Singh	Surat Singh	Vill. Sangwan, District Bhiwani	HHB 299	Local	1900	1800	5.6
44	Sachin Kumar	Devender Singh	Vill. Baaganwala, District Bhiwani	HHB 299	Local	4000	3500	14.3
45	Devender Singh	Bir Singh	Vill. Baaganwala, District Bhiwani	HHB 299	Local	4200	3900	7.7
Total						98600	87550	
Mean						2739	2432	12.6

Type of FLD: Farmer's Practices (FP) v/s Improved Practices (IP)

T₁: Farmers' Practices : Use of Pvt. Hybrid, Suboptimal use of N (40-60 kg/ha) only + 1 HW, negligible or no use of P, ZnSO₄ fertilizers,biomix biofertilizer and herbicide Atrazine.

T₂: Improved Practices: Use of improved hybrid HHB 299, Recommended dose of Nitrogen & Phosphorus along with Zn, biomix and herbicide Atrazine +1 HW).

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.5: Result of FLD's conducted by Junagadh Agricultural University, Jamnagar - Summer 2024

Type of Demonstration: Varietal Trial: Biofortified hybrid GHB 1129

S. No.	Name of Beneficiary	Location	Vaiety/Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
1	Jitendrabhai Amrutlal Modha	Khambhaliya	GHB 1129	Local	4320	4120	4.9	7500	6850
2	Dhirajlal Narbhashankar Modha	Khambhaliya	GHB 1129	Local	4200	3850	9.1	7850	7230
3	Dilipbhai Amrutlal Modha	Khambhaliya	GHB 1129	Local	4530	4130	9.7	7100	6800
4	Jamnabhai Mohanbhai Chauhan	Jamnagar	GHB 1129	Local	3850	3550	8.5	7475	6950
5	Valajibhai Narshibhai Parmar	Jamnagar	GHB 1129	Local	3650	3500	4.3	7080	6300
6	Ravikumar Maganbhai Dadhaniya	Bhanvad	GHB 1129	Local	5850	5220	12.1	8200	7360
7	Naranbhai Gordhanbhai Dadhaniya	Bhanvad	GHB 1129	Local	5800	5280	9.8	8050	7250
8	Haribhai Meghabhai Shiyar	Dhrol	GHB 1129	Local	4950	4750	4.2	7950	7080
9	Gordhanbhai Valabhbhai Vadi	Lalpur	GHB 1129	Local	4650	4420	5.2	7675	7150
10	Keshvaji Hemraj Patel	Jamnagar	GHB 1129	Local	3820	3500	9.1	7230	6950
11	Bhavikbhai Girdharbhai Vaishnav	Lalpur	GHB 1129	Local	4130	3950	4.6	7540	6750
12	Muktaben Maganlal Dadhaniya	Bhanvad	GHB 1129	Local	5550	5130	8.2	8080	7140
13	Hashmukhbhai Chaganbhai Dadhaniya	Bhanvad	GHB 1129	Local	5350	4950	8.1	8230	7550
14	Maganlal Lakhamanbhai Dadhaniya	Bhanvad	GHB 1129	Local	5180	5000	3.6	8150	7300
15	Hirabhai Devabhai Aidichy	Khambhaliya	GHB 1129	Local	4850	4650	4.3	7950	7450
16	Ranabhai Jethabhai Aswar	Khambhaliya	GHB 1129	Local	4550	4300	5.8	7590	6980
17	Karsan Ramaji Horiya	Khambhaliya	GHB 1129	Local	4400	4150	6.0	7730	7090
18	Nirmal Ramaji Horiya	Khambhaliya	GHB 1129	Local	4250	3900	9.0	7840	7230
19	Pravinbhai Bhagvanbhai Katariya	Mahuva	GHB 1129	Local	4170	3730	11.8	7300	6950
20	Govindbhai Vashrambhai Domadiya	Kalavad	GHB 1129	Local	4350	4150	4.8	7750	7220
21	Jayeshkumar Maganlal Shanghani	Jamnagar	GHB 1129	Local	4670	4350	7.4	7380	6900
22	Ramesh Aodhavaji Sudra	Jamnagar	GHB 1129	Local	4450	4100	8.5	7530	7000
23	Naran Anandbhai Piprotar	Bhanvad	GHB 1129	Local	3850	3500	10.0	7250	6700
24	Lakhamanbhai Anandbhai Piprotar	Bhanvad	GHB 1129	Local	4030	3800	6.1	7800	7150
25	Hirabhai Khimabhai Piprotar	Bhanvad	GHB 1129	Local	4920	4775	3.0	7870	6950
26	Mahmadgani Alihushen Kureshi	Mahuva	GHB 1129	Local	3875	3700	4.7	7450	6950
27	Barkathushen Alihushen Kureshi	Mahuva	GHB 1129	Local	4063	4000	1.6	7820	7050

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.5: Result of FLD's conducted by Junagadh Agricultural University, Jamnagar - Summer 2024

Type of Demonstration: Varietal Trial: Biofortified hybrid GHB 1129

S. No.	Name of Beneficiary	Location	Vaiety/Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
28	Kadarbhai Jinabhai Sipai	Mahuva	GHB 1129	Local	4063	3700	9.8	7580	7050
29	Yakubbhai Amirhushen Kureshi	Mahuva	GHB 1129	Local	3875	3700	4.7	7280	6700
30	Allabax Amirhushen Kureshi	Mahuva	GHB 1129	Local	4100	3600	13.9	7900	6900
31	Bababhai Shibabhai Chauhan	Mahuva	GHB 1129	Local	4375	3700	18.2	7950	7050
32	Kamuben Popatbhai Batiya	Mahuva	GHB 1129	Local	4100	3700	10.8	7730	7150
33	Jagubhai Tapubhai Chauhan	Mahuva	GHB 1129	Local	4100	3700	10.8	8000	6980
34	Maheshbhai Dulabhai Batiya	Mahuva	GHB 1129	Local	4100	3700	10.8	7880	7000
35	Madhuben Ganeshbhai Chauhan	Mahuva	GHB 1129	Local	4100	3600	13.9	7950	6950
36	Zaverbhai Shivabhai Chauhan	Mahuva	GHB 1129	Local	4375	4000	9.4	8100	6800
37	Himantbhai Vitthalbhai Chauhan	Mahuva	GHB 1129	Local	4100	3600	13.9	7650	6950
38	Narashibhai Vitthalbhai Chauhan	Mahuva	GHB 1129	Local	4375	3700	18.2	7850	7030
39	Tulashibhai Tejabhai Chauhan	Mahuva	GHB 1129	Local	3750	3600	4.2	7700	6980
40	Bavchandbhai Ganeshbhai Chauhan	Mahuva	GHB 1129	Local	3875	3600	7.6	8030	6950
41	Umeshbhai Javerbhai Baraiya	Mahuva	GHB 1129	Local	4100	3700	10.8	7950	7150
42	Manshukhbhai Bhaikhabhai Makwana	Mahuva	GHB 1129	Local	4063	3700	9.8	7820	6940
43	Bhavesbhai Dhirubhai Dodiya	Mahuva	GHB 1129	Local	4063	3800	6.9	7950	7050
44	Vitthalbhai Temabhai Bhaliya	Mahuva	GHB 1129	Local	4375	3700	18.2	7650	6400
45	Karshanbhai Ramjibhai Dodiya	Mahuva	GHB 1129	Local	4063	3700	9.8	7730	7030
46	Chiragbhai Nanjibhai Bhil	Mahuva	GHB 1129	Local	4063	3700	9.8	7800	6900
47	Dineshbhai Mohanbhai Makwana	Mahuva	GHB 1129	Local	3875	3600	7.6	7450	6750
48	Nanjibhai Mohanbhai Makwana	Mahuva	GHB 1129	Local	4600	3700	24.3	7900	6950
49	Manshukhbhai Narvanbhai Chauhan	Mahuva	GHB 1129	Local	4700	4000	17.5	7600	6800
50	Durlabhbhai Ramjibhai Joliya	Mahuva	GHB 1129	Local	4100	3700	10.8	7720	6970
Total					217548	199655		386540	349710
Mean					4351	3993	9.0	7731	6994

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.6: Result of FLD's conducted by Junagadh Agricultural University, Jamnagar - Kharif 2024

Type of Demonstration: Varietal Trial: Biofortified hybrid GHB 732

S. No.	Name of Beneficiary	Location		Vaiety/Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
		Village	Taluka			IP	FP		IP	FP
1	Kababhai Savajibhai Gohil	Kuda	Ghogha	GHB 732	Local	1875	1250	50.0	5240	4090
2	Santuben Vitthalbhai Gohil	Kuda	Ghogha	GHB 732	Local	1250	1093	14.4	3775	3425
3	Nakudbhai Panchabhai Gohil	Kuda	Ghogha	GHB 732	Local	1406	1093	28.6	4996	4288
4	Arjanbhai Bhagvanbhai Gohil	Kuda	Ghogha	GHB 732	Local	938	938	0.0	2978	2850
5	Makabhai Bhimabhai Gohil	Kuda	Ghogha	GHB 732	Local	1719	1250	37.5	4865	4225
6	Bhupatbhai Tababhai Gohil	Kuda	Ghogha	GHB 732	Local	1250	1093	14.4	4456	3974
7	Dayalbhai Vitthalbhai Gohil	Kuda	Ghogha	GHB 732	Local	1093	1093	0.0	4295	4065
8	Jagdishbhai Veljibhai Gohil	Kuda	Ghogha	GHB 732	Local	1093	1093	0.0	4216	3856
9	Raghavbhai Daybhai Gohil	Kuda	Ghogha	GHB 732	Local	1562	1406	11.1	5120	4614
10	Anandbhai Dayalbhai Kambad	Kuda	Ghogha	GHB 732	Local	1406	1250	12.5	4598	4207
11	Maganbhai Khimabhai Gohil	Kuda	Ghogha	GHB 732	Local	1093	1093	0.0	3562	3480
12	Veljibhai Mavajibhai Chauhan	Kuda	Ghogha	GHB 732	Local	1250	1093	14.4	3845	3552
13	Najabhai Ranabhai Gohil	Kuda	Ghogha	GHB 732	Local	938	938	0.0	3078	2988
14	Harajibhai Bhimabhai Baraiya	Kuda	Ghogha	GHB 732	Local	1250	1093	14.4	4060	3614
15	Gobarbhai Bhikhabhai Baraiya	Kuda	Ghogha	GHB 732	Local	1406	1250	12.5	4670	4198
16	Jikuben Parshotambhai Baraiya	Kuda	Ghogha	GHB 732	Local	1406	1250	12.5	4265	4096
17	Mathurbhai Bachubhai Chudasama	Kuda	Ghogha	GHB 732	Local	1094	938	16.6	3816	3250
18	Anandbhai Ranchodbhai Baraiya	Kuda	Ghogha	GHB 732	Local	1250	1093	14.4	4325	3805
19	Kanjibhai Narashibhai Baraiya	Kuda	Ghogha	GHB 732	Local	1563	1406	11.2	4892	4560
20	Mathurbhai Jethabhai Baraiya	Kuda	Ghogha	GHB 732	Local	1094	938	16.6	3550	3175
21	Dharamshibhai Rameshbhai Jethava	Kuda	Ghogha	GHB 732	Local	1406	1250	12.5	4985	4520
22	Harbhim Bhayabhai Gohil	Kuda	Ghogha	GHB 732	Local	1250	1093	14.4	4218	3894
23	Dulabhai Kalabhai Solanki	Kuda	Ghogha	GHB 732	Local	1719	1093	57.3	5226	4265
24	Khima Bhimasi Ambaliya	Sedha Bhadtar	Khambhaliya	GHB 732	Local	1094	938	16.6	3625	3258
25	Bharat Bhimabhai Ambaliya	Khad	Lalpur	GHB 732	Local	1250	1250	0.0	4170	3610
Total						32655	28275		106826	95859
Mean						1306	1131	15.5	4273	3834

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.7: Result of FLD's conducted by AICRP on Pearl Millet, ARS, ANGRAU, Ananthapuramu *Kharif* 2024

Type of Demonstration: Improved Practices (Varietal trial: Biofortified variety ABV-04) v/s Farmer's Practices

S. No.	Name of Beneficiary	Address	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
1	P. Sreenivasulu	Ananthapuramu	ABV-04	Farm saved Seed	1210	1026	17.9	2865	2600
2	K. Vannurswamy	Ananthapuramu	ABV-04	Farm saved Seed	1150	975	17.9	2600	2250
3	C. Manoj Kumar	Ananthapuramu	ABV-04	Farm saved Seed	785	560	40.2	1980	1800
4	M. Vishalakshi	Ananthapuramu	ABV-04	Farm saved Seed	879	640	37.3	2135	2010
5	Y. Ramanjinamma	Ananthapuramu	ABV-04	Farm saved Seed	730	545	33.9	2250	2160
6	R. Rajeswari	Ananthapuramu	ABV-04	Farm saved Seed	705	520	35.6	2160	1875
7	B. Sreelatha	Ananthapuramu	ABV-04	Farm saved Seed	1190	1040	14.4	2800	2650
8	N. Mutyalakka	Ananthapuramu	ABV-04	Farm saved Seed	943	760	24.1	2540	2170
9	L. Peddkka	Ananthapuramu	ABV-04	Farm saved Seed	1080	800	35.0	2850	2540
10	S. Bharathi	Ananthapuramu	ABV-04	Farm saved Seed	700	576	21.5	2120	1970
11	G. Nagamma	Ananthapuramu	ABV-04	Farm saved Seed	990	739	34.0	2400	2210
12	A. Suresh	Ananthapuramu	ABV-04	Farm saved Seed	1190	930	28.0	2805	2690
13	N. Nagaraju	Ananthapuramu	ABV-04	Farm saved Seed	1095	843	29.9	2675	2460
14	G. Ramana	Ananthapuramu	ABV-04	Farm saved Seed	980	750	30.7	2520	2250
15	G. Thippayya	Ananthapuramu	ABV-04	Farm saved Seed	790	687	15.0	2470	2195
16	B. Sreenath Reddy	Ananthapuramu	ABV-04	Farm saved Seed	840	598	40.5	2320	2160
17	U. Ramana Reddy	Ananthapuramu	ABV-04	Farm saved Seed	990	725	36.6	2580	2310
18	M. Ravi	Ananthapuramu	ABV-04	Farm saved Seed	1075	826	30.1	2650	2590
19	C. Vannurappa	Ananthapuramu	ABV-04	Farm saved Seed	850	678	25.4	2600	2230
20	T. Ramulamma	Ananthapuramu	ABV-04	Farm saved Seed	1150	955	20.4	2760	2540
Total					19322	15173		50080	45660
Mean					966	759	27.3	2504	2283

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.8: Result of FLD's conducted by PAU, Ludhiana (Punjab) *Kharif 2024*

Technology Demonstration: Improved practices (Hybrid PCB 167) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Address	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
1	Balbir Singh	Dharangwala, Fazilka	PCB 167	Private hybrid	3850	3000	28.3	7200	7470
2	Bal Krishan	Bhullan, Sangrur	PCB 167	Private hybrid	4100	3250	26.2	7550	7200
3	Guneet Singh	Jhottian Wala, Jalalabaad	PCB 167	Private hybrid	3740	2950	26.8	7150	7600
4	Parvinder Kumar	Jhotianwali, Fazilka	PCB 167	Private hybrid	4150	3100	33.9	7000	7440
5	Hardeep Singh	Kothe Pipli, Bathinda	PCB 167	Private hybrid	4045	3550	13.9	7330	7230
6	Nirmaljeet Singh	Dharangwala, Fazilka	PCB 167	Private hybrid	3750	3240	15.7	7250	7055
7	Suresh Kumar	Bhullan, Sangrur	PCB 167	Private hybrid	3950	3370	17.2	7450	7200
8	Jugraj Singh	Kothe Pipli, Bathinda	PCB 167	Private hybrid	4000	3770	6.1	7050	7200
9	Gurmeet Singh	Bakainwala, Khuaian Sarvar	PCB 167	Private hybrid	3800	3550	7.0	7130	7350
10	Gurpreet Singh	Dharanwala, Abohar	PCB 167	Private hybrid	4170	3600	15.8	7970	7300
11	Kashmir Chand	Jhotianwali, Fazilka	PCB 167	Private hybrid	3650	3100	17.7	7500	7250
12	Prem Kumar	Jhotianwali, Fazilka	PCB 167	Private hybrid	3800	3200	18.8	7200	7600
13	Pritam Singh	Bhullan, Sangrur	PCB 167	Private hybrid	3950	3150	25.4	7340	7300
14	Balveera	Bhullan, Sangrur	PCB 167	Private hybrid	4050	3400	19.1	7350	7400
15	Balwan Singh	Bhullan, Sangrur	PCB 167	Private hybrid	3950	2900	36.2	7600	7440
16	Rishipal	Bhullan, Sangrur	PCB 167	Private hybrid	4150	3500	18.6	7830	7150
17	Jinga Ram	Bhullan, Sangrur	PCB 167	Private hybrid	4180	2850	46.7	7800	7550
18	Bansiram	Bhullan, Sangrur	PCB 167	Private hybrid	4230	2900	45.9	7450	7050
19	Jai Singh	Bhullan, Sangrur	PCB 167	Private hybrid	3730	3000	24.3	7600	7600
20	Diara Ram	Bhullan, Sangrur	PCB 167	Private hybrid	3800	2800	35.7	7450	7500
Total					79045	64180		148200	146885
Mean					3952	3209	23.2	7410	7344

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.9: Result of FLD's conducted by B.R.S., College of Agriculture, Dhule (Maharashtra) - Kharif 2024

Technology Demonstration: Full package of practices V/s Farmers practice

S. No.	Name & Address of the Beneficiary	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
				IP	FP		IP	FP
1	Sau. Kisanabai Nimbaji Gavali, At. Post. Moghan, Tal. Dist-Dhule	Aadishakti	Local	1850	1650	12.1	3249	2917
2	Sau. Kasturabai Ramchandra Mali, At. Post. Moghan, Tal. Dist-Dhule	Aadishakti	Local	2100	1920	9.4	3688	3395
3	Shri. Vasant Budha Mali, At. Post. Moghan, Tal. Dist-Dhule	Aadishakti	Local	1760	1585	11.0	3091	2802
4	Sau. Bhimabai Dagadu Sonawane, At. Post. Moghan, Tal. Dist-Dhule	Aadishakti	Local	1800	1612	11.7	3161	2850
5	Shri. Vijay kondaji Gavali, At. Post. Moghan, Tal. Dist-Dhule	Aadishakti	Local	1752	1523	15.0	3077	2693
6	Shri. Nandu Dhonu Jadhav, At. Post. Moghan, Tal. Dist-Dhule	Aadishakti	Local	2150	1895	13.5	3775	3350
7	Shri. Sunil Pundalik Mali, At. Post. Moghan, Tal. Dist-Dhule	Aadishakti	Local	1975	1765	11.9	3468	3121
8	Shri. Shivsing Jamsing Thoke, At. Post. Moghan, Tal. Dist-Dhule	Aadishakti	Local	2152	1965	9.5	3779	3474
9	Shri. Jibhau Prasram Patil, At. Post. Moghan, Tal. Dist-Dhule	Aadishakti	Local	1765	1569	12.5	3099	2774
10	Shri. Bhausahab Aananda Mali, At. Post. Moghan, Tal. Dist-Dhule	Aadishakti	Local	1820	1569	16.0	3196	2774
11	Shri. Shriram Namdev Patil, At. Post. Borviher, Ta. Dist- Dhule	Aadishakti	Local	1652	1498	10.3	2901	2648
12	Shri. Walmik Aananda Patil, At. Post. Chande, Ta. Dist- Dhule	Aadishakti	Local	2152	1956	10.0	3779	3458
13	Sau. Rekhabai Pratapsing Girase, At. Post. Degaon, Ta. Dist- Dhule	Aadishakti	Local	1956	1758	11.3	3435	3108
14	Shri. Bapu Sukha Patil, At. Post. Deaon, Ta. Dist- Dhule	Aadishakti	Local	1856	1695	9.5	3259	2997
15	Shri. Rajendara Amrut Pawar, At. Post. Amkhel, Ta.-Sakari, Dist- Dhule	Aadishakti	Local	1980	1754	12.9	3477	3101
16	Shri. Jaysing Bhavrao Gaikawad, At. Post- Mograni, Ta- Navapur, Dist- Nandurbar	Aadishakti	Local	1564	1350	15.9	2746	2387
17	Vijay Bhabuta Rajput, At. Post- Kolda, Ta. Dist- Nandurbar	Aadishakti	Local	1523	1300	17.2	2674	2298
18	Shri. Sudam Narsai Patil, At. Post- Kolda, Ta. Dist- Nandurbar	Aadishakti	Local	1856	1625	14.2	3259	2873
19	Shri. Dajalya Verut Valvi, At. Post- Malpada, Ta- Akkalkuva, Dist- Nandurbar	Aadishakti	Local	1798	1621	10.9	3157	2866
20	Sau. Sushila Sudam Patil, At. Post- Kolda, Ta. Dist- Nandurbar	Aadishakti	Local	2100	1856	13.1	3688	3281
21	Shri. Saysing Fotya Padvi, At. Post- Khadki, Ta- Dhadgaon, Dist- Nandurbar	Aadishakti	Local	1875	1625	15.4	3293	2873
22	Sau. Asha Ambalal Patil, At. Post- Borala, Ta. Dist- Nandurbar	Aadishakti	Local	1869	1625	15.0	3282	2873
23	Shri. Harlal Daga Pawar, At. Post- Ranjangaon, Ta- Sakri, Dist- Dhule	Aadishakti	Local	2120	1935	9.6	3723	3421
24	Shri. Nandabhai Narayan Gavit, At. Post- Badgichapada, Ta- Dindori, Dist- Nasik	Aadishakti	Local	1689	1458	15.8	2966	2578
25	Shri. Ramesh Bhanga Vasave, At. Post- Moranba, Ta- Akkalkuva, Dist- Nandurbar	Aadishakti	Local	1568	1356	15.6	2753	2397
26	Shri. Kailas Namdev Gaikawad, At. Post- Aamsarpada, Ta- Navapur, Dist- Nandurbar	Aadishakti	Local	2140	1895	12.9	3758	3350

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.9: Result of FLD's conducted by B.R.S., College of Agriculture, Dhule (Maharashtra) - Kharif 2024

Technology Demonstration: Full package of practices V/s Farmers practice

S. No.	Name & Address of the Beneficiary	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
				IP	FP		IP	FP
27	Shri. Kundan Savliram Deore, At.- Kudane, Post- shrisamni, Ta-Kalvan, Dist- Nasik	Aadishakti	Local	2060	1769	16.4	3617	3128
28	Shri. Rajendra Umrao Borale, At. Post- Rajale, Ta. Dist- Nandurbar	Aadishakti	Local	1995	1759	13.4	3503	3110
29	Shri. Bovaji Narayan Sabale, At- Vihirgaon, Post- Bramhanvel, Ta- Sakri, Dist- Dhule	Aadishakti	Local	2110	1910	10.5	3705	3377
30	Shri. Narayan Tarachand Patil, At. Post- Bahyane, Ta. Dist- Nandurbar	Aadishakti	Local	1896	1685	12.5	3329	2979
31	Shri. Rajendra Shantilal Buva, At- Saitane, Post- Kharde khurd, Ta. Dist- Nandurbar	Aadishakti	Local	1765	1569	12.5	3099	2774
32	Shri. Sena Pawan Bhil, At. Post- Bahyane, Ta. Dist- Nandurbar	Aadishakti	Local	1836	1545	18.8	3224	2732
33	Sau. Lata Narayan Patil, At Post-Bahyane, Tal. Dist- Nandurbar	Aadishakti	Local	1965	1756	11.9	3451	3105
34	Shri. Shivaji Shankar Patil, At.Post- Bahyane, Ta. Dist- Nandurbar	Aadishakti	Local	1950	1741	12.0	3424	3078
35	Shri.Chunilal Vitthal Desai At- Jambhora, Post- Bramhanvel, Ta- Sakri, Dist- Dhule	Aadishakti	Local	2030	1823	11.4	3565	3223
36	Shri. Shirish Dungal Wagh At/Post :Balapur, Tal./Dist. Dhule	Aadishakti	Local	2110	1896	11.3	3705	3352
37	Shri. Saysing Fotya Padvi, At. Post- Khadki, Ta- Dhadgaon, Dist- Nandurbar	Aadishakti	Local	1669	1456	14.6	2931	2574
Total				70208	62269		123286	110091
Mean				1898	1683	12.7	3332	2975

Full POP: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.10: Result of FLD's conducted by RARS (UAS) Vijayapur - Kharif 2024

S. No.	Name & Address of Beneficiary	Area (ha)	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)		Gross Returns (Rs./ha)*	
			IP	FP		IP	FP	IP	FP
Type of Demonstration: Improved Practices (Varietal trial: Biofortified hybrid VPMH 14) v/s Farmer's Practices									
1	Shri. Chandrahas Hosamani, Tq: Devara hipparagi, Dist: Vijayapur	1.0	1420	1265	12.3	4300	4050	32660	29095
2	Shri. Somibai R. Rathod, Hobli: Minchanal Lt Tq: Vijayapur, Dist: Vijayapur	1.0	2170	1820	19.2	5010	4740	49910	41860
3	Shri. Basappa Mamadapur, Tq: Kolar, Dist: Vijayapur	1.0	2385	2010	18.7	5890	5530	54855	46230
4	Shri. Dundappa Dalavai, Hobli: : Kalagurki, Tq: Kolar, Dist: Vijayapur	1.0	1781	1540	15.6	5120	4890	40963	35420
5	Shri. Kashinath. Mahadev Rathod, Tq: Vijayapur, Dist: Vijayapur	1.0	2013	1795	12.1	5480	5250	46299	41285
6	Smt. Triveni Mayanalli, Hobli: Zalaki, Tq: Zalaki, Dist: Vijayapur	1.0	2690	2217	21.3	6010	5790	61870	50991
7	Shri. Anand G. Hugar, Hobli: Managuli, Tq: Vijayapur, Dist: Vijayapur	1.0	1808	1670	8.3	5540	5270	41584	38410
8	Shri. Raju Rathod, Hobli: Bhutinal LT, Tq: Vijayapur, Dist: Vijayapur	1.0	2481	2095	18.4	5750	5400	57063	48185
9	Shri. Mallikarjun Badiger, Hobli: Kolar, Tq: Kolar, Dist: Vijayapur	1.0	2156	1791	20.4	5970	5580	49588	41193
10	Shri. Laxman Agasar, Hobli: Hegadihal, Tq: Vijayapur, Dist: Vijayapur	1.0	2889	2560	12.9	6230	6010	66447	58880
11	Shri. Shivaraj Hugar, Hobli: Devara Hipparagi, Tq: Devara Hipparagi, Dist: Vijayapur	1.0	1940	1568	23.7	5600	5450	44620	36064
12	Shri. Kashibai Y. Satihal, Hobli: Kalagurki, Tq: Kolar, Dist: Vijayapur	1.0	2267	2016	12.5	6150	5820	52141	46368
13	Shri. Vinod Nadagouda, Devara Hipparagi, Tq: Devara Hipparagi, Dist: Vijayapur	1.0	1293	1130	14.4	5110	4940	29739	25990
14	Shri. Maiboobsaheb Waddodagi, Hobli: Devara Hipparagi Tq: Devara Hipparagi, Dist: Vijayapur	1.0	1729	1575	9.8	5390	5080	39767	36225
15	Shri. Mallppa Kumbar, Hobli: Kainakatti, Tq: Bagalakot, Dist: Bagalakot	1.0	983	810	21.4	3500	3250	22609	18630
16	Shri. Shanakreppa Bagewadi, Hobli: Utnal, Tq: Vijayapur, Dist: Vijayapur	1.0	2392	2150	11.3	6390	6040	55016	49450
17	Smt. Dundavva Hosamani, Hobli: Devara Hipparagi, Tq: Devara Hipparagi, Dist: Vijayapur	1.0	1693	1505	12.5	5410	5030	38939	34615
18	Shri. Irappa Mashanavar, Hobli: Devara hipparagi, Tq: Devara hipparagi, Dist: Vijayapur	1.0	1955	1780	9.8	5870	5500	44965	40940
19	Shri. Ashok Babaleshwar, Hobli: Devara hipparagi, Tq: Devara hipparagi, Dist: Vijayapur	1.0	2181	2001	9.0	5700	5380	50163	46023
20	Smt. Mutavva.B.Mamadapur, Hobli: Kalagurki, Tq: Kolar, Dist: Vijayapur	1.0	1870	1625	15.1	5420	5100	43010	37375
Total		20.0	40096	34923		109840	104100	922208	803229
Mean			2005	1746	14.8	5492	5205	46110	40161

IP = Improved Practice FP=Farmer's Practice *Gross returns includes income of only grain yields

Market Prices: Grain: Pear millet @ Rs. 23.00/kg

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.11: Result of FLD's conducted by A.R.S., Vizianagaram, Andhra Pradesh - Kharif 2024

Technology Demonstration: Improved practices (Biofortified hybrid ABV 04) v/s Farmer's Practice Trials

S. No.	Name & Address of the Beneficiary	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
				IP	FP		IP	FP
1	Jeelakarra Pagadamma, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2250	1900	18.4	7570	7430
2	Geedala Prakash Rao, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2350	1850	27.0	7800	7500
3	Nimmaka Bhushana Rao, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2400	1740	37.9	8030	7590
4	Savara Prasadharao, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2345	1800	30.3	7540	7348
5	Savara Ramakrishna, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2350	1960	19.9	7790	7700
6	Vooyaka Sanyasirao, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2160	1750	23.4	8250	7300
7	Biddika Eswarao, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2400	1690	42.0	7390	7585
8	Nimmaka Nageswarao, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2280	1750	30.3	7700	7690
9	Nimmaka Aruna, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2100	1800	16.7	7450	8340
10	Nimmaka Mahesh, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2290	1745	31.2	8050	8050
11	Vooyaka Manikyam, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2370	1828	29.6	8340	7440
12	Nimmaka Mohan Rao, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2360	1855	27.2	8270	7350
13	Arika Suseela, Geddakola, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2220	1820	22.0	7950	7780
14	Arika Yogayya, Geddakola, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2180	1756	24.1	7468	8000
15	Vuyaka Narayana, Geddakola, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2340	1800	30.0	7900	8330
16	Biddika Satyanand, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2150	1830	17.5	8200	8040
17	Kuda Nagaraju, Sukuruputtu, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2490	1890	31.7	8500	8430
18	Surra Chiranjeevi, Karakaputtu, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2360	1740	35.6	8940	8040
19	Gaade Chandrakala, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2380	1840	29.3	7650	7630
20	Kuda Kondababu, Sukuruputtu, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2245	1777	26.3	7400	7000
21	Gammeli Seetharam, Seeethampeta Mandal, ASR District	ABV 05	Pittaganti	2345	1784	31.4	7580	7830
22	Gammeli Nukaraju, Seeethampeta Mandal, ASR District	ABV 06	Pittaganti	2160	1834	17.8	7250	7920
23	Gammeli Seethanna, Seeethampeta Mandal, ASR District	ABV 07	Pittaganti	2145	1820	17.9	7590	8400
24	Thamarla Sanjeevarao, Seeethampeta Mandal, ASR District	ABV 08	Pittaganti	2300	1845	24.7	7350	8150
25	Gammeli Balarao, Seeethampeta Mandal, ASR District	ABV 09	Pittaganti	2260	1900	18.9	7540	8060
26	Thamarla Venkatarao, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2430	1787	36.0	8460	8270
27	Thamarla Gopal, Sunnametta, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2230	1860	19.9	8300	7460
28	Thagula Jagannadam, Skota, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2140	1820	17.6	8080	7620
29	Thamarla Kujanna, Sunnametta, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2140	1700	25.9	7900	8300
30	Kuda Nagaraju, Sukuruputtu, Seeethampeta Mandal, ASR District	ABV 04	Pittaganti	2243	1675	33.9	8240	8500
Total				68413	54146		236478	235083
Mean				2280	1805	26.3	7883	7836

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.12: Result of FLD's conducted by CPBG, TNAU, Coimbatore - Kharif 2024

Technology Demonstrated: Popularization of cumbu variety COH 10 & Biofortified hybrid AHB 1200 with improved crop management practices

S. No.	Name & Address of Beneficiary	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)		GR (Rs./ha)		NR (Rs./ha)	
				TV	CV		TV	CV	TV	CV	TV	CV
1	Tmt. R. Poongodi W/o Rajendiran, Cuddalore	COH 10	Nattu Cumbu	3276	2675	22.5	4061	2108	85961	60958	55961	34958
2	Tmt. K. Palaniyammal D/o Kaliyamoorthy, Cuddalore	COH 10	Nattu Cumbu	3240	2738	18.3	4237	3647	85237	63883	55237	37883
3	Th. S. Narayanasamy S/o Sellamuthu, Cuddalore	COH 10	Nattu Cumbu	3185	2762	15.3	4053	2067	83678	62831	53678	36831
4	Th. N. Anbuselvan S/o Narayanasamy, Cuddalore	COH 10	Nattu Cumbu	3228	2674	20.7	3830	3481	84530	62309	54530	36309
5	Tmt. N. Sumathi W/o Narayariasamy, Cuddalore	COH 10	Nattu Cumbu	3029	2568	18.0	3849	3168	79574	59664	49574	33664
6	Th. V. Ramachandran S/o Veeramuthu, Cuddalore	COH 10	Nattu Cumbu	3021	2576	17.3	3846	3128	79371	59800	49371	33800
7	Tmt. S. Rajakumari W/o Sekar, Cuddalore	COH 10	Nattu Cumbu	3184	2761	15.3	4222	2167	83822	62909	53822	36909
8	Th. N. Ramkumar C/o Narayanasamy, Cuddalore	COH 10	Nattu Cumbu	3342	2664	25.5	4312	2391	87862	60999	57862	34999
9	Th. K. Venkadesan S/o Kaliyaperumal, Cuddalore	COH 10	Nattu Cumbu	3276	2734	19.8	3951	2461	85851	62609	55851	36609
10	Tmt. R. Selvamani W/o Rajendran, Cuddalore	COH 10	Nattu Cumbu	3085	2681	15.1	3746	2384	80871	61366	50871	35366
11	Th. N. Senthilkumar S/o Narayanasamy, Cuddalore	COH 10	Nattu Cumbu	3318	2643	25.5	4424	2206	87374	60352	57374	34352
12	Th.C. Narayanasamy S/o Chellamuthu, Cuddalore	COH 10	Nattu Cumbu	3162	2764	14.4	4305	2308	83355	63116	53355	37116
13	Th. N. Krishnaveni D/o Narayanasamy, Cuddalore	COH 10	Nattu Cumbu	3342	2861	16.8	4257	2183	87807	65125	57807	39125
14	Th. C. Sadagopan S/o Chinnasamy, Theni	COH 10	Nattu Cumbu	2948	2451	20.3	3868	3342	77568	57264	47568	31264
15	Th. V. Srinivasan S/o Varatharajan, Theni	COH 10	Nattu Cumbu	2957	2375	24.5	3815	3384	77740	55634	47740	29634
16	Th. S. Nannugarajan S/o Sundararaj, Theni	COH 10	Nattu Cumbu	3106	2451	26.7	4018	3225	81668	57147	51668	31147
17	Th. C. Ponnusamy C/o Chellaiah, Theni	COH 10	Nattu Cumbu	3084	2510	22.9	3728	3124	80828	58344	50828	32344
18	Th. G. Balakumar S/o Gnanadesigan, Theni	COH 10	Nattu Cumbu	2948	2384	23.7	3672	3294	77372	55742	47372	29742
19	Th. P. Rengasamy S/o Pethuraj, Theni	COH 10	Nattu Cumbu	2794	2437	14.6	4231	3517	74081	57131	44081	31131
20	Th. S. Sivakumar S/o Sangaiyanayackar, Theni	COH 10	Nattu Cumbu	3034	2458	23.4	3856	3327	79706	57403	49706	31403
21	Tmt. E. Jayanthi D/o Emperumal, Theni	COH 10	Nattu Cumbu	2846	2388	19.2	3624	3214	74774	55750	44774	29750
22	Th.P. Selvaraj S/o Perumal, Theni	COH 10	Nattu Cumbu	2857	2451	16.6	3724	3318	75149	57240	45149	31240
23	Th. C. Kamaraj S/o Chennaiyan, Theni	COH 10	Nattu Cumbu	2836	2315	22.5	3568	3124	74468	54054	44468	28054
24	Th. M. Balusamy S/o Muthulingam, Theni	COH 10	Nattu Cumbu	3133	2434	28.7	4283	1962	82608	55510	52608	29510
25	Th. P. Sivaram S/o Patchaimal, Theni	COH 10	Nattu Cumbu	3022	2296	31.6	3819	3067	79369	53579	49369	27579
26	Th. P. Patchaimal S/o Periyathambinadar, Theni	COH 10	Nattu Cumbu	3108	2428	28.0	4028	3027	81728	56443	51728	30443
Total (A)				80361	66479		103327	74624	2112352	1537162	1332352	861162
Mean (A)				3091	2557	20.9	3974	2870	81244	59122	51244	33122

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.12: Result of FLD's conducted by CPBG, TNAU, Coimbatore - *Kharif* 2024

Technology Demonstrated: Popularization of cumbu variety COH 10 & Biofortified hybrid AHB 1200 with improved crop management practices

S. No.	Name & Address of Beneficiary	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)		GR (Rs./ha)		NR (Rs./ha)	
				TV	CV		TV	CV	TV	CV	TV	CV
27	Th. M. Meenatchisundaram S/o Muthusamy Nadar, Theni	AHB 1200	Nattu Cumbu	3284	2541	29.2	4270	3281	86370	59183	56370	33183
28	Th. K. Parimalakkanan S/o Krishnan, Theni	AHB 1200	Nattu Cumbu	2934	2374	23.6	4041	3039	77391	55267	47391	29267
29	Tmt. P. Ramuthai W/o Ponnusamy, Theni	AHB 1200	Nattu Cumbu	3063	2468	24.1	3891	3008	80466	57304	50466	31304
30	Th. M. Pandiyaraj S/o Maruthanayagam, Theni	AHB 1200	Nattu Cumbu	2888	2289	26.2	3858	3234	76058	53592	46058	27592
31	Th. P. Subbaiya S/o Perumal, Theni	AHB 1200	Nattu Cumbu	3036	2385	27.3	3852	3029	79752	55499	49752	29499
Total (B)				15205	12057		19912	15591	400037	280845	250037	150845
Mean (B)				3041	2411	26.1	3982	3118	80007	56169	50007	30169
G. Total (A+B)				95566	78536		123239	90215	2512389	1818007	1582389	1012007
G. Mean				3083	2533	21.7	3975	2910	81045	58645	51045	32645

TV: Test Variety

CV: Check Variety/Local Variety

GR: Gross Returns

NR: Net Returns

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.13: Result of FLD's conducted by AICRP-PM, NARP, Aurangabad - Kharif 2024

Technology Demonstration: Improved practices (Biofortified hybrid AHB 1200) v/s Farmer's Practices Trials

S. No.	Name of the Beneficiary	Location	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
Technology Demonstration:Improved practices (IP) v/s Farmer's Practices (FP)									
1	Kiran Bhagchand Kahite	Lakhegaon, Paithan, Dist	AHB 1200	MP 7333	2305	1854	24.3	5509	4431
2	Jivan Kalyan Gaikwad	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2041	1754	16.4	4592	3947
3	Navnath Punjaram Dupe	Lakhegaon, Paithan, Dist	AHB 1200	MP 7333	1840	1523	20.8	4158	3457
4	Balu Sheshrao Kagde	Lakhegaon, Paithan, Dist	AHB 1200	MP 7333	1523	1169	30.3	3503	2712
5	Ganesh Vishvalal Narwade	Lakhegaon, Paithan, Dist	AHB 1200	MP 7333	1736	1341	29.5	3802	3017
6	Kachru Govind Ghodke	Lakhegaon, Paithan, Dist	AHB 1200	MP 7333	1744	1385	25.9	3959	3172
7	Arun Pandurang Kaladkar	Lakhegaon, Paithan, Dist	AHB 1200	MP 7333	1911	1484	28.8	4300	3369
8	Ramlal Javarlal Dumale	Lakhegaon, Paithan, Dist	AHB 1200	MP 7333	1521	1355	12.3	3468	3076
9	Bhausahab Ravsaheb Choudhari	Lakhegaon, Paithan, Dist	AHB 1200	MP 7333	1837	1692	8.6	4372	3925
10	Sayyad Sakil Sayyad Nasir	Lakhegaon, Paithan, Dist	AHB 1200	MP 7333	1838	1639	12.1	4374	3901
11	Uddhav Pralhad Mule	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2381	1939	22.8	5238	4305
12	Sudam Rama Uchit	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2392	2082	14.9	5526	4893
13	Satyanarayan Bhausahab Bande	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2036	1845	10.4	4785	4280
14	Shriram Raju Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1523	1274	19.5	3518	2956
15	Sakharam Trimbak Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1890	1665	13.5	4498	3963
16	Babasaheb Trimbak Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2239	1659	35.0	4926	3683
17	Pralhad Trimbak Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2380	1890	25.9	5379	4328
18	Ganesh Uddhav Mule	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1170	1028	13.8	2785	2457
19	Badrinath Laxman Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1936	1746	10.9	4627	4103
20	Namdev Mohan Chavan	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2438	2147	13.6	5339	4745
21	Subhash Bhausahab Kale	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2087	1879	11.1	5009	4491
22	Pandurang Mohan Bande	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2352	1683	39.8	5527	3905
23	Sunil Uddhav Mule	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1790	1680	6.5	4224	3662
24	Namdev Dasu Rathod	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	1860	1780	4.5	4315	4005
25	Ganesh Mohan Bande	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	2088	1236	68.9	5032	2670

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.13: Result of FLD's conducted by AICRP-PM, NARP, Aurangabad - Kharif 2024

Technology Demonstration: Improved practices (Biofortified hybrid AHB 1200) v/s Farmer's Practices Trials

S. No.	Name of the Beneficiary	Location	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
26	Vivek Gangadhar Bande	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2489	2082	19.5	6023	4955
27	Subhash Shrichand Chavan	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	2296	1645	39.6	5442	3932
28	Dattatray Gangadhar Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2431	2121	14.6	5640	5006
29	Govind Eknath Toge	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2010	1830	9.8	4764	4301
30	Santosh Suresh Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2413	2139	12.8	5357	4877
31	Krishna Bhausahab Kale	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1965	1654	18.8	4696	3953
32	Sheshrao Raisingh Jadhav	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	1844	1482	24.4	4020	3275
33	Amol Dwarkadas Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2213	1946	13.7	5333	4651
34	Mohan Eknath Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2348	2149	9.3	5588	4943
35	Satyanarayan Bhaurao Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2139	1874	14.1	5091	4142
36	Sheshnarayan Dwarkadas Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2438	2259	7.9	5607	5083
37	Bapu Pralhad Mule	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1834	1666	10.1	4402	3632
38	Pralhad Ramnath Khanse	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2112	1976	6.9	4815	4327
39	Bharat Namdev Mule	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2037	1732	17.6	4828	4122
40	Deepak Raosaheb Gaikwad	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1890	1679	12.6	4385	3946
41	Rasul Akbar Shaikh	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2089	1872	11.6	4951	4399
42	Santosh Babasaheb Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2563	2348	9.2	5639	5377
43	Markas Sonaji Gaikwad	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2214	1934	14.5	5225	4545
44	Ganesh Dnyaneshwar Uchit	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2756	2238	23.1	6449	5326
45	Ashok Sonaji Gaikwad	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2039	1736	17.5	4588	3889
46	Ankush Kondiram Gaikwad	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2319	1930	20.2	5589	4420
47	Tukaram Kalyan Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1938	1680	15.4	4748	3931
48	Vitthal Baburao Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1755	1690	3.8	4159	3634
49	Akash Ramnath Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2025	1228	64.9	4739	2898
50	Suresh Ramnath Hud	Padali, Paithan, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2458	2184	12.5	5604	5242
51	Laxman Kisan Chavne	Chinchadgaon, Vaijapur Dist	AHB 1200	MP 7333	1860	1523	22.1	4408	3442

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.13: Result of FLD's conducted by AICRP-PM, NARP, Aurangabad - *Kharif 2024*

Technology Demonstration: Improved practices (Biofortified hybrid AHB 1200) v/s Farmer's Practices Trials

S. No.	Name of the Beneficiary	Location	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
52	Hiraman Pralhad Jadhav	Chinchadgaon, Vaijapur Dist	AHB 1200	MP 7333	2369	1850	28.1	5496	4218
53	Balu Dattu Shelke	Pimpalgaon, Vaijapur, Dist	AHB 1200	MP 7333	2439	2098	16.3	5976	4846
54	Deepak Narayan Shinde	Sirasgaon, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1874	1635	14.6	4291	3679
55	Balu Nivratti Game	Sirasgaon, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2087	1964	6.3	5051	4615
56	Chhabu Pandurang Thorat	Rotegaon, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2134	1807	18.1	4994	4301
57	Manoj Bansilal Jaiswal	Aadgaon Sarak, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2064	1742	18.5	4892	4094
58	Rajendra Jagganath Sonawne	Sudamwadi, Vaijapur, Dist	AHB 1200	MP 7333	1832	1449	26.4	4030	3173
59	Popat Tanaji Sable	Sudamwadi, Vaijapur, Dist	AHB 1200	MP 7333	1924	1358	41.7	4560	3218
60	Eknath Bandu Gawli	Nili, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1964	1497	31.2	4694	3563
61	Gorakh Nana Magar	Kolhi, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1740	1394	24.8	4089	3290
62	Dastagir Khan Pathan	Khandala, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2419	2019	19.8	5781	4724
63	Milind Prakash Pawar	Khandala, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2017	1649	22.3	4740	3892
64	Raju Karim Shaha	Tidi, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1829	1534	19.2	4353	3620
65	Chandrabhan Suryabhan Gawli	Tidi, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1943	1358	43.1	4391	3042
66	Kadu Baburao Jagtap	Tidi, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1756	1364	28.7	4179	3151
67	Subhash Shahadu Suryawanshi	Khandala, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2173	1296	67.7	5085	3046
68	Anita Rajendra Sonawne	Sudamwadi, Vaijapur, Dist	AHB 1200	MP 7333	2350	1947	20.7	5405	4498
69	Navnath Bhimsen Welankar	Khandala, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1914	1782	7.4	4364	4027
70	Pandurang Mahadu Suryawanshi	Khandala, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2390	1867	28.0	5593	4331
71	Sudam Changdev Pawar	Khandala, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1836	1743	5.3	4370	4044
72	Bhimrao Punjaji Thorat	Rotegaon, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1890	1473	28.3	4460	3506
73	Chabu Fakira Pathare	Rotegaon, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	1936	1340	44.5	4472	3082
74	Satyabhamabai Shahadu	Khandala, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2394	1938	23.5	5722	4612
75	Sachin Dyandev Thorat	Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2014	1236	62.9	4854	2942
76	Harun Karim Shaha	Khandala, Vaijapur, Dist Ch.Sambhajinagar	AHB 1200	MP 7333	2542	1917	32.6	5999	4601
77	Jaikisan Ramdas Shinde	Warudi, Badnapur, Dist. Jalna	AHB 1200	MP 7333	1988	1424	39.6	4692	3332

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.13: Result of FLD's conducted by AICRP-PM, NARP, Aurangabad - Kharif 2024

Technology Demonstration: Improved practices (Biofortified hybrid AHB 1200) v/s Farmer's Practices Trials

S. No.	Name of the Beneficiary	Location	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
78	Vaijinath Namdev Shinde	Warudi, Badnapur, Dist. Jalna	AHB 1200	MP 7333	2215	1864	18.8	4984	4399
79	Vitthal Vaijinath Shinde	Warudi, Badnapur, Dist. Jalna	AHB 1200	MP 7333	2146	1642	30.7	4829	3662
80	Santosh Baburao Bhise	Warudi, Badnapur, Dist. Jalna	AHB 1200	MP 7333	2317	1628	42.3	5491	3891
81	Somnath Aagaji Shinde	Warudi, Badnapur, Dist. Jalna	AHB 1200	MP 7333	2156	1893	13.9	4980	4505
82	Prahad Bhanudas Shinde	Warudi, Badnapur, Dist. Jalna	AHB 1200	MP 7333	1870	1325	41.1	4451	3167
83	Nandu Chavan Bhise	Warudi, Badnapur, Dist. Jalna	AHB 1200	MP 7333	2017	1464	37.8	4821	3455
84	Sominath Barikrao Shinde	Warudi, Badnapur, Dist. Jalna	AHB 1200	MP 7333	2412	2058	17.2	5282	4548
85	Ganesh Vishnu Shinde	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	2117	1529	38.5	4996	3563
86	Sanjay Tejrao Bhise	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	2564	2142	19.7	5923	4969
87	Fatemabi Abbas Shaha	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	1905	1687	12.9	4362	3695
88	Vitthal Vaiginath Shinde	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	2218	1906	16.4	5323	4536
89	Vaiginath Namdev Shinde	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	1953	1722	13.4	4472	3961
90	Sangita Prabhakar Shinde	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	2176	1935	12.5	4961	4392
91	Vikee Sudhir Shreesundar	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	1854	1567	18.3	4450	3745
92	Arun Chaburao Bhise	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	1788	1504	18.9	4077	3414
93	Ramesh Bhanudas Shinde	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	2143	1817	17.9	5143	4343
94	Baburao Aabarao Shinde	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	2254	1879	20.0	5184	4303
95	Sonaji Shrimant Shinde	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	1712	1436	19.2	4092	3274
96	Savlahari Tulshiram Havle	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	2414	2086	15.7	5769	4944
97	Gayabai Devidas Shinde	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	1868	1420	31.5	4408	4019
98	Devidas Aabarao Shinde	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	2419	1891	27.9	5056	4311
99	Vishnu Devidas Shinde	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	2534	2047	23.8	5803	4585
100	Vaijnath Mansing Chavan	Padali Tanda, Paithan, Dist	AHB 1200	MP 7333	1935	1762	9.8	4702	4123
Total					208138	172211		484946	398948
Mean					2081	1722	20.9	4849	3989

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.14: Result of FLD's conducted by Krishi Vigyan Kendra, ICAR-CAZRI, Jodhpur (Rajasthan) Kharif 2024

Technology Demonstration: Improved practices (Varietal trial: Biofortified hybrid HHB 299) v/s Farmer's Practice

S. No.	Name of the Beneficiary	Fathers/ Husband/ Name	Address	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
						IP	FP		IP	FP
1	Sh. Ragunath Ram	Sh. Mangla Ram	Daikara, Mandor	HHB 299	Local	2050	1650	24.2	2925	2250
2	Mrs. Guddi	Sh. Sohan Lal	Daikara, Mandor	HHB 299	Local	2000	1625	23.1	2900	2200
3	Sh. Kishna Ram	Sh. Ganesh Ram	Daikara, Mandor	HHB 299	Local	2100	1700	23.5	3250	2300
4	Sh. Pema Ram	Sh. Mangi Lal	Daikara, Mandor	HHB 299	Local	2025	1675	20.9	3000	2225
5	Mrs Dakhu	Sh. Mangla Ram	Daikara, Mandor	HHB 299	Local	2050	1675	22.4	2975	2250
6	Sh. Bhanwar Singh	Sh. Mod Singh	Daikara, Mandor	HHB 299	Local	2000	1625	23.1	3100	2200
7	Sh. Mohan Ram	Sh. Danna Ram	Daikara, Mandor	HHB 299	Local	2100	1700	23.5	3200	2350
8	Sh. Dhagla Ram	Sh. Mangi Lal	Daikara, Mandor	HHB 299	Local	2075	1650	25.8	2950	2275
9	Mrs. Kanta	Sh. Kishna Ram	Daikara, Mandor	HHB 299	Local	2025	1625	24.6	2875	2215
10	Sh. Ram Lal	Sh. Harchand Ram	Daikara, Mandor	HHB 299	Local	2050	1675	22.4	3100	2300
11	Sh. Bhoma Ram	Sh. Luna Ram	Daikara, Mandor	HHB 300	Local	2075	1650	25.8	3000	2250
12	Mrs. Sita	Sh. Pema Ram	Daikara, Mandor	HHB 301	Local	2050	1700	20.6	3150	2300
13	Sh. Lumbha Ram	Sh. Nena Ram	Daikara, Mandor	HHB 302	Local	2100	1625	29.2	3200	2275
14	Sh. Dhana Ram	Sh. Natha Ram	Daikara, Mandor	HHB 303	Local	2100	1650	27.3	3250	2250
15	Sh. Sukh Dev	Sh. Sohan Lal	Daikara, Mandor	HHB 304	Local	2050	1675	22.4	2975	2235
16	Mrs. Sohani	Sh. Ragunath Ram	Daikara, Mandor	HHB 305	Local	2025	1650	22.7	2950	2230
17	Mrs. Papu Devi	Sh. Bhoma Ram	Daikara, Mandor	HHB 306	Local	2050	1650	24.2	3050	2300
18	Sh. Rakesh	Sh. Sohan Lal	Daikara, Mandor	HHB 307	Local	2025	1700	19.1	3200	2225
19	Mrs Seema	Sh. Ram Lakhan	Daikara, Mandor	HHB 308	Local	2000	1675	19.4	3100	2175
20	Mrs. Tulsi	Sh. Mohan Ram	Daikara, Mandor	HHB 309	Local	2100	1650	27.3	3250	2250
21	Mrs Dhagli	Sh. Hanuman Ram	Daikara, Mandor	HHB 310	Local	2075	1700	22.1	3000	2350
22	Mrs Poonam	Sh. Ragunath Ram	Daikara, Mandor	HHB 311	Local	2050	1650	24.2	3050	2150
23	Mrs. Geeta	Sh. Ram Lal	Daikara, Mandor	HHB 312	Local	2100	1700	23.5	3200	2300
24	Mrs. Phuli	Sh. Sohan Lal	Daikara, Mandor	HHB 313	Local	2050	1650	24.2	2975	2150
25	Sh. Mangi Lal	Sh. Lumbha Ram	Daikara, Mandor	HHB 314	Local	2025	1625	24.6	3025	2130
26	Mrs. Sohani	Sh. Ghewar Ram	Daikara, Mandor	HHB 315	Local	2075	1700	22.1	3150	2265
27	Mrs. Marali	Sh. Mahendra	Daikara, Mandor	HHB 316	Local	2050	1650	24.2	3100	2150
28	Sh. Gopa Ram	Sh. Mada Ram	Daikara, Mandor	HHB 317	Local	2100	1700	23.5	3200	2300

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.14: Result of FLD's conducted by Krishi Vigyan Kendra, ICAR-CAZRI, Jodhpur (Rajasthan) Kharif 2024

Technology Demonstration: Improved practices (Varietal trial: Biofortified hybrid HHB 299) v/s Farmer's Practice

S. No.	Name of the Beneficiary	Fathers/ Husband/ Name	Address	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
						IP	FP		IP	FP
29	Mrs Puja	Sh. Sohan Lal	Daikara, Mandor	HHB 318	Local	2050	1650	24.2	2975	2175
30	Mrs Raji	Sh. Luna Ram	Daikara, Mandor	HHB 319	Local	2075	1625	27.7	3100	2150
31	Sh. Moda Ram	Sh. Mangi Lal	Daikara, Mandor	HHB 299	Local	2025	1635	23.9	3200	2200
32	Sh. Ram Rakh	Sh. Hanuman Ram	Daikara, Mandor	HHB 299	Local	2000	1700	17.6	2975	2200
33	Sh. Jetha Ram	Sh. Dana Ram	Daikara, Mandor	HHB 299	Local	2100	1655	26.9	3250	2150
34	Sh. Deva Ram	Sh. Jhumar Ram	Daikara, Mandor	HHB 299	Local	2075	1675	23.9	3050	2300
35	Sh. Bhakhar Ram	Sh. Amana Ram	Daikara, Mandor	HHB 299	Local	2050	1625	26.2	3150	2175
36	Sh. Oma Ram	Sh. Teja Ram	Daikara, Mandor	HHB 299	Local	2100	1700	23.5	3200	2200
37	Sh. Kisan Singh	Sh. Mag Singh	Daikara, Mandor	HHB 299	Local	2075	1680	23.5	3050	2230
38	Sh. Kachra Ram	Sh. Pancha Ram	Daikara, Mandor	HHB 299	Local	2050	1650	24.2	3100	2150
39	Sh. Budha Ram	Sh. Natha Ram	Daikara, Mandor	HHB 299	Local	2025	1700	19.1	3000	2300
40	Sh. Bhakhar Ram	Sh. Mangi Lal	Daikara, Mandor	HHB 299	Local	2075	1700	22.1	3100	2300
41	Sh. Pahlad Singh	Sh. Mag Singh	Daikara, Mandor	HHB 299	Local	2050	1650	24.2	3200	2150
42	Sh. Beeja Ram	Sh. Dhana Ram	Daikara, Mandor	HHB 299	Local	2100	1700	23.5	3100	2210
43	Sh. Santosh Das	Sh. Ghewar Das	Daikara, Mandor	HHB 299	Local	2075	1675	23.9	3000	2300
44	Sh. Jagdish	Sh. Ghewar Ram	Daikara, Mandor	HHB 299	Local	2025	1700	19.1	3125	2250
45	Sh. Dinesh	Sh. Deva Ram	Daikara, Mandor	HHB 299	Local	2075	1675	23.9	3200	2300
46	Sh. Gena Ram	Sh. Dhokal Ram	Daikara, Mandor	HHB 299	Local	2050	1625	26.2	3100	2250
47	Sh. Kana Ram	Sh. Dhokal Ram	Daikara, Mandor	HHB 299	Local	2100	1675	25.4	3250	2300
48	Sh. Hamir Ram	Sh. Chanda Ram	Daikara, Mandor	HHB 299	Local	2075	1650	25.8	3200	2230
49	Sh. Sahdev Ram	Sh. Bhanwar Lal	Daikara, Mandor	HHB 299	Local	2050	1650	24.2	3100	2200
50	Sh. Kana Ram	Sh. Lumba Ram	Daikara, Mandor	HHB 299	Local	2075	1625	27.7	3050	2175
Total						102950	83220		154575	111745
Mean						2059	1664	23.7	3092	2235

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.15: Result of FLD's conducted by Krishi Vigyan Kendra, Chandgothi (Churu), SKRAU, Bikaner (Rajasthan) *Kharif* 2024

Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Fathers/ Husband/ Name	Address	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
						IP	FP		IP	FP
1	Surendra	Madu Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1580	1322	19.5	2891	2271
2	Rajkumar	Prakash	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1530	1252	22.2	2846	2203
3	Ravi	Rajendra	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1372	19.5	3067	2416
4	Rotash	Mamchand	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1620	1340	20.9	2981	2318
5	Shishram	Mamchand	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1570	1328	18.2	2920	2292
6	Mahendra	Kishori	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1780	1521	17.0	3364	2667
7	Ramswaroop		Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1710	1430	19.6	3164	2530
8	Bhanwar Singh	Rajkumar Singh	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1387	18.2	3083	2400
9	Mahendra	Mala Ram	Jaswantpura, Sadulpur, Churu	HHB 299	F ₂ Seed	1740	1390	25.2	3254	2575
10	Subash	Mula Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1760	1471	19.6	3274	2532
11	Rajendra Kumar	Asha Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1610	1362	18.2	3027	2381
12	Mahboob	Safi Khan	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1680	1420	18.3	3091	2411
13	Bhadar	Balu Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1700	1406	20.9	3162	2498
14	Mazid	Munshi Khan	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1660	1404	18.2	3137	2445
15	Amar Singh	Phula Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1590	1330	19.5	2942	2257
16	Sunil	Pratap Singh	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1580	1336	18.3	2970	2306
17	Harshvardhan	Dilip Singh	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1372	19.5	3018	2321
18	Aslam	Lal Khan	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1630	1378	18.3	3032	2359
19	Goutampal	Raghuveer	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1700	1421	19.6	3213	2479
20	Satpal	Ratan Singh	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1570	1328	18.2	2905	2253
21	Shaukat Ali	Gani Khan	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1610	1377	16.9	3027	2381
22	Mahesh Ola	Roop Chand	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1610	1347	19.5	2946	2263
23	Dyanand	Asha Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1660	1404	18.2	3038	2367
24	Ratan	Bhikha Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1740	1471	18.3	3236	2531
25	Raju Budaniya	Ram Singh	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1710	1446	18.3	3112	2431
26	Kuldeep	Indraj	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1570	1328	18.2	2873	2271
27	Sanju	Ramavtar	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1720	1470	17.0	3199	2203
28	Jai Singh	Banwari Lal	Chandgothi, Sadulpur, Churu	HHB 299	F ₂ Seed	1710	1430	19.6	3198	2416
29	Prem Singh	Norang Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1387	18.2	3018	2318

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.15: Result of FLD's conducted by Krishi Vigyan Kendra, Chandgothi (Churu), SKRAU, Bikaner (Rajasthan) *Kharif* 2024

Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Fathers/ Husband/ Name	Address	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
						IP	FP		IP	FP
30	Manroop Shrma	Juglal	Thirpali Choti, Sadulpur, Churu	HHB 299	F ₂ Seed	1650	1411	16.9	3069	2292
31	Kalyan Singh	Mohan Singh	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1540	1289	19.5	2911	2667
32	Bhanwar Singh	Purn Singh	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1500	1269	18.2	2775	2530
33	Rameshwer	Kisna Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1680	1420	18.3	3158	2400
34	Nagarmal	Syokaran	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1470	1217	20.8	2749	2575
35	Mahendra	Mala Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1470	1244	18.2	2734	2532
36	Jai Singh	Kisan Lal	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1540	1289	19.5	2895	2381
37	Bhopal Singh	Jagu Singh	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1530	1294	18.2	2815	2411
38	Surendra	Neki Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1540	1289	19.5	2864	2498
39	Pawan Kumar	Mangla Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1710	1430	19.6	3232	2445
40	Anil Kumar	Mangla Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1387	18.2	3034	2257
41	Rotash	Mangla Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1740	1390	25.2	3271	2306
42	Babu Lal	Kalu Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1760	1471	19.6	3238	2321
43	Mustak	Dine Khan	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1610	1362	18.2	2995	2359
44	Ramkumar	Bilash Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1680	1420	18.3	3175	2479
45	Mahendra	Kalu Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1700	1406	20.9	3145	2253
46	Bhanwar Singh	Ramkumar	Bas Lal Singh, Sadulpur, Churu	HHB 299	F ₂ Seed	1660	1404	18.2	3121	2381
47	Sumer Singh	Mohan Singh	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1590	1330	19.5	2910	2263
48	Ashok Kumar	Buddh Ram	Nima, Sadulpur, Churu	HHB 299	F ₂ Seed	1580	1336	18.3	2891	2367
49	Smt. Sharda	Nandu	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1372	19.5	3050	2531
50	Ram Kisan	Nandlal	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1630	1378	18.3	2967	2431
51	Mukesh Kumar	Ummed Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1700	1421	19.6	3111	2271
52	Sumitra	Mandroop	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1570	1328	18.2	2920	2203
53	Rajroop	Jamna Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1610	1377	16.9	3011	2559
54	Om Pati	Rajroop	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1610	1347	19.5	2962	2349
55	Vidhya Devi	Hoshiyar Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1660	1404	18.2	3088	2292
56	Meva Singh	Amar Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1740	1471	18.3	3289	2570
57	Rajbala	Meva Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1710	1446	18.3	3164	2530
58	Kuldeep	Meva Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1710	1430	19.6	3215	2400

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.15: Result of FLD's conducted by Krishi Vigyan Kendra, Chandgothi (Churu), SKRAU, Bikaner (Rajasthan) *Kharif* 2024

Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Fathers/ Husband/ Name	Address	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
						IP	FP		IP	FP
59	Sushila Devi	Norattam	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1387	18.2	3067	2432
60	Jarwanti	Chet Ram	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1650	1411	16.9	3069	2192
61	Kela	Parbhu Ram	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1540	1289	19.5	2895	2205
62	Vinod	Hanuman	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1500	1269	18.2	2760	2411
63	Munni	Ramanand	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1680	1420	18.3	3125	2134
64	Vimla	Mahendra Singh	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1470	1217	20.8	2778	2143
65	Vinod	Krishan Singh	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1470	1244	18.2	2720	2180
66	Bobdi	Ramkaran	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1540	1289	19.5	2895	2227
67	Ganesha Ram	Munga ram	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1530	1294	18.2	2815	2169
68	Prabhu Ram	Munga Ram	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1540	1289	19.5	2864	2312
69	Ramanand	Prabhu Ram	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1600	1353	18.3	3024	2479
70	Karan Singh	Pala Ram	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1700	1421	19.6	3145	2378
71	Vijay Singh	Phoola Ram	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1650	1395	18.3	3102	2461
72	Sajjan Singh	Harish Kumar	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1660	1419	17.0	3038	2172
73	Rajkumar	Harish Kumar	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1550	1297	19.5	2837	2275
74	Vijay Kumar	Tiku Ram	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1600	1353	18.3	2976	2359
75	Kamlesh	Jhabar Mal	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1630	1378	18.3	2967	2339
76	Rajpal	Roopchand	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1650	1395	18.3	3020	2172
77	Mohammad Asgar	Aasin Khan	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1650	1411	16.9	3020	2275
78	Saroj	Lal Chand	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1540	1289	19.5	2818	2271
79	Sumitra	Ishwer Singh	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1500	1269	18.2	2790	2203
80	Chmeli	Krishan Kumar	Noohand, Sadulpur, Churu	HHB 299	F ₂ Seed	1680	1420	18.3	3142	2416
81	Asha	Rajesh Kumar	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1470	1217	20.8	2705	2318
82	Rajkumar	Amar Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1470	1244	18.2	2734	2292
83	Sunita	Naresh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1540	1289	19.5	2911	2667
84	Poonam	Dinesh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1530	1294	18.2	2831	2530
85	Dinesh	Jaykaran	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1540	1289	19.5	2895	2400
86	Jaykaran	Mula Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1710	1430	19.6	3198	2575
87	Ginni Devi	Jaikaran	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1387	18.2	3050	2532

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.15: Result of FLD's conducted by Krishi Vigyan Kendra, Chandgothi (Churu), SKRAU, Bikaner (Rajasthan) *Kharif* 2024

Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Fathers/ Husband/ Name	Address	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
						IP	FP		IP	FP
88	Jamna	Balwan	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1740	1390	25.2	3271	2381
89	Balwan	Budda Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1760	1471	19.6	3238	2411
90	Somveer	Balwan	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1610	1362	18.2	2995	2498
91	Sukhama	Somveer	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1680	1420	18.3	3175	2445
92	Hoshiyar ingh	Chandgi Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1700	1406	20.9	3145	2257
93	Bhagirath	Shri chand	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1660	1404	18.2	3121	2306
94	Rajesh	Lokram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1590	1330	19.5	2926	2321
95	Buddhram	Rameshwerlal	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1580	1336	18.3	2939	2359
96	Mira Devi	Jagdish	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1372	19.5	3100	2479
97	Poonam	Mahipal	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1630	1378	18.3	3016	2253
98	Mukesh	Surendra	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1700	1421	19.6	3196	2381
99	Dishali	Indrasingh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1570	1328	18.2	2873	2263
100	Mohini	Sohan Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1610	1377	16.9	2946	2367
101	Kavita	Vidhyadhar	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1580	1322	19.5	2939	2531
102	Ishwer	Pralad	Thirpali Choti, Sadulpur, Churu	HHB 299	F ₂ Seed	1530	1252	22.2	2785	2431
103	Mohri	Hari Singh	Bas Kirtan, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1372	19.5	3001	2271
104	Sandeep	Ramnivas	Bas Kirtan, Sadulpur, Churu	HHB 299	F ₂ Seed	1620	1340	20.9	3013	2203
105	Balveer	Jagdish Prasad	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1570	1328	18.2	2936	2559
106	Narendra	Rampal	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1780	1521	17.0	3275	2349
107	Mahipal	Subash Chandra	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1710	1430	19.6	3181	2292
108	Hajari	Barsi Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1387	18.2	3100	2570
109	Satbeer	Duli Chand	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1740	1390	25.2	3219	2530
110	Beer Singh	Barsi Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1760	1471	19.6	3309	2400
111	Suresh	Prakash	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1610	1362	18.2	3011	2432
112	Rajesh	Amar Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1680	1420	18.3	3125	2192
113	Sadu Ram	Ratan Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1700	1406	20.9	3196	2205
114	Sampat Singh	Dariya Singh	Thirpali Choti, Sadulpur, Churu	HHB 299	F ₂ Seed	1660	1404	18.2	3054	2411
115	Dharpal	Juglal	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1590	1330	19.5	2957	2134
116	Suresh Kumar	Prabhu Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1580	1336	18.3	2986	2143

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.15: Result of FLD's conducted by Krishi Vigyan Kendra, Chandgothi (Churu), SKRAU, Bikaner (Rajasthan) *Kharif* 2024

Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Fathers/ Husband/ Name	Address	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
						IP	FP		IP	FP
117	Lal Singh	Dariya Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1372	19.5	3034	2180
118	Pradeep	Hosiyar Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1630	1378	18.3	3064	2227
119	Baljeet	Ummed	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1580	1322	19.5	2907	2169
120	Nisha	Brijesh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1530	1294	18.2	2846	2312
121	Rajesh	Ummed Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1730	1430	21.0	3270	2479
122	Anita	Somveer	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1387	18.2	3034	2378
123	Santosh	Sumer	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1570	1328	18.2	2952	2461
124	Sunil	Hosiyar Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1720	1470	17.0	3148	2172
125	Suresh	Prabhu Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1710	1430	19.6	3129	2275
126	Rotash	Ravidatt	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1387	18.2	3050	2359
127	Toni	Gurdayal	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1650	1411	16.9	3003	2339
128	Anita	Sube Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1540	1289	19.5	2880	2559
129	Suresh	Hajari	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1500	1269	18.2	2760	2349
130	Suresh	Mahendra	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1680	1420	18.3	3125	2292
131	Kavita	Vidhyadhar	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1630	1378	18.3	3081	2570
132	Sandeep	Bhagirath	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1700	1421	19.6	3145	2530
133	Mhasingh	Bajnaram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1570	1328	18.2	2952	2400
134	Praksh	Shrichand	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1610	1377	16.9	3011	2432
135	Satveer	Dularam	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1580	1322	19.5	2939	2192
136	Karmveer	Chindra Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1530	1252	22.2	2876	2205
137	Jaikaran	Mularam	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1372	19.5	3018	2411
138	Madan	Mularam	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1620	1340	20.9	3013	2203
139	Mukesh	Hosiyar Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1570	1328	18.2	2873	2271
140	Randheer	Sohan Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1780	1521	17.0	3311	2203
141	Bajrang	Syochand	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1710	1430	19.6	3198	2416
142	Rajveer	Subhram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1387	18.2	3018	2318
143	Rajveer	Jhaburam	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1740	1390	25.2	3236	2292
144	Chetram	Sohanram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1760	1471	19.6	3326	2667
145	Jaiveer	Panna Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1610	1362	18.2	2979	2530

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.15: Result of FLD's conducted by Krishi Vigyan Kendra, Chandgothi (Churu), SKRAU, Bikaner (Rajasthan) *Kharif* 2024

Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Fathers/ Husband/ Name	Address	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
						IP	FP		IP	FP
146	Sanjay	Subhram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1680	1420	18.3	3158	2400
147	Sadal	Tokharam	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1700	1406	20.9	3179	2575
148	Pratap	Radmal	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1660	1404	18.2	3088	2532
149	Sandeep	Veer Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1590	1330	19.5	2989	2381
150	Veer Singh	Mularam	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1580	1336	18.3	2907	2411
151	Jai Singh	Amar Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1640	1372	19.5	3050	2498
152	Dharmveer	Indra Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1600	1353	18.3	3024	2445
153	Balwan	Indra Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1700	1421	19.6	3145	2257
154	Rajesh	Tokha Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1650	1395	18.3	3102	2306
155	Rajesh	Mohar Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1660	1419	17.0	3054	2321
156	Balwan	Bhopal ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1550	1297	19.5	2883	2359
157	Bajrang	Bhopal Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1600	1353	18.3	3024	2479
158	Mange	Indra Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1630	1378	18.3	3016	2253
159	Kamla	Dharmveer	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1650	1395	18.3	3102	2381
160	Jai Singh	Sagar Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1650	1411	16.9	3020	2263
161	Raju	Amar Singh	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1540	1289	19.5	2818	2367
162	Sandeep	Mange Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1500	1269	18.2	2790	2531
163	Mahipal	Lichmna Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1680	1420	18.3	3058	2431
164	Mahipal	Saba Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1470	1217	20.8	2690	2271
165	Hajri	Barsi ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1470	1244	18.2	2734	2203
166	Suresh	Sohan	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1540	1289	19.5	2880	2559
167	Veer Singh	Barsi Ram	Dingli, Sadulpur, Churu	HHB 299	F ₂ Seed	1530	1294	18.2	2815	2349
Total						271520	228165		504670	395604
Mean						1626	1366	19.0	3022	2369

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.16: Result of FLD's conducted by Krishi Vigyan Kendra, Phalodi (Rajasthan), SKRAU, Bikaner (Rajasthan) *Kharif 2024*

Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Address	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
1	Chotulal	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1985	1596	24.4	3250	2870
2	Gafur Khan	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1792	1220	46.9	3140	2730
3	Girdharilal	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1846	1435	28.6	2953	2628
4	Jasraj Paliwal	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2141	1708	25.4	2970	2350
5	Chotulal	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2332	1925	21.1	3460	3164
6	Anil Paliwal	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1828	1472	24.2	3557	3261
7	Lalram	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1985	1640	21.0	3239	2884
8	Manklal Paliwal	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1862	1485	25.4	3380	2985
9	Hemant Paliwal	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2065	1621	27.4	3392	2987
10	Sukharam	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1976	1539	28.4	3475	3154
11	Mukesh	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1942	1532	26.8	3147	2764
12	Jhubarlal	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2045	1645	24.3	3312	2996
13	Shankarlal	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2150	1752	22.7	2987	2588
14	Dhnraj	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2360	1920	22.9	2896	2474
15	Thakardas	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2087	1647	26.7	3271	2869
16	Devila	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1896	1524	24.4	3416	3095
17	Choturam	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1980	1530	29.4	3385	2978
18	Ani Choudhary	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2034	1648	23.4	3497	3152
19	Rekhchand	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2079	1639	26.8	3520	3166
20	Anddaram	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1945	1584	22.8	3486	3074
21	Bhwani shankar	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2174	1756	23.8	3375	2953
22	Jitendra	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2345	1986	18.1	3265	2836
23	Jankilal	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1974	1665	18.6	3105	2786
24	Motilal	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2016	1675	20.4	2984	2582
25	Kamal	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2234	1869	19.5	2810	2436
26	Insaf Ali	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2106	1788	17.8	2911	2548
27	Sheru	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1846	1452	27.1	3017	2673
28	Moh. Frid	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1956	1586	23.3	3034	2685

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.16: Result of FLD's conducted by Krishi Vigyan Kendra, Phalodi (Rajasthan), SKRAU, Bikaner (Rajasthan) *Kharif 2024*

Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Address	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
29	Baryam Khan	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1874	1499	25.0	3164	2794
30	Ajmad Husen	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1839	1448	27.0	3275	3054
31	Abdul Ajj	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2015	1684	19.7	3340	2956
32	Jetha Ram	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2346	1944	20.7	2914	2546
33	Mansukh	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2105	1736	21.3	3410	3061
34	Salim	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1965	1577	24.6	3305	2945
35	Omaram	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1856	1496	24.1	3142	2740
36	Harchandraram	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1815	1445	25.6	3022	2625
37	Kalu Khan	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2109	1788	18.0	2941	2545
38	Sohan ram	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2260	1849	22.2	3064	2665
39	Oma ram	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2314	1984	16.6	2975	2565
40	Bilala	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2485	2096	18.6	2874	2470
41	Mukesh Meghwal	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2051	1674	22.5	2953	2550
42	Girdhariram	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1934	1536	25.9	3041	2642
43	Sai Ram	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	1944	1564	24.3	3124	2722
44	Gopal Ram	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2015	1674	20.4	3340	2920
45	Farukh	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2243	1862	20.5	3465	3046
46	Dinesh	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2385	1964	21.4	3018	2622
47	Jagdish Mali	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2412	2081	15.9	3148	2745
48	Hitesh	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2163	1786	21.1	2967	2560
49	Umesh	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2245	1894	18.5	2860	2455
50	Raju Ram	Bhojka, Phalodi, Rajasthan	HHB 299	F ₂ Seed	2316	1955	18.5	3077	2668
Total					103672	84375		158653	139564
Mean					2073	1688	22.9	3173	2791

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.17: Result of FLD's conducted by KVK, Keshwana, Jalore-I (Rajasthan) *Kharif 2024*

Technology Demonstration: Biofortified hybrid RHB 223 v/s Farmer's Practice (FP) Trials

S. No.	Name of the Beneficiary	Fathers/ Husband/ Name	Address	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield
						IP	FP	
1	Manglaram	Sakaram	Pijopura, Jalore	RHB 223	F ₂ Seed	1740	1350	28.9
2	Puraram	Jeevaji	Pijopura, Jalore	RHB 223	F ₂ Seed	1640	1360	20.6
3	Ganesharam	Hajaram	Pijopura, Jalore	RHB 223	F ₂ Seed	1720	1430	20.3
4	Chamnaram	Jodharam	Pijopura, Jalore	RHB 223	F ₂ Seed	1760	1380	27.5
5	Sawaram	Jodharam	Pijopura, Jalore	RHB 223	F ₂ Seed	1600	1320	21.2
6	Moolaram	Choram	Pijopura, Jalore	RHB 223	F ₂ Seed	1690	1450	16.6
7	Shankarlal	Sawaram	Pijopura, Jalore	RHB 223	F ₂ Seed	1620	1390	16.5
8	Hajaram	Jodharam	Pijopura, Jalore	RHB 223	F ₂ Seed	1720	1440	19.4
9	Deeparam	Thanaram	Pijopura, Jalore	RHB 223	F ₂ Seed	1810	1580	14.6
10	Masram	Kesaji	Pijopura, Jalore	RHB 223	F ₂ Seed	1860	1510	23.2
11	Khaetaram	Ookaram	Pijopura, Jalore	RHB 223	F ₂ Seed	1860	1550	20.0
12	Mangilal	Ookaram	Pijopura, Jalore	RHB 223	F ₂ Seed	1820	1570	15.9
13	Dinesh	Hosaram	Pijopura, Jalore	RHB 223	F ₂ Seed	1790	1380	29.7
14	Sumersingh	Chattarsingh	Pijopura, Jalore	RHB 223	F ₂ Seed	1590	1360	16.9
15	Jogaram	Bholaram	Pijopura, Jalore	RHB 223	F ₂ Seed	1660	1400	18.6
16	Hosaram	Kuiyaram	Pijopura, Jalore	RHB 223	F ₂ Seed	1760	1440	22.2
17	Ramesh Kumar	Kanaram	Pijopura, Jalore	RHB 223	F ₂ Seed	1600	1450	10.3
18	Rekha Devi	Natharam	Pijopura, Jalore	RHB 223	F ₂ Seed	1585	1350	17.4
19	Velaram	Kripaji	Pijopura, Jalore	RHB 223	F ₂ Seed	1720	1420	21.1
20	Babusingh	Momat Singh	Pijopura, Jalore	RHB 223	F ₂ Seed	1780	1540	15.6
21	Natharam	Kesharamji	Pijopura, Jalore	RHB 223	F ₂ Seed	1790	1430	25.2
22	Phoolaram	Magnaji	Pijopura, Jalore	RHB 223	F ₂ Seed	1620	1330	21.8
23	Gulabsingh	Kaloo Singh	Pijopura, Jalore	RHB 223	F ₂ Seed	1625	1430	13.6
24	Soojaram	Bhavaram	Pijopura, Jalore	RHB 223	F ₂ Seed	1680	1390	20.9
25	Natharam	Magnaji	Pijopura, Jalore	RHB 223	F ₂ Seed	1710	1460	17.1
26	Dungaram	Bagdaram	Akwa, Jalore	RHB 223	F ₂ Seed	1670	1380	21.0
27	Vikram Singh	Chailsingh	Akwa, Jalore	RHB 223	F ₂ Seed	1560	1190	31.1
28	Jabraram	Bagdaram	Akwa, Jalore	RHB 223	F ₂ Seed	1950	1460	33.6

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.17: Result of FLD's conducted by KVK, Keshwana, Jalore-I (Rajasthan) *Kharif 2024*

Technology Demonstration: Biofortified hybrid RHB 223 v/s Farmer's Practice (FP) Trials

S. No.	Name of the Beneficiary	Fathers/ Husband/ Name	Address	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield
						IP	FP	
29	Arjunsingh	Chailsingh	Akwa, Jalore	RHB 223	F ₂ Seed	1530	1290	18.6
30	Govindram	Mawaram	Akwa, Jalore	RHB 223	F ₂ Seed	1660	1320	25.8
31	Dashrath Singh	Chailsingh	Akwa, Jalore	RHB 223	F ₂ Seed	1740	1460	19.2
32	Ratnaram	Bhalaji	Akwa, Jalore	RHB 223	F ₂ Seed	1780	1370	29.9
33	Premsingh	Sukhsinghji	Akwa, Jalore	RHB 223	F ₂ Seed	1625	1380	17.8
34	Jhutaram	Jaitaram	Akwa, Jalore	RHB 223	F ₂ Seed	1780	1460	21.9
35	Dungarsingh	Chandan singh	Akwa, Jalore	RHB 223	F ₂ Seed	1660	1400	18.6
36	Dugaram	Raymaji	Akwa, Jalore	RHB 223	F ₂ Seed	1700	1440	18.1
37	Bhanwarsingh	Poonam Singh	Akwa, Jalore	RHB 223	F ₂ Seed	1590	1380	15.2
38	Nimbaram	Kanaram	Akwa, Jalore	RHB 223	F ₂ Seed	1670	1490	12.1
39	Narnaram	Valaramji	Akwa, Jalore	RHB 223	F ₂ Seed	1390	1230	13.0
40	Mukansingh	Khetsinghji	Akwa, Jalore	RHB 223	F ₂ Seed	1640	1400	17.1
41	Baburam	Mukaram	Akwa, Jalore	RHB 223	F ₂ Seed	1880	1500	25.3
42	Ghevargiri	Bhimgiri	Akwa, Jalore	RHB 223	F ₂ Seed	1760	1320	33.3
43	Narnanam	Dharmaram	Akwa, Jalore	RHB 223	F ₂ Seed	1810	1450	24.8
44	Narendra Singh	Arjunsingh	Akwa, Jalore	RHB 223	F ₂ Seed	1680	1340	25.4
45	Sambhu Singh	Hadmat singh	Akwa, Jalore	RHB 223	F ₂ Seed	1720	1420	21.1
46	Udaysingh	Sukhsingh	Akwa, Jalore	RHB 223	F ₂ Seed	1740	1510	15.2
47	Jairooparam	Sartanaram	Akwa, Jalore	RHB 223	F ₂ Seed	1680	1460	15.1
48	Desh Knwar	Arjunsingh	Akwa, Jalore	RHB 223	F ₂ Seed	1580	1390	13.7
49	Jabraram	Shreeramji	Akwa, Jalore	RHB 223	F ₂ Seed	1700	1400	21.4
50	Vagaram	Sartanaram	Akwa, Jalore	RHB 223	F ₂ Seed	1840	1520	21.1
Total						85085	70670	
Mean						1702	1413	20.4

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Mirconutrients, Chemical weed Mirconutrients, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.18: Result of FLD's conducted by Krishi Vigyan Kendra, Athiyasan (Nagaur-I), Agriculture University, Jodhpur (Rajasthan) Kharif 2023

Technology Demonstration: Improved practices v/s Farmer's Practice

S. No.	Name of the Beneficiary	Fathers/ Husband/ Name	Address	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
						IP	FP		IP	FP
1	Prahlad	Jhumar ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1832	1522	20.4	6425	5276
2	Mahendra	Mangi lal	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1871	1497	25.0	6736	5149
3	Nena ram	Ana ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1903	1632	16.6	6549	5649
4	Bhima ram	Babu lal	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1894	1528	24.0	6729	5311
5	Dharm raj	Bhura ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1917	1489	28.7	6419	5141
6	Mahendra	Pratap ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1905	1559	22.2	6642	5381
7	Surendra	Nimba ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1897	1671	13.5	6829	5734
8	Surendra	Baldev ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1878	1603	17.2	6598	5611
9	Mahendra jajra	Narayan jajra	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1924	1527	26.0	6697	5298
10	Saty narayan	Nena ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1942	1637	18.6	6791	5731
11	Sita ram	Bhanwara ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1931	1611	19.9	6698	5729
12	Suresh	Hanuman ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1897	1549	22.5	6549	5449
13	Mahendra	Jagram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1957	1539	27.2	6878	5419
14	Sampta ram	Bhanwar lal	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1937	1497	29.4	6825	5288
15	Suresh raliya	Baldev ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1964	1542	27.4	6809	5332
16	Sahdev	Kanvra ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1976	1557	26.9	6934	5520
17	Muna ram	Bhola ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1889	1667	13.3	6651	5932
18	Hanuman ram	Hardin ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1982	1528	29.7	6925	5368
19	Dau lal	Kanhaiya lal	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1962	1611	21.8	6841	5621
20	Dinesh	Jagram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1928	1492	29.2	6721	5291
21	Raju ram	Nena ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1943	1527	27.2	6894	5246
22	Mukesh	Hanuman	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1986	1594	24.6	7021	5546
23	Hema ram	Bana ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1921	1549	24.0	6625	5530
24	Dhana ram	Ramdev	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1913	1579	21.2	6795	5657
25	Kailash dukiya	Rama ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1955	1653	18.3	6754	5897
26	Sukhdev	Shivdan	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1963	1621	21.1	6831	5637
27	Dinesh	Sahdev	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1893	1644	15.1	6715	5911
28	Mukesh	Sita ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1877	1497	25.4	6659	5210
29	Dinesh	Dharma ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1882	1489	26.4	6674	5187
30	Tulcha ram	Nena ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1917	1571	22.0	6716	5537
31	Jitendra	Mangla ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1933	1564	23.6	6813	5633
32	Koja ram	Sita ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1967	1599	23.0	6788	5618
33	Surendra	Nena ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1949	1548	25.9	6914	5347
34	Manish	Naina ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1921	1537	25.0	6752	5440

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.18: Result of FLD's conducted by Krishi Vigyan Kendra, Athiyasan (Nagaur-I), Agriculture University, Jodhpur (Rajasthan) Kharif 2023

Technology Demonstration: Improved practices v/s Farmer's Practice

S. No.	Name of the Beneficiary	Fathers/ Husband/ Name	Address	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
						IP	FP		IP	FP
35	Kana ram	Mohan ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1888	1529	23.5	6687	5464
36	Bhagirath	Bagta ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1894	1611	17.6	6679	5625
37	Anop ram	Dhokal ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1908	1534	24.4	6667	5660
38	Ganpat singh	Ram singh	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1952	1544	26.4	6919	5542
39	Bhawani singh	Himmat singh	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1967	1554	26.6	7029	5841
40	Bhanu pratap	Surajbhan singh	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1923	1693	13.6	6705	6128
41	Dashrath singh	Bhom singh	Jorawarpura, Khinvsar	RHB 224	F ₂ Seed	1971	1534	28.5	7097	5164
42	Kan singh	Bhanwar singh	Jorawarpura, Khinvsar	RHB 225	F ₂ Seed	1984	1577	25.8	7222	5729
43	Mahendra singh	Hem singh	Jorawarpura, Khinvsar	RHB 226	F ₂ Seed	1987	1633	21.7	7108	5611
44	Madan singh	Ladu singh	Jorawarpura, Khinvsar	RHB 227	F ₂ Seed	1896	1601	18.4	6518	5419
45	Jalam singh	Prem singh	Jorawarpura, Khinvsar	RHB 228	F ₂ Seed	1936	1578	22.7	6693	5488
46	Anda ram	Malla ram	Jorawarpura, Khinvsar	RHB 229	F ₂ Seed	1992	1651	20.7	7249	5926
47	Hukma ram	Mohan ram	Jorawarpura, Khinvsar	RHB 230	F ₂ Seed	1976	1549	27.6	7001	5562
48	Jetu singh	Vijay singh	Jorawarpura, Khinvsar	RHB 231	F ₂ Seed	1986	1587	25.1	7284	5667
49	Bhanwar singh	Prabat singh	Jorawarpura, Khinvsar	RHB 232	F ₂ Seed	1997	1648	21.2	6829	5905
50	Kan singh	Arjun singh	Jorawarpura, Khinvsar	RHB 233	F ₂ Seed	1989	1455	36.7	7144	5324
51	Mahendra singh	Shyam singh	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	2035	1603	26.9	7357	5768
52	Mahendra singh	Hanuman singh	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1998	1619	23.4	6874	5544
53	Khuman singh	Devi singh	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1977	1531	29.1	7022	5267
54	Dayal singh	Lal singh	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1958	1564	25.2	6987	5926
55	Rajendra singh	Bishan singh	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1971	1475	33.6	6738	5237
56	Dhirendra singh	Shiv singh	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1985	1479	34.2	7058	5020
57	Deep singh	Ummed singh	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1972	1466	34.5	7133	5197
58	Nimba ram	Hukma ram	Jorawarpura, Khinvsar	RHB 224	F ₂ Seed	1969	1559	26.3	7035	5492
59	Mahendra	Nena ram	Jorawarpura, Khinvsar	RHB 225	F ₂ Seed	1965	1571	25.1	7049	5682
60	Thanagiri	Gumangiri	Jorawarpura, Khinvsar	RHB 226	F ₂ Seed	1948	1547	25.9	6801	5564
61	Chandrapal singh	Girdhari	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1916	1686	13.6	6752	6218
62	Radhe shyam	Siya ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	1987	1539	29.1	6751	5624
63	Babu lal	Ghewar ram	Jorawarpura, Khinvsar	RHB 223	F ₂ Seed	2013	1511	33.2	7035	5173
Total						122346	98658		430620	348393
Mean						1942	1566	24.0	6835	5530

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Micronutrients, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.19: Result of FLD's conducted by Krishi Vigyan Kendra, Gudamalani (Barmer), Agriculture University, Jodhpur (Rajasthan) *Kharif 2024*

Technology Demonstration: Improved practices (Varietal trial: Biofortified hybrid HHB 299) v/s Farmer's Practice

S. No.	Name of the Beneficiary	Address	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
1	Daula Ram	Nmbalkot, Barmer	HHB 299	F ₂ Seed	687	400	71.8	1400	687
2	Krta Ram	Nmbalkot, Barmer	HHB 299	F ₂ Seed	905	721	25.5	1398	1020
3	Nena Ram	Nmbalkot, Barmer	HHB 299	F ₂ Seed	900	655	37.4	1400	1285
4	Thana Ram	Nmbalkot, Barmer	HHB 299	F ₂ Seed	948	710	33.5	1452	1200
5	Rava Ram	Nmbalkot, Barmer	HHB 299	F ₂ Seed	1167	722	61.6	1578	1166
6	Ishra Ram	Nmbalkot, Barmer	HHB 299	F ₂ Seed	1236	612	102.0	1788	807
7	Thana Ram	Nmbalkot, Barmer	HHB 299	F ₂ Seed	1202	782	53.7	1743	1166
8	Kailash Kumar	Nmbalkot, Barmer	HHB 299	F ₂ Seed	1222	600	103.7	1907	900
9	Achla Ram	Nmbalkot, Barmer	HHB 299	F ₂ Seed	844	677	24.7	1378	1011
10	Jujha Ram	Nmbalkot, Barmer	HHB 299	F ₂ Seed	1344	997	34.8	1803	1219
11	Kehr Devi	Nmbalkot, Barmer	HHB 299	F ₂ Seed	983	755	30.2	1440	970
12	Himmta Ram	Nmbalkot, Barmer	HHB 299	F ₂ Seed	991	669	48.1	1383	1008
13	Kishore Kumar	Nmbalkot, Barmer	HHB 299	F ₂ Seed	1119	819	36.6	1639	1186
14	Kavra Ram	Nmbalkot, Barmer	HHB 299	F ₂ Seed	1208	700	72.6	1800	1100
15	Bhana Ram	Khariya, Barmer	HHB 299	F ₂ Seed	1115	955	16.8	1702	1130
16	Uda Ram	Khariya, Barmer	HHB 299	F ₂ Seed	1177	800	47.1	1655	1220
17	Daja Ram	Golya, Barmer	HHB 299	F ₂ Seed	1100	767	43.4	1823	1402
18	Mana Ram	Payla Kallan, Barmer	HHB 299	F ₂ Seed	1560	850	83.5	1960	1045
19	Bhanwara Ram	Dedawas, Barmer	HHB 299	F ₂ Seed	1100	1000	10.0	1974	1144
20	Krishna Kumar	Dedawas, Barmer	HHB 299	F ₂ Seed	1308	969	35.0	1887	1322
21	Jodha Ram	Golya, Barmer	HHB 299	F ₂ Seed	1357	722	88.0	1578	1266
22	Chetan Ram	Payla Kallan, Barmer	HHB 299	F ₂ Seed	1134	612	85.3	1788	907
23	Harji Ram	Payla Kallan, Barmer	HHB 299	F ₂ Seed	1102	782	40.9	1743	1266
24	Rachand Ram	Golya, Barmer	HHB 299	F ₂ Seed	1246	600	107.7	1907	1000
25	Bharmal Ram	Payla Kallan, Barmer	HHB 299	F ₂ Seed	954	677	40.9	1378	1111
26	Jetha Ram	Dedawas, Barmer	HHB 299	F ₂ Seed	1264	997	26.8	1803	1119

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.19: Result of FLD's conducted by Krishi Vigyan Kendra, Gudamalani (Barmer), Agriculture University, Jodhpur (Rajasthan) *Kharif 2024*

Technology Demonstration: Improved practices (Varietal trial: Biofortified hybrid HHB 299) v/s Farmer's Practice

S. No.	Name of the Beneficiary	Address	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
27	Mangi Lal	Chidiya, Barmer	HHB 299	F ₂ Seed	1083	655	65.3	1455	988
28	Naval Ram	Santara, Barmer	HHB 299	F ₂ Seed	1021	669	52.6	1383	1114
29	Dola Ram	Santara, Barmer	HHB 299	F ₂ Seed	1019	819	24.4	1639	1086
30	Babu Lal	Chidiya, Barmer	HHB 299	F ₂ Seed	983	675	45.6	1455	1021
31	Nena Ram	Payla Kallan, Barmer	HHB 299	F ₂ Seed	991	700	41.6	1383	908
32	Veera Ram	Jajba, Barmer	HHB 299	F ₂ Seed	1019	800	27.4	1639	1086
33	Banka Ram	Jajba, Barmer	HHB 299	F ₂ Seed	1308	756	73.0	1800	1000
34	Manga Ram	Nokhda, Barmer	HHB 299	F ₂ Seed	1224	986	24.1	1689	1118
35	Bhanwara Ram	Nokhda, Barmer	HHB 299	F ₂ Seed	1286	1000	28.6	2008	1300
36	Jeta Ram	Nokhda, Barmer	HHB 299	F ₂ Seed	1345	987	36.3	2007	1498
37	Mohan Lal	Nokhda, Barmer	HHB 299	F ₂ Seed	1480	988	49.8	1904	1295
38	Bhakra Ram	Nokhda, Barmer	HHB 299	F ₂ Seed	1433	1094	31.0	1974	1044
39	Ridmal Ram	Nokhda, Barmer	HHB 299	F ₂ Seed	900	750	20.0	1887	1222
40	Nena Ram	Nokhda, Barmer	HHB 299	F ₂ Seed	1307	1000	30.7	1578	1166
41	Leela Raam	Nokhda, Barmer	HHB 299	F ₂ Seed	1104	812	36.0	1788	1007
42	Virma Ram	Nokhda, Barmer	HHB 299	F ₂ Seed	1345	987	36.3	2007	1498
43	Dhema Ram	Nokhda, Barmer	HHB 299	F ₂ Seed	1245	833	49.5	2007	1398
44	Dharma Ram	Nokhda, Barmer	HHB 299	F ₂ Seed	1308	969	35.0	1887	1322
45	Kumbha Ram	Nokhda, Barmer	HHB 299	F ₂ Seed	1286	1000	28.6	2008	1300
46	Teja Ram	Nokhda, Barmer	HHB 299	F ₂ Seed	1480	988	49.8	1904	1295
47	Dana Ram	Nokhda, Barmer	HHB 299	F ₂ Seed	1357	722	88.0	1578	1266
48	Karna Ram	Nokhda, Barmer	HHB 299	F ₂ Seed	1102	782	40.9	1743	1266
49	Miro Devi	Nokhda, Barmer	HHB 299	F ₂ Seed	1300	1069	21.6	1887	1222
50	Khetu Devi	Nokhda, Barmer	HHB 299	F ₂ Seed	1344	997	34.8	1803	1219
51	Anchi Devi	Nokhda, Barmer	HHB 299	F ₂ Seed	974	625	55.8	1481	1204
52	Achla Ram	Nokhda, Barmer	HHB 299	F ₂ Seed	1266	946	33.8	2008	1200

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.19: Result of FLD's conducted by Krishi Vigyan Kendra, Gudamalani (Barmer), Agriculture University, Jodhpur (Rajasthan) *Kharif 2024*

Technology Demonstration: Improved practices (Varietal trial: Biofortified hybrid HHB 299) v/s Farmer's Practice

S. No.	Name of the Beneficiary	Address	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
53	Dharma Ram	Meethi Beri, Barmer	HHB 299	F ₂ Seed	1520	717	112.0	1904	1195
54	Harkha Ram	Meethi Beri, Barmer	HHB 299	F ₂ Seed	1119	819	36.6	1639	1186
55	Bharu Ram	Meethi Beri, Barmer	HHB 299	F ₂ Seed	1307	1000	30.7	1578	1166
56	Channa Ram	Meethi Beri, Barmer	HHB 299	F ₂ Seed	1202	782	53.7	1743	1166
57	Rupa Ram	Meethi Beri, Barmer	HHB 299	F ₂ Seed	1167	722	61.6	1578	1166
58	Bhaga Ram	Meethi Beri, Barmer	HHB 299	F ₂ Seed	1333	974	36.9	1974	1144
59	Dola Ram	Meethi Beri, Barmer	HHB 299	F ₂ Seed	1264	997	26.8	1803	1119
60	Bhaga Ram	Meethi Beri, Barmer	HHB 299	F ₂ Seed	1224	986	24.1	1689	1118
61	Duda Ram	Meethi Beri, Barmer	HHB 299	F ₂ Seed	1021	669	52.6	1383	1114
62	Anu Devi	Meethi Beri, Barmer	HHB 299	F ₂ Seed	954	677	40.9	1378	1111
63	Hara Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1208	700	72.6	1800	1100
64	Narayan Ram	Kanana, Barmer	HHB 299	F ₂ Seed	945	733	28.9	1552	1100
65	Kana Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1019	819	24.4	1639	1086
66	Gobra Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1019	800	27.4	1639	1086
67	Jwara Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1433	1094	31.0	1974	1044
68	Arvind Ram	Kanana, Barmer	HHB 299	F ₂ Seed	983	675	45.6	1455	1021
69	Vikram	Kanana, Barmer	HHB 299	F ₂ Seed	1214	963	26.1	1689	1018
70	Vata Ram	Kanana, Barmer	HHB 299	F ₂ Seed	844	677	24.7	1378	1011
71	Budha Ram	Kanana, Barmer	HHB 299	F ₂ Seed	991	669	48.1	1383	1008
72	Daya Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1104	812	36.0	1788	1007
73	Madan Lal	Kanana, Barmer	HHB 299	F ₂ Seed	1308	756	73.0	1800	1000
74	Samartha Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1246	600	107.7	1907	1000
75	Vagta Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1083	655	65.3	1455	988
76	Kana Ram	Kanana, Barmer	HHB 299	F ₂ Seed	983	655	50.1	1455	921
77	Vadha Ram	Kanana, Barmer	HHB 299	F ₂ Seed	991	680	45.7	1383	908
78	Mehra Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1134	612	85.3	1788	907

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.19: Result of FLD's conducted by Krishi Vigyan Kendra, Gudamalani (Barmer), Agriculture University, Jodhpur (Rajasthan) *Kharif 2024*

Technology Demonstration: Improved practices (Varietal trial: Biofortified hybrid HHB 299) v/s Farmer's Practice

S. No.	Name of the Beneficiary	Address	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
79	Hindu Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1112	900	23.6	1706	1240
80	Kheema Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1160	650	78.5	1380	895
81	Mula Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1330	1110	19.8	1930	1420
82	Chena Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1440	1080	33.3	1700	1300
83	Dharma Devi	Kanana, Barmer	HHB 299	F ₂ Seed	980	740	32.4	1530	1201
84	Ladha Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1320	1000	32.0	1820	1360
85	Narsinga Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1500	740	102.7	1800	1280
86	Mada Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1370	1025	33.7	1610	1230
87	Sanvla Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1420	1150	23.5	1700	1330
88	Goma Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1255	955	31.4	1845	1255
89	Sanvla Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1100	960	14.6	1675	1200
90	Ramesh	Kanana, Barmer	HHB 299	F ₂ Seed	1350	1050	28.6	1785	1240
91	Amba Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1250	1000	25.0	1780	1340
92	Mula Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1310	1040	26.0	1840	1246
93	Jetha Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1600	880	81.8	1876	1267
94	Narpat Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1500	1050	42.9	1900	1360
95	Deva Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1300	1000	30.0	1820	1300
96	Dharmendra Pal	Kanana, Barmer	HHB 299	F ₂ Seed	1450	760	90.8	1620	1145
97	Bhanwar Lal	Kanana, Barmer	HHB 299	F ₂ Seed	1230	700	75.7	1866	1020
98	Damra Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1220	875	39.4	1880	1345
99	Kera Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1374	820	67.6	1920	1240
100	Mukna Ram	Kanana, Barmer	HHB 299	F ₂ Seed	1120	840	33.3	1420	1230
Total					118990	82727		170366	114834
Mean					1190	827	43.8	1704	1148

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.20: Result of FLD's conducted by Krishi Vigyan Kendra, Pokaran (Jaisalmer-II), SKRAU, Bikaner (Rajasthan) Kharif 2024
Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Address	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
1	Yogendra	Ajasar, Pokaran	HHB 299	F ₂ Seed	1135	885	28.2	2175	1635
2	Om Prakash	Ajasar, Pokaran	HHB 299	F ₂ Seed	1220	925	31.9	2340	1830
3	Amrt Garg	Ajasar, Pokaran	HHB 299	F ₂ Seed	1050	840	25.0	1950	1575
4	Reshma Ram	Ajasar, Pokaran	HHB 299	F ₂ Seed	765	630	21.4	1470	1205
5	Gawari Devi	Ajasar, Pokaran	HHB 299	F ₂ Seed	980	815	20.2	1645	1265
6	Prtapa Ram	Badli-Mada, Pokaran	HHB 299	F ₂ Seed	935	755	23.8	1465	1195
7	Nathu Ram	Badli-Mada, Pokaran	HHB 299	F ₂ Seed	1150	915	25.7	1935	1480
8	Prahlad Ram	Badli-Nathusar, Pokaran	HHB 299	F ₂ Seed	895	660	35.6	1595	1245
9	Chanda Ram	Badli-Nathusar, Pokaran	HHB 299	F ₂ Seed	745	590	26.3	1645	1185
10	Jiyo	Badli-Nathusar, Pokaran	HHB 299	F ₂ Seed	885	665	33.1	1525	1200
11	Hira Ram	Badli-Nathusar, Pokaran	HHB 299	F ₂ Seed	940	725	29.7	1685	1280
12	Ravata Ram	Badli-Nathusar, Pokaran	HHB 299	F ₂ Seed	1155	935	23.5	1860	1525
13	Dhapu Ram	Badli-Nathusar, Pokaran	HHB 299	F ₂ Seed	930	725	28.3	1790	1375
14	Guddi	Badli-Nathusar, Pokaran	HHB 299	F ₂ Seed	1230	945	30.2	2335	1850
15	Jagdish	Badli-Nathusar, Pokaran	HHB 299	F ₂ Seed	1075	855	25.7	1975	1535
16	Arjun Singh	Bhakhri, Pokaran	HHB 299	F ₂ Seed	1150	895	28.5	2150	1620
17	Ladhu Singh	Bhakhri, Pokaran	HHB 299	F ₂ Seed	1060	815	30.1	2295	1840
18	Mangal Singh	Bhakhri, Pokaran	HHB 299	F ₂ Seed	1225	980	25.0	2350	1815
19	Babu Ram	Bhakhri, Pokaran	HHB 299	F ₂ Seed	1170	910	28.6	2065	1555
20	Munna Ram	Bhakhri, Pokaran	HHB 299	F ₂ Seed	850	635	33.9	1550	1205
21	Bheru Singh	Dangari, Pokaran	HHB 299	F ₂ Seed	1135	850	33.5	2170	1555
22	Moti Singh	Dangari, Pokaran	HHB 299	F ₂ Seed	1020	795	28.3	1885	1375
23	Man Singh	Dangari, Pokaran	HHB 299	F ₂ Seed	785	595	31.9	1385	1195
24	Om Prakash	Dangari, Pokaran	HHB 299	F ₂ Seed	935	775	20.6	1730	1365
25	Jagmal Singh	Dangari, Pokaran	HHB 299	F ₂ Seed	1055	825	27.9	1990	1635
26	Tag Singh	Dangari, Pokaran	HHB 299	F ₂ Seed	870	650	33.8	1425	1190
27	Shivdan Singh	Dangari, Pokaran	HHB 299	F ₂ Seed	930	715	30.1	1770	1380
28	Ganpat Singh	Dangari, Pokaran	HHB 299	F ₂ Seed	1080	860	25.6	2465	1955
29	Himat Singh	Dangari, Pokaran	HHB 299	F ₂ Seed	1265	1030	22.8	2235	1725
30	Daraver Singh	Dangari, Pokaran	HHB 299	F ₂ Seed	930	705	31.9	1720	1285
31	Devi Lal	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1175	985	19.3	2265	1650
32	Aju Ram	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1140	935	21.9	2330	1870
33	Mahesh	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1215	1065	14.1	2285	1725

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.20: Result of FLD's conducted by Krishi Vigyan Kendra, Pokaran (Jaisalmer-II), SKRAU, Bikaner (Rajasthan) Kharif 2024
Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Address	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
34	Taja Ram	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1055	825	27.9	1855	1465
35	Annu Devi	Dudhiya, Pokaran	HHB 299	F ₂ Seed	895	680	31.6	1525	1250
36	Gopi Devi	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1050	895	17.3	2040	1435
37	Chena Ram	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1165	940	23.9	2170	1665
38	Laxmi Pawar	Dudhiya, Pokaran	HHB 299	F ₂ Seed	955	725	31.7	1745	1385
39	Raju Ram	Dudhiya, Pokaran	HHB 299	F ₂ Seed	690	575	20.0	1375	1190
40	Narayan Singh	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1045	780	34.0	1925	1385
41	Indra Singh	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1230	980	25.5	2250	1705
42	Dhau Kanwar	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1065	815	30.7	1860	1480
43	Bhagwan Singh	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1245	1005	23.9	2255	1625
44	Anju Kanwar	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1160	955	21.5	2185	1670
45	Uda Ram	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1035	835	24.0	1935	1450
46	Sadama Ram	Dudhiya, Pokaran	HHB 299	F ₂ Seed	965	820	17.7	1640	1325
47	Jethi Devi	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1220	910	34.1	2210	1585
48	Deepa Ram	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1165	950	22.6	2360	2035
49	Mohan Ram	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1035	765	35.3	1880	1385
50	Hira Ram	Dudhiya, Pokaran	HHB 299	F ₂ Seed	815	680	19.9	1445	1210
51	Reshma Ram	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1075	865	24.3	1870	1455
52	Penpa Ram	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1150	865	32.9	2215	1640
53	Harivansh	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1175	955	23.0	2180	1750
54	Sita Ram	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1080	860	25.6	1915	1465
55	Premi Devi	Dudhiya, Pokaran	HHB 299	F ₂ Seed	850	695	22.3	1595	1250
56	Jugal Kishor	Dudhiya, Pokaran	HHB 299	F ₂ Seed	925	780	18.6	1665	1230
57	Satish	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1060	785	35.0	1810	1375
58	Ramesh Ram	Dudhiya, Pokaran	HHB 299	F ₂ Seed	880	670	31.3	1490	1225
59	Dinesh Kumar	Dudhiya, Pokaran	HHB 299	F ₂ Seed	755	595	26.9	1360	1195
60	Reshma Ram	Dudhiya, Pokaran	HHB 299	F ₂ Seed	1030	780	32.1	1895	1445
61	Hau Devi	Eka, Pokaran	HHB 299	F ₂ Seed	875	710	23.2	1545	1205
62	Om Prakash	Eka, Pokaran	HHB 299	F ₂ Seed	1155	885	30.5	2010	1425
63	Samand Kanwar	Eka, Pokaran	HHB 299	F ₂ Seed	930	725	28.3	1625	1240
64	Ind Kanwar	Eka, Pokaran	HHB 299	F ₂ Seed	1030	780	32.1	1880	1365
65	Prem Ram	Eka, Pokaran	HHB 299	F ₂ Seed	915	635	44.1	1725	1240
66	Mod Singh	Eka, Pokaran	HHB 299	F ₂ Seed	1245	965	29.0	2355	1860

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.20: Result of FLD's conducted by Krishi Vigyan Kendra, Pokaran (Jaisalmer-II), SKRAU, Bikaner (Rajasthan) Kharif 2024
Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Address	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
67	Manohar Singh	Eka, Pokaran	HHB 299	F ₂ Seed	960	810	18.5	1745	1450
68	Sahi Ram	Eka, Pokaran	HHB 299	F ₂ Seed	865	705	22.7	1525	1235
69	Aam Singh	Eka, Pokaran	HHB 299	F ₂ Seed	1070	830	28.9	1845	1435
70	Jethu Singh	Eka, Pokaran	HHB 299	F ₂ Seed	1095	815	34.4	1835	1440
71	Sawai Singh	Eka, Pokaran	HHB 299	F ₂ Seed	1135	875	29.7	2125	1585
72	Manohar Ram	Eka, Pokaran	HHB 299	F ₂ Seed	940	710	32.4	1640	1290
73	Gena Ram	Eka, Pokaran	HHB 299	F ₂ Seed	785	625	25.6	1355	1190
74	Sawai Singh	Eka, Pokaran	HHB 299	F ₂ Seed	1030	800	28.8	2050	1585
75	Samand Kanwar	Eka, Pokaran	HHB 299	F ₂ Seed	1150	840	36.9	2190	1625
76	Chain Kanwar	Eka, Pokaran	HHB 299	F ₂ Seed	965	740	30.4	1620	1215
77	Nenu Kanwar	Eka, Pokaran	HHB 299	F ₂ Seed	1230	990	24.2	2240	1655
78	Jaswant Singh	Eka, Pokaran	HHB 299	F ₂ Seed	1045	810	29.0	1780	1455
79	Hemant	Lawan, Pokaran	HHB 299	F ₂ Seed	715	560	27.7	1425	1190
80	Ganesha Ram	Lawan, Pokaran	HHB 299	F ₂ Seed	870	655	32.8	1485	1195
81	Narayandas	Lawan, Pokaran	HHB 299	F ₂ Seed	865	695	24.5	1470	1215
82	Mohan Lal	Lawan, Pokaran	HHB 299	F ₂ Seed	930	735	26.5	1735	1250
83	Madhu	Mawa, Pokaran	HHB 299	F ₂ Seed	1085	815	33.1	1830	1410
84	Chutra Ram	Mawa, Pokaran	HHB 299	F ₂ Seed	1140	925	23.2	2090	1675
85	Nathu Ram	Mawa, Pokaran	HHB 299	F ₂ Seed	940	750	25.3	1665	1245
86	Jai Narayan	Morani, Pokaran	HHB 299	F ₂ Seed	995	835	19.2	1535	1255
87	Mohan Lal	Morani, Pokaran	HHB 299	F ₂ Seed	1075	840	28.0	1950	1560
88	Shiv Prakash	Nachana, Pokaran	HHB 299	F ₂ Seed	1135	915	24.0	2145	1795
89	Nema Ram	Nachana, Pokaran	HHB 299	F ₂ Seed	1185	995	19.1	2090	1645
90	Padma Ram	Nachana, Pokaran	HHB 299	F ₂ Seed	960	765	25.5	1620	1215
91	Prem Ram	Nachana, Pokaran	HHB 299	F ₂ Seed	745	570	30.7	1340	1195
92	Bhagwana Ram	Nachana, Pokaran	HHB 299	F ₂ Seed	1095	930	17.7	1830	1600
93	Shakur Mohammad	Pokaran	HHB 299	F ₂ Seed	1125	910	23.6	2010	1645
94	Khuda Baksh	Pokaran	HHB 299	F ₂ Seed	1060	845	25.4	1755	1325
95	Uda Ram	Pokaran	HHB 299	F ₂ Seed	1240	955	29.8	2245	1660
96	Keshu Ram	Pokaran	HHB 299	F ₂ Seed	1065	885	20.3	1880	1345
97	Hans Raj	Pokaran	HHB 299	F ₂ Seed	1125	940	19.7	2065	1630
98	Dhuda Ram	Pokaran	HHB 299	F ₂ Seed	1165	925	25.9	2050	1660
99	Kaku Devi	Pokaran	HHB 299	F ₂ Seed	1045	815	28.2	1825	1450

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.20: Result of FLD's conducted by Krishi Vigyan Kendra, Pokaran (Jaisalmer-II), SKRAU, Bikaner (Rajasthan) Kharif 2024
Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Address	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
100	Siru Devi	Pokaran	HHB 299	F ₂ Seed	960	730	31.5	1675	1220
101	Raishdeen	Pokaran	HHB 299	F ₂ Seed	875	645	35.7	1490	1245
102	Bhera Ram	Pokaran	HHB 299	F ₂ Seed	1155	935	23.5	2165	1785
103	Jitendra Singh	Sanavada, Pokaran	HHB 299	F ₂ Seed	930	725	28.3	1985	1525
104	Madan Singh	Sanavada, Pokaran	HHB 299	F ₂ Seed	1230	910	35.2	2270	1765
105	Chandrveer	Sanavada, Pokaran	HHB 299	F ₂ Seed	1160	875	32.6	2095	1530
106	Prayag Singh	Sanavada, Pokaran	HHB 299	F ₂ Seed	1205	995	21.1	2335	1775
107	Kump Singh	Sanavada, Pokaran	HHB 299	F ₂ Seed	645	565	14.2	1385	1175
108	Kenku Kanwar	Sanavada, Pokaran	HHB 299	F ₂ Seed	1065	850	25.3	1965	1535
109	Viram Singh	Sanavada, Pokaran	HHB 299	F ₂ Seed	1170	885	32.2	2230	1645
110	Narpat Singh	Sanavada, Pokaran	HHB 299	F ₂ Seed	915	745	22.8	1735	1250
111	Malam Singh	Sanavada, Pokaran	HHB 299	F ₂ Seed	1135	950	19.5	2185	1570
112	Manju Kanwar	Sanavada, Pokaran	HHB 299	F ₂ Seed	1055	780	35.3	2070	1555
113	Girdhari Singh	Sanavada, Pokaran	HHB 299	F ₂ Seed	980	750	30.7	1895	1385
114	Kundan Singh	Sanavada, Pokaran	HHB 299	F ₂ Seed	1035	840	23.2	2050	1515
115	Nirmal Singh	Sanavada, Pokaran	HHB 299	F ₂ Seed	850	700	21.4	1635	1260
116	Durgen Singh	Sanavada, Pokaran	HHB 299	F ₂ Seed	1165	980	18.9	2250	1635
117	Manohar Singh	Sanavada, Pokaran	HHB 299	F ₂ Seed	795	625	27.2	1525	1215
118	Rahmat Khatun	Selvi, Pokaran	HHB 299	F ₂ Seed	1035	850	21.8	2070	1435
119	Jenab	Selvi, Pokaran	HHB 299	F ₂ Seed	920	765	20.3	1865	1280
120	Ridmal Ram	Selvi, Pokaran	HHB 299	F ₂ Seed	855	635	34.6	1675	1290
121	Sal Mohammad	Selvi, Pokaran	HHB 299	F ₂ Seed	1130	945	19.6	2260	1645
122	Gulam Fatma	Selvi, Pokaran	HHB 299	F ₂ Seed	965	710	35.9	1850	1320
123	Nasheer Khan	Selvi, Pokaran	HHB 299	F ₂ Seed	1045	865	20.8	2015	1465
124	Babu Singh	Sujasar, Pokaran	HHB 299	F ₂ Seed	890	730	21.9	1645	1215
125	Mul Singh	Sujasar, Pokaran	HHB 299	F ₂ Seed	1135	895	26.8	2070	1385
Total					128130	101260		235625	181870
Mean					1025	810	26.5	1885	1455

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.21: Result of FLD's conducted by A.R.S., Vizianagaram, Andhra Pradesh - Summer 2024

Technology Demonstration: Improved practices (Biofortified hybrid ABV 04) v/s Farmer's Practice Trials

S. No.	Name & Address of the Beneficiary	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
				IP	FP		IP	FP
1	Gollori Nandu, Sagara, Dumbriguda Mandal, ASR District	ABV 04	Pittaganti	2350	1765	33.1	7050	7300
2	Korra Navagana Murthy, Dumbriguda mandal, A SR District	ABV 04	Pittaganti	2050	1860	10.2	7690	7875
3	Pangi Raghunadh, Sovva Mandal, ASR District	ABV 04	Pittaganti	2350	1800	30.6	7900	7370
4	Thamarla Gopal, Sunnametta, Sovva Mandal, ASR District	ABV 04	Pittaganti	2260	1789	26.3	8040	7500
5	Thamarla Appanna, Sunnametta, Sovva Mandal, ASR District	ABV 04	Pittaganti	2340	1800	30.0	8250	7030
6	Thamarla Raghunadh, Sunnametta, Sovva Mandal, ASR District	ABV 04	Pittaganti	2400	1834	30.9	7650	7250
7	Gemmeli Nukaraju, Sunnametta, Sovva Mandal, ASR District	ABV 04	Pittaganti	2250	1740	29.3	8040	7540
8	Thamarla Prasad, Sunnametta, Sovva Mandal, ASR District	ABV 04	Pittaganti	2300	1780	29.2	7580	7370
9	Thamarla Sanjeevarao, Sunnametta, Sovva Mandal, ASR District	ABV 04	Pittaganti	2134	1820	17.3	7990	7290
10	Killo Jeenabondu, Karakavalasa, Sovva Mandal, ASR District	ABV 04	Pittaganti	2270	1800	26.1	8250	7390
11	Killo Mono, Karakavalasa, Sovva Mandal, ASR District	ABV 04	Pittaganti	2550	1730	47.4	7890	7590
12	Killo Loleeth, Karakavalasa, Sovva Mandal, ASR District	ABV 04	Pittaganti	2340	1750	33.7	8000	7490
13	Lokoyi Donnu, Karakavalasa, Sovva Mandal, ASR District	ABV 04	Pittaganti	2350	1800	30.6	7750	7890
14	Pangi Seetharam, Karakavalasa, Sovva Mandal, ASR District	ABV 04	Pittaganti	2440	1700	43.5	7890	8020
15	Thangula Anantharao, Karakavalasa, Sovva Mandal, ASR District	ABV 04	Pittaganti	2340	1820	28.6	7860	7570
16	Ramojeerao Vanthala, Karakavalasa, Sovva Mandal, ASR District	ABV 04	Pittaganti	2300	1760	30.7	7600	7430
17	Vanthala Jhansi, Sagara, Sagara Mandal, ASR District	ABV 04	Pittaganti	2220	1830	21.3	7950	7650
18	Gemmeli Seetharam, Sagara, Sagara Mandal, ASR District	ABV 04	Pittaganti	2150	1820	18.1	7500	7840
19	Vanthala Laxmi, Sagara, Sagara Mandal, ASR District	ABV 04	Pittaganti	2450	1850	32.4	7950	7940
20	Kello Bujji, Sagara, Sagara Mandal, ASR District	ABV 04	Pittaganti	2400	1790	34.1	7600	7800
Total				46244	35838		156430	151135
Mean				2312	1792	29.0	7822	7557

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.22: Result of FLD's conducted by Krishi Vigyan Kendra, Bamanwara (Jalore-II), AU, Jodhpur (Rajasthan) Kharif 2024
Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Address	Variety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield
					IP	FP	
1	Jodha Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1440	1150	25.2
2	Babu Lal	Bamanwara, Jalore	HHB 299	F ₂ Seed	1390	1080	28.7
3	Chuni Devi	Bamanwara, Jalore	HHB 299	F ₂ Seed	1385	1230	12.6
4	Bhagwana Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1360	1190	14.3
5	Malla Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1500	1340	11.9
6	Nimba Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1490	1380	8.0
7	Punama Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1520	1290	17.8
8	Mngi Devi	Bamanwara, Jalore	HHB 299	F ₂ Seed	1525	1240	23.0
9	Prakash Chandra	Bamanwara, Jalore	HHB 299	F ₂ Seed	1385	1270	9.1
10	Kana Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1460	1320	10.6
11	Hanuman Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1550	1160	33.6
12	Hemi Devi	Bamanwara, Jalore	HHB 299	F ₂ Seed	1525	1270	20.1
13	Purkha Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1495	1180	26.7
14	Narasi Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1390	1060	31.1
15	Babu Lal	Bamanwara, Jalore	HHB 299	F ₂ Seed	1460	1200	21.7
16	Babu Lal	Bamanwara, Jalore	HHB 299	F ₂ Seed	1360	1340	1.5
17	Bhanwar Lal	Bamanwara, Jalore	HHB 299	F ₂ Seed	1400	1350	3.7
18	Chiman Lal	Bamanwara, Jalore	HHB 299	F ₂ Seed	1385	1150	20.4
19	Tiva Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1360	1240	9.7
20	Hira Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1500	1270	18.1
21	Kamlesh Kumar	Bamanwara, Jalore	HHB 299	F ₂ Seed	1490	1320	12.9
22	Raghunath Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1520	1230	23.6
23	Thakra Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1525	1230	24.0
24	Ashok Kumar	Bamanwara, Jalore	HHB 299	F ₂ Seed	1580	1190	32.8
25	Sona Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1390	1340	3.7
26	Sala Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1570	1380	13.8
27	Bhana Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1560	1190	31.1
28	Reeda Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1495	1260	18.7
29	Lakha Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1430	1090	31.2
30	Rekha Devi	Bamanwara, Jalore	HHB 299	F ₂ Seed	1460	1120	30.4
31	MagRaj	Bamanwara, Jalore	HHB 299	F ₂ Seed	1490	1160	28.4
32	Varju Devi	Bamanwara, Jalore	HHB 299	F ₂ Seed	1520	1270	19.7
33	Ramesh Kumar	Bamanwara, Jalore	HHB 299	F ₂ Seed	1525	1180	29.2
34	Verma Ram	Bamanwara, Jalore	HHB 299	F ₂ Seed	1580	1060	49.1
35	Pakhu Devi	Bamanwara, Jalore	HHB 299	F ₂ Seed	1460	1200	21.7
36	Samu Devi	Bamanwara, Jalore	HHB 299	F ₂ Seed	1500	1340	11.9
37	Ashok Kumar	Bamanwara, Jalore	HHB 299	F ₂ Seed	1525	1310	16.4
38	Suresh Kumar	Bamanwara, Jalore	HHB 299	F ₂ Seed	1470	1290	14.0
39	Mukesh Kumar	Bamanwara, Jalore	HHB 299	F ₂ Seed	1390	1230	13.0
40	Kailash Kumar	Bamanwara, Jalore	HHB 299	F ₂ Seed	1440	1100	30.9
Total					58800	49200	
Mean					1470	1230	19.5

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VI: FRONT LINE DEMONSTRATIONS

Table VI.23: Result of FLD's conducted by COA, Sumerpur (Pali), Agriculture University, Jodhpur (Rajasthan) *Kharif* 2024

Technology Demonstration: Improved practices (Biofortified hybrid HHB 299) v/s Farmer's Practice Trials

S. No.	Name of the Beneficiary	Address	Vaiety/ Hybrids	Check Variety	Grain Yield (Kg/ha)		% improvement in Grain yield	Fodder Yield (Kg/ha)	
					IP	FP		IP	FP
1	Ishwar Singh	Bijapur, Pali	Dhanshakti	F ₂ Seed	1350	1050	28.6	2850	2100
2	Phool Chand	Bijapur, Pali	HHB 299	F ₂ Seed	1150	840	36.9	2600	1650
3	Devaram	Bijapur, Pali	HHB 299	F ₂ Seed	850	630	34.9	1980	1350
4	Otaram	Bijapur, Pali	HHB 299	F ₂ Seed	1266	945	34.0	2622	1800
5	Vinod Kumar	Bijapur, Pali	HHB 299	F ₂ Seed	1150	870	32.2	2670	1550
6	Bagdi Ram	Bijapur, Pali	HHB 299	F ₂ Seed	1340	1025	30.7	2890	1960
7	Sanjay Kumar	Bijapur, Pali	HHB 299	F ₂ Seed	1050	800	31.3	2350	1470
8	Arvind Kumar	Bijapur, Pali	HHB 299	F ₂ Seed	1180	850	38.8	2890	1530
9	Ghishulal	Bijapur, Pali	HHB 299	F ₂ Seed	1150	830	38.6	2850	1500
10	Malaram	Bijapur, Pali	HHB 299	F ₂ Seed	1250	1000	25.0	2120	1920
11	Bheraram	Bijapur, Pali	HHB 300	F ₂ Seed	930	700	32.9	2400	1375
12	Prakash Chand	Bijapur, Pali	HHB 301	F ₂ Seed	1190	850	40.0	2805	1685
13	Shambhu Singh	Bijapur, Pali	HHB 302	F ₂ Seed	920	715	28.7	2310	1325
14	Kansingh	Bijapur, Pali	HHB 303	F ₂ Seed	980	740	32.4	2575	1400
15	Jaideep Meena	Bijapur, Pali	HHB 304	F ₂ Seed	1120	820	36.6	2570	1505
16	Dungar Singh	Bijapur, Pali	HHB 305	F ₂ Seed	940	680	38.2	2320	1190
17	Mahaveer Singh	Bijapur, Pali	HHB 306	F ₂ Seed	990	730	35.6	2580	1210
18	Bhagwan Sawrup	Bijapur, Pali	HHB 307	F ₂ Seed	1075	750	43.3	2650	1380
19	Ramesh Lal	Bijapur, Pali	HHB 308	F ₂ Seed	1020	710	43.7	2450	1320
20	Suresh Kumar	Bijapur, Pali	HHB 309	F ₂ Seed	1150	850	35.3	2860	1500
Total					22051	16385		51342	30720
Mean					1103	819	34.6	2567	1536

Improved practices: Use of Improved hybrids, Seed treatment, Sowing by Seed drill, line sowing, Maintain recommended spacing, Use of RDF, Chemical weed control and Use of thresher etc.

CHAPTER VII

PLANT

BIOTECHNOLOGY

PLANT BIOTECHNOLOGY**PMMB 1: TRAIT ASSOCIATION STUDIES AND VALIDATION OF MARKERS IN PEARL MILLET****Experiment 1: Trait association studies and validation of drought tolerance markers in drought/heat tolerant pearl millet genotypes suitable for A₁ zone.****Plant Material**

A total of 24 pearl millet drought/heat tolerant lines suitable for A₁ zone were used for morphological and molecular characterization under this experiment (Table 1.1). Development of high yielding, dual purpose disease resistant cultivars for low rainfall areas i.e. A₁ zone is of utmost priority for increasing pearl millet productivity at national level and develop some hybrids for this specific zone. Keeping this in view, this experiment was useful for screening and developing drought/heat tolerant hybrids for A₁ zone.

Genomic DNA isolation and quantification

Good quality genomic DNA having sharp band was successfully isolated from fresh and young leaves of 24 pearl millet lines using the CTAB method (Murray and Thompson, 1980) with slight modifications and it was also observed that good quality DNA was extracted even without using liquid nitrogen for grinding of hard leaf tissues like pearl millet which can reduce cost of isolation.

Table 1.1 List of pearl millet lines used for molecular characterization

S. No.	Name of line	Source
1	MIR 525-2 (BM/K-18/322)	ICAR-AICRP on Pearl millet, Jodhpur
2	MIR 1106 (BM/K-18/368)	ICAR-AICRP on Pearl millet, Jodhpur
3	MIR 1262(BM/K-18/404)	ICAR-AICRP on Pearl millet, Jodhpur
4	MIR 1356 (BM/K-18/436)	ICAR-AICRP on Pearl millet, Jodhpur
5	MIR 1408 (BM/K-18/478)	ICAR-AICRP on Pearl millet, Jodhpur
6	MIR 1604 (BM/K-18/496)	ICAR-AICRP on Pearl millet, Jodhpur
7	MIR 1706 (BM/K-18/506)	ICAR-AICRP on Pearl millet, Jodhpur
8	MIR 1803 (BM/K-18/544)	ICAR-AICRP on Pearl millet, Jodhpur
9	RIB 128-134/S/19	RARI, Durgapura
10	RIB 156-162/S/19	RARI, Durgapura
11	RIB 163-169/S/19	RARI, Durgapura
12	RIB 170-176/S/19	RARI, Durgapura
13	RIB 177-183	RARI, Durgapura
14	RIB 184-190/S/19	RARI, Durgapura
15	H77/833/2-202	HAU, Hisar
16	G 73-107	HAU, Hisar
17	H 77/833-2	HAU, Hisar
18	H 90/4-5	HAU, Hisar
19	HBL 11	HAU, Hisar
20	BIB-437	SKRAU, Bikaner
21	BIB-445	SKRAU, Bikaner
22	ICMB 99777	ICRISAT, Patancheru
23	ICMB 95222	ICRISAT, Patancheru
24	ICMB 97444	ICRISAT, Patancheru

Molecular characterization and SSR analysis

For PCR reaction, DNA was diluted accordingly to make available final concentration of 10 ng/μl and amplification reactions were carried out in a volume of 10 μl containing 10 mM Tris HCl (pH 8.3), 50 mM KCl, 1.5 mM MgCl₂, 200 mM each dNTP, 0.4 μM 10-mer primer, 1 unit Taq NA polymerase (GeNei, India) and 10 ng of template DNA. Amplifications were carried out in a 96-well thermal cycler (Agilent Technologies). Thermal cycler was programmed to 1 cycle of 5 min at 94°C for initial strand separation. This was followed by 35 cycles of 30s at 94°C for denaturation, 30 s of 58°C for annealing and 1 min at 72°C for primer extension. Finally, 1 cycle of 10 mins at 72°C was used for final extension, followed by hold at 4°C. A total of 15 SSR primers specifically reported for drought were used for PCR amplification and molecular characterization among 24 pearl millet lines. All the 15 SSRs amplified products of varying sizes ranging between 100-600 bp (Fig. 1.1). A total of 35 alleles were obtained in this study and the number of alleles per locus varied between 2 to 4 with an average of 2.73 alleles. Polymorphic Information Content (PIC) varied from 0.43 to 0.84 with an average of 0.67 PIC value. Four SSR markers (PSMP2059, PSMP2077, PSMP2078 and PSMP2066) linked to drought-tolerant QTLs on LG2 and LG5 identified by Yadav et al. (2004) were also validated here among these genotypes.

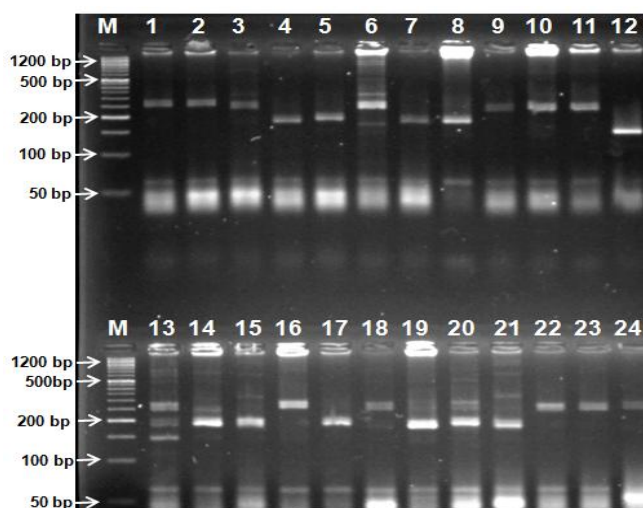


Fig. 1.1 Agarose gel showing amplification profiles of pearl millet lines using the primer PSMP 2066. Lane M-50 bp ladder, Lane 1-24 pearl millet lines

Morphological parameters

A total of 24 pearl millet drought/heat tolerant lines suitable for A₁ zone were evaluated for morpho-physiological conditions and different parameters were recorded. Relative Water Content (RWC) at 45 DAS for different genotypes ranged from 66.9 (MIR 525-2) to 83.41 (RIB-163-169). Chlorophyll Content at 45 DAS for different genotypes ranged from 1.01 (RIB-163-169) to 1.95 (BIB 437). Membrane Stability index at 45 DAS varied from 67.92 (MIR 1262) to 86.63 (H77/833-2). Number of tillers/plant for different genotypes ranged from 3.00 (ICMB 97777) to 6.07 (ICMB 95222) while no. of productive tillers/plant ranged from 1.53 (RIB-156-162) to 4.23 (H 90/4-5). Flag leaf area varied from 51.45 (MIR 1262) to 90.87 cm² (ICMB 95222). Plant height for different genotypes ranged from 96.44 (ICMB 97444) to 154.51 cm

(ICMB 95222). The spike length varied from 14.93 (HBL 11) to 20.07 cm (ICMB 97777) whereas spike thickness varied from 1.38 (H77/833-2-202) to 2.76 cm (ICMB 97777). Days to 50% flowering for different genotypes ranged from 38.67 (MIR 525-2, MIR 1106) to 52.00 (ICMB 97444). Test weight varied from 5.34 (MIR 1408) to 10.47 g (ICMB 97444) while grain yield/plant varied from 15.93 (MIR 1803) to 32.67 g (ICMB 97777).

Experiment 2: Validation of markers and study trait association for diseases in pearl millet.

Plant Material

A total of 38 entries of downy mildew nursery trials and 57 entries of blast nursery trials were used for molecular characterization using markers identified for downy mildew and blast, respectively under this experiment (Table 1.2, 1.3). Downy mildew and blast are two major diseases affecting pearl millet. Hence, screening of pearl millet lines resistant to these diseases will be useful for developing disease resistant pearl millet hybrids/varieties.

Genomic DNA isolation and quantification

Good quality genomic DNA having sharp band was successfully isolated from fresh and young leaves of 38 entries of downy mildew nursery trials and 57 entries of blast nursery trials as described in PMMB 1 and quantified on agarose gel.

Table 1.2 List of entries of downy mildew nursery trials

S. No.	Entry Code	S. No.	Entry Code
1	ICPMDML-1	20	ICPMDML-20
2	ICPMDML-2	21	ICPMDML-21
3	ICPMDML-3	22	ICPMDML-22
4	ICPMDML-4	23	ICPMDML-23
5	ICPMDML-5	24	ICPMDML-26
6	ICPMDML-6	25	ICPMDML-27
7	ICPMDML-7	26	ICPMDML-28
8	ICPMDML-8	27	ICPMDML-29
9	ICPMDML-9	28	ICPMDML-30
10	ICPMDML-10	29	ICPMDML-31
11	ICPMDML-11	30	ICPMDML-32
12	ICPMDML-12	31	ICPMDML-33
13	ICPMDML-13	32	ICPMDML-34
14	ICPMDML-14	33	ICPMDML-35
15	ICPMDML-15	34	ICPMDML-36
16	ICPMDML-16	35	ICPMDML-37
17	ICPMDML-17	36	ICPMDML-38
18	ICPMDML-18	37	ICPMDML 39
19	ICPMDML-19	38	ICPMDML-40

Table 1.3 List of entries of blast nursery trials

S. No.	Entry Code	S. No.	Entry Code
1	ICPMBL-1	30	ICPMBL-30
2	ICPMBL-2	31	ICPMBL-31
3	ICPMBL-3	32	ICPMBL-32
4	ICPMBL-4	33	ICPMBL-33
5	ICPMBL-5	34	ICPMBL-34
6	ICPMBL-6	35	ICPMBL-35
7	ICPMBL-7	36	ICPMBL-36
8	ICPMBL-8	37	ICPMBL-37
9	ICPMBL-9	38	ICPMBL-38
10	ICPMBL10	39	ICPMBL-39
11	ICPMBL-11	40	ICPMBL-40
12	ICPMBL-12	41	ICPMBL-41
13	ICPMBL-13	42	ICPMBL-42
14	ICPMBL-14	43	ICPMBL-43
15	ICPMBL-15	44	ICPMBL-44
16	ICPMBL-16	45	ICPMBL-45
17	ICPMBL-17	46	ICPMBL-46
18	ICPMBL-18	47	ICPMBL-47
19	ICPMBL-19	48	ICPMBL-48
20	ICPMBL-20	49	ICPMBL-49
21	ICPMBL-21	50	ICPMBL-50
22	ICPMBL-22	51	ICPMBL-51
23	ICPMBL-23	52	ICPMBL-52
24	ICPMBL-24	53	ICPMBL-53
25	ICPMBL-25	54	ICPMBL-54
26	ICPMBL-26	55	ICPMBL-55
27	ICPMBL-27	56	ICPMBL-56
28	ICPMBL-28	57	ICPMBL-57
29	ICPMBL-29		

Molecular characterization and SSR analysis

For PCR reaction, DNA was diluted accordingly to make available final concentration of 10 ng/μl and amplification reactions were carried out in a volume of 10 μl as described in PMMB1. A total of 56 SSR primers were used for PCR amplification with 38 entries of downy mildew nursery trials. Out of 56 SSRs, 48 primers amplified products of varying sizes ranging from 90 to 600 bp and 30 (53.6%) were polymorphic and 18 (32.1 %) were monomorphic (Table 1.4 and Fig. 1.2). A total of 76 alleles were obtained in this study and the number of alleles per locus varied between 2 to 4 with an average of 2.53 alleles. Polymorphic Information Content (PIC) varied from 0.39 to 0.79 with an average of 0.54 PIC value.

Table 1.4 Results of SSR primers used for PCR

Markers	Markers for DM	Markers for blast
Number of SSR markers used	56	58
Number of amplified markers	48	47
Number of non- amplified markers	08	11
Number of polymorphic markers	30	34
Number of monomorphic markers	18	13

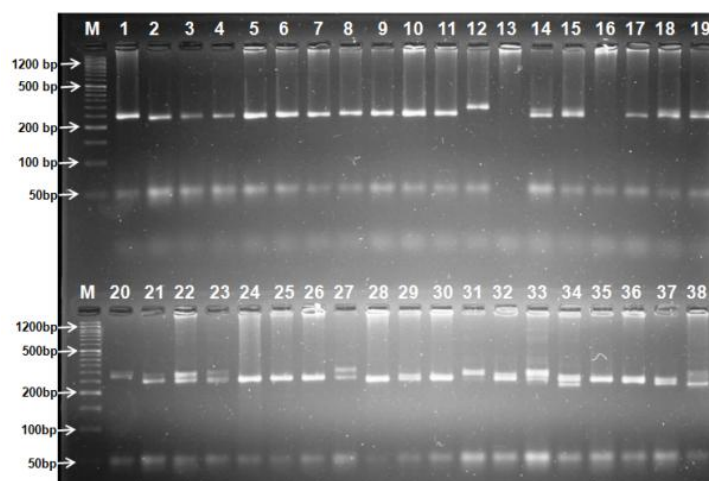


Fig. 1.2 Agarose gel showing amplification profiles of entries of downy mildew nursery trials using the primer PSMP 2008. Lane M-50 bp ladder, Lane 1-38 entries of pearl millet downy mildew nursery trials

A total of 58 SSR primers were used for PCR amplification with 57 entries of blast nursery trials. Out of 58 SSRs, 47 primers amplified products of varying sizes ranging from 120 to 570 bp and 34 (58.6 %) were polymorphic and 13 (22.4%) were monomorphic (Table 1.4 and Fig. 1.3). A total of 86 alleles were obtained in this study and the number of alleles per locus varied between 2 to 4 with an average of 2.52 alleles. Polymorphic Information Content (PIC) varied from 0.32 to 0.79 with an average of 0.52 PIC value.

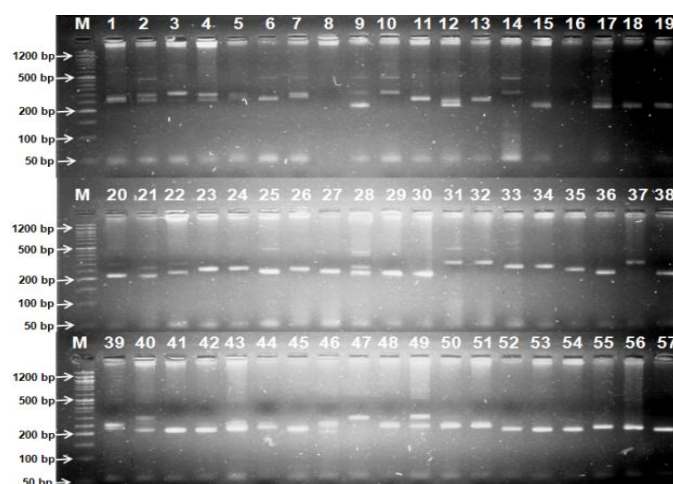


Fig. 1.3 Agarose gel showing amplification profiles of entries of blast nursery trials using the primer PSMP2084. Lane M-100 bp ladder, Lane 1-57 entries of pearl millet blast nursery trials

Morphological parameters

A total of 38 entries of downy mildew nursery trials and 57 entries of blast nursery trials were screened in field conditions and data were recorded by counting no. of diseased plants at 60 DAS. Analysis of the downy mildew disease incidence showed one or more typical downy mildew symptoms and revealed significant differences among the different entries. The disease incidence ranged between 3.33% (ICPMDML-11) to 24.59% (ICPMDML-4) among the entries screened at Mandor. 13 entries with 0-5% infection were found to be resistant, 19 entries with >5 to 10% disease incidence were found to be moderately resistant and 7 entries with >10-25 % disease incidence were categorized to be moderately susceptible.

A total of 57 entries of blast nursery trials were screened in field conditions and data were recorded at 60 DAS. Analysis of the blast disease incidence showed one or more blast disease symptoms and revealed significant differences among the different entries. The disease incidence ranged between 1 (ICPMBL-14) to 6.5 (ICPMBL-54) among the entries screened at Mandor. 34 entries with score 1-3.5 were found to be resistant, 22 entries with score 4-5.5 were found to be moderately resistant and 1 entry (ICPMBL-54) with 6.5 score was found to be susceptible.

Experiment 3: Validation and association studies for high Fe/Zn among pearl millet lines rich in Fe and Zn content

Plant Material

A total of 38 pearl millet lines rich in Fe/Zn were used for molecular characterization and screening and validation of already reported high Fe/Zn markers under this experiment (Table 1.5). Pearl millet is rich in Fe & Zn content and ICAR-AICRP on Pearl Millet has already included minimum standard for micronutrient (Fe = 42 ppm; Zn = 32 ppm) in the promotion criteria. Hence, screening of pearl millet lines rich in Fe and Zn content using molecular markers and their validation will be helpful for developing high Fe/Zn pearl millet hybrids.

Genomic DNA isolation and quantification

Good quality genomic DNA having sharp band was successfully isolated from fresh and young leaves of 38 genotypes as described in PMMB1 and quantified on agarose gel.

Table 1.5 List of genotypes used for molecular characterization

S. No.	Name of pearl millet line	Organization	Fe (ppm)	Zn (ppm)
1.	PPMI 1322	IARI, New Delhi	35	32
2.	PPMI 1323	IARI, New Delhi	53	39
3.	PPMI 1324	IARI, New Delhi	71	48
4.	PPMI 1325	IARI, New Delhi	57	45
5.	PPMI 1326	IARI, New Delhi	54	44
6.	HSR 24-1	CCS HAU, Hisar	30	25
7.	HSR 24-2	CCS HAU, Hisar	40	40
8.	HSR 24-3	CCS HAU, Hisar	41	30
9.	HSR 24-4	CCS HAU, Hisar	53	42
10.	150 SB 24	JAU, Jamnagar	62	44

S. No.	Name of pearl millet line	Organization	Fe (ppm)	Zn (ppm)
11.	159 SB 24	JAU, Jamnagar	33	33
12.	171 SB 24	JAU, Jamnagar	40	34
13.	217 SB 24	JAU, Jamnagar	41	31
14.	229 SB 24	JAU, Jamnagar	50	33
15.	JMSB 20213	JAU, Jamnagar	49	37
16.	JMSB 20227	JAU, Jamnagar	75	38
17.	JMSB 20229	JAU, Jamnagar	43	34
18.	DHL CRP 01	MPKV, Dhule	59	38
19.	DHL CRP 02	MPKV, Dhule	52	42
20.	DHL CRP 03	MPKV, Dhule	59	41
21.	DHL CRP 04	MPKV, Dhule	60	42
22.	DHL CRP 05	MPKV, Dhule	51	33
23.	DHL CRP 06	MPKV, Dhule	51	41
24.	RIB 15178	RARI, Durgapura	53	36
25.	RIB 15179	RARI, Durgapura	57	39
26.	RIB 15180	RARI, Durgapura	44	35
27.	RIB 15181	RARI, Durgapura	38	45
28.	RIB 15182	RARI, Durgapura	27	27
29.	RIB 15183	RARI, Durgapura	42	33
30.	RIB 15184	RARI, Durgapura	57	36
31.	RIB 15185	RARI, Durgapura	58	45
32.	RIB 15186	RARI, Durgapura	54	36
33.	RIB 15187	RARI, Durgapura	45	36
34.	MIR 1117	PC Unit, Jodhpur	53	39
35.	MIR 1406	PC Unit, Jodhpur	60	56
36.	MIR 1716	PC Unit, Jodhpur	37	35
37.	MIR 1806	PC Unit, Jodhpur	52	40
38.	MIR 1907	PC Unit, Jodhpur	44	42

Molecular characterization and SSR analysis

A total of 112 SSR primers were used for PCR amplification and validation among 38 pearl millet genotypes. Out of 112 SSRs, 91 primers amplified products of varying sizes ranging from 110 to 750 bp and 71 (63.4%) were polymorphic and 20 (17.9 %) were monomorphic (Table 1.6 and Fig. 1.4). A total of 194 alleles were obtained in this study and the number of alleles per locus varied between 2 to 4 with an average of 2.73 alleles. Polymorphic Information Content (PIC) varied from 0.35 to 0.78 with an average of 0.59 PIC value.

Table 1.6 Results of SSR primers used for PCR

Markers	No. of markers
Number of markers used	112
Number of amplified markers	91
Number of non- amplified markers	21
Number of polymorphic markers	71
Number of monomorphic markers	20

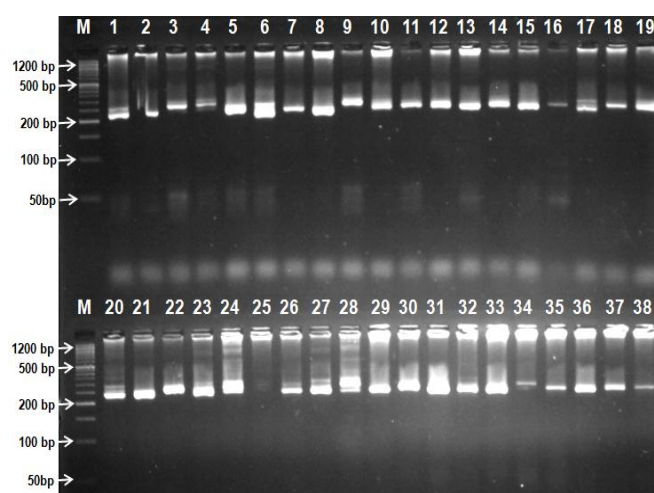


Fig. 1.4 Agarose gel showing amplification profiles of pearl millet lines using the primer IPES 0203. Lane M-50 bp ladder, Lane 1-38 pearl millet lines

Morphological characterization

Observations recorded for days to 50% flowering, effective tillers per plant, plant height, head diameter, head length etc. Days to 50% flowering ranged from 48 (PPMI 1323) to 65 (RIB 15181 and RIB 15186). Plant height ranged from 85 cm (JMSB 20227 and DHL CRP 01) to 163 cm (JMSB 20229). Effective tillers per plant was 1.5 (PPMI 1322, HSR 24-2, 217 SB 24, RIB 15178, RIB 15179 and RIB 15183) to 4 cm (MIR 1716). Head length ranged from 11 cm (HSR 24-4, DHL CRP 01) to 35 cm (JMSB 20229). Head girth ranged from 1.8 cm (MIR 1117) to 4 cm (HSR 24-2). The seed set (%) under open pollination condition ranged from 33 (RIB 15183) to 88 (MIR 1907). Agronomic score ranged from 1.8 (HSR 24-4) to 4.5 (MIR 1907). Iron content ranged from 27 (RIB 15182) to 75 ppm (JMSB 20227) while zinc content ranged from 25 (HSR 24-1) to 56 ppm (MIR 1406) (Table 1.7).

Table 1.7 Performance of different pearl millet genotypes under field conditions

S. No.	Pearl millet line	Days to 50% flowering	Plant Height (cm)	Effective Tiller/plant	Head Length (cm)	Head Diameter (cm)	Open Pollination Seed set %	Agronomic Score (1-5), 1=Poor, 5=Excellent	Fe (ppm)	Zn (ppm)
1	PPMI 1322	61	118	1.5	22	1.9	73	3.3	35	32
2	PPMI 1323	48	148	2.5	21	2.3	73	3.3	53	39
3	PPMI 1324	61	110	1.8	15	2.3	55	2.3	71	48
4	PPMI 1325	56	150	2.5	21	3.2	65	3.5	57	45
5	PPMI 1326	62	135	1.8	21	2.4	55	2.5	54	44
6	HSR 24-1	52	122	3.0	13	1.9	73	4.3	30	25
7	HSR 24-2	61	105	1.5	16	4.0	76	3.0	40	40
8	HSR 24-3	59	105	2.3	14	3.2	68	2.3	41	30
9	HSR 24-4	58	105	2.0	11	2.6	48	1.8	53	42
10	150 SB 24	55	145	3.5	17	3.0	60	3.3	62	44
11	159 SB 24	55	123	2.0	18	2.1	48	2.3	33	33
12	171 SB 24	52	135	2.0	21	2.3	63	2.3	40	34
13	217 SB 24	61	108	1.5	20	2.4	47	2.3	41	31
14	229 SB 24	55	148	2.3	27	2.9	53	2.0	50	33

CHAPTERVII: PLANT BIOTECHNOLOGY

S. No.	Pearl millet line	Days to 50% flowering	Plant Height (cm)	Effective Tiller/plant	Head Length (cm)	Head Diameter (cm)	Open Pollination Seed set %	Agronomic Score (1-5), 1=Poor, 5=Excellent	Fe (ppm)	Zn (ppm)
15	JMSB 20213	60	117	2.8	21	2.9	60	2.3	49	37
16	JMSB 20227	64	85	3.0	16	3.8	80	3.3	75	38
17	JMSB 20229	64	163	2.8	35	3.2	70	2.3	43	34
18	DHL CRP 01	55	85	2.0	11	2.7	40	2.0	59	38
19	DHL CRP 02	61	138	2.5	17	3.1	44	2.5	52	42
20	DHL CRP 03	63	143	2.5	20	3.4	63	4.3	59	41
21	DHL CRP 04	62	148	2.3	21	3.5	50	3.3	60	42
22	DHL CRP 05	63	153	2.0	23	3.6	55	2.3	51	33
23	DHL CRP 06	60	153	3.0	23	3.5	55	2.3	51	41
24	RIB 15178	58	105	1.5	15	2.6	50	2.3	53	36
25	RIB 15179	64	105	1.5	16	3.0	80	2.3	57	39
26	RIB 15180	57	103	2.3	17	3.0	50	2.3	44	35
27	RIB 15181	65	133	2.5	19	3.1	48	2.3	38	45
28	RIB 15182	51	135	2.5	19	3.2	73	2.3	27	27
29	RIB 15183	64	128	1.5	19	2.4	33	2.3	42	33
30	RIB 15184	59	155	2.5	24	2.9	75	3.3	57	36
31	RIB 15185	64	113	1.8	19	3.8	85	3.8	58	45
32	RIB 15186	65	100	2.0	18	3.9	75	3.0	54	36
33	RIB 15187	57	138	2.3	20	3.6	65	2.8	45	36
34	MIR 1117	64	125	3.0	18	1.8	85	3.3	53	39
35	MIR 1406	55	103	2.3	12	3.3	70	3.5	60	56
36	MIR 1716	54	130	4.0	19	1.9	83	4.0	37	35
37	MIR 1806	53	120	3.8	22	2.0	80	4.0	52	40
38	MIR 1907	53	105	2.8	12	3.4	88	4.5	44	42

PMMB 2: MOLECULAR CHARACTERIZATION OF GERMPLASM OF PEARL MILLET

Experiment 1: DNA profiling of identified/advanced hybrid entries of third year testing

Plant Material

The four advanced hybrid entries (MH 2672, MH 2673, MH 2675 and MH 2678) of third year testing from AHPT I (E) A to AHPT II (E) trial of A₁ zone along with two checks (MPMH21, AHB1200) and three advanced hybrid entries (MH 2709, MH 2712 and MH 2717) of third year testing from AHT I (L) A to AHT II (L) trial along with two checks (KBH108, 86M86) were used for DNA profiling under this experiment. The entries promoted for third year testing will be later identified for release and hence need DNA profile for submission of proposal. Thus, this experiment is useful for authenticity of identification proposal and can meet the basic requirements of proposal submission.

Genomic DNA isolation and quantification

Good quality genomic DNA having sharp band was successfully isolated from fresh and young leaves of seven advanced hybrid entries and four checks as described in PMMB1 and quantified on agarose gel.

DNA profiling using SSRs

For PCR reaction, DNA was diluted accordingly to make available final concentration of 10 ng/μl and amplification reactions were carried out in a volume of 10 μl as described in PMMB 1. A total of 36 SSR primers were used for PCR amplification and DNA profiling of advanced hybrid entries of pearl millet. Among the advanced hybrid entries (MH 2672, MH 2673, MH 2675 and MH 2678) of third year testing from AHPT I (E) A to AHPT II (E) trial, analysis of MH 2672 using 36 primers displayed a unique profile for this genotype (Fig. 2.1). Out of the 36 primers used, 21 SSR primers (58.3%) were found polymorphic between the three genotypes. Similarly, analysis of MH2673 using the same 36 primers displayed a unique profile for this genotype (Fig. 2.2). Out of the 36 primers used, 19 SSR primers (52.7%) were found polymorphic between the three genotypes. Analysis of MH2675 using the same 36 primers displayed a unique profile for this genotype (Fig. 2.3). Out of the 36 primers used, 16 SSR primers (44.4%) were found polymorphic between the three genotypes. Analysis of MH2678 using the same 36 primers displayed a unique profile for this genotype (Fig. 2.4). Out of the 36 primers used, 19 SSR primers (52.7%) were found polymorphic between the three genotypes.

Among the three advanced hybrid entries (MH 2709, MH 2712 and MH 2717) of third year testing from AHT I (L) A to AHT II (L) trial, analysis of MH 2709 using 36 primers displayed a unique profile for this genotype (Fig. 2.5). Out of the 36 primers used, 17 SSR primers (47.2 %) were found polymorphic between the three genotypes. Similarly, analysis of MH 2712 using the same 36 primers displayed a unique profile for this genotype (Fig. 2.6). Out of the 36 primers used, 18 SSR primers (50.0 %) were found polymorphic between the three genotypes. Analysis of MH2717 using the same 36 primers displayed a unique profile for this genotype (Fig. 2.7). Out of the 36 primers used, 19 SSR primers (52.7 %) were found polymorphic between the three genotypes.

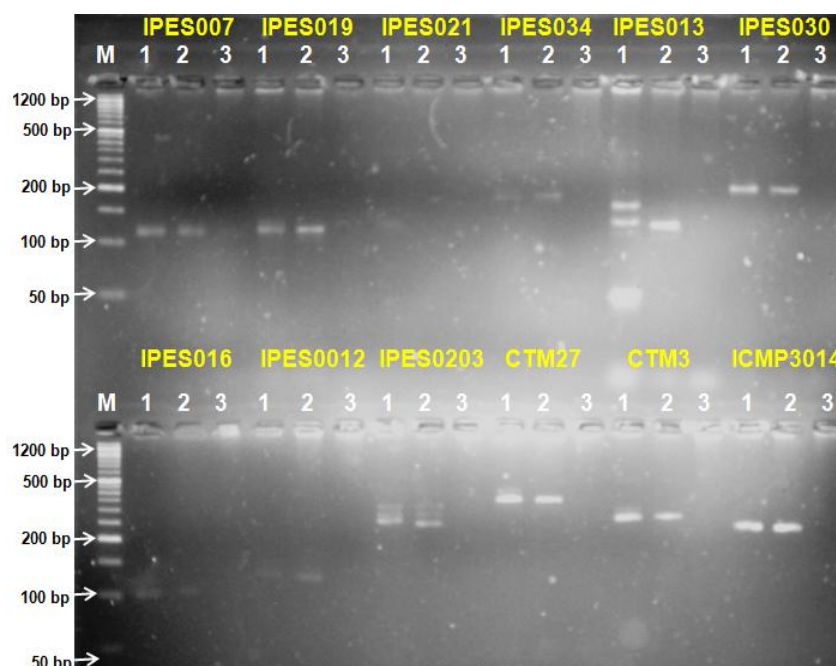


Fig 2.1 Gel photograph showing SSR allelic profile of MH2672 with 36 SSRs. M-50 bp DNA ladder; Lane 1- MPMH21 (Check), 2- AHB1200 (Check), 3- MH2672



Fig 2.2 Gel photograph showing SSR allelic profile of MH2673 with 36 SSRs. M-50 bp DNA ladder; Lane 1- MPMH21 (Check), 2- AHB1200 (Check), 3- MH2673

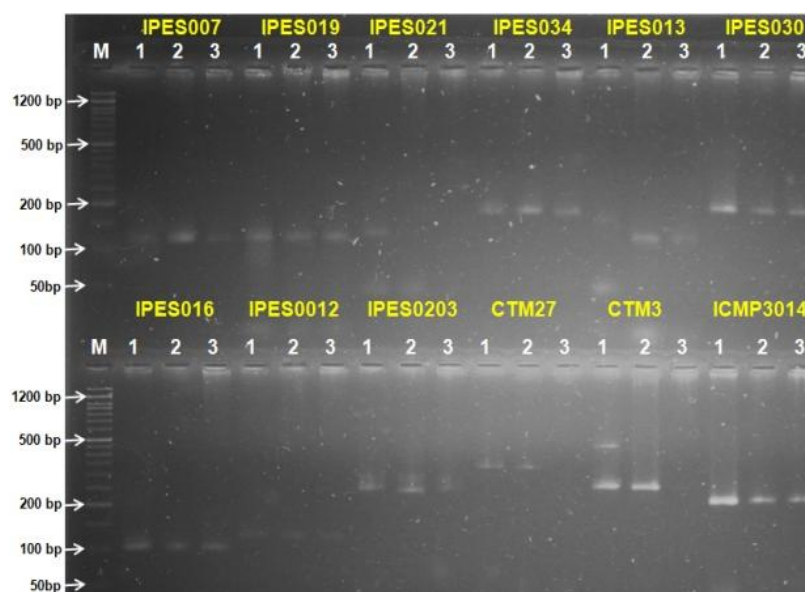


Fig 2.3 Gel photograph showing SSR allelic profile of MH2675 with 36 SSRs. M-50 bp DNA ladder; Lane 1- MPMH21 (Check), 2- AHB1200 (Check), 3- MH2675



Fig 2.4 Gel photograph showing SSR allelic profile of MH2678 with 36 SSRs. M-50 bp DNA ladder; Lane 1- MPMH21 (Check), 2- AHB1200 (Check), 3- MH2678

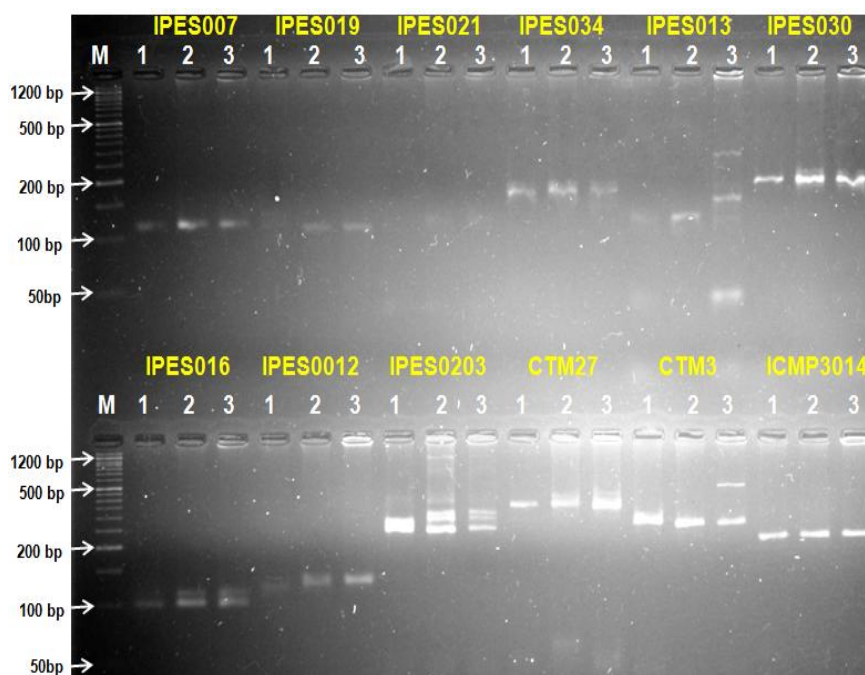


Fig 2.5 Gel photograph showing SSR allelic profile of MH2709 with 36 SSRs. M-50 bp DNA ladder; Lane 1- KBH108 (Check), 2- 86M86 (Check), 3- MH2709



Fig 2.6 Gel photograph showing SSR allelic profile of MH2712 with 36 SSRs. M-50 bp DNA ladder; Lane 1- KBH108 (Check), 2- 86M86 (Check), 3- MH2712

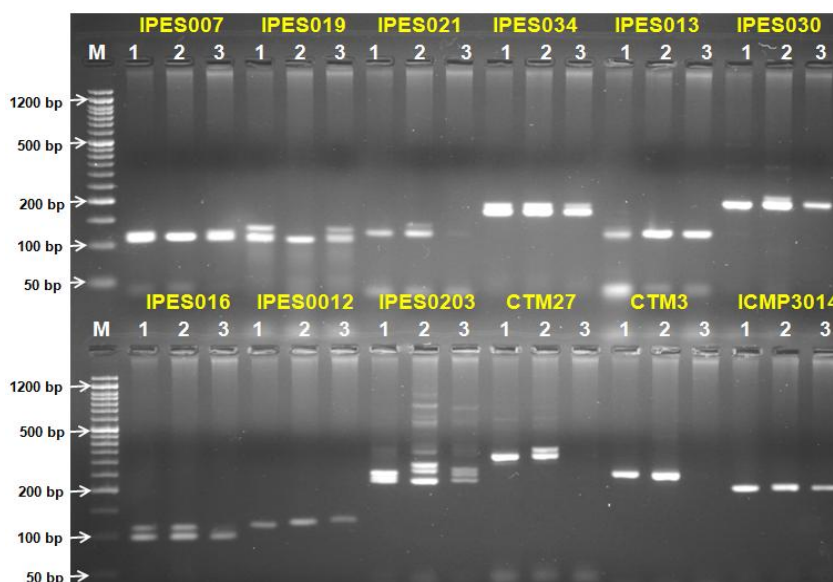


Fig 2.7 Gel photograph showing SSR allelic profile of MH2717 with 36 SSRs. M-50 bp DNA ladder; Lane 1- KBH108 (Check), 2- 86M86 (Check), 3- MH2717

Experiment 2: Molecular characterization of landraces in pearl millet

Plant material:

Young leaf samples of 2-3 leaf stage of high/low rancidity genotypes. A total of 24 pearl millet genotypes collected from NBPGR, Regional Station, Jodhpur were used for molecular characterization under this experiment (Table 2.1). Pearl millet has poor shelf life and rancidity is a major issue. To enhance its keeping quality there is a high need to address the issue of rancidity. Hence, screening of pearl millet landraces having low and high rancidity will be useful for developing superior genotypes.

Genomic DNA isolation and quantification

Good quality genomic DNA having sharp band was successfully isolated from fresh and young leaves of 24 genotypes of pearl millet as described in PMMB1 and quantified on agarose gel.

Table 2.1 List of genotypes used for molecular characterization

S. No.	Name of Genotype	Source
1	IC420347	NBPGR, Regional Station, Jodhpur
2	IC333179	NBPGR, Regional Station, Jodhpur
3	IC420368	NBPGR, Regional Station, Jodhpur
4	IC420371	NBPGR, Regional Station, Jodhpur
5	IC329045	NBPGR, Regional Station, Jodhpur
6	IC329047	NBPGR, Regional Station, Jodhpur
7	IC329055	NBPGR, Regional Station, Jodhpur
8	IC329056	NBPGR, Regional Station, Jodhpur
9	IC537960	NBPGR, Regional Station, Jodhpur
10	IC420312	NBPGR, Regional Station, Jodhpur
11	IC449438	NBPGR, Regional Station, Jodhpur
12	IC449444	NBPGR, Regional Station, Jodhpur
13	IC449463	NBPGR, Regional Station, Jodhpur
14	IC537954	NBPGR, Regional Station, Jodhpur
15	IC449472	NBPGR, Regional Station, Jodhpur
16	IC537955	NBPGR, Regional Station, Jodhpur
17	IC541016	NBPGR, Regional Station, Jodhpur
18	IC537984	NBPGR, Regional Station, Jodhpur
19	IC285152	NBPGR, Regional Station, Jodhpur
20	IC285200	NBPGR, Regional Station, Jodhpur
21	IC449435	NBPGR, Regional Station, Jodhpur
22	IC537970	NBPGR, Regional Station, Jodhpur
23	IC449446	NBPGR, Regional Station, Jodhpur
24	IC537958	NBPGR, Regional Station, Jodhpur

Table 2.2 Results of SSR primers used for PCR

Markers	No. of markers
Number of SSR markers used	118
Number of amplified markers	108
Number of non-amplified markers	10
Number of polymorphic markers	94
Number of monomorphic markers	14

Molecular characterization and SSR analysis

For PCR reaction, DNA was diluted accordingly to make available final concentration of 10 ng/μl and amplification reactions were carried out in a volume of 10 μl as described in PMMB1. A total of 118 SSR primers were used for PCR amplification and characterization among 24 pearl millet genotypes. Out of 118 SSRs, 108 primers amplified products of varying sizes ranging from 110 to 600 bp and 14 (11.9%) were monomorphic and 94 (79.7%) were

polymorphic (Table 2.2 and Fig. 2.8). A total of 238 alleles were obtained in this study and the number of alleles per locus varied between 2 to 4 with an average of 2.53 alleles. Polymorphic Information Content (PIC) varied from 0.41 to 0.79 with an average of 0.58 PIC value.

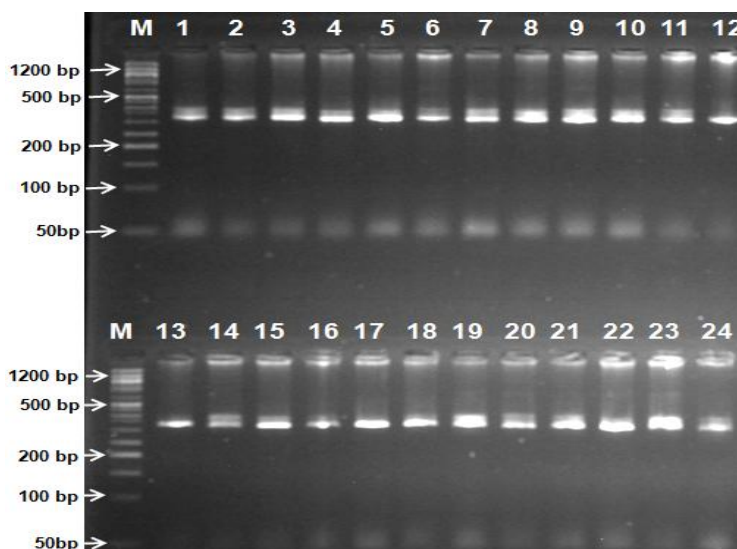


Fig. 2.8 Agarose gel showing amplification profiles of pearl millet genotypes using the primer CTM 12. Lane M-50 bp ladder, Lane 1-24 pearl millet lines

Diversity analysis and dendrogram construction

Differences in the DNA banding patterns were qualitatively scored from gel photographs for presence (1) and absence (0) of bands assuming that each band represents a unique genetic locus. Scoring was done for clear, unambiguous amplicons and their sizes were determined by comparing with 50 bp DNA ladder. Based on the presence or absence of amplicons, a binary 1-0 data matrix was created and used to calculate Jaccard's similarity coefficient (Jaccard, 1908). Cluster analysis was carried out among the genotypes based on Jaccard's similarity coefficients using UPGMA (Sneath and Sokal, 1973) and SAHN-clustering algorithm in NTSYS-pc, version 2.02e (Applied Biostatistics) software.

The genetic relationships among the genotypes were consistent and in complete agreement with the available data. The cluster analysis based on SSR markers discriminated well between the genotypes and gave 5 major clusters viz., I, II, III, IV and V with similarity coefficient ranging between 0.58 to 0.76 (Fig. 2.9). Cluster I contained eight genotypes and grouped together at similarity index of 0.64. In this cluster, pearl millet genotypes IC420347, IC420368, IC420312, IC537954, IC537984, IC449472, IC537955 and IC537970 are clustered together. Cluster II was obtained at a similarity index of 0.65 containing four genotypes namely IC537958, IC285152, IC285200 and IC420371. In this cluster, IC285200 and IC420371 are grouped together at a genetic distance of 0.72.

In cluster III, five genotypes IC333179, IC449438, IC329056, IC329047 and IC329045 clustered together at a similarity index of 0.63. Here, IC333179 and IC449438 showed a more close similarity at a genetic distance of 0.73 while IC329047 and IC329045 exhibited similarity at a genetic distance of 0.68. Cluster IV included six genotypes viz. IC449435, IC329055, IC541016, IC449463, IC449446 and IC449444 and was obtained at a

similarity index of 0.62. IC537960 was entirely separated from all the genotypes and clustered in group V at a similarity index of 0.53. It has been proved that SSRs can be suitable and efficient tool for molecular characterization of many plant species including pearl millet. The pearl millet genotypes have been successfully characterized and the information revealed through this study is very useful and can be further used in breeding programmes.

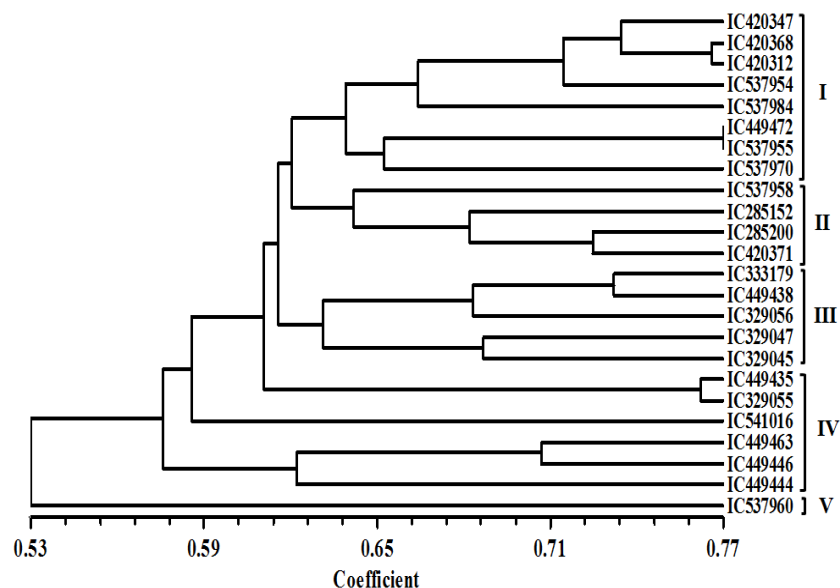


Fig. 2.9 UPGMA dendrogram showing genetic relationship among pearl millet genotypes based on Jaccard's similarity coefficients using SSR markers

APPENDICES

Appendix I: Rainfall pattern at pearl millet trial locations during crop growth period kharif - 2024

Met. Weeks	Date	RAJ								HAR						GUJ						MP				PUN				DEL			
		MDR		JPR		BKR		FTR		HSR		BWL		TLJ		JMR		AND		GLR		LDA		NDL									
		RF	RD	RF	RD	RF	RD	RF	RD	RF	RD	RF	RD	RF	RD	RF	RD	RF	RD	RF	RD	RF	RD	RF	RD	RF	RD						
6	5 Feb - 11 Feb.	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-	0	0	-	-	-	-	0	-								
7	12 Feb - 18 Feb.	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-	0	0	-	-	-	-	0	-								
8	19 Feb - 25 Feb.	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-	0	0	-	-	-	-	3	1								
9	26 Feb - 4 Mar.	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-	13	1	-	-	-	-	12	2								
10	5 Mar - 11 Mar.	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-	0	0	-	-	-	-	0	-								
11	12 Mar - 18 Mar.	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-	0	0	-	-	-	-	0	-								
12	19 Mar - 25 Mar.	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-	0	0	-	-	-	-	0	-								
13	26 Mar - 1 Apr.	-	-	-	-	0	0	-	-	-	-	-	-	0	0	-	-	0	0	-	-	-	-	0	-								
14	2 Apr - 8 Apr.	-	-	-	-	0	0	-	-	-	-	-	-	0	0	-	-	0	0	-	-	-	-	0	-								
15	9 Apr - 15 Apr.	-	-	-	-	18	2	-	-	-	-	-	-	0	0	-	-	0	0	-	-	-	-	10	2								
16	16 Apr - 22 Apr.	-	-	-	-	0	0	-	-	-	-	-	-	0	0	-	-	0	0	-	-	-	-	4	1								
17	23 Apr - 29 Apr.	-	-	-	-	0	0	-	-	-	-	-	-	0	0	-	-	1	0	-	-	-	-	2	1								
18	30 Apr - 6 May	-	-	-	-	0	0	0	0	-	-	-	-	0	0	-	-	0	0	-	-	-	-	0	-								
19	7 May - 13 May	-	-	-	-	22	1	0	0	-	-	3	-	0	0	-	-	0	0	-	-	0	-	0	-								
20	14 May - 20 May	-	-	-	-	0	0	0	0	-	-	2	-	0	0	1	-	0	0	-	-	0	-	0	-								
21	21 May - 27 May	-	-	-	-	0	0	0	0	-	-	-	-	0	0	-	-	0	0	-	-	0	-	0	-								
22	28 May - 3 June	-	-	-	-	0	0	0	0	9	1	2	-	0	0	-	-	0	0	-	-	0	-	0	-								
23	4 June - 10 June	-	-	-	-	0	0	3	1	2	0	4	-	0	0	-	-	0	0	-	-	4	-	1	1								
24	11 June -17 June	-	-	-	-	0	0	0	0	0	0	3	-	12	2	-	-	0	0	-	-	0	-	0	-								
25	18 June - 24 June	-	-	-	-	0	0	7	1	25	1	1	-	14	4	55	1	1	0	-	-	3	1	14	1								
26	25 June - 1 July	12	2	12	4	5	1	6	1	52	1	123	-	32	1	15	4	70	3	-	-	49	4	102	3								
27	2 July - 8 July	3	1	83	5	52	2	15	2	43	3	151	-	77	4	84	1	16	3	195	-	64	-	7	3								
28	9 July - 15 July	0	0	44	3	44	2	10	2	0	0	3	-	140	7	24	2	9	1	9	-	4	-	1	1								
29	16 July - 22 July	56	6	0	0	0	0	3	1	1	0	-	-	74	4	164	5	66	2	46	-	4	-	53	2								
30	23 July - 29 July	19	4	61	5	38	2	64	2	8	1	51	-	26	4	122	2	95	3	14	-	33	-	289	6								
31	30 July - 5 Aug.	50	5	287	3	69	1	41	1	71	2	82	-	81	6	49	4	56	4	47	-	18	-	97	2								
32	6 Aug - 12 Aug.	48	3	245	7	65	3	29	4	144	4	120	-	7	4	18	3	54	5	28	-	70	1	52	5								
33	13 Aug - 19 Aug.	105	3	164	5	45	3	53	3	23	1	104	-	36	5	15	3	56	2	80	-	68	2	21	2								
34	10 Aug - 26 Aug.	61	3	73	2	0	0	5	1	9	2	92	-	58	6	28	1	186	2	115	-	53	3	89	3								
35	27 Aug - 2 Sept.	39	4	194	3	17	2	2	0	29	2	17	-	83	4	604	4	226	6	7	-	72	-	110	5								
36	3 Sept - 9 Sept.	47	3	151	5	36	1	82	4	46	2	122	-	75	5	2	-	133	3	3	-	86	3	69	7								
37	10 Sept - 16 Sept.	40	4	28	2	0	0	8	2	20	1	6	-	51	4	-	-	2	0	253	-	8	1	87	5								
38	17 Sept - 23 Sept.	20	3	0	0	0	0	2	0	0	0	6	-	4	1	-	-	0	0	141	-	0	-	10	1								
39	24 Sept - 30 Sept.	0	0	0	0	0	0	0	0	0	0	-	-	174	4	28	2	133	6	20	-	3	2	1	1								
40	1 Oct - 7 Oct.	0	0	0	0	0	0	0	0	0	0	-	-	0	0	-	-	0	1	0	-	0	-	0	-								
41	8 Oct - 14 Oct.	0	0	0	0	2	0	7	1	0	0	-	-	37	2	9	1	16	1	0	-	0	-	0	-								
42	15 Oct - 21 Oct.	0	0	0	0	0	0	0	0	0	0	-	-	1	1	4	1	54	1	0	-	0	-	0	-								
43	22 Oct - 28 Oct.	0	0	0	0	0	0	0	0	0	0	-	-	0	0	3	1	1	0	-	-	-	-	0	-								
44	29 Oct - 4 Nov.	0	0	0	0	0	0	0	0	0	0	-	-	0	0	-	-	0	0	-	-	-	-	0	-								

Contd...

Appendix I: Rainfall pattern at pearl millet trial locations during crop growth period kharif - 2024

Met. Weeks	Date	MS				KS		AP		TN	
		ABD1		DHL		VYP		APR		CBE	
		RF	RD	RF	RD	RF	RD	RF	RD	RF	RD
6	5 Feb - 11 Feb.	0	0	-	-	0	0	-	-	-	-
7	12 Feb - 18 Feb.	0	0	-	-	0	0	-	-	-	-
8	19 Feb - 25 Feb.	0	0	-	-	0	0	-	-	-	-
9	26 Feb - 4 Mar.	0	0	-	-	0	0	-	-	-	-
10	5 Mar - 11 Mar.	0	0	-	-	0	0	-	-	-	-
11	12 Mar - 18 Mar.	0	0	-	-	0	0	-	-	-	-
12	19 Mar - 25 Mar.	0	0	-	-	0	0	-	-	-	-
13	26 Mar - 1 Apr.	0	0	-	-	0	0	-	-	-	-
14	2 Apr - 8 Apr.	0	0	-	-	0	0	-	-	-	-
15	9 Apr - 15 Apr.	0	0	-	-	4	0	-	-	-	-
16	16 Apr - 22 Apr.	0	0	-	-	0	0	-	-	-	-
17	23 Apr - 29 Apr.	0	0	-	-	1	0	-	-	-	-
18	30 Apr - 6 May	0	0	-	-	0	0	0	-	-	-
19	7 May - 13 May	18	3	-	-	14	1	13	-	-	-
20	14 May - 20 May	0	0	-	-	23	2	9	-	-	-
21	21 May - 27 May	0	0	-	-	27	2	33	-	-	-
22	28 May - 3 June	0	0	-	-	87	1	31	-	-	-
23	4 June - 10 June	24	1	57	2	147	4	86	-	-	-
24	11 June -17 June	10	1	65	1	10	1	44	-	-	-
25	18 June - 24 June	--	--	74	2	2	0	0	-	1	0
26	25 June - 1 July	64	4	64	4	6	1	1	-	21	2
27	2 July - 8 July	50	3	48	5	14	1	1	-	11	1
28	9 July - 15 July	27	3	15	1	29	2	12	-	8	1
29	16 July - 22 July	27	4	51	2	3	0	3	-	41	4
30	23 July - 29 July	36	3	54	5	17	2	4	-	12	1
31	30 July - 5 Aug.	8	2	80	5	1	0	4	-	19	1
32	6 Aug - 12 Aug.	6	2	19	3	19	2	26	-	7	1
33	13 Aug - 19 Aug.	5	1	5	1	30	3	150	-	9	1
34	20 Aug - 26 Aug.	3	1	216	5	77	5	115	-	12	1
35	27 Aug - 2 Sept.	10	1	43	5	22	3	5	-	0	0
36	3 Sept - 9 Sept.	82	3	30	3	5	1	2	-	1	0
37	10 Sept - 16 Sept.	25	2	3	0	4	0	0	-	0	0
38	17 Sept - 23 Sept.	55	1	19	1	34	3	7	-	0	0
39	24 Sept - 30 Sept.	151	4	67	6	199	1	0	-	10	1
40	1 Oct - 7 Oct.	-	-	0	0	94	2	10	-	28	2
41	8 Oct - 14 Oct.	-	-	30	2	22	3	1	-	158	6
42	15 Oct - 21 Oct.	-	0	68	3	34	2	80	-	99	3
43	22 Oct - 28 Oct.	-	0	10	1	0	0	47	-	84	3
44	29 Oct - 4 Nov.	-	0	0	0	1	0	0	-	11	1

Appendix iii

Appendix II: Temperature (°C) at pearl millet trial locations during crop growth period kharif - 2024

Met. Weeks	Date	RAJ								HAR						GUJ				MP				PUN				DEL	
		MDR		JPR		BKR		FTR		HSR		BWL		JMR		AND		GLR		LDA		NDL							
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX				
6	5 Feb - 11 Feb.	-	-	-	-	-	-	-	-	-	-	-	-	16	28	14	34	-	-	-	-	4	23						
7	12 Feb - 18 Feb.	-	-	-	-	-	-	-	-	-	-	-	-	16	29	15	33	-	-	-	-	5	26						
8	19 Feb - 25 Feb.	-	-	-	-	-	-	-	-	-	-	-	-	18	30	12	35	-	-	-	-	7	29						
9	26 Feb - 4 Mar.	-	-	-	-	-	-	-	-	-	-	-	-	19	30	12	37	-	-	-	-	8	28						
10	5 Mar - 11 Mar.	-	-	-	-	-	-	-	-	-	-	-	-	16	30	11	34	-	-	-	-	7	27						
11	12 Mar - 18 Mar.	-	-	-	-	-	-	-	-	-	-	-	-	19	32	16	36	-	-	-	-	11	31						
12	19 Mar - 25 Mar.	-	-	-	-	-	-	-	-	-	-	-	-	21	36	16	38	-	-	-	-	11	33						
13	26 Mar - 1 Apr.	-	-	-	-	18	37	-	-	-	-	-	-	23	34	21	40	-	-	-	-	8	37						
14	2 Apr - 8 Apr.	-	-	-	-	19	38	-	-	-	-	-	-	23	34	20	37	-	-	-	-	13	38						
15	9 Apr - 15 Apr.	-	-	-	-	21	37	-	-	-	-	-	-	25	36	21	40	-	-	-	-	16	39						
16	16 Apr - 22 Apr.	-	-	-	-	21	36	-	-	-	-	-	-	25	36	24	42	-	-	-	-	21	39						
17	23 Apr - 29 Apr.	-	-	-	-	21	39	-	-	-	-	-	-	25	35	23	40	-	-	-	-	18	40						
18	30 Apr - 6 May	-	-	-	-	19	39	18	38	-	-	21	39	26	37	21	41	-	-	-	-	17	41						
19	7 May - 13 May	-	-	-	-	24	43	23	43	-	-	26	41	27	36	26	41	-	-	24	37	23	41						
20	14 May - 20 May	-	-	-	-	25	44	24	44	-	-	25	43	28	38	24	44	-	-	25	42	23	45						
21	21 May - 27 May	-	-	-	-	27	47	28	46	-	-	29	44	28	36	27	45	-	-	28	42	29	45						
22	28 May - 3 June	-	-	-	-	30	46	29	46	26	46	29	46	29	38	29	40	-	-	28	44	29	47						
23	4 June - 10 June	-	-	-	-	27	43	27	42	26	42	28	43	28	37	29	42	-	-	25	40	26	46						
24	11 June -17 June	-	-	-	-	30	44	28	44	28	44	31	44	28	37	29	40	-	-	29	43	29	47						
25	18 June - 24 June	-	-	-	-	29	42	29	40	28	41	30	42	29	37	26	40	-	-	28	40	24	47						
26	25 June - 1 July	31	39	25	34	29	40	25	38	28	38	27	36	28	35	26	36	-	-	28	40	24	38						
27	2 July - 8 July	28	38	24	33	26	39	26	36	27	34	26	23	28	33	25	35	25	34	27	34	24	37						
28	9 July - 15 July	28	38	24	35	26	40	27	37	28	36	28	37	28	35	25	36	28	34	28	36	27	39						
29	16 July - 22 July	29	39	26	35	28	41	28	40	29	38	29	37	27	34	25	34	28	33	30	37	26	37						
30	23 July - 29 July	28	37	25	33	27	39	27	36	29	38	28	36	27	31	26	32	27	32	29	36	26	36						
31	30 July - 5 Aug.	27	35	24	30	27	35	27	35	28	36	28	35	27	31	26	33	26	32	29	35	25	39						
32	6 Aug - 12 Aug.	26	33	25	34	25	34	25	30	27	33	26	30	26	31	26	33	26	33	27	33	26	36						
33	13 Aug - 19 Aug.	26	33	26	36	25	34	25	33	27	34	26	32	26	32	26	35	26	34	27	34	25	35						
34	10 Aug - 26 Aug.	26	34	25	36	26	36	26	36	27	35	26	34	27	33	25	35	26	36	27	34	25	36						
35	27 Aug - 2 Sept.	25	32	24	33	24	36	25	35	26	33	26	33	25	30	24	33	26	35	25	32	24	35						
36	3 Sept - 9 Sept.	26	33	25	31	23	35	24	33	26	32	26	32	26	32	25	33	26	33	26	33	24	35						
37	10 Sept - 16 Sept.	25	35	24	30	24	36	24	34	25	34	25	23	25	33	25	33	25	34	25	34	23	36						
38	17 Sept - 23 Sept.	24	36	24	30	23	36	23	35	24	34	24	33	25	33	26	34	23	34	25	34	23	36						
39	24 Sept - 30 Sept.	26	37	24	32	25	38	24	37	25	35	25	35	26	33	24	35	25	36	26	33	23	37						
40	1 Oct - 7 Oct.	24	37	24	33	23	38	23	38	23	37	24	37	25	33	24	35	25	36	23	34	22	38						
41	8 Oct - 14 Oct.	24	36	21	36	18	36	19	36	19	35	20	35	26	34	23	36	23	37	19	33	19	35						
42	15 Oct - 21 Oct.	23	36	19	32	19	37	17	37	18	36	19	36	26	34	22	36	19	37	19	33	17	36						
43	22 Oct - 28 Oct.	23	36	18	31	18	37	17	36	18	34	19	35	25	36	21	37	-	-	-	-	17	34						
44	29 Oct - 4 Nov.	21	37	14	31	18	38	16	37	17	34	18	36	22	36	20	37	-	-	-	-	15	36						

Contd...

Appendix II: Temperature (°C) at pearl millet trial locations during crop growth period kharif - 2024

Met. Weeks	Date	MS				KS		AP		TN	
		ABD1		DHL		VYP		APR		CBE	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
6	5 Feb - 11 Feb.	15	32	-	-	17	35	-	-	-	-
7	12 Feb - 18 Feb.	21	32	-	-	15	34	-	-	-	-
8	19 Feb - 25 Feb.	14	32	-	-	16	34	-	-	-	-
9	26 Feb - 4 Mar.	19	34	-	-	19	35	-	-	-	-
10	5 Mar - 11 Mar.	15	34	-	-	20	36	-	-	-	-
11	12 Mar - 18 Mar.	17	35	-	-	21	37	-	-	-	-
12	19 Mar - 25 Mar.	18	36	-	-	20	37	-	-	-	-
13	26 Mar - 1 Apr.	22	38	-	-	21	39	-	-	-	-
14	2 Apr - 8 Apr.	21	38	-	-	24	40	-	-	-	-
15	9 Apr - 15 Apr.	24	37	-	-	21	38	-	-	-	-
16	16 Apr - 22 Apr.	25	40	-	-	23	39	-	-	-	-
17	23 Apr - 29 Apr.	25	39	-	-	22	40	-	-	-	-
18	30 Apr - 6 May	23	41	-	-	22	42	27	43	-	-
19	7 May - 13 May	25	39	-	-	22	39	25	40	-	-
20	14 May - 20 May	26	39	-	-	20	36	23	38	-	-
21	21 May - 27 May	28	42	-	-	21	38	24	37	-	-
22	28 May - 3 June	27	40	-	-	21	38	24	38	-	-
23	4 June - 10 June	25	38	23	41	20	32	22	34	-	-
24	11 June - 17 June	24	37	22	39	20	31	21	34	-	-
25	18 June - 24 June	25	36	23	37	20	33	23	36	24	33
26	25 June - 1 July	23	30	22	35	20	32	23	35	24	30
27	2 July - 8 July	24	31	22	33	20	32	23	35	24	32
28	9 July - 15 July	23	30	22	32	19	31	22	35	23	32
29	16 July - 22 July	23	29	21	32	20	29	22	33	24	28
30	23 July - 29 July	23	28	20	30	20	28	23	33	24	31
31	30 July - 5 Aug.	23	29	21	30	20	30	22	35	23	30
32	6 Aug - 12 Aug.	22	30	21	30	19	31	22	33	24	31
33	13 Aug - 19 Aug.	23	31	21	32	20	33	22	35	25	33
34	10 Aug - 26 Aug.	22	29	21	32	19	30	21	34	24	32
35	27 Aug - 2 Sept.	18	25	20	30	18	29	21	32	24	31
36	3 Sept - 9 Sept.	22	25	20	30	19	30	22	34	24	33
37	10 Sept - 16 Sept.	22	29	19	32	17	31	24	35	24	33
38	17 Sept - 23 Sept.	22	29	19	33	18	32	24	35	23	34
39	24 Sept - 30 Sept.	23	32	20	32	18	30	23	34	24	33
40	1 Oct - 7 Oct.	20	33	20	33	19	32	23	35	24	33
41	8 Oct - 14 Oct.	21	34	20	34	19	31	25	34	23	30
42	15 Oct - 21 Oct.	23	32	20	33	20	29	23	30	23	29
43	22 Oct - 28 Oct.	17	33	18	33	17	31	22	33	21	31
44	29 Oct - 4 Nov.	13	24	16	34	18	32	23	34	22	31

Appendix III: Humidity (%) at pearl millet trial locations during crop growth period kharif - 2024

Met. Week s	Date	RAJ						HAR						GUJ				MP		PUN		DEL	
		MDR		JPR		BKR		FTR		HSR		BWL		JMR		AND		GLR		LDA		NDL	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
6	5 Feb - 11 Feb.	-	-	-	-	-	-	-	-	-	-	-	-	32	80	35	94	-	-	-	-	35	94
7	12 Feb - 18 Feb.	-	-	-	-	-	-	-	-	-	-	-	-	27	67	23	92	-	-	-	-	32	97
8	19 Feb - 25 Feb.	-	-	-	-	-	-	-	-	-	-	-	-	33	82	12	86	-	-	-	-	35	96
9	26 Feb - 4 Mar.	-	-	-	-	-	-	-	-	-	-	-	-	34	62	22	85	-	-	-	-	37	90
10	5 Mar - 11 Mar.	-	-	-	-	-	-	-	-	-	-	-	-	19	65	19	84	-	-	-	-	32	87
11	12 Mar - 18 Mar.	-	-	-	-	-	-	-	-	-	-	-	-	28	79	21	88	-	-	-	-	30	79
12	19 Mar - 25 Mar.	-	-	-	-	-	-	-	-	-	-	-	-	29	85	14	75	-	-	-	-	29	87
13	26 Mar - 1 Apr.	-	-	-	-	26	52	-	-	-	-	-	-	44	91	22	89	-	-	-	-	28	87
14	2 Apr - 8 Apr.	-	-	-	-	18	40	-	-	-	-	-	-	40	90	23	78	-	-	-	-	19	80
15	9 Apr - 15 Apr.	-	-	-	-	30	54	-	-	-	-	-	-	38	85	27	85	-	-	-	-	19	84
16	16 Apr - 22 Apr.	-	-	-	-	27	55	-	-	-	-	-	-	35	77	20	62	-	-	-	-	31	78
17	23 Apr - 29 Apr.	-	-	-	-	21	44	-	-	-	-	-	-	41	80	20	67	-	-	-	-	26	86
18	30 Apr - 6 May	-	-	-	-	15	43	16	59	-	-	20	43	33	74	13	67	-	-	-	-	26	76
19	7 May - 13 May	-	-	-	-	20	42	18	72	-	-	30	57	44	82	26	85	-	-	26	52	31	83
20	14 May - 20 May	-	-	-	-	18	43	17	67	-	-	20	43	42	77	19	65	-	-	15	40	21	78
21	21 May - 27 May	-	-	-	-	16	38	17	71	-	-	24	52	50	81	18	65	-	-	23	48	22	65
22	28 May - 3 June	-	-	-	-	21	45	17	71	15	42	20	45	47	74	38	77	-	-	16	37	26	62
23	4 June - 10 June	-	-	-	-	23	52	23	57	22	52	28	52	53	74	31	77	-	-	24	51	23	76
24	11 June - 17 June	-	-	-	-	22	45	20	51	19	42	28	47	52	74	36	78	-	-	19	49	22	60
25	18 June - 24 June	-	-	-	-	29	55	41	61	40	66	38	59	58	80	40	91	-	-	34	59	27	84
26	25 June - 1 July	33	72	68	85	41	67	58	80	54	79	67	88	71	90	60	98	-	-	31	56	52	98
27	2 July - 8 July	63	77	76	90	50	75	66	84	71	88	75	91	68	89	59	92	71	92	65	80	58	94
28	9 July - 15 July	56	75	71	90	95	93	60	79	56	83	62	83	67	88	59	96	53	74	53	72	51	91
29	16 July - 22 July	61	65	66	81	97	97	52	83	60	85	55	84	76	96	65	96	51	77	57	75	58	92
30	23 July - 29 July	61	78	71	85	98	98	72	83	56	83	64	87	80	92	77	97	59	87	62	77	53	98
31	30 July - 5 Aug.	65	90	82	94	91	94	67	88	68	87	65	90	83	93	67	96	62	84	64	78	53	98
32	6 Aug - 12 Aug.	78	86	60	79	88	97	85	92	75	93	85	96	81	90	70	96	70	89	65	81	65	98
33	13 Aug - 19 Aug.	82	91	43	65	87	94	72	90	70	93	79	95	79	91	54	94	56	85	73	84	60	93
34	10 Aug - 26 Aug.	80	90	48	78	96	98	73	89	66	87	69	92	69	87	62	98	57	86	86	86	60	97
35	27 Aug - 2 Sept.	78	88	66	84	96	96	74	90	72	94	71	95	79	96	58	97	52	84	70	91	62	97
36	3 Sept - 9 Sept.	75	88	68	88	92	97	83	94	83	93	78	96	70	94	62	100	50	83	75	87	64	98
37	10 Sept - 16 Sept.	75	83	73	85	97	97	66	93	63	92	68	93	60	86	54	96	62	86	61	87	61	98
38	17 Sept - 23 Sept.	69	77	73	90	97	97	70	90	60	92	56	89	62	88	54	89	60	84	56	87	58	93
39	24 Sept - 30 Sept.	71	81	61	85	97	96	52	86	56	89	52	92	66	89	73	100	64	86	66	85	52	88
40	1 Oct - 7 Oct.	60	79	53	83	96	95	43	82	38	90	40	79	62	87	43	94	46	70	49	86	40	83
41	8 Oct - 14 Oct.	64	75	32	66	97	83	41	86	32	89	29	82	55	81	42	95	55	76	38	86	33	86
42	15 Oct - 21 Oct.	57	66	41	67	98	96	44	80	28	84	25	76	58	90	42	93	43	73	36	84	31	89
43	22 Oct - 28 Oct.	46	61	30	60	97	95	39	89	33	89	28	81	41	89	30	91	-	-	-	-	39	93
44	29 Oct - 4 Nov.	48	61	29	55	97	95	59	88	33	88	26	83	34	84	28	92	-	-	-	-	36	94

Contd...

Appendix vi

Appendix III: Humidity (%) at pearl millet trial locations during crop growth period kharif - 2024

Met. Weeks	Date	MS				KS		AP		TN	
		ABD1		DHL		VYP		APR		CBE	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
6	5 Feb - 11 Feb.	45	55	-	-	28	64	-	-	-	-
7	12 Feb - 18 Feb.	40	46	-	-	21	61	-	-	-	-
8	19 Feb - 25 Feb.	29	43	-	-	22	55	-	-	-	-
9	26 Feb - 4 Mar.	46	56	-	-	27	61	-	-	-	-
10	5 Mar - 11 Mar.	26	35	-	-	22	37	-	-	-	-
11	12 Mar - 18 Mar.	27	37	-	-	20	40	-	-	-	-
12	19 Mar - 25 Mar.	19	34	-	-	24	52	-	-	-	-
13	26 Mar - 1 Apr.	20	35	-	-	22	59	-	-	-	-
14	2 Apr - 8 Apr.	14	27	-	-	20	36	-	-	-	-
15	9 Apr - 15 Apr.	20	54	-	-	33	64	-	-	-	-
16	16 Apr - 22 Apr.	19	33	-	-	33	65	-	-	-	-
17	23 Apr - 29 Apr.	23	40	-	-	20	61	-	-	-	-
18	30 Apr - 6 May	11	23	-	-	16	53	19	48	-	-
19	7 May - 13 May	33	51	-	-	33	75	32	65	-	-
20	14 May - 20 May	27	46	-	-	45	82	35	71	-	-
21	21 May - 27 May	18	47	-	-	39	78	42	69	-	-
22	28 May - 3 June	22	57	-	-	38	92	36	69	-	-
23	4 June - 10 June	34	63	41	78	65	94	53	77	-	-
24	11 June - 17 June	36	61	44	85	60	92	51	81	-	-
25	18 June - 24 June	32	63	56	89	54	88	43	75	57	80
26	25 June - 1 July	81	88	54	89	59	86	43	74	64	87
27	2 July - 8 July	80	88	61	88	61	87	46	76	56	90
28	9 July - 15 July	74	89	66	91	62	89	46	75	62	88
29	16 July - 22 July	76	98	62	91	67	90	49	75	72	82
30	23 July - 29 July	87	92	64	91	76	90	51	71	63	75
31	30 July - 5 Aug.	78	95	67	93	61	85	45	74	61	92
32	6 Aug - 12 Aug.	68	89	67	90	55	93	49	80	62	92
33	13 Aug - 19 Aug.	65	85	63	91	58	91	48	83	54	90
34	10 Aug - 26 Aug.	73	84	64	92	73	94	50	87	54	80
35	27 Aug - 2 Sept.	49	69	67	91	74	94	55	85	56	82
36	3 Sept - 9 Sept.	99	99	64	92	62	91	49	80	55	83
37	10 Sept - 16 Sept.	70	91	61	91	50	94	41	81	58	85
38	17 Sept - 23 Sept.	78	86	57	88	56	92	45	82	52	85
39	24 Sept - 30 Sept.	87	82	66	92	64	92	50	84	55	83
40	1 Oct - 7 Oct.	42	71	60	91	58	93	50	87	62	88
41	8 Oct - 14 Oct.	44	61	59	91	59	94	52	87	70	94
42	15 Oct - 21 Oct.	46	64	61	92	72	96	69	91	71	93
43	22 Oct - 28 Oct.	29	48	49	91	46	85	48	91	69	93
44	29 Oct - 4 Nov.	21	34	41	90	50	90	48	90	67	92



Project Coordinator

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