



Pearl Millet News

ICAR - All India Coordinated Research Project on Pearl Millet
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From Coordinator's Desk.....

Pearl millet [*Pennisetum glaucum* (L.) R. Br.] is the most important cereal crop subsequent to rice, wheat, maize and sorghum. It is staple food of 90 million poor people and widely grown on 30 million ha in the arid and semi-arid tropical regions of Asia and Africa accounting for half of the global millet production. In India, pearl millet is the fourth most widely cultivated food crop after rice, wheat and maize. It is a C₄ plant having high photosynthetic efficiency, more dry matter productivity and survival under adverse agro-climatic conditions with lesser inputs and more economic returns. It is critically important for food and nutritional security of humans and animals in arid and semi-arid regions as it is - early maturing, drought tolerant, requiring minimal purchase inputs, mostly free from biotic and abiotic stresses and its inherent ability to endure high temperatures up to 42°C during reproductive phase enables it for cultivation in adverse conditions, thus making it a *climate resilient crop*. During 2019-20, pearl millet was grown in 7.41 million ha with an average production of 10.3 million tonnes and 1391 kg/ha productivity (3rd advanced estimate from Directorate of Millets Development, 2020-21; Project Coordinator Review, 2021). The major pearl millet growing states are Rajasthan, Maharashtra, Uttar Pradesh, Gujarat and Haryana contributing to 90% of total production in the country. Rajasthan contributes nearly 4.283 million tonnes, followed by Uttar Pradesh (1.302), Haryana (1.079), Gujarat (0.961), Maharashtra (0.66) and Tamil Nadu (0.084). Most of pearl millet in India is grown in rainy (*kharif*) season (June/July–September/October). It is also cultivated during summer season (February–May) in parts of Gujarat, Rajasthan and Uttar Pradesh; and during the post-rainy (*rabi*) season (November–February) at a small scale in Maharashtra and Gujarat.

Nutritional value of pearl millet is much superior than the most widely consumed cereals like wheat, rice, maize and sorghum. It is a highly nutritious, non-acid forming, non-glutinous food having several nutraceutical and beneficial health properties. It is a good source of energy, carbohydrates, crude fibres (resistant starch, soluble and insoluble dietary fibres), soluble and insoluble fat, proteins (8-19%), ash, dietary fibres (1.2 g/100 g), antioxidants, fat

(3-8%) with better fat digestibility, iron and zinc. It is also a rich source of vitamins like riboflavin, niacin, thiamine and minerals (2.3mg/100g) like potassium, phosphorous, magnesium, iron, zinc, copper and manganese. It exhibits a better essential amino acid profile of protein in comparison to maize and rice. It contains lesser cross-linked prolamins leading to higher digestibility of the millet proteins. It has 74% polyunsaturated fatty acids (PUFA) and is rich in nutritionally important and vital fatty acids like omega-3 fatty acids i.e. oleic acid (25%), linoleic acid (45%) and linolenic acid (4%) that are considered best for health. It is a gluten free grain retaining the alkaline properties even after being cooked and is thus good for people having gluten allergy. It possesses higher quantity of slowly digestible starch (SDS) and resistant starch (RS) which account for lower glycemic index (GI) and is much sought after in the recent times of transforming diets, food habits, food industry and diabetics. Pearl millet has higher fibre content. It acts as a probiotic food for microflora present in our body and thus keeps us away from constipation. It is also capable of lowering cholesterol due to presence of Niacin in its grain. It contributes to antioxidant activity with phytates, polyphenols etc. Consumption of various types of millets has been associated with protection against certain types of cancer, cardiovascular diseases and various age related diseases. Pearl millet is gaining lot of popularity among health conscious people all over the world. It can play a vital role in overcoming malnutrition to ensure food and nutritional security. Due to its excellent nutritional properties, pearl millet is designated as **nutricereal** (Gazette of India, No. 133 dtd 13th April, 2018) for production, consumption, trade and was included in Public Distribution System (PDS). The minimum support price (MSP) of pearl millet increased to Rs. 2050 per quintal (raised by Rs. 50 which is 2.5 %) compared to the previous years MSP at Rs. 2000 resulting in highest returns to the farmers. To bring millets into mainstream and exploiting the nutritional rich properties and promoting their cultivation, Govt. of India has declared **Year 2018** as the “**Year of Millets**” and the **Year 2023** is declared as “**International Year of Millets**” by FAO Committee on Agriculture (COAG) forum.

Apart from the conductance of mandated coordinated multi location trials and evaluation of test entries, ICAR- AICRP on Pearl millet is committed to pearl millet improvement through research, technology generation and transfer. Till date, a total of 185 hybrids and 62 varieties were identified and released for cultivation in different agro ecological zones of the

country through AICRP on Pearl millet. A number of production and protection technologies specific to different agro-ecological regions which will prove useful in enhancing the productivity of improved cultivars to commercial farming scales and increase the profitability of pearl millet growers were developed through this system.

ICAR-AICRP on Pearl millet is actively collaborating as technology and knowledge partner in several new research initiatives like UNEP-GEF project on “Mainstreaming agricultural biodiversity conservation and utilization in agricultural sectors to ensure ecosystem services and reduce vulnerability”, Millet mission by NFSM, Niche area of excellence (NAE) programme from ICAR on “Development of Biochemical and Physical Processing Technology to Arrest Oxidation of Lipids/Flavones to Enhance the Shelf-Life of Pearl Millet Flour”, ICAR-BMGF project on “Application of Next-Generation Breeding, Genotyping, and Digitalization Approaches for Improving the Genetic Gain in Indian Staple Crops” etc. Under the NFSM, high iron/zinc pearl millet hybrids were demonstrated on large number of farmer's fields during 2020-21.

Along with yield improvement, focus on the nutritional improvement was also given in Pearl millet. *Pearl millet is the first crop in the world to introduce bench mark levels for Fe (42 ppm) and Zn (32 ppm) in cultivar promotion and release since 2018 ensuring nutritional security in the country falling in line with the vision of nutritionally secure India.* Since then, twenty hybrids/varieties were developed as micronutrient rich pearl millet cultivars including the seven biofortified cultivars identified from the special biofortification trial. Development of micronutrient rich pearl millet hybrids and varieties with enhanced levels of Fe and Zn is taken up as a priority leading to mainstreaming of biofortification in pearl millet and now it is a routine affair.

Development of high yielding, dual purpose disease resistant cultivars for low rainfall areas i.e. A₁ zone is also given priority for increasing pearl millet productivity at national level. Keeping this in view, series of meetings and interaction sessions were held for developing material and technologies for A₁ zone during 2019 and 2020. Refinement of technologies for processing of grain, development of value added products along with development of sound extension support for popularization of these technologies and products spread of pearl millet cultivation in

nontraditional areas and pearl millet hybrid seed production in North - Western part of the country is the need of the hour. Addressing these changes will certainly add to the national efforts of doubling the farmer's income.

55th Annual Group Meeting of ICAR-AICRP on Pearl Millet

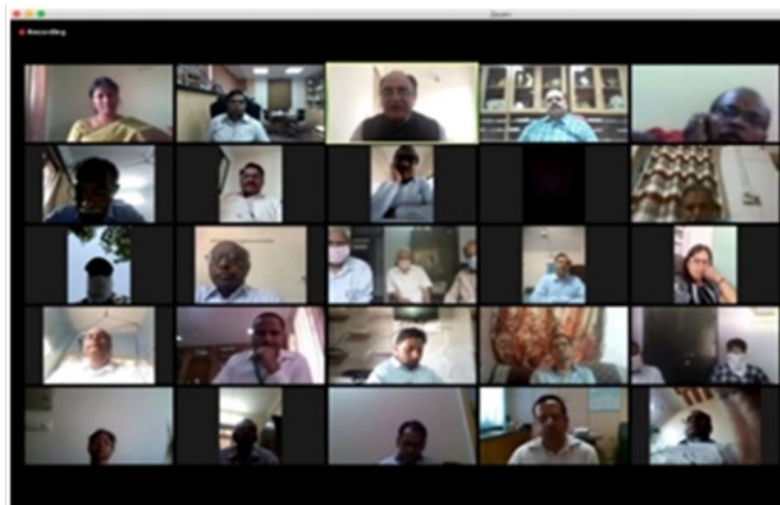
The 55th Annual Group Meeting of ICAR-AICRP on Pearl millet was held online via Zoom on 29th April, 2020 due to COVID-19 pandemic and lockdown across the country. Hon'ble Dr T Mohapatra, Secretary, DARE and DG, ICAR New Delhi was the Chief Guest, Dr. T.R. Sharma, DDG (Crop Science), ICAR, New Delhi was Chairman and Dr. Y.P. Singh, ADG (FFC), ICAR; New Delhi was the Guest of Honour. Around 99 participants including Project Advisory and Monitoring Committee (PAMC), Dr. P. Raghava Reddy (Chairman) and members Dr. M.L. Lodha (Biochemistry), Dr. R.K. Pannu (Agronomy), Prof. H. Shekhar Shetty (Plant Pathology) and Dr. D.C. Uprety (Plant Physiology), Directors from various ICAR institutes and scientists from public sector, private sector and ICRISAT attended this online meeting.

Chief Guest, Hon'ble Dr T Mohapatra, Secretary, DARE and DG, ICAR New Delhi in his address stressed upon increasing research efforts for pearl millet improvement in A₁ zone. Research work on rancidity is a good initiative taken up by the AICRP on Pearl millet. Integrated Pest Management/Integrated Disease Management/Integrated Nutrient Management issues are important and the centers linked with AICRP should work accordingly. Untiring efforts of the PC were appreciated to strengthen the programme. He stressed upon importance of proper screening of hybrids against major diseases and adoption of speed breeding. He appreciated the contribution of private sector and stressed upon active participation of private sector with public sector for parental line development.

Chairman Dr. T.R. Sharma, DDG (Crop Science), ICAR, New Delhi highlighted the significance of AICRP on Pearl millet and mentioned that as the genome has been decoded, the available genomic information must be utilized and further improvement in this crop is required using advanced technologies. He also suggested that homology searches can be done and available database of rice and Arabidopsis may be used to further improve the crop against various biotic/abiotic stresses.

He advised that all disciplines should join hands together and work in a network mode to get desired output. He also added that pearl millet gene pool is rich in diversity and it should be exploited in breeding programmes. He urged that scientists must devote more time for research programs and try to seek competitive grants from different funding agencies. They should record data in a scientific manner and proper interpretation should be done and quality publications must be brought out of the work. He mentioned about the role of apomixis in fixing heterosis in this crop and suggested that collaborative programs should be designed between Indian Grassland and Fodder Research Institute, Jhansi; Indian Institute of Millets Research, Hyderabad and All India Coordinated Research Project on Pearl millet, Jodhpur. He suggested to put more efforts on food processing, value addition, shelf life, rancidity, various metabolic pathways and basic and strategic research programs using advanced tools and techniques like genome editing etc.

Dr. Vilas Tonapi, Director, IIMR, Hyderabad in his introductory remarks appreciated the efforts of ICAR-AICRP on Pearl millet and emphasized on strengthening parental line development in pearl millet. He also suggested that integrated programs involving IIMR and AICRP should be initiated and also assured that IIMR, Hyderabad will provide full support to strengthen basic/strategic research component related to pearl millet.



New Releases and Notification of Released Hybrids and Varieties of Pearl millet during 2020-21

- Seven pearl millet hybrids were notified and released for cultivation in various agro-ecologies of the country during 2020-21:

Hybrid	Notification number	Notification date	Area of adaptation
VPMH 7	S.O. 500 (E)	29.01.2021	Karnataka
MP 7366	S.O. 500 (E)	29.01.2021	Summer growing areas of Gujarat, Rajasthan, UP Maharashtra and Tamil Nadu
Proagro Marutej (XMT 1358)	S.O. 3482 (E)	07.10.2020	Rajasthan
Moti Shakti (GHB 1225)	S.O. 3482 (E)	07.10.2020	Gujarat
Jam Shakti (GHB 1129)	S.O. 3482 (E)	07.10.2020	Gujarat
Central Pearl Millet Hybrid BHB1602 (MH 2192)	S.O. 3482 (E)	07.10.2020	Rajasthan, Gujarat and Haryana
HHB 311 (MH 2179)	S.O. 99(E)	07.10.2020	Rajasthan, Gujarat, Haryana, Punjab, Delhi, Maharashtra and Tamil Nadu

- One pearl millet hybrid (MP7366) was identified for release for summer cultivation during 55th Annual Group Meeting of Pearl millet in April, 2020.
- Dual purpose bajra variety PCB 165 (having very good popping potential) was released in the Punjab state during February, 2020 by State Variety Approval Committee.
- High yielding pearl millet variety VPMV-9 was released for zone-3 of Karnataka in ZREAC and ZREFC meeting of UAS Dharwad, Karnataka held on 3rd-4th September, 2020.

MoUs

- A MoU was signed between Vasantrya Naik Marathawada Krishi Vidyapeeth, Parbhani and Maharashtra State Seed Corporation Ltd, Akola and for non-exclusive license for the seed production, marketing and commercialization of ABPC-4-3 and AHB-1200 Fe in Maharashtra since 2010.
- A MoU was signed between Agriculture University, Jodhpur and Classic Hybrid Seeds Pvt. Ltd., Ahmedabad on 26th February, 2021 for non-exclusive license for the seed production, marketing and commercialization of hybrid MPMH17.

Interaction Sessions / Trainings /Workshops /Seminars/Symposia Organized

- PC Unit, ICAR-AICRP on Pearl millet, Jodhpur organized two special trainings on “Demonstration of pearl millet cultivars” and “Screening of pearl millet hybrids/varieties under sick plot for downy mildew” on 27th August, 2020 in which 21 dealers of pesticide and insecticide participated under Diploma in Agricultural Extension Services for Input Dealers (DAESI).



- PC Unit, ICAR-AICRP on Pearl millet, Jodhpur organized two special meetings related to automation of AICRP on Pearl millet testing to train different scientists and technicians of ICAR-AICRP on Pearl millet in collaboration with ICAR-IASRI, New Delhi via online mode on 9th May, 2020 and 22nd May, 2020.
- ICAR-AICRP on Pearl millet, NARP, Aurangabad conducted 11 online training programmes including training on “Package of practices of pearl millet; Varietal improvement in pearl millet; Pearl millet-based cropping system; Pest and disease management of pearl millet” during *kharif* 2020.
- ICAR-AICRP on Pearl millet, NARP, Aurangabad organized a Rashtriya Poshan Abhiyan “POSHAN MAHA Abhiyan-2020” during 1st-30th September, 2020 under National Nutrition Mission in collaboration with Krishi Vigyan Kendra, Aurangabad, Krishi Vigyan Kendra, Jalna and State Agricultural Department. Under this Abhiyan, 16 programmes were conducted and 1200 Anganwadi sevika and farm women participated.



- ICAR-AICRP on Pearl millet, Ananthapuramu organized four trainings on “Production technology of millets and pearl millet value addition” on 9th September, 2020; “Hands on training on pearl millet production and value addition to women farmers and SHG members” on 18th November, 2020; “Package of practices of bajra crop to Diploma in Agricultural Extension Services for Input Dealers (DAESI) on 25th November, 2020; “Package of practices of maize crop” to village Agricultural and Horticultural Assistants of Rythu Bharosa Kendras on 26th November, 2020.



- ICAR-AICRP on Pearl millet, Vijayapur organized international web conference on “Global research initiatives for sustainable agriculture & allied sciences (GRISAAS-2020) organized by Astha Foundation, Meerut, Uttar Pradesh, India and UAHS Shivamogga during 28-30th December, 2020.

Field Days/Kisan Mela

- PC Unit, ICAR-AICRP on Pearl millet, Jodhpur participated and demonstrated various pearl millet hybrids/varieties and technology to the farmers during Kisan Mela organized at KVK, Gudamalani on 6th March, 2021.



- Pearl millet field day on 'MPMH 17' was organized by PC Unit, ICAR-AICRP on Pearl millet, Jodhpur in collaboration with Directorate of Extension, Agriculture University, Jodhpur on 19th September, 2020 at Luni Village, Jodhpur, Rajasthan.



- Pearl millet field day was organized on 14th October, 2020 at IARI, New Delhi in which twenty two farmers participated.



- NARP, Aurangabad conducted a field day on pearl millet at Padali and Lakhegaon village tq. Pithan, Dist. Aurangabad under FLD programme on 16th September, 2020 in which 43 farmers were benefitted.
- AICRP on Pearl Millet, Bajra Research Scheme, Dhule organized a field day and farmers rally on the demonstration plot of hybrid Phule Aadishakti at Village-Balapur, Tal-Dhule, Dist-Dhule on 22nd September, 2020.





- Field day on pearl millet was conducted by ICAR-AICRP on Pearl Millet, Regional Agricultural Research Station, Vijayapur centre under FLD programme at Village Kirsur, Tal and Dist Bagalkote on 24th September, 2020.



- ICAR-AICRP on Pearl millet, Ananthapuramu organized “Pearl millet field day” and an awareness programme for millets promotion on 30th September, 2020 at Pathacheruvu Village, Golla Mandal, Ananthapuramu District in Andhra Pradesh. Over 100 participants, including scientists, representatives of NGOs, officials of Department of

Agriculture and Farmers of Golla and Kalyandurg mandals participated in this programme and got acquainted with the production techniques of millets.



- Vasantrao Naik Marathwada KrishiVidyapith, Parhani organized an online agri mela on the eve of university foundation day on 17th September, 2020.

Other Activities

- Swachhata Abhiyaan was held at PC Unit, ICAR-AICRP on Pearl millet, Jodhpur on 2nd October, 2020.
- “Swachhata Pakhwada” was held from 16th-31st December, 2020 at PC Unit, ICAR-AICRP on Pearl millet, Jodhpur.





- Swachhata Abhiyaan and Kisan Diwas was celebrated at Luni Village, Jodhpur on 23rd December, 2020.



- Plantation activity was held at PC Unit, ICAR-AICRP on Pearl millet, Jodhpur on 18th December, 2020 as part of Swachhata Pakhwada activity.

Appointments

- Dr. Dev Vart, Assistant Scientist (S-III) (Plant Breeding) was appointed in the existing sanctioned post of Senior Scientist (PB) in the ICAR-AICRP on Pearl millet scheme, Hisar Centre w.e.f. 29th October, 2020.
- Dr. Chandan Kapoor, Scientist joined ICAR-IARI, New Delhi on pearl millet improvement program w.e.f. 27th October, 2020.
- Mr. Yogeshwar Sharma, Stenographer (Gr-III) joined PC Unit, ICAR-AICRP on Pearl millet, Jodhpur as PA to Project Coordinator w.e.f. 30th June, 2020.

Trainings/Workshops/Seminars/Symposia/Conferences Attended

S. No.	Name of Scientist	Training Title	Organized By	Duration
Trainings				
1	Dr. R. Narasimhulu (ANGRAU, Ananthapuramu)	Ten days online national training on “Emerging trends in seed production technology and quality control framework for effective seed supply chain of horticulture crops”	COH, Bidar	28 th Dec, 2020 to 6 th January, 2021
		Two days online national training on “Seed certification”	NSRTC, Varanasi	10-11 th December, 2020
		National training on “Fundamentals of drone technology for precision agriculture”	CAAST, Rahuri	25-30 th April, 2020
2	Dr. S.B. Pawar (NARP, VNMKY, Aurangabad)	One day training on “Integrated weed management ”	Department of Agronomy, VNMKV, Parbhani	24 th June, 2020
3	Dr. D.M. Lomte Dr. A.B. Bagade (NARP, VNMKY, Aurangabad)	Training on “Present and futuristic trends in agricultural mechanization”	NAHEP, VNMKV, Parbhani	18-23 th June, 2020
4	Dr. S.B. Pawar, Dr. A.B. Bagade (NARP, VNMKY, Aurangabad)	Training on “ Recent advances in millet research”	IIMR, Hyderabad	18 th -31 st December, 2020
5	Dr. S.B. Pawar, Dr. G.P. Jagtap Dr. D.M. Lomte, Dr. N.R. Patange, Dr. A.B. Bagade (NARP, VNMKY, Aurangabad)	Training on “Organic farming”	NAHEP, VNMKV, Parbhani	22 nd November, 2020 to 4 th December, 2020
6	Dr. Vikas Khandelwal (PC Unit, Jodhpur)	Training on “Implementation of online ICAR-AICRP on Pearl millet experiments”	ICAR-IASRI, New Delhi	7 th -21 st May, 2020
		Training on “Advanced bioinformatics tools and its applications in agriculture”	ICAR-NAARM, Hyderabad	14-19 th September, 2020
7	Dr. R.C. Meena, Dr. Supriya (PC Unit, Jodhpur)	21 days online training course on “Recent techniques in nucleic acid based diagnostics and cell culture”	LLR Univ. of Veterinary and Animal Sciences, Hisar	11 th -31 st January, 2021
8	Dr. Dev Vart Yadav (CCS HAU, Hisar)	Two weeks online training on “Application of molecular and bioinformatics tools in agriculture & allied sciences”	SVPUAT, Meerut	11-24 th December, 2020

9	Dr. V.K. Malik (CCS HAU, Hisar)	21 days training course “Refresher course on language skills”	DHRM, CCS HAU, Hisar	27 th May, 2020 to 16 th June, 2020
e-conferences				
10	Dr. B.K Athoni (Vijayapur)	International web conferences on “Global research initiative for sustainable agriculture & allied sciences (GRISAAS-2020)”	Astha Foundation, Meerut (U.P) & UAHS Shivamogga	28-30 th December, 2020
11	Dr. R. Narasimhulu (ANGRAU, Ananthapuramu) Dr. Supriya (PC Unit, Jodhpur)	International e-conferences on “Genetics & plant breeding research in post covid-19 era”	Department of Genetics and Plant Breeding, CCS University, Meerut	13-14 th June, 2020
12	Dr. Supriya (PC Unit, Jodhpur)	National conferences on “Natural and agricultural science: issue, challenges and opportunities”	Association of Plant Science Researchers Dehradun, Uttarakhand	26-27 th September, 2020
		International conferences on “Global approaches in natural resources management for climate smart agriculture (GNRSA-2020) during pandemic era of covid-19”	Shobhit University, Meerut	26-28 th February, 2021
Webinars				
13	Dr. Vikas Khandelwal (PC Unit, Jodhpur)	International webinar on “DUS data management/automation/ image analysis in crops”	PPV&FRA, New Delhi under Indo-German cooperation on seed sector development	6-7 th October, 2020
14	Dr. Supriya (PC Unit, Jodhpur)	International webinar on “Post-COVID-19 research advancement in the arena of agricultural, environmental and life sciences”	Ch. Chhotu Ram (P.G.) College Muzaffarnagar	15-16 th June, 2020
15	Dr. R. Narasimhulu (ANGRAU, Ananthapuramu)	Webinar series on “Application of omics in climate smart agriculture”	CAAST, Rahuri	30 th April, 2020-2 nd May, 2020
		National webinar on “Recent biotechnological tools for crop improvement”	ANGRAU, Lam, Guntur (AP)	24 th June, 2020
		Webinar on “Crop improvement for food and nutritional security: challenges and opportunities”	AAU, Jorhat, Assam	7-11 th July, 2020

16	DR. Vikas Khandelwal, Dr. Supriya(PC Unit, Jodhpur), Dr. R. Narasimhulu (ANGRAU, Ananthapuramu) Dr. S. K. Parmar	Two days national webinar on “Applications of biotechnological tools in crop improvement”	RVS KVV, Gwalior	10-11 th June, 2020
17	Dr. Supriya (PC Unit, Jodhpur) Dr. R. Narasimhulu (ANGRAU, Ananthapuramu) Dr K.D. Mungra, (JAU, Jamnagar)	Webinar in the series of Next generation genomics and integrated breeding for crop improvement (VII-NGGIBCI) on “Genomics for food, health and nutrition”	CEGSB- ICRISAT, Hyderabad	14 th May, 2020
18	Dr. Supriya, (PC Unit, Jodhpur) Dr. R. Narasimhulu (ANGRAU, Ananthapuramu) Dr. K.D. Mungra (JAU, Jamnagar)	Webinar on “Journey from biofortification in food crops to including nutritional traits in varietal identification and release in Pearl millet” Dr. C. Tara Satyavathi, Project Coordinator, ICAR-AICRP on Pearl millet, Jodhpur	Bioingene	9 th July, 2020
19	P.S. Shekhawat (SKRAU, Bikaner)	National webinar on “Technological advances in crop production during covid-19”	DOR, SKRAU, Bikaner	16 th June, 2020
20	Dr. S.B. Pawar (NARP, Aurangabad)	Seminar on “Information on nutri tional garden and importance of healthy foods is given for farmers”	KVK, Aurangabad	9 th April, 2020
21	Dr. K.D. Mungra (JAU, Jamnagar)	National webinar on “Pandemic and hunger mainstreaming millets for addressing food and nutritional security”	School of Life Sciences, University of Hyderabad, Telangana	8 th June, 2020
22	Dr. H.M. Bhuva	National webinar on “Innovative approaches in seed quality maintenance for successful entrepreneurship”	NAHEP-IDP, ICAR, New Delhi and UAS, Dharwad	7 th August, 2020
23	Dr. R.P. Juneja (JAU, Jamnagar)	National webinar on “Bio pesticides, green technology in sustainable agriculture”	COA, NAU, Campus Bharuch	18 th August, 2020
24	Dr. S.K. Parmar Prof. Asha C. Detroja	National webinar on “Advances in biotechnological application for crop improvement”	NAHEP and Department of Biotechnology, CoA, JAU, Junagadh	22 nd September, 2020

25	Dr. D.L. Kadvani	National webinar on “Recent advancements in seed health management”	ICAR-Indian Institute of Seed Science, Mau (UP)	5 th October, 2020
26	Dr. S.P. Singh (ICAR-IARI, New Delhi)	Webinar on “Future Perspectives in Agricultural Education” delivered by Dr. Trilochan Mohapatra	DARE & DG ICAR, New Delhi	5 th Sept., 2020
e-symposium				
27	Dr. Supriya (PC Unit, Jodhpur)	International e-symposium on “Diversification of Indian agriculture: Ancient to modern”	School of Agriculture, SGVU, Jaipur, Rajasthan	17-18 th June, 2020
Workshops				
28	Dr. R. Narasimhulu (ANGRAU, Ananthapuramu) Dr S.P. Singh (IARI, New Delhi)	One day workshop on “Genetic enhancement of pearl millet in public sector-defining priorities or product development”	IIMR, Hyderabad	22 nd Jan., 2020
29	Dr. Supriya (PC Unit, Jodhpur)	Online workshop on “HPTLC technique and its applications in agriculture”	NAU, Navsari	3 rd Nov., 2020

Awards and Nominations

- PC Unit, ICAR-AICRP on Pearl millet, Jodhpur got second prize during Kisan Mela organized at KVK, Gudamalani on 6th March, 2021.



- Dr. K. D Mungra, I/C Research Scientist (Pearl Millet), JAU, Jamnagar and his team members (Dr. D L Kadvani, Dr SK Parmar, Shri J S Sorathiya, Shri S.N. Galani-STA, Shri N.N. Chaudhary-STA) were awarded Prof. J.P.Trivedi Award (2018) sponsored by Shri Hari Om Ashram, Nadiad for the

Development of biofortified pearl millet hybrids to fight against iron and zinc deficiency in Gujarat by The Gujarat Association for Agricultural Sciences (GASS), Ahmedabad on 3rd October, 2020.



- VNMKV-NARP, Aurangabad received Best ICAR-AICRP on Pearl millet centre for 2019-20 under the category of “Nutritional security through pearl millet” during 55th online Annual Group Meet of ICAR-AICRP on Pearl millet, Jodhpur held on 29th April, 2020.
- RARI, Durgapura, Jaipur centre received the “Award

for Best ICAR-AICRP on Pearl millet centre (2019-20) during 55th online Annual Group Meet of ICAR-AICRP on Pearl millet, Jodhpur held on 29th April, 2020.

- Dr. Vikas Khandelwal, Senior Scientist (GPB) received Best Scientist award during 55th online Annual Group Meet of ICAR-AICRP on Pearl millet, Jodhpur held on 29th April, 2020.
- Dr. Vikas Khandelwal, Senior Scientist (GPB) and Sh. Arjun Singh Nathawat, Computer Assistant, PC Unit, ICAR-AICRP on Pearl millet, Jodhpur were rewarded for thier outstanding contribution for development and implementation of information system and website for ICAR-AICRP on Pearl Millet through Krishi Portal during 55th online Annual Group Meet of ICAR-AICRP on Pearl millet, Jodhpur held on 29th April, 2020.
- Dr. S. K. Pahuja, Dr L.K. Chugh, Dr Anil Kumar, Dr. DevVart, Dr K.D. Sehrawat and Vinod Kumar Malik received “letter of appreciation” from Worthy Vice-Chancellor, CCS HAU, Hisar for their contribution in development of biofortified bajra hybrid HHB 311.
- Dr. Supriya got Young Scientist Award during 4th International online conference on “Global Approaches in Natural Resource Management for Climate Smart Agriculture during Pandemic Era of COVID-19” (GNRSA- 2020) organized by ATDS, Ghaziabad, UP and Shobhit Deemed University, Meerut, UP during 26-28th February, 2021; Plant Science Excellence Research Award- 2020 during 3rd Plant Science Researchers Meet (PSRM)-2020 organized by Association of Plant Science Researchers Dehradun, Uttarakhand during 26-27th September, 2020 and best oral presentation award during international e-symposium on “Diversification of Indian agriculture: ancient to modern organized by School of Agriculture, Suresh Gyan Vihar University, Jaipur during 17-18th June, 2020 for her oral presentation on “Next Generation Sequencing: an efficient biotechnological approach for crop improvement”

Visits

- Sh. Kailash Chaudhary, Hon'ble Union Minister of State, Ministry of Agriculture & Farmers' Welfare, Govt. of India visited pearl millet fields of ICAR-IARI, New Delhi on 12th September, 2020.



- Prof. J.S. Sandhu, Honorable Vice Chancellor, SKNAU, Jobner and Former DDG (Crop Science) visited fields of ICAR-AICRP on Pearl millet, RARI, Jaipur during *kharif* 2020.



- Dr. A.S. Dhawan, Hon'ble Vice Chancellor, Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani visited NARP, Aurangabad on 15th June, 2020 and 23rd November, 2020.
- Sh. Mahendar Bishnoi, MLA, Luni and BoM member, Agriculture Univeristy, Jodhpur, Hon'ble Vice Chancellor & Director Research, AU, Jodhpur and other state Govt. Officials visited fields of PC Unit, ICAR-AICRP on Pearl millet, Jodhpur on 14th September, 2020.



- Dr. J.C. Rana, Biovarsity International and Dr. H.S. Gupta, Former DG, BISA, and Former Director, ICAR-IARI, New Delhi visited PC Unit, ICAR-AICRP on Pearl millet, Jodhpur on 19th February, 2021.



- Dr. D.P. Waskar, Director of Research, VNMKV, Parbhani and Dr. K.S. Baig, Associate Director Seed, VNMKV, Parbhani visited NARP, Aurangabad on 13th October, 2020.



- Dr. K.S. Baig, Associate Director Seed, VNMKV, Parbhani along with Dr. S.B. Pawar, Associate Director Research, D.M. Lomte, Pearl millet Agronomist, Dr. A.B. Bagade, Plant Breeder and K.D. Dahiphale, Farm manager visited the fields of NARP, Aurangabad on 18th February, 2021.



- Dr. C. Deokar, Associate Dean, College of Agriculture, Dhule visited ICAR- AICRP on Pearl Millet, Dhule on 21st August, 2020.



- Dr. B. Sahadeva Reddy, Principal Scientist & Head, ARS, Ananthapuramu and Dr. C.V Chandra Mohan Reddy, Zonal Seed Production Officer, RARS, Nandyal, visited ICAR-AICRP on Pearl millet, Ananthapuramu and monitored the seed production plot of ABV 04 on 9th September, 2020.



- Dr. M. Hemanth Kumar, Principal Scientist (Millets) & Head, ARS, Perumallapalle, visited ICAR-AICRP on Pearl millet, Ananthapuramu on 13th November, 2020.



- Dr. B. Narendra, Rtd. Principal Scientist, visited ICAR-AICRP on Pearl millet, Ananthapuramu on 28th August, 2020.



- Dr. A.K. Guggari, Associate Director of Research, Regional Agricultural Research Station, Vijayapur visited the AICRP Agronomy, Plant breeding trials and breeding material during *kharif*, 2020 on 15th September, 2020.



- Dr. B. D. Biradar, University Head, Genetics & Plant breeding (UAS, Dharwad) visited the plant breeding trials and breeding material during *kharif*, 2020 on 4th September, 2020.



Research Papers

- Gupta SK, Patil KS, Rathore A, Yadav D, Sharma LD, Mungra KD, Patil HT, Gupta SK, Kumar R, Chaudhary V, Das RR, Kumar A, Singh V, Srivastava RK, Gupta R, Boratkar M, Varshney RK, Rai KN, Yadav OP (2020) Identification of heterotic groups in South-Asian-bred hybrid parents of pearl millet. *Theoretical and Applied Genetics* <https://doi.org/10.1007/s00122-019-03512-z> (NAAS Rating- 10.44)
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