

RESEARCH HIGHLIGHTS

Potential hybrids:

- Five hybrids, namely, IMHSB 17R-8, IMHSB 17-9, IMHSB 17R-14, IMHSB 17R-16 and IMHSB 17R-17 have been promoted to AVT-II (Medium) of *rabi* 2020-21
- One hybrid, IMHSB 19K-2 has been promoted to AVT-II (Medium) of *kharif* 2021.
- Three hybrids, namely, IMHSB 19R-2, IMHSB 19R-8 and IMHSB 19R-10 have been promoted to AVT-I (Medium) trial of *rabi* 2020-21.
- Four hybrids, namely, IMHSB 20K-10, IMHSB 20R-11, IMHSB 20K-11 and IMHSB 20K-12 have been promoted to AVT-I (Medium) of *kharif* 2021.
- A Cytoplasmic Male Sterile-based baby corn hybrid, IBCH 1, superior to the checks G 5414 and HM 4 has been identified.



Images of the potential hybrids

Population development for fodder maize

Two new populations, viz., IMFP 8 and IMFP 9 were developed for fodder maize which were found superior over the check, J 1006. The new entries were contributed to AICRP on Forage Crops.

Promising germplasm

Genotype IML1-11CM111 × *Zea diploperennis* × CM111 was found promising to pink stem borer under artificial infestation with LIR score of 2.84. Four genotypes, viz., CML 337, CML 345, DML163-1 and CML 141 were

found resistant to fall armyworm (FAW) under artificial infestation with LIR scores of 3.51, 4.0, 3.86 and 3.58, respectively.

Protein quality differentiation assay

In order to popularize and promote Quality Protein Maize (QPM) on a large scale, a rapid Molecular Differentiation Assay has been developed, which can differentiate QPM and normal maize in a short time span and is easy to perform.

Standardizing in vitro regeneration and transformation method in tropical maize using nodal explants

The genetic transformation in nodal explants derived calli using biolistic transformation methods have been carried out successfully. The histochemical assay exhibited the presence of blue spots in calli even ten days after biolistic transformation indicating the expression of GUS protein (β -glucuronidase) in the transformed cells. The PCR analysis of putative maize transformants using β -glucuronidase (*gusA*) specific primers confirmed the presence of expected size band (~0.9 Kb) transformants. Further, histochemical analysis showed the presence of GUS activity in the leaf from PCR positive transformants while no GUS activity was present in the leaf of the untransformed control plant.

Management of maize diseases

Chemical module and Integrated Disease Management module were found effective to manage the Maydis leaf blight across three locations with effective Cost:Benefit ratio of 1:3 to 1:4 in Ludhiana, Karnal and Delhi. A total of 79 potential isolates of *Exserohilum turcicum* have been procured/isolated from leaves infected with *Turcicum* leaf

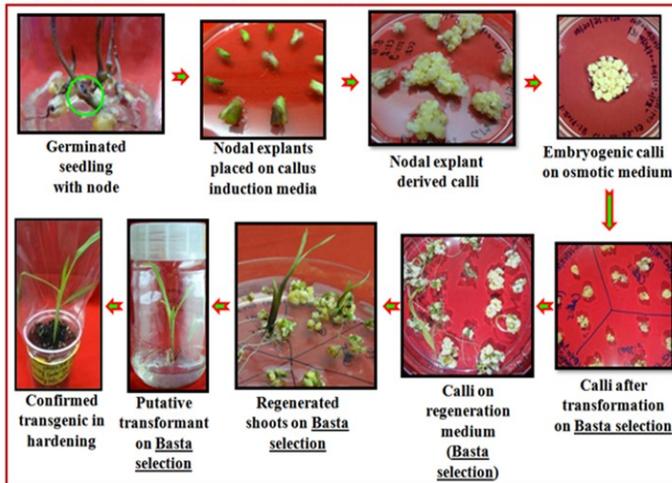
Meta-QTL analysis for biotic stresses in maize

A MetaQTL analysis has been performed using 125 experimental studies reporting Quantitative Trait Loci responsible for fungal and viral diseases in maize. A total of 52 Meta-QTLs have been identified representing QTLs contributing majorly for respective viral and fungal disease. The analysis of candidate gene identification and annotation is under process.

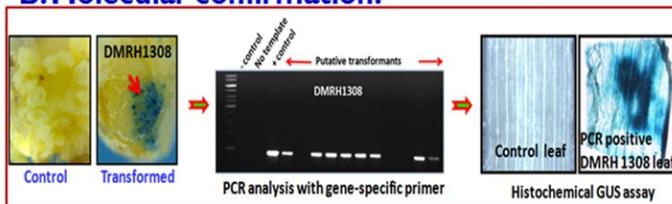
Meta-QTL analysis for various abiotic stresses in maize

Meta-QTL analysis was carried out to detect robust/real major QTLs for drought, heat, salinity, waterlogging and cold tolerance in maize using BiomeqatorV4.2.3. Total 542 QTLs were summarized from 33 published studies for abiotic stresses tolerance in maize. Among those, 244 major QTLs with more than 10% phenotypic variance were utilised to carry meta-analysis with refined meta-QTL positions. Total 32 meta-QTLs were detected for various abiotic stresses over different genetic and environmental backgrounds possessing 1907 candidate genes against different stress responses that will be valuable for future climate-resilient maize breeding programs

A. Genetic transformation:



B. Molecular confirmation:

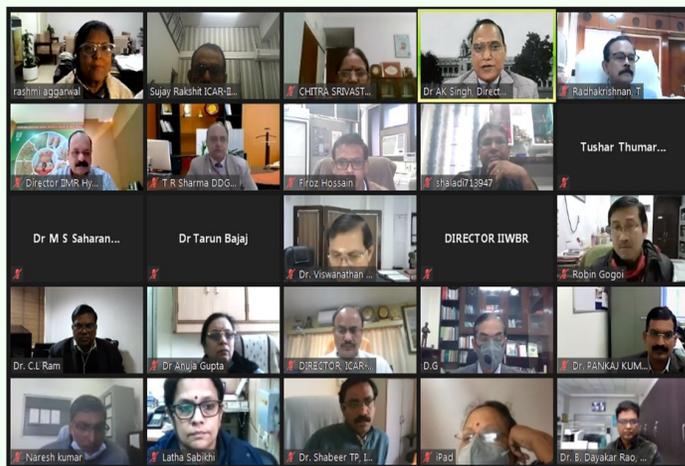


(A) Genetic transformation in DMRH 1308 nodal explants-derived calli (B) molecular confirmation of putative transformants.

IMPORTANT EVENTS

ICAR-Industry meet on Aflatoxin

Director ICAR-IIMR attended the ICAR-Industry Meet on “Aflatoxin Management in Food and Feed: Challenges and Opportunities” organized by ICAR-IARI on January 04, 2021, which was chaired by the Secretary DARE & DG ICAR. The meeting was attended by 62 participants from various industries as well as public research organizations.



Participants of ICAR-Industry Meet on Aflatoxin management in food and feed

Preliminary discussion on diversification of agriculture in Punjab and Haryana

An online meeting on “Preliminary discussion on diversification of agriculture in Punjab and Haryana” was hosted and Chaired by Dr. Sujay Rakshit, Director, ICAR- IIMR, Ludhiana on January 16, 2020. The meeting was attended by Dr. N.P. Singh, Director, ICAR-IIPR, Dr. P.K. Rai, ICAR-DRMR, Dr. Nita Khadelkar, ICAR-IISR, and scientists of these institutes to discuss the policy framework for diversification and intensification of cropping system in Punjab and Haryana with maize, soybean, mustard and pulses. All aspects of potential cropping systems were discussed and the most suitable cropping systems were identified for experimentation in the region.

Republic Day Celebration

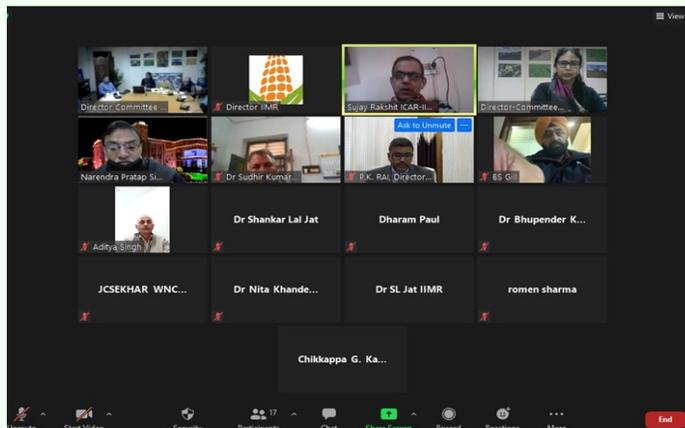
The 72nd republic day was celebrated with zeal, enthusiasm and patriotic fervour by all the staff of the institute. On this occasion the National Flag was hoisted by the Director in the upcoming campus of the institute at Ladhawal, Ludhiana while at other centres respective In-charges did the honour. The Director emphasized on need to honour our constitutional responsibilities. On this occasion he praised the farming community for sustaining the agricultural production despite all the adversities of nature including the challenges of COVID-19 pandemic. The Director urge upon the staffs of the institute to fully commit themselves to the welfare of the farming community .

High Level Monitoring Committee Meeting

Director ICAR-IIMR attended the High Level Monitoring Committee meeting through video conferencing for effective planning, implementation and monitoring of Central Sector Scheme on ‘Promotion of Agriculture Mechanization for In-Situ Management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi on 1st Feb 2021, under the Chairmanship of Secretary, DARE and DG, ICAR.

Institute Foundation Day Celebration

The institute celebrated its “7th Foundation Day” through video conferencing on February 9, 2021. Dr. T.R. Sharma DDG (CS), ICAR was the Chief Guest and Padma Shri Dr. B.S. Dhillon, Vice Chancellor, Punjab Agricultural University (PAU) was the Guest of Honour on this occasion. Dr. Y.P. Singh, ADG (FFC) and Dr. D.K. Yadava, ADG (Seeds) graced the occasion as Special Guests.

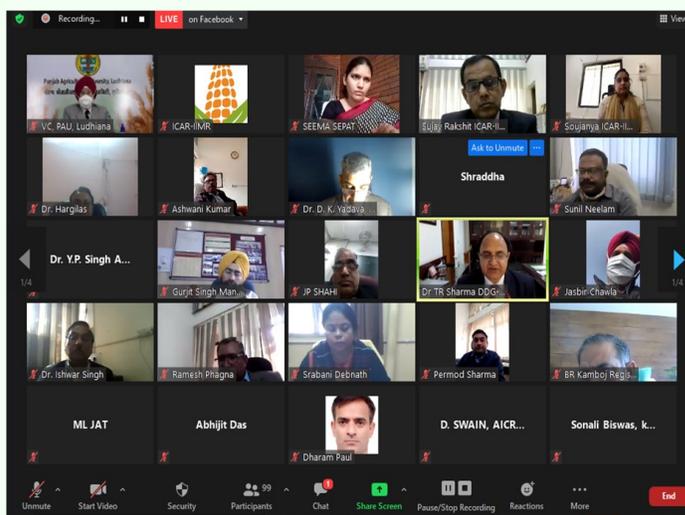


Director IIMR sharing his thoughts on diversification of agriculture in Punjab and Haryana



Flag hoisting ceremony on the Republic Day

Dr. Sujay Rakshit, Director, ICAR-IIMR presented the significant achievements of the institute during 2020. The Chief Guest delivered the Foundation Day Lecture on “Search for novel disease resistance genes in crop plants” and appreciated the efforts of ICAR-IIMR towards maize

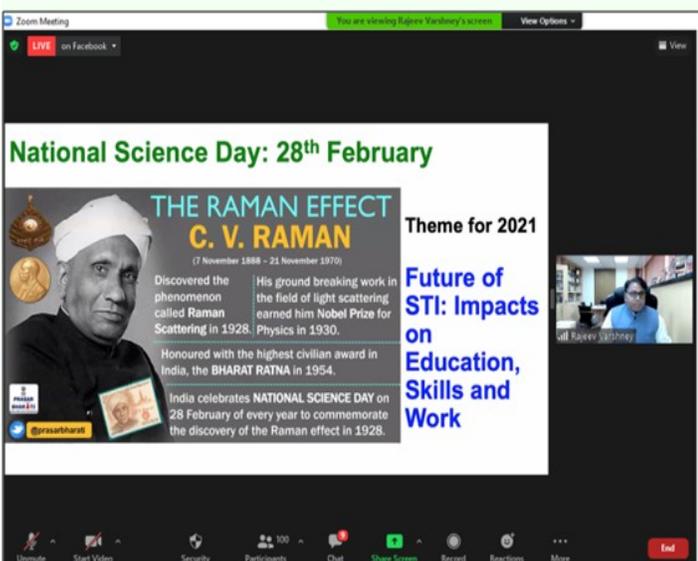


Chief Guest Dr. T.R. Sharma, DDG (CS), delivering the Foundation Day Lecture

improvement. On this occasion, the Chief Guest released annual report of the institute and 4th edition of Hindi magazine “*Krishi Chetna*”. He also felicitated the best performing staff members of the institute. Dr. B.S. Dhillon stressed that the rice-wheat cropping system is unsustainable for the states of Punjab and Haryana. Maize can be the most profitable alternate crop for diversification of rice-wheat cropping system in the region. Dr. D.K. Yadava highlighted the importance of maize in the changing climatic scenario and stressed upon the scientists to work towards resistance breeding and to develop high yielding climate resilient hybrids of maize. Dr. Y.P. Singh shared his thoughts on management of pests, particularly, fall armyworm, to sustain the maize production in the country.

National Science Day Celebration

The institute celebrated National Science Day on Feb 28, 2021 and organized a special lecture on “Science, Technology and Innovations: a Perspective from Genomics-assisted Breeding”. Dr. Rajeev K. Varshney, Research Program Director-Genetic gains, ICRISAT, Hyderabad was the speaker. Prof. Swapan K. Datta, V.C., Biswa Bangla Biswabidyalay was chairman of the programme. Dr. Varshney highlighted the genomic-assisted breeding mechanism deployed in the development of high-oleic groundnut varieties and climate resilient varieties in chickpea and other legumes. More than 100 participants from different ICAR institutes and AICRP on maize attended the programme through video conferencing.



Dr. Varshney delivering the National Science Day lecture

World Water Day Celebration

ICAR- IIMR celebrated World Water Day on March 22, 2021 with a special lecture by Dr. Mahi Pal, IES, former Director, Ministry of Rural Development, GoI. In his address the Director IIMR stressed upon the judicious use of water. Dr. Pal addressed the gathering on "The role of Panchayats in Conservation, Management and Budgeting of Water in India". The staff of the institute and AICRP on Maize attended the virtual lecture. Dr. Mahi Pal discussed the potential role of scientist community in saving water.



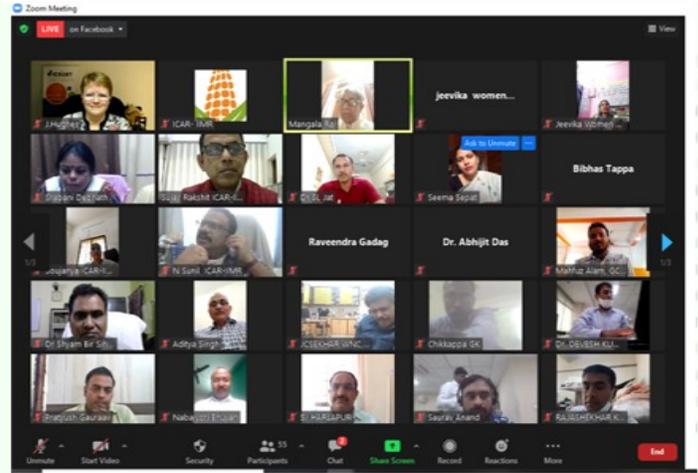
Dr. Mahi Pal delivering special lecture on the occasion of world water day

Commercializing of Technologies

The institute has signed MoUs for commercialization of two maize hybrids, viz., DMRH 1301 and DMRH 1308 for the next five years with M/s Indo US Biotech Limited, Ahmadabad, Gujarat through *Agrinnovate*. MoU for commercialization was also signed with M/s Gourmet Popcornica Limited, Andhra Pradesh for popcorn hybrid, LPCH 3 (IMHP 1540).

International Women Day Celebration

ICAR-IIMR observed the International Women’s day on the March 8, 2021 to celebrate womanhood, acknowledge women’s role and to honour their dignity. Dr. Jacqueline d' Arros Hughes, Director General, ICRISAT, Hyderabad was the Chief Guest and Dr. Mangala Rai, Former Secretary DARE and DG ICAR was the Chairman of the programme. In her online address, the Chief Guest, Dr. Jacqueline, highlighted different issues of gender biases, gender inequality and inequity, and gender discrimination in agriculture, agricultural research and also in the society in general. On the occasion, three women entrepreneurs,



Glimpses of the International Women's day celebration

viz., Smt. Amrita Devi of Somra, Khagaria, Bihar, Smt. Kiran Devi of Purnia, Bihar and Smt. Basanti Toppa of Modna, Nadia, West Bengal were felicitated for their outstanding contributions in the promotion of aggregation and marketing of maize through FPCs, value addition of maize and hybrid maize seed production, respectively. Dr. Mangala Rai emphasized the significant role of women in our society, particularly in agriculture and also highlighted the need for women empowerment in today's world. The programme was attended by more than 89 participants from across the country.

Annual Maize Workshop

The 64th Annual Group Meeting of All India Coordinated Research Project (AICRP) on Maize was held through video conferencing from May 17-19 and June 17, 2021. The group meeting was spread to 11 sessions over four days. The Workshop was inaugurated by Dr. H.S. Gupta, former DG, BISA and Ex-Director, IARI and Chairman, Project Advisory and Monitoring Committee (PAMC) in the presence of Dr. S.K. Vasal, World Food Laureate, Dr. I.S. Singh, Dr. P.N. Sharma and Dr. Jella Satyanaryana, members, PAMC. Nearly 200 participants representing both public and private sector across the country attended the workshop. Dr. H.S. Gupta complimented the scientists of AICRP on Maize for developing technologies for producing 28 million tonnes of maize and credit of making exports from India. He emphasized that the bigger challenge in front of us is to double the production by 2025. Dr S.K. Vasal highlighted the importance of development of source population, recycling of inbred lines within the heterotic group, development of multi-parent source population and identification of new testers and

inbred lines with better productivity. Dr. T.R. Sharma, DDG (Crop Science) graced the occasion on June 17, 2021 and reviewed the work done during *Rabi* 2019-20 and *Kharif* 2020. Total 17 Cultivars were identified for release during the workshop.



Glimpse of the Annual Maize Workshop

COVID-19 mass testing drive

The institute conducted a free RT-PCR mass testing drive for COVID 19 for all temporary and permanent employees including the labourers on April 26 and June 8, 2021.



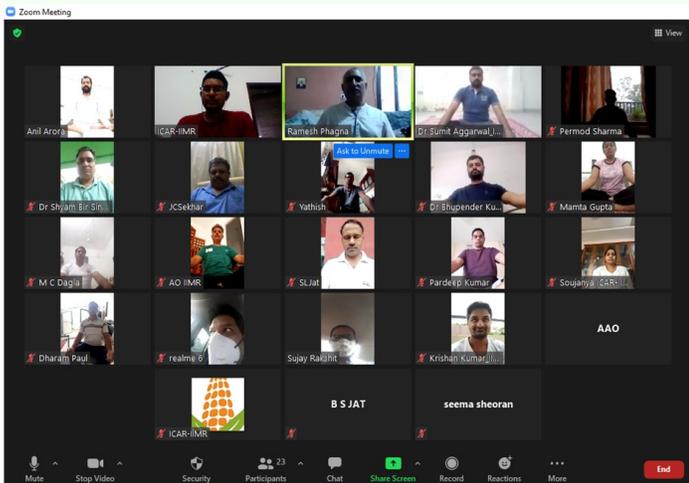
Sample collection for COVID-19 RT-PCR testing



International Yoga Day

International Yoga Day was celebrated virtually by all the staff members on June 21, 2021 at their home amid the COVID-19 pandemic. The theme of the same was "Yoga for Wellness". On this occasion the Director encouraged the staff to strengthen their body, mind and soul with the goodness of yoga for a better life. Mr. Anil Arora was the yoga master on the occasion.

द्वारा किया गया। बैठक के दौरान संस्थान की राजभाषा कार्यान्वयन समिति के सभी सदस्य उपस्थित थे। श्री नरेन्द्र सिंह मेहरा ने संस्थान में हिंदी के प्रोत्साहन के लिए किये जा रहे कार्यों की प्रशंसा की तथा भविष्य में भी राजभाषा विभाग, भारत सरकार के निर्देशों की पालना करने के साथ दिए गए लक्ष्यों को पूरा करने का शत प्रतिशत प्रयाश करे।



Staffs of ICAR-IIMR practicing yoga



संस्थान में वर्ष 2020-21 के लिए राजभाषा के प्रगामी प्रयोग से संबंधित वार्षिक ई-निरीक्षण एवं विचार-विमर्श के दौरान उपस्थित सदस्य

राजभाषा कार्यान्वयन संबंधी वार्षिक निरीक्षण

भा.कृ.अनु.प.- भारतीय मक्का अनुसंधान संस्थान, लुधियाना का वर्ष 2020-21 के लिए राजभाषा के प्रगामी प्रयोग से संबंधित वार्षिक ई-निरीक्षण एवं विचार-विमर्श दिनांक जून 16, 2021 को किया गया। राजभाषा कार्यान्वयन संबंधी निरीक्षण (राजभाषा विभाग, गृह मंत्रालय) के सहायक निदेशक (कार्यान्वयन) श्री नरेन्द्र सिंह मेहरा

हिंदी कार्यशाला

भा.कृ.अनु.प.- भारतीय मक्का अनुसंधान संस्थान, लुधियाना में राजभाषा हिंदी के प्रगामी प्रयोग को बढ़ावा देने तथा राजभाषा संबंधी अधिनियमों, नियमों एवं आदेशों की अनुपालन हेतु वर्ष 2021-22 में राजभाषा की प्रथम तिमाही (अप्रैल से जून, 2021)

को किया गया। कार्यशाला का शीर्षक “राजभाषा नियम व अधिनियम” था। कार्यशाला में अतिथि वक्ता के रूप में श्रीमति किरण साहनी, सहायक निदेशक राजभाषा एवं सदस्य सचिव, नगर राजभाषा कार्यान्वयन समिति, लुधियाना को आमंत्रित किया गया है। कार्यशाला में संस्थान के सभी अधिकारियों/कर्मचारियों ने भाग लिया। अतिथि वक्ता ने राजभाषा अधिनियम 1963 तथा 1976 की मुख्य विशेषताओं के साथ राजभाषा के विभिन्न नियमों तथा राजभाषा अधिनियम 1963 की धारा 3(3) के अंतर्गत जारी होने वाले विभिन्न दस्तावेजों को द्विभाषी रूप में जारी करने के बारे में विस्तृत से जानकारी दी। कार्यशाला बहुत ही उपयोगी एवं सार्थक रही।

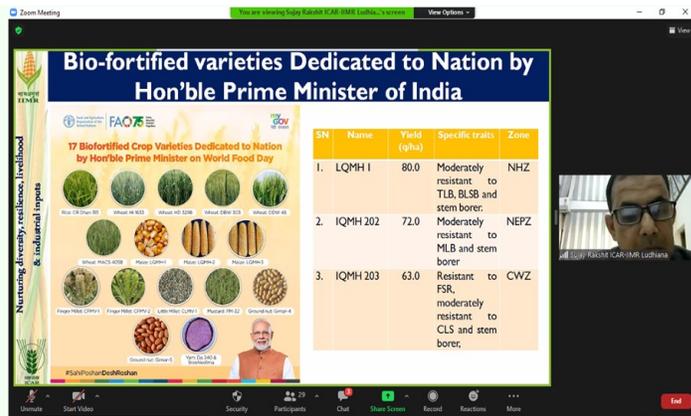
IMPORTANT MEETINGS

Research Advisory Committee (RAC) Meeting

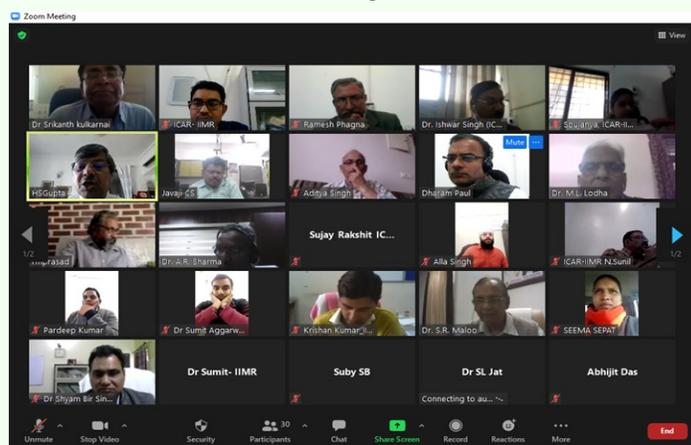
The meeting of the Research Advisory Committee (RAC) of the institute was held in a virtual mode from February 24-25, 2021 under the Chairmanship of Dr. H.S. Gupta Former Director General, BISA & Ex-Director, ICAR-Indian Agricultural Research Institute, New Delhi. During the meeting Dr. Sujay Rakshit, Director ICAR-IIMR presented the overview of the maize scenario and the major accomplishments of the institute during 2020. Dr. H.S. Gupta, Chairman, RAC complimented the scientists for inclusion of three biofortified maize hybrids developed by the institute in the list of the 17 biofortified varieties released by the Hon'ble Prime Minister on the occasion of World Food Day. He further emphasised that maize has shown impressive growth despite COVID-19 pandemic during 2020. The Chairman called upon the scientists to work passionately to solve issues being faced by the farming community. He also stressed that the results of field demonstrations must be disseminated and awareness regarding latest technologies must be provided to the farmers.

Variety Identification Committee (VIC) Meeting

The Variety Identification Committee Meeting of AICRP on Maize was held on June 17, 2021 through Video Conferencing. The meeting was conducted under the chairmanship of Dr. T.R. Sharma, Deputy Director General (Crop Science), ICAR. Ten members of the VIC along with five resource persons from ICAR-IIMR attended the meeting. A total of 17 proposals were presented and after thorough discussion 11 genotypes were identified for release.



Director IIMR presented the major accomplishments of the institute during 2019-20



RAC Members discussing the research agendas

Institute Technology Management Committee (ITMC) Meeting

The ITMC meeting of the institute was held on May 15, 2021. The main agenda of the meeting was to discuss the draft MoU for seed production with West Bengal State Seed Corporation Ltd. and farmer Producing Organisation (FPO), Bishwa Bharati Krishi Swambar Gosthi, Kulgachi, Nadia. During this meeting the terms and conditions of MoU with both organisations were discussed in details and finalized.

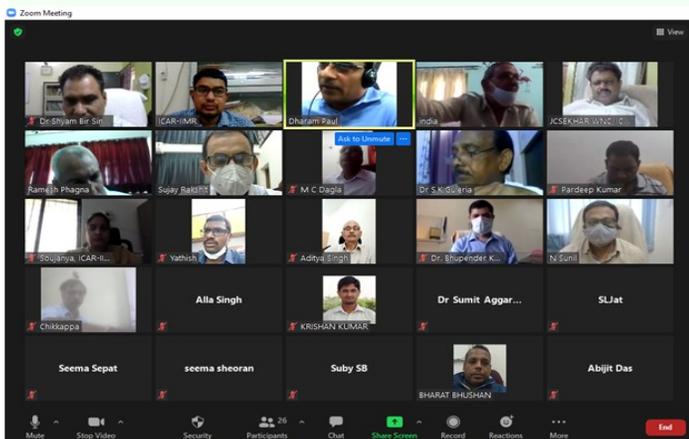


Director IIMR sharing his thoughts during ITMC meeting

Institute Research Council (IRC) Meeting

The Institute Research Council (IRC) meeting of the ICAR-Indian Institute of Maize Research, Ludhiana was held from June 22-24, and July 1, 2021 through video conferencing under the chairmanship of Dr. Sujay Rakshit, Director ICAR-IIMR to review the progress of ongoing research projects and to consider the new project proposals. Dr. R.S. Rathore, Professor and Sr. Maize Pathologist (Retd.) and In-charge, AICRP on Maize, MPUAT, Udaipur and Dr. S.K. Guleria, Sr. Maize Breeder (Retd.) and In-charge, AICRP on Maize, HAREC, CSKHPKV, Bajaura were the outside experts during 22-24 June, whereas Dr. N. K. Singh, Sr. Maize Breeder, GBPUAT, Pantnagar and Dr. R. Ravikeshavan, Professor, TNAU Coimbatore were the outside experts for the meeting held on 1st July, 2021. A total of 18 in house and 14 externally funded projects were reviewed and appropriate suggestions and recommendations were made for the improvement of research programs.

NBPGR, New Delhi graced the occasion as Chief Guest. Shri Balamurugan D, IAS, Secretary Cum Commissioner Self Employment and Mission Director, NRLM, Govt. of Bihar also graced the occasion as Guest of Honour. Dr. Sujay Rakshit, Director, ICAR-IIMR, presided the programme.



Participants of the IRC meeting

Glimpse of the training on Value addition in maize

EXTENSION AND OUTREACH

Training on Value Addition in Maize

The institute organised training on “Value addition in maize” for popularization of technologies developed by ICAR-IIMR through its Agri-Business Incubator (ABI) in Patna and Begusarai in collaboration with JEEVIKA and Microsave organisations working in Bihar on January 31 and February 1, 2021, respectively. The training was attended by 20 women farmers who were part of different Farmer Producing Companies from Saharsa and Purina district of Bihar. Dr. Ramesh Kumar In-charge, ABI and Ms. Navjot Kaur and Ms. Yashmeet Kaur of ICAR-IIMR were the resource persons. Various value-added products, namely, QPM Burfi, Popcorn Gazakh and QPM Biscuits were demonstrated. Dr. Kuldeep Singh, Director ICAR-

Training on Single Cross Hybrid Seed Production in Maize

The institute organised a training on ‘Single Cross Hybrid Seed Production in Maize’ at Begusarai on February 1, 2021 in collaboration with JEEVIKA and Microsave. A total of 45 women farmers and officials of JEEVIKA and Microsave organisations attended the training. Sh. Akhilesh Singh, member ICAR governing Council graced the occasion as Chief Guest. He praised the efforts of ICAR-IIMR scientists for organising such trainings in Bihar which will be very fruitful for enhancing farmer’s income. He requested the JEEVIKA officials as well the women farmers to spread the technologies developed by ICAR-IIMR scientists for the benefit of farming community. Dr. Sujay Rakshit, Director, ICAR-IIMR, Ludhiana



Participants of the training programme

chaired the programme. In his address, the Director emphasized that farmers can produce maize hybrid seed which will play a pivotal role in doubling farmer's income. Dr. SB Singh and Dr. Ramesh Kumar delivered lectures on Hybrid seed production in maize and role of QPM and specialty corns for livelihood security during this training programme.

Training programme on host plant resistance against FAW in maize

An online training programme on "Host plant resistance against FAW in maize" was organized on March 16, 2021 under NASF project. Special lectures were given on "Mass production techniques of FAW" and "Screening techniques and breeding for resistance against FAW" by Dr. Jagdish Jabba, Scientist, TICM (Research Programme), Asia, ICRIASAT and Dr. B.M. Prasanna, Director, CIMMYT, Global Maize Programme. More than 100 participants from different institutes participated in this online training programme.

Awareness and training programme on FAW

A virtual training was organized on "Awareness training programme on fall armyworm management on Maize in Nagaland" on May 24, 2021. The training coordinators were Dr. J. C. Sekhar, ICAR-IIMR and Dr. Rajesh Dubey, National Operations and Program Officer, FAO India. The inaugural session was graced by Mr. Tomio Shichiri, FAO Representative in India and Dr. N. Sathyanarayana, Joint Director, Directorate of Plant Protection Quarantine and Storage, Faridabad. Dr. Sujay Rakshit, Director, ICAR-IIMR, Ludhiana chaired the programme. The training was attended by around 52 participants from Agriculture Technology Members, Scientists of KVK, Agriculture officers from Nagaland and AICRP Entomologists. The training lectures covered IPM for FAW on maize in NEH region, Quick action strategy for FAW management in Nagaland, Agroecological options for FAW management in Nagaland and CIB&RC recommendations and strengthening monitoring and surveillance for early detection using FAWMES app. The training emphasized the need to create awareness on early monitoring of the fall army worm incidence on maize and to advise the farmers to initiate the timely management techniques in a sustainable manner using the FAWES app.



Participants of the training programme

Scheduled Tribe Component (STC)

Under scheduled tribe component (STC) programme, 18 trainings programmes were conducted for the popularization of best management practices in maize whereby 796 farmers were benefited in the tribal areas. Inputs related to maize production were also distributed to the 727 farmers.

SCSP programme

Under SCSP programme, 17 trainings programmes were organized on different aspect of maize cultivation

benefiting over 1625 schedule caste farmers. Different inputs related to maize production especially small farm implements were also distributed to the farmers.

HUMAN RESOURCE DEVELOPMENT

Participation in training programs

Name of scientist	Training programme attended	Venue	Date
Dr. S.K. Aggarwal	Diversity analysis and molecular marker development for identification and characterization of plant pathogens	ICAR-IIWBR, Karnal	March 15-22, 2021
Dr S.L. Jat	Awareness training programme on Fall armyworm management on Maize in Nagaland	FAO, DPPQ&S & ICAR- IIMR	May 24, 2021
Dr. Sunil Neelam	Plant Quarantine Procedures for imports and Exports'	NIPHM, Hyderabad	February, 8-12, 2021
Dr. J. C. Sekhar	Regional consultation meeting on Fall Armyworm – the status, challenges and experiences among the SAARC Member States	SAARC Bangladesh	January 27-28, 2021
Dr. J. C. Sekhar	Online training on “Host plant resistance against FAW in maize” under NASF Project	PI NASF FAW Project	March 16, 2021
Dr. J. C. Sekhar	First Geo-Zone Coordination Meeting for Implementing the FAO Global Action on Fall Armyworm Control in Northeast Asia Region	FAO Rome	March 31, 2021
Dr. J. C. Sekhar	First Geo-Zone Coordination Meeting for Implementing the FAO Global Action on Fall Armyworm Control in South Asia Region	FAO Rome	April 13, 2021.
Dr. J. C. Sekhar	Meeting to discuss on the different issues in AICRP trial in the North East region of India	ICAR-IIMR	May 15, 2021
Dr. J. C. Sekhar	FAO India Meetings the GA work plan for FAW management	FAO India	June 4, 2021

Training programme conducted

Name of coordinator	Training programme conducted	Scheme	Partici-pants	Venue	Date
Dr. J. C. Sekhar	Host plant resistance against FAW in maize	NASF, ICAR	122	ICAR-IIMR (Online)	March 16, 2021
Drs. Ramesh Kumar and S.B Singh	“Value addition in maize” for popularization of technologies developed by ICAR-IIMR through its Agri-business Incubator (ABI)	ICAR-IIMR, Ludhiana in collaboration with JEEVIKA and Microsave organisations working in Bihar	20	Patna and Begusarai	January 31, 2020 and February 1, 2021
Drs. Ramesh Kumar and S.B Singh	Single cross hybrid seed production in maize	ICAR-IIMR, Ludhiana in collaboration with JEEVIKA and Microsave organisations working in Bihar	45	Begusarai	February 1, 2021
Dr. J. C. Sekhar	Organized Training program on” ‘Awareness training program on fall armyworm management on Maize in Nagaland”	NASF Project	52	ICAR-IIMR, FAO India	May 24, 2021

Awards/Honours/Recognition

Dr. S.L. Jat has been selected as Associate of National Academy of Agricultural Sciences, New Delhi with effect from January 1, 2021.

Dr. Dharam Paul received an externally funded project from NICRA on First generation Maize ethanol as a renewable energy model for climate change mitigation.

Dr. S.K. Aggarwal received the university gold medal for Ph.D. programme from Punjab Agricultural University (PAU), Ludhiana in Crop improvement and protection.

Drs. S.L. Jat, Abhijit K. Das and Alla Singh received the 'Best Scientist Award' of the institute during the 7th foundation day of IIMR held on February 9, 2021.

Dr. Sumit Kumar Aggarwal received the best oral presentation award on “Adoption of modules for management of banded leaf and sheath blight of maize in India” during National e-Conference on “Plant Health and Food Security: Challenges and Opportunities” organized by IPS, ICAR-IARI, New Delhi, India during March 25-27, 2021)

Dr. Aditya Kumar Singh has been nominated as external member of Board of Studies, Faculty of Agriculture, MPUAT, Udaipur for three years, June, 2021-June, 2024.

Webinar(s) attended

Name of scientist	Webinar/lecture attended	Organized by	Date
Dr. Pardeep Kumar	Startup Innovations in dairy and livestock sector on	MANAGE, Hyderabad	January 30, 2021
Dr. S.K. Aggarwal	Next Generation sequencing for deciphering host-pathogen interactions	Bionivid by IPS	February 4-5, 2021
Dr. S.K. Aggarwal	National e-Conference on “Plant Health and Food Security: Challenges and Opportunities” 2.	IPS, ICAR-IARI, New Delhi, India	March 25-27, 2021
Dr. S. B. Singh	National Dialogue Indian Agriculture Towards 2030: Pathways for Enhancing Farmers’ Income, Nutritional Security and Sustainable Food Systems	FAO	January 20, 2021
Dr. J.C. Sekhar	Biocontrol WS 2: Rearing of Parasitoids and Predators for FAW Control.	Organized by Grow Asia	January 14, 2021
Dr. J.C. Sekhar	Update and Planning - FAW Global Action in India	FAO Rome	February 22, 2021
Dr. J.C. Sekhar	Impact of Climate Change and Invasive Alien Species on Agriculture	ANGRAU	February 26, 2021
Dr. J.C. Sekhar	Biocontrol WS 4: Biopesticide Efficacy Part 1: Why are biopesticide trials so difficult?	Grow Asia	March 4, 2021
Dr. J.C. Sekhar	Biocontrol WS 5: Farmer acceptance of biocontrol approaches and scale-up issues	Grow Asia	March 18, 2021
Dr. J.C. Sekhar	FAW webinar on Host Plant Resistance	FAO Rome	March 23, 2021
Dr. J.C. Sekhar	Webinar 4, A one health approach, organized by	Event brite	March 31, 2021
Dr. J.C. Sekhar	Is gene editing a myth or reality? CRISPR CAS9 applications in Agriculture	Plant Protection Association of India and PJTSAU	April 22, 2021
Dr. J.C. Sekhar	ASEAN FAW Action Plan Session 7: Design tips for conservation biocontrol studies and programmes	Grow Asia	April 22, 2021
Dr. J.C. Sekhar	ASEAN FAW Action Plan FAW Resistance Management Plan Workshop	Grow Asia	April 27, 2021
Dr. J.C. Sekhar	Webinar on” Promise of biological control for sustainable pest management” by Dr Chandish Ballal	MPUAT Udaipur, Rajasthan	May 17, 2021
Dr. J.C. Sekhar	National webinar on "Sustainable management of birds in agri-horticultural ecosystem"	NIPHM	June 30, 2021

Name of scientist	Webinar/lecture attended	Organized by	Date
Dr. Mamta Gupta	Is gene editing a myth or reality? CRISPR CAS9 applications in Agriculture	Plant Protection Association of India	April 4, 2021
Dr. Mamta Gupta	Decoding the genomes with big data analytics	NIPGR	June 3, 2021
Dr. Yathish K.R.	Is Gene Editing a Myth or Reality? CRISPR CAS 9 Applications in Agriculture	Plant Protection Association of India, PJTSAU & ICAR-NBPGR	April 22, 2021
Dr. Yathish K.R.	Design tips for conservation biocontrol studies and programmes	Grow Asia – ASEAN FAW Action Plan	April 22, 2021
Dr. Yathish K.R.	Regional Resistance Management Plan Workshop	Grow Asia – ASEAN FAW Action Plan	April 27, 2021
Dr. Yathish K.R.	Nature-based solutions for FAW management	FAO	May 05, 2021
Dr. Yathish K.R.	Hindi workshop on Official languages rules and act	IIMR, Ludhiana	June 25, 2021
Dr. Yathish K.R.	Sustainable management of birds in agri-horticultural ecosystem	NIPHM, Hyderabad	June 30, 2021
Dr. P.L. Soujanya	FAW webinar on Host Plant Resistance	FAO	March 23, 2021
Dr. Sunil Neelam	Is Gene Editing a Myth or Reality? CRISPR CAS 9 Applications in Agriculture	Plant Protection Association of India, PJTSAU & ICAR-NBPGR	April 22, 2021
Dr. Sunil Neelam	Nature-based solutions for FAW management	FAO	May 19, 2021
Dr. Sunil Neelam	Sustainable management of birds in agri-horticultural ecosystem	NIPHM, Hyderabad	June 30, 2021

Transfer/ New joining/ Retired



Dr. Ishwar Singh, Principal Scientist (Plant Physiology) has been transferred to ICAR(HQ), New Delhi from ICAR-Indian Institute of Maize Research, Ludhiana.



Sh. Dharambir Singh, Assistant, was retired from ICAR-Indian Institute of Maize Research, Ludhiana on January 31, 2021.

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