

**ICAR****Reporter**

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Dear Readers,

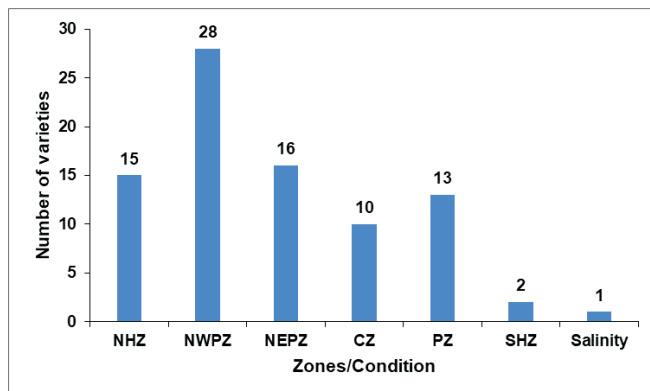
Wheat research in India gains significance as it brought about green revolution in this country. In this regard, ICAR and CIMMYT-Mexico globally share a common goal for sustained wheat production. This mutual collaboration has been beneficial and has strengthened research efforts of both organizations in various areas including the development and delivery of stress resilient and nutritionally enriched wheat germplasm, impact oriented sustainable and climate smart, resource smart, resource conserving agricultural practices required in India, socio-economic analysis and the development of policy recommendations.

The partnership between ICAR and CIMMYT in agricultural research is one of the longest and most productive in the world with a history of over five decades. The collaboration started with the visit of Nobel laureate Dr Norman E. Borlaug to India in 1963 for help in paving the way for "Green

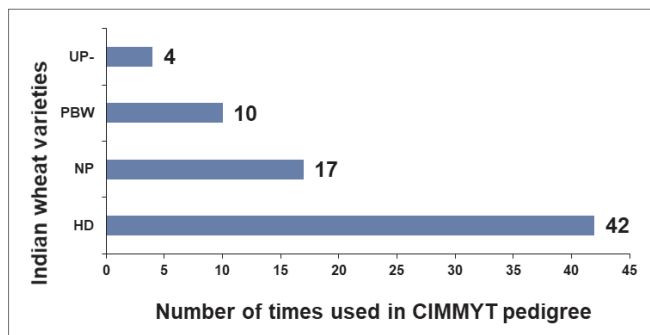


Revolution" in active partnership with the national agricultural research system (NARS), farmers and the Government of India. The first formal ICAR-CIMMYT Work Plan was implemented during 1989-1991, based on the Memorandum of Agreement signed between the two institutions in 1974, and since then the work plans have been consistently renewed. In order to strengthen the collaboration, the work plan (2018-2022) for scientific and technical partnership on maize and wheat systems was signed between Indian Council of Agriculture Research (ICAR), Department of Agricultural Research and Education (DARE) and The International Maize and Wheat Improvement Center (CIMMYT), during Borlaug Institute for South Asia (BISA) ninth executive committee meeting, held on 1<sup>st</sup> June 2018 New Delhi.

As far as the germplasm exchange is concerned, ICAR has been receiving around 1,500-2,000 germplasm lines every year from CIMMYT and after multi-location evaluation, superior lines are identified as varieties or donors for traits and mapping of genes



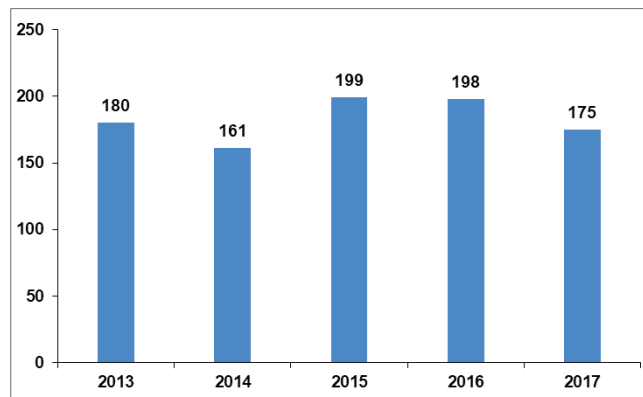
Varities released in India through direct selection from CIMMYT nursery



Indian wheat cultivars used as donors in CIMMYT hybridization programme

for different traits of importance. Specific attention was given to development of material against diseases of importance in India such as yellow rust in Indo-Gangetic plains and spot blotch in eastern plains. High yielding wheat varieties have been developed using the Veery, Seri, Attila, Kauz materials from CIMMYT which are even yielding up to 6 tons/ha. The outcome of this long-term collaboration under exchange of germplasm is the release of 88 wheat varieties suited to various cultivation conditions of India during 1960 to 2017 and these are directly coming out of selections from the international nurseries received from CIMMYT. A maximum of 28 varieties have so far been released for wheat growing regions under North Western Plains Zone (NWPZ).


In addition, the collaboration has been mutually beneficial and in return India also has contributed to global wheat breeding programme through utilization of Indian wheat cultivars as donors in hybridization for incorporation of several important traits related to stress adaption. A total of 72 Indian wheat lines were routinely used as donors in CIMMYT wheat breeding programme. To address the problem of micronutrient malnutrition, for the first time, two biofortified wheat varieties (WB 2 and HPBW 01) were released for the north-western plains zone of India under this collaboration in 2016. These varieties have 20% higher grain zinc (+6 ppm more) and also 6%



Participation of Indian scientists in in various capacity building programs with CIMMYT during 2013-17

yield advantage over the best check. These varieties are being spread extensively in NWPZ through *Kisan melas* and demonstration in farmers' fields.

While enabling agricultural development in the country, a report indicated that the Indian conservation agriculture (CA) program has saved USD 164 million with an investment of only USD 3.5 million, with internal rate of return of 66%, which is highest amongst the entire CG program. Zero-tillage, bed planting and CA research were conducted and up-scaled in a range of environments/locations. Long-term strategic research on conservation agriculture based sustainable intensification in wheat-based systems was continued in diverse ecologies. For smallholder precision nutrient management, new decision support tools (Nutrient Expert), calibration curve for GreenSeeker sensor (Variable Rate Technology) and Android phone-based app to support GreenSeeker calibration have been developed and validated through large on-station and on-farm participatory validation trial wheat-based systems. Full technology package for residue management in rice-wheat rotation with multiple wins including yield gains, farm profits, saved water, reduced weather risks as well as environmental foot prints, improved soil health and reduced chemical load in farming has been developed, validated and shared with the stakeholders. In view of the recent emergence of wheat blast in Bangladesh, screening of Indian germplasm for blast resistance was initiated in Bolivia and USA. The approach has helped in identification of blast resistant lines of the Indian programme and tackling the disease at doorstep. The Indian germplasm was also genotyped for 2NS translocation that contributes to blast resistance. With growing challenges, the human resource activities are also emphasized; and CIMMYT enabled capacity building of 913 Indian scientists.

  
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This Yojana brings

**Pradhan Mantri Krishi Sinchai Yojana**

- Per Drop More Crop • Inputs from MoWR and DOLR received
- Increase in agricultural production and productivity and enhance farm income.

# WORKSHOPS, MEETINGS, CONFERENCES, SYMPOSIA, SEMINARS,

## ICAR-Regional Committee Meetings

### Regional Committee-I, SKUAST, Kashmir



Jammu Kashmir, June 11, 2018. XXV meeting of ICAR Regional Committee-I was inaugurated by Shri NN Vohra, Governor, Jammu Kashmir State at SKUAST Shalimar. The technical session was chaired by Dr Trilochan Mohapatra, Secretary DARE and Director General of ICAR wherein Action Taken Report and other problems were presented by Member Secretary and other State officers. State problems, research needs and developmental issues were discussed.

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### Regional Committee-II, Bhubaneswar

Bhubaneswar, 22 June 2018. The 24<sup>th</sup> meeting of ICAR-Regional Committee-II comprising members from the states of West Bengal, Odisha, Andhra Pradesh, Telangana and UT of Andaman and Nicobar Islands, was held at OUAT, Bhubaneswar. Technical sessions were held at Institute on Management of Agricultural Extension (IMAGE), Bhubaneswar. Organized by ICAR-CIFRI, Barrackpore in collaboration with ICAR-CIFA,



Bhubaneswar, the Regional Committee provided a forum to examine in depth the major gaps in current research and training efforts, to identify priorities and to decide agenda of research and extension in agriculture, animal husbandry and fisheries for a region for the coming year.

Dr T Mohapatra, Secretary, DARE and Director General, ICAR, New Delhi, emphasized that the region offers tremendous scope and opportunities for multifaceted growth of agriculture sector, including animal husbandry, fisheries, horticulture, sericulture and others. The region is contributing significantly to the food basket of India. The states of this region are major producers of rice, potato, tobacco, jute, poultry, fishes, oil-palm, vegetables and flowers. The country produces more than 280 million metric tonnes foodgrains despite problems of climate change, loss



of arable areas due to urbanization and a host of other problems. A right mix of technological breakthroughs and policy support has realized it. He called for concerted efforts of ICAR, SAUs and state governments to ensure that doubling of farmers' income becomes a reality.

Dr S Garg, Principal Secretary, Agriculture and Farmers' Empowerment, Government of Odisha appreciated the close interaction with different stakeholders on agricultural research and development being organized by ICAR. He wished this unique initiative would go a long way in ensuring that research findings are grounded well for the benefit of farming community.

Shri GB Dhal, Agriculture Production Commissioner, Odisha, highlighted the use of robotics, genomics and





nanotechnology in agriculture. He remarked that countries like Israel and USA are using 4G farming technologies whereas we in India are at 2G level. He urged the research fraternity to make available new generation farming technologies for betterment of socio-economic condition of farmers.

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## High level meeting of NICRA

New Delhi, 4 April, 2018. The Tenth high level monitoring committee (HLMC) meeting of National Innovation in Climate Resilient Agriculture (NICRA) was conducted to review the Action Taken Report on the recommendations of the 9<sup>th</sup> HLMC and to review the progress and achievements of the project from August 2016 to March 2018.



Dr Trilochan Mohapatra, Secretary (DARE) and Director General (ICAR) suggested to test and validate the technologies and mobile applications developed by NICRA so that they are made available to the stake-holders. He also released a book titled 'Climate Resilient Innovation from NICRA' in the meeting.

Shri Chhabilendra Roul, Special Secretary (DARE) and Secretary (ICAR) appreciated efforts made under NICRA towards enhancing the resilience of Indian agriculture to climatic variability and climate change. He also suggested that farmers who adopted climate resilient technologies should be incentivised.

Several actionable points emerged and important observations were made. The green house gas emission inventory developed by the project will be useful in determining country specific emission coefficients for agriculture sector. It was decided to conduct awareness creation programme on climate resilient agricultural practices for farmers and other stake-holders. Climate resilient technologies developed by the 41 partner institutes of ICAR were reviewed and suggestions for refining and upscaling of these technologies were given.

Taking into consideration the latest climate change projections by IPCC, a new district level vulnerability atlas is being prepared by ICAR- Central Research Institute for Drylands Agriculture, Hyderabad.

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## Preparing for Kharif Season- 2018

Chennai, 25 March, 2018. Based on the forecast of the South-West monsoon for 2018, an interface meeting was organized on Agricultural Contingency for enhanced preparedness for Tamil Nadu state at Directorate of Agriculture in Chennai. The meeting was organized at the Directorate of Agriculture, Chennai under chairmanship of Additional Director of Agriculture Sri Shenbagha Rajan.

Dr KV Rao made a detailed presentation on forecast for Tamil Nadu state based on IMD and SASCOF 12 forecasts.



He asked district officials to educate farmers in choosing crops and varieties in the light of monsoon 2018 as well as failure of North-east monsoon 2017. Since, more than half of the districts cultivate paddy, farmers need to be cautious in their use of water, especially in Cauvery basin area. Dr S Desai suggested that frequent dialogue should take place among farmers, an department officials, ICAR-CRIDA and TNAU for timely interventions in critical districts. Dr Deva Senapathy offered to provide all technical support from the University.

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## International Workshop on Nutrition-Sensitive Agriculture

Bhopal, May 14, 2018. A 3 day International Workshop on Nutrition-Sensitive Agriculture and Nutrition Literacy was organized jointly by ICAR-Agricultural Technology Application Research Institute, Jabalpur and Women and Child Development Department, Government of Madhya Pradesh.

Shri Narendra Singh Tomar, Minister of Rural Development, Panchayati Raj and Mines assured that his ministry will extend all the help and support for successful implementation of the Nutri-Smart villages in Madhya Pradesh.

Smt Archana Chitnis, Minister of Women and Child Development informed that at present there are 313 Nutri-Smart villages, one in each block of Madhya Pradesh and applauded the support received by ICAR-ATARI, Jabalpur in the implementation of the Nutri-



Smart villages for enhancing the nutrition literacy and make the child more healthy and happy for making India a brighter country.

Dr AK Singh, Deputy Director General (AE), ICAR New Delhi shared about the new initiative of ICAR in the form of Nutri-Sensitive Agricultural Resources and Innovations (NARI). He said that ICAR has initiated several other projects like Knowledge Systems and Homestead Agriculture Management in Tribal Areas (KSHMTA), and Value-addition and Technology Incubation Centres in Agriculture (VATICA), etc. to make the society happy, healthy and educated.

Dr Anupam Mishra, Director, ICAR-ATARI Jabalpur said that nutrition security has multi-fold effect on the health and economy of the society. It is directly linked with poverty and education. KVKs are playing pivotal role in bringing nutritional security in the state through appropriate technological interventions

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## Rise of Rice

Hyderabad, 14 April, 2018. On the occasion of the inauguration of the 53<sup>rd</sup> Annual Rice Research Group Meeting at ICAR-Indian Institute of Rice Research, Hyderabad, Chief Guest Dr V Praveen Rao, Vice Chancellor, PJTSAU, said that though rice is the only crop consumed in a large scale and in spite of productivity increase over the years, much more improvement is required. Scientists should be sensitive to social changes, urbanisation, wage increase, water level drop in rice growing regions



and reorient their research goals accordingly. Less water, less land, less labour technologies are essential.

Dr AK Singh, DDG (Crop Science and Horticulture Science), ICAR complimented the AICRIP as the oldest coordinated programme and pointed out that time has arrived for diversification and motivated rice scientists to do more efforts to make farmers' life better.

Dr IS Solanki, ADG (FFC) ICAR in his remarks mentioned that about 1200 varieties have been released through AICRIP and suggested that breeders should also take responsibility of popularizing their varieties.

Dr Himanshu Pathak, Director NRRI said that stable varieties with high productivity in bad climate years with at least 4 t/ha, should be achieved. He also emphasized to find ways for mitigation of methane emission in a mission mode programme to reach the farmers.

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## Cluster Front Line Demonstrations on Pulses and Oilseeds

Ludhiana, 21 May, 2018. ICAR-ATARI, Ludhiana organized an Action Plan meeting of CFLD Pulses and Oilseeds Project for KVKs at Ludhiana. The Chief Guest Dr VP Chahal, ADG (Extension) and National Coordinator of CFLD Pulses and Oilseeds Projects sensitized participants about the importance of seed exchange among the farmers for sustainable pulses



production. He informed that KVKs can use withdrawal strategy by developing sustainable mechanism of pulses and oilseeds at cluster level.

Dr Rajbir Singh urged KVKs to multiply seeds of new varieties at their farms and use that seed for conducting demonstrations. He discussed about conducting demonstrations in areas where there is a scope for technology dissemination.

Dr DS Bhati, ADE, PAU, Ludhiana, assured KVKs





regarding availability of seeds for conducting demonstrations. He urged KVKs to conduct FLDs in areas of specific need, and to document success stories at the end.

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## Post harvest processing and handling



New Delhi, 21 May, 2018. Shri Gajendra Singh Shekhawat, Union Minister of State for Agriculture and Farmers Welfare, inaugurated the 5<sup>th</sup> Meeting of Indian Grain Storage Working Group at NASC Complex, New Delhi. Theme of the meeting was "Bulk Storage, Fumigation and Drying of Grains at Farmers Level".



Shri Shekhawat said due to lack of availability of post harvest measures, country has to bear huge loss every year. He further added that we should concentrate on market centric approach instead of production centric approach and need to emphasise more on post harvest processing and handling.

Dr Trilochan Mohapatra, Secretary (DARE) and Director General (ICAR) said that in the absence of the facilities of preserving agricultural produce both the farmer and the government have to suffer the loss. The farmers should be in touch with various agricultural institutes and know the current research findings regarding conservation of food grains.

Dr DS Jayas, Vice President (Research and International) University of Manitoba, Canada urged that there should be facility of measuring humidity in food grains at Panchayat level, where farmers can get their grain sample checked. Technical presentations were given by grain storage experts from Academia and industry. A hands-on training session on small scale bulk fumigation of food grains was also conducted for farmers.

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## Project on Forage Crops and Utilization

Coimbatore, 6 April, 2018. The National Group Meeting of the All India Coordinated Research Project on Forage Crops and Utilization was inaugurated at Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu.

Professor K Ramasamy, Vice Chancellor TNAU highlighted the importance of forages and animal husbandry and stressed on intensification of research and developmental activities in increasing forage resources in the country.

Dr IS Solanki, ADG (FFC), ICAR highlighted the various gaps in forage research and stressed upon the need of high yielding varieties with good nutritional quality and disease pest resistance. Dr RV Kumar, Director, ICAR-IGFRI, Jhansi, highlighted the importance of cultivated forage as well as pasture crops to bridge the demand and supply gap of forage availability.

Dr K Ramaraju, Director of Research, TNAU informed about the significant contribution and success of TNAU varieties particularly CO-3, CO-4, CO(CN)5 in BxN hybrid in increasing the fodder availability in the country. Dr AK Roy, Project coordinator, AICRP on Forage Crops and Utilization presented the brief introduction of AICRP Forage project, Salient achievements during XII plan period and summary of activities carried out in kharif 2017 and results.

Various publications were released. Certificates of appreciation were awarded to AICRP forage crops centres CAU, Imphal and UAS (B), ZRS, Mandya.

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## National Project Management Committee Meeting

Dehradun, 28 May, 2018. Two days National Project Management Committee meeting under Farmer FIRST Program (FFP) was held at ICAR-Indian Institute of Soil and Water Conservation, Dehradun. The first



phase of the program was implemented during 2016-18 at 52 centres across the country. The second phase is being launched for the year 2018-2020 for which the two day meeting was organized.

Dr AK Singh DDG (Agril. Extension), ICAR, New Delhi mentioned that the FFP was launched with the objective of directly involving the framers in the research modules and it is basically an applied research project. It is a saturation model which intends to saturate the adopted villages with technologies which can act as model villages for state government and NGOs for upscaling. He urged researchers involved in the Project to enhance partnership with the Line Departments working in their project areas and to bring the success stories and farmers innovation in public domain through different media platforms.

Dr PK Mishra, Director, ICAR-IISWC, Dehradun highlighted the importance of the Farmer FIRST Project in nation building. The farmers are the first and foremost stakeholders for entire ICAR and a project like this with the right intentions can help in reaching out to the farming community. He pointed out that the 52 centres across the country where the project was being implemented should come up with policy briefs for the State and Central Government for upscaling the most important achievements of the project.

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## Environmental hero appreciates KVKs role in stubble burning

Jalandhar, 19 April, 2018. Padma Shree Saint Balbir Singh Seechwal, a noted environmentalist who was declared as Environmental Hero by the TIME Magazine, flagged-off vehicle to make awareness against burning of wheat stubbles at the premises of KVK, Nurmahal, Jalandhar.

Saint Seechwal appreciated the role of KVK in making a movement against residue burning. He urged all stakeholders to come on a single platform and work together in convergence mode to fight this social



problem. He said that with the use of machines, the problem of residue can be sorted out but farmers have to be educated.

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## Our Agriculture Future



New Delhi, 19 June, 2018. Dr Trilochan Mohapatra , Secretary (DARE) and Director General (ICAR) delivered 25<sup>th</sup> "Dr BP Pal Memorial Lecture" on "Our Agricultural Future" at IARI, New Delhi. Dr Mohapatra highlighted the visionary research and policies initiated by the legendary scientist Dr BP Pal in whose memory the lecture series was initiated. He presented a comprehensive analysis of post-green revolution achievements along with outline of futuristic technologies, which may result in increased productivity, farmers income and meeting future challenges of climate change in all areas of agriculture including cereals, pulses, oilseeds, animal husbandry and fisheries with efficient use of inputs.

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## Soil health-holistic strategy

New Delhi, 26 June, 2018. A Brainstorming Session on "Holistic strategy for assessment of Soil Health" was organized at NASC Complex, New Delhi.

Dr Trilochan Mohapatra , Secretary (DARE) and Director General (ICAR), in his inaugural address emphasized on importance of soil testing and management of soil health to meet the challenges of







food security. As the factor productivity and rate of response of crops to applied fertilizers under intensive cropping systems are declining year-after-year, inclusion of soil physical and biological parameters becomes imperative to maintain self-sufficiency in food grains production and agriculture growth on sustainable basis, he added.

Dr Asok Dalwai CEO (NRAA) highlighted the importance of quick and simple techniques for assessment of soil physical and biological parameters, and sensor-based technology for repeated measurements over a period of time.

Earlier, Dr K Alagusundaram, DDG (NRM) briefed about the background of organizing the brainstorming session. Dr SK Chaudhari, ADG (SWM), highlighted the involvement of NRM Division (ICAR) in developing Soil Test Kit and its importance in preparing soil health card. The meeting was attended by Smt A Neeraja, Joint Secretary (INM), Dr Claudia Sadoff, Director General, International Water Management Institute (IWMI), Dr A K Sikka, IWMI- India Representative, Scientists from CG Centers, ICAR Institutes.

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## International Linkages

### Climate Smart Policies



Hyderabad, 17 April, 2018. Shri Shailendra Kumar Joshi, Chief Secretary of Telangana inaugurated regional consultation on "Climate Smart Agricultural Policies, Strategies and Agricultural Development Programmes towards Climate Change Adaptation" at ICAR-National Academy of Agricultural Research Management (NAARM), Hyderabad. The regional consultation was jointly organized by SAARC Agriculture Centre (SAC), Bangladesh, Asia-Pacific Network for Global Change Research (APN), Japan, Ministry of Environment, Forest and Climate Change (MoEFCC), India and ICAR-NAARM.

Speaking at the inauguration, Shri Joshi said that SAARC countries have a unique opportunity to shape and strengthen the process as well as global attention and action to support climate resilient agricultural systems and dependent communities.

Guest of Honour Dr P Appa Rao, Vice Chancellor, University of Hyderabad said workable models to predict and adapt the climate resilient systems need to be developed.

The second Guest of Honour Dr KJ Ramesh, DG, Indian Meteorology Department, said weather-based agro-advisory services need to be expanded among SAARC countries.

This consultation takes forward the decision on "Koronivia Joint Work on Agriculture" taken by the 23<sup>rd</sup> Conference of Parties (CoP) to the United Nations Framework Convention on Climate Change's (UNFCCC) last year. A key feature of this decision was that there would be a greater focus on implementing climate actions in agriculture sector as opposed to negotiations focused on scientific and technical aspects only. Thus, expanding the scope of the recommendations that countries can make to CoP. SAARC countries see it as a long delayed but a positive beginning of a journey linking science to implementation by UNFCCC.

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### ICAR - CABI discuss work plan

New Delhi, 11 April, 2018. A meeting between Indian Council of Agricultural Research (ICAR) and Centre for Agriculture and Biosciences International (CABI)





was held at Krishi Bhavan, New Delhi under the Chairmanship of Dr Trilochan Mohapatra, Secretary (DARE) and Director General (ICAR). The objective of the meeting was to discuss work plan for 2018-20 and mode of implementation in various fields of agricultural research.

Potential areas of scientific collaboration between ICAR and CABI was briefed by CABI representatives.

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## ICAR - CIMMYT sign work plan

New Delhi, 1 June, 2018. A work plan (2018-2022) for scientific and technical partnership on maize and wheat systems was signed between ICAR, Department of Agricultural Research and Education (DARE) and The International Maize and Wheat Improvement Center (CIMMYT), during Borlaug Institute for South Asia (BISA) ninth executive committee meeting, held at board room, NASC complex, New Delhi.

The work plan was signed by Dr Trilochan Mohapatra, Secretary (DARE) and Director General (ICAR) and Martin Kropff, Director General, CIMMYT in the presence of all Ex-Co members and other senior officials. It has been developed to promote and accelerate close collaborative efforts in the field of maize and wheat systems.



The proposed work plan will enable to organize training courses and capacity building on identified areas for benefitting researchers, technicians, students and other stakeholders in South Asia in general and India in particular, through synergistic use of the facilities and expertise of ICAR and CIMMYT. Linkages will also be made with other International Centers and national institutions, especially in Asia, collaborating with ICAR/CIMMYT on maize and wheat.

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## Work plan signed with IWMI

New Delhi, 25 June, 2018. ICAR and International Water Management Institute (IWMI) signed Work Plan (2018-2022) for furthering scientific and technical cooperation in the field of agricultural water



management through collaborative research and capacity building with a vision of "A Water Secure World" at NASC Complex, New Delhi. The proposed collaboration includes Strategic Research Programs under the Consortium Research Program: Water, Land and Ecosystems and implementation of the activities, projects for climate smart agriculture, Capacity Building and other activities for promoting research, influencing policy and knowledge dissemination.

The session was Chaired by Dr Trilochan Mohapatra, Secretary (DARE) and Director General (ICAR) and Co-chaired by Dr Claudia Sadoff, Director General (IWMI), Colombo.

Dr Mohapatra elaborated the importance of water in Indian agriculture and urged IWMI to work towards bringing global lesson on scientific water management to India and evolve a practical oriented approach towards enhancing water use efficiency and water productivity. He urged to explore the possibility of desalination of sea water using solar energy to meet challenges of water scarcity. He said, India can provide technological backstopping in South-South Collaboration.

Dr Sadoff highlighted the need for research for development for a water secure world, water energy food nexus, and climate smart practices.

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## Ethiopian delegation visits ICAR-CIFE, Mumbai



Mumbai, 28 May, 2018. A delegation from Hawassa, University, Ethiopia visited CIFE, Mumbai to discuss mutual capabilities and areas of collaborative

research and education. The delegation led by Mr Ayano Barso, President (Vice-Chancellor), HU

comprised of Dr Zeytu Gashaw, Dean, College of Natural and Computational Science, Professor P Natarajan, Professor, Aquatic Sciences and Aquaculture, Department of Biology, Dr Zufan Bedewi, Head of Department of Biology and Mr Kassaye Balkew, Lecturer in Aquaculture, HU.

Mr Barso, President, Hawassa, University mentioned that although they have 81 under-graduate programmes they are offering very few Post Graduate and Doctoral programs due to lack of specialized faculty.

Dr Aparna Chaudhari, Dean External Relations, CIFE informed the members that the draft MoU between the two institutions has been submitted to DARE, ICAR for approval and will be communicated to HU for their signature. The VCs of both Universities exchanged the draft MoU.

The delegation visited various labs and facilities at CIFE. Mr Barso expressed his hope for constructive and mutually beneficial collaboration in future.

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## MoUs

### ICAR-CIBA, Waterbase in Pact

New Delhi, 10 April, 2018. ICAR-Central Institute Brackishwater Aquaculture, Chennai has inked a strategic partnership with the Waterbase Ltd., a pioneering aquaculture feed manufacturing company to upscale the transfer of eco-friendly feed technologies from the "lab to the field" in a large scale where the social benefit is measurable.



The CIBA-WATERBASE strategic alliance will cover the technical collaboration and partnership in the development of ecofriendly shrimp feed, **CIBA VanamiEcoplus**, exchange of information on feed formulations involving macro and micro-nutritional parameters, feed processing, and testing of identified feed ingredients and finished feeds. CIBA will advise on the specific changes in feed ingredients, inclusion level, feed standards, additives, processing technology to achieve the desired performance. CIBA will provide its expertise in testing the quality of the finished feeds in experimental ponds of CIBA, the Waterbase farm facility and farmers' ponds, and subsequently to the shrimp farming sector.

Dr KK Vijayan, Director, CIBA and Mr Varun Thapar, Director, The Waterbase Limited signed this partnership at the Thapar house, New Delhi in the presence of Dr Pravin Puthra, ADG, ICAR, (Marine Fisheries), and Mr Ramakanth V Akula, CEO, The Waterbase Limited.

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### Agro Met Advisory Services in local language

New Delhi, 12 April, 2018. Indian Council of Agricultural Research (ICAR) and India Meteorological Department (IMD) jointly planned to provide Agro Met Advisory Services (AAS) in local language across the country for the farming community in different Agro-climatic zones to improve productivity and reduce the risk.



A memorandum of understanding (MoU), in this regard was signed between ICAR and India Meteorological Department. Dr AK Singh, Deputy Director General (Agricultural Extension) and Dr KK Singh, Head, Agro Met Services, IMD signed the MoU on behalf of ICAR and IMD respectively.

ICAR and IMD have jointly planned to augment the AAS network to sub-district (block level) level by setting up of District Agro-Met Units (DAMUs) in 530 districts in the premises of KVKs to provide agromet services to farmers.

Initially 200 KVKs including the 110 aspirational districts have been identified for setting up of DAMUs. The initial fund of ₹ 2.4 cr. (@ ₹ 1.2 lakh per unit) has been sanctioned for establishing the required facilities to start the advisory services.

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# Capacity Building

## Dry fish retailing takes a new Avatar

Cochin, 10 April, 2018. A new business model for solar dried fish products, was introduced in Cochin, by a startup firm 'Aabbaa Fish Products' with the support of ICAR - Central Institute of Fisheries Technology, Cochin. The dry fish store was inaugurated at Chambakara St James Church shopping complex by Shri PT Thomas, MLA in presence of Shri VP Chandran, Corporation Councillor and Dr Ravishankar CN, Director, CIFT.



The store is the first of its kind in Kerala and is expected to revamp the dry fish delicacies which are favoured by majority of the Keralites.

The products available here are scientifically processed using the energy efficient and eco-friendly solar dryers developed by CIFT. The quality of the solar dried fish is extremely good in terms of hygiene, retention of nutrients, aroma and taste, as it eliminates all the disadvantages of conventional open sun drying, and are free from the attack of dust, dirt, rain, insects and microorganisms. Lower and uniform levels of moisture can also be achieved for products from solar dryer when compared to the conventionally dried products.

CIFT provided all the technical support and guidance to this firm, through the Agri-Business Incubation (ABI) Centre operating at the Institute.

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## Conserving the mahseer fisheries

Mokokcheng, Nagaland, 25 April 2018. To boost up the fisheries and aquaculture activities in the state of Nagaland, ICAR-Directorate of Cold Water Fisheries Research, Bhimtal, Nainital established a mahseer hatchery along with brood stock ponds at Longkong village, Mokokcheng, Nagaland with an



objective to conserve the state fish Chocolate mahseer.

The Minister for PWD, Shri Tongpang Ozukum, Government of Nagaland along with other high officials inaugurated the facilities and expressed satisfaction for successful implementation of the project by DCFR, which is first of its kind in the state for the benefit of local people and to protect the endemic food and sport fish.

Dr Debajit Sarma, Director, ICAR-DCFR emphasised the need of such a project under NEH activities, which will help to conserve and rehabilitate the mahseer fisheries in the natural water resources augmenting the livelihood security of the hilly people of the region.

Shri T Mhabemo Yanthan, Secretary (Fisheries) and Shri Kevisa Kense, Director of Fisheries, Government of Nagaland, Dr Sudhir Raizada, ADG (I.Fy), ICAR, New Delhi, Dr AK Singh, Former Director, DCFR, members of Angling Association of Nagaland as well as progressive farmers participated on the occasion. A State level Angling Competition was also organized.

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## First shrimp feed mill in Northern India

Bhiwani, Haryana, 15 May, 2018. ICAR-Central Institute Brackishwater Aquaculture, Chennai has developed a cost effective and quality shrimp feed using indigenous feed ingredients for vannamei shrimp farming, and the feed is promoted as the 'Vanami plus' The technology is being transferred to series of private entrepreneurs for upscaling and commercial production on a non-exclusive basis.

Adding to the list, a new feed mill was commissioned by an entrepreneur at Bhiwani, Haryana by adopting Vanami Plus feed technology of CIBA, through an MoU. It is a first of its kind in Northern India, which



will be of great advantage for shrimp farmers in inland saline regions of Punjab, Haryana and Rajasthan, where the feed is brought from the southern states. With an installed production capacity of 750 kg/hour, this mill can produce 8-10 tonnes of feed per day.

Dr KK Vijayan, Director CIBA, while inaugurating the feed mill, explained this model as 'Factory to Farm', where the farmer can take the fresh feed directly from the feed mill to their farm, bypassing the agents, also savings on dealer margin. He assured that this would increase the profit margin of farmers by 20%.

Dr Pravin Puthra, Assistant Director General (Fisheries), highlighted the role of CIBA in the technology backstopping to the aqua farmers. He appreciated the efforts of CIBA in developing such cost-effective technologies and stressed on the significance of this technology in reducing the cost of production of shrimp in northern India and would be a boon to small and medium farmers in the country.

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## Celebrations

### ICAR celebrates World Environment Day

**New Delhi, 5 June 2018.** Dr. Harsh Vardhan, Minister of Environment, Forest and Climate Change, and Erik Solheim, United Nations Under-Secretary-General and Head of UN Environment, jointly announced that India will be hosting the global World Environment Day celebrations on 5 June 2018. "Beat Plastic Pollution", the theme for World Environment 2018, urges governments, industry, communities, and individuals to come together and explore sustainable alternatives and urgently reduce the production and excessive use of single-use plastic polluting our oceans, damaging marine life and threatening human health.

#### ICAR-NRC on Yak

'World Environment Day' was celebrated at Mandala with enthusiasm. Dr P Chakravarty, Director (Acting), ICAR-NRC on Yak participated in fodder tree plantation for yak during "Mass Plantation Drive" organized on this day at Mandala.



#### ICAR-CIBA, Chennai

ICAR-CIBA in association with the Society of Coastal Aquaculture and Fisheries (SCAFi), organized an interaction on World Environment Day at CIBA headquarters, with a lead talk delivered by Dr E Vivekanandan, National Consultant, Bay of Bengal Programme, an Inter-Governmental Organization. The talk on "Human Interventions in Coastal Environment" emphasized that people should strive

to change their everyday lives to reduce the heavy burden of plastic pollution. Likewise at the national level the government needs to regulate plastic production, its usage and recycling. He highlighted the concept of ecosystem services, impact of plastic pollution on ecosystem services and the importance of economic valuation of ecosystem services. Dr K K Vijayan, Director, CIBA and President, SCAFi emphasized that ecosystem needs to be viewed in a holistic perspective. In this connection he cited the cleaning up of Adayar estuary and the follow-up activities taken up by CIBA, involving the nearby villages.



#### ICAR-JSS Agricultural Centre, Suttur

As part of World Environment Day, a tree-planting programme was held at ICAR-JSS Agricultural Science Centre in Suttur, Nanjangud taluk.



The chief guest, Suttur Mutt Co-ordinating Officer G L Tripurantaka observed that plastic had become an integral part of modern life and getting rid of that was a tough proposition. He requested people to shun plastic as it was a highly non-biodegradable product. Centre Head Dr Arun Balamatti opined that water bodies were getting contaminated owing to continuous discharge of effluents from industries without total treatment.



He suggested total harvesting of solar power to reduce pollution levels.

### ICAR-CIFRI, Barrackpore

ICAR-CIFRI celebrated World Environment Day, 2018 by planting saplings of Mangrove Sundari trees (*Heritiera fomes*) on the bank of river Ganga involving native populace to sensitize them about river bank erosion and role of plantation. School children were encouraged in planting mangrove saplings. Institute staff and local people interacted about importance of plantation and conservation of Mother Earth. Tulsi and Neem (medicinal plants) saplings were also planted in the Institute campus to make it eco-friendly. Emphasis was given on reduction of plastic and its disposal in riverine ecosystem.



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### ICAR joins in International Yoga Day

Dehradun, 21 June, 2018. International Day of Yoga is celebrated every year on 21st June. The venue of fourth International Yoga Day was Dehradun. The Prime Minister led thousands of volunteers to perform yoga *asanas*. ICAR Institutes celebrated the fourth International Yoga Day with enthusiasm. Staff of ICAR-Indian Institute of Soil and Water Conservation, Dehradun and its Research Centres at Agra, Ballari, Chandigarh, Kota, Vasad, Koraput, Udhagamandalam and Datia participated enthusiastically.



### ICAR Headquarters, New Delhi

Employees from ICAR, Headquarters performed yoga under the guidance of instructors from the Morarji Desai National Institute of Yoga, New Delhi. Dr Trilochan Mohapatra, Secretary (DARE) and Director



General (ICAR) said that regular practice of yoga keeps the body healthy and peace in mind.

### ICAR-NBFGR, Lucknow

Staff of ICAR-National Bureau of Fish Genetic Resources, Lucknow celebrated the International Yoga Day at 6.00 am. The yoga session was open for all NBFGR staff and their family members. Dr Kuldeep Kumar Lal, Director, ICAR-NBFGR, Lucknow welcomed the participants. Yoga Teacher Dr (Ms) Sweta Upadhyaya along with her team from Art of Living, Lucknow explained the benefits of Yoga in daily life in order to maintain overall body fitness. The staff of PMFGR Division of ICAR-NBFGR, Kochi also observed International Yoga Day.



### ICAR-CIAE, Bhopal

International yoga day was celebrated at ICAR-Central Institute of Agricultural Engineering, Bhopal under the guidance of yoga expert from Bhartiya Yog Sansthan. The staff along with Director of Institute Dr K K Singh practiced different *Pranaayam* and *Asanas*. Yoga experts taught exercises that can be done at work place to increase working efficiency.



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### State level agriculture fair

Motihari, 15 April, 2018. A 3 day State Level Agriculture Fair-cum-Farmers' Scientists Interaction Meet was organized at Zila School Ground, Motihari, Bihar. Chief Guest Shri Radha Mohan Singh, Union Minister of Agriculture and Farmers Welfare,



Government of India briefed about the various agricultural schemes like the *Pradhan Mantri Fasal Beema Yojana*, Soil Health Card, Per Drop More Crop, Gokul Mission, Integrated Farming System, etc. He emphasized upon skill development programmes being undertaken in the field of agriculture and allied fields. A Mobile Soil Test Laboratory of Dr Rajendra Prasad Central Agricultural University, Pusa was inaugurated for farmers of adjoining districts of North Bihar.

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## Annual Day Celebrations

### ICAR-CIFA, Bhubaneswar

Bhubaneswar, 1 April, 2018. Noted Social activist Padma Shri Tulasi Munda visited ICAR-Central Institute of Freshwater Aquaculture, Kausalyaganga, Bhubaneswar. Inaugurating the 31<sup>st</sup> Annual Day celebrations of this institute, Tulasi, Munda, an ardent believer in Gandhian philosophy, urged ICAR-CIFA employees to devote at least two hours a week for social welfare activities. As responsible citizen one must work for upliftment of downtrodden people and help ensuring birth rights to the under privileged. She underlined the importance of holding gramsabha and stakeholder consultation for effective outreach activities gave away ICAR-CIFA annual awards and special appreciation awards to employees for their outstanding contribution to institution building activities.



Dr IK Patro, VC, Ravenshaw University, Cuttack said fish has been one of the great friends of evolution. Fish genome has been used in many modern day biotechnology research. He appreciated the research environment prevailing at the institute and said that packaging of research in usable form by the end users and showcasing of achievements is of paramount importance. Dr JK Sundaray, Director, CIFA said that the Institute established on this very day, three decades ago, has contributed immensely towards growth and development of the freshwater aquaculture sector. During the last fiscal the institute has mobilized external research funding to the tune of ₹ 10 crores.

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### ICAR-IISWC, Dehradun

Dehradun, 7 April, 2018. The ICAR-Indian Institute of Soil and Water Conservation, Dehradun celebrated its 45<sup>th</sup> Annual Day. Shri Subodh Uniyal, Minister of Agriculture and Horticulture, Uttarakhand Chief Guest highlighted the importance of soil and water conservation in agriculture and the prime role agriculture plays in livelihoods of rural Uttarakhand.



He emphasized on the idea of Community Farming and "*Chak Bandi*" as a solution to the migration problem. The State has lost 15% of its agricultural land in the past 17 years since its inception, which is an alarming fact and needs to be checked immediately to preserve social and geographical diversity of the State, he added. He stressed upon importance of organic farming and horticulture in the state for benefit of farmers.

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## Foundation Day Celebrations

### ICAR-Indian Institute of Soil Science, Bhopal

Bhopal, 16 April 2018. On the 31<sup>st</sup> Foundation Day of IISS, Bhopal, the Chief Guest Dr Tejinder Singh, IFS, Additional Principal Chief Conservator of Forests of the Western Zone stressed upon finding out the root cause of problems of soil pollution and degradation, rather than relying more on preventive measures.

Dr SK Singh, Director, ICAR-NBSS and LUP, Nagpur briefed about the growing menace of soil degradation and stressed upon using high resolution soil resources data for optimum land use planning.

Dr VP Singh, Director, National Institute for High Security Animal Diseases Laboratory, Bhopal talked about the chain of soil health and its linkage with





animal and human health. Dr JK Saha, Incharge Director briefed about the recent achievements of the Institute. Progressive farmers from villages adopted under *Mera Gaon Mera Gaurav* (MGMG) scheme and the National and State level award winning farmers were felicitated on the occasion.

A farmer-scientist interaction was also held in which farmers put forth problems being faced related to crop residue management and conservation agriculture, which were elaborately discussed among the participants.

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### ICAR - Central Research Institute for Dryland Agriculture, Hyderabad

Hyderabad, 12 April, 2018. On its 34<sup>th</sup> Foundation Day, ICAR-CRIDA, Hyderabad invited Smt V Usha Rani, IAS, Director General, National Institute of Agricultural Extension Management (MANAGE) as Chief Guest. Smt Usha Rani highlighted the importance of research, extension and participatory



approaches for enhancing farm level profitability in rainfed drylands and significant role played by CRIDA in developing location specific rainfed technologies through its network centres.

Dr K Sammi Reddy, Director/Act, ICAR-CRIDA highlighted the activities planned for the future and the action plan to implement the same. Ten farmers from eight states (West Bengal, Maharashtra, Madhya Pradesh, Tamil Nadu, Telangana, Chhatishgarh, Karnataka, Andhra Pradesh) were felicitated for their farming practices for enhancing productivity and climate resilience.

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### ICAR- Central Coastal Agricultural Research Institute, Old Goa

Old Goa, 7 April, 2018. On the 30<sup>th</sup> Foundation Day of ICAR-CCARI, Old Goa, Chief Guest Dr Promod Sawant, Speaker-Goa Legislative Assembly appreciated the research work and extension activities being carried out by the Institute. He also

released Technical Bulletin - "Few Egg cited recipes from Goa" and three leaflets.

Dr EB Chakurkar, Director, ICAR-CCARI, briefed about the Institute's activities and output. An exhibition was organized to showcase the significant technologies developed and research work carried out by the Institute. Innovative Farmers, ex-staff of Institute and the employees who have complete 25 years were felicitated on the occasion.

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### ICAR-Central Institute of Fisheries Technology, Cochin

Cochin, 28 April, 2018. Celebrating the 61<sup>st</sup> Foundation Day of CIFT, Cochin, Dr KK Vijayan, Director, ICAR-CIBA, Chennai, said that ICAR-CIFT is providing quality service to stakeholders all over the country. He lauded the commendable team work done under the able leadership of the institute for developing several promising fishing, processing and post-harvest technologies for better income generation.



Dr Ravishankar CN, Director, ICAR-CIFT, Cochin briefed about commendable contributions of the Institute in the realm of Indian fishery and contemporary scientific achievements in the harvest and post-harvest sectors of fisheries. He outlined in detail the achievements of CIFT during the last year.

On this occasion, two MoUs were exchanged between CIFT and M/S HIQ and M/S Aabbaa Fish products on Jack fruit processing and Solar Dryer (50-60 kg) respectively.

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### ICAR- Directorate of Weed Research, Jabalpur

Jabalpur, 22 April 2018. On the 30<sup>th</sup> Foundation day of ICAR-DWR, Jabalpur, Chief Guest, Dr PD Juyal, Vice Chancellor, *Nanaji Deshmukh Veterinary Science* urged to work on integrated weed management and appealed to farmers for making cooperative societies and to cooperate with each other to gain maximum from the minimum resources.



Guest of Honour, Dr GR Rao Director, Tropical First Research Institute appealed the Directorate to work on the management of weeds in the forest to save the biodiversity and to increase the productivity of forest ecosystem. He urged to start collaborative project on forest weeds.

The second Guest of Honour Dr PK Mishra, Dean Faculty, JNAU, Jabalpur appreciated the work done on conservation agriculture and parthenium and appealed to scientists to work on current major challenges in weed management in agriculture. Three books, two extension folders and three video films were released on this occasion.

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## World Honey Bee Day

Baramati, 20 May, 2018. World Honey Bee Day was celebrated at KVK, Baramati (Pune). Dr Lakhan Singh, Director, ICAR-ATARI, Pune inaugurated the program and advocated the farmers about government policy and importance of pollination. Bee keeping is environmental friendly and agro-forestry based enterprise. It provides huge potential for raising income, poverty alleviation, using forest resources sustainably. One can keep honey bee as pets by keeping a bee box in their balcony. He said that all the KVKs should have honey bee units at the centre and capacity building programs for rural youths may be organized and efforts for educating the bee keepers about bee keeping, value addition and



marketing should be taken up. Honey bee may be considered as national insect.

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## Jackfruit processing machineries for tribal farmers

Goa, 5 May, 2018. A programme to distribute bypass fat and Jackfruit processing machineries to tribal farmers under Tribal Sub Plan Programme was organised at ICAR-Central Coastal Agricultural Research Institute, Goa. Chief Guest, Shri Narendra Keshav Sawaikar, Member of Parliament from South Goa appreciated the efforts of CCARI for improving the livelihood of tribal and agricultural farmers through their research and extension services.

Shri Govind Gaude Minister for Tribal Welfare, Government of Goa, Guest of honour, appealed to the tribal farmers to avail the maximum benefits offered by CCARI. Dr EB Chakurkar, Director, CCARI briefed about the research and extension activities of the institute and also delivered the technical details and use of bypass fat.

A group of twenty five tribal farmers from Cuncoliem, Priol, and Veling of North Goa received 1000 kg bypass fat material (each farmer received 25kg). Shree Kamakshi Self-help group from Cuncoliem, Mardol comprising of 10 women tribal farmers received a set of Jackfruit processing machineries.

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## ICAR-CIFT distributes gillnets to fishermen

Tamil Nadu, 18 April, 2018. The distribution of inputs to fishermen of Aliyar under Scheduled Tribe Component (STC) was organized as a public programme at Aliyar dam, Tamil Nadu. The programme was well attended by representatives of Tamil Nadu Fisheries Development Corporation (TNFDC), Scientists from ICAR-CIFT and fishermen. The programme conducted as a part of ongoing Institute project on 'Economic evaluation of resource use efficiency and management of reservoir ecosystem'. The fishermen were instructed to use two different gear sizes of gillnets, viz., 120 mm and



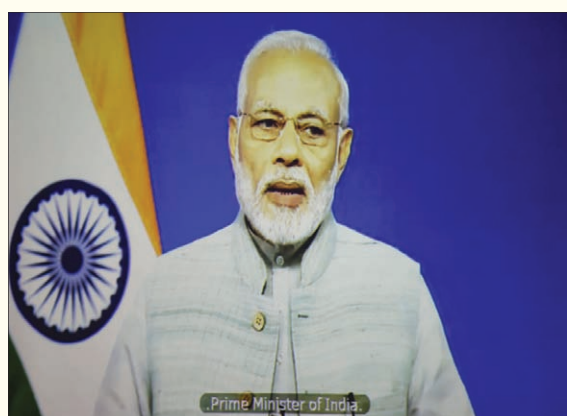


240 mm for optimum catch and were also asked to use gear size of greater than 110 mm to avoid the fish catch of less than 1 Kg.

There are 17 fishermen units at Kanjirapuzha and fishing operations is undertaken all round the year. Interaction with the fishermen was held after the programme. The fishermen felt the need for a sale counter with a platform for cutting and cleaning fresh fish. Wide media coverage was given to the programme in newspapers.

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## Direct dialogue with farmers



### ICAR-CRIDA, Hyderabad

Hyderabad, 20 June, 2018. Web telecasting of Honorable Prime Minister's interaction with farmers was organized in ICAR-CRIDA. The Prime Minister expressed his satisfaction with the progress made by farmers of different states in enhancing their income from agriculture and allied activities. About 150 farmers out of which 40 are women farmers from eight different villages of Ranga Reddy District, Telangana State, 250 scientists, technical, administrative staff of CRIDA, KVK Staff, Director, ATARI, Zone-X and scientists from ATARI Zone-X participated in this event.



### ICAR-CMFRI, Chennai

Chennai, 20 June, 2018. The live webcast of Honorable Prime Minister Shri Narendra Modi's direct

dialogue with farmers across the country was held at ICAR-CMFRI, for the farmers in Ernakulam district. 129 male farmers and 11 female farmers participated in the live webcast programme at the conference hall of the ICAR-CMFRI, Kochi.

### ICAR-CIAE, Bhopal

Bhopal, 20 June, 2018. ICAR-CIAE, Bhopal made arrangements to watch the live webcast of this programme. Approximately 350 people comprising of farmers, scientists, and staff members of the Institute watched this programme. The webcast was followed by a training programme for the farmers of adopted villages under *Mera Gaon Mera Gaurav* scheme wherein the farmers were provided tips on improved crop production techniques for *kharif* crops.



### ICAR-NBFGR, Lucknow

Lucknow, 20 June, 2018. Webcasting of the direct dialogue of Honorable Prime Minister with farmers across the country was held at ICAR-NBFGR Headquarters. Director NBFGR, Dr Kuldeep K Lal and all staff members attended the programme at the institute's SAH Abidi committee hall.



Arrangements were also made at ARTU, Chinhat, Lucknow for viewing of the live interactive session. Farmers of Narendra Dev Krishi Vishwavidyalaya, Faizabad, Uttar Pradesh and progressive fish culturist of ARTU residing at nearby areas benefitted by viewing this interactive dialogue.

### ICAR-headquarters and DKMA

New Delhi, 20 June, 2018. Webtelecasting of Honorable Prime Minister's interaction with farmers was held at ICAR, Krishi Bhavan and ICAR-DKMA, Pusa, New Delhi. Staff members and officers of ICAR headquarters and DKMA participated in the event.

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## Visits

### Vice President of India visits ICAR-IIRR, Hyderabad

Hyderabad, 31 March, 2018. Honorable Vice President of India, Shri M Venkaiah Naidu visited Indian Institute of Rice Research, Hyderabad to motivate

and inspire agricultural scientists and young ARS probationers. Shri Naidu was the chief guest for an interactive meeting to chalk out strategies for Doubling of Farmers Income especially in Telangana and Andhra Pradesh.

The Vice President outlined the significance of agricultural research in the context of today's aspirations of Indian youth. Shri Naidu urged



scientists to focus on strengthening the infrastructure for better storage and preservation. He also said that entire supply chain needs a transformation and affordable and timely credit and insurance will help small and marginal farmers of the country. He said strengthening eNational Agricultural Markets (eNAM)

will benefit Indian farmers in realizing better prices. He emphasized on harnessing latest digital technologies in reaching out to farmers with timely knowledge and services. He concluded by saying that happy farmers make a happy nation.

Dr Trilochan Mohapatra, Secretary (DARE) and Director General (ICAR) elucidated the efforts of ICAR in chalking out location specific and state specific strategies to double the farmers' level. He highlighted the significant achievements of ICAR in post independence era especially in last four years and categorically said that ICAR technologies would contribute to 20% of the mission of doubling farmer's income where as 35% coming from better price realization, 25% from bridging the yield gaps and 20% from value addition and value chain.

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## BGRI Gene Stewardship Award for ICAR



Marrakech, Morocco, 14 April 2018. Dr Trilochan Mohapatra , Secretary (DARE) and Director General (ICAR) received the prestigious Borlaug Global Rust Initiative (BGRI) Gene Stewardship Award from Jennie Borlaug Laube, Chairperson, Borlaug Global Rust Initiative in the presence of Ms Kheya Bhattacharya, Ambassador of India in Morocco, Dr GP Singh, Director, IIWBR and entire Indian wheat team.

This award was given to ICAR in recognition of the outstanding work done by the Indian Wheat Programme in development and constant release and dissemination of agronomically-superior rust resistant wheat varieties that enabled effective management of rust disease thereby ensuring food security of the country.

On this occasion, the team of wheat researchers from ICAR and associated institutions in the country were felicitated for their significant contributions.

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## National Award for NAARM



New Delhi, 11 May, 2018. Technology Business Incubator of NAARM (a-IDEA), has received "National Award for Emerging Technology Business Incubator 2017" from Department of Science and Technology, Government of India on the occasion of Technology Day. This event was graced by Honorable President of India Shri Ram Nath Kovind. This award was presented by Dr Harsh Vardhan, Union Minister for Science and Technology, Earth Sciences, Environment, Forests and Climate Change. The incubator is supported by NSTEDB, DST, and BIRAC and all the partners are successfully promoting agri-entrepreneurship in agriculture sector across the country.

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## Union Minister of Agriculture and Farmers' Welfare visits ICAR-CIAE

Bhopal, 18 May, 2018. Shri Radha Mohan Singh, Union Minister of Agriculture and Farmers' Welfare, and President, ICAR paid a visit to ICAR-CIAE.



The Minister reviewed physical as well as financial progress of various developmental schemes of Government of India viz. National Food Security Mission, Gokul Gram, RKVY, Integrated Farming, Rainfed Area Development and ENAM.



He commented that there should be strong linkage between ATMA and ICAR Institutes and State Government machinery should make sure that guidance of scientists is taken during various programmes of agricultural development and farmers' welfare. He advised each KVK to have demonstration units on micro irrigation, appropriate post-harvest processing and a strong revenue generation model to demonstrate that farmers' income can be doubled through improved technologies.

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## Commercialization of camel milk can stop decline of camel population

Bikaner, 10 June, 2018. Minister of State for Agriculture and Farmer's Welfare Shri Gajendra Singh Shekhawat visited the ICAR-National Research Centre on Camel, Bikaner. While appreciating the scientific outputs of NRCC scientists in establishing the camel as milch animal, he stressed the need for commercialization of camel milk and products like



freeze dried powder for diabetes, autism etc. He appealed to the private industry to join hands with NRCC to establish camel milk trade, as camel milk standards have been recently approved by FSSAI in February 2017. Shri Shekhawat appreciated the efforts of camel herders in rearing this animal in an era of mechanized world. He also awarded the progressive camel breeder Shri Shankarlal Rabari from Mewar region for his efforts in establishing camel milk trade. He urged NRCC scientists to initiate efforts for formation of Farmer Producer's Organizations (FPOs) so that collection, processing and trading of Camel milk is taken care of and also seek help of various agencies. He lauded the efforts of NRCC to exploit the unique immunology of camel for developing the diagnostic kit for Thyroid Cancer which has been effectively used for more than 25000 human patients by BARC. Appreciating the development of anti-snake venom against a deadly local snake **Bandi**—a scaled viper by NRCC under collaborative research, he said that it is a boon for desert dwellers and assured necessary help for conduct of clinical trials. While visiting the camel dairy, feed technology unit, eco-tourism facilities like museum, product parlor and riding he suggested to bring more visibility of NRCC on social media as it could be the best model of agro-ecotourism involving camel.

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## Seaweed farming has multi-dimensional projects

Kochi, 29 May, 2018. Smt Krishna Raj, Union Minister of State for Agriculture and Farmers Welfare urged scientists to accelerate research to promote seaweed farming which has multi dimensional industrial prospects, during her visit to ICAR-Central Marine Fisheries Research Institute, Kochi (ICAR-CMFRI).

Smt Raj said that seaweed cultivation will be greatly beneficial to the manufacturing of various Nutraceutical products, medicines and cosmetics. It can also fetch extra income to fishermen. She urged officers to organize village level campaigns to create awareness among the fishermen and farmers about



the prospects of small scale entrepreneurship in fisheries sector. She called upon scientists to implement innovative and diversified farming practices to woo more people into fish farming.

The minister also visited the National Marine Biodiversity Museum and inspected research laboratories at the CMFRI.

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## Minister for Home (Rural), Maharashtra visits ICAR-CIBA



Chennai, 19 April, 2018. Shri Deepak Kesarkar, Minister for Home (Rural), Finance and Planning, Government of Maharashtra along with a team of officers visited ICAR-Central Institute Brackishwater Aquaculture, Chennai.

He articulated his vision for “Dream Konkan” with the focused development of farmers, fisheries, tourism, education and industry along with preserving the rich heritage of Konkan region of Maharashtra. Shri Kesarkar urged scientists of CIBA to come up in the collaborative program for cost-effective farming technologies amenable to the west coast, especially for Sindhudurg region for the betterment of fish farmers and a coastal population who depend on this water for their livelihood and nutritional security. He expressed his interest to initiate joint programs between CIBA and Maharashtra government in areas of crab farming, seabass farming and feed development.

The minister and the team visited Muttukadu Experimentation Station of CIBA, and interacted with scientists.

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## DG, ICAR visits ICAR-CIFT and ICAR-CMFRI

Veraval, 7 April, 2018. Dr Trilochan Mohapatra, Secretary (DARE) and Director General (ICAR) visited Veraval Research Centre of Central Institute of Fisheries Technology and Central Marine Fisheries Research Institute.

Dr Mohapatra urged scientists to take up need based and problem specific research programmes, which must be targeted to combat the plight of the farmers and fishers. He reiterated that while taking up any project the focus must be on contributing towards the societal development. He said that it is challenging for the researcher especially for agricultural scientists as they have to work in multi-disciplinary mode with multi-dimensional approach to protect the interest of farmers and contribute to the economy of the nation and over-come the problems like climate change and global warming etc.

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## Personnel

### Superannuation

Name, Designation and Address	Date of relieving
Dr Inderjeet Singh, Director CIRB, Hisar	29 April 2018 (Relieved)
Dr I.S. Solanki, ADG(F&FC), ICAR Hqrs.	31 May 2018 (Relieved)
Dr P.K. Mishra, Director IISWC, Dehradun	31 January 2018 (Retirement)

## Editorial Board

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