



January-June, 2018

### Visit of Shri Gajendra Singh Shekhawat, Honourable Minister of State for Agriculture and Farmers' Welfare

(Details on Page-2)

Hon'ble Minister of State for Agriculture and Farmers Welfare, Government of India, Shri Gajendra Singh Shekhawat Ji visited ICAR-Central Research Institute for Dryland Agriculture, Hyderabad on March 24, 2018.





Visit of Shri Gajendra Singh Shekhawat Hon'ble Minister of State for Agriculture and Farmers' Welfare, Government of India

Inauguration of Climate Change Research Complex at ICAR-CRIDA, Hyderabad by Dr. Trilochan Mohapatra, Secretary, DARE and Director General, ICAR

(Details on page-2)

Dr. Trilochana Mohapatra, Secretary, DARE and Director General, ICAR inaugurated the Climate Change Research Complex at Hayatnagar Research Farm, ICAR-CRIDA on March 25, 2018.



Inauguration of Climate Change Research Complex by Dr. Trilochan Mohapatra, Secretary, DARE and Director General, ICAR

### Visit of Shri Gajendra Singh Shekhawat, Honourable Minister of State for Agriculture and Farmers' Welfare (Continued from Page-1)

Hon'ble Minister of State for Agriculture and Farmers' Welfare, Government of India, Shri Gajendra Singh Shekhawat Ji visited ICAR-Central Research Institute for Dryland Agriculture, Hyderabad on 24<sup>th</sup> March, 2018. At the outset, Dr. K. Sammi Reddy, Director (Acting) welcomed Shri Shekhawat Ji and briefed him about the mandate, organizational structure and major achievements of the Institute. Hon'ble Minister interacted with the scientists on various aspects of rainfed agriculture research for development in the Country. He explained the main motive of Mera Gaon Mera Gaurav (MGMG) programme while appreciating the efforts made by CRIDA under MGMG programme, wherein 15 groups of CRIDA scientists with 4 scientists in each group and adopted 15 villages. He also informed that the Government is linking agriculture to global markets so that the Indian farmers can take the advantage of global market demands for their agriculture products. He suggested that ICAR as an organization now should shift focus from 'farm to fork' to 'fork to farm' so that such agri-products could be promoted to increase farm income substantially. On this occasion two CRIDA's publications was



Shri Gajendra Singh Shekhawat, Honourable Minister of State for Agriculture and Farmers' Welfare interacting with ICAR-CRIDA scientists

## Inauguration of Climate Change Research Complex at ICAR-CRIDA, Hyderabad (Continued from Page 1)

Dr. Trilochan Mohapatra, Secretary, DARE and Director General, ICAR inaugurated the Climate Change Research Complex at Hayatnagar Research Farm, ICAR-CRIDA on 25.3.2018. The concerned scientists of facilities explained about relevance technical and scientific issues of these facilities to Hon'ble DG who was accompanied by Dr. S. Bhaskar, ADG (AAF&CC), Dr. K. Sammi Reddy, Director (Acting.); ICAR-CRIDA. The event was graced by Dr. B. Venkateswarlu, VC, VNMKV, Parbhani; Dr. V. Praveen Rao, VC, PJTSAU, Hyderabad; Dr. Y.S. Ramakrishna, Former Director, CRIDA and Member, NICRA Expert Committee and Directors of local ICAR institutes in Hyderabad. The complex houses three major state-of-the-art facilities viz., Free Air Temperature Elevation (FATE) system, Carbon dioxide and Temperature Gradient Chambers (CTGC) and Supervisory Control and Data Acquisition (SCADA) based Automatic Rainfall Simulator and Lysimeter. The Free Air Temperature Elevation (FATE) system is a research facility with elevated temperature conditions over ambient and intended to conduct various experiments controlling other parameters such as CO<sub>2</sub> enrichment and moisture deficit stress in intact ecosystems. CTGC is a CO<sub>2</sub> Temperature Gradient Chamber, a facility designed for measuring the impacts of elevated CO<sub>2</sub> and temperature SCADA based Rainfall Simulation Facility and Precision type Lysimeters with open top climate chambers for studying the climate change impacts on resource losses and soil water balance.



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### **Research Highlights**

The climate resilient technologies developed under the first phase of NICRA project are being demonstrated at the farmers field through the KVK's of technology demonstration

component. The details of list of climate resilient technologies being demonstrated at various KVK's are given below.

### Deitals of Resilient practices developed under NICRA strategies research demonstrated at KVK's

Institute	Name of the Technology	KVKs where the technologies are proposed to be demonstrated
CIAE, Bhopal	Broad Bed Former cum Seeder/Planter, Rotary Slit Till Drill, Seed Cum Fertilizer Drill for Differential Depth, Fertilizer Application, Variable Rate Urea Applicator with Spectral, Reflectance Based Sensor	Ratlam
ICAR-NEH, Umiam	<ul> <li>Land use model for hill slopes (30-40% slope) for soil and water conservation in all hill states of NE,</li> <li>Climate resilient deep litter pig housing model and raised/slatted floor poultry housing model in all hill states of NE.</li> </ul>	Ri bhoi
IIMR, Ludhiana	Drought and water logging tolerant hybrids and synthetics.	3 KVKs (Bihar, AP and Karnataka)
IIHR, Bangalore	Inter-specific grafting as a tool for improving resilience of tomato to flash flooding	Tumkur, Kolar
NDRI, Karnal	• Supplementation of Vitamin E, mustard oil and betaine to ameliorate heat stress in Dairy Cows.	3 KVKs (Haryana and Punjab)
CSWRI, Avikanagar	Area-specific mineral mixture, Anti-stress-pellet, Multi-nutrient supplement as lick     or pellet	Barmer, Bharatpur, Kota, Jhunjhunu, Jodhpur
DPR, Hyderabad	• OxyCure	Nalgonda
CRIDA, Hyderabad	CRIDA Broad Bed and furrow planter, CRIDA Herbicide applicator cum Variable width Raised Bed Planter	Nalgonda

## **Scientific Activities**

### Research Advisory Committee (RAC) meeting

The XXVI meeting of the Research Advisory Committee under the chairmanship of Dr. Panjab Singh, former Director General, ICAR and President, Foundation for Advancement of Agriculture and Rural Development (FAARD), Varanasi, UP was held during 11-12 January, 2018 at ICAR-CRIDA, Hyderabad. The committee reviewed the progress of research at CRIDA during the previous one year. Some of the recommendations that emerged out of the deliberations include strengthening of basic sciences research, identification of high biomass producing species to meet fodder needs, greater emphasis on minimization of seepage and evaporation losses and assessment of ecosystem services in watershed development programmes. They also suggested communication of the positive outcomes emanating from NICRA to the development programmes being implemented by state and central governments.



### Mid-Institute Research Council (IRC) meeting

Mid-Institute Research Council meeting was conducted on January 18 and 23, 2018. The meeting was chaired by Dr. K. Sammi Reddy, Director (Acting), ICAR-CRIDA and was attended by Project Coordinators and all Heads of Divisions/ Sections/Units and Scientists. Dr. K. Sammi Reddy, Director (Acting) and Chairman of IRC reviewed the status of RPPs and advised to adhere to the guidelines and submit them within the given time frame. New projects need to consider the expectations of RAC, QRT and ICAR, so as to tune the research for development of our clientele. Publications in high rated journals to be given high priority and at the same time scientists are advised to participate actively in various seminars/symposia, etc. All the PIs made brief presentation for the on-going projects and also brought to the notice about few constraints in achieving the objectives.

### Institute Management Committee Meeting (IMC)

The 47<sup>th</sup> meeting of Institute Management Committee was conducted on 22<sup>nd</sup> January, 2018. The following is the composition of present IMC team: Professor M.S. Nataraju, (Extn. Education), University of Agricultural Science (UAS), Bengaluru (Karnataka), Member Professor T.V.K. Singh, Dean/Director (Extension), Professor Jayshankar Telangana State Agricultural University (PJTSAU), Rajendranagar, Hyderabad, Member, Shri D.D. Verma, Comptroller, ICAR-NAARM, Hyderabad, Member, Dr. (Smt.) K. Surekha, Principal Scientist, ICAR-Indian Institute of Rice Research, Rajendranagar, Hyderabad, Member, Dr. G. Ravindra Chary, Project Coordinator, AICRPDA, ICAR-CRIDA, Hyderabad (Member), Dr. K. Sammi Reddy, Director (Acting), ICAR-CRIDA, Hyderabad (Member), Dr. Jagadish Rane, Head, National Institute of Abiotic Stress Management, Malegaon, Baramati, Pune, Member Agricultural Commissioner, Telangana state, Hyderabad. The research activities, institute budget utilization and other important activities of the institute were discussed during the meeting.



Workshop on Drought Monitoring Systems: **Constraints and Opportunities** 

A workshop on "Drought Monitoring Systems: Constraints and Opportunities" was organized on 14th March, 2018 by ICAR-CRIDA in collaboration with International Water Management Institute (IWMI). The workshop was organized as part of ICAR-IWMI collaboration work plan. The focus of the workshop was to understand the prevailing drought monitoring systems across different states for monitoring meteorological, agriculture droughts etc. and the use of the remote sensing information for in-season monitoring of agriculture droughts and the methods being followed for integration of various information sources etc.



Glimpses of Workshop on Drought Monitoring Systems

The workshop was attended by Dr. S.K. Choudhary, ADG (SWM), NRM Division, ICAR, Dr. K. Sammi Reddy, Director, CRIDA, Dr. AK Sikka, India Representative, IWMI, Experts from IWMI, representatives of States from Andhra Pradesh, Telangana, Karnataka and Tamil Nadu, Scientists from CRIDA, IARI, CAZRI, Central Government agencies (MNCFC, ISRO & IMD) and scientists from State Agriculture Universities (ANGRAU & PJTSAU) Major recommendation of the workshop was to popularize the available drought monitoring products among various stakeholders particularly the line departments for initiating the drought contingency measures. Data availability and sharing, improving the available products with collaboration, validation of various products across project sites were also discussed.

### Farm Machinery Industry Meet

An Industry meet was organized at CRIDA on 24<sup>th</sup> March, 2018 to create the awareness regarding the improved implements developed by the ICAR institutions. Shri L. Kishan Rao, Chairman, Telangana Agro Industry Development Corporation inaugurated the meet and addressed the gathering. Representatives from 45 industries attended the meeting and expressed their concern over present practices. Representatives from CIAE, Bhopal, IARI, New Delhi, Professor Jayashankar Agril. University, CRIDA presented their technologies which are commercialized and also under the commercialization status.



### Foundation Day Celebrations

ICAR - Central Research Institute for Dryland Agriculture (ICAR-CRIDA), Hyderabad, celebrated its 34<sup>th</sup> Foundation Day on 12<sup>th</sup> April, 2018. Smt. V. Usha Rani, IAS, Director General, National Institute of Agricultural Extension Management (MANAGE) graced the occasion as the Chief Guest. Dr. K. Sammi Reddy, Director (Acting), CRIDA in his welcome address highlighted the achievements of the Institute and appreciated the contributions of the predecessors as well as current employees in the growth of the Institute while presenting the activities planned for the future and the action plan to implement the same. Smt. V. Usha Rani, in her foundation day address 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. She also appreciated the work of CRIDA in coordination with various national programs and state rainfed mission for implementing at ground level. On this occasion, 10 best innovative farmers from 8 states (West Bengal, Maharashtra, Madhya Pradesh, Tamil Nadu, Telangana, Chhattishgarh, Karnataka and Andhra Pradesh) were felicitated for their innovative farming practices for enhancing productivity and climate resilience. The staff in administrative & accounts, technical and supporting categories were recognized for their significant contributions to the organization and felicitated. Two technical bulletins were released on this occasion. Apart from the employees, former Directors of CRIDA and Project Coordinators also participated in the programme.



### Institute Research Council (IRC) Meeting

The IRC meeting was held on 15<sup>th</sup>, 16<sup>th</sup>, 21<sup>st</sup> & 28<sup>th</sup> May, 2018. The meeting was chaired by Dr. K. Sammi Reddy, Director (Acting) CRIDA and was participated by Project Coordinators, Heads of Divisions/Sections/Units and Scientists. Dr. K. Sammi Reddy, Director (Acting) and Chairman of IRC informed the house to meet the expectations of RAC, QRT and ICAR as CRIDA is considered as one of the main pillars of ICAR. He also emphasized that high priority should be given to publications in high impact journals in general and scientists working on basic aspects in particular. The progresses of the ongoing projects under all the divisions were reviewed and suggestions were given. In this IRC, 15 New

projects were approved, 9 projects got extension and 3 projects were concluded.



IRC Meeting in progress

## **Contingency Plans**

### **Contingency Preparedness Meetings**

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 on 25<sup>th</sup> May, 2018. The meeting was organized at the Directorate of Agriculture, Chennai under the chairmanship of Additional Director of Agriculture Sri Shenbagha Rajan. All district level officers from 31 districts participated in the meeting. Dr. Deva Senapathy, Professor and Head, Agronomy Department, TNAU, Coimbatore, representatives from CIBA and

CMFRI participated in the meeting. Dr. K.V. Rao, Principal Scientist made a detailed presentation on forecast for Tamil Nadu State based on IMD and SASCOF 12 and forecasts. He emphasized role of district officials to educate farmers to be cautious 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, diligence need to be adopted for prudent use of water, especially in Cauvery basin area. Soft copies of the district plans were provided to the officials for preparing the action plans.



## Technology Transfer

### **Productivity Week Celebrations**

ICAR-CRIDA celebrated National Productivity week from 14-17 February, 2018 on the theme of enhancing productivity by adopting few industry 4.0 technologies. As the part of the programme, on February 14, 2018. Shri N.S. Raju, Scientist, (Computer Science) delivered a lecture on 'Cloud Computing' while on February 15, 2018. Dr. B. Sailaja, Principal Scientist, ICAR-IIRR delivered lecture on the topic 'Big Data in Agriculture'. Essay writing and elocution competitions for the CRIDA staff were also organised. Dr. K. Sammi Reddy, Director (Acting), ICAR-CRIDA distributed prizes to the winners of the competitions on the concluding day of the National Productivity Week.

# Farmer - Scientist Interface and Web Telecast of Krishi Unnati Mela

Farmers - Scientists interface meeting was held at ICAR-CRIDA, Hyderabad on 17<sup>th</sup> March, 2018 at 10.00 AM. About 1000 farmers, scientists, technical officers and other officials participated in the meeting. Honourable Prime Minister inaugurated the Krishi Unnati Mela and Biennial National Conference of KVKs on 17<sup>th</sup> March, 2018 at the campus of ICAR-Indian Agricultural Research Institute (IARI), New Delhi. At the outset he welcomed all the farmers, scientists and extension personnel who were present at the occasion and others viewing the web telecast across the nation. He emphasized that farmers of the country are facing the new threats and challenges and to resolve these, a new holistic approach is required with an aim to achieve Doubling of Farmers' income by 2022 Farmer-Producer-Organization (FPOs) and Gobar-Dhan Yojana. He urged the farmers not to burn the crop residue which cause the environment pollution instead suggested to incorporate in the field which will have multiple advantages. After this event, Farmer Scientist Interface was held under Chairmanship of Dr. K. Sammi Reddy, Director (Acting), ICAR-CRIDA. Sri N. Gallaya, Sarpanch, appreciated the efforts of CRIDA in Swacch Bharat Mission which was implemented in the village wherein the planting of several tree species was done as a part of afforestation.



Glimpses of the Farmer - Scientist Inferface and Web telecast of Krishi Unnati Mela

### Participation in Exhibitions

### Krishi Unnati Mela

ICAR-CRIDA participated in the Krishi Unnati Mela held during 16-19 March, 2018 at IARI exhibition grounds, Pusa, New Delhi. The Krishi Unnati Mela, 2018 was inaugurated by the Honorable Agriculture Minister, Shri Radhamohan Singh Ji and later visited the exhibition pandals.



CRIDA's stall at Krishi Unnati Mela

The Director General of ICAR Dr. T. Mohapatra, DDG'S and other eminent personalities visited the stalls of ICAR institutes including CRIDA. More than 800 stalls have been set up by the Central and State Governments, various organizations, etc. in this fair. On 17<sup>th</sup> March, 2018 Hon'ble Prime Minister Shri Narendra Modi addressed farmers, agricultural scientists and other participants during the mela. The team comprising of Dr. Jagriti Rohit, Scientist, Dr. Anshida Beevi C.N, Scientist and Sri G Sai Krishan explained NRM technologies particularly soil and water conservation technologies and NICRA achievements. Free publications were provided to interested visitors based on theme area of interest. The event provided a platform for sharing information on CRIDA technologies to the farmers with the overall objective of development, empowerment, and progress of the farmers.

## Workshop cum exhibition on Road Map for Vegetable Oil Production by 2022

ICAR -Indian Institute of Oil Seed Research (IIOR), Hyderabad organized a two day workshop from 28-29, April, 2018 on "Road Map for Vegetable Oil Production by 2022 in collaboration with Department of Agriculture and Farmers Welfare, New Delhi. On invitation from IIOR, ICAR-CRIDA showcased relevant Farm Implements and Machinery technologies under the guidance of Dr. B. Sanjeeva Reddy and Er. Ashish Dhimate. All the ICAR Institutes, Agricultural universities and State line departments from Telangana and Andhra Pradesh also exhibited their technologies. Shri Gajendra Singh Shekhawat, Minister of State for Agriculture and Farmers welfare inaugurated the exhibition and interacted with various stakeholders. He was highly impressed with the CRIDA machinery technologies and enquired about the availability of these technologies for the farmers. Dr. Sammi Reddy, Director CRIDA informed that all these technologies were passed on to more than 22 industries through MOA for manufacture and supply. These machineries were also empanelled by Agro Industries under subsidy scheme in states like Maharashtra, Andhra Pradesh and Telangana states for the benefit of farmers.



Shri Gajendra Singh Shekhawat, Honourable Minister of State for Agriculture and Farmers' Welfare visiting CRIDA's stall

#### **CRIDA-KVK**

#### Workshop on Sustainable intensification and diversification

One day workshop on Sustainable intensification and diversification in Horticulture & Livestock entrepreneurs was conducted at KVK-CRIDA, Ranga Reddy District on January 4, 2018. About 48 Farmers were attended in the programme. The trainees were explained about the Good management practices to adopt in rearing ruminant population, precaution to be taken during pre-monsoon period, poisoning cases measures to be adopted to minimize the mortality in animals.

### Field Day on Cluster Frontline Demonstrations of Chickpea

A field day on Cluster Front Line demonstrations was organized on February 17, 2018. The CFLDs were demonstrated in Medipaali village of Moinabad Mandal in 10 ha of area in two clusters with variety Nandyala Senega -1 (NBeG -3).



Cluster Frontline Demonstrations of Bengalgram (Chickpea)

Field visit under Seed Hub project: CRIDA-KVK was allotted Seed hub on pulses by the Ministry of Agriculture and Farmers' Welfare under NFSM programme along with other centres in the country. Under this programme KVK has taken up the seed production on pulses in Redgram and Horsegram during 2017-18. 20 guintals of redgram certified seed variety PRG -176 was able to produce 107.72 quintals processed Foundation seed of redgram variety PRG 176 and 5 quintals of Horsegram variety CRHG-4 was produced under the Seed Hub programme and the seed will be sold and distributed to farmers under Revolving Fund Scheme.



### **Skill Development Training Program on Farm Pond** Construction and Lining

A skill development training program was organised in association with Department of Horticulture, Government of Telangana for rural youth and farmers on "Farm Pond Construction and Lining" during February 20 to March 27, 2018 at KVK, Ranga Reddy district. About 420 rural youth and farmers were trained from 24 districts from Telangana state. The trainees were imparted with skills of location of farm pond based on the slope direction, marking for the farm pond, construction procedure with machinery, calculation of farm pond capacity for different catchment areas, inlet and outlet structures along with silt trap, size of the lining material and selection of lining material etc. The trainees were also exposed to the field visit of farm pond technology in Gunegal Research Farm (GRF) and Hayathnagar Research Farm (HRF).

### **Exposure visit**

ICAR-CRIDA, KVK, Ranga Reddy district conducted exposure visit cum training programme on Fodder production technologies and mitigating fodder shortage situation for small and marginal dairy farmers of KVK adopted villages Gummadivally, Kolanguda and Gummadivally Thanda of Kandukur Mandal-Ranga Reddy district. This exposure visit was organized in collaboration with Regional Fodder Station, Ministry of Agriculture and Farmers Welfare, Department of A.H, Dairying & Fisheries at Pahadishariff, Hyderabad on May 29, 2018. Twenty six progressive dairy practicing farmers participated in the training programme. The farmers expressed keen interest in growing of popular varieties viz., perennial hybrid napier CO-4, CO-5, Multicut fodder sorghum Co-FS-29, Maize J1006, Bajra (BAIF1) and Hedge Lucerne.

## Awareness programme on Technologies in agriculture and allied sectors

The training was organized for Scheduled caste farmers of Ranga Reddy district under the land beneficiary scheme of Government of Telanagna on agricultural technologies and allied sectors with emphasis on livelihood activities. The training was sponsored by SC corporation of Ranga Reddy district. Fifty farmers were trained through resource persons of KVK both as Off campus at Ibrahimpatnam division (one day on 28.6.2018) and On Campus (at KVK premises 29.6.2018).

### Training programmes

About 21 training programmes were organsied under KVK during the period January to June, 2018 on different aspects of agriculture, horticulture, animal husbandry, farm mechanization and Women empowerment to farmers and farm women from Ranga Reddy district. About 554 farmers and farm women were benefitted from these training programmes.

### **AICRPs**

#### XVI Working Group Meeting of AICRPDA

The XVI Working Group Meeting of All India Coordinated Research Project for Dryland Agriculture (AICRPDA), ICAR-CRIDA was organized at AICRPDA centre, Jagdalpur, IGKV, Chhattisgarh during 1-5 February, 2018 with the main objective to critically review the progress at centres and finalize technical programme for 2018-19. Shri Kedar Kashyap ji, Hon'ble Education Minister, Government of Chhattisgarh was the chief guest and Dr. S.K. Patil, Hon'ble Vice Chancellor, IGKV, presided the inaugural session. Shri Kedar Kashyap ji, in his address appreciated the efforts of AICRPDA centre, Jagdalpur in developing rainfed technologies, which are integrated and implemented through convergence of various national/state agriculture/rural /tribal development programmes in Bastar region of Chhattisgarh state. Dr. S.K. Patil, emphasized that AICRPDA is a unique



#### **CRIDA - Newsletter**

project in addressing holistically the productivity, profitability and sustainability of rainfed agriculture in small farm holdings. Dr. Bhaskar while appreciating the efforts of AICRPDA, also suggested to strengthen agro-ecology specific rainfed integrated farming systems for risk resilience and sustainability of rainfed agriculture. Dr. Sammi Reddy, Director (Acting), ICAR-CRIDA suggested for strengthening existing collaboration with other AICRPS for addressing operationalization of the real-time contingency plan implementation at microlevel. On the occasion, Shri Kashyap ji, Hon'ble minister and dignitaries felicitated 13 best dryalnd farmers from various states for their efforts in adoption and popularizing the improved rainfed technologies, 19 publications by PC unit, AICRPDA and AICRPDA centres were released.

### Visit of QRT team to AICRPDA Centres

The VII QRT and scientists visited on-farm interventions in Tahkapal village, Bastar district adopted by AICRPDA centre, Jagdalpur and interacted with the farmers. During the meeting, Shri Dhananjay Dewangan, IAS, Collector, Bastar district, Chhattisgarh, interacted with the scientists from the centres and discussed about the issues to be addressed for rainfed agriculture and development in Bastar district. The major outcome of the deliberations during the meeting include finalization of technical programme 2018-19 at centres, and initiated new collaborative research with CRIDA, AICRPAM, AICRP on Cotton, ICAR-CICR and AICRP on Agroforestry. Further, during the meeting, the VII QRT, CRIDA-AICRPDA and AICRPAM reviewed the achievements of AICRPDA and AICRPAM centres located in Chhattisgarh, Madhya Pradesh and Uttar Pradesh.



QRT team visit to Tahpakal village, Baster District and interaction with farmers

## Technical Workshop of Voluntary Centres of AICRPDA

A one day Technical Workshop of 4 Voluntary Centres of All India Coordinated Research Project for Dryland Agriculture (AICRPDA) under PJTSAU, Hyderabad, ICAR-CAZRI, Jodhpur, ICAR-IGFRI, Jhansi and ICAR-IISWC, Research Centre, Bellary was held at ICAR-CRIDA on 26<sup>th</sup> May, 2018. The objective of the workshop was to sensitize the centres about the mandate and activities of AICRPDA, and to develop technical programme for the year 2018-19. Dr. V. Praveen Rao, Hon'ble Vice Chancellor, PJTSAU, Hyderabad, emphasized that soil and rainwater are two important natural resources in rainfed farming and the centres should map all the resources of the domain districts and develop location-specific technologies for bridging the yield gaps in the domain districts.



Participants of Technical Workshop

Dr. S. Bhaskar, ADG (AAF&CC), NRM Division, ICAR emphasized the importance of natural resource management research in view of climate change and also suggested the voluntary centres to prioritize the rainfed agriculture problems in the domain of the centre and accordingly initiate two or three focused experiments as problem solving research. Dr. K. Sammi Reddy, Director, (Acting) ICAR-CRIDA highlighted the major problems of rainfed agriculture and emphasized that the voluntary centres should initiate location-specific rainfed agriculture research to develop simple and cost-effective technologies. Dr. Ravindra Chary gave an overview of AICRPDA network research and briefed about the aim of the workshop to develop technical programme for each voluntary centre. Later, scientists from voluntary centres presented the details of resource characterization of domain districts and technical programme 2018-19.



### Technical Workshop on RIFS Research

A three day Technical Workshop on Rainfed Integrated Farming Systems (RIFS) research in AICRPDA was held at ICAR-CRIDA during 27-29<sup>th</sup> May, 2018 to analyse the survey data on RIFS, characterise & identify predominant RIFS and to develop technical programme for on-farm research on RIFS. Dr. S. Bhaskar, ADG (AAF&CC), NRM Division, ICAR, Dr. K. Sammi Reddy, Director (Acting), ICAR-CRIDA, Dr. G. Ravindra Chary, Project Coordinator (Dryland Research), Dr. C.A. Rama Rao, Dr. B.M.K. Raju, scientists from CRIDA/PC Unit, AICRPDA, and Chief scientists/ scientists from 23 AICRPDA Centres participated.



S. Bhaskar, ADG (A,AF&CC), Guest of Hor addressing the participants

ng remarks by Dr. K. Sammi Reddy, Di (Acting), ICAR-CRIDA

Dr. G. Ravindra Chary, Project Coordinator (Dryland Research), briefing about the workshop

### Capacity Enhancement Program

AICRPAM has organized 'Output Oriented Capacity Enhancement Program for 'Development of Dynamic Crop Weather Calendar' at JNKVV, Jabalpur during 21-28 February, 2018. Under this program, all AICRPAM centre scientists were trained on the use of "rule based software" developed by AICRPAM unit to develop the dynamic crop weather calendar and its calibration with the field experiment data generated by the centres.



# Meeting on Automation of Agromet Advisory Services with DGM, IMD

The 2<sup>nd</sup> Meeting of AICRPAM, ICAR-CRIDA and IMD officials was held at ICAR-CRIDA, Hyderabad on 18 April, 2018 for discussing the progress made on automation of Agromet Advisory Services in the country and linking with crop weather calendars and contingency crop plans. Dr. K. Sammi Reddy, Director (Acting), welcomed all the participants and highlighted that role and responsibilities of ICAR-CRIDA should be clearly defined. Dr. K.J. Ramesh, DGM, IMD provided a glimpse of present status of Agromet advisory services provided by IMD alone and in collaboration with ICAR. Dr. S.D. Attri made a detailed presentation on Agromet DSS for automation of Agromet Advisory Services and explained different components of DSS. Dr. P. Vijaya Kumar presented the progress made in development of dynamic crop weather calendar at AICRPAM, ICAR-CRIDA. It was decided that a draft MoU between ICAR-CRIDA, AICRPAM and IMD for this collaborative work be prepared shortly and signed shortly after getting approval from ICAR.



## National Innovations in Climate Resilient Agriculture (NICRA)

### Review by High Level Monitoring Committee

Tenth High level monitoring committee (HLMC) meeting of National Innovations in Climate Resilient Agriculture (NICRA) was held at NASC, New Delhi on 4<sup>th</sup> April 2018. The objectives of the meeting was to review the Action Taken Report on the recommendations of the 9th HLMC and to review the progress and achievements of the project from August 2016 to March 2018. Dr. Trilochan Mohapatra, Secretary (DARE) & Director General (ICAR) chaired the meeting and 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 book titled 'Climate Resilient Innovation from NICRA' in the meeting. Dr. K. Alugusundaram, DDG (NRM & AE), Dr. A.K. Singh, DDG (Hort Sciences & Crop Sciences), ADGs, representatives from various Ministries like Department of Agriculture and Cooperation, Ministry of Environment and Forest, DST, DBT and Ministry of Water Resources also participated in the meeting. Based on the discussions held several actionable points emerged and important observations were made. 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. Many other State Governments are coming forward to replicate NICRA village model. 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. It was also decided to conduct a one day workshop involving ICAR scientists, experts from line ministries and other stake-holders to discuss on the preparation of vulnerability atlas.



# Annual Action Plan and Review Workshop of NICRA-KVKs

Annual action plan and review workshop of NICRA-KVK's of various ATARI Zones were conducted during January-June, 2018 to review the progress and to discuss and finalize the action plan for *Kharif* 2018-19. The meetings captured the salient achievements and success stories from technology demonstrations in NICRA adopted villages. Scientists of TDC team from CRIDA participated in various workshops emphasized about the approaches for scaling up of the proven resilient practices in the NICRA villages which is to be adopted in the present phase of NICRA in various workshops. Various suggestions were given to make the NICRA-KVK's achievements visible to other farmers and stakeholders. NICRA-KVK's of the zone presented the consolidated achievements of the NICRA programme in the last year and the action plan for the next year.

Zones	Place	Date
Zone II	ICAR-ATARI, Jodhpur	April 9, 2018
Zone VI & VII	KVK Rhiboi, Barapani, Meghalaya	April 24-25, 2018
Zone XI	ICAR-ATARI, Bangalore	June1, 2018
Zone III	ICAR-ATARI, Kanpur	June 8, 2018
Zone X	KVK Namakkal, TN	June 18-19, 2018
Zone IV & V	ICAR-ATARI, Patna	June 27-28, 2018

### Zonal Monitoring Committee (ZMC) Visits

Zonal monitoring committee's visits to various zones were organized to review the technical progress of different modules like NRM, crop production, livestock & fishery and institutional interventions in NICRA villages and for making appropriate suggestions for improvement.

ATARI Zone	Dates	Place
Zone I	1-2 Feb, 2018	KVK Ropar, Fatehgargh Sahib, Faridkot, Bathinda
Zone II	12-17 Feb, 2018	KVK Bharatpur, Jhunjhun, Kota
Zone XI	26-27 Feb, 2018	KVK Gadag, Kalaburi
Zone VII	4-7 March, 2018	KVK Gonda & Pratapgarh
Zone V	11-14 March, 2018	KVK Dibrugargh
Zone VIII	20-22 March, 2018	KVK Baramati, Jalna

### Annual Review Workshop of AICRPDA-NICRA

The Sixth Annual Review Workshop of AICRPDA-NICRA was held at ICAR-CRIDA during 25-26 May, 2018 with the objective to review the progress of the 23 centres during 2017-18 and to develop technical programme for 2018-19. Dr. S. Bhaskar, ADG (AAF&CC), NRM Division, ICAR, Dr. K. Sammi Reddy, Director (Acting), ICAR-CRIDA, Dr. Vilas A. Tonapi, Director, ICAR-IIMR, Hyderabad, Dr. A. Vishnuvardhan Reddy, Director, ICAR-IIOR, Hyderabad, Dr. G. Ravindra Chary, Project Coordinator (Dryland Research), Dr. M. Prabhakar, PI (NICRA), Dr. P. Vijaya Kumar, PC, AICRPAM, Heads of Divisions & Sections, KVK and sections & scientists from CRIDA and PC Unit, AICRPDA, and Chief scientists/ scientists from 23 AICRPDA Centres participated. Dr. Bhaskar appreciated the contributions of AICRPDA centres in implementation of location-specific real time contingency technologies to cope with weather aberrations and their validation in farmers' fields, further he emphasized on the need for horizontal expansion of real-time contingency plans (RTCPs) implementation with the concept of NICRA Clusters. Dr. K. Sammi Reddy, Director, ICAR-CRIDA emphasized that the RTCP implementation is essential to cope with weather aberrations and he also suggested to compile the data and publish the results in reputed journals. During the occasion, three publications from PC Unit and AICRPDA centres were released. The major outcome of the deliberations during the workshop was to strengthen research on coping midseason drought, RTCP implementation on cluster basis and evaluation of millet and oilseed crops as climate resilient crops in strong cooperation with ICAR-Indian Institute of Millets Research and ICAR-Indian Institute of Oilseeds Research.



### **AICRPAM - NICRA Annual Workshop**

The annual workshop of AICRPAM component of NICRA project was held at Chandra Sekhar Azad University of Agriculture and Technology (CSAUAT), Kanpur during 30-31 May, 2018. In this workshop, the progress of activities undertaken by cooperating centers during 2017-18 was evaluated and the technical program for 2018-19 was finalized. Major recommendations made from deliberations of the workshop are:

- To extend the micro-level Agromet advisory services to more number of TDC-NICRA villages.
- Case study of agromet advisory services for horticulture, livestock, poultry and integrated farming system to be included in addition to field crops.

• Impact of Micro-level Agromet Advisory Services on the livelihood of selected farmers to be assessed taking the data of the first phase of AICRPAM-NICRA.



AICRPAM - NICRA Annual Workshop in progress

**Important Visitors** 

### Visit of Shri Chhabilendra Roul, Special Secretary (DARE) & Secretary (ICAR)

Shri, Chhabilendra Roul, Special Secretary (DARE) & Secretary (ICAR) visited ICAR-CRIDA on 16<sup>th</sup> January, 2018. Dr. K. Sammi Reddy, Director (Acting), ICAR-CRIDA welcomed Shri Roul and apprised him the activities and achievements of the institute. Shri Roul addressed scientists and staffs of the institute and appreciated ICAR-CRIDA technologies, NICRA facilities and

emphasized the need to create more impact of ICAR-CRIDA rainfed technologies and custom hiring centres on farmers' fields particularly in small and marginal famers' holdings in rainfed areas of the country. He visited ICAR-CRIDA facilities such as Plant Phenomics, OTC and Dryland Gallery.



Shri Chhabilendra Roul, Special Secretary (DARE) & Secretary, (ICAR) interacting with scientists of ICAR-CRIDA

### Cornell University students visited ICAR-CRIDA

A group of students from Cornell University, New York, USA has visited ICAR-CRIDA on January 8, 2018. An interactive session was held with the Director (Acting), Heads of Divisions

and scientists of ICAR-CRIDA. Later they have visited Dryland Gallery and were exposed to technical know-how on Dryland technologies.



#### Details of other visitors

SI. No.	Affiliation of Visitors	No. of visitors	Date of visit
1.	New Recruited Agricultural Scientists from NAARM, PJ TSAU	48	07.02.2018
2.	Assam Agricultural University, Jorhat	19	06.01.2018
3.	Students from Cornell University, New York	25	08.01.2018
4.	B. Tech. (Agril. Engg) students from VNMKV, Parbhani	85	20.03.2018
5.	Students from VNMKV, Parbhani	85	20.03.2018
6.	DKS College of Agriculture, Bhatapara (IGKV, Chattisgarh), B.Sc. (Agril.) III year students	25	23.03.2018
7.	Farmers from Belgavi, Karnataka	57	24.01.2018
8.	Farmers from State Department of Agriculture, Betul, M.P	8	07.02.2018
9.	Morappur Block, Dharmapuri district	21	12.03.2018

## Visits Abroad

Dr. JVNS Prasad, Principal Scientist (Agronomy) visited Bonn, Germany to take participation in the UNFCCC conference during April 30-May 10, 2018. He participated and presented in the session on SBI/SBSTA informal consultation on the impact of the implementation of response measures: improved forum and work programme.

Dr. Arun Kumar Shanker, Principal Scientist (Plant Physiology) went to Australia on foreign deputation through Endeavour

Executive Fellowship Programme, during April 7-August 6, 2018. Dr. Arun Shanker (Principal Scientist, CRIDA) and Robert Coe (Scientist, HRPPC, CSIRO node of the Australian Plant Phenomics Facility) partnered to work on a project entitled "Integrated highresolution phenotyping, chlorophyll fluorescence and photosystem II dynamics in wheat under water and heat stress" as part of an Executive Endeavour Fellowship received from the Australian Government's Department of Education and Training.

### Human Resource Development

### Feed the Future-India Triangular Training Programme on Strategies for Enhancement of Farmers Income in Dryland Agriculture

ICAR-CRIDA organized 15 days Feed the Future - India Triangular Training Program (FTF-ITT) international training program on "Strategies for Enhancement of Farmers Income in Dryland Agriculture"during January 16-30, 2018 for 22 international executives representing seven African and three Asian countries. The training program was inaugurated by Shri Chhabilendra Roul, Special Secretary (DARE) & Secretary (ICAR) in the gracious presence of Mrs. V. Usha Rani IAS, Director General, MANAGE, Dr. K. Sammi Reddy, Director (Acting), ICAR-CRIDA, scientists of ICAR-CRIDA and Directors of various ICAR

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institutes located in Hyderabad. The main aim of this training program was to enhance the human resources which in turn could assist in ambitious goal to achieve the food and livelihood security to the billions living in the rural and backward setups. Dr. Manoranjan Kumar, Principal Scientist (Soil & water conservation engineering), was the course director for this international training course. Dr. S. Bhaskar, ADG (AAF&CC), ICAR graced the valedictory session on January 30, 2018.



Inauguration of Feed the Future - India Triangular Training Programme on Strategies for Enhancement of Farmers Income in Dryland Agriculture

### International Training Programme on Rainwater Management for Climate Resilient Agriculture in Drylands

International Training Program on "Rainwater Management for Climate Resilient Agriculture in Drylands" was organized during February 15 - March 7, 2018 at ICAR-CRIDA, Hyderabad under India-Africa forum Summit-III and sponsored by the Ministry of External Affairs. Fifteen executives from Nigeria, Ethiopia and Malawi were participated in this training program. The Vice Chancellor of PJTSAU & Member, Governing Board of ICAR, Dr. V. Praveen Rao, inaugurated the program. During the inaugural address he has emphasized on science and evidence based implementable rainwater management technologies developed by ICAR-CRIDA which could be very well replicated at their respective countries through project mode with collaboration with Indian organizations. The Director (Acting), ICAR-CRIDA, Dr. K. Sammi Reddy highlighted the natural resource base and rainwater management in Nigeria, Ethiopia and Malawi and briefed on various rain water management technologies developed by ICAR-CRIDA.



Dr. Anthony Whitbread, Research Program Director for Innovation Systems for the Drylands (ISD), ICRISAT, Hyderabad was the chief guest for the valedictory function where he mentioned about the ICRISAT programmes in African Countries and emphasized the Agribusiness opportunities in African Countries. Dr. B. Krishna, Principal Scientist, was the course director of this training programme.



### National Hindi Workshop-cum-Training Programme

ICAR-CRIDA organised two days National Hindi Workshop-cumtraining programme from 24-25 April, 2018. The main purpose of this programme was to encourage the officers/officials who are holding the post of Official Language in their Institutes for effective implementation the Official Language policy of the Govt. of India / ICAR and to face the various inspections Committees like Parliament Committee on Official Language (PCOL) etc. More than 125 participants from all over ICAR Institute's were attended the programme. DDG (NRM), ICAR Hqrs., New Delhi & Prof. Shubda Vanjpe, Osmania University, Hyderabad were Special Guest & Chief Guest of the programme. Director (Hindi) and official language staff from ICAR headquarters, New Delhi and Director, CRIDA & Dr. S.R. Yadav, Asstt. Director(OL) along with other staff of CRIDA actively organised the above programme at CRIDA, Hyderabad.



National Hindi Workshop-cum-Training Programme

## Forthcoming Events

SI. No.	Title of the Event	Dates
1.	Independence Day Celebration	August 15, 2018
2.	ICAR South Zone Sports Meet-2018	September 5-9, 2018
3.	Model Training Course on "Extension strategies for Participatory Natural Resource Management in Rainfed Agriculture" Sponsored by D.O.E., Ministry of Agriculture & Farmer's Welfare, Govt. of India, New Delhi	September 24 - October 1, 2018
4.	ICAR sponsored 10-days short course on 'Assessment of vulnerability and adaptation to climate change in agriculture' organized by ICAR-CRIDA from at ICAR-CRIDA, Santoshnagar, Hyderabad.	November 28 - December 7, 2018
5.	XXVI Biennial Workshop of AICRPDA	December 2018

For further details please visit the website: www.icar-crida.res.in

## Participation in Seminars and Symposia

Name of the scientist	Workshop/Meeting/Seminar/ Symposia	Duration	Venue
K. Sammi Reddy	National workshop on "Doubling Farmers Income by 2022"	January 17, 2018	ICAR-NAARM, Hyderabad
	National Consultation on "Making Agriculture Sustainable and Profitable	June 21-22, 2018	VAMNICOM, Pune
K. Sammi Reddy, Anshida Beevi C.N., Jagriti Rohit	Krishi Unnathi Mela, IARI, New Delhi	March 15-19, 2018	ICAR-IARI, New Delhi
K.Sammi Reddy & M.Manjunath	Microbe based technologies for Soil Health and Plant Nutrition	May 25, 2018	NASC Complex, New Delhi
Kaushalya Ramachandran	Geospatial World Forum	January 17, 2018	HICC , HITEX, Hyderabad
	ASSOCHAM (Associated Chambers of Commerce of India) Geospatial Conference	June 8, 2018	Hotel Radisson, Hi-Tech city, Hyderabad
G. Ravindra Chary	Workshop on the Drought Manual 2016	February 22, 2018	MNCFC, New Delhi
	Review and Finalization Meeting of Action Plans for Drought Proofing in 16 Districts of Karnataka	February 27, 2018	Bengaluru
C.A. Rama Rao	Working Committee Meeting on 'Scaling up climate-smart agriculture in Telangana state'	February 19, 2018	EPTRI, Hyderabad
	Workshop on 'Dimensions of Agrarian Distress', jointly organized by MANAGE, ICRISAT, CESS and TEA	April 20-21, 2018	MANAGE, Hyderabad
R. Nagarjuna Kumar	User's Training Workshop on Geospatial Applications in Data Enrichment of ICAR KRISHI Geoportal	March 26-27, 2018	ICAR-NBSS&LUP, Nagapur
	National Dialogue on Artificial Intelligence (AI) and Internet of Things (IoT) Applications in Agriculture	June 1-2, 2018	ICAR-NAARM, Hyderabad
K.A. Gopinath	Advocacy meeting on need and scope for farming system for nutrition in Andhra Pradesh	May 21, 2018	Vijayawada

## Awards and Recognition

A Copyright was bagged for the web enabled software namely 'Unreaped yield potentials in major rainfed crops and scope for bridging yield gaps - A decision support system' (Citation: Raju, B.M.K., Nagarjuna Kumar, R., Rama Rao, C.A., Josily Samuel, Rao, K.V., Subba Rao, A.V.M., Osman, Md and Swapna, N. 2018. Unreaped yield potentials in major rainfed crops and scope for bridging yield gaps, Decision Support System (available at http://www.crida.in:8129/).

Dr. B. Narsimlu, Senior Scientist (Soil & water conservation engineering) awarded with the Doctor of Philosophy in Water Resources Engineering by Indian Institute of Technology (IIT) Delhi, New Delhi on 4<sup>th</sup> May, 2018.

## **Personnel Information**

### Appointments/Promotions/Transfers/Joinings

Name and Designation	Transfer/Joining/Promotion	Date w.e.f			
Transfers/ Joinings	Transfers/ Joinings				
Dr. G. Rajeshwar Rao Principal Scientist, ICAR-CRIDA	Joined as Director to Tropical Forest Research Institute (TFRI), Jabalpur	22.02.2018			
Dr. K. Usha Rani Assistant Chief Technical officer, ICAR-CRIDA	Joined back from the deputation (27.08.2017 to 19.06.2018) Joint Director (Extn.), Directorate of Extension, Ministry of Agriculture and Farmers' Welfare	19.06.2018			
Smt. N. K. Anupama Junior Accounts Officer, ICAR-CRIDA	Transferred as Assistant Finance and Accounts Officer to ICAR- Central Marine Fisheries Research Institute, Kochi	19.06.2018			
Promotions					
Dr. A. K. Indoria, Scientist	Promoted to next higher pay 7000	15.09.2015			
Dr. V. Girija Veni, Scientist	Promoted to next higher pay 7000	02.07.2016			
Smt. V. Visha Kumari, Scientist	Promoted to next higher pay 7000	15.09.2016			
Shri P. Chandra Sekhar, ACTO	Assistant Chief Technical Officer - Chief Technical Officer	01.01.2017			
Shri P. Raju, Driver	Senior Technician - Technical Assistant	04.06.2016			
Shri K. Shankar, Driver	Senior Technician - Technical Assistant	12.12.2017			
Shri K. Rajeshwar	Technician - Senior Technician	25.01.2017			
Smt. V. Renu	Personal Assistant - Private Secretary	24.03.2018			

Our hearty congratulations to all of them

#### Retirements

Name	Designation	Date of superannuation
Smt. N. Lakshmi Narasu	Private Secretary, PC Unit, AICRPDA	28.02.2018
Shri S. Srinivasa Reddy	Assistant Chief Technical Officer, HRF	30.04.2018
Smt. K. V. Manikyam	Private Secretary	30.06.2018

Our best wishes for happy and peaceful retired life to all of above staff

### **Cultural and Welfare Activities**

### **Republic Day Celebration**

ICAR-CRIDA celebrated India's 69<sup>th</sup> Republic Day on 26<sup>th</sup> January, 2018 with pride and excitement. Dr. K. Sammi Reddy, Director (Acting), ICAR-CRIDA hoisted the National Flag and addressed the gathering. On the eve of Republic day, Cultural

and Recreation Club (CCRC) of ICAR-CRIDA conducted various games and singing competition for all the staffs of the institute. On this occasion Dr. K. Sammi Reddy, Director (Acting) distributed the prizes to the winners.



**International Day of Yoga celebration** The Fourth International Day of Yoga (IDY) was organized at ICAR- Central Research Institute for Dryland Agriculture, Hyderabad on 21<sup>st</sup> June, 2018 wherein about 150 staff members including scientists, technical, administrative and supporting staffs, senior research fellows, young professionals and contractual staffs were participated. Dr. M. Maheswari, Director In-charge in her opening remarks stressed the need of practicing yoga in our daily life and thus one can lead a stress-free and healthy life. Later, the participants performed Upa-Yoga as demonstrated by the volunteers of Isha Foundation and also yoga asanas as demonstrated in the Common Protocol video. Dr. S.S. Balloli, Principal Scientist (Soil Science) and Dr. Anshida Beevi C.N., Scientist (Agril. Extension) organized the event.



Published by Editorial Board Chairman	<ul> <li>Dr. K. Sammi Reddy, Director (Acting), ICAR-CRIDA</li> <li>Dr. K. Sammi Reddy, Director (Acting), ICAR-CRIDA</li> </ul>	ICAR-Central Research Institute for Dryland Agriculture Santoshnagar, Saidabad PO, Hyderabad - 500 059 Ph: 040-24530157/161/163 Fax: 040-24531802 E-mail: news.crida@icar.gov.in Website: www.crida.in
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## From the Director's Desk



Dr. K Sammi Reddy, Director (Acting), ICAR-CRIDA

### Southwest Monsoon situation over the country (2018)

This year south west monsoon set over Kerala by 29 May, 2018 and covered whole of the country by 29 June, 2018. The amount of predicted rainfall by IMD during monsoon season (June to September) for the country as a whole is likely to be 97% of the LPA with a model error of  $\pm 4\%$ . Region wise prediction shows that seasonal rainfall is likely to be ranging from 92 to 108% over North-West India, 91 to 107% over Central India, 87 to 103% over South Peninsula and 85 to 101% of LPA over North-East India. While the monthly rainfall predicted over the country as whole is likely to be 92 to 110% of its LPA during July and 85 to 103% of LPA during August.

While, the monthly distribution of rainfall during June month (1 - 30 June 2018), over country, has received 155.3 mm rainfall, which is 5% Deficit, compared to the normal rainfall for the same period (163.6 mm). Out of 36 meteorological subdivisions, rainfall was large excess in 2 sub-divisions; excess in 11; normal in 12; deficient in 10 and largely deficient in 1 subdivisions. Whereas from 1 June to 31 July 2018, the country as a whole has received 426.1 mm rainfall, which is 6% Deficit, compared to the normal rainfall for the same period (452.8 mm). Out of 36 meteorological subdivisions, rainfall was excess in 1 subdivision; normal in 27 and deficient in 8 subdivisions.

However, the rainfall situation in 658 districts of the country from 1 June to 15 August, 2018 showed excess rainfall condition in 107 (16%) districts, normal rainfall condition in 281 (43%) districts, whereas deficit rainfall condition is reported in 271 (41%) districts as per the report issued on 15 August, 2018 by India Meteorological Department.

Dr. K. Sammi Reddy, Director (Acting), ICAR-CRIDA

## निदेशक की कलम से .....

### देश में दक्षिण-पश्चिमी मानसून की स्थिति (2018)

इस वर्ष दक्षिण-पश्चिमी मानसून का आगमन केरल राज्य में 29 मई 2018 को हुआ तथा दिनांक 29 जून 2018 तक यह पूरे देश में पहुंच गया। देश में मानसून ऋतु (जून से सितंबर की अवधि के दौरान प्राप्त आंकड़ोनुसार) के दौरान अनुमानित वर्षा (एलपीए ± 4 प्रतिशत की मॉडल तुटि के साथ) की माता 97 प्रतिशत तक होने की संभावना है। क्षेत्रवार की गई भविष्यवाणियों से पता चलता है कि देश में मौसमी वर्षा दीर्घावधि औसत (एलपीए) की तुलना में उत्तर-पश्चिमी क्षेत्रों में 92 से 108 प्रतिशत, मध्य भारत में 91 से 107 प्रतिशत, दक्षिण प्रायद्वीप में 87 से 103 प्रतिशत, मध्य भारत में 91 से 107 प्रतिशत, दक्षिण प्रायद्वीप में 87 से 103 प्रतिशत और उत्तर-पूर्वी भाग में 85 से 101 प्रतिशत तक होने की संभावना है। हालांकि, देश के संपूर्ण भाग में एलपीए की तुलना में मासिक वर्षा की भविष्यवाणी जुलाई मास में 92 से 110 प्रतिशत और अगस्त माह में 85 से 103 प्रतिशत की गई है।

इस वर्ष जून माह (01-30 जून, 2018) के दौरान 155.3 मिलीमीटर वर्षा प्राप्त हुई, जो कि इसी अवधि के लिए सामान्य वर्षा (163.6 मिमी) की तुलना में 5 प्रतिशत कम थी। देश के 36 मौसम संबंधी उप-प्रभागों में से 2 उप-प्रभागों में अधिक वर्षा; 11 में अतिरिक्त; 12 में सामान्य; 10 में कम और एक उपखंड में काफी कम वर्षा प्राप्त हुई। जबकि, 01 जून से 31 जुलाई, 2018 तक, पूरे देश में 426.1 मिलीमीटर वर्षा प्राप्त हुई, जो कि इसी अवधि के लिए सामान्य वर्षा (452.8 मिलीमीटर) की तुलना में 6 प्रतिशत कम आंकी गई। 36 मौसम संबंधी उप-प्रभागों में से, एक उप-खंड में अधिक; 27 में सामान्य और 8 उप-प्रभागों में कम वर्षा प्राप्त हुई।

हालांकि, भारतीय मौसम विज्ञान विभाग द्वारा 15 अगस्त 2018 को जारी की गई रिपोर्ट के अनुसार 01 जून से 15 अगस्त 2018 तक की अवधि के दौरान देश के 658 जिलों में प्राप्त वर्षा की यदि तुलना की जाए तो 107 (16 प्रतिशत) जिलों में अतिरिक्त वर्षा, 281 (43 प्रतिशत) जिलों में सामान्य वर्षा और 271 जिलों (41 प्रतिशत) में सामान्य से भी कम वर्षा दर्ज की गई है।



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