

# ग्रामीण कृषि मौसम सेवा GKMS-News



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Agricultural Meteorology Division  
India Meteorological Department  
Ministry of Earth Sciences

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## *International Activities*

Dr. N. Chattopadhyay, Head (Agrimet) & Scientist-F attended the meeting of “Implementation and Coordination Team (ICT) and Management Group” Commission for Agricultural Meteorology, World Meteorological Organisation, Geneva held in Switzerland, Geneva during 28-30 November 2017.



Dr. S. D. Attri, Scientist-F, AASD New Delhi attended WMO Stakeholders Workshop on “Climate Services for Agriculture” held at Thimphu, Bhutan during 7-9 November 2017 where he made eight presentations on various topics on Weather, Climate and Agromet Services. Dr. N. Chattopadhyay, Head (Agrimet) & Scientist-F had an interaction meeting on Skype (video Conference) on 8<sup>th</sup> November 2017 for the stakeholders Workshop in Bhutan under the Project: “Customization of Climate Services Tool for Bhutan and development of tailored products for the Bhutanese agriculture sector.”



Dr. K. K. Singh, Head, AASD, IMD, New Delhi attended

- ◆ Workshop on “Climate Smart Agriculture in Asia: Beyond Pilot Evaluation and Models” held at Hanoi, Vietnam from 21-23 November 2017. Objective of the workshop was to bring together key stakeholders to discuss and exchange learning in Asia and presented India’s effort in providing climate services for agriculture and support system along with future plan.
- ◆ WMO’s RA II Region Working Group Chairs’ meeting at Abu Dhabi, United Arab Emirates during 12-14 December 2017. Dr. Singh was Coordinator for Expert Group on Agriculture Meteorology (EG-AgM) under Working Group on Climate Services for RA II region. He made two presentations on (i) EG-AgM Work Plan for 2017-2020 for RA -II, and (ii) Review of the regional activities in Asia and Implementation of RA II Operating Plan 2016-2019.



## ***National Activities***

### **Eleventh Annual Review Meeting of Gramin Krishi Mausam Sewa (GKMS) at IGKV, Raipur**



India Meteorological Department (IMD) and Indira Gandhi Krishi Vishwavidyalaya (IGKV), Raipur, Chhattisgarh jointly organized eleventh Annual Review Meeting of Gramin Krishi Mausam Sewa (GKMS) at IGKV, Raipur during 15 -16 November 2017. A number of high level dignitaries like Shri. Brij Mohan Agarwal, Hon<sup>ble</sup> Minister, Govt. of Chhattisgarh, Dr. Akhilesh Gupta, Advisor & Head SPLICE, DST & President-AAM, Dr. K. J. Ramesh, Director General of Meteorology, IMD, New Delhi, Dr. S. K. Patil, Hon<sup>ble</sup> Vice Chancellor, IGKV, Raipur, Dr. K. K. Singh, Head, Agromet, IMD, New Delhi and Dr. N. Chattopadhyay, Head (Agrimet), IMD, Pune, Scientists from various institutes, Principal Nodal Officers, Nodal Officers and Technical Officers of Agrometeorological Field Units (AMFUs) participated in the meeting. The main objective of the meeting was to review effective implementation of the GKMS scheme and on operational aspects like weather forecasting, observational network, use of satellite products in generation of Agromet Advisories, dissemination and popularization of AAS *etc.* In addition, discussion was also made on the proposed activities like implementation of block level AAS, enhancing weather forecast and observations including online access to observational data, capacity building, automated generation of Agromet Advisory bulletins *etc.*

### **National Seminar**



Officers AASD, New Delhi and Agrimet, Pune, Dr. Kailas K. Dakhore, Principal Nodal Officer, AMFU, Parbhani, Maharashtra and Dr. G.K. Das, Principal Nodal Officer, AMFU, Raipur, Chhattisgarh attended National Seminar on "Agrometeorology for Sustainable Development with special emphasis on Agrometeorological Practices for Climate Resilient Farming and Food Security (AGMET-2017)" held during 12 -14 October 2017 at Chaudhary Charan Singh Haryana Agricultural University (CCS HAU), Hissar. Dr. S. D. Attri, Scientist-F, AASD, IMD, New Delhi delivered invited talk on 'Climate Change and Agriculture'.

Shri I. J. Verma, Sci. E, Meteorological Centre, Bhopal participated in National Seminar on “ Climate Change: Its effects on the Agriculture Sector in India” organised by EPCO (The Environmental Planning & Coordination Organisation ) on 19<sup>th</sup> December 2017.



### Meeting

Dr. K. J. Ramesh, DGM, Dr. K. K. Singh, Head, AASD and Dr. S. D. Attri, Scientist-F. AASD participated in the meeting chaired by DG, ICAR and Secretary, DARE along with DDG (Agricultural Extension), ADG (Agricultural Extension) and other senior officers of ICAR for discussion of MoU between both the organizations, regarding establishment of DAMUs at KVKs of ICAR and augmentation of Agromet Advisory Service in the country on 6<sup>th</sup> October 2017 at ICAR, Krishi Bhawan.

### USER MEET of Agromet Advisories for Telangana

MC, Hyderabad organized USER MEET of Agromet Advisories for Telangana for improving outreach of AAS bulletins through state Agricultural Department and obtaining feedback on 23<sup>rd</sup> November 2017 which was attended by Dr. K. J. Ramesh, DGM, IMD, Shri Y. K. Reddy, Scientist-F & Head, MC Hyderabad, Dr. C. Parthasarathi, IAS, APC & Principle Secretary Dr. Jagan Mohan, IAS, Commissioner, Dr. P. Vijay Kumar, PC, CRIDA, Dr. S. C. Bhan, Scientist-F & Regional Coordinator and various Scientists, Agricultural Officers, Researchers, Project Coordinators from



KVKs, ARS and Agriculture department of Government of Telangana along with the progressive farmers from Telangana state. Support from Telangana Agriculture Department for dissemination of AAS bulletins and supply of contact details of 44 Lakh farmers was promised by Principal Secretary and Commissioner.

### 9<sup>th</sup> AGROVISION-2017

Shri M. A. Pachankar, Met-A and Shri S. Y. Wagmare, S.A. attended the 9<sup>th</sup> AGROVISION-2017 held during 10-13 November, 2017 at Nagpur, Maharashtra.





### Rural Programme Advisory Committee Meeting


Shri. J. P. Sable Meteorologist-A, Agrimet, Pune attended “Rural Programme Advisory Committee Meeting” held at KVK Narayangaon coming under Pune district on 14<sup>th</sup> December 2017 organized by All India Radio Pune and exhibited the various Services provided by Agrimet Division for the welfare of farmers under GKMS.

### Meetings /Workshop/Seminar attended by officers AASD, New Delhi and Agrimet, Pune .

- ◆ State level *Rabi* Productivity meeting-2017 cum workshop “On delivery of Agro-Meteorological Advisories Services (AAS) at block/village level through SMS to farmers of U.P.” held at auditorium Krishi Bhavan, Lucknow on 4<sup>th</sup> October 2017. Meeting was chaired by Shri Surya Pratap Sahi, Cabinet Agriculture Minister, Govt. of Uttar Pradesh.

- ◆ Stakeholder meeting at Bhubaneswar jointly organized by State Department of Agriculture, Odisha and MC, Bhubaneswar on 10<sup>th</sup> October 2017.
- ◆ Meeting chaired by Principal Secretary, Agriculture, Government of Gujarat along with Head, MC Ahmedabad, Director Agriculture and Nodal Officer, Gujarat on 26<sup>th</sup> October 2017 for augmentation of Agromet Services and holding of District Level Stakeholders meeting. 
- ◆ Workshop of Global Technology Watch Group: Adaptation and Mitigation to Climate Change for Sustainable Agriculture in NRRI, Cuttak during 25-27 October 2017. Dr. K. K. Singh presented on role of Geo ICT in Natural Recourse Management.
- ◆ Meeting, discussion, training and hands-on data familiarization for India Meteorological Department, (IMD) Agrimet officials at Space Application Centre (SAC) Ahmedabad on 9<sup>th</sup> October 2017 for utilization in Agromet Advisories.
- ◆ South Asian workshop for strengthening early warning for disaster risk reduction in agriculture organised at Chaudhary Sarwan Kumar Krishi Vishwavidyalaya (CSKKV), Palampur, Himachal Pradesh during 25-26 October 2017. 
- ◆ Farmers awareness meet at KVK Bastar, Chhattisgarh on 14<sup>th</sup> November 2017 about current status of weather and climate services provided by IMD.

### Workshop/ seminar attended by Officers of AMFU

- ◆ Dr. Prasanta Neog, Nodal Officer, **AMFU, Sonitpur, Assam** participated in a workshop on ‘Effective use of Geospatial Technology in Agriculture and allied Sectors in North Eastern Region’ organized by North Eastern Space Applications Centre (NESAC) in Umiam, Meghalaya during 21-22 November, 2017.
- ◆ Dr. Kailas K. Dakhore, Principal Nodal Officer, **AMFU, Parbhani, Maharashtra** attended working group meeting of AICRP on Agrometeorology (AICRPAM) to be held at Sher-e-Kashmir University of Agricultural Sciences and Technology, Chatha (Jammu) during 27<sup>th</sup> to 29<sup>th</sup> November 2017. He also participated as resource person for “Use of Extended Range Forecast for Development of CRM tools in Agriculture” during 24-30 December, 2017 at University of Agriculture and Horticultural Sciences, Shivmoga, Karnataka. 
- ◆ Dr. Kailas K. Dakhore, Principal Nodal Officer and Shri. Pramod B. Shinde, Technical Officer, **AMFU, Parbhani, Maharashtra** attended International seminar on “Global Climate Change: Implications for Agriculture and Water sectors” during 14 -16 December 2017 at Aurangabad.
- ◆ Dr. Mahender Singh, Sr. Scientist (Agromet) and Nodal Officer of GKMS unit, **AMFU, Chatha, Jammu and Kashmir** participated in International South Asian Workshop on “Strengthening Early Warning for Disaster Risk Reduction in Himalayan Agriculture” at CSKHPKV, Palampur during 25-26 October 2017.
- ◆ Dr. V. K. Mini, Scientist-D, **Meteorological Centre, Thiruvananthapuram, Kerala** attended the Centre-State Interactive meet to discuss the possibilities of increasing rice production in the state by introducing innovative and modern technologies and to strengthen the linkages and co-operation between Centre & State on 28<sup>th</sup> October 2017 at CTCRI, Thiruvananthapuram convened by Director ICAR.



## Paper presentation

- ◆ Dr. S. Khedikar, Scientist-B, Agrimet, Pune gave Oral presentation on research paper **“Yield estimate of major crop considering weather parameters and Remote sensing together for important states in India”** in the meeting of ‘INTROMET 2017’ workshop held during 7-10 November 2017 at Space Application Centre, Ahmedabad.
- ◆ Paper presented in National Seminar on **“Agrometeorology for Sustainable Development with special emphasis on Agrometeorological Practices for Climate Resilient Farming and Food Security”** organized at CCS HAU Hissar during 12-14 October 2017 on
  - ◇ **“Climate Change Assessment and Projection in Haryana”** by Mamta Rana, K. K. Singh and Nisha Kumari.
  - ◇ **“Effect of sowing temperature on growth and yield of Indian Mustard”** by Sumant Prasad, A. N. Mishra, A. K. Singh, K. K. Singh, A. K. Baxla and R. P. Singh.
  - ◇ **“Wheat yield Prediction using CERES-Wheat an operational approach for Uttar Pradesh in India”** by A. K. Baxla, K. K. Singh, R. K. Mall, P. K. Singh G. B. Gohain, Mamta Rana, Ranjeet Singh and Santosh Kumar.
  - ◇ **“Observed Solar radiation over India and its comparison with satellite estimates of NASA (NASA power) over India.”** By Muskan, S. C. Bhan and K. K. Singh.
  - ◇ **“Model Based assessment of physiological water stress in cotton crop”** by A. Sikha, K. K. Singh, A. P. Dimri and S. D. Attri.
  - ◇ **“Web GIS based Rael time monitoring and forecasting of soil moisture index at 25 km spatial resolution over Indian region”** by Anil Kumar Soni, Priyanka Singh, K. K. Singh, John P. George, G. B. Gohain, Kripan Ghosh and A. K. Baxla.
  - ◇ **“Crop Simulation Approach. To estimate the growth and yield response of Potato under present climate variability and prediction of yield for West Bengal”** by Priyanka Singh, S. Naresh Kumar, Kamaljit Ray and K. K. Singh.

## Award

**AMFU, Sonitpur, Assam** received best AMFU award in the eleventh Annual Review Meeting of GKMS at IGKV, Raipur, Chhattisgarh during 15-16 November 2017 for excellent performance in issuance of DAAS bulletins, dissemination of Agromet Advisories, conducting Farmer Awareness Programme etc. Dr. Prasanta Neog, Nodal Officer, Sonitpur received “Certificate of Excellence” in this regard from Shri Brij Mohan Agarwal, Hon’ble Minister, Govt. of Chhattisgarh.



**AMFU, Raipur, Chhattisgarh**, received the second best poster award for Trends of rain-fall and temperature over Chhattisgarh for crop planning by S.R. Patel, G.K. Das, J.L. Chaudhary, H. V. Puranik and Y. K. Dewangan at CCAW 2017 (International Seminar on Global climate change: Implications for agriculture and water sectors). CCAW 2017 held at WALMI, Aurangabad in joint co-ordination of Vasant Rao Naik Marathwada Krishi Vidyapeeth, Parbhani; Mahatma Phule Krishi Vidyapeeth, Rahuri; Dr. Panjabrao



Deshmukh Krishi Vidyapeeth, Akola; Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli, Water And Land Management Institute (WALMI), Aurangabad and JART, Pune during 14-16 December 2017.

**Dr. Ananta Vashisth, Nodal Officer, AMFU, New Delhi received following awards.**

- ◆ First prize in oral presentation for the paper entitled “Effect of weather variability on radiation use efficiency and yield of wheat crop” in the “National Seminar Agrometeorological Practices for Climate Resilient Farming and Food Security (AGMET-2017)” held at CCS Haryana Agricultural University, Hissar during 12-14 October, 2017.
- ◆ Distinguished Scientist in Agricultural Physics of the Research Awards-VIRA 2017 by Venus International Foundation. Outstanding Scientist Award by Society of Tropical Agriculture, India and best paper presentation award for the paper entitled “Importance of weather based Agromet Advisories for farmers under changing climate scenario” in the “6<sup>th</sup> International Conference on Recent Advances in Agriculture and Horticulture Sciences (ICRAAHS-2017)” during 16-17 December 2017 held at New Delhi.

## **Awareness Programme**

### **Farmers Awareness Programme (FAP)**

**AMFU, Kakdwip, West Bengal** organized FAP on “Climate, Weather and crops” on 26<sup>th</sup> December 2017 at Kalitala village, Kulpi block. Dr. N. Chattopadhyay, Head, Agrimet and Scientist-F, IMD, Pune discussed the importance of Weather based Agromet Advisory for the farming community. He pointed out the role of weather parameter on cultivation of crops and poultry, livestock, pisciculture. Prof. A. K. Senapati, Nodal Officer of GKMS Unit described role of Agromet Advisory Services. Dr. Shibani Chowdhury, Technical Officer explained GKMS project.



**AMFU, Diphu, Assam** organized FAP at Deopani village under Karbi Anglong district on 24<sup>th</sup> October 2017. The programme was undertaken in connection with input distribution programme under ongoing TSP (Tribal Sub Plant) project of the station. The farmers participating in the programme were beneficiaries under TSP project and they were imparted training on probable climate related problems in crops and livestock distributed to them and the precautions required to negate the problems.



**AMFU, Anand, Gujarat** organized FAP on “Importance of weather forecast and Agromet Advisory for farmers” at KVK Magalbhart, Vadodara, Chhota Udepur, Gujarat on 22<sup>nd</sup> December 2017. **Dr. S. D. Attri, Scientist F, AASD, IMD, New Delhi** gave the detail information about district Agro-meteorological unit and future plan of GKMS. Dr. Manjusha Kulshreshtha, Principal Nodal Officer of GKMS focus on “Departmental activities and scheme for farmers’ benefits.” Dr K.P. Patel, Dean college of agriculture gave information about GKMS programme. Dr. J. Sarkar, Scientist-F, IMD, Ahmedabad explained weather forecast in Gujarat State. Dr. S. B. Yadav, Nodal officer of GKMS gave lecture on “Weather forecast and its usability in agriculture” and display how to registered on mkisan portal for getting Agromet Advisory on mobile through SMS and collected farmers’ feedback. Other experts gave the lecture on Weather based disease, pest and its control, impact of climate change on horticultural crop, impact assessment of climate change on agriculture and adaptation measures for minimizing adverse effect of climate change in agriculture, animals diseases and its control.



**AMFU, Kolasib, Mizoram** organized FAP on “Weather management in farm operations” on 10<sup>th</sup> October 2017 at Phaiseng, Kolasib, Mizoram to introduce Operational Agro-meteorology and GKMS to new village (Phaiseng) and the importance of climate and weather information for agricultural production in Mizoram. Officers of GKMS Unit also highlighted the importance of weather forecasting for high value vegetable crops in Mizoram and emphasized the need for intensive scientist-farmer’s interaction for better implementation of farm level AgrometAdvisory services and crop health monitoring.



**AMFU, Ludhiana, Punjab** organized FAP on 3<sup>rd</sup> November 2017 on “Weather Services and Agriculture” to aware the farmers about the climate change and different strategies to mitigate the adverse effect of climate change, make the farmers more self-reliant in dealing with climatic issue that affect the crop production and to increase the awareness about Agro Advisory Services under GKMS scheme.



### Field visit

**AMFU, Pundibari, West Bengal** made three field visits : first on 27<sup>th</sup> December 2017 at Tufanganj-II vlock, Cooch Behar district; second on 28<sup>th</sup> December, 2017 at Tufanganj-I block, Cooch Behar district and third on 30<sup>th</sup> December, 2017 at Sitalkuchi block, Cooch Behar district to discuss about the effect of low temperature in potato and aphid infestation in mustard.



**AMFU, Karaikal, Puducherry** made a field visit on 6<sup>th</sup> December 2017. Dr. J. Gokila, Technical officer and Smt.Sharmila, Agricultural Officer to Kotucherry village of Karaikal to narrate the incidence of leaf folder damage in view of cloudy weather and its related management measures. They also gave demonstration on flood management.



Dr. A. L. Narayanan, Nodal Officer of GKMS unit, Karaikal, Puducherry and Shri Meikandan, Reliance Foundation created awareness on the aspects of flood management in paddy using urea + Zinc sulphate spray on 19<sup>th</sup> December 2017 at Kovilthirumalam of Tiruvarur district. They also arranged a demo on foliar spray of nutrition to rice at Rettakudy village, Tiruvarur on 20<sup>th</sup> December 2017. The farmers were realizing about the weather related problems in rice.

**AMFU, Majhian, West Bengal** organized farmers meet cum field visit at Blurghat & Tapan block of Dakshin Dinajpur district on 20<sup>th</sup> December 2017 to study aphid attack in mustard field.



**AMFU, Kalimpong, West Bengal** made three field visits on 8<sup>th</sup>, 23<sup>rd</sup> and 28<sup>th</sup> December, 2017 at Kalimpong district.





## Other Awareness Programme

**AMFU, Diphu, Assam** actively took part in world soil health day on 5<sup>th</sup> December 2017 organised by KVK, RARS to creating awareness among the farmers regarding the effect of crop residue burning in field, importance of soil testing, availability of nutrient in soil and how to use balance dose of fertilizer and importance of weather on use of fertilizer in the field.



The **AMFU** also visited the IFFCO Kisan Sanchar Limited (Kisan Call Center, Guwahati) and have contact with agriculture experts of IFFCO for link up to increase the farmer's number and awareness of GKMS by register in mKisan.

**AMFU, Gossaigaon, Assam** organized awareness programme among the students of Bhomrabail High School, Gossaigaon, Kokrajhar on 7<sup>th</sup> December 2017. Officers of AMFU explained benefits of Agromet Advisory Services in Agricultural Crop production, climate change & weather forecasting.



Dr. S. K. Paul, Nodal Officer, **AMFU, Gossaigaon, Assam** attended World Food Day meeting on the theme "Doubling Farmers' Income" at Noapara Dakhin near Manikpur organized by KVK, Bongaigaon on 16<sup>th</sup> October 2017 and gave a lecture on benefit of Agromet Advisory Services. He also attended World Soil Health Day at Abhaypuri organized by KVK, Bongaigaon on 5<sup>th</sup> December 2017 and conducted awareness on the weather based



Agromet Advisories under GKMS project. Also Dr. Paul participated "Petroleum Conservation Day" at Block Development Office, Manikpur organized by KVK, Bongaigaon on 7<sup>th</sup> December 2017 and highlighted the impact of extreme weather events in the farm lands and role of Agromet Advisories in strengthening the agricultural productivity system.

Shri Athar Nishat Islam, Technical Officer, **AMFU, Gossaigaon, Assam** attended Agriculture Education Day on 3<sup>rd</sup> December 2017 at High School, Gossaigaon, Assam and highlighted the beneficial impact of Agromet Advisory Services on the present agricultural productivity system.



**AMFU, New Delhi** organised Kisan Gosthi and field visit under MGGM (Mera Gaon-Mera Garav) programme at Kaushalia, Bhoorgarhi and Samaypur villages, Ghaziabad on 3<sup>rd</sup> November 2017 to create awareness among farmers regarding importance of weather, weather forecast and weather based advisories in Agriculture. Seed of wheat variety HD-3086 and HD-2967 distributed among farmers for *Rabi* season. Dr. Ananta Vashisth, Nodal Officer of GKMS unit also explained the technology developed by the Institute and weather based management practices for *Rabi* crops.





**AMFU, Pundibari, West Bengal** participated in the kisan mela in Tufanganj-I Block, Cooch Behar district on 28<sup>th</sup> December 2017. A training programme was conducted in the mela to discuss about the mustard aphid and early blight of potato during the winter season and protection measure.



**AMFU, Majhian, West Bengal** organized training programme during 26-29 December 2017 to discuss on Climate change and its effect on agriculture, role of weather based Agromet Advisory service for agricultural activities and improvement of the interaction between farmers and the AFMU.



**AMFU, Majhian, West Bengal** participated in sub divisional Krishi mela organized by Department of Agriculture, Balurghat during 22-24 December 2017. Leaflets on Agromet Advisory Services were distributed. Mobile numbers of the farmers from different blocks were collected to send Agromet Advisory SMS through mKisan portal.



**AMFU, Dantiwada, Gujarat** organized farmers meet on 8<sup>th</sup> November 2017 at village Nilpur, Dantiwada. Experts gave information to farmers about cultivation of potato crop grown, application of fertiliser and quality of seed to be used for potato cultivation in the region, control measure for disease and pest of potato crop. Shri Ajit Desai, Technical Officer, GKMS informed about activities of GKMS project.



**AMFU, Jorhat, Assam** participated in Farmers' Fair at Regional Agricultural research station, Titabar, Jorhat, Assam on 7<sup>th</sup> November 2017 and at Sugarcane Research Station, Buralickson, Golaghat, Assam on 23<sup>rd</sup> November 2017. Officers of AMFU gave information about meteorological instruments and also highlighted the utility of weather based Agromet Advisories among the farmers. Also farmers' registration carried out for mobile SMS services under the GKMS project.



**AMFU, Kharagpur, West Bengal** participated in field day to create awareness and utilization of weather based advisory at Kenthia village, Kharagpur-II on 27<sup>th</sup> October 2017. Also there was interactive session with the farmers on the important role of weather based advisory on efficient input management in crop cultivation. The **AMFU** also made two field visits on 20<sup>th</sup> and 23<sup>rd</sup> December 2017 to discuss with farmers on cultivation the crops using weather information.



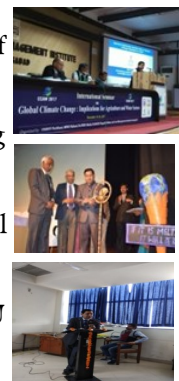
Dr. A. L. Narayanan, Nodal Officer of GKMS unit, **AMFU, Karaikal, Puducherry** along with Dr. C. Rettinasababady (Pathologist) and Dr. K. Kumar (Entomologist) and Shri Kennadi Raju of M. S. Swaminathan foundation conducted one day farmers seminar on rice cultivation at Kathiripulam village of Vedaranyam to create awareness on weather, pest and disease management in rice in relation to flood condition on 25<sup>th</sup> December 2017.



Dr. Ananta Vashisth, Nodal Officer, **AMFU, New Delhi** attended राष्ट्रीय महिला किसान दिवस on 15<sup>th</sup> October, 2017, NASC, New Delhi.

## Lectures

- ◆ **Dr. K. K. Singh, Head, AASD and Dr. Kripan Ghosh, Scientist-E, AASD** delivered lecture in training programme cum workshop on “Use of Extended Range Forecast For Development of CRM Tool in Agriculture” during 23-30 December 2017 at University of Agriculture and Horticultural Sciences, Shivmoga, Karnataka.
- ◆ **Dr. S. D. Attri, Scientist-F, AASD** delivered invited talk on
  - ◇ **“Climate Change and Agriculture”** in National Seminar on “Agrometeorology for Sustainable Development with special emphasis on Agrometeorological Practices for Climate Resilient Farming and Food Security” held at CCS HAU Hissar during 12-14 October 2017.
  - ◇ **“Climate change modeling and Impact assessment”** in 21<sup>st</sup> International Conference of International Academy of Physical Sciences (CONIAPS XXI) held at GJ Univ. of Sci. & Tech. Hissar, India during 28-30 October 2017.
  - ◇ **“Agro-Meteorological Advisory Services and its Automation”** in Working Group Meeting of AICRP on Agrometeorology held at SKUAST-J, Jammu during 27-29 November 2017.
  - ◇ **“Role of Agromet Services in Climate Change Adaptation”** in International Conference during 14-16 December 2017 at Aurangabad, Maharashtra.
  - ◇ **“Climate Change and Sustainable Clean Environment”** in National Conference held at Central University of Haryana, Mahendergarh, Haryana, during 22-23 November 2017.
  - ◇ **“Climate Change and Sustainable Development”** in National Seminar organised by MDU Rohtak on 24<sup>th</sup> November 2017.
- ◆ **Dr. N. Chattopadhyay, Head (Agrimet) & Scientist-F** delivered lecture on “Genesis and future strategies of Agromet Advisory Services in the country” at the National Training Programme on Fundamentals of Agricultural Meteorology organized by Mahatma Phule Krishi Vidyapeeth, Department of Agricultural Meteorology, Centre of Advance Faculty Training (CAFT) in Meteorology, Pune on 8<sup>th</sup> November 2017.
- ◆ **Shri Anand Sharma, Scientist-F, AASD** delivered a lead talk on "Extreme Weather events with respect to Himalayas" and "Agromet Services and its Outreach" in the UNESCO, IMS and IMD International workshop on “Strengthening Early Warning for Disaster Risk Reduction for Himalayan Agriculture” at Palampur Agricultural University during 25-26 October 2017.
- ◆ **Dr. S. C. Bhan, Scientist-F, AASD** delivered two invited lectures on “Agro-Meteorological data Collection Analysis and Management” for ICAR Technical staff held at ICAR-CRIDA, Hyderabad during 11-23 December 2017.



## Training

- ◆ Dr. Lata Vishnoi, Scientist-B, AASD, New Delhi and Smt. K. Malathi, Met-B, Smt. Swati Chandras, SA, Smt. Vidhya R. Choudhari, SA and Nivedita Tidke, SRF from Agrimet Pune attended the training on “Data Familiarization and hands on for utilization in Agromet Advisories” at SAC, Ahmedabad during 9-11 October 2017.
- ◆ Dr. Ananta Vashisth, Nodal Officer, AMFU, New Delhi attended training on “Advanced Statistical Tools and Techniques for Modeling and Forecasting Agricultural Data”, ICAR-IASRI, New Delhi during 8-28 November 2017.
- ◆ Shri Sevak Das, Assistant Professor & Nodal Officer, AMFU, Dantiwada, Gujarat participated in training programme “Input Dealer Training” and delivered lectures on “Role of weather in crop production and benefits of Agromet Advisory Services in farming community” organized by S. D. Agricultural University, Dantiwada on 28<sup>th</sup> October 2017.



- ◆ Dr. Mahender Singh, Sr. Scientist (Agromet) and Nodal Officer of GKMS Unit, **AMFU, Chatha, Jammu and Kashmir** participated in short training programme on Advances in Climate Resilient Soil Management for sustainable hill Agriculture and delivered a lecture on "Preparation & dissemination of Agromet Advisory in changing climate" organized by ICAR at SKUAST-Jammu during 1-10 November 2017.
- ◆ Dr. Mahender Singh, Sr. Scientist (Agromet) and Nodal Officer of GKMS unit, **AMFU, Chatha, Jammu and Kashmir** participated in Working Group Meeting-AICRP on Agrometeorology organized by Agromet Section, SKUAST- Jammu, Chatha during 27-29 November 2017.



## **Publication**

- ◆ Paper entitled "Usability of extended range and seasonal weather forecast in Indian agriculture" by N. Chattopadhyay, K. V. Rao, A. K. Sahai, R. Balasubramanian, D. S. Pai, D. R. Pattanaik, S. V. Chandras and S. Khedikar has been accepted for publication in Research Journal 'MAUSAM'. has been accepted for publication in MAUSAM.
- ◆ " Role of Agrometeorological Advisory Services in Managing Risk under Changing Climate" by S. D. Attri, N. Chattopadhyay, Priyanka Singh and KK Singh, 2017, . In: Wani SP, Vijay Sandeep Jakkula and Dharendra Singh (eds.) 2017, Doubling Farmers' Income: KISAN-MITRA . Proceedings of National Workshop on Doubling Farmers' Income through Scalingup: KISAN-MITRA (Knowledge-based Integrated Sustainable Agriculture Network-Mission India for Transforming Agriculture) Patancheru 502 324. Telangana, India. International Crops Research Institute for the Semi-Arid Tropics. 160 pp. ISBN No. 978-92-9066-594-6 Order code: CPE175.
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### *Upcoming events*

- ◆ **14-15 April 2018** : Women's Agro Meteorology Leadership Training Workshop , Incheon, Republic of Korea
- ◆ **16-17 April 2018** : Technical Conference on Future Challenges and Opportunities in Agricultural Meteorology, Incheon, Republic of Korea
- ◆ **18-20 April 2018**: 17th Session of the Commission for Agricultural Meteorology (CAgM), Incheon, Republic of Korea

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