



Newsletter

GRAMIN KRISHI MAUSAM SEWA
DISTRICT AGROMET UNIT

ICAR-AGRICULTURAL TECHNOLOGY APPLICATION RESEARCH INSTITUTE KOLKATA



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GLIMPSES OF ACTIVITIES



INTRODUCTION

In Gramin Krishi Mausam Sewa (GKMS) Scheme, the India Meteorological Department (IMD) proposed to establish District AgroMet Unit (DAMU) in 530 districts, in addition to already operating 130 AMFUs, in order to meet the said expansion. Among other responsibilities, DAMU will receive weather forecast from IMD to prepare and disseminate sub-district level agromet advisory bulletins. ICAR through All India Co-ordinate Research Project on Agro-meteorology (AICRPAM) is pursuing R&D on Agro-meteorology through a network of 35 centres located with SAUs in the country for improvement in weather based advisory and strengthening outreach of advisory bulletin to the farming community. The Central Research Institute for Dry Land Agriculture (CRIDA) and the National Innovations on Climate Resilient Agriculture (NICRA) projects of the Indian Council of Agricultural Research aim to enhance resilience of Indian Agriculture to climate change and climate variability through strategic research and technology. It also provides agro advisories to the crop weather outlook, website established by CRIDA and guides the Ministry of Agriculture on contingency planning during the crop season.

Agrometeorology is an important multidisciplinary subject. Hence, ICAR maintains Agromet observatories as well as Automated Weather Stations (AWS) and record Agromet observations at its Institutions, National Research Centres, Project Directorates, Krishi Vigyan Kendras (KVKs) etc. to generate agrometeorological information for use in studies of crops, pests and diseases, soil, agro-forestry, livestock, horticulture, Agricultural Physics, Soil Science etc. Such data will help ICAR Institutes to study crop-weather relationship, relationship between crop-weather and pest/disease and develop region/location specific agromet predictive models. In view of this 16 KVKs; of which 10 from Odisha and six from West Bengal have been selected in Phase-I to establish DAMU. As of now a total of 14 KVKs; six KVKs of West Bengal and eight from Odisha have been functioning. The KVKs with DAMUs are providing weather forecast bulletins to the farmers since the inception of the Project. Weather forecast bulletins/special bulletins are generated in English and local languages and communicated to the farmers well in advance. Agromet Advisory Bulletins are prepared twice a week and circulated among all the farmers of the district. KVKs took initiatives in popularizing of 'Meghdoot' and 'Damini' mobile Apps for outreach of Agromet Advisories and to help individuals keep updated about thunderstorm/lightening likely to strike in their locations. An online orientation programme on Preparation and Dissemination of Agromet Advisories at Block level under Gramin Krishi Mausam Sewa (GKMS) Scheme for Subject Matter Specialists (Agromet) of OUAT DAMUs was conducted during November 18-21, 2020. In Phase-II, additional eight KVKs of West Bengal have been selected to set up DAMUs and instruction conveyed to Hosts of KVKs to recruit the man powers SMS and Agromet Observer, and all the KVKs have initiated the process for recruitment.

"We are the first generation to feel the effect of climate change and the last generation who can do something about it."

-Barack Obama, Former US President

DAMU PURULIA

District Agromet Unit (DAMU) Purulia conducted one training cum farmers awareness programme on Weather based Management practices of Rabi Pulse and Oilseeds on Nov 21, 2020. The importance of weather-based management practices of major rabi pulse and oilseed crops grown in that region were discussed and there was one interaction session with the 30 nos. of participated farmers regarding several issues they are facing during the crop cultivation. Ten days hands on skill development training programme on Crop Modelling (DSSAT) during Dec 10-20, 2020. Eight nos. of diagnostic field visits to different villages under different villages of the district was also conducted.



✿ SUCCESS STORY:

Sri Alope Kumar Mahato started crop and vegetable farming since 2010. However, he was unable to make remarkable profile and most of the season he experienced loss due vagaries of extreme weather events and lack of scientific knowledge in farming. In the mean-time he started following the Advisories issued from District Agromet Unit at Krishi Vigyan Kendra Kalyan, Purulia from last one year. Presently he is experiencing 40% more return than the conventional method. Benefit in monetary terms has been experienced by him when adopt the recommendation given in the advisory bulletin through adjustment of cultural practices such as change in sowing dates, selection of varieties, postponement of fertilizer and spraying chemical, scheduling of irrigation and harvesting dates. Thus, the DAMU unit, KVK Kalyan plays a vital role in getting a very good economic return by the farmers following the weather-based agro advisory bulletin.



Six nos. of lectures were delivered by the SMS (Agromet) as a resource person regarding Impact of climate change in Agriculture and role of AAS to enhance the crop production.



DAMU MALDA

The District Agromet Unit Malda KVK, Ratua have conducted six Farmers Awareness Programme during the month of July to December, 2020 through online and offline modes during COVID-19 situations. Almost 93 farmers participated through online mode and 104 farmers have been trained through offline mode. Under COVID-19 situations the farmers were continuously given suggestions and contacted regarding crop management, pest disease management and were highly benefitted due to timely disseminations of the agro advisories. 24 whatsapp groups have been created across the district for scientist-farmers interactions. Apart from this about 21000 farmers have been added recently from different blocks of Malda for free SMS service through mKisan portal. Regular feedbacks were taken from the farmers for betterment of the agro advisories. Around 1.5 million farmers are receiving the SMS services on weekly basis pertaining to knowledge enrichment. Mr. Rizanul from Bhaluka village under Ratua-1 block have highly praised the accuracy of the forecast and agro advisories which helped him to for achieving higher yield and timely harvest of crops even under COVID-19 situations. A documentary film on role of Agro advisory and it's importance have been filmed which will soon be widely circulated through Malda KVK youtube channel.



DAMU NORTH 24 PARGANAS

District Agromet Unit of North 24 Parganas KVK organized a Training Programme cum Farmers' Awareness Programme on Climate and its relation with Agriculture on Dec 16, 2020. The programme was organized at Beri, Gaighata block, North 24 Parganas. Total 30 nos. of farmers attended that programme. The main objective of the programme was to emphasize on the climate and climatic abnormalities and how much it affects the yield of the crops. In this programme also discussed about weather forecasting and its utilization in crop production, Animal husbandry and fishery and discussed about fertilizer application on crop fields. To popularize the Meghdoot App among the farmers, a brief introduction of its application was also discussed and the farmers were encouraged to use this application. Till date 120 numbers of farmers downloaded this App.



The farmer has to be an optimist or he wouldn't still be a farmer."

- Will Rogers

DAMU MURSHIDABAD

District Agromet Unit of Murshidabad KVK organized a Training Programme cum Farmers Awareness Programme on Climate Change and its effect on Agriculture on Dec 21, 2020. The programme was organized in the training hall of the KVK. Total 30 nos. of farmers from different blocks of the district attended the programme. The main objective of the programme was to emphasize the detrimental effects of the global climate change and how much it affects the yield of the crops. In this programme different cause of climate change and how much it is responsible for yield reduction especially in this district was elaborately discussed. To popularize the Meghdoot App among the farmers, a brief introduction of its application was also discussed and the farmers were encouraged to use this application. Till date 107 numbers of farmers downloaded this App. Previously on the month of October and November this unit organized Farmers awareness programme via online mode and 30 no. of farmers attended the programmes each time.



DAMU JALPAIGURI

Farmers Awareness Programme plays an important role to sensitize the objectives of GKMS scheme and significance of weather based Agromet Advisory to increase farmers' income by reducing production cost and proper farm management. District Agromet Unit of Jalpaiguri KVK has organized 3 nos. of ON/OFF campus Farmers Awareness Programmes and a total of 110 nos. of farmers and farm women actively participated in the programmes. The participants were pleased to know that they can avail weather information at block level regularly with simple technical knowledge. During the period July-December 2020, a total of 2 nos. weather based Agromet Advisory SMSs was delivered through the m-Kisan portal which benefitted a total of 5450 enlisted farmers. Agromet Advisory emails were also sent to 28 recipients. Weather forecasts and Agromet Advisories were also communicated through 8 nos. whatsapp groups to a total of 250 members. Also, 2 nos. of Special Agromet Advisory Bulletins were circulated for the benefit of all the farmers of the district.



DAMU CUTTACK

- Two days web based/online capacity building programme for grassroots level extension functionaries i.e. Village agriculture workers/agri was conducted on Aug 6-7, 2020. Overseer of Cuttack district on **“Impact Based Agromet Advisory Service”** was organized by DAMU, KVK, ICAR-NRRI, Cuttack. Chief district agriculture officer, DPD, ATMA, Head, KVK and all specialist from KVK and around 65 number of VAWs/AOs attended in that capacity building programme. Main purpose of the capacity building programme was to sensitize the grassroot level extension functionaries about the activities of DAMU and impact of block level Weather based agromet advisory service. AAS bulletins & dissemination mechanism of DAMU were displayed through presentation. 
- Two days web based capacity building programme for the BTMs and ATMs of ATMA of Cuttack district on Aug 26-27, 2020 on **‘Block Level Weather Forecast Based Agromet Advisory Service System’** was organized by DAMU, KVK, ICAR-NRRI, Cuttack in collaboration with line department. Total 56 BTMs and ATMs participated in the programme. As ATMA is the focal point for integrating the research extensions and strengthening the activities through BTMs and ATMs, so in this connection we have decided to aware the BTMs and ATMs about block level agromet advisory service system. 
- Two days web based seminar on **‘Weather resilience agricultural technologies for farmers of Cuttack district’** on Nov 11-12, 2020 for all district and block level agriculture and horticulture officials of Cuttack district through zoom online Platform. Around 56 officials from the district and all blocks attended in that seminar. Dr. S. Bandopadhyay, DDGM, RMC, IMD, Kolkata, Dr. H.R. Biswas, Director, MC-BBSR, IMD, Odisha, Dr. F.H Rahman, Principal scientist and Nodal officer DAMU, ICAR-ATARI, Kolkata, Dr. GAK Kumar, Head SSD, ICAR-NRRI, Cuttack attended as delegate in that programme. Dr. S. Sethy, OIC KVK Cuttack and Nodal officer DAMU, KVK Cuttack welcomed and briefed about the DAMU activities and its achievements during 2019-20. She emphasized that more than 1 lakh farmers were covered under cyclone advisory during ‘Fani’, ‘Bulbul’ and ‘Amphan’ by DAMU, KVK Cuttack in collaboration with Agrimet division, IMD, Pune. 

- A Farmers awareness programme on ‘Gramin Krishi Mausam Sewa and Meghdoot app popularization’ was organized by DAMU, KVK Cuttack at Gopinathpur village of Badamba block on Dec 10, 2020 and Dhanamandala Village of Knapatada block on December 16, 2020 respectively. Total no. of 100 farmers and farmwomen participated in the programme. Sri Debasish Jena, SMS, Agrometeorology and Sri Satyaranjan Rout, Agromet Observer highlighted the importance of block level agro-advisory service, which was implemented by IMD–ICAR joint effort and explained the significance of block level weather forecast on agriculture and way of activity of “Gramin Krishi Mausam Sewa”.



✿ ADVISORY SERVICES

Fifty two Block level Agromet Advisory bulletins and three Special Agromet Advisory bulletins (during low pressure system in August, flood in August and cold wave condition in December 2020) were issued by DAMU, KVK, ICAR-NRRI, Cuttack covering 236 stakeholders and nearly 1432 progressive farmers through 23 WhatsApp groups and e-mail.

SMS (Agromet), DAMU, KVK Cuttack imparted training on “Climate Resilience Agricultural Practices” to DAESI Students on Oct21, 2020 at ATMA office, Cuttack and on “Preparation of agromet advisory bulletin as per weather forecast” in the training programme of newly recruited SMSs (Agromet) of DAMUs, OUAT on Nov 21, 2020 was organized by Directorate of Extension Education, OUAT, Bhubaneswar.

✿ SUCCESS STORIES

- ◆ A farmer Sri Baidhar Pradhan, Village-Nuabandha, Badamba, Dist-Cuttack, Odisha, M-9938509086 has cultivated 2 acre Groundnut in last year. His input cost in fertilizer, pesticide, irrigation was minimized 3000@ 2times=Rs. 6,000/-, 4000@ 3 times= Rs.12000/-, 2000 @ 4 times=Rs.8000/- in groundnut respectively due to proactive farm action as per the forecast of rain. Also, 25q groundnut (Rs. 1,00,000) is pre harvested as per forecast of thundershower in pre monsoon season.
- ◆ A farmer Sri Pramod Kumar Subudhi, Village-Gopinathpur, Badamba, Dist-Cuttack, Odisha, M-9337887069 has cultivated 6 acre Sugarcane and 1 acre rice in last year. His input cost in irrigation was minimized @ Rs. 30,000/- due to timely water saving practices based on forecast of rain which was Rs. 6000 for 6 ac @ 5 times for sugarcane. Preharvest of 10q rice was done as per forecast of rain.
- ◆ A farmer Sri Sangram Pani, Village-Gopinathpur, Salepur, Dist-Cuttack, Odisha, M-9438097968 has cultivated 15-16 Guntha Pradhan rice variety in last year. His input cost in human labour and fertiliser was minimized @ Rs. 8000/- due to timely human labour operation at transplanting of rice based on forecast of rain in kharif season. He saved all his rice seedlings which may be got damaged if they were transplanted in waterlogged lowland conditions due to heavy rain in August, 2020.



DAMU BIRBHUM

District Agromet Unit (DAMU) Birbhum conducted one farmer awareness programme at Salan, Bolpur-Sriniketanon Introduction to Agromet Advisory Bulletin, DAMU and Meghdoot app on Sep 30, 2020. The introductory speech was given by SMS (Agrometeorology), Rathindra Krishi Vigyan Kendra, PalliSiksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan. A total of 22 farmers and farm women attended the

programme. The SMS also addressed the farmers and farm women about the District Agromet Unit (DAMU) and about Agromet Advisory Bulletin. Farmers' contact numbers were also taken for dissemination of Agromet Advisory Bulletin through Whatsapp group.



Another farmer awareness programme was conducted at Rathindra KVK, Birbhum for spreading the usefulness of Agromet Advisory Bulletins, DAMU and Meghdoot app on Oct 5, 2020. The introductory speech was given by Senior Scientist & Head and Nodal Officer (DAMU), Rathindra KVK. A total of 19 farmers and farm women attended the programme. He also addressed the farmers and farm women about the District Agromet Unit (DAMU). After that, SMS (Agrometeorology), Rathindra KVK, told the farmers about the details and the usefulness of Agromet Advisory Bulletins. All farmers' contact numbers were also taken for dissemination of Agromet Advisory Bulletin through Whatsapp group.



PUBLICATIONS

RESEARCH PAPERS

- Rakesh Roy, Bankim Chandra Rudra, Debjyoti Majumder and Adwaita Mondal. 2020. Perceived Constraints in Mushroom Production Enterprise in West Bengal. *Int.J.Curr.Microbiol.App.Sci.* 9(04): 1579-1583. doi: <https://doi.org/10.20546/ijcmas.2020.904.185>
- Roy, R., Kharga, B. D., Rudra, B. C., Mondal, A., Bhowmik, P., and Majumder, D. (2020). Knowledge Retaining Abilities of Dairy Farmers: Post-Training Analysis. *Int. J. Curr. Microbiol. App. Sci.* 9(4), 783-790.
- Debjyoti Majumder, Rakesh Roy, Paramita Bhowmik, Bankim Chandra Rudra, Adwaita Mondal, Bhabani Das and Samima Sultana. 2020. Impact and Perceived Constraints in Adoption of Climate Resilient Technologies in Flood Prone Areas of West Bengal, India. *Int.J.Curr.Microbiol.App.Sci.* 9(04): 797-806.

BOOK

- Birendra Kumar, Debjyoti Majumder, Jubuli Sahu, Binod Kumar Vimal and Hoque, M (2020). Role of ICT and ITK's in Weather Hazards and Agricultural Risk Management. Akinik Publications, New Delhi.

★ TECHNICAL BULLETINS

- Jena D., Sethy S., Sarangi D.R., Sahoo T.R., and Mohanta R.K., 2019. 'Weather based disease and pest of rice crop and their management'. NRRI Technical Bulletin no. 152. Krishi Vigyan Kendra Cuttack.
- Jena D., 2020. Post flood agricultural management. Published in Odia Newspaper "Prameya" on 1st September, 2020

★ RADIO TALK

- Sri D. Jena Cuttack KVK, delivered a radio talk on "Post flood farm management" broadcast by AIR Cuttack in Krishi Sansar Programme on Sep 4, 2020.

TRAININGS/HRD PROGRAMMES ATTENDED

- 12 webinars and 4 Short courses (7, 10 and 21 days) have been attended by SMS, Agromet Mr. Debjyoti Majumder during the lockdown tenure conducted by National Institutes viz. ISRO, SAU's, MANAGE, Hyderabad etc.
- Participated in online WGCapD Webinar Series on "Remote Sensing in Crop Monitoring and Assessment". The webinar series was conducted by Indian Institute of Remote Sensing (IIRS), ISRO, during May 19 - June 9, 2020.
- Attended 10days online international training programme on "Climate Risk Assessment and Its Management Through Agrometeorological Approaches" organized by Dryland Agriculture Research Station, Rangreth, SKUAST, w.e.f. Oct 20-30, 2020.
- Four weeks online certificate course on "Regional Climate Change Projection: Statistical Downscaling through R" organized by the center for built environment of SAIARD in association with IMD from Dec 5-26, 2020.

RECOGNITION/ AWARDS

Debjyoti Majumder (SMS, Agromet) has been awarded with Young scientist award, 2020 by Institute of Scholars, Bengaluru.

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