



# ग्रामीण कृषि मौसम सेवा GKMS-News

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Agricultural Meteorology Division  
India Meteorological Department  
Ministry of Earth Sciences

## Credential of Agromet Advisory Services

Honourable Chief Minister of Maharashtra, Shri. Devendra Fadnavis gave a press release (given below) on sowing of *Kharif* Crops in Maharashtra on 15<sup>th</sup> June 2016. There was confusion on pre-monsoon showers, sowing of crops and news from other sources on sowing of crops in interior Maharashtra particularly in Marathawada and Madhya Maharashtra (which faced severe drought last year along with acute drinking water shortage and anxiously waiting for monsoon rain). It was possible to understand the gravity of the problem and need for effective intervention particularly in regards to one time investment of seed and fertilizers, labour etc. IMD reacted to this and communicated that it was not the proper time of sowing and farmers need to wait for a few days because monsoon rain would be received within 4-5 days (information given on 14-15 June). This decision has been taken jointly by the IMD, Agromet Field Units in Agricultural Universities of Maharashtra and State Department of Agriculture. Honourable CM agreed to that fully and given a Press Release in this regard. This exactly coincided with the reality. This type of proactive initiatives may be considered as true services to the society in real sense. Once again the forecasters of IMD proved their skill in forecasting which has significant bearing in operational agriculture.

### Press clipping of 15<sup>th</sup> June, 2016



"Though many parts of the state have received rainfall, monsoon has not arrived as yet. The meteorological department has said that rainy season will start soon. But after the initial rains, farmers have got ready with their *Kharif* sowing expecting continuous good rains," Fadnavis said. "I urge farmers not to sow *Kharif* crops till it rains sufficiently and continuously for at least two days so that the soil develops the moisture required for crops," he said in a release here. He said that due to the hot weather, the seeds may get destroyed and farmers may have to resow seeds,

which may result in financial losses for them, like it did last year. Shri Fadnavis said the government has made sufficient fertilizers and seeds available for the *Kharif* season and has also stayed the decision regarding seed price hike by Mahabeej to provide relief to lakhs of farmers.

"Out of 43.75 metric tonnes of demand for fertilizers, the government has till now made available 40.25 lakh MT. Apart from this, the Centre has reserved 0.50 lakh MT of Urea fertilizer for Maharashtra," he said, adding that as compared to 2015, the demand for fertilizers has shot up by 26 per cent. Shri Fadnavis said that for the current *Kharif* season, the demand for seeds is 14.99 lakh quintals, while the government has made available seeds totaling 17.90 lakh quintal.

## Visit of Hon'ble Minister for Science & Technology and Earth Sciences to IMD, Pune



Hon'ble Minister of Science & Technology and Minister of Earth Sciences, Dr. Harsh Vardhan visited IMD, Pune on 1<sup>st</sup> April 2016. Dr. N. Chattopadhyay, DDGM (Agrimet), IMD, Pune gave a presentation on "Agromet Advisory Services to Farmers".

## Visit of Dr. Jitender Chauhan, Scientific Advisor to Union Minister of Agriculture



Dr. Jitender Chauhan, Scientific Advisor to Union Minister of Agriculture and Farmers Welfare, Govt. of India visited the newly established class B Agromet observatory at ICAR Research Complex for NEH Region, AMFU, Kolasib, Mizoram Centre on 5<sup>th</sup> April 2016. Dr. Saurav Saha elaborately described the details of installation and functioning of all meteorological equipment.

## International Training



Short duration course on “Agrometeorology” for foreign trainees was conducted at Agrimet Division, Pune during 9–20 May 2016, Pune. Mr. Ugyen Chopel and Mr. Sonam Rabten from Bhutan attended the training.

## Establishment District Agromet Field Units for issuing Block Level Advisories



KVK, Tinsukia, Assam



KVK, Nagaur, Rajasthan



KVK, Hazaribagh Jharkhand.



KVK, Mandya Karnataka

ESSO-India Meteorological Department, Ministry of Earth Sciences proposes to upgrade its existing district level Agrometeorological Advisory Services to block level named as “Gramin Krishi Mausam Sewa (GKMS)”. A high-resolution weather forecast at block level will be utilized to develop this service. As a part of ‘GKMS’, it is proposed to establish 240 District Agromet Units (DAMUs) in existing Krishi Vigyan Kendras (KVKs) (Ministry of Agriculture) in the Phase-I and all districts in Phase-II. IMD has started establishing DAMUs at KVKs under Indian Council of Agriculture Research (ICAR) network. Initially, 100 DAMUs will be established across the country. To assess the existing infrastructure, manpower etc. of KVKs for setting up DAMUs under GKMS Scheme, 71 KVKs visit have been made during April to June 2016.

## Training

- ⇒ Summer Placement course for Agricultural Engineering students was conducted during 6<sup>th</sup> June to 1<sup>st</sup> July 2016. Total 18 students from different agricultural engineering colleges are undergoing the training. They visited CAgMo. Project presentation and viva-voce was also conducted.
- ⇒ Dr. Mahinder Singh, Nodal Officer & Dr. Veena Sharma, Technical Officer of GKMS Unit, **AMFU, Chatha (Jammu), Jammu & Kashmir** participated in the training programme on “Impact of climate change on agriculture sector and its mitigation measures” during 24–25 May 2016 organized by State Agricultural Management And Extension Training Institute (SAMETI), Jammu.
- ⇒ Dr Ananta Vashisth, Nodal Officer of GKMS Unit, **AMFU, New Delhi** gave the training on “Weather based Agromet advisory Services and dissemination through SMS and other sources webpages” to Bappa Das, Scientist from ICAR – Central Coastal Agricultural Research Institute, Goa during 4–8 April 2016.

## Award on Agromet Advisory Services

Dr. Ananta Vashisth, Nodal Officer of GKMS Unit, AMFU, New Delhi, received the award for the best research paper on "Importance of weather-based agricultural advisories through Web page and SMS in agricultural production" in Scientific and Technical Seminar : "Make in India and Digital India-India's Progressive steps." held on 26<sup>th</sup> February, 2016 organized by Department of Technology and Research Laboratory, New Delhi.

## National Activities

### Participation of Officers of Agrimet Division in national meetings.

- ◆ **Dr. N. Chattopadhyay, DDGM (Agrimet), IMD, Pune :**
  - ⇒ Chaired the Project Work presentation of Special Forecasting Training Course, Batch No. 182 held at MTI, Pashan, on 21<sup>st</sup> April 2016.
  - ⇒ Attended "The Forecasters Meet 2016" held at Hotel Ramee Grand, Pune during 23-24 May, 2016.
  - ⇒ Participated in the "State Annual Review Meeting (SARM) of GKMS (Karnataka) and Regional Review Meeting (RRM) of FASAL (South Zone) Projects" on 9-10 June 2016 at University of Agricultural Sciences (UAS), Gandhi Krishi Vigyan Kendra (GKVK) Campus, Bangalore.
- ◆ **Shri R. Balasubramanian, Sci-D, Agrimet, IMD, Pune attended following meetings :**
  - ⇒ "Planning for *kharif* season for Maharashtra State", under the chairmanship of Addl. Chief Secretary (Agriculture), Maharashtra at Padmashri Sabhagruha, Central Bld, Pune, on 23<sup>rd</sup> April 2016.
  - ⇒ "Overview of state level *kharif* planning-2016 for Maharashtra", under the chairmanship of Hon'ble Chief Minister, Govt. of Maharashtra, Shri. Devendra Fadnavis, at Yashwantrao Chavan Sabhagruha Hall, Mumbai on 28<sup>th</sup> April 2016.
  - ⇒ "Interphase meeting on *Kharif* crop planning during monsoon 2016 in Maharashtra", held at Central Building, Department of Agriculture, Pune - 411001 on 14<sup>th</sup> May 2016 along with Shri. S. S. Mairal, AM-II.
  - ⇒ "Interim findings from Field Interactions on Climate Services in Maharashtra" organized by The Energy and Research Institute (TERI), Mumbai at Central Park Hotel, Pune on 24<sup>th</sup> May 2016.
  - ⇒ "Proposed IMD Integrated Operational Forecast Systems and its Submodule", held on 9<sup>th</sup> June 2016 at conference hall, 6<sup>th</sup> floor, IMD HQ, New Delhi.
  - ⇒ National Bureau of Soil Survey and Land Use Planning (NBSSLUP), Nagpur for interaction and discussion for collaboration between NBSSLUP and IMD on 4<sup>th</sup> May 2016.
- ◆ **Dr. Shirish Khedikar, Sci. B, Agrimet, IMD, Pune** participated in 44<sup>th</sup> 'Joint Agresco Meet 2016' which is annually organized by all four Agricultural Universities of Maharashtra State and gave presentation on "Activities and Services to farmers of Maharashtra by IMD" held at Dr. Punjabrao Deshmukh Krishi Vidyapeeth, Akola during 28-30 May 2016.

- ◆ **Shri S. S. Mairal, AM-II** participated in the discussion on “Monsoon and planning of *kharif* crops in Maharashtra”, conducted by Doordarshan (DD) Sahyadri, Mumbai on 15<sup>th</sup> June 2016 and same was telecast it in ‘Amchi Mati Amchi Manasa’ programme on 20<sup>th</sup> June 2016. Also, he delivered talk on “Long Range Forecast 2016 and *Kharif* planning in Maharashtra” on All India Radio which was broadcast on 20<sup>th</sup> June 2016.
- ◆ **Dr. Anupam Kashyapi, Sci ‘E’**, Meteorological Centre, Bhopal, Madhya Pradesh attended meeting with Shri Gauri Shankar Vishen, Hon’able Agriculture Minister, Govt. Of M.P. and Agriculture Production Commissioner on ‘How will be Monsoon 2016, Use & need for Artificial Rain & Cloud Seeding and production of *kharif* crops over the State’ on 28<sup>th</sup> June 2016. He also attended a workshop on ‘Rehabilitation for Soil Conservation & Protection of Agril. Products’ at NABARD German CO-OP on 7<sup>th</sup> April, 2016.
- ◆ **Dr. Vyas Pandey**, Principal Nodal Officer, AMFU, Anand, Gujarat attended a meeting on “Enhancing the Preparedness for Agricultural Contingencies in *Kharif* 2016 for Gujarat” jointly organised by ICAR, DAC and Government of Gujarat, on 23<sup>rd</sup> June 2016 at Directorate of agriculture Ahmedabad.

## Awareness Programmes

### Farmer Awareness Programme (FAP)



**AMFU, Kolasib, Mizoram** organized two FAPs on “Weather based Agromet Advisory Services to increase the farming resiliency of the farmers in

Mizoram” to sensitize the active dissemination of real time farm level Agromet Advisories for the farmers of Mizoram on 8<sup>th</sup> April at Aizawl, Tachhip and second FAP at Mamit Lengpuion 15<sup>th</sup> April 2016.



**AMFU, Ananthapuramu, Andhra Pradesh** organised two FAPs on “Weather Based Agro Advisories” at KVK Banavasi, Kurnool district on 26<sup>th</sup> May, 2016 and other at KVK,

Kalyandurg, Ananthapuramu on 15<sup>th</sup> June 2016 to create the awareness among the farming community on the Agromet Advisories and their importance. Dr. B. Sahadeva Reddy, Nodal officer of GKMS Unit briefly explained importance of weather forecasting.

Shri. Y. Pavan Kumar Reddy, Technical officer of GKMS Unit gave detailed information about mkisan SMS and Agricultural mobile applications which are helpful to farmers. A detailed literature booklet on “Weather based Agro, Horti and Veterinary Agro Advisories” were distributed among the farmers.



**AMFU, Jharnapani, Nagaland** conducted two FAPs on “Strategies to Counter Climate Change in Agriculture and Allied Sectors” on 18<sup>th</sup> May 2016 at

ICAR Research Complex for NEH Region, Medziphema, Nagaland Centre and other on 24<sup>th</sup> May 2016 at Piphema village, Dimapur district to increase knowledge and sensitize the farmer about the importance of Agromet Advisories and empower the farmer community to adapt to climate change in agriculture and allied sectors. Smt. Imtisenla Walling, Technical Officer of GKMS Unit presented on “Agromet Advisories to meet climate risks in agricultural front”.



**AMFU, Lembucherra, Tripura** organised FAP on “Monsoon Anomalies Resilient Production System” on 23<sup>rd</sup> June 2016 at Research Complex for NEH

Region, Tripura Centre at Lembucherra.. Shri D. Daschadhuri, Technical Officer of GKMS unit delivered lecture on “Understanding of weather and weather anomalies”. Also other subject experts delivered lectures on fish production & disease management with special emphasis to monsoon climate, management of *kharif* crops & contingency planning, rice cultivation under different ecology during *kharif* season, Pest and diseases of major crops during *kharif* season and its management, *kharif* vegetable cultivation and animal care & health management during monsoon season.



**AMFU, Kharagpur, West Bengal** organised FAP at Narajal village of Paschim Medinipur district on 18<sup>th</sup> June 2016, to bring awareness among the

farmers pertaining to weather forecasting services and to use the information for timely farm operations like land preparation, selection of planting time, planning for irrigation and fertilizer application, insect pest management and harvesting of the crop. Guest lecturers were delivered by technical expert members. An interactive session with technical expert members and farmers and field visit were also arranged to the participants. Dr. D.K Swain Nodal Officer of GKMS Unit gave information about usefulness, importance of GKMS project to the farming community.



**AMFU, Parbhani, Maharashtra** organised FAP on “Management of *Kharif* crop in relation to monsoon” on 5<sup>th</sup> June 2016.

During the inaugural programme book “Krishi Hawaman Salla-Hawaman Badal Adharit” released by the hands of farmers and university scientists. Prof. Pralhad Jaybhaye, Principal Nodal Officer of GKMS Unit informed about “Weather risk in agriculture, mechanism of rainfall forecast its utility in agriculture and weather based crop insurance in detail”. Shri. Pramod Shinde, Technical Officer of GKMS Unit given information on how to get registered on mKisan portal for getting Agromet Advisory on Mobile through SMS. The farmers were also made aware to use meteorological services for agricultural management.

### Field visits



Shri. R. Balasubramanian, Sci ‘D’, Agrimet, IMD Pune made field visit to **AMFU, Karaikal, Pondicherry** observatory on 20<sup>th</sup> June 2016. Shri.

Balasubramanian interacted with the DEAN Dr. V. Kanthaswamy, Professor & Head Dr. R. Poonguzhalan and Nodal Officer Dr. A. L. Narayanan at AMFU observatory of Karaikal and suggested the importance of weather observations for the benefit of the Researchers and Farming community of Karaikal. About 80 Agri students interacted and participated in an interactive session at AMFU, Karaikal College with regard to the new trends in weather forecasting and the role of IMD in weather forecasting wherein Shri. R. Balasubramanian, Dr. A. L. Narayanan and Dr. V. Sridevi participated and deliberated the issues. Also interactive session with farmers at Thennangudi village, Karaikal was arranged. About 25 farmers participated and interacted regarding the issues of Agri related activities of the tail end of River Cauvery and obtained suggestions from the team of Scientists headed by Shri. R. Balasubramanian and Dr. A. L. Narayanan.



**AMFU, Targhadia, Gujarat** organized a field visit on 18<sup>th</sup> June 2016 at Shivrajgadh village of Gondal taluka of Rajkot district. Shri V. D. Vora, Technical Officer of

GKMS Unit highlighted activities of GKMS project. He gave information about infestation and management of pink ball worm in cotton crops.

### Other Awareness Programms

**AMFU, Targhadia, Gujarat**, Main Dry Farming Research Station, Junagadh Agricultural University participated in Krushi Mahotsav-2016 during May-2016 organized by Govt. of Gujarat. Shri V. D. Vora, Technical officer of GKMS Unit informed and aware regarding the activities of the GKMS unit and Agricultural Technology. He also explained prevailing crop conditions and remedies of existing pests and diseases, management of soil health and contingency crop planning.



**AMFU, New Delhi** organised Kisan Gosthi and field visit at Piplehda village of district Hapur on 22<sup>nd</sup> April 2016 under

“Mera Gaon Mera Gaurav” programme. Dr. Ananta Vashisth, Nodal Officer of GKMS Unit interacted with farmers in the fields.



**AMFU, Basar, Arunachal Pradesh** organized awareness programme for Officer's of state line departments and other stake holders on 15<sup>th</sup>

June 2016. During the meeting, Dr. R. Bhagawati, Nodal officer of GKMS Unit gave overview of the activities under the project and reiterated role of line departments in registration of more and more farmers under the service.

Shri. K. Bhagawati, Technical Officer of GKMS Unit briefed on the system of GKMS and role of ICAR Basar in preparation and dissemination of advisories. Progressive farmers shared their experiences and gave valuable suggestions/inputs.



Dr. A. L. Narayanan, Nodal Officer of GKMS Unit, **AMFU, Karaikal, Pondicherry** participated in Karaikal AIR Program on 6<sup>th</sup> June 2016 on “Alternate crop suggestion

during *Kharif* season for the deltaic area in view of shortage of water in the canal”. It was suggested the minor millets especially Finger millet was one of the best alternative to rice. Farming community and the public were benefitted.



Ananta Vashisth, Nodal Officer of GKMS Unit, AMFU, New Delhi gave a talk on “दक्षिण-पश्चिम मानसून का कृषि पर प्रभाव” on DD Kisan Channel in “Khet Khaliyan programme” on 26<sup>th</sup>

May 2016.



**AMFU, Kolasib, Mizoram** organized training programme on “Weather based Agromet Advisory Service to increase the farming resilience of

farmers in Tercchip village of Aizawl districts of Mizoram” on 8<sup>th</sup> April 2016 and other on 15<sup>th</sup> April 2016 at KVK, Mamit to introduce ‘Operational Agro-meteorology and GKMS activities’. Subject experts explained the importance of climate and weather information for agricultural production in Mizoram. They also explained the significant role of weather controlling the agricultural production system in Mizoram and pointed out the significant increase in air temperature worldwide and its possible impacts on agriculture.



## Workshop/ Seminar

- ◆ **AMFU, Parbhani, Maharashtra** organized a seminar on “Climate change, weather forecasting and risk management in Agriculture” on 2<sup>nd</sup> May 2016 for students and scientists of the university. Dr. K. K. Singh, Head, Agromet Services, IMD, New Delhi visited AMFU, Parbhani during the visit. He delivered a lecture on “Climate change and risk management in Agriculture”. He also shared knowledge with the students about opportunities in Agricultural Meteorology and effect of weather and climate on life of human beings. Prof. Pralhad Jaybhaye, Principal Nodal Officer of GKMS Unit gave information about usefulness, importance of GKMS project to the farming community. Other subject experts also delivered lectures on related subject.
- ◆ **AMFU, Barapani, Meghalaya**, participated “Workshop on crop simulation models for yield forecasting and gridded data processing using MATLAB software” during 20-25 June 2016 organized by Department of Agrometeorology, Assam Agricultural University, Jorhat in collaboration with IMD, New Delhi.
- ◆ Dr Ananta Vashisth, Nodal Officer of GKMS Unit, **AMFU, New Delhi** attended a seminar on “Monsoon Outlook 2016 and Risk Management Strategy” 1<sup>st</sup> April 2016 at hotel Shangri-La, Connaught Place, New Delhi organized by weather risk management services Pvt Ltd. She also attended Conference on “Managing Climate Risk in Agriculture” on 13<sup>th</sup> April 2016 at Hotel Imperial, organized ASSOCHAM, USAID and Skymet weather services.

## Lectures

- ◆ Dr. Vyas Pandey, Principal Nodal Officer, **AMFU, Anand, Gujarat** delivered lecture on “Effect of Climate Change on Agriculture-Global Prospective” on 20<sup>th</sup> June 2016 in Training programme at Extension Education Department of AAU, Anand.
- ◆ Smt. Imtisenla Walling, Technical Officer, **AMFU, Jharnapani, Nagaland** delivered lecture on “Agromet Advisories to meet Climate Risks in Agricultural Front” during the one day Within District Farmers Training programme for extension functionaries organized by ATMA Dimapur, Aghunaqa block on 27<sup>th</sup> May 2016 at KVK, Jharnapani.
- ◆ Dr. Mahinder Singh, Nodal Officer, **AMFU, Chatha (Jammu), Jammu & Kashmir** delivered lecture on “Potential impact of climate change on agriculture and its mitigation” and Dr. Veena Sharma, Technical Officer of GKMS Unit, Chatha (Jammu), Jammu & Kashmir delivered lecture on “Mitigation of various effects of climate change through Agromet Advisory Services” in the training programme on “Impact of Climate Change on Agriculture Sector and Its Mitigation Measures” during 24-25 May 2016 organized by State Agricultural Management And Extension Training Institute (SAMETI), Jammu.
- ◆ Dr Ananta Vashisth Nodal Officer of GKMS Unit, **AMFU, New Delhi** attended and presented two papers entitled “Crop water requirement in wheat (*Triticum aestivum*) under variable weather condition in the semi arid region of India” and “Estimation of water use efficiency of mustard crop under variable weather conditions” during 3<sup>rd</sup> International conference on Agriculture, Horticulture & Plant Science, 25-26 June 2016, Hans Hotel New Delhi. She also gave lecture on “Agromet Advisory Service” and visit to Division of Agricultural Physics in a training programme for faculties of Myanmar University, Yezin, Myanmar for 21 days on Agricultural Knowledge Management through Innovative Communication Interventions from May 31 – June 20, 2016 organized by Division of Agricultural Extension, on 2<sup>nd</sup> June, 2016.

## Publication

Following research papers were published/ accepted in Scientific Journals .

- ◆ Research paper entitled, “Evaluating the potential of rainfall product from Indian geostationary satellite for operational agromet advisory services in India” by N. Chattopadhyay, S. S. Vyas, B. K. Bhattacharya and S. V. Chandras has been published in the Journal of Agrometeorology, Vol. 1, June 2016, pp. 29-33.
- ◆ “Occurrence of hail storms and strategies to minimize its effect on crops” by N. Chattopadhyay, S. Sunitha Devi, Gracy John and V.R. Choudhari has been accepted for publication in “Mausam.
- ◆ “Validation of soil moisture derived from water balance method and satellite observation”, by N. Chattopadhyay, S.S. Vyas, B.K. Bhattacharya, N. S. Tidke, and N.G. Dhangarhas been accepted for publication in “Mausam”.

## Upcoming events

- ◆ Integrated Drought Management Programme (IDMP) Advisory Committee and Management Committee Meetings, Geneva, Switzerland during 14-15 September 2016. (more information : <http://www.wmo.int/pages/prog/wcp/agm/upcomingmeetings.php>).
- ◆ National Symposium “AGMET-2016” on “Climate driven Food Production systems : Agrometeorological Interventions” proposed to be held at TNAU, Coimbatore during 20-22 December 2016 organised by Association of Agrometeorologists, Anand, Gujarat and Tamil Nadu Agriculture University , Coimbatore, Tamil Nadu. (more information : <http://agrimetassociation.org/Seminar.aspx>).
- ◆ National Conference on “Innovative and current Advances in Agriculture and Allied Sciences- ICAAS-2016” during 10-11 December 2016 at Prof Jayashankar Telangana state Agriculture University, Rajendranagar, Hyderabad (Telangana).

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