



National Agromet Advisory Service Bulletin
Based on
Extended Range Weather Forecast (ERFS)

Validity: 15 to 28 February 2019

Date of issue: 15 February 2019

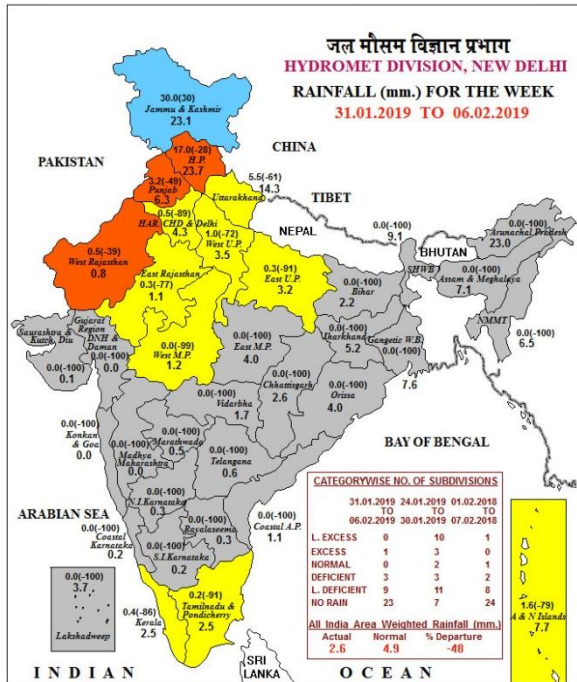
Issued by
Indian Council of Agricultural Research (ICAR)
All India Coordinated Research Project on Agricultural Meteorology (AICRPAM),
Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad.
&
Earth System Science Organization
India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall

(31st January to 13th February 2019)

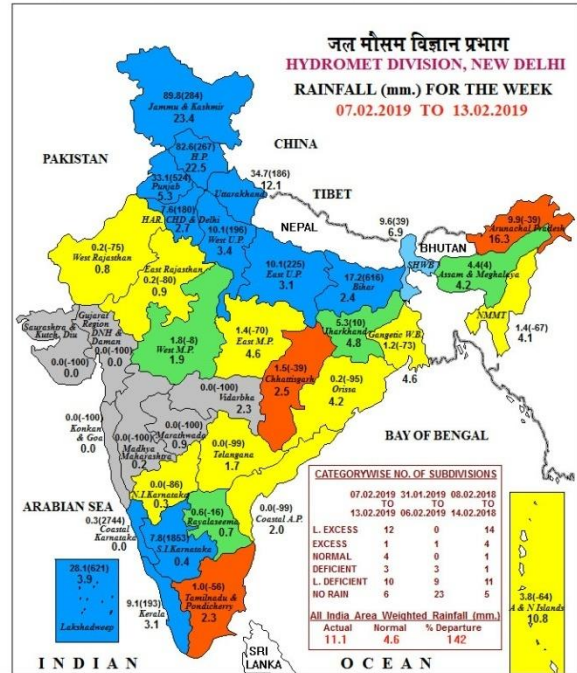
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



LEGEND: L. EXCESS (+60% OR MORE) EXCESS (+20% TO +59%) NORMAL (+19% TO -19%)
DEFICIENT (-20% TO -59%) L. DEFICIENT (-60% TO -99%) NO RAIN (-100%) NO DATA

NOTES:
[a] Rainfall figures are based on operational data.
[b] Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
Percentage Departures of Rainfall are shown in Brackets.

भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



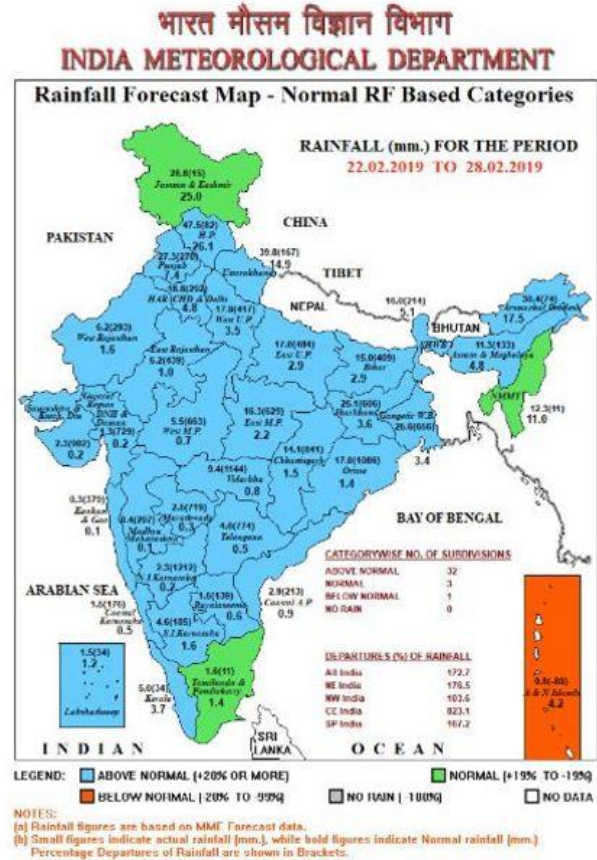
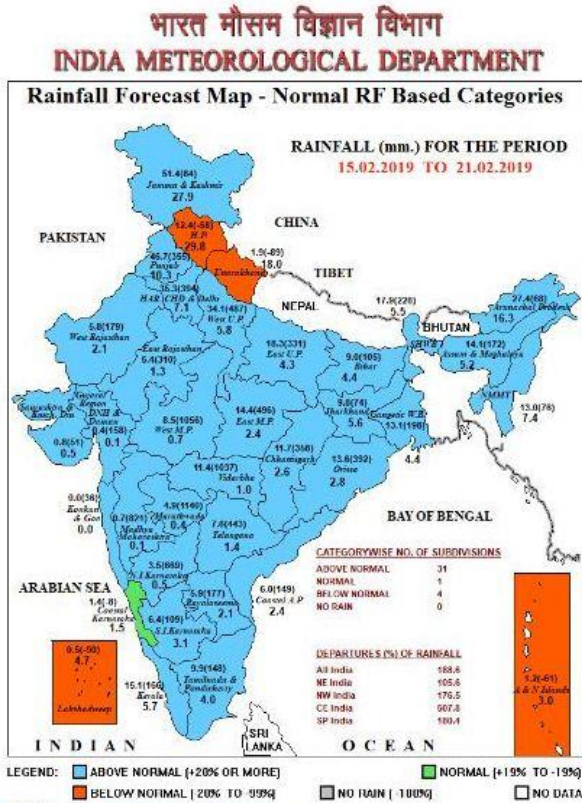
LEGEND: L. EXCESS (+60% OR MORE) EXCESS (+20% TO +59%) NORMAL (+19% TO -19%)
DEFICIENT (-20% TO -59%) L. DEFICIENT (-60% TO -99%) NO RAIN (-100%) NO DATA

NOTES:
[a] Rainfall figures are based on operational data.
[b] Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
Percentage Departures of Rainfall are shown in Brackets.

- Normal or above normal rainfall occurred in both the weeks in Jammu & Kashmir.
- Normal or above normal rainfall occurred during the week in Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, Sub-Himalyan West Bengal, Assam & Meghalaya, West Madhya Pradesh, Rayalaseema, South Interior Karnataka, Coastal Karnataka, Kerala and Lakshadweep
- Below normal rainfall / no rain occurred over rest of the country.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 13 February) (15th to 28th February 2019)



Extended Range Rainfall Forecast

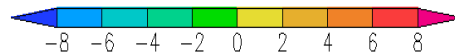
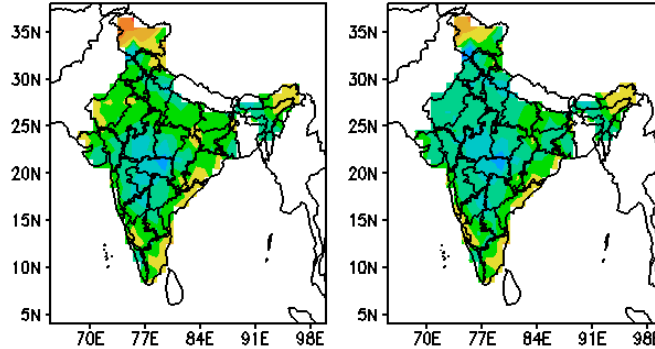
Week 1 (15.02.2019 to 21.02.2019) and Week 2 (22.02.2019 to 28.02.2019): Rainfall associated with Western Disturbance over extreme north India (Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab and Haryana) and adjoining eastern parts (Uttarakhand, Uttar Pradesh, Madhya Pradesh, Odisha, Chhattisgarh, Gangetic West Bengal, Bihar and north-east met-subdivisions). Southern part of Bay of Bengal, Sri Lanka and adjoining Tamil Nadu will be active during the period. Mostly above normal rainfall during the period.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 13 February)
(15th to 28th February 2019)**

MME Bias Corrected Tmax Anomaly (Deg)

(Week1: 15Feb–21Feb)

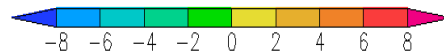
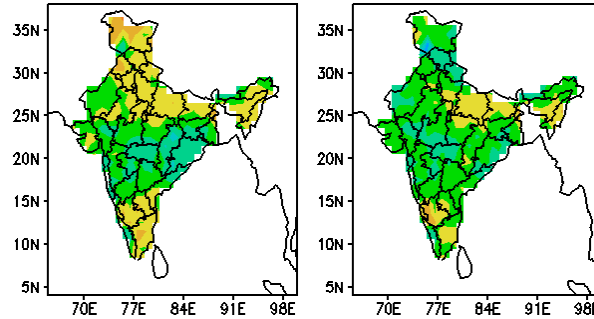
(Week2: 22Feb–28Feb)



MME Bias Corrected Tmin Anomaly (Deg)

(Week1: 15Feb–21Feb)

(Week2: 22Feb–28Feb)



Maximum Temperature (Tmax)

- **Week 1 (15.02.2019 to 21.02.2019) and Week 2 (22.02.2019 to 28.02.2019):** Except isolated regions over extreme north India, eastern coastal belts and north east India, Tmax will be below normal over India with higher negative anomaly over central and northwest India during the period.

Minimum Temperature (Tmin)

- **Week 1 (15.02.2019 to 21.02.2019):** Mostly below normal Tmin over the central parts of India. Isolated regions over North West India will also have below normal Tmin.
- **Week 2 (22.02.2019 to 28.02.2019):** Below normal Tmin over central and North West India will continue. Except some parts of eastern and central India Tmin will be mostly below normal over India.

Strategic Agricultural Planning based on rainfall during next two weeks till 28th February 2019

Agromet Advisories

Kerala

Amount of rainfall received during the period from 01 January to 14 February 2019 over Kerala is 10.1 mm (28% deficit). The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) is above normal for both the weeks.

- Coconut palms are seen affected by red palm weevil. After thorough cleaning of the crown region, apply 1 ml imidacloprid per one litre of water at spindle leaf area.
- White powdery spots are seen on the leaves of cucurbitaceous vegetables. Apply 1.5 ml tebuconazole or 0.5 ml difenoconazole per one litre of water. After 10 days, apply 20 g of Trichoderma viride per one litre of water to control powdery mildew.
- Spray Streptocycline 300ppm and weekly application of Pseudomonas 2% solution after head initiation to protect cabbage from black rot.
- To control thrips incidence in cowpea, apply 2 ml fipronil 5 SC per one litre of water after the harvest of matured cowpea pods.

Karnataka

Amount of rainfall received during the period from 01 January to 14 February 2019 over North Interior Karnataka is 0.9 mm (68 % deficit), over South Interior Karnataka is 9.0 mm (375% excess) and over Coastal Karnataka is 0.3 mm (64% deficit). The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) over North and South Karnataka is above normal for both the weeks and over coastal Karnataka normal for week-1 and above normal for week-2.

South Interior Karnataka

- To protect the pulse grains from storage pests apply oils of Castor/ linseed/honge/ neem oil @ 3-5 ml per kg of grains.
- Right time for harvesting of kharif crops like Maize and Redgram etc. cleaning, drying and storage of crops. If ragi crop already harvested the straw may be collected and stacked.
- Spray Lambda Cyhalothrin 5EC@ 0.5 ml/ litre of water or sulphur dust (SULTAF) 80 W @3g/litre of water against the Powdery mildew diseases in crops.
- Proper ventilation should be maintained for free circulation of air in the dairy sheds.

Tamil Nadu

Amount of rainfall received during the period of 01 January to 14 February 2019 over Tamil Nadu is 3.3 mm (85% deficit). The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) over North and South Karnataka is above normal for week-1 and normal for week-2.

- Prevailing weather condition is favorable for leafhopper, mealy bug and stem weevil incidence in cotton. To control sucking pest, spray Imidacloprid 200 SL 100 ml/ha (or) Fipronil 5%SC 1500-2000 ml/ha.
- Climatic condition is favourable for Thrips and Mite infestation in chilli. To control thrips, spray Imidacloprid 17.8 % SL 3.0 ml/10 litre.
- The expected weather having low cloud cover and moderate to high humidity are conducive for the incidence of head borer in Sunflower. To control the pest, spray 5% Neem oil or 5% Neem Seed

Kernal extract before egg laying.

Maharashtra

No rainfall received during 01 January to 14 February 2019 over different meteorological sub divisions of the state viz., Konkan, Madhya Maharashtra and Marathwada. Amount of rainfall received over Vidarbha is 10.9 mm (20% deficit). The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) is above normal over all the sub-divisions of Maharashtra for both the weeks.

Madhya Maharashtra

- In mango orchards to control fruit fly install fruit fly traps (Methyleugenol) @ 5 / ha.
- Give protective irrigation to drumstick and use crop residue for mulching to conserve soil moisture.
- Harvesting of safflower should be done with the help of combine harvester if available. Winnowing should be carried out with the help of fan @ 600-700 rpm for cleaning of safflower seed & store it in dry place.
- In sugarcane (Suru) irrigation scheduled at after 75 mm of ET i.e. in summer it will be after 8 – 10 days and in Ratoon irrigation should be given after 50 mm of evaporation i.e. in summer it will be after 8-9 days.

Konkan

- Due to forecast for increase in maximum temperature, there is possibility for pre-mature fruit drops of mango, therefore it is advise to spray 2% urea (200 gm per 10 litre of water) by mixing into insecticide solution of 4th to 6th spray blossom protection schedule of mango.
- There is possibility of incidence of tea mosquito bug and thrips during fruit bearing stage of cashewnut, if incidence is noticed spray Lambda cyhalothrin 5%EC @6 ml per 10 litre of water.
- Due to increasing rate of evaporation irrigate the groundnut crop at an interval of 8-10 days after sowing. Rolling of empty drum 45-60 days after sowing for better penetration of pegs & pod setting is advocated.
- Harvest mature pulse crop early in morning or late in evening and dry it for 3 to 4 days in sunlight.

Chhattisgarh

Amount of rainfall received over Chhattisgarh during 01 January to 14 February 2019 is 16.5 mm (8% excess). The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) is above normal for both the weeks.

- The average temperature is now suitable for proper germination of summer vegetables like pumpkin, bitter gourd, bottle gourd, okra etc. Hence the sowing of these vegetables should be completed at the earliest.
- Summer season banana crop is generally affected by heat waves. To protect crop plants M.P. Chari, Jowar and Sunhemp crops in the periphery of banana fields should be grown so that during summer it will grow up to the height and protect banana crop from heat waves.
- Mustard is in flowering/pod formation stage. At this stage aphids are commonly observed in this crop. Hence, farmers are advised for the monitoring of the crop.
- Looking to the cloudy weather condition prevailing during past week the incidence of Heliothis in gram is reported from many places and it is likely to increase after slight increase in maximum and minimum temperature. Hence, farmers are advised to keep keen watch over the crops and adopt

integrated pest management practices like light trap, pheromone trap, bird prech etc. for initial control.

Uttar Pradesh

Amount of rainfall received over East Uttar Pradesh region is 22 mm (3% deficit) and West Uttar Pradesh is 26.7 mm (8% excess) during 01 January to 14 February 2019. The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) over east and west Uttar Pradesh is above normal for both the weeks.

- Farmers are advised to top dress $\frac{1}{4}$ urea at optimum moisture during PI stage of wheat.
- In Barley crop, top dress 30 kg/ha Urea in rain-fed areas at optimum moisture condition.
- For protection of Pea/chickpea from Pod borer and Semi lopper, spray Fenvalerate 0.4% DP 20-25 kg/ha or Quinalphos 20% EC 2.0 lt/ha or Malathion 50 % Ec 2.0 litre/ha with 500 to 600 lt water on clear sky. Spray soluble Sulphur (80%) 2.0 kg/ha with 500-600 lt. water solution to protect from Powdery mildew on clear sky condition.
- To reduce aphid attack in mustard crop on cloudy weather in this weeks, farmers are advised to spray Chlorpyriphos 20% EC @ 1.0 litre/ha or monochrotophos 36 % S.L. @ 500 ml/ha with 500-600 litre of water solution on clear sky.

West Bengal

Amount of rainfall received over Gangetic West Bengal during 01 January to 14 February 2019 is 1.2 mm (95% deficit). The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) is above normal for both the weeks.

- Apply 1st top dressing in Boro rice after 24 days of transplanting or at the beginning of tillering stage at the rate of 15 Kg urea per bigha.
- In this weather condition, occurrence of late blight is being reported from many areas. Farmers are advised to keep a close observation. As a control spray, Blitox or Mancozeb @2.5 g/litre of water thrice at an interval of 5-7 days.
- For late sown crop mustard crop, aphid infestation may be high this week due to sudden rise of temperature. Apply 1.5 ml metasystox/ rogor per litre of water to control them.
- Light irrigation should be given in pulses, as the crops are in flowering stage.

Jharkhand

Amount of rainfall received over Jharkhand during 01 January to 14 February 2019 is 6.4 mm (75 % deficit). The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) is above normal for both the weeks.

- After digging of potato farmers may sow the mung. Select improved variety of mung S.M.L. - 668 and sow the seed @ 12 kg per acre.
- Control the attack of pumpkin beetle immediately in cucurbitaceous plant. Spray Chlorpyriphos 4 ml. per liter of water to control.
- **Summer Rice** : Farmers having 21 days old seedlings may start transplanting. Before transplanting, field may be ploughed repeatedly (for puddling) and apply 18 kg D.A.P., 11 kg Urea and 14 kg Murate of Potash per acre at the time of final preparation of the field.

Bihar

Amount of rainfall received over Bihar during 01 January to 14 February 2019 is 22.3 mm (27 % excess). The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) is above normal for both the weeks.

- In view of rainfall forecast during 7-9 February in north Bihar districts, farmers are advised to postpone irrigation to standing wheat, maize and other rabi crops.
- Regular monitoring is advised for attack of cut worm in late sown potato crop. If infestation is observed in the crop field, spraying of Chlorpyrifos 20EC@ 2.5-3 ml per litre of water is advised in dry and clear weather condition.
- In view of rainfall forecast, skip irrigation in crops such as cabbage, late sown cauliflower, tomato, brinjal, chilli, pea etc. Regular monitoring is advised against attack of insect-pests and diseases.
- Monitoring is advised for pod/fruit borer infestation in pea. If infestation occurs, spraying of Quinalphos 25 EC @1ml/litre of water is advised.

Rajasthan

Amount of rainfall received over West Rajasthan is 5.9 mm (38% excess) and over East Rajasthan is 6.3 mm (13% deficit) during 01 January to 14 February 2019. The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) over east and west Rajasthan is above normal for both the weeks.

- Harvest the mustard crop wherever it has reached at physiological maturity and store at safe place.
- Stop irrigation in cumin as crop is at maturity stage.
- Apply irrigation in wheat, barley & opium poppy crops.
- Transplanting of young seedlings of tomato & chilli should be done.

Assam

Rainfall received over Assam is 6.7 mm (75% deficit) during 01 January to 14 February 2019. The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) is above normal for both the weeks.

- Farmers can go for harvesting of potato.
- Land preparation for summer green gram and black gram can be done. Collect recommended varieties viz.T9, Pant U 19, UG 157 etc. for black gram and Kopergaon, Pratap, AAU 39 etc. for green gram cultivation.
- Farmers are advised to go for irrigation in the onion crop at 7 days interval. Against downy mildew disease farmers are advised to spray Ridomil @ 2.5gm/lit at an interval of 10 days.
- As the water level of ponds are going down, the fishery owners may arrange for partial harvesting of marketable sized fish (>700gm).

Haryana

Rainfall received over Haryana is 23.3 mm rainfall (3% deficit) during 01 January to 14 February 2019. The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) is above normal for both the weeks.

- Due to Western Disturbances, farmers are advised to temporarily withhold irrigation and chemical spray in mustard, gram crop and vegetable crops till this week.
- Due to fall in night temperature, high winds and cloudy conditions keep the animals under shed. Keep proper arrangement to keep warm in shed.
- Farmers are advised to keep on vigilance for insect and pests in sugarcane crop.

Punjab

Rainfall received over Punjab is 64.2 mm rainfall (82% excess) during 01 January to 14 February 2019. The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) is above normal for both the weeks.

Cloudy and rainy weather is likely to prevail in the coming days. Weather parameters are likely to remain as follows: Maximum Temperature 21-25 °C, Minimum Temperature 7-10 °C. Wind speed 2-10 km/h.

- Spray Rogor 30 EC @ 1.7 ml per liter of water to manage fruit fly in ber.
- Farmers are advised to monitor the symptoms of late blight in potato, if symptoms observed in the field then protect the crop by spraying Indofil M-45/Mass M- 45/Markzeb/Antracole/Kavach @ 500-700 gram or Mark copper/Copper oxichloride at 750-1000 g per acre using 250-350 litres of water per acre.
- Farmers are advised to survey the field for the appearance of yellow rust disease in wheat. If symptoms appeared, spray with 200 ml Tilt/ Bumper/Shine/Stilt/Compass/Markzole 25 EC using 200 litres of water per acre to check its further spread.

Himachal Pradesh

Himachal Pradesh has received 182.6 mm of rainfall during 01 January to 14 February 2019, which is 31% excess. The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) is below normal for week-1 and above normal for week-2.

- Thinning and weeding is recommended in timely sown mustard crop.
- In vegetables (brinjal, cauliflower, cabbage, tomato etc.) for monitoring of borer insect, farmers are advised to use pheromone traps.
- Farmers are advised to apply mulch and well rotten FYM on ginger, turmeric, colcasia and leafy vegetables.
- Farmers are advised to complete planting of onion bulbs.

Jammu

Rainfall received during 01 January to 14 February 2019 over Jammu is 255.0 mm, which is 84% excess. The Extended range weather forecast for next two weeks (15 to 21 and 22 to 28 February 2019) is above normal for week-1 and normal for week-2.

- The weather condition is favourable for yellow rust. Farmers are advised to apply Propiconazole (Tilt) @ 25ml in 25 litres of water/kanal and repeat same after 10-15 days during clear weather.
- The weather condition favours the outbreak of aphids in late sown mustard crop. If noticed spray the crop with imidacloprid @ 0.3 ml / litres of water or (Dimethoate) rogor 30 EC @ 1ml/litres of water during clear weather.

- Keep nursery area of cucurbitaceous crop, weed free by manual and spray the crop with bavistin @ 1gram/litre during clear weather against post damping off disease.

***Disclaimer:** The predictability of weather depends on many factors which are dynamic in nature. The success of agromet advisories provided here depends on the accuracy of the forecasts. In no event will India Meteorological Department (IMD) and Indian Council of Agricultural Research (ICAR) be liable to the user or to any third party for any direct, indirect, incidental, consequential, special or exemplary damages or lost profit resulting from any use or misuse of the information on this bulletin.*