



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

**Validity: 22 February to 07 March 2019**

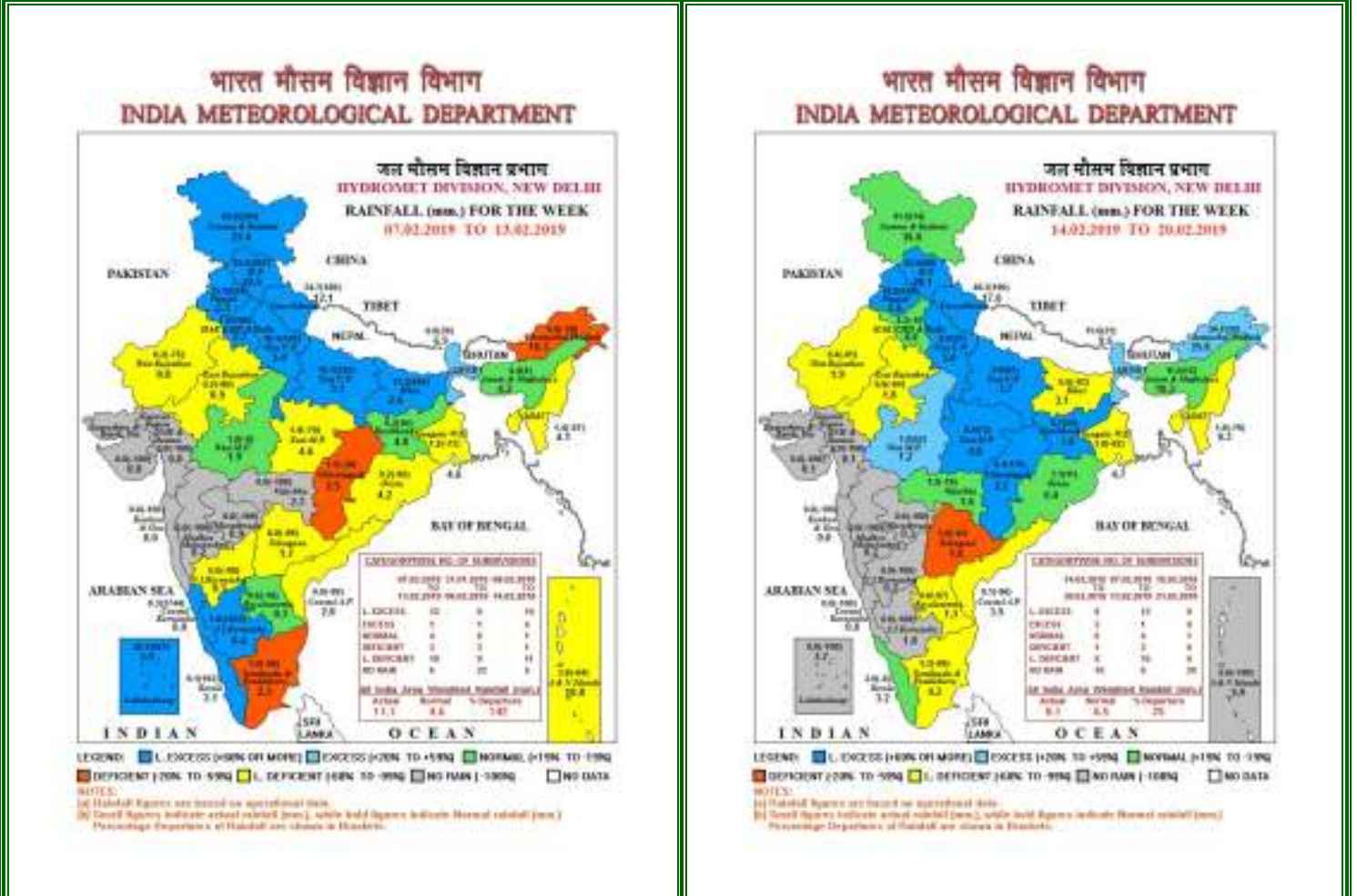
**Date of issue: 22 February 2019**

**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

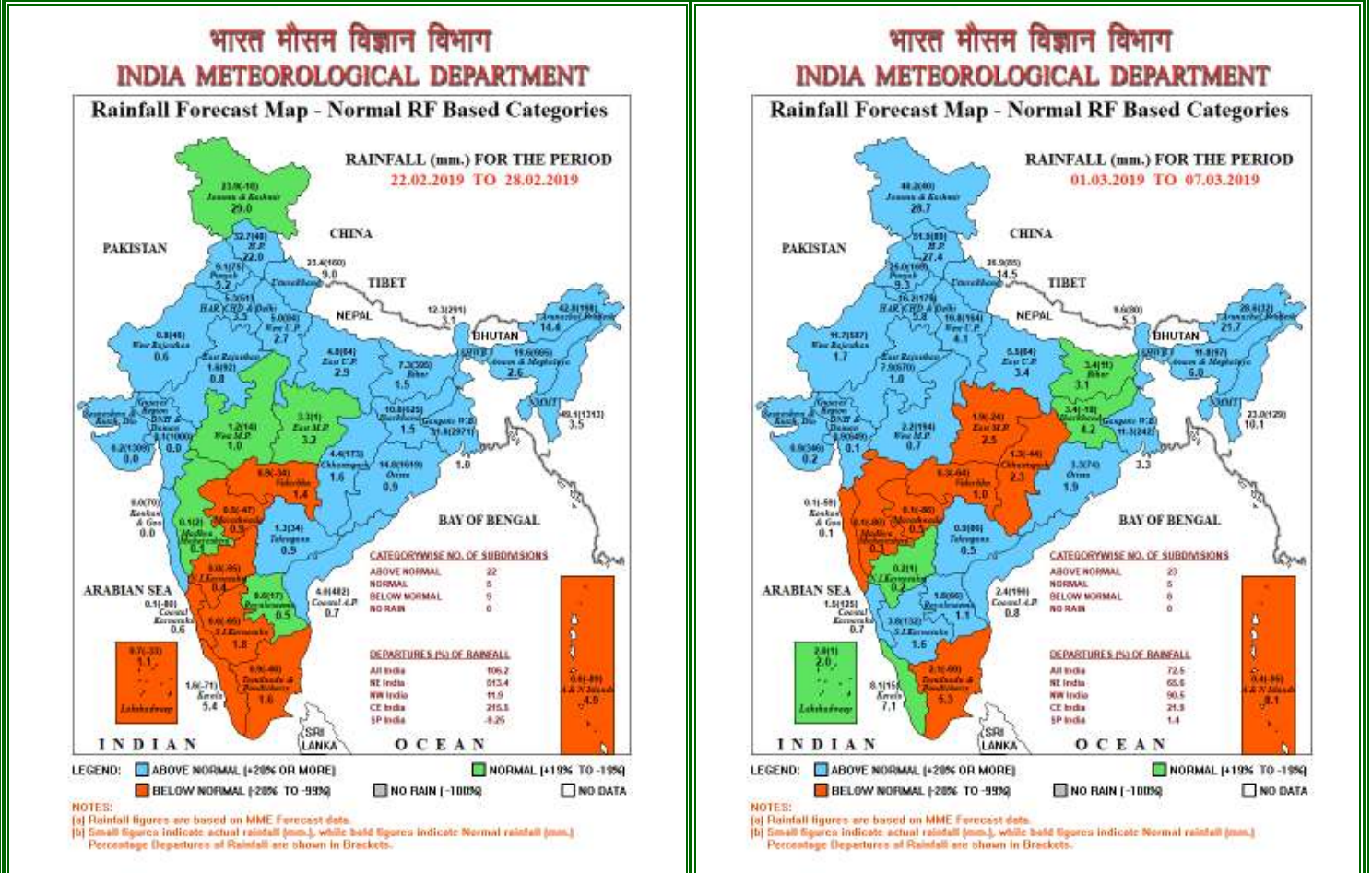
(7<sup>th</sup> to 20<sup>th</sup> February 2019)



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

## Extended Range Forecast System

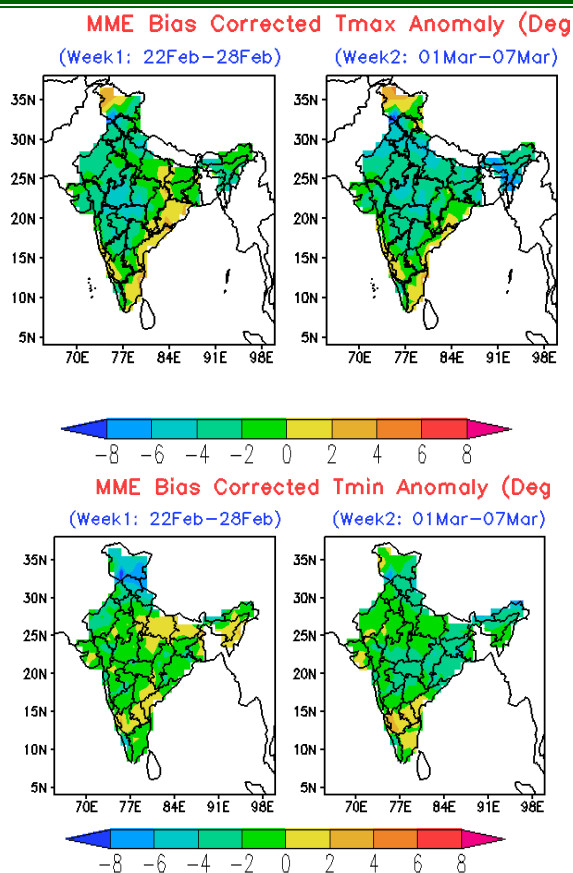
### Rainfall forecast maps for the next 2 weeks (IC – 20 February) (22<sup>nd</sup> February to 7<sup>th</sup> March 2019)



### Extended Range Rainfall Forecast

- **Week 1 (22.02.2019 to 28.02.2019) :** Rainfall associated with Western Disturbance over extreme north India (Jammu & Kashmir, Himachal Pradesh, Uttarakhand) and adjoining eastern parts (Odisha, Gangetic West Bengal, Bihar, Jharkhand and north-east met subdivisions).
- **Week 2 (01.03.2019 to 07.03.2019):** Rainfall associated with Western Disturbance over northwest India and parts of Northeast India. Normal over rest of India.

**Maximum and Minimum temperature anomaly ( $^{\circ}\text{C}$ ) forecast  
for next 2 weeks (IC – 20 February)  
(22<sup>nd</sup> February to 7<sup>th</sup> March 2019)**



**Maximum Temperature (Tmax)**

- **Week 1 (22.02.2019 to 28.02.2019) and Week 2 (01.03.2019 to 07.03.2019):** Except isolated regions over extreme north India, eastern coastal belts and parts of southern peninsula, Tmax will be below normal over India with higher negative anomaly over central and northwest India.

**Minimum Temperature (Tmin)**

- **Week 1 (22.02.2019 to 28.02.2019):** Mostly below normal Tmin over the central part of India along with Northwest and northern parts of India. Some parts of western Uttar Pradesh, Bihar and adjoining region will have above normal Tmin.
- **Week 2 (01.03.2019 to 07.03.2019):** Below normal Tmin over central and Northwest India will continue.

## **Strategic Agricultural Planning based on rainfall during next two weeks till 7<sup>th</sup> March 2019**

### **Agromet Advisories**

#### **Kerala**

Amount of rainfall received during the period from 01 January to 21 February 2019 over Kerala is 13.1 mm (24% deficit). The extended range weather forecast provided for next two weeks (22 to 28 February and 1 to 7 March) is below normal for week-1 and normal for week-2.

- Farmers are advised to spray Quinalphos (0.05%) 400 ml in 200 litres of water against coffee berry borer.
- White powdery spots are seen on the leaves of cucurbitaceous vegetables. Apply 20 g of *Trichoderma viride* per one litre of water to control powdery mildew disease of vegetables.
- Due to the increase in air temperature, the attack of insects such as thrips, mite and white flies etc. are more in cowpea. As a result, there is a chance of stunted growth in vegetables. It can be controlled by applying 10 grams of *Verticillium* in 1 litre of water or neem based insecticides can be applied.
- To avoid black rot in cabbage, spray Streptocycline 300ppm. Once a week, apply *Pseudomonas* 2 % solution after head initiation.

#### **Karnataka**

Amount of rainfall received during the period from 01 January to 21 February 2019 over North Interior Karnataka is 0.9 mm (70 % deficit), over South Interior Karnataka is 8.7 mm (201% excess) and over Coastal Karnataka is 0.3 mm (64% deficit). The extended range weather forecast provided for 22 to 28 February and 1 to 7 March over all the subdivisions of Karnataka is below normal for week-1 and above normal for coastal and South Interior Karnataka and normal over north Interior Karnataka for week-2.

#### **South Interior Karnataka**

- To protect pulse grains from storage pests, apply oils of Castor/ linseed/honge/neem oil @ 3-5 ml per kg of grains.
- Provide artificial brooding to chicks to maintain adequate temperature.

#### **Tamil Nadu**

Amount of rainfall received during the period of 01 January to 21 February 2019 over Tamil Nadu is 4.6 mm (82% deficit). The extended range weather forecast provided for next two weeks (22 to 28 February and 1 to 7 March) is below normal for both the weeks.

- 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% S C 1500-2000 ml/ha.
- Current weather condition is favorable for Citrus canker disease incidence. To control, spray Copper Oxy Chloride 0.2% at fortnight intervals.

- Prevailing weather condition is congenial for sucking pests like Thrips and Aphids in Chilli. To control, spray Imidacloprid 17.8% SL @ 3 ml/10 litre.

### **Maharashtra**

No rainfall received during 01 January to 21 February 2019 over different meteorological sub divisions of the state viz., Konkan, Madhya Maharashtra and Marathwada. Amount of rainfall received over Vidarbha is 12.2 mm (20% deficit). The extended range weather forecast provided for next two weeks (22 to 28 February and 1 to 7 March) over Konkan is above normal, over Madhya Maharashtra is normal and over Marathwada and Vidarbha is below normal for week-1 and below normal over all the subdivisions of Maharashtra for week-2.

### **Marathwada**

- For management of armyworms in late sown maize crop, spray Thiamethoxam 12.6 % + Lambda cyhalothrin 9.5 % @ 50 ml per acre while considering rainfall.
- Farmers are advised to stop irrigating the turmeric crop 15 days before harvesting.
- Take a spray of Dimethoate 30 % @ 1320 ml per acre during flowering stage of mango to control Jassids in mango crop while considering rainfall. Irrigation management should be done in mango orchard.
- Harvesting of mature mrig bahar citrus fruits should be done. Irrigation management and mulching should be done in ambia bahar citrus orchard.
- Plantation of summer vegetable should be done as early as possible. Irrigation management should be done in summer vegetable crops.

### **Madhya Maharashtra**

- To control fruit fly In mango orchards, install fruit fly traps (Methyleugenol) @ 5 / ha.
- Give protective irrigation in drumstick and use crop residue for mulching to conserve soil moisture.
- Rabi sorghum is at harvesting stage, so it should be harvested, threshed and store ( moisture should not more than 10%) it after 2-3 sun drying by mixing it with 1-2 % dried neem leaf
- 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. The same seed can be used for re-sowing for next month
- To control powdery mildew & mango hoppers on bloomed mango, farmers are advised to spray Imidachloprid (17.8 SL) 3- 4 ml + Sulphur 80 WP 25 gram per 10 litre water.

### **Chhattisgarh**

Amount of rainfall received over Chhattisgarh during 01 January to 21 February 2019 is 22.6 mm (29% excess). The extended range weather forecast provided for next two weeks (22 to 28 February and 1 to 7 March) is above normal for week-1 and below normal for week-2.

- To control borer insect in okra and brinjal, use pheromone traps@10 Nos/acre and destroy the upper portion of affected plants.
- Farmers are advised for the control of purple blotch of onion by spraying saaf fungicide @ 2 g per

litre of water.

- If outbreak of aphid shown in mustard crop, than apply imidacloprid @ 80 ml/acre dissolved in 200 litre water.
- Presently mango crop is at flowering/fruit setting stage, at this stage powdery mildew is commonly observed in mango, which causes poor fruit setting and later on fruit dropping. Hence, it is advised to keep watch over the crop and whenever the symptom appears, spray Carbendizim (Bavistin) @1.5gram or Sulphex @3.0g per litre of water.

### **Uttar Pradesh**

Amount of rainfall received over East Uttar Pradesh region is 28.0 mm (6% excess) and West Uttar Pradesh is 36.3 mm (23% excess) during 01 January to 21 February 2019. The extended range weather forecast provided for two weeks (22 to 28 February and 1 to 7 March) for West and East Uttar Pradesh is above normal for both the weeks.

- Aphid infestation is expected in late sown mustard crop due to cloudy weather in these weeks. Spray Chlorpyrifos 20% EC @ 1.0 litre/ha or monochrotophos 36 % S.L. @ 500 ml/ha with 500-600 litter of water solution on clear sky.
- Dig out early sown potato crop. Take precaution from late blight and Aphid infestation, spray Copper oxichloride 3.0 kg/ha with 700-800 litre water solution or 2.0 g /litre water Mancozeb.
- Sowing of black gram crop should be taken up at clear sky, seed should be treated with Captan or Thiram @ 3.0 gm/kg of seed before sowing and varieties T-9, Narendra Urd-1, Azaid Urd-1, Uttara, Azad Urd-2, Shekhar-2 should be sown 20-25 kg/ha treated seed.
- Farmers are advised for top dressing of urea at optimum moisture during PI stages of wheat.
- In Barley crop, top dress 30 kg/ha Urea in rain-fed areas at optimum moisture condition.

### **Odisha**

Amount of rainfall received over Odisha during 01 January to 21 February 2019 is 8.6 mm (66% deficit). The extended range weather forecast provided for next two weeks (22 to 28 February and 1 to 7 March) is above normal for both the weeks.

- High humidity may lead to the infestation of mango hopper. In taller plants give fumigation of neem leaves. Spray 20 ml Chloropyrifos or 3 ml Imidacloprid per litre water and after 1 Week spray 3 g carbendazim / mancozeb per litre.
- Spodoptera in cabbage and cauliflower may be found. Alternate spraying of B.T product 1 kg or 250 LE SLNPV/acre at weekly interval or use 4 Trichogramma cards per acre may be done.
- Transplanted rice is at 3 week stage. Apply 16 kg nitrogen per acre and farmers are advised to Keep the field saturated.
- It is the optimum weather for sesame sowing. Grow improved varieties like - Uma, Kalika, Nirmala, Prachi and Usha, Use 2 to 2.5 kg seeds/ acre. Go for line sowing at a spacing of 25-30 X 10 cm.

## **Rajasthan**

Amount of rainfall received over West Rajasthan is 6.2 mm (1% deficit) and over East Rajasthan is 7.2 mm (20% deficit) during 01 January to 21 February 2019. The extended range weather forecast provided for next two weeks (22 to 28 February and 1 to 7 March) for West and East Rajasthan is above normal for both the weeks.

- Harvest the mustard crop wherever it has reached at physiological maturity stage and store at safe place.
- Stop providing irrigation in cumin as crop is at maturity stage.
- For the control of termites in wheat and other crops, spray chloropyriphos 20EC 2l/ha with irrigation water. For broadcast, chloropyriphos 20EC mix with 100 kg/ha sand than apply light irrigation
- Sowing should be done of summer okra and use varieties like Pusasavani, Arkaanamika, ArkaAbhya, Aajadkranti, Prabhnikranti, Pusa-A-4 etc.
- Sowing should be done of summer groundnut varieties like T.A.G.24, T.G.37A, G.G.2, and D.H.86.

## **Assam**

Rainfall received over Assam is 18.1 mm (51% deficit) during 01 January to 21 February 2019. The extended range weather forecast provided for next two weeks (22 to 28 February and 1 to 7 March) is above normal for both the weeks.

- **Rapeseed and mustard:** Seeds should be stored in cool, dark cupboard, away from the direct heat or sunlight, seeds should also be tightly closed when not in use.
- Farmers are advised to prepare land for growing green gram and black gram crop. Sandy loam soil is more preferable. Collect recommended varieties viz. T9, Pant U 19, UG 157 etc. for black gram and Kopergaon, Pratap, AAU 39 etc. for green gram cultivation.
- Land preparation may be started for growing of ridge and sponge gourd. Early sowing helps in escaping fruit fly attack. Select recommended varieties viz. AAUJ-1, AAUJ-2, AAUJ-3 etc. for ridge gourd and Pusa Chikni or other local varieties for sponge gourd.

## **Haryana**

Rainfall received over Haryana is 27.6 mm rainfall (4% deficit) during 01 January to 21 February 2019. The extended range weather forecast provided for next two weeks (22 to 28 February and 1 to 7 March) is above normal for both the weeks.

- Due to Western Disturbances, farmers are advised to temporarily withhold irrigation and chemical spray till 22nd February in mustard, wheat and gram crop.
- Due to Western Disturbances, farmers are advised to withhold irrigation till temporarily withhold irrigation in berseem crop till 22nd February in the existing vegetable crops. Farmers are also advised to keep monitoring for pest/ diseases.
- Due to fall in night temperature, high winds and cloudy conditions keep the animals under shed. Keep proper arrangement to keep warm in shed. Provide 50 grams iodized salt and 50 to 100 grams mineral mixture daily with animal feed/fodder to keep them healthy.



## **Punjab**

Rainfall received over Punjab is 84.1 mm rainfall (97% excess) during 01 January to 21 February 2019. The extended range weather forecast provided for next two weeks (22 to 28 February and 1 to 7 March) is above normal for both the weeks.

- Farmers are advised to survey the field for the appearance of yellow rust disease in wheat. If 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.
- 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 g or Mark copper/Copper oxychloride at 750-1000 g per acre using 250-350 litres of water per acre.
- It is the best time for the plantation of deciduous fruit plants.
- Spray Rogor 30 EC @ 1.7 ml per liter of water to manage fruit fly in ber.

## **Himachal Pradesh**

Himachal Pradesh has received 233.9 mm of rainfall during 01 January to 21 February 2019, which is 41% excess. The extended range weather forecast provided for next two weeks (22 to 28 February and 1 to 7 March) is above normal for both the weeks.

- Thinning and weeding is recommended in timely sown mustard crop.
- In vegetables like brinjal, cauliflower, cabbage, tomato etc for monitoring of borer insect, farmers are advised to use pheromone traps.
- Farmers are advised to start earthing-up in potato if crop has attained a height of 15-22 cm.
- Keep the cowshed clean and do not allow the water to stagnate in the cow shed, provide dry bedding to animals.

## **Jammu**

Rainfall received during 01 January to 21 February 2019 over Jammu is 296.6 mm, which is 69% excess. The extended range weather forecast provided for next two weeks (22 to 28 February and 1 to 7 March) over Jammu is normal for week-1 and above normal for week-2.

- Due to the presence of sufficient moisture in the soil, apply second dose of urea @ 2.0 kg/kanal in late and very late sown wheat before the ear head emerge during clear weather.
- In Gram crop the weather is congenial for the outbreak of Aschochyta blight and wilt diseases If the symptom observed farmers are advised drench the affected spots with Bavistin @10ml/ litre of water.
- The weather condition favours the outbreak of aphids in late sown mustard crop under such situation regular monitor for attack of aphids is advised, spray the crop with imidacloprid @ 0.3 ml / litre of water or (Dimethoate) rogor 30 EC @ 1ml/litre of water during clear weather.
- Farmers are advised to raise cucurbits properly in the poly bags under protected structures.

*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.*