



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

**Validity: (27<sup>th</sup> December 2019 to 09<sup>th</sup> January 2020)**

**Date of issue: 27<sup>th</sup> December 2019**

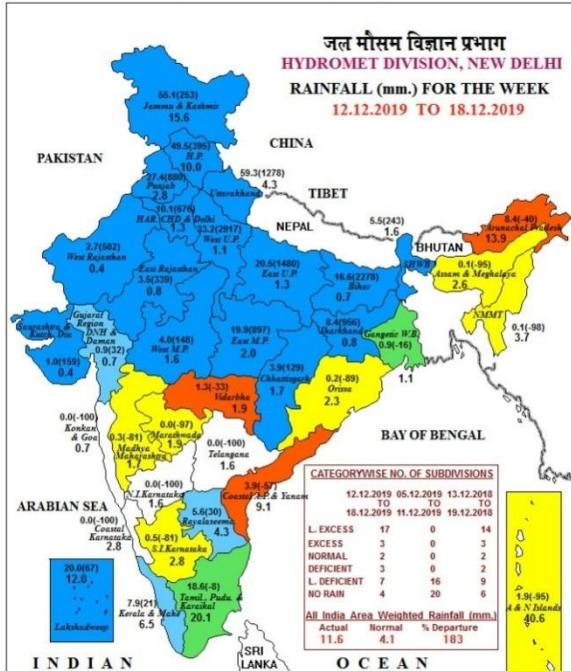
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**&**  
**Earth System Science Organization**  
**India Meteorological Department**

## Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

### Realized Rainfall

(12<sup>th</sup> to 25<sup>th</sup> December, 2019)

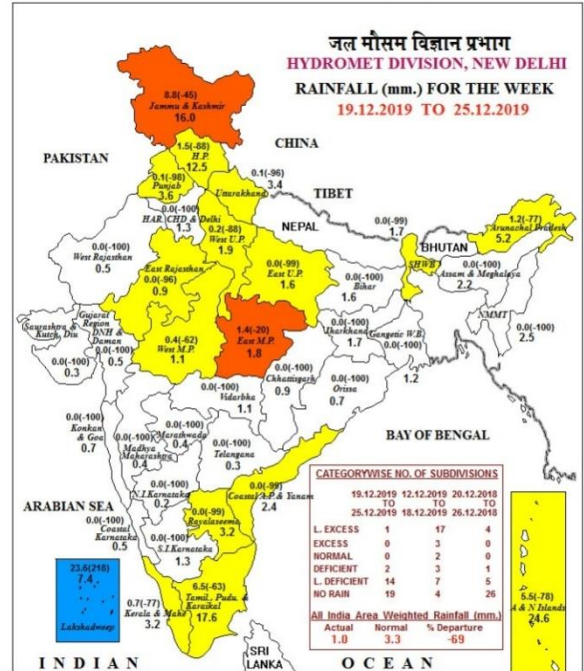
#### भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



**LEGEND:** ■ L. EXCESS (+60% OR MORE) ■ EXCESS (+20% TO +59%) ■ NORMAL (+1% 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.

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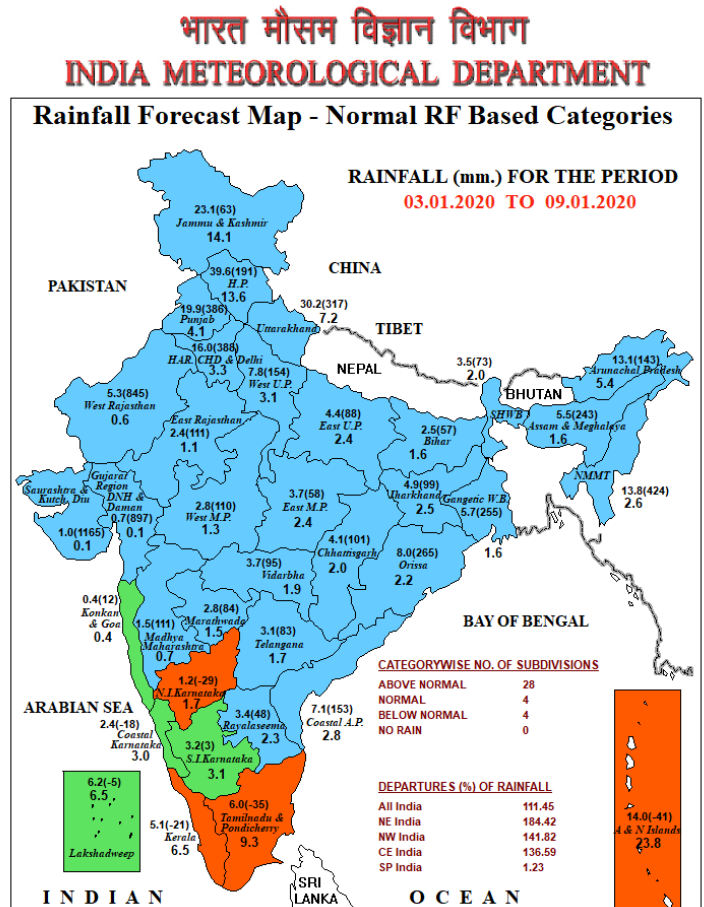
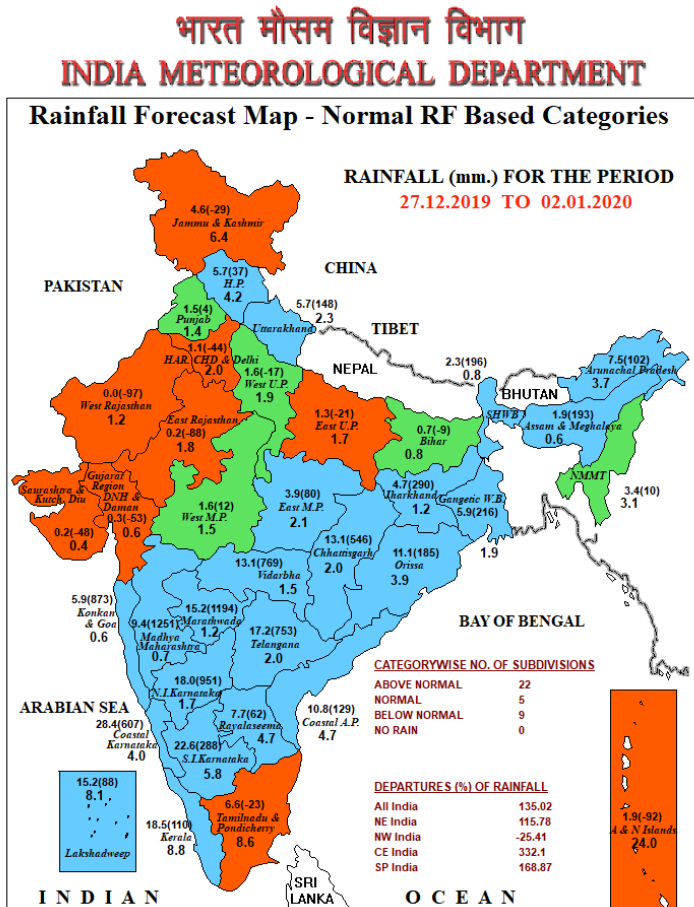
**NOTES:**  
[a] Rainfall figures are based on operational data.  
[b] Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)  
Percentage Departures of Rainfall are shown in Brackets.

- Normal or above normal rainfall occurred in both the weeks in Lakshadweep.
- Normal or above normal rainfall occurred in either of the two weeks in Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana Chandigarh & Delhi, Rajasthan, Uttar Pradesh, Bihar, Jharkhand, West Bengal & Sikkim, Gujarat, Madhya Pradesh, Chhattisgarh, Rayalaseema, Tamil Nadu Puducherry & Karaikal and Kerala & Mahe.
- Below normal rainfall/no rain occurred over rest of the country.

## Extended Range Forecast System

### Rainfall forecast maps for the next 2 weeks (IC – 25 December)

(27<sup>th</sup> Dec. 2019 to 9<sup>th</sup> Jan. 2020)



- **Week 1 (27.12.2019 to 02.01.2020) and Week 2 (03.01.2020 to 09.01.2020):** Central India and adjoining South Peninsula and Northeast India will remain active during week 1 and northern India will be under the influence of Western Disturbance during week 2.

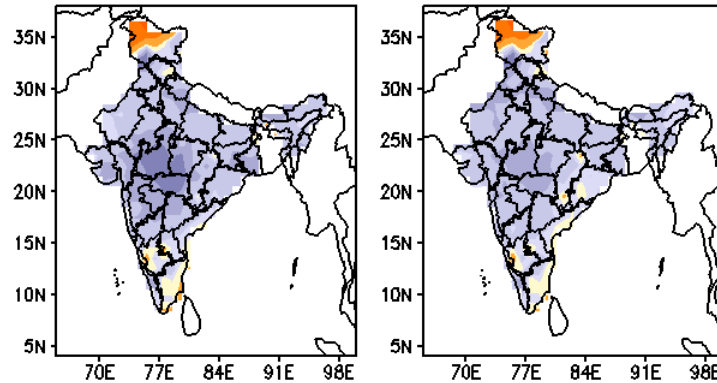
**Maximum and Minimum temperature anomaly ( $^{\circ}\text{C}$ ) forecast  
for next 2 weeks (IC – 25 December)**

**(27<sup>th</sup> Dec. 2019 to 9<sup>th</sup> Jan. 2020)**

**MME forecast Tmax anomaly (Deg C)**

(Week1: 27Dec–02Jan)

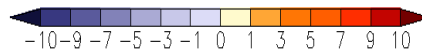
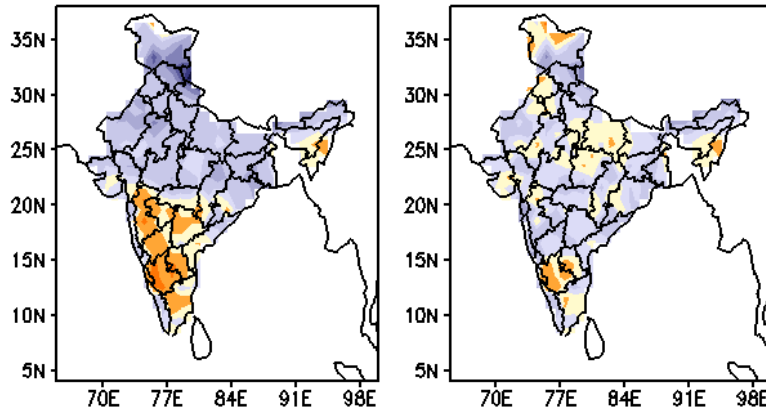
(Week2: 03Jan–09Jan)



**MME forecast Tmin anomaly (Deg C)**

(Week1: 27Dec–02Jan)

(Week2: 03Jan–09Jan)



**Maximum Temperature (Tmax)**

- **Week 1 (27.12.2019 to 02.01.2020) and Week 2 (03.01.2020 to 09.01.2020):** T max anomaly is mostly negative over most parts of India except extreme north India and some parts of eastern coastal regions.

**Minimum Temperature (Tmin)**

- **Week 1 (27.12.2019 to 02.01.2020):** Below normal T min over extreme north India and northeast India.
- **Week 2 (03.01.2020 to 09.01.2020):** Below normal T min over extreme north India and adjoining central India.

## **Strategic Agricultural Planning based on rainfall during next two weeks till 09<sup>th</sup> January 2020**

### **Agromet Advisories**

#### **Kerala**

Amount of rainfall received over Kerala is 623.9 mm (28% excess) during the period of 01 Oct.- 26 Dec. 2019. The extended range weather forecast for next two weeks (27 Dec. 2019 - 02 Jan. 2020 and 03 Jan.- 09 Jan. 2020) is above normal for week-1 and below normal for week-2.

- The prevailing weather conditions may favour the incidence of sheath blight in rice. To control this spray Hexaconazole 2ml/litre of water.
- Mulching is advised for conserving moisture and reducing soil temperature in coconut gardens. Mulch the coconut basins with dry/green leaves at the end of Northeast monsoon.

#### **Tamil Nadu**

Amount of rainfall received over Tamil Nadu is 451.5 mm (2% normal) during the period of 01 Oct.- 26 Dec. 2019. The extended range weather forecast for next two weeks (27 Dec. 2019 - 02 Jan. 2020 and 03 Jan. - 09 Jan. 2020) is below normal for week-1 and week 2.

- Prevailing weather condition is favorable for tobacco caterpillar in sunflower. It is advised to spray any one of the insecticides Dichlorvos 76 EC 500 ml/ha or Phosalone 35 EC 1000 ml/ha.
- Prevailing weather conditions are favorable for leaf hopper and aphid incidence in cotton. Spray Dimethoate 30 EC 500ml/ha for the control of leaf hopper and Methyl demeton 25 EC 500ml/ha for the control of aphid.

#### **Maharashtra**

Rainfall received over Madhya Maharashtra is 228.5 mm (123% large excess), over Marathwada is 256.3 mm (158% large excess), Vidharbha is 66.3 mm (-17% deficit) and Konkan region 281.5 mm (102% large excess) during 01 Oct.- 26 Dec. 2019. The extended range weather forecast for next two weeks (27 Dec. 2019 to 02 Jan. 2020 and 03 Jan. - 09 Jan. 2020) over Madhya Maharashtra, Konkan, Marathwada and Vidharbha are above normal for week-1 and above normal over Madhya Maharashtra, Marathwada and Vidharbha and normal over Konkan for week-2.

#### *Madhya Maharashtra*

- Zinc deficiency was observed in the dryland sorghum field. Spray 0.5% Zinc Sulphate mixed with 50 g/litre of water.
- Weather is congenial to aphid infestation in safflower crop. For control, spray Dimethoate 20 EC @15 ml/10 litre of water.
- Farmers are advised to look for army worm attack on maize, sorghum and sugarcane. To control, spray of Spinetoram (11.7% SC) 10 ml or Chlorantraniliprole (18.5 % SC) 3 to 4 ml/10 litre of water + 10 ml sticker.

### *Konkan*

- There is possibility of incidence of tea mosquito bugs on the inflorescence of cashewnut, to protect the cashew inflorescence, spray Profenophos 50% EC @10 ml per 10 litre of water.
- Weather is congenial for the incidence of aphids in lablab. To control, spray Dimethoate 30% EC @ 12 ml per 10 litre of water.
- Protect the animals /poultry birds from low temperature by providing curtains and electric bulbs as per the need.

### *Vidharbha*

- At cotton collection and storage centers, cleanliness and mass trapping for pink boll worm through pheromone trap is advised.
- In pigeonpea, during pod formations stage the crop is likely infested by pests like leaf eating caterpillar, pod borer, plume moth, pod fly etc. For control, spray of 5% neem seed kernel extract is advised. Above ETL levels (10-20 larvae/plant) spray of Emamectin benzoate 5% SG @ 3 g in 10 litre of water is advised.

### **Rajasthan**

Rainfall received during 01 Oct.- 26 Dec. 2019 over East Rajasthan is 37.8 mm (51% excess). The extended range weather forecast for next two weeks (27 Dec. 2019 - 02 Jan. 2020 and 03 Jan. - 09 Jan. 2020) over East Rajasthan is below normal for week-1 and above normal for week-2.

- Because of prevailing cold waves, farmers are advised to spray 0.1% sulphuric acid or apply irrigation or produce smoke in the frost sensitive crops for the protection against frost.
- Due to sudden dip in minimum temperature suitable protection measures to protect poultry birds and livestock are advised.
- To control *phalaris minor* and wild oat in barley spray of Isoproturon @ 0.75 kg/ha for light soil and @1.25 kg/ha in heavy soil at 30-35 DAS.

### **Jammu**

Rainfall received during 01 Oct.- 26 Dec. 2019 in Jammu is 253.3 mm (119% large excess). The extended range weather forecast for next two weeks (27 Dec. 2019 to 02 Jan. 2020 and 03 Jan.- 09 Jan. 2020) is below normal for week-1 and above normal for week-2.

- Due to the decrease in minimum temperature farmers are advised to go for very late sown wheat variety such as Raj 3077, HD-2285, Raj-3765 and HD-2402.
- Due to congenial weather for collar rot and root rot in gram, rogue out affected plants and drench the affected patches of the field with Thiram or Captan @ 2g/litre of water.
- Weather is favourable for the attack of leaf webber, spray Carbaryl (Sevin) @ 1 gram/litre of water to control.



## **Himachal Pradesh**

Amount of rainfall received over Himachal Pradesh is 120.4 mm (49% excess) during 01 Oct.- 26 Dec. 2019. The extended range weather forecast provided for next two weeks (27 Dec. 2019 - 02 Jan. 2020 and 03 Jan. - 09 Jan. 2020) on rainfall over Himachal Pradesh is normal for week-1 and for week-2.

- Digging pits are advised for plantation of new horticulture plants like peacunnut, walnut, almond plum and peach.
- It is advised to cover the small horticulture plants with grass to avoid cold paralysis.
- Training, skiffing and cleaning work can be completed in the tea.

## **Hisar**

Amount of rainfall received over Hisar is 28.3 mm (56% excess) during 01 Oct.- 26 Dec. 2019. The extended range weather forecast provided for next two weeks (27 Dec. 2019 - 02 Jan. 2020 and 03 Jan. - 09 Jan. 2020) on rainfall over Hisar is below normal for week-1 and above normal for week-2.

- Intercultural operation is advised to conserve soil moisture and apply need based irrigation in wheat.
- Farmers are advised to keep on vigilance for insect/pests in sugarcane crop. Apply need based irrigation to the crop.
- Due to fall in night temperature and cloudy weather keep the animals under shed. Provide 50 g iodized salt and 50 to 100 g mineral mixture daily with animal feed/fodder to keep them healthy.

## **Assam**

Amount of rainfall received over Assam is 204.1 mm (5% normal) during 01 Oct.- 26 Dec. 2019. The extended range weather forecast provided for next two weeks (27 Dec. 2019 - 02 Jan. 2020 and 03 Jan. - 09 Jan. 2020) on rainfall over Assam is above normal for weeks-1 and week-2.

- Farmers are advised for earthing up in the potato at stolon formation stage (25 days after planting). Adopt mulching by using water hyacinth, straw etc. to enhance the tuber quality and yield.
- Due to low temperature, occurrence of saw fly may be seen in the rapeseed & mustard crop. To control, spray Chloropyriphos 20EC @ 5mm/litre of water.
- Farmers are advised to protect the poultry from cold injury by keeping the coop clean and dry and use dry paddy straw as litter material and cover the sides of the coop with thick cloths during night.

## **Jharkhand**

Amount of rainfall received over Jharkhand is 138.7 mm (55% excess) during 01 Oct.- 26 Dec. 2019. The extended range weather forecast provided for next two weeks (27 Dec. 2019 - 02 Jan. 2020 and 03 Jan. - 09 Jan. 2020) on rainfall over Jharkhand is above normal for weeks-1 and week-2.

- Because of cool and humid weather, there is a chance of infestation of late blight disease in potato crop. It is advised to spray Krilaksilor Ridomil MZ chemical@ 1.5 g/litre of water to check it from further spreading.
- For more branching and flowering nipping is advised at 30-40 DAS in gram. After nipping light

irrigation and broadcast of 5 kg urea is highly recommended.

### **Uttar Pradesh**

Rainfall received during 01 Oct.- 26 Dec. 2019 over East Uttar Pradesh is 46.4 mm (1% normal) and West Uttar Pradesh is 51.9 mm (69% large excess). The extended range weather forecast for next two weeks (27 Dec. 2019 - 02 Jan. 2020 and 03 Jan. - 09 Jan. 2020) over East Uttar Pradesh is below normal for week-1 and above normal for week-2.

- Light to scattered clouds to be appeared, during this week therefore, watchfull for aphid in mustard crop. If seen, spray Chlorpyriphos 20% EC @ 1.0 litre/ha or Monocrotophos 36 % S.L. @ 500 ml/ha with 500-600 litre of water solution.
- Need based irrigation should be applied for protection of fog and frost condition in potato crop and spray Mancozeb 2g /litre water to counter the effect of blight disease at 10-15 days intervals.

### **Gujarat**

Amount of rainfall received over Gujarat is 83.8 mm (182% large excess) during 01 Oct.- 26 Dec. 2019. The extended range weather forecast provided for next two weeks (27 Dec. 2019 - 02 Jan. 2020 and 03 Jan. - 09 Jan. 2020) on rainfall over Gujarat is below normal for week-1 and above normal for week-2.

- For the management of mango hopper spray Deltamethrin 2.8 EC, 3 ml or Cypermethrin 25 EC, 2 ml in 10 litre water, in case of severe incidence spray Imidacloprid 17.8 SL, 3ml or Fenobucarb 50 EC, 20 ml or Buprofezin 25EC, 10ml in 10 litre water.
- “T” shaped bird perches in and around chick pea crop field is advised to install for natural controlling of prodenia and heliothes population. If infestation cross ETL, spray Emamectin Benzoate 5 % SG 7 g in 10 litres of water.

### **West Bengal**

Amount of rainfall received over West Bengal is 235.8 mm (52% excess) during 01 Oct.- 26 Dec. 2019. The extended range weather forecast provided for next two weeks (27 Dec. 2019 - 02 Jan. 2020 and 03 Jan. - 09 Jan. 2020) on rainfall over West Bengal is above normal for week-1 and week-2.

- Irrigate the mustard field at the time of flowering for late sown crop or pod initiation for early sown crop. Continuous monitor on aphid attack is advised. To control, apply 1.5 ml Metasystox or Rogor per litre of water is advised.
- To protect the seedlings of rice crop from cold, cover the nursery bed with polythene or keep 2 to 3 cm stagnant water in the nursery bed especially during the night-time.

### **Bihar**

Amount of rainfall received over Bihar is 42.2 mm (-41% deficit) during 01 Oct.- 26 Dec. 2019. The extended range weather forecast provided for next two weeks (27 Dec. 2019 - 02 Jan. 2020 and 03 Jan. - 09 Jan. 2020) on rainfall over Bihar is normal for week-1 and above normal for week-2.

- Monitoring is advised for infestation of fruit borers in brinjal, tomato, chilli. If infestation occurs,



installation of pheromone traps @ 3-4 traps per acre is advised.

- Farmers are advised to give light irrigation in wheat crop at Crown Root Initiation (CRI) stage (21-25 days after sowing). Application of 30 kg nitrogen per hectare is advised after irrigation.
- Farmers are advised to give protein enriched diets to the animals. Avoid feeding of paddy straw to prevent liverfluke infection in dairy animals.

## **Karnataka**

Rainfall received during 01 Oct.- 26 Dec. 2019 over South Interior Karnataka is 306.2 mm (51% excess) and North Interior Karnataka is 244.6 mm (79% large excess). The extended range weather forecast for next two weeks (27 Dec. 2019 - 02 Jan. 2020 and 03 Jan. - 09 Jan. 2020) over South Interior Karnataka is above normal for week-1 and normal for week-2 and for North Interior Karnataka above normal for week-1 and below normal for week-2.

### *South Interior Karnataka*

- Due to low temperature during night followed by morning dew the pod borer incidence was noticed in the red gram crop. Spray of Indoxycarb 14.5 SC @ 0.5 ml/litre or Spynosad 45 SC @ 0.15 ml/litre or Chloropyrifos 20 EC @ 2ml/litre are advised.
- Provide artificial brooding to chicks to maintain adequate temperature.
- Manage the humidity in the silk worm rearing house by providing good cross-ventilation. Dust dry slaked lime powder when silkworms settle for moult.

## **Punjab**

Amount of rainfall received over Punjab is 62.4 mm (168% large excess) during 01 Oct.- 26 Dec. 2019. The extended range weather forecast provided for next two weeks (27 Dec. 2019 - 02 Jan. 2020 and 03 Jan. - 09 Jan. 2020) on rainfall over Punjab is normal for weeks-1 and above normal for week-2.

- Monitoring is advised for infestation of late blight in potato crop. If infestation occurs, spray Indofil M-45/Mass M-45/Markzeb/Antracole/Kavach @ 500-750 g using 250-350 litres of water per acre at 7 days interval is advised.
- Protect the young evergreen fruit plants from frost and cold weather. Prepare thatches and apply light irrigations to protect young fruit plants from frost damage.
- If symptoms of sulphur deficiency noticed in wheat crop, broadcast one quintal gypsum/acre followed by a light irrigation or if the soil is in proper moisture condition is advised.

*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.*