



National Agromet Advisory Service Bulletin

based on

Extended Range Weather Forecast (ERFS)

Validity: 17 - 30 December 2021

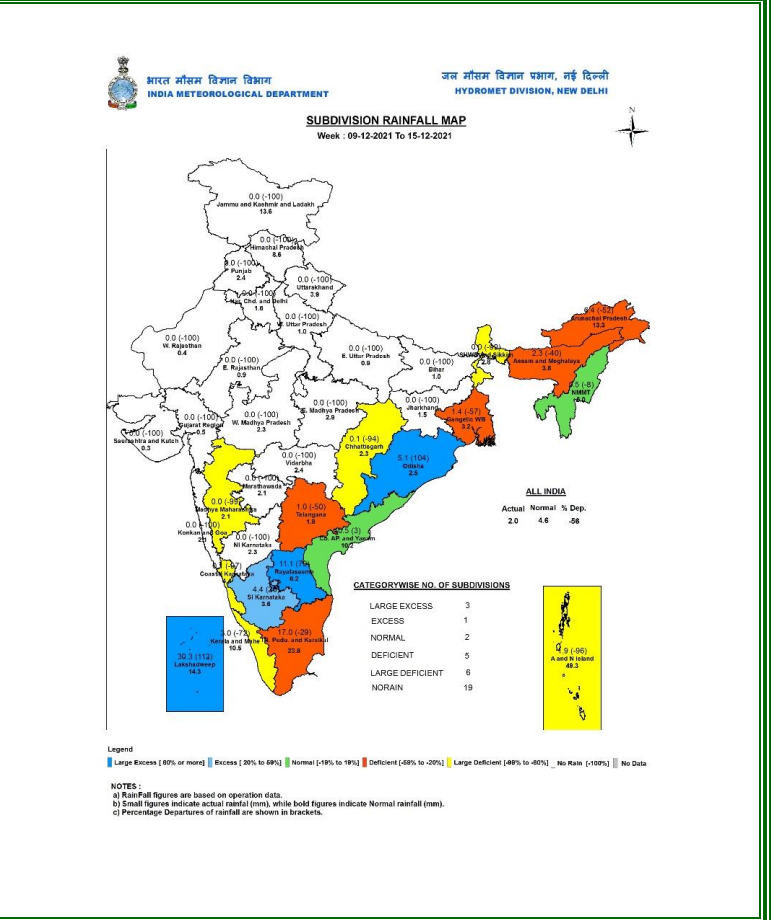
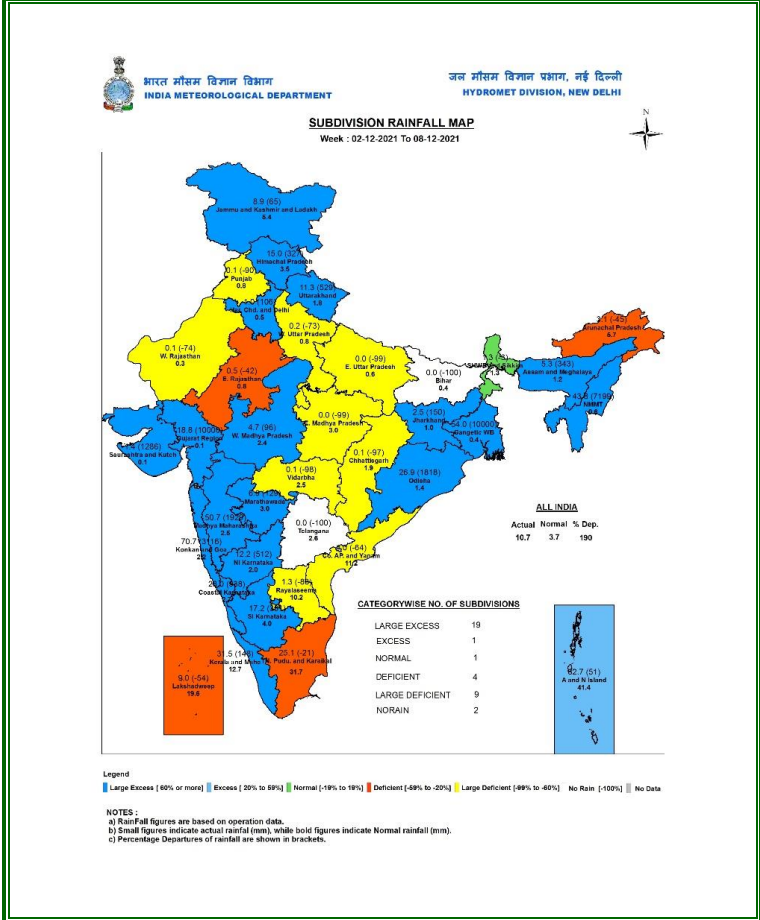
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**AICRP on Agro-Meteorology (AICRPAM),
Central Research Institute for Dryland Agriculture (CRIDA),
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&
India Meteorological Department (IMD),
Earth System Science Organization**

Realized Rainfall and Extended Range Forecast (Rainfall and Temperature)

Realized Rainfall (2nd to 15th December, 2021)



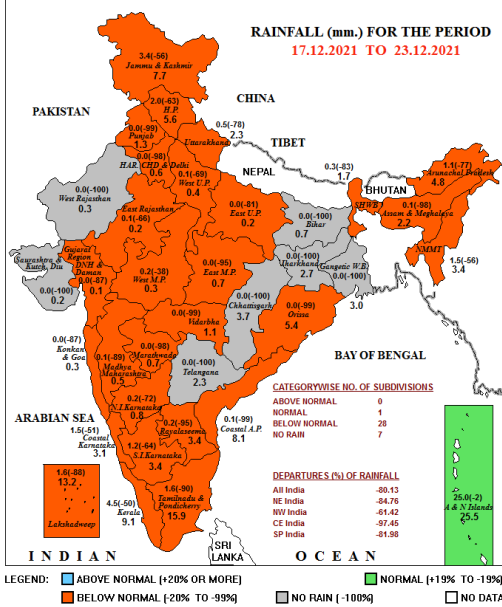
- Normal or above normal rainfall occurred in both the weeks in Odisha, Nagaland Manipur Mizoram & Tripura (NMMT) and South Interior Karnataka.
- Normal or above normal rainfall occurred in either of the two weeks in Jammu & Kashmir and Ladakh (UTs), Uttarakhand, Himachal Pradesh, Haryana, Chandigarh & Delhi, Gujarat Region, Saurashtra & Kutch, West Madhya Pradesh, Jharkhand, Konkan & Goa, Madhya Maharashtra, Marathwada, Sub-Himalayan West Bengal & Sikkim, Gangetic West Bengal, Assam & Meghalaya, Coastal Karnataka, North Interior Karnataka, Coastal Andhra Pradesh & Yanam, Rayalaseema, Kerala & Mahe, Andaman & Nicobar Islands and Lakshadweep.
- Below Normal rainfall /no rain occurred in both the weeks / either of the two weeks over Punjab, West Uttar Pradesh, East Uttar Pradesh, East Rajasthan, West Rajasthan, East Madhya Pradesh, Chhattisgarh, Vidarbha, Bihar, Arunachal Pradesh, Tamil Nadu Puducherry & Karaikal and Telangana.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 15 December) (17th to 30th December, 2021)

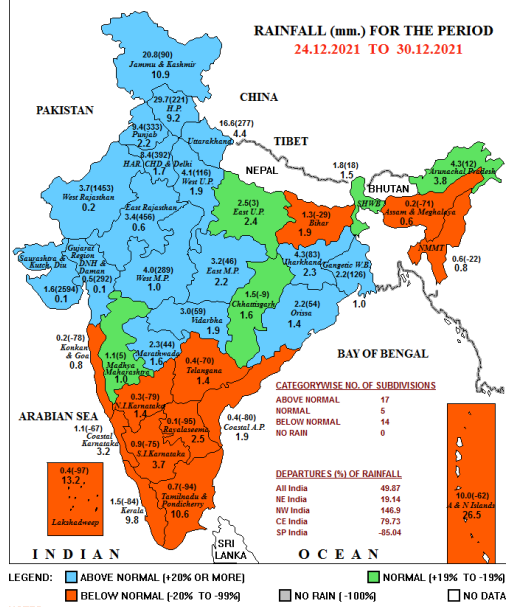
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT

Rainfall Forecast Map - Normal RF Based Categories



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Rainfall Forecast Map - Normal RF Based Categories



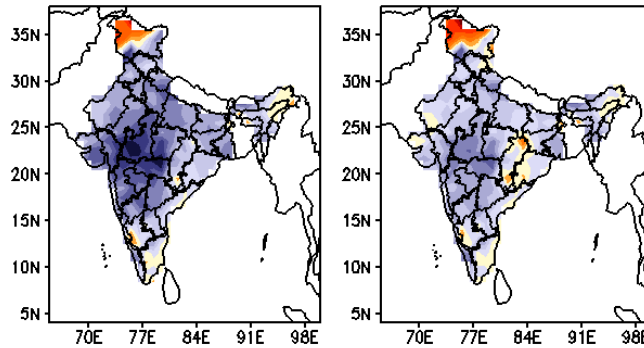
- **Week 1 (17.12.2021 to 23.12.2021):** Some parts of Sri Lanka and adjoining regions will get rainfall associated with cyclonic formation/low pressure area over the region.
- **Week 2 (24.12.2021 to 30.12.2021):** Slight below normal northeast monsoon rainfall is expected. Western Disturbances associated rainfall is expected over extreme north India in week 2.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 15 December)
(17th to 30th December, 2021)**

MME forecast Tmax anomaly (Deg C)

(Week1: 17Dec–23Dec)

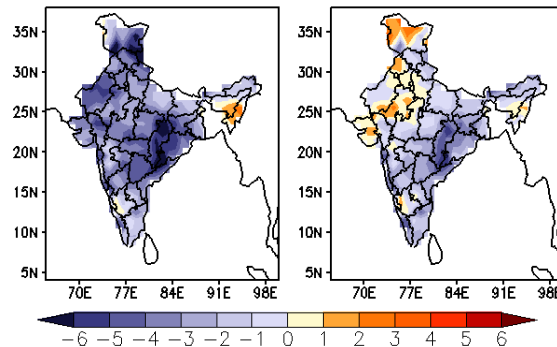
(Week2: 24Dec–30Dec)



MME forecast Tmin anomaly (Deg C)

(Week1: 17Dec–23Dec)

(Week2: 24Dec–30Dec)



Maximum Temperature (Tmax)

- **Week 1 (17.12.2021 to 23.12.2021):** Mostly below normal Tmax likely over most parts of India in week 1 except some isolated regions of extreme north India, south peninsula and northeast India.
- **Week 2 (24.12.2021 to 30.12.2021):** Mostly below normal Tmax likely over India except some parts of eastern coastal states of India and extreme north India.

Minimum Temperature (Tmin)

- **Week 1 (17.12.2021 to 23.12.2021):** Mostly below normal Tmin during the period likely over the entire India.
- **Week 2 (24.12.2021 to 30.12.2021):** Below normal Tmin likely over the eastern and central parts of the country while some parts of northwest India will have above normal Tmin.

Strategic Agricultural Planning based on rainfall during next two weeks till 30 December 2021

Agro-met Advisories

Kerala

Amount of rainfall received over Kerala is 1027 mm (112% large excess) during 01 October - 17 December 2021. The extended range weather forecast (rainfall) for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) is below normal for week-1 and week-2.

- Due to increase in atmospheric temperature, there is a chance of sucking pest infestation in vegetables. To control, it is advised to spray neem oil emulsion 2%, once in a week or spray *Lecanicillium lecanii* @ 20 g per litre of water.
- If there is no rainfall in cabbage and cauliflower growing areas, irrigation is advised at one day interval up to the formation of head and curd.

Tamil Nadu

Amount of rainfall received over Tamil Nadu is 704 mm (67% large excess) during 01 October - 17 December 2021. The extended range weather forecast (rainfall) for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) is below normal for week-1 and week-2.

- Current weather condition is favorable for shoot weevil infestation in cotton. To prevent, soil application of Carbofuran 3G @ 30 g is advised 20 days after sowing and earthing up.
- Prevailing weather conditions are congenial for tristeza wilt in acid lime. Farmers are advised for periodic spray of insecticide like Monocrotophos 0.05% to reduce the secondary spread of the disease in the orchard.

Maharashtra

Rainfall received over Madhya Maharashtra is 181 mm (77% large excess); Marathwada is 119 mm (21% excess); Vidarbha is 62 mm (-21% deficit) and Konkan region is 266 mm (92% large excess) during 01 October - 17 December 2021. The extended range weather forecast (rainfall) for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over Konkan, Vidarbha, Marathwada and Madhya Maharashtra is below normal for week-1; During week-2, below normal rainfall is expected over Konkan, normal over Madhya Maharashtra and; above normal over Marathwada and Vidarbha regions.

Konkan

- Due to the forecast of gradual fall in minimum temperature, it is advised to provide irrigation to nursery, new fruit crop plantation and vegetable crops during evening hours.
- Under prevailing weather condition, there is a possibility of infestation of fall army worm on sweet corn. To manage, intercropping with marigold crop is advised and install Pheromone trap and light trap after emergence of crops or spray Neem seed kernel extract 5% at 15 to 20 days interval, if incidence is severe, then spray Chlorantraniliprole 18.5% SC @ 4 ml per 10 litres of

water.

Vidarbha

- Partly cloudy weather and lowering night time temperature favours infestation of pod borer in timely sown chickpea in early stages. To manage the initial incidence of pod borer (*Helicoverpa*), it is advised to erect bird perches @ 20/ha randomly in the field. If pod borer damage above ETL level, spraying of 5% NSKE or Azadirachtin 300 ppm @ 50 ml per 10 litres of water or Emamectin benzoate 5 % @ 4.5 g per 10 litres of water is advised.
- Application of organic mulches in fruit crops tree basins is advised for thermal insulation to reduce cooling of soil surface during cold weather period.

Madhya Maharashtra

- For the management of wilt and root rot in chickpea, drenching of Trichoderma @ 50 g per 10 litres of water is recommended.
- To control powdery mildew in ber, application of 80% water soluble Sulphur @ 25 g per 10 litres of water is advised.

Marathwada

- For the management of pink bollworm in late sown cotton, it is advised to install pink bollworm Pheromone trap @ 5 per acre. If infestation is more, take a spray of Profenofos 50% @ 400 ml or Profenofos 40 % + Cypermethrin 4% (Complex insecticide) @ 400 ml per acre.

Hisar

Amount of rainfall received over Hisar is 27 mm (64% large excess) during 01 October - 17 December 2021. The extended range rainfall forecast (rainfall) provided for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over Hisar is below normal for week-1 and above normal for week-2.

- Under prevailing weather condition, farmers are advised to complete the sowing of wheat/barley as soon as possible
- There is a possibility of fall in night temperature and variable weather. Therefore, farmers are advised to keep the animal under sheds and clean the surrounding to control fly and mosquito in cattle shed.

Karnataka

Rainfall received during 01 October - 17 December 2021 over South Interior Karnataka is 502 mm (150% large excess) and North Interior Karnataka is 173 mm (27% excess). The extended range weather forecast (rainfall) for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over South Interior Karnataka and North Interior Karnataka is below normal for week-1 and week-2.

North Interior Karnataka

- In the areas where heavy and continuous rainfall has been received during past days may adversely impact the growth and development of crops. Therefore, it is advised to drain out excess and standing water by making proper channels in the field.
- As the soil moisture condition is good, sowing of chickpea and wheat (irrigated and *Dicoccum*) may be taken up.

South Interior Karnataka

- Under prevailing weather condition, sowing of horse gram- (var. *PHG-9, KBH-1, Niger*); field bean (var. *HA-3 and 4*) and sunflower (var. *KBSH-1, 41, 42, 44 and 53*); cowpea (var. *KBC-1, TVX-944 and PKB-4*) for vegetable purpose is advised.
- To protect the pulse grains from storage pests, it is advised to apply oils of castor/ linseed/honge/neem oil @ 3-5 ml per kg of grains.

Uttar Pradesh

Rainfall received during 01 October - 17 December 2021 over East Uttar Pradesh is 87 mm (102% large excess) and West Uttar Pradesh is 93 mm (230% large excess). The extended range weather forecast (rainfall) for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over East Uttar Pradesh and West Uttar Pradesh is below normal for week-1 and normal over East Uttar Pradesh and above normal over West Uttar Pradesh for week-2.

Western Uttar Pradesh

- Under prevailing weather condition, it is advised for sowing of late sown wheat varieties under irrigated condition. Recommended late sown varieties are *HUW-234, K-7903, UP-2338, K-9162, K-9533, HD-2643, HP-1744, NW-1014, K-8020, UP-2425, NW-2036, DBW-14, K-9423, PBW-524 NW-1076* and *HUW-510*.
- For the management of leaf webber in pigeonpea, spraying of Emamectin benzoate 5% SG @ 250 g/ha or Cypermethrin 25% EC @ 500ml/ha with 500 litres of water solution in clear weather condition is advised.

Eastern Uttar Pradesh

- Intercultural operation is advised to check the evapotranspiration losses and proper utilization of nutrient to the crop.
- Sowing of *rabi* maize with improved hybrid varieties such as *Ganga-11, Deccan 103, Deccan-105* and high starch and composite varieties such as *Dhawan, Varsa* etc. is advised.

Jammu

Amount of rainfall received over Jammu is 115 mm (22% excess) during 01 October - 17 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over Jammu is below normal for week-1 and above normal for week-

2.

- Due to cloudy weather and high humidity, there is a chance of powdery mildew disease in pea. To manage, it is advised to apply suplex @ 2.5g/litre of water.
- Under prevailing weather condition, it is advised to spray Imidacloprid @ 1ml/3 litres of water to control cabbage butterfly, and caterpillar in *cole* crops.

Assam

Amount of rainfall received over Assam is 149 mm (-22% deficit) during 01 October - 17 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over Assam is below normal for week-1 and week-2.

- Due to the receipt of deficit to large deficit rainfall in many districts of Assam, farmers are advised to provide irrigation in the *rabi* vegetable crops like cauliflower, cabbage, broccoli, knol khol, brinjal etc.
- Under prevailing weather condition, farmers are advised to continue the harvesting of ripened *sali* paddy and transfer the harvested paddy to safe place after proper sun drying.

Chhattisgarh

Amount of rainfall received over Chhattisgarh is 63 mm (-16% deficit) during 01 October - 17 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over Chhattisgarh is no rainfall for week-1 and normal for week-2.

- In the extreme cold condition, there is a chance of infestation of yellow vein mosaic. Therefore, farmers are advised to go for spraying of systemic fungicides.

Gujarat

Amount of rainfall received over Gujarat is 60 mm (107% large excess) during 01 October - 17 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over Gujarat is below normal for week-1 and above normal for week-2.

- Regular monitoring of gram pod borer in pea during entire crop season is advised. To manage, it is advised to set up the bird perches @ 40-50/ha for pod borer or install *pheromone* trap @ 40/ha and light trap @ 1/ha.

Himachal Pradesh

Amount of rainfall received over Himachal Pradesh is 73 mm (14% excess) during 01 October - 17 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over Himachal Pradesh is below normal for week-1 and above normal for week-2.

- For conservation of soil moisture and maintaining the soil temperature, it is advised to add mulch material in the space between two rows of vegetables crops. Addition of mulch also prevents the growth of weeds.
- Under prevailing weather condition, suitable varieties of cauliflower, capsicum and tomato should be transplanted in polyhouse.

West Bengal

Rainfall received during 01 October - 17 December 2021 over Gangetic West Bengal is 271 mm (77% large excess) and Sub-Himalayan West Bengal is 281 mm (62% large excess). The extended range weather forecast (rainfall) provided for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over Gangetic West Bengal no rainfall and Sub-Himalayan West Bengal is below normal for week-1 and above normal over Gangetic West Bengal and normal over Sub-Himalayan West Bengal week-2.

- For the management of leaf spot, leaf blight and root rot in mustard, it is advised to spray Carbendazim @1 g/litre water and Tebuconazole 1.5 ml per litre of water.

Jharkhand

Amount of rainfall received over Jharkhand is 138 mm (59% excess) during 01 October - 17 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over Jharkhand is no rainfall for week-1 and above normal for week-2.

- Under prevailing weather condition, farmers wish to cultivate wheat must select late sown wheat varieties. Recommended late sown wheat varieties are *HI-1583, DBW-107, HD-3118 etc.*
- For the management of blight disease in potato, it is advised to spray fungicide Ridomil @ 1.5 g per litre of water.

Andhra Pradesh

Rainfall received during 01 October - 17 December 2021 over Rayalaseema is 466 mm (114% large excess) and Coastal Andhra Pradesh and Yanam is 360 mm (8% excess). The extended range weather forecast (rainfall) provided for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over Rayalaseema and Coastal Andhra Pradesh below normal for week-1 and week-2.

- Present weather conditions are favourable for collar rot incidence in chickpea grown in Ananthapuramu, Kurnool districts. To control, farmers are advised to drench soil with Carbendazim @ 1 g or Mancozeb @ 3 g /litre of water.
- In view of recent rains, the present weather conditions are favourable for incidence of bacterial leaf spot and boll rot diseases in cotton grown in Krishna, Ananthapuramu, Guntur and Kadapa districts. To control, it is advised to spray Copper oxychloride @ 30 g + Streptocycline @1 g in

10 litres of water.

Odisha

Amount of rainfall received over Odisha is 166 mm (28% excess) during 01 October - 17 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over Odisha is below normal for week-1 and above normal for week-2.

- After the unseasonal rain, there is chance of infestation by ear head caterpillar. To manage, it is advised to spray Chlorpyrifos 50% + Cypermethrin 5% EC @ 400 ml/acre or Lambda-cyhalothrin @ 400 ml/acre.
- For the management of mustard sawfly infestation in mustard crop, it is advised to spray Etofenprox 10% EC @ 200 ml/acre or Chlorpyrifos 50% + Cypermethrin 5 % EC @ 400 ml/acre by mixing it in 200 litres of water.

Bihar

Amount of rainfall received over Bihar is 190 mm (174% large excess) during 01 October - 17 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over Bihar is no rainfall for week-1 and below normal for week-2.

- Monitoring is advised for infestation of fruit and shoot borers in brinjal, tomato, chilli, gram and pea. If infestation occurs, installation of pheromone traps @ 3-4 traps per acre is advised. If insect population is observed to be above ETL, then spraying of Spinosad 1.0 ml/4 litre of water is advised.
- Under prevailing weather condition, sowing of late varieties of wheat crop is advised. Recommended varieties are *PBW-373*, *HD-2285*, *HW-2045*, *HUW-234*, *WR-544*, *DBW-14*, *HD-2643*, *HD-2967* and *NW-2036* are recommended for North Bihar region.

Uttarakhand

Amount of rainfall received over Uttarakhand is 216 mm (337% large excess) during 01 October - 17 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over Uttarakhand is below normal for week-1 and above normal for week-2.

- In view of prevailing dry weather and occurrence of frost, farmers are advised to provide light irrigation to all crops.
- Under prevailing weather condition. It is advised to apply basal dose of soil insecticides against mealy bugs and woolly aphid in apple orchard.

Punjab

Amount of rainfall received over Punjab is 35 mm (88% large excess) during 01 October - 17 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (17 - 23 December 2021 and 24 - 30 December 2021) over Punjab is below normal for week-1 and week-2.

- To protect potato crop from late blight, it is advised to spray Indofil M-45/Antracol/ Kavach @ 500- 700 g or Copper oxychloride 50 WP/Mark copper @ 750- 1000 g/acre in 250- 350 litres of water at 7 days interval.

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 weather forecast. In no event, India Meteorological Department (IMD) and Indian Council of Agricultural Research (ICAR) will 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 presented in this bulletin.