



National Agromet Advisory Service Bulletin

based on

Extended Range Weather Forecast (ERFS)

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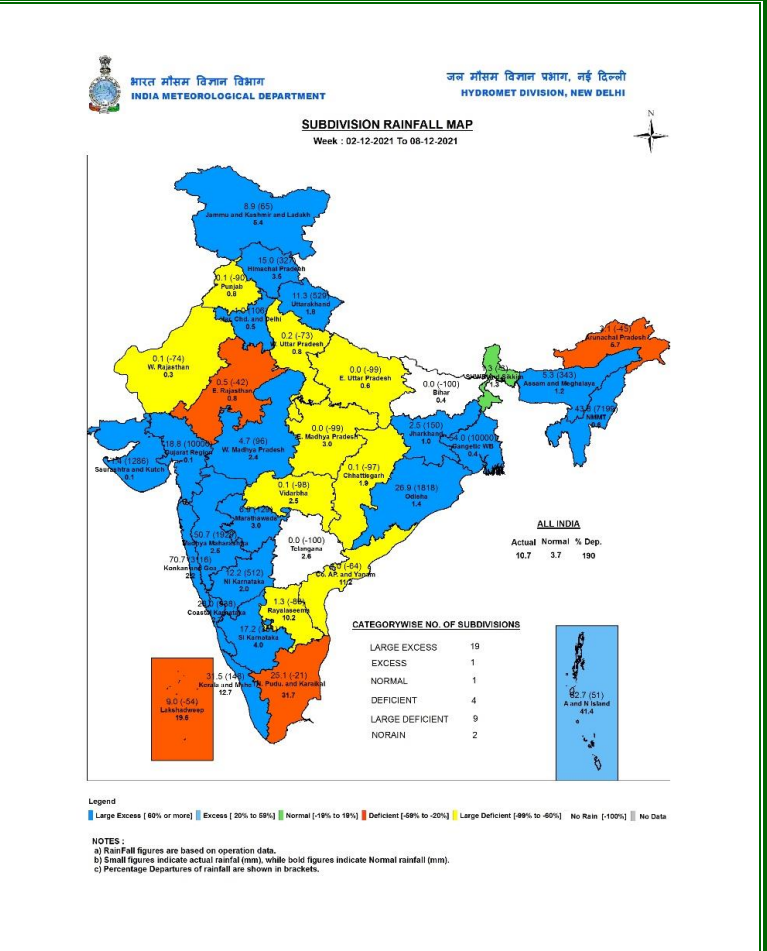
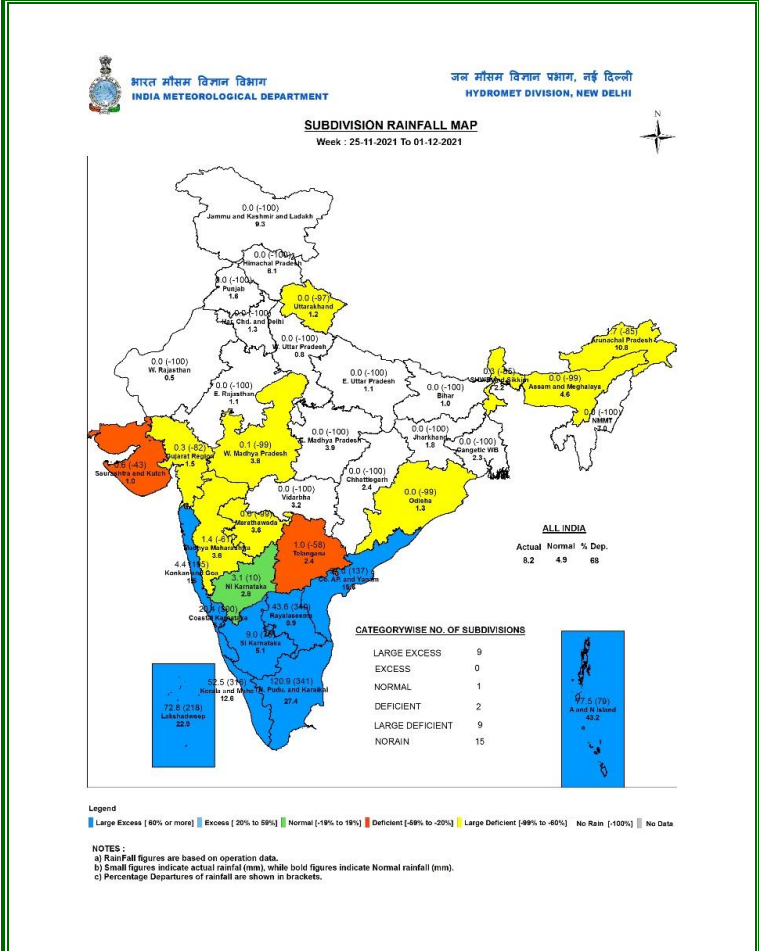
**AICRP on Agro-Meteorology (AICRPAM),
Central Research Institute for Dryland Agriculture (CRIDA),
Indian Council of Agricultural Research (ICAR)**

&

**India Meteorological Department (IMD),
Earth System Science Organization**

Realized Rainfall and Extended Range Forecast (Rainfall and Temperature)

Realized Rainfall (25th Nov. to 8th December, 2021)



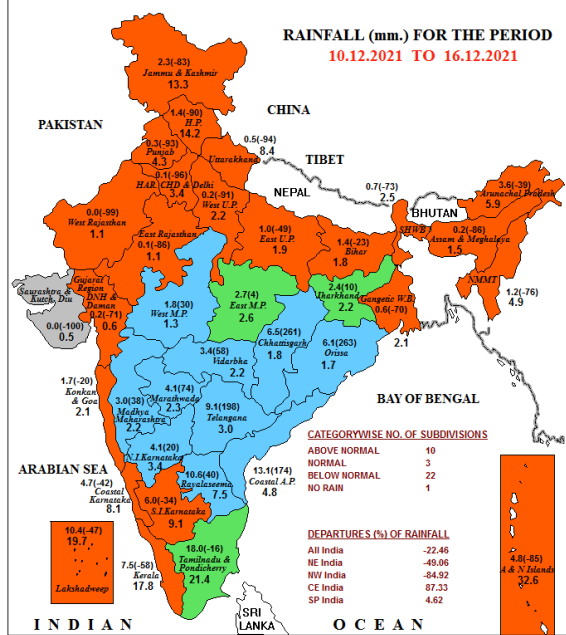
- Normal or above normal rainfall occurred in both the weeks in Konkan & Goa, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe and Andaman & Nicobar Islands.
- Normal or above normal rainfall occurred in either of the two weeks in Jammu & Kashmir and Ladakh (UTs), Uttarakhand, Himachal Pradesh, Haryana, Chandigarh & Delhi, Gujarat Region, Saurashtra & Kutch, West Madhya Pradesh, Jharkhand, Madhya Maharashtra, Marathwada, Odisha, Sub-Himalayan West Bengal & Sikkim, Gangetic West Bengal, Assam & Meghalaya, Nagaland Manipur Mizoram & Tripura (NMMT), Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu Puducherry & Karaikal 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 and Telangana.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 08 December) (10th to 23rd December, 2021)

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Rainfall Forecast Map - Normal RF Based Categories

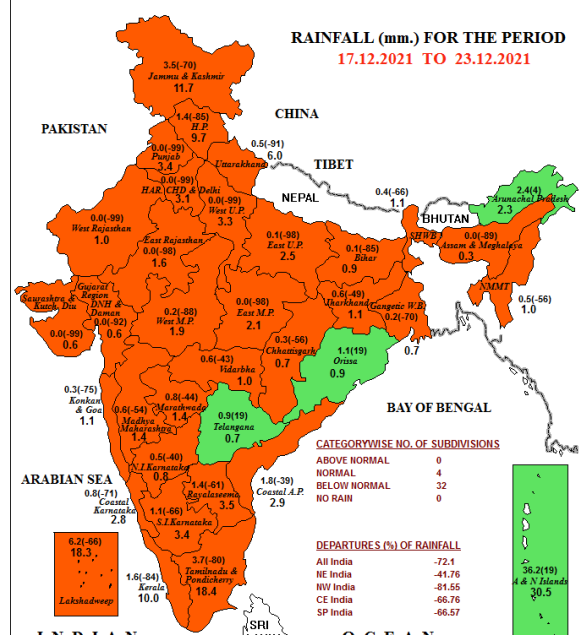


LEGEND: ■ ABOVE NORMAL (+20% OR MORE) ■ NORMAL (+19% TO -19%)
■ BELOW NORMAL (-20% TO -99%) ■ NO RAIN [-100%] ■ NO DATA

NOTES:
 (a) Rainfall figures are based on MME Forecast 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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Rainfall Forecast Map - Normal RF Based Categories

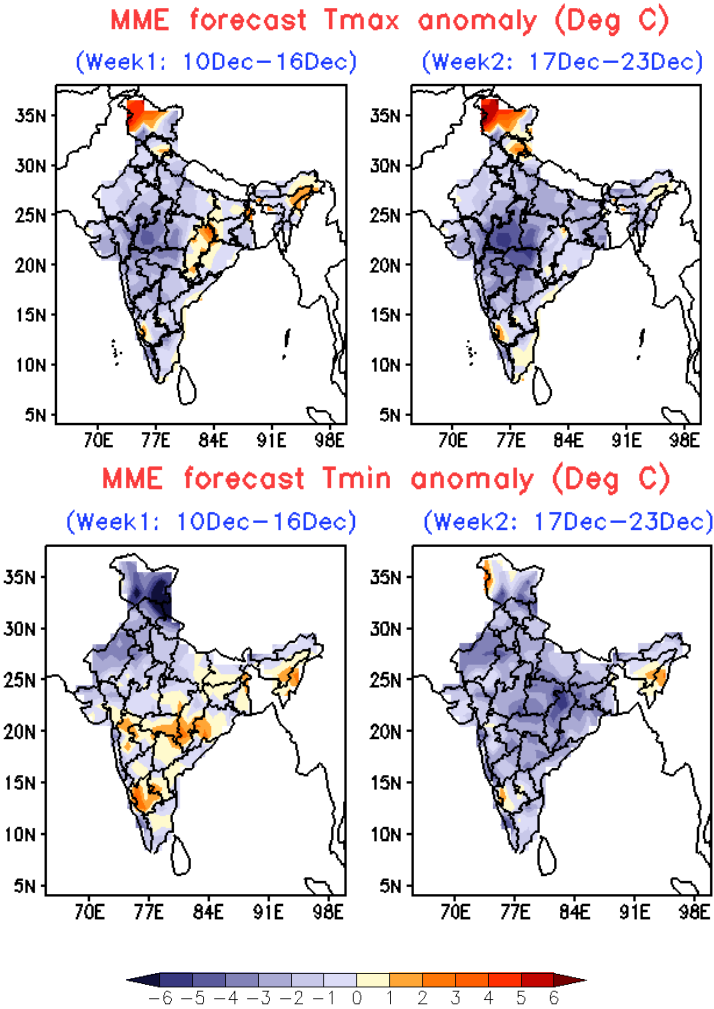


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NOTES:
 (a) Rainfall figures are based on MME Forecast data.
 (b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
 Percentage Departures of Rainfall are shown in Brackets.

- **Week 1 (10.12.2021 to 16.12.2021):** Some parts of eastern coastal states like Tamil Nadu, Andhra Pradesh adjoining Odisha may experience slight rain during the week 1.
- **Week 2 (17.12.2021 to 23.12.2021):** Below normal northeast monsoon rainfall is expected over all parts of India while normal rainfall is expected in Telangana, Odisha and Arunachal Pradesh states.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 08 December)
(10th to 23rd December, 2021)**



Maximum Temperature (Tmax)

- **Week 1 (10.12.2021 to 16.12.2021):** Mostly below normal Tmax likely over west-central and southern parts of India. However, some parts of Uttar Pradesh, Bihar, Chhattisgarh, Odisha, Northeast states and Jammu & Kashmir and Ladakh (UTs) region will have normal to slightly above normal Tmax.

Week 2 (17.12.2021 to 23.12.2021): Mostly below normal Tmax likely over India except in Jammu & Kashmir and Ladakh (UTs) region, parts of Himachal Pradesh and southwest part of Karnataka state slightly above normal Tmax is expected.

Minimum Temperature (Tmin)

Week 1 (10.12.2021 to 16.12.2021): Tmin with negative anomaly likely over northwest and adjoining northern India over Jammu & Kashmir and Ladakh (UTs) and Himachal Pradesh region in week 1. However, remaining regions of India will have normal to slightly above normal Tmin particularly over southern and southeastern parts of India.

- **Week 2 (17.12.2021 to 23.12.2021):** Mostly below normal Tmin is expected likely in week 2.

Strategic Agricultural Planning based on rainfall during next two weeks till 23 December 2021

Agro-met Advisories

Kerala

Amount of rainfall received over Kerala is 1025 mm (115% large excess) during 01 October - 10 December 2021. The extended range weather forecast (rainfall) for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) is below normal for week-1 and week-2.

- If there is no rainfall in cabbage and cauliflower growing areas, then irrigation is advised at one day interval up to the formation of head and curd.
- Due to high relative humidity, there is a chance of leaf blotch diseases in turmeric. To manage, it is advised to remove and destroy disease affected plants and as a prophylactic measure, spray 2 ml Contaf or SAAF @ 2 g in one litre of water.

Tamil Nadu

Amount of rainfall received over Tamil Nadu is 690 mm (73% large excess) during 01 October - 10 December 2021. The extended range weather forecast (rainfall) for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) is normal for week-1 and below normal for week-2.

- Current weather condition is favorable for shoot weevil infestation in cotton. To prevent, soil application of Carbofuran 3 G @ 30 kg is advised 20 days after sowing and earthing up.
- Prevailing weather conditions are congenial for mealy bug infestation in guava and mango. Farmers are advised to spray Triazophos 2 ml + Neem oil 5 ml/litre or Phosalone 35% EC 1.5 ml + Neem oil 5 ml/litre.

Maharashtra

Rainfall received over Madhya Maharashtra is 181 mm (81% large excess); Marathwada is 119 mm (24% excess); Vidarbha is 62 mm (-19% deficit) and Konkan region is 266 mm (94% large excess) during 01 October - 10 December 2021. The extended range weather forecast (rainfall) for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Konkan is below normal and Vidarbha, Marathwada and Madhya Maharashtra is above normal for week-1; During week-2, below normal rainfall is expected over Marathwada, Madhya Maharashtra, Konkan and Vidarbha regions.

Konkan

- Due to rainfall and low temperature, there is possibility for anthracnose disease in mango vegetative flush and inflorescence. To protect, it is advised to spray Azoxystrobin 23% SC @ 7 ml per 10 litres of water.
- For the management of root knot nematode in brinjal, chilli and tomato crops, it is advised to apply neem cake @ 50 g per plant at the time of transplanting and also advised to grow marigold

crop as trap crop.

Vidarbha

- Partly cloudy weather and lowering night time temperature favours infestation of pod borer in timely sown chickpea crop 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.

Madhya Maharashtra

- For the management of flower drop in pigeon pea, spraying of Planofix @ 50 ml in 200 litres of water is advised.
- To control army worms and stem borer in *rabi* crops, it is advised to spray Quinalphos 25 EC @ 20 ml per 10 litres of water during clear weather condition.

Marathwada

- Due to cloudy weather condition during last few days, there may be pod borer infestation in timely sown chickpea crop. To control, it is advised to spray 5% NSKE or Quinalphos 25% EC @ 20 ml or Emamectin benzoate 5% @ 4.5 g per 10 litres of water.
- Due to continuous cloudy weather during last few days infestation of leaf spot disease may observed in turmeric. To control this, it is advised to spray of Azoxystrobin 18.2% + Difenoconazole 11.4% @ 10 ml + 5 ml sticker per 10 litres of water.

Hisar

Amount of rainfall received over Hisar is 27 mm (77% large excess) during 01 October - 10 December 2021. The extended range rainfall forecast (rainfall) provided for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Hisar is below normal for week-1 and 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 - 10 December 2021 over South Interior Karnataka is 501 mm (153% large excess) and North Interior Karnataka is 173 mm (29% excess). The extended range weather forecast (rainfall) for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over South Interior Karnataka below normal and North Interior Karnataka is below normal for week-1 and below normal over North Interior Karnataka and South Interior Karnataka for 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 - 10 December 2021 over East Uttar Pradesh is 87 mm (106% large excess) and West Uttar Pradesh is 93 mm (241% large excess). The extended range weather forecast (rainfall) for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over East Uttar Pradesh above normal and West Uttar Pradesh is below normal for week-1 and week-2.

Western Uttar Pradesh

- Under prevailing weather condition, it is advised to continue the sowing of suitable wheat varieties in irrigated condition. Recommended varieties are *PBW-343, UP-2338, WH-542, K-9107, K-9006, HUW-510, DBW-17, DBW-187, DBW-222, HP-1731, NW-1012, PBW-443, UP-2382, HD-2733, HD-2888, HD-2967, HD-3226* and *K-307*.

Eastern Uttar Pradesh

- Intercultural operation is advised to check the evapotranspiration losses and proper utilization of nutrient to the crop.

Jammu

Amount of rainfall received over Jammu is 115 mm (46% excess) during 01 October - 10 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Jammu is below normal for week-1 and week-2.

- Due to the presence of sufficient moisture in the soil and favorable temperature for germination, farmers may go for sowing of late sown wheat varieties. Recommended late sown wheat varieties are *PBW-752, DBW-173, WH-1124, DBW-90, HD-3059*.
- Under prevailing weather condition, it is advised to spray Imidacloprid @ 1ml/3litres of water to

control cabbage butterfly, and caterpillar in *cole* crops.

Assam

Amount of rainfall received over Assam is 146 mm (-22% deficit) during 01 October - 10 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Assam is below normal for week-1 and week-2.

- Current weather is favourable for sowing of carrot seeds in main field. Recommended varieties are *Nantes, Pusa Kesar, Chutney*.
- Under prevailing weather condition, in low lying areas, the early sown boro varieties like *Boro 1, Boro 2, Dinanath and Swarnabh* are advised for transplanting to the main field.

Chhattisgarh

Amount of rainfall received over Chhattisgarh is 63 mm (-14% deficit) during 01 October - 10 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Chhattisgarh is above normal for week-1 and normal for week-2.

- Under prevailing weather condition, farmers are advised to sow sunflower. Recommended improved varieties are *Modern, TNAUSUF-7, BSH-1, KBSH-1, DRSH-1, Jwalamukhi and Surya* etc.

Gujarat

Amount of rainfall received over Gujarat is 60 mm (112% large excess) during 01 October - 10 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Gujarat is below normal for week-1 and week-2.

- For the management of thrips in onion, it is advised to spray Phosphamidon 5 ml or Dimethoate 15 ml or Methyl-o-Demeton 15 ml in 15 litres of water at 15 days interval.

Himachal Pradesh

Amount of rainfall received over Himachal Pradesh is 73 mm (34% excess) during 01 October - 10 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Himachal Pradesh is below normal for week-1 and week-2.

- For conservation of soil moisture and maintaining the soil temperature, it is advised to add mulch material in 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 - 10 December 2021 over Gangetic West Bengal is 271 mm (80% large excess) and Sub-Himalayan West Bengal is 281 mm (63% large excess). The extended range weather forecast (rainfall) provided for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Gangetic West Bengal normal and Sub-Himalayan West Bengal is below normal for week-1 and week-2.

- For the management of leaf spot, leaf blight and root rot in mustard crop, 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 (61% large excess) during 01 October - 10 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Jharkhand is normal for week-1 and below normal for week-2.

- Under prevailing weather condition, farmers wish to cultivate wheat crop 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 crop it is advised to spray fungicide Ridomil @ 1.5 g per litre of water.

Andhra Pradesh

Rainfall received during 01 October - 10 December 2021 over Rayalaseema is 459 mm (115% large excess) and Coastal Andhra Pradesh and Yanam is 555 mm (121% large excess). The extended range weather forecast (rainfall) provided for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Rayalaseema and Coastal Andhra Pradesh above normal for week-1 and below normal over Rayalaseema and Coastal Andhra Pradesh for week-2.

- In Ananthapuramu, Kurnool and Kadapa districts, farmers growing *rabi* groundnut are advised to select the varieties *Dharani, Narayani, K6, K7, K8 Bold, Kadiri Amaravathi, Bheema, TCGS-1157, and TCGS-1073.*
- 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, Ananthapurmu, 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 (30% excess) during 01 October - 10 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Odisha is above normal for week-1 and normal for week-2.

- To prevent tobacco caterpillar infestation in cole crops after rains, it is advised to spray Emamectin Benzoate @ 80 ml/acre or Lambda Cyhalothrin 4.9 CS @ 300 ml/acre.
- There is a chance of crop damage due to stagnation of water after rain in black gram and green gram. Therefore, it is advised to make provision for draining out rain water in standing crop.

Rajasthan

Amount of rainfall received over Rajasthan is 60 mm (159% large excess) during 01 October - 10 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Rajasthan is below normal for week-1 and week-2.

- There is a chance of cold wave in coming days. Therefore, farmers are advised to irrigate the crop and produce smoke around the field at evening or spray 0.1 % Sulphuric acid to protect the crop from the cold wave.
- The present weather is favorable for powdery mildew disease in peas, cauliflower, cabbage, reddish. To prevent, it is advised to spray Karathane 1ml/litre of water or other sulfur based fungicides.

Bihar

Amount of rainfall received over Bihar is 190 mm (176% large excess) during 01 October - 10 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Bihar is below normal for week-1 and 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.

Madhya Pradesh

Amount of rainfall received over Madhya Pradesh is 32 mm (-38% deficit) during 01 October - 10 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Madhya Pradesh is normal for week-1 and below normal for week-2.

- As less rainfall occurred in north and east region of the state, light irrigation is advised in vegetables, pulse, oilseeds and wheat crops.
- Due to dryness in the atmosphere in the coming days, a light irrigation is advised in mustard

crop at 30-35 DAS.

Uttarakhand

Amount of rainfall received over Uttarakhand is 216 mm (376% large excess) during 01 October - 10 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (10 - 16 December 2021 and 17 - 23 December 2021) over Uttarakhand is below normal for week-1 and week-2.

- For the management of aphid attack in Toria/cabbage crop, it is advised to spray Monocrotophos @ 1ml or Imidacloprid @ 1ml or Neem oil @ 2-3 ml per liter of water.
- Due to high humidity and low temperature, there is a possibility of late blight disease on potato crop. To prevent, it is advised to spray Mancozeb @ 2 g per liter of water at initial stage. If disease outbreak is high, spray Ridomil Gold @ 2 g per litre of water.

Disclaimer:

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