



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

**Validity: (15<sup>th</sup> to 28<sup>th</sup> November 2019)**

**Date of issue: 15<sup>th</sup> November 2019**

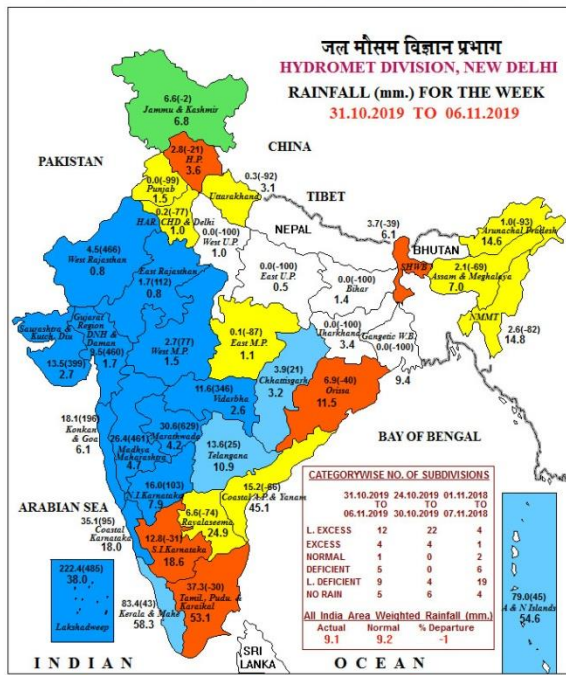
**Issued by**  
**Indian Council of Agricultural Research (ICAR)**  
**All India Coordinated Research Project on Agricultural Meteorology (AICRPAM),**  
**Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad.**  
**&**  
**Earth System Science Organization**  
**India Meteorological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

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

### Realized Rainfall

(31<sup>st</sup> October to 13<sup>th</sup> November, 2019)

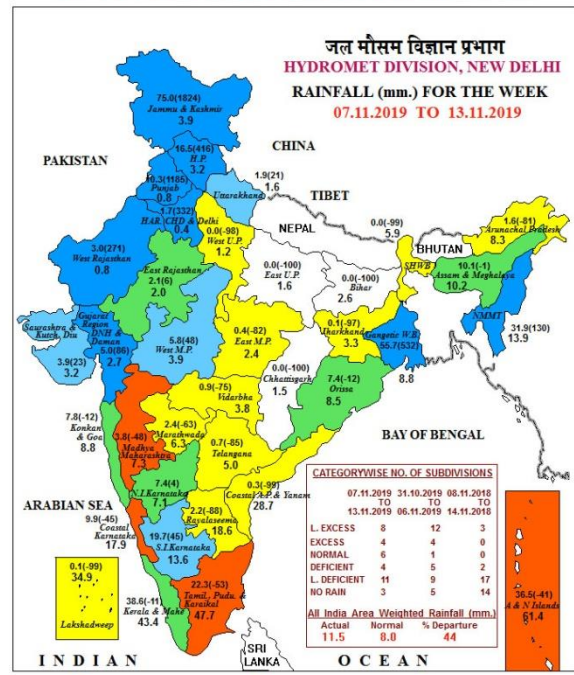
#### भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



**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.

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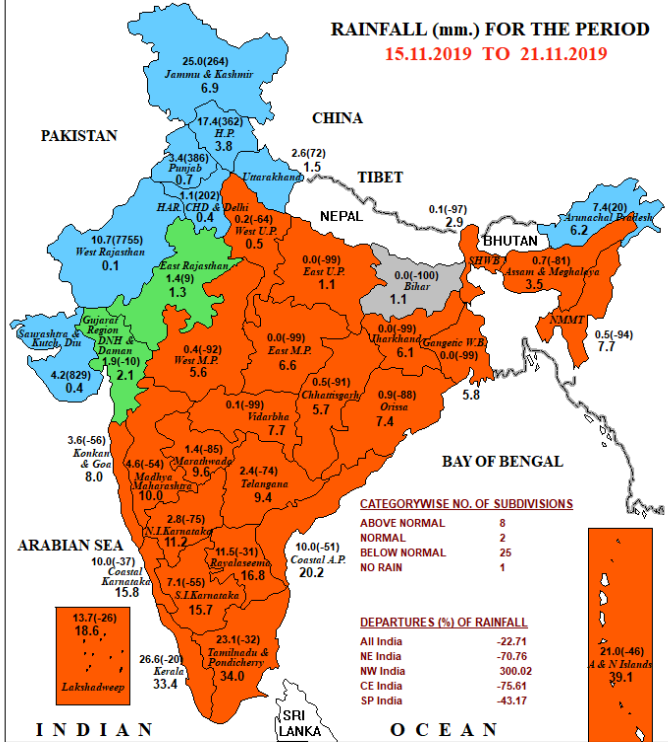
- Normal or above normal rainfall occurred in both the weeks in Jammu & Kashmir, Rajasthan, Gujarat Region, Saurashtra & Kutch, West Madhya Pradesh, Konkan & Goa, North Interior Karnataka and Kerala & Mahe.
- Normal or above normal rainfall occurred in either of the two weeks in Himachal Pradesh, Uttarakhand,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

# Extended Range Forecast System

## Rainfall forecast maps for the next 2 weeks (IC – 13 November) (15<sup>th</sup> to 28<sup>th</sup> November 2019)

### भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT

#### Rainfall Forecast Map - Normal RF Based Categories

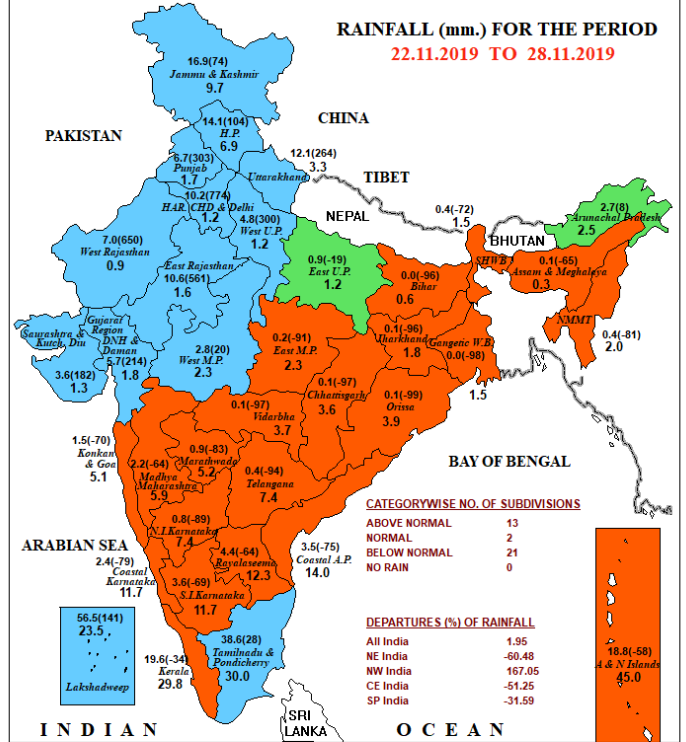


LEGEND: ■ ABOVE NORMAL (+20% OR MORE) ■ NORMAL (+19% TO -19%)  
■ BELOW NORMAL (-20% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

NOTES:  
 [a] Rainfall figures are based on MME Forecast data.  
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 Percentage Departures of Rainfall are shown in Brackets.

### भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT

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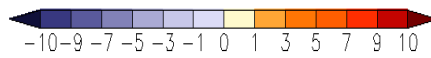
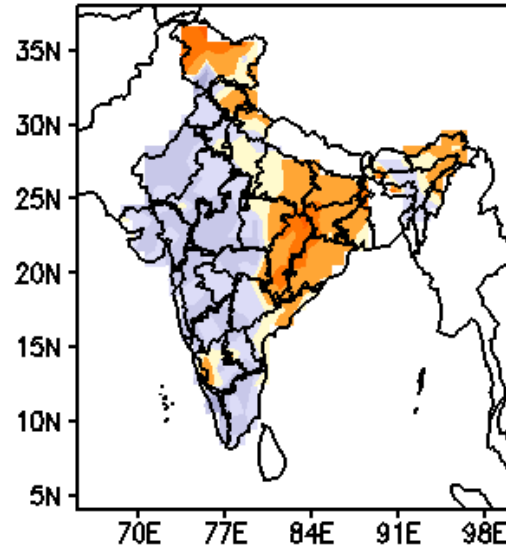
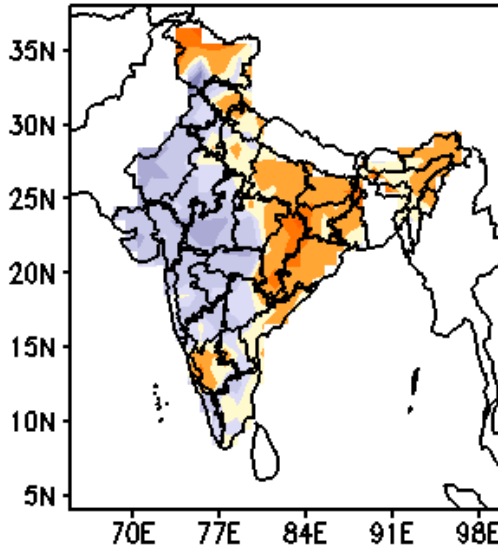
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**Maximum and Minimum temperature anomaly ( $^{\circ}\text{C}$ ) forecast  
for next 2 weeks (IC – 13 November)  
(15<sup>th</sup> to 28<sup>th</sup> November 2019)**

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

(Week1: 15Nov–21Nov)

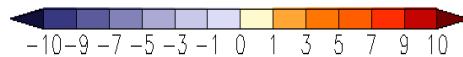
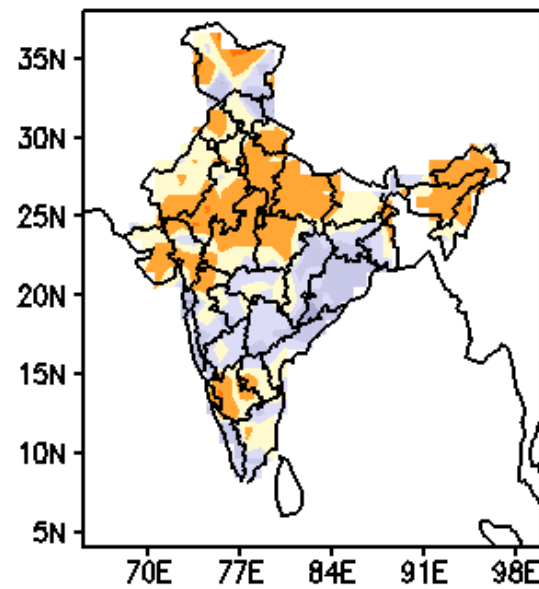
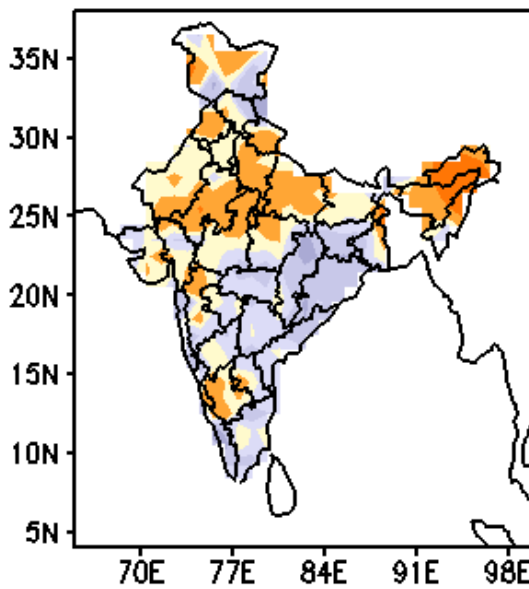
(Week2: 22Nov–28Nov)



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

(Week1: 15Nov–21Nov)

(Week2: 22Nov–28Nov)



## **Strategic Agricultural Planning based on rainfall during next two weeks till 28 November 2019**

### **Agromet Advisories**

#### **Kerala**

Amount of rainfall received over Kerala during the period from 01 October to 14 November 2019 is 554.8 mm (38% excess). The extended range weather forecast for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) is below normal for week-1 and week-2.

- It is advised to spray Indofil M45 @ 4g/litre in rubber on tapping panels against fungal diseases.
- Due to increase in relative humidity, there is a chance of severe leaf rust disease in coffee. It is advised to apply 0.5% Bordeaux mixture or plant wax 20 EC @ 1-2 ml/litre to control the disease.
- Due to rainy season, there is a chance of rice case worm in paddy field. To control, 25 kg sawdust or rice husk ash mixed with one litre kerosene (for 1 acre) can be spread after draining the fields.

#### **Tamil Nadu**

Amount of rainfall received over Tamil Nadu is 258.3 mm (-7% deficit) during the period of 01 October to 14 November 2019. The extended range weather forecast for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) is below normal for week-1 and above normal for week-2.

- Prevailing weather condition is favorable for leaf hopper incidence in cotton. It is advised to spray any one of the insecticides (500 l spray fluid /ha), Imidacloprid 200 SL @ 100 ml or Methyl demeton 25 EC 500ml/ha or Dimethoate 30 EC 500 ml/ha or NSKE 5% @ 2 kg/ha.
- Prevailing weather condition is favorable for sucking pest and leaf hopper incidence in pulses. Spray Emamectin benzoate 5% SG 220 g/ha for the control of sucking pest and Methyl-o-demeton 750 ml in 700-1000 litre of water/ha for the control of leaf hopper.

#### **Maharashtra**

Rainfall received over Madhya Maharashtra is 227.2 mm (166% large excess), over Marathwada is 255.6 mm (211% large excess), Vidharbha is 63.8 mm (0% normal) and Konkan region 281.2 mm (124% large excess) during 01 October to 14 November 2019. The extended range weather forecast for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) over Madhya Maharashtra, Marathwada, Konkan, Vidharbha are below normal for week-1 and week-2.

#### *Konkan*

- Increase in temperature may lead to accelerate evaporation. Hence provide irrigation to areca nut orchard at 4 to 5 days interval.
- Due to humid weather conditions, there is a possibility of incidence of tea mosquito bug and thrips on vegetative flush of cashew nut to protect the flush of cashew, spray Monocrotophos 36%SL @ 15 ml or Lambda cyhalothrin 5% EC @ 6 ml per 10 litre of water.

### *Madhya Maharashtra*

- It is advised to remove the water from pigeon pea fields due to high rainfall and for control of pod borer, spray 5% NSKE or Azadiractin (300 ppm) 50 ml or HAVPV 500 L.E. 10 ml.
- Methyl eugenol traps are advised for the control of fruitfly of Guava.
- For control of blight disease of onion, farmers are advised to spray Copper oxychloride 4 g/litre of water.

### *Vidharbha*

- Normal sowing time for irrigated wheat (AKW-3722 (Vimal), HD-2380, HD-2189, AKW-1071 (Purna), MCS-2496, NIAW-301) is first fortnight of November. However under improper wapsa condition due to past rain events and excess soil moisture sowing can be extended up to 20 November.
- In cotton, foliar spray of 2% DAP (200 g DAP + 10 litre water) mixed with 4 ml Planofix at boll development stage is advisable to reduce boll shedding and improve boll growth.

### *Marathwada*

- To control leaf spot disease in turmeric crop, spray of Mancozeb 25 g or Carbendazim 10 g/10 litre of water is advised.
- For management of Sigatoka disease in banana orchard, take a spray of Propiconazole 10 ml + Sticker per 10 litre of water.

### **Gujarat**

Amount of rainfall received over Gujarat is 82.4 mm (278% large excess) during 01 October to 14 November 2019. The extended range weather forecast provided for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) over Gujarat region is normal for week-1 and below normal for week-2.

- In cucurbits, for the control of downy mildew, spray of Ridomil M Z 72 @ 20 g/10 litre of water is advised. Install fruit fly trap Naurojicuelure @ 10 trap/ha for the management of fruit fly.
- Spray of COC (4 g/l water) in whole mango orchard after pruning of diseased and dead shoots is advised. Drenching of Chlorpyrifos 20 EC @ 30 ml/10 litre to avoid termite problem nearby mango grafts.

### **Rajasthan**

Rainfall received during 01 October to 14 November 2019 over east Rajasthan is 32.4 mm (93% large excess). The extended range weather forecast for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) over east Rajasthan is normal for week-1 and above normal for week-2.

- This is right time for normal sowing of wheat as the mean temperature around 20°C is suitable for sowing of wheat for getting higher yield. The improved varieties are Raj-4037, Raj-3077, Raj- 3765,



HD-2864, GW-322, Raj-1555, HI-8498, HI-1544 and Lok-1.

- Sowing of pea should not be delayed, because late sowing reduces the seed yield and exposes the crop to insect damage.
- Weather is suitable for transplanting of cauliflower, cabbage and chilli seedlings.

### **Jammu**

Rainfall received during 01 October to 14 November 2019 in Jammu is 110.7 mm (137% large excess). The extended range weather forecast for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) is above normal for the week-1 and week-2.

- Due to the chances of light rainfall, farmers are advised to shift harvested paddy/threshed grains from fields to safer places. Postpone harvesting of standing crop for next two days.
- Application of nitrogenous fertilizer is advised in the young fruit plants after the receipt of rainfall.
- Postpone sowing of normal sown wheat varieties for next two days due to the chances of light to moderate rainfall.

### **Assam**

Rainfall received during 01 October to 14 November 2019 in Assam is 200.6 mm (15% normal). The extended range weather forecast for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) is below normal for the week-1 and week-2.

- Farmers are advised to uproot the brinjal crops which are severely infested by bacterial and fungal wilt disease. Drench the soil with Streptomycin and Captaf to control further spread of the disease.
- Farmers are advised to go for direct sowing of pea seeds as a relay crop at about 15-20 days before harvesting of medium duration rice crop. Select recommended varieties viz., T-163, Boneviella etc. @ 10-12 kg/bigha land.

### **Jharkhand**

Amount of rainfall received over Jharkhand is 132.9 mm (65% large excess) during 01 October to 14 November 2019. The extended range weather forecast provided for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) over Jharkhand is below normal for week-1 and week-2.

- In medium land, rice crop transplanted at normal time are ready to harvest. At the time of harvesting, pick the black earhead and destroy them with burning. In lowland, maintain the field bunds under rice to keep it submerged.
- Farmers opting for mustard crop, may prepare their fields and select the improved varieties of seed like Shiwani, Pusa Bold, Pusa mustard.
- The recommended varieties for Deshi (indigenous) gram are BG-372, BG-256, KWR-108, Pant G-186, Pant G 114 and for Kabuli gram are HK-94-134, BG-1053, BG-1003 etc.

### **Chhattisgarh**

Amount of rainfall received over Chhattisgarh is 101.0 mm (58% excess) during 01 October to 14

November 2019. The extended range weather forecast provided for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) over Chhattisgarh is below normal for week-1 and for week-2.

- Farmers are advised to harvest the matured rice crop and keep it at safe places for proper sun drying only for 1-2 days. Late sown rice crop should be properly monitored.
- In case of recurring infestation of wilt and collar rot disease of chickpea/gram crop in each year, farmers are advised to follow crop rotation for *rabi* wheat, lathyrus, safflower and linseed crops.

### **Odisha**

Amount of rainfall received over Odisha is 186.8 mm (57% excess) during 01 October to 14 November 2019. The extended range weather forecast provided for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) over Odisha is below normal for week-1 and week-2.

- Harvesting of *kharif* crops such as maize, groundnut, and pulses is advised. After harvesting of groundnut crop, make bundles. Keep the bundles in such a way that the pods will remain up side and the plants down under sun for drying of pods and thresh them.
- Give staking to Banana to avoid breaking of trees due to high wind speed.

### **Himachal Pradesh**

Amount of rainfall received over Himachal Pradesh is 41.3 mm (19% normal) during 01 October to 14 November 2019. The extended range weather forecast provided for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) on rainfall over Himachal Pradesh is above normal for both the weeks.

- Farmers are advised to harvest paddy and pulses looking into weather conditions and also utilize the sunny sky conditions for hay making and drying the harvested crops.
- It is advised to sow nursery of mid season cauliflower and cabbage in poly houses in mid and lower hills. Ready to transplant nursery of cauliflower should be transplanted soon.
- It is advised that after harvesting of maize, paddy and pulses, store grains at 12% moisture to avoid the weevils.

### **Bihar**

Amount of rainfall received over Bihar is 25.5 mm (-61% large deficit) during 01 October to 14 November 2019. The extended range weather forecast provided for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) for rainfall over Bihar is no rain for week 1 and below normal for week 2.

- Weather is congenial for sowing of wheat crop. Farmers are advised to start the sowing of wheat crop. PBW-343, PBW-443, K-9107, HD-2733, HD-2824, HUW-206, HUW-468, K-307, CBW-38, DBW-39 are recommended for timely sowing under irrigated condition.
- Sowing of *rabi* maize is advised. Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2, and Rajendrasanker makka and deepjwala varieties of hybrid maize and Dewki white, Lakshmi white and Suwan yellow varieties of composite maize are recommended for north Bihar.



## Uttar Pradesh

Amount of rainfall received over West Uttar Pradesh is 9.3 mm (-62% large deficit) and East Uttar Pradesh is 25.1 mm (-36% deficit) during 01 October to 14 November 2019. The extended range weather forecast provided for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) on rainfall over West Uttar Pradesh and East Uttar Pradesh is below normal for week 1 and above normal for West Uttar Pradesh and normal in East Uttar Pradesh for week 2.

- The recommended varieties of chickpea crops are Awrodhi, Pusa-254, K.W.R-108, D.C.P.-92-3, KDG-1168, K-850, and recommended varieties of Kabuli chickpea - HK-94-134 etc, ensure the sowing of field.
- Timely sown potato viz. Kufari chandramukhi, Kufari Bahar, Kufari Badshah, Kufari Anand, Kufari Lalima, Kufari Surya, kufari chipsona-1, kufari chifsona-3 and Kufari stlaj are advised for planting in this week.
- Farmers are advised to vaccinate cows, buffalo, goats, and sheep's against the mouth and foot disease controls.

## Hisar

Amount of rainfall received over Hisar is 7.2 mm (-36% deficit) during 01 October to 14 November 2019. The extended range weather forecast provided for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) on rainfall over Hisar is above normal for week 1 and week 2.

- Due to dry weather and favourable temperature, farmers are advised to sow wheat with recommended timely sowing varieties like WH 283, WH 542, DBW 17, WH 711, WH 1105.
- There is a possibility of fall in night temperature and variable weather. Keep the animal under sheds and clean surroundings to control fly and mosquito in cattle shade.
- Keeping in view of variable weather farmers are advised to complete the picking of cotton crop thereafter wheat crop may be sown in the field timely.

## West Bengal

Amount of rainfall received over West Bengal is 232.9 mm (64% large excess) during 01 October to 14 November 2019. The extended range weather forecast provided for next two weeks (15 to 21 Nov. and 22 to 28 Nov. 2019) on rainfall over West Bengal is below normal for weeks 1 and week 2.

- It is advised to harvest rice crop and dry it in an open place.
- In the prevailing weather, there is a chance of attack of Black-rot of crucifers in the cabbage and cauliflower. Apply 1 g Streptocycline in 10 litre of water and spray thoroughly on a dry day.

*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.*

