



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

**Validity: (18<sup>th</sup> to 31<sup>st</sup> October 2019)**

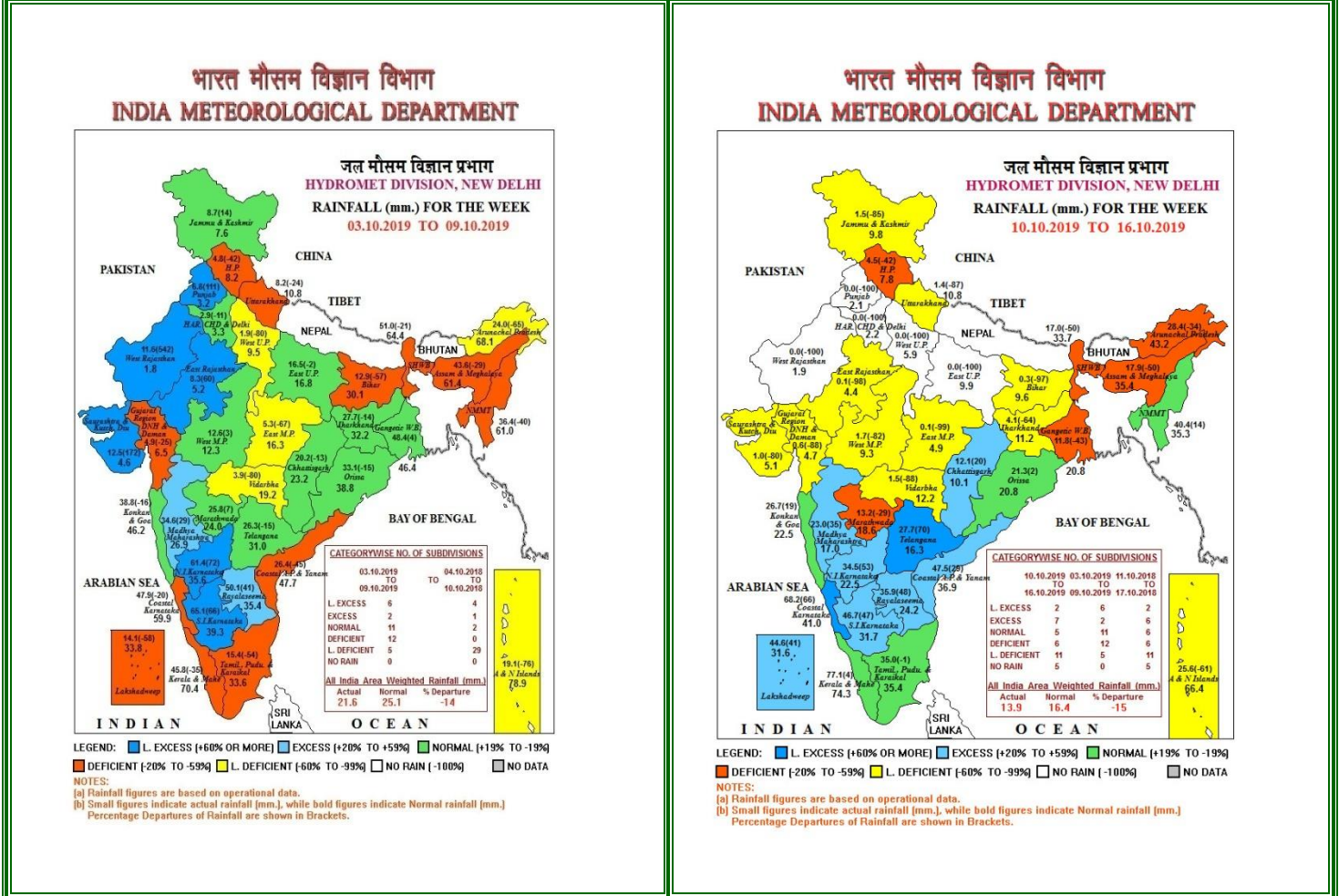
**Date of issue: 18<sup>th</sup> October 2019**

**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

(3<sup>rd</sup> October to 16<sup>th</sup> October, 2019)



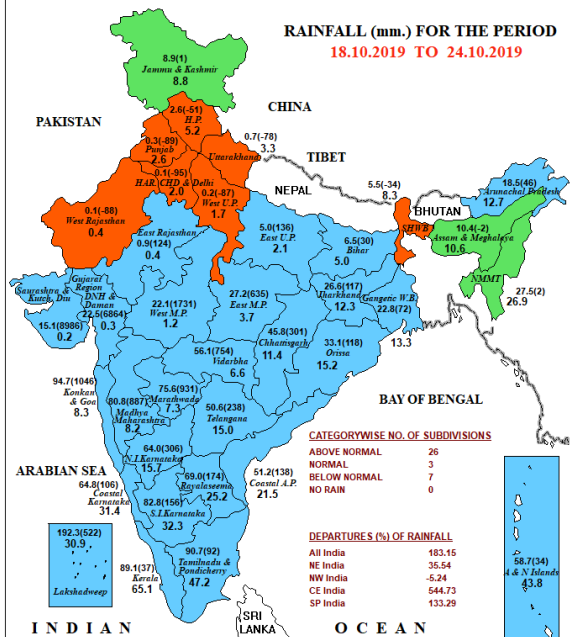
- Normal or above normal rainfall occurred in both the weeks in Chhattisgarh, Odisha, Konkan & Goa, Madhya Maharashtra, Telangana, Rayalaseema, North Interior Karnataka and South Interior Karnataka.
- Normal or above normal rainfall occurred in either of the two weeks in Jammu & Kashmir, Punjab, Haryana,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

# Extended Range Forecast System

## Rainfall forecast maps for the next 2 weeks (IC – 16 October) (18<sup>th</sup> to 31<sup>st</sup> October 2019)

### भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT

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

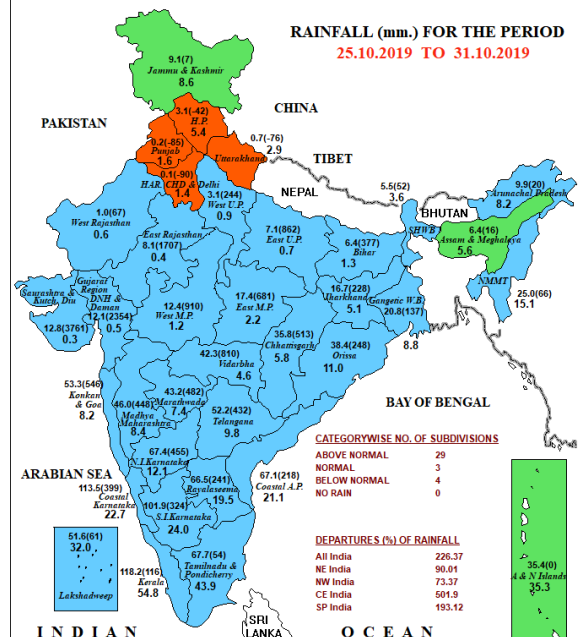


LEGEND: ■ ABOVE NORMAL (+20% OR MORE) ■ NORMAL (+19% TO -19%)  
■ BELOW NORMAL (-20% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

NOTES:  
 [a] Rainfall figures are based on MME Forecast data.  
 [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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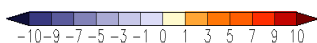
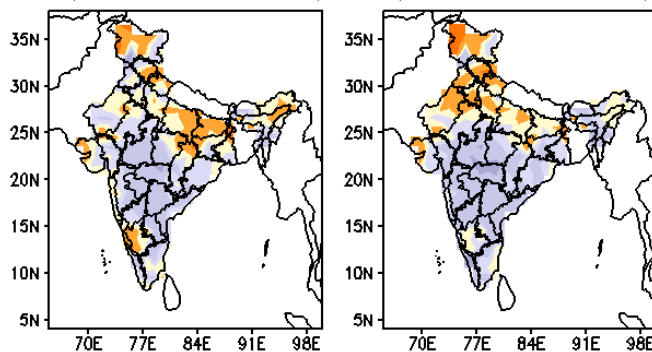
- **Week 1 (18.10.2019 to 24.10.2019) and Week 2 (25.10.2019 to 31.10.2019):** Main rainfall activity is over central India and south Peninsula with active northeast monsoon. Over Northwest India, rainfall decreased.

**Maximum and Minimum temperature anomaly ( $^{\circ}\text{C}$ ) forecast  
for next 2 weeks (IC – 16 October)  
(18<sup>th</sup> to 31<sup>st</sup> October 2019)**

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

(Week1: 11Oct–17Oct)

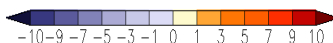
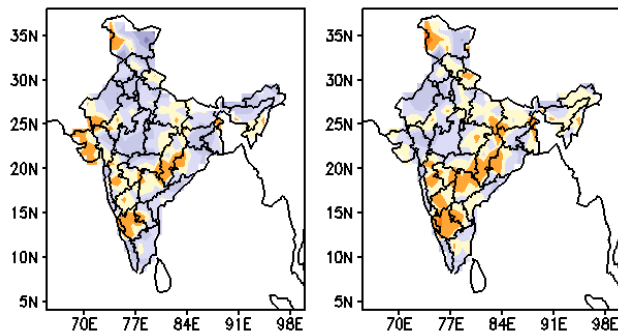
(Week2: 18Oct–24Oct)



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

(Week1: 11Oct–17Oct)

(Week2: 18Oct–24Oct)



**Maximum Temperature (Tmax)**

- **Week 1 (18.10.2019 to 24.10.2019) and Week 2 (25.10.2019 to 31.10.2019):** Tmax anomaly is mostly negative over central and south peninsular India during the period, whereas it is slightly above normal over extreme northern parts and Indo-Gangetic region.

**Minimum Temperature (Tmin)**

- **Week 1 (18.10.2019 to 24.10.2019) and Week 2 (25.10.2019 to 31.10.2019):** Slightly above normal Tmin over southern, central and eastern parts of India, whereas, over the northern parts, Tmin is expected to be below normal during first three weeks.

## **Strategic Agricultural Planning based on rainfall during next two weeks till 31<sup>st</sup> October 2019**

### **Agromet Advisories**

#### **Kerala**

Amount of rainfall received over Kerala during the period from 01<sup>st</sup> October to 16<sup>th</sup> October 2019 is 135.8 mm (-17% deficit). The extended range weather forecast for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) is above normal for week-1 and for week-2.

- Due to intermittent rainfall and sunshine, a foliar spray of pseudomonas 15-20g /litre of water will be effective as a prophylactic measure against quick wilt disease in pepper.
- There is a chance of fruit fly in vegetables. It is suggested that remove and destroy the affected and decayed fruits. Use special pheromone traps like cuelure (6 nos/acre) for vegetable fruit fly. Thulasi/fruit traps can be used. If the attack is not reduced, spray mixture of Malathion 2 ml per one litre of water + jaggery 10 g at flowering and fruit initiation.
- Water soaked light brown to black spots appear on the base of spindle and tender leaves during prolonged rainfall. Tender leaf base and soft tissues of the crown rot into a slimy mass of decayed material emitting foul smell resulting in the death of palm. It is advised to cut and remove the affected parts of the crown along with healthy tissues and apply Bordeaux paste.

#### **Tamil Nadu**

Amount of rainfall received over Tamil Nadu is 55.7 mm (-29% deficit) during the period of 01<sup>st</sup> October to 16<sup>th</sup> October 2019. The extended range weather forecast for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) is above normal for week-1 and for week-2.

- Farmers are advised to monitor fall army worm incidence in maize. If symptoms were noticed, spray any one of the following insecticide to control. Azadirachtin 1 EC @ 2 ml/litre (or) Thiodicarb 75 WP @ 2 g/l (or) Emamectin benzoate 5 SG @ 0.4 g/litre (or) Spinetoram 12 SP @ 0.5 ml/litre
- Prevailing weather condition is favorable for sucking pest like bean aphids and leaf hopper incidence in pulses. Spray any one of the insecticides (Spray fluid 500 litre/ha), Emamectin benzoate 5%SG 220 g/ha, Indoxacarb 15.8%SC 333 ml/ha, NSKE 5% twice followed by triazophos 0.05% Neem oil 2%.

#### **Maharashtra**

Rainfall received over Madhya Maharashtra is 62.2 mm (19% normal), over Marathwada is 41.5 mm (-18% deficit), Vidharbha is 8.1 mm (-79% large deficit) and Konkan region 69.9 mm (-17% deficit) during 01<sup>st</sup> October to 16<sup>th</sup> October 2019. The extended range weather forecast for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) over Madhya Maharashtra, Marathwada, Konkan, Vidharbha are above normal for week-1 and in week-2.

#### **Konkan**

- There is forecast of moderate rain, hence by observing rainfall situation harvest matured early rice varieties in morning hours only with 'Vaibhav sickle' near to ground level and follow immediate threshing, the threshed grains should be sundry for 2 to 3 days before storage.
- Due to forecast for increase in temperature, provide irrigation to young cashew graft either by conventional or with drip irrigation method also apply straw or black polythene mulch around tree

also new growth below graft union should be removed regularly from young cashew graft.

- Due to forecast for increase in temperature, provide irrigation to young mango graft either by conventional or with drip irrigation method also apply straw or black polythene mulch around tree.

#### Madhya Maharashtra

- Thinning operation is advised and followed 15 days after sowing of *rabi* sorghum and safflower.
- For chickpea crop, apply recommended dose fertilizer at the time of sowing i.e. 25 kg N, 50 kg P and 25 kg K per ha.
- Vijay and Digvijay variety of chickpea should be used for sowing in dry land area.

#### Marathwada

- It is advised to harvest timely sown and mature *kharif* sorghum during clear weather condition. Precaution should be taken so that harvested *kharif* sorghum crop may not damage due to rainfall.
- Due to rainfall during last month infestation of weeds is more in Grape orchard. Weed management should be done in Grape orchard.
- After rainy season till the availability of grazing land lambs/kids/adult/sheep and goat shall be dewormed after each 30–40 days. Similarly faecal examination of 10 % sample shall be undertaken from veterinarian so that specific dewormer can be administered.

#### Vidharbha

- Under prevailing condition of increase in maximum temperature, 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 and to manage leaf reddening observed at boll development stage in cotton, undertake foliar spray of 1% Urea with 1% Magnesium sulphate.
- It is advised to harvest of matured soybean crop and ensure safe storage of harvested produce from sudden rain showers. Further store the produce in safe place after proper drying and threshing.
- Nursery seed sowing of cabbage, cauliflower, brinjal, tomato can be initiated during this period. Similarly cultivation of spinach, fenugreek, radish etc can be initiated.

#### Gujarat

Amount of rainfall received over Gujarat is 50.8 mm (268% large excess) during 01<sup>st</sup> October to 16<sup>th</sup> October 2019. The extended range weather forecast provided for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) over Gujarat region is above normal for week-1 and week-2.

- In cucurbits, to control downy mildew, spray Ridomil M Z 72 @ 20 gm/10 litre of water. Install fruit fly trap Naurojicurtin cucurbit @ 10 trap per ha for management of fruit fly.
- Spot application of Propargite 57 EC @ 2 ml/lit or Fenazaquin 10 EC 1 ml/lit water for the control of red spider mites in brinjal is advised. For control of white fly spray Diafenthiuron 50% WP 10 g/10 lit of water. Uproot and burn little leaf infected plant and spray systemic insecticide.
- Spraying of *Bacillus thuringiensis* powder @ 20 gram in 10 litre of water to control of fall army worm in maize is advised.

- Advised spraying of Acetamiprid 20 % SP@ 5.0 gm or Imidacloprid 30.5 % 3 ml with neem seed extract 500 ml or neem oil 40 ml / 10 lit of water to control of jassids and white fly in castor crop.

### **Rajasthan**

Rainfall received during 01<sup>st</sup> October to 16<sup>th</sup> October 2019 over East Rajasthan was 28.6 mm (162% large excess). The extended range weather forecast for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) over east Rajasthan is above normal for week-1 and week-2.

- As per forecast clear sky is expected in coming days, so farmers are advised to harvest the kharif crops and keep at dry place for sun drying.
- Field sanitization is advised before sowing of rabi crop. Bunds, channels, uncultivated fields and field roads should be cleaned, by removing weeds.
- Initiate gram sowing under conserved soil moisture. The improve varieties of gram are Dahod yellow, GNG-146, GNG-1581, RSG-44, RSG-888, RSG-902, RSG-895 and Pratap Chana-1, Pratap raj chana.

### **West Bengal**

Amount of rainfall received over Gangetic West Bengal during 01<sup>st</sup> October to 16<sup>th</sup> October 2019 is 67.8 mm (-16 % normal). The extended range weather forecast for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) is above normal for week-1 and week-2.

- There is a chance of spread of blast due to prevailing weather condition. To control spray Hexaconazole @ 1.5 g/lit. of water. In case of Brown Plant Hopper attack spray Acephate @ 2 ml/lit. of water in Aman rice crop.
- Under high humidity and cloudy condition, combined attack of downy mildew and mosaic may be seen in bitter gourd and pointed gourd. Apply Ridomil Gold MZ @ 2 gm per lit. to control the attack.
- Attack of white fly has been reported from many areas leading to the spread of yellow mosaic virus in okra due to present hot and humid condition, spray Difenthiuron @ 0.75g per lit. of water to prevent the further spread of the disease.
- Present temperature and humidity conditions are congenial for the rapid spread of thrips and mites leading to the leaf curling in chilli. Advised to spray Diafenthiuron @ 0.75g per litre of water at 7-10 days interval to control spread of the disease.

### **Haryana**

Rainfall received during 01<sup>st</sup> October to 16<sup>th</sup> October 2019 in Haryana 3.8 mm (-41% deficit). The extended range weather forecast for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) is below normal for the week-1 and normal week-2.

- It is advised to pick opened bolls of cotton after evaporation of dew from boll surface in the morning.
- Due to rainy conditions, it is advised to postpone irrigation in vegetables and fruits and also monitor for insect-pest.
- It is advised to provide plenty of clean drinking water and green forage to the animals as per requirement. Recommended vaccination schedule may also be taken up.

## **Jammu**

Rainfall received during 01<sup>st</sup> October to 16<sup>th</sup> October 2019 in Jammu is 18.1 mm (-3% deficit). The extended range weather forecast for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) is normal for the week-1 and for week-2.

- It is advised to transplant all cole crops (knol khol, cabbage, cauliflower and broccoli) without any delay.

## **Assam**

Rainfall received during 01<sup>st</sup> October to 16<sup>th</sup> October 2019 in Assam 98.0 mm (-11% deficit). The extended range weather forecast for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) is normal for the week-1 and week-2.

- Farmers are advised to sow seeds of improved brinjal varieties like Pusa Kranti, Pusa Purple Long, Pusa Purple Round, Pusa Purple Cluster, Pusa Vairab, Kuchia, Pant Samrat, JC-1, JC-1 etc.
- In already sown crops, farmers should take measures to get rid of excess water from the fields. One weeding should be done at 20 days after sowing by khurpi or hoe. The crop should be thinned out simultaneously to maintain the required spacing within the rows.
- Suggested to go for routine vaccination for livestock and poultry against the dreaded virus. The floor and dairy shed should be cleaned with suitable antiseptic solution and maintain a proper sanitation. Poultry growers can use the hybrid variety of chicken like BV300, Babcock and BV 380 etc for egg production.

## **Uttarakhand**

Rainfall received during 01<sup>st</sup> October to 16<sup>th</sup> October 2019 in Uttarakhand is 31.8 mm (27% excess). The extended range weather forecast for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) is below normal for week-1 and week-2.

- Spray of Monocrotophos @ 0.5-1.0 ml/litre of water or Neem oil @ 5 ml/litre of water twice at 7-10 days interval to control pod borer in pigeon pea crop is advised.
- Vaccination against FMD should be given to animals. Farmers are advised to provide dry fodder with green fodder in 50:50 ratio & 20-30 gm mineral mixture and salt for the dairy animals everyday. Spray Ecto-parasiticides in their livestock sheds, clean up any cob webs, ant and houseflies which may act as intermediate host.

## **Uttar Pradesh**

Amount of rainfall received over East Uttar Pradesh is 23.9 mm (-22% deficit) and 9.3 mm (-46% deficit) over West Uttar Pradesh during 01<sup>st</sup> October to 16<sup>th</sup> October 2019. The extended range weather forecast provided for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) over East Uttar Pradesh is above normal and West Uttar Pradesh is below normal for week-1 and above normal over East Uttar Pradesh and West Uttar Pradesh for week-2.

- As per the weather forecast, there is no chance of rainfall, so farmers are advised to maintain proper



moisture by lightly irrigating the late sown paddy crop.

- Present weather conditions are favorable for the planting of horticultural crops viz, papaya, mango, Banana, guava etc, farmers are advised for the planting the same at the earliest.
- Balanced diet (green fodder 15-20 kg and wheat or rice husk 2-3 kg) per day should be given to the buffaloes and cows so that milk production did not affected by the fluctuating weather.

### **Jharkhand**

Amount of rainfall received over Jharkhand is 39.3 mm (-26% deficit) during 01<sup>st</sup> October to 16<sup>th</sup> October 2019. The extended range weather forecast provided for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) over Jharkhand is above normal for week-1 and week-2.

- In medium land, short duration varieties transplanted at right time are at maturity stage or ready to harvest. At the time of harvesting, pick the black ear head (affected ear head with false smut disease) and destroy them after burning.
- Farmers wishing to cultivate linseed crop may start sowing. Recommended varieties for this region are Sweta, Shubhra, T-397 etc. 8-9 kg seeds are required for cultivation in one acre.
- Recommended variety of mustard for this region are Shiwani, Varuna, Pusa Bold, BR-40 etc. 3 kg seeds are required for cultivation in one acre. Sow the seed in line at a distance of 30 cm (row to row) and 10 cm. (plant to plant).

### **Chhattisgarh**

Amount of rainfall received over Chhattisgarh is 39.7 mm (-26% deficit) during 01<sup>st</sup> October to 16<sup>th</sup> October 2019. The extended range weather forecast provided for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) over Chhattisgarh is above normal for week-1 and for week-2.

- For *rabi* crops, farmers can start their field operations in fallow fields in October month. Tractor drawn rotorator or cultivator can be used and shallow ploughing should be done. In October month, Horsegram, moong, urad, toria, maize, sunflower and forage crops can be taken.
- Poultry farmers who are following deep litter method, poultry beds should be turned upside down during rainy season. Damped type beds should not be used.

### **Odisha**

Amount of rainfall received over Odisha is 59.0 mm (-16% deficit) during 01<sup>st</sup> October to 16<sup>th</sup> October 2019. The extended range weather forecast provided for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) over Odisha is above normal for week-1 and week-2.

- If infestation of boll worm is spotted in cotton spray 200 LE HNPV along with gur, if it crosses the ETL level of 5 –10% of affected twigs and install pheromone trap in the middle of the field at 1 ft above the crop height.
- To control early shoot borer in sugarcane, spray 2.5 ml Monocrotophos in each litre water. Spray 2 g Bentan or Crilton per litre of water to control red rot and release required quantity of Epiricania sps to control pyrilla infestation.

- If maize crop is infested with stem borer apply Phorate 10% CG @10 kg/ha or Carbaryl 4% G @20 kg/ha. If granular insecticides are not used, spray Carbaryl 50 WP 1 kg/ha on the 20th day of sowing (500 l of spray fluid/ha) or Dimethoate 30% EC 660 ml/ha.
- If hairy caterpillar is seen in groundnut apply any one of the insecticides at 25 kg/ha (for young caterpillars) Phosalone 35 EC 750 ml/ha in 375 l of water or Dichlorvos 76 EC 627 ml/ha.
- If jassids, aphid, hairy caterpillar and leaf folder infestation is found in cotton, do not apply Organo Phosphate insecticides up to 60 days after sowing. The plant can tolerate sucking insects like leaf hopper to some extent. In case of severe attack, spray 2 ml methyle demiton in 1 litre water or 5 ml Imidachloprod in 10 litre water.
- It is the optimum time for sowing of green pea in the fallow uplands. High yielding varieties suitable for sowing in Odisha are Rachana, Arkel and T-163 Use 30kgseeds/acre. Before sowing, seeds are to be treated with 2g Carbendazim/kg seeds. Apply 10:16:10 kg NPK/acre during final land preparation. Sow the seeds in line 30 cm apart with 10 cm plant to plant distance.
- If sheath blight is infested in rice crop spray effective fungicides like Propiconazole 25% (Tilt) @ 1ml/litre, (Rhizocin 3L, or Sheathmar 3L) @ 2ml/ litre of water) or Tebuconazole 50%+ Trifloxystrobin 25% (Nativo 75 WG) @ 0.4g/litre or Contaf 5 EC (Hexaconazole 5EC) @ 2ml/ litre of water or Thifluzamide 24SC @ 1ml/ litre of water or Bavistin 50WP (Carbendazim 50WP) 2.5 g/ litre of water.

### **Himachal Pradesh**

Amount of rainfall received over Himachal Pradesh is 22.0 mm (29% excess) during 01<sup>st</sup> October to 16<sup>th</sup> October 2019. The extended range weather forecast provided for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) on rainfall over Himachal Pradesh is below normal for both the weeks.

- Monsoon is withdrawn from the state, farmers are advised to harvest maize, paddy and pulses and also utilize the expected sunny sky conditions for hay making and drying harvested produce.
- Before rabi crop sowing, clean fields and add well decomposed FYM or compost before sowing of crops as it improves the physical and biological properties of soil and thus increases the water retention capacity as well as nutrient status of the soil.
- Night temperature has started falling in the region; farmers should protect their milch animals and their young ones from morning/evening cold by covering them with gunny bags during night and ample exposure to sunlight during day time to avoid pneumonia.

### **Karnataka**

Amount of rainfall received over South Interior Karnataka is 128.1 mm (50% excess) and North Interior Karnataka during 01<sup>st</sup> October to 16<sup>th</sup> October 2019. The extended range weather forecast provided for next two weeks (18<sup>th</sup> to 24<sup>th</sup> October and 25<sup>th</sup> to 31<sup>st</sup> October 2019) on rainfall over Karnataka is above normal for both the weeks.

## South Interior Karnataka

- Since high rainfall viabilities is observed these days farmers are advised to take up planting for mango, Jack fruit and Jamun on the bunds.
- To control stem borer in maize crop, spray Quinolphos-25 EC @ 2ml/liter of water or Chlorophyriphos -20 EC @ 2ml/litre of water.
- In red gram crop if wilt disease is noticed, drenching of Carbendazim 50 WP 2 g/litre of water is advised. Remove and burn the wilt infected plant in the field.

*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.*

