



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

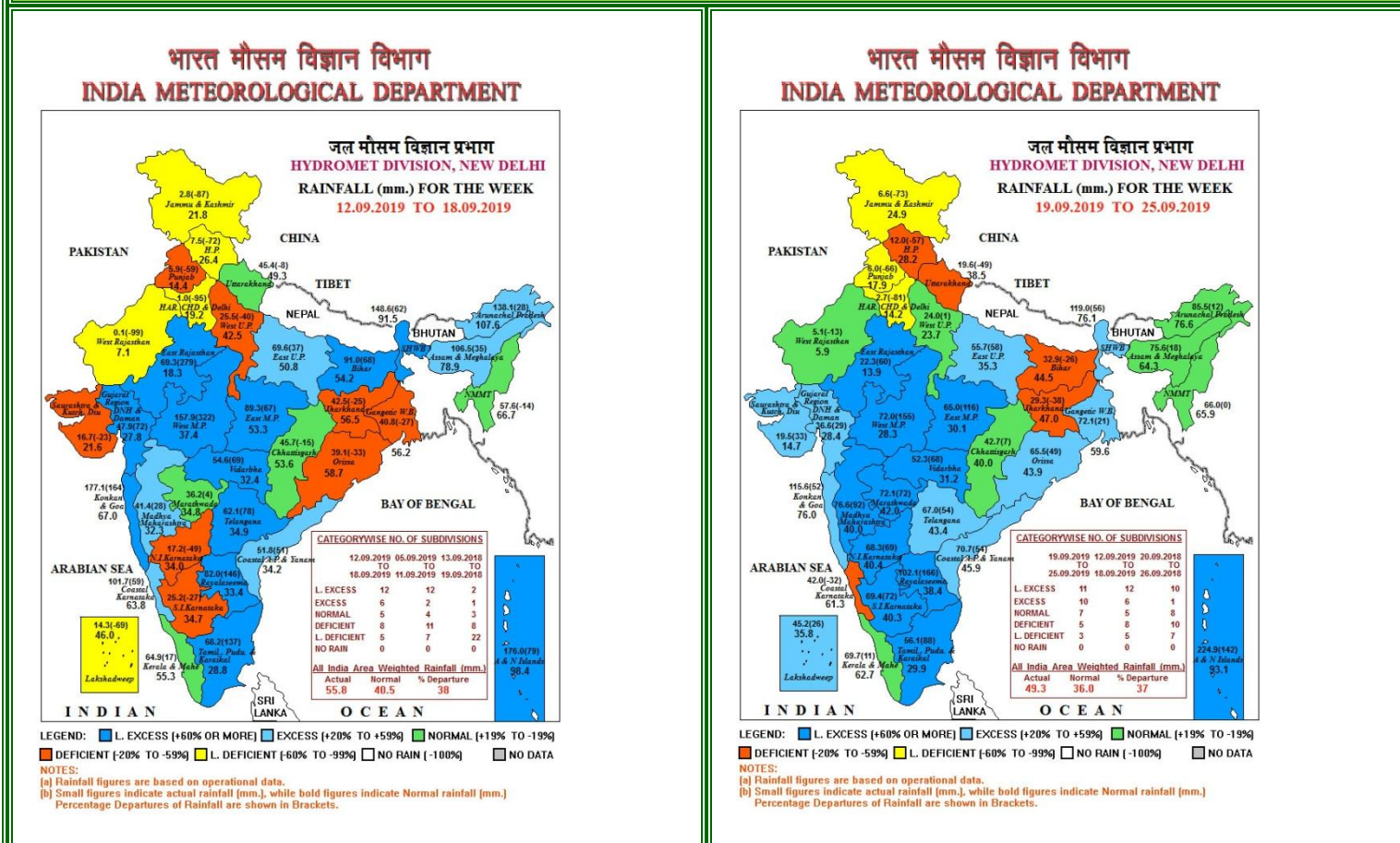
**Validity: (27<sup>th</sup> September to 10<sup>th</sup> October 2019)**

**Date of issue: 27<sup>th</sup> September 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 (12<sup>th</sup> to 25<sup>th</sup> September, 2019)



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

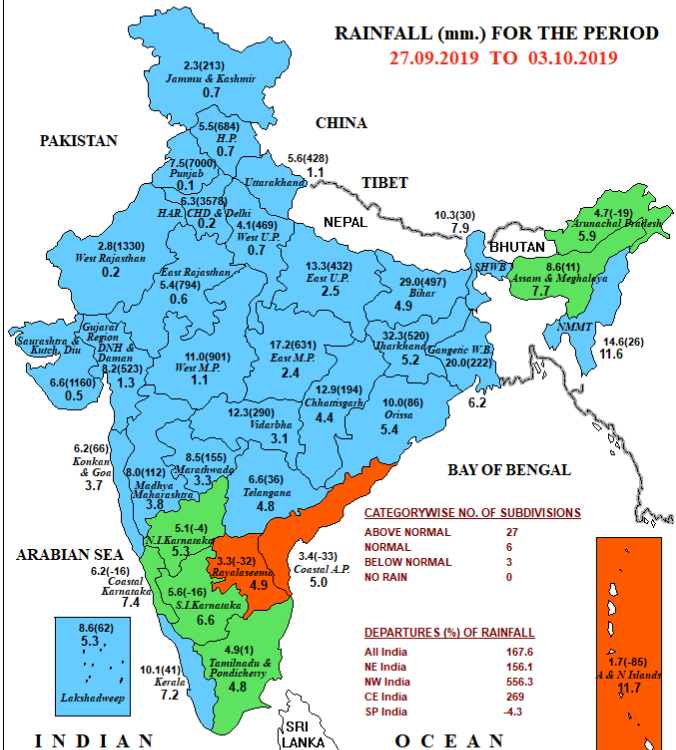
## Extended Range Forecast System

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

(27<sup>th</sup> September to 10<sup>th</sup> October 2019)

#### भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT

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

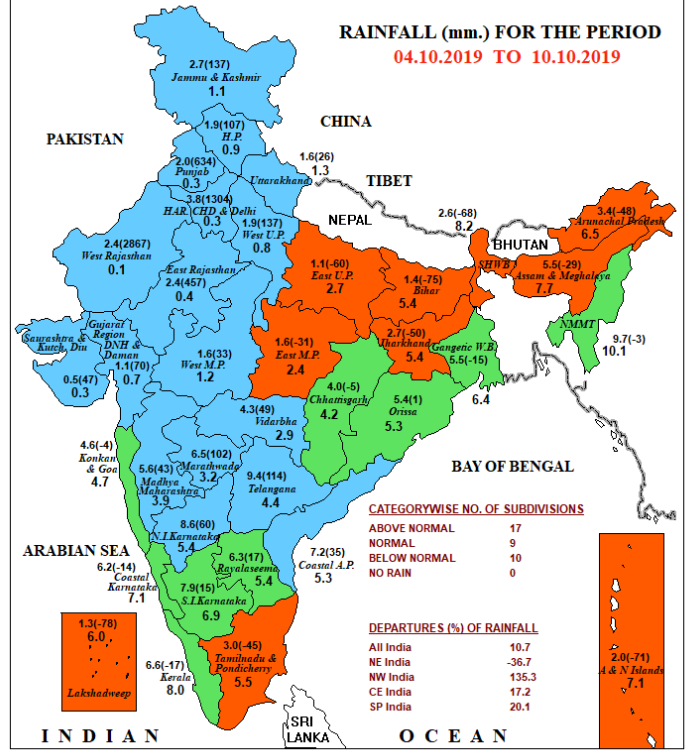


LEGEND: ■ ABOVE NORMAL (+20% OR MORE) ■ NORMAL (+19% TO -19%)  
■ BELOW NORMAL (-20% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

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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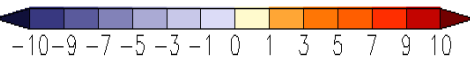
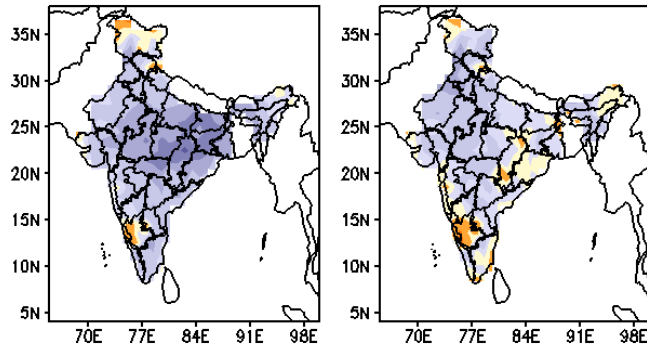
- Week 1 (27.09.2019 to 03.10.2019):** Above normal rainfall over most parts of India with large positive departure over Indo-Gangetic region. Only over a small pocket of northeast India and southeastern coastal belt the rainfall departure is large positive.
- Week 2 (04.10.2019 to 10.10.2019):** Mostly normal rainfall over most parts of India, however, the positive anomaly over northwest India indicates delay in withdrawal of monsoon.

**Maximum and Minimum temperature anomaly ( $^{\circ}\text{C}$ ) forecast  
for next 2 weeks (IC – 25 September)  
(27<sup>th</sup> September to 10<sup>th</sup> October 2019)**

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

(Week1: 27Sep–03Oct)

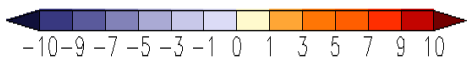
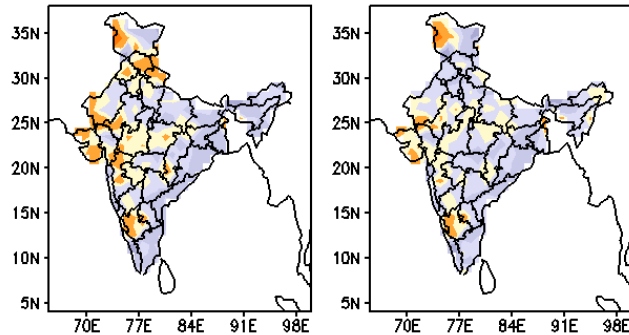
(Week2: 04Oct–10Oct)



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

(Week1: 27Sep–03Oct)

(Week2: 04Oct–10Oct)

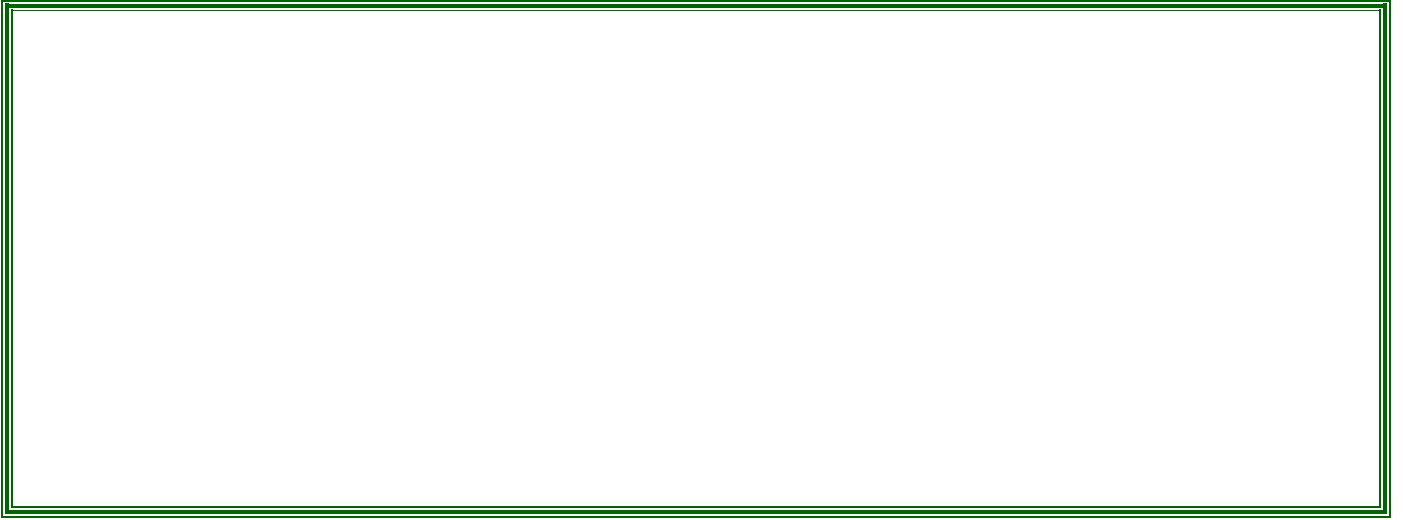


**Maximum Temperature (Tmax)**

- **Week 1 (27.09.2019 to 03.10.2019) and Week 2 (04.10.2019 to 10.10.2019):** Tmax anomaly is mostly negative over India during the period.

**Minimum Temperature (Tmin)**

- **Week 1 (27.09.2019 to 03.10.2019) and Week 2 (04.10.2019 to 10.10.2019):** Slight above normal Tmin over northern-western and western parts of India during the period and weak negative anomaly over rest of the region.



## **Strategic Agricultural Planning based on rainfall during next two weeks till 10th October 2019**

### **Agromet Advisories**

#### **Kerala**

Amount of rainfall received over Kerala during the period from 01<sup>st</sup> June to 27<sup>th</sup> September 2019 is 2263.9 mm (13% normal). The extended range weather forecast for next two weeks (27<sup>th</sup> September to 3<sup>rd</sup> October and 4<sup>th</sup> to 10<sup>th</sup> October 2019) is above normal for week-1 and normal for week-2.

- Prolonged rains and cloudy days favour the incidence of fungal diseases of leaves and buds in rubber. Spray Indofil M45 4g/ litre against fungal diseases.
- Due to prevailing rainy season, there is a chance of Mahali disease in Arecanut. The conidium of the fungus carried by wind and rainwater is favourable for disease spread. Prophylactic spraying of Bordeaux mixture (1%) or copper oxychloride 50WP (2g/litre) with sticker is recommended.
- Due to prolonged rainfall, take necessary phyto-sanitary measures to manage capsule rot (Azhukal disease) and spray 1% Bordeaux mixture (half to one litre/plant) in Cardamom. As a prophylactic measure to control rhizome rot, drench the soil with 2 to 3 litres of Copper oxychloride (0.25%) solution.
- During the monsoon season, there is a chance of quick wilt and pollu disease in pepper. It is advised to drench the soil with 0.2 % Copper oxychloride and spray the aerial part with 1% Bordeaux mixture as a prophylactic measure. Application of trichoderma/ pseudomonas culture will control the quick wilt infestation.

#### **Karnataka**

Amount of rainfall received over north interior Karnataka during the period from 01<sup>st</sup> June to 27<sup>th</sup> September 2019 is 579.3 mm (24% excess). Amount of rainfall received over south interior during the period from 01<sup>st</sup> June to 27<sup>th</sup> September 2019 is 803.6 mm (23% excess). Coastal Karnataka is 3759.3 mm (23% excess). The extended range weather forecast for next two weeks (27<sup>th</sup> September to 3<sup>rd</sup> October and 4<sup>th</sup> to 10<sup>th</sup> October 2019) over north interior is normal for week-1 and above normal for week-2, south interior Karnataka is normal for week-1 and week-2.

#### **North Interior Karnataka**

- As good rainfall has been received it is advised for sowing of *rabi* crops like Sorghum, Sunflower, safflower, chickpea and fodder crops may be completed immediately upon preference. Intercropping of Sorghum + Chickpea (2:1) and safflower + chickpea (2:4) may be followed.
- Vaccinate livestock against Foot and Mouth disease (FMD vaccination), Black Quarter disease (BC vaccination) and Haemorrhagic Septicaemia. Care should be taken to that excess moisture is not there in the Vermin-compost pits.

#### **Tamil Nadu**

Amount of rainfall received over Tamil Nadu is 372.2 mm (17 % normal) during the period of 01<sup>st</sup> June to 27<sup>th</sup> September 2019. The extended range weather forecast for next two weeks (27<sup>th</sup> September to 3<sup>rd</sup> October and 4<sup>th</sup> to 10<sup>th</sup> October 2019) is normal for week-1 and below normal for week-2.

- In the prevailing weather condition, Canker and Scab are noticed in citrus. To control citrus canker, immediately after pruning one spray of Copper oxychloride (COC) 0.3% is done followed by 4 sprayings with Streptocyclin100 ppm + COC 1.5 kg/ha at monthly intervals. To control Scab, spray

1% Bordeaux mixture to control the disease.

- In the prevailing weather conditions, wilt is likely to appear in the banana. To control wilt in banana, soil drenching of Carbendazim 0.1% solution around the pseudostem at bimonthly intervals is required starting from five months after planting.

## **Maharashtra**

Rainfall received over Madhya Maharashtra is 1131.8 mm (57% excess), over Marathwada is 567.1 mm (-12% deficit), Vidarbha is 1009.6 mm (9% excess) and Konkan region 4344.1 mm (54% excess) during 01 June to 27 September 2019. The extended range weather forecast for next two weeks (27<sup>th</sup> September to 3<sup>rd</sup> October and 4<sup>th</sup> to 10<sup>th</sup> October 2019) over Madhya Maharashtra, Konkan, Vidharbha and Marathwada is above normal week-1 and in week-2 Konkan is normal, and Madhya Maharashtra, Vidharbha and Marathwada is above normal.

### Vidarbha

- Excess rain causes flower and square drop in cotton crop. Wilt also appear in water logged areas. Soil drenching with copper oxychloride 25 g + 100 g urea in 10 litres of water. Foliar spray of 2% DAP(200 g DAP + 10 litres of water) at boll development stage is advised in cotton for better productivity, especially in late sown cotton.
- Ensure protection and well being of farm animals during rainy weather. Keep the feeds in a dry place. Draught/milch animals should be vaccinated for foot and mouth disease (FMD).
- Early sowing of safflower (Bhima, AKS-207, PKV-Pink, Nari-6) during 4<sup>th</sup> week of September to 1st week of October escapes the damage caused by aphid incidence. Avoid sowing during moderate to heavy rain forecast period.

### Konkan

- Due to intermittent rainfall and cloudy weather conditions, there is a chance brown plant hopper and blast disease in low line area where stagnation of water is observed in rice. Hence monitor the crop regularly for infestation of pest. If incidence of brown plant hopper is observed above threshold level (5-10 hopper/hill), spray Acephate 75%WP @ 2.25 g or Fipronil 5% SC @ 2 ml or Imidacloprid 17.8% SL @ 0.2 ml per liter of water. Make provision for replacing stagnated water with fresh water for every 2-3 days. Precaution should be taken to spray the insecticide on stem of rice plant. And for blast disease incidence, spray Tricyclazole 75%WP@ 10 g per 10 litre of water.
- Due to forecast of increase in temperature which is congenial for vegetative flush in cashewnut, spray Monocrotophos 36%SL @ 15 ml or Lambda cyhalothrin 5% EC @ 6 ml per 10 litre of water for protection.
- Due to forecast of cloudy weather and increase in humidity, there is possibility of incidence of downy mildew in cucurbitaceous vegetables, if incidence noticed, remove and destroy infected leaves and take a spray of Mancozeb or Zineb 2.5 g /litre of water at an interval of 10 to 15 days.

## Madhya Maharashtra

- Due to evaporation losses from the soil, it is advised for intercultural operation of hoeing in the standing crop.
- Prepare ridges and furrows or compartmental bunds of 6x6 meter size in the fallow land kept for *rabi* sowing. It will help to conserve more rain water during *kharif* and will help to increase yield of *rabi* Jowar.

## Rajasthan

Rainfall received during 01<sup>st</sup> June to 27<sup>th</sup> September 2019 over East Rajasthan was 887.6 mm (48% excess). The extended range weather forecast for next two weeks (27<sup>th</sup> September to 3<sup>rd</sup> October and 4<sup>th</sup> to 10<sup>th</sup> October 2019) over east Rajasthan is above normal for week-1 and week-2.

- Harvest the maize and pulses at physiological maturity stage and vacate the field for *rabi* sowing.
- Where the crops are failed due to heavy rain, farmers are advised to plan for *rabi* crops (mustard & gram) under conserved moisture.

## Haryana

Rainfall received during 01<sup>st</sup> June to 27<sup>th</sup> September 2019 in Haryana 251.4 mm (-43% deficit). The extended range weather forecast for next two weeks (27<sup>th</sup> September to 3<sup>rd</sup> October and 4<sup>th</sup> to 10<sup>th</sup> October 2019) is below normal for the week-1 and above normal week-2.

- Due to anticipated rainfall, it is advised to postpone irrigation in paddy fields and make arrangements for the harvest of early non-scented varieties which are near to maturity.
- It is advised not to apply irrigation in cotton crop and start picking of opened bolls during clear weather.
- Due to rainy conditions, it is advised to postpone irrigation in vegetables and fruits and monitoring for insect-pest.
- It is advised to provide plenty of clean drinking water and green forage to the animals as per requirement. Adopt recommended vaccination schedule.

## Punjab

Rainfall received during 01<sup>st</sup> June to 27<sup>th</sup> September 2019 in Punjab 411.5 mm (-11% normal). The extended range weather forecast for next two weeks (27<sup>th</sup> September to 3<sup>rd</sup> October and 4<sup>th</sup> to 10<sup>th</sup> October 2019) is above normal for the week-1 and week-2.

- Prevailing weather is favourable for the onset of false smut in rice. Farmers are advised to protect crop by spraying 500 ml Kocide in 200 litre of water per acre at boot stage.
- It is advised to spray Ulala 50 WG @80 g or Osheen 20 SG @ 60 g or Actara/Extrasuper/Dotara 25 WG @ 40 g or Imidacel/Mark or 17.8 SL or Confidor 200 SL @ 40 ml in 150 litres of water per acre against Jassid when fully formed leaves in upper canopy showing yellowing and curling at the



margins on 50 per cent of the cotton plants.

- It is advised to go for transplanting of mid-season cauliflower. This is best time for sowing of carrot, broccoli, Chinese cabbage, radish and spinach.

### **Himachal Pradesh**

Rainfall received during 01<sup>st</sup> June to 27<sup>th</sup> September 2019 in Himachal Pradesh 638.2 mm (-16% deficit). The extended range weather forecast for next two weeks (27<sup>th</sup> September to 3<sup>rd</sup> October and 4<sup>th</sup> to 10<sup>th</sup> October 2019) is above normal for the week-1 and week-2.

- It is advised to continue picking in green tea at 8-10 days interval to maintain the quality and productivity. Lopping of shade tress is advised in order to ensure better penetration of light in tea gardens.
- It is advised to use mulch material in rainfed areas for conservation of moisture in field crops.
- Farmers are advised to make bunds for conserving rain water in paddy fields. Bunds should be higher and wider so that more rain water can be conserved and thus proper water management should be ensured in the paddy fields.

### **Jammu**

Rainfall received during 01<sup>st</sup> June to 27<sup>th</sup> September 2019 in Jammu 428.6 mm (-23% deficit). The extended range weather forecast for next two weeks (27<sup>th</sup> September to 3<sup>rd</sup> October and 4<sup>th</sup> to 10<sup>th</sup> October 2019) is above normal for the week-1 and week-2.

- Due to chances of rainfall, farmers are advised to shift harvested maize crop to safer places. Do not allow water to stagnate in fields. Postpone harvesting and threshing of crop till the weather gets clear.
- In view of the possibility of rain, farmers are advised to strengthen bunds of their paddy field for in situ storage of rain water.
- Sow direct sown vegetables like methi, spinach, beet, coriander, radish, carrot, beet root and spinach where moisture is adequate in the field.

### **Assam**

Rainfall received during 01<sup>st</sup> June to 27<sup>th</sup> September 2019 in Assam 1529.4 mm (-11% normal). The extended range weather forecast for next two weeks (27<sup>th</sup> September to 3<sup>rd</sup> October and 4<sup>th</sup> to 10<sup>th</sup> October 2019) is normal for the week-1 and below normal week-2.

- In flood affected areas, control measures should be taken against attack of fall army worm using insecticides as well as bird trapping
- It is advised to provide life saving irrigation to sali rice in active vegetative stage.
- Split application of urea top dressing should be completed. Before fertilizer application, manual or mechanical weeding should be done to minimize crop-weed competition.

## **Andhra Pradesh**

Rainfall received during 01<sup>st</sup> June to 27<sup>th</sup> September 2019 in Andhra Pradesh 601.7 mm (8% excess). The extended range weather forecast for next two weeks (27<sup>th</sup> September to 3<sup>rd</sup> October and 4<sup>th</sup> to 10<sup>th</sup> October 2019) is below normal for the week-1 and normal week-2.

- Due to heavy rainfall, farmers are advised to monitor incidence of Spodoptera in groundnut, cotton, castor crops and take up precautionary spraying with Monocrotophos @1.6ml/L or spraying of Thiodicarb@1g/litre of water if incidence is observed.
- Prevailing conditions are favourable for incidence of blast and sheath blight in rice crop. Farmers are advised to spray Isoprothioline@1.5ml/litre of water for control of blast and hexaconazole@2ml/litre or Propiconazole@1ml/litre of water for control of sheath blight.

## **Uttarakhand**

Rainfall received during 01<sup>st</sup> June to 27<sup>th</sup> September 2019 in Uttarakhand 891.0 mm (-24% deficit). The extended range weather forecast for next two weeks (27<sup>th</sup> September to 3<sup>rd</sup> October and 4<sup>th</sup> to 10<sup>th</sup> October 2019) is above normal for the week-1 and week-2.

- Under prevailing rainy conditions, farmers are advised to protect harvested early *kharif* crops in safer place.
- Due to rainy weather condition, it is advised to monitor pulse crops for white flies or sucking pest insect. If it is observed above ETL on crops, farmers are advised to spray Imidacloprid @0.5-1.0 ml or Neem oil @2-2.5ml per litre of water with added adhesive in small quantity on a non rainy day.
- After veterinarian consultation, the newborn calves (15 days after birth) should be fed calcium, magnesium, phosphorus zinc, iron iodine, copper elements in the form of a salt mixture or mineral drop. Timely vaccinate of poultry birds for getting the maximum profit.

## **Uttar Pradesh**

Amount of rainfall received over East Uttar Pradesh is 701.9 mm (-15% deficit) and West Uttar Pradesh is 509.0 mm (-29% deficit) during 01<sup>st</sup> June to 27<sup>th</sup> September 2019. The extended range weather forecast provided for next two weeks (27<sup>th</sup> September to 3<sup>rd</sup> October and 4<sup>th</sup> to 10<sup>th</sup> October 2019) over East Uttar Pradesh and West Uttar Pradesh is above normal for week-1 and below normal in East Uttar Pradesh and above normal for western Uttar Pradesh for week-2.

- Under prevailing rainy weather conditions, there is possibility for attack of yellow vein mosaic in urd bean. Hence farmers are advised to save them by using suitable protection measures.
- It is advised for sowing of pigeonpea, with improved varieties such as NA-2, NA-2 under late condition if optimum soil moisture condition is advisable.
- Intercultural operation is advised to check the evapotranspiration losses and proper utilization of nutrient to the crop.

***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.***