



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

**Validity: 24 May to 06 June 2019**

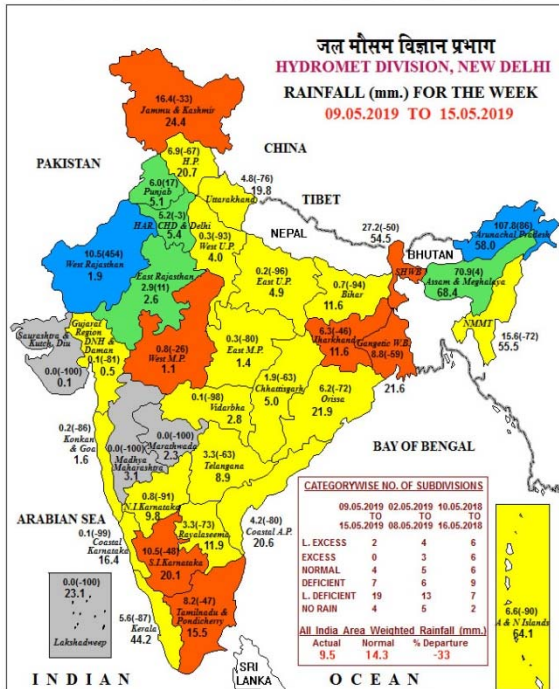
**Date of issue: 24 May 2019**

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

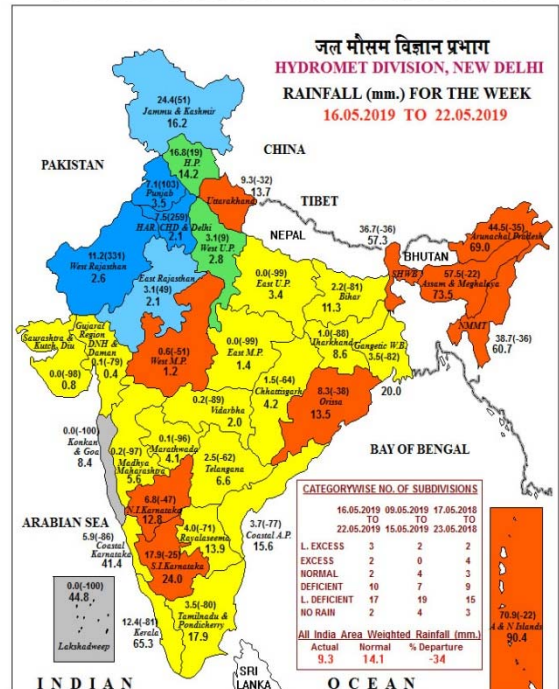
# Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

## Realized Rainfall (9 to 22 May, 2019)

**भारत मौसम विज्ञान विभाग**  
**INDIA METEOROLOGICAL DEPARTMENT**



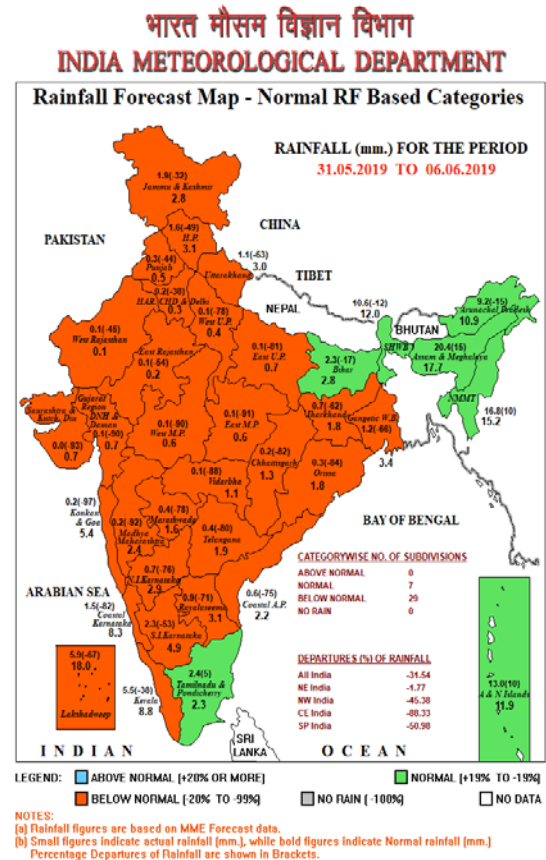
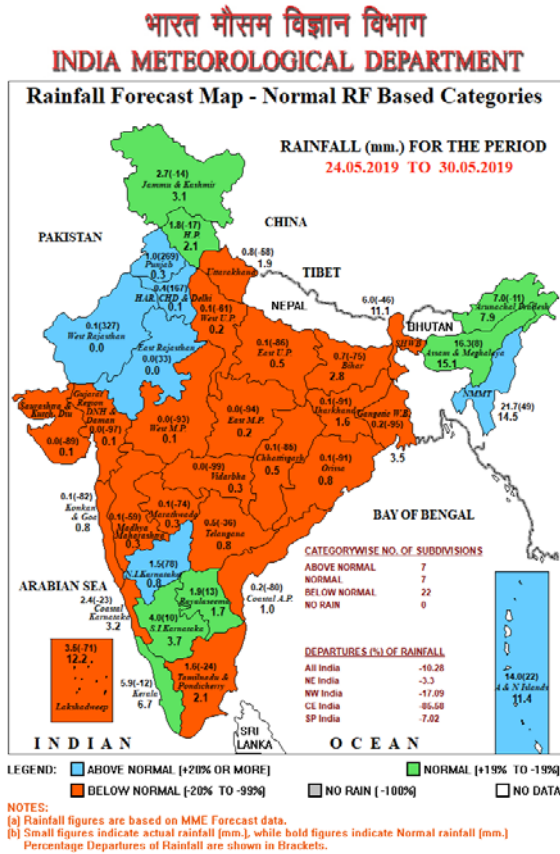
**भारत मौसम विज्ञान विभाग**  
**INDIA METEOROLOGICAL DEPARTMENT**



- Normal or above normal rainfall occurred in both the weeks in Punjab, Haryana, Chandigarh & Delhi, Rajasthan.
- Normal or above normal rainfall occurred in either of the two weeks in Jammu & Kashmir, Himachal Pradesh, West Uttar Pradesh, Assam & Meghalaya, Arunachal Pradesh
- Below normal rainfall / no rain occurred over rest of the country.

## Extended Range Forecast System

### Rainfall forecast maps for the next 2 weeks (IC – 22 May) (24 May to 6 June 2019)



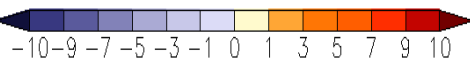
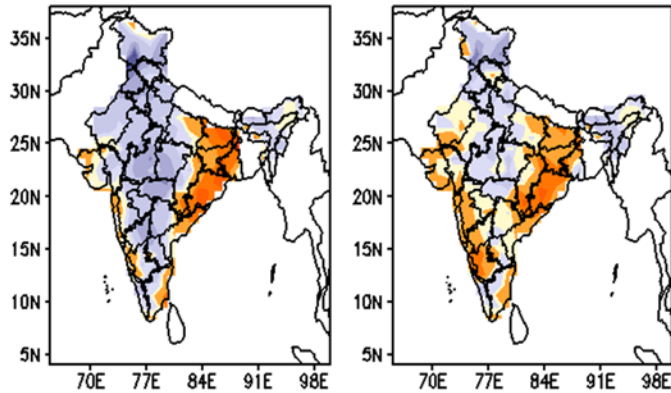
- **Week 1 (24.05.2019 to 30.05.2019) and Week 2 (31.05.2019 to 06.06.2019):** (i) Northwest India expected to get rainfall due to the movement of WD in week 1 and also in week 2. NE India is expected to get some rainfall during this period. (ii) With regard to monsoon rainfall, the bay of Bengal will be active in week 1 and also in week 2. However, over the south-east Arabian Sea and adjoining Kerala coast it will be subdued rainfall.

**Maximum and Minimum temperature anomaly ( $^{\circ}\text{C}$ ) forecast  
for next 2 weeks (IC – 22 May)  
(24<sup>th</sup> May to 6<sup>th</sup> June 2019)**

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

(Week1: 24May–30May)

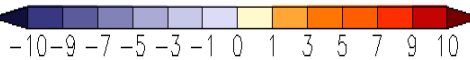
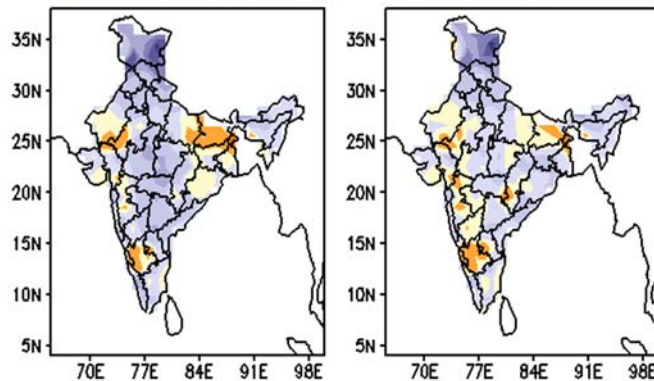
(Week2: 31May–06Jun)



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

(Week1: 24May–30May)

(Week2: 31May–06Jun)



**Maximum Temperature (Tmax)**

- **Week-1 (24.05.2019 to 30.05.2019) and Week-2 (31.05.2019 to 06.06.2019):** (i) Tmax will remain below normal over most of the central and northwestern parts of India in week 1 and week 2. However, eastern/NE parts of India and western coastal India, Tmax will be above normal in first two weeks.

**Minimum Temperature (Tmin)**

- **Week -1 (24.05.2019 to 30.05.2019) and Week-2 (31.05.2019 to 06.06.2019):** Mostly, Tmin is expected to be normal to slightly below normal over most of India during the first two weeks except some parts of central India and northwest India.

## Strategic Agricultural Planning based on rainfall during next two weeks till 06<sup>th</sup> June 2019

### Agromet Advisories

#### **Kerala**

Amount of rainfall received during the period from 01 March to 22 May 2019 over Kerala is 137 mm (53% deficit). The extended range weather forecast for next two weeks (24 to 30 May and 31May to 06 June) is normal for week-1 and below normal for week-2.

- There is a chance of Rhinoceros beetle in Coconut. After thorough cleaning of the crown region, apply cartap hydrochloride 4G @ 20 g mixed with fine sand 200 g to the inner most leaf axils surrounding the spindle leaf or a mixture of fipronil 0.3 G @ 20 g and fine sand @ 200 g to the inner most leaf axils. This application has to be repeated thrice a year. (January, May and September/October) for better results.
- There is a chance of foot rot disease in Pepper. Add 2 kg Trichoderma to a mixture of 90 kg FYM and 10 kg Neem cake and kept for two weeks with sufficient moisture. Add 2.5 kg of this mixture to each matured vine to control foot rot of pepper.
- There is a attack of Jassid infestation in Bhindi, due to increase in temperature. Apply 2% neem oil garlic emulsion once in a week or by spraying Lecanicillium lecanii at 20 g per litre of water.
- Vegetables: Due to increase in air temperature, the attack of insects such as whitefly, mealy bug and grass hopper is increased in vegetables. It can be controlled by applying 2% neem oil emulsion once in a week.
- There is a chance of Sigatoka disease in Banana. As a precaution, spray 20 g Pseudomonas per one litre of water.
- There is a chance of Thrips, White flies, Katte disease in Cardamom. Take necessary control measures against cardamom thrips, white flies etc. Continue irrigation, apply mulch and clean the drainage channels. It is advised to give a heavy irrigation once in a fortnight and destroy the Katte disease affected plants.

#### **Karnataka**

Amount of rainfall received over North Interior Karnataka is 33.9 mm (46% deficit), South Interior Karnataka is 80.5 mm (30% deficit) and Coastal Karnataka is 37.1 mm (66 % deficit) during 01 March to 22 May 2019. The extended range weather forecast for next two weeks (24 to 30 May and 31May to 06 June) over North Interior Karnataka is above normal for week-1 for South Interior Karnataka is normal for week-1 and for Coastal Karnataka is below normal for week-1. And over North and South interior Karnataka and Coastal Karnataka is below normal for week-2.

#### South Interior Karnataka

- In mango, due to heavy downpour of rain fruit drop has been observed. Consequently fruit fly damage is also noticed. Suitable control measures should be taken by spraying Carbaryl 4 g/litre of water.
- Dairy: Proper ventilation should be maintained for free circulation of air in the sheds.

## **Maharashtra**

Amount of rainfall received over Madhya Maharashtra is 7.2 mm (71% deficit), over Marathwada is 6.1 mm (71% deficit), Vidarbha is 6.8 mm (74% deficit) and Konkan region 0.7 mm (95% deficit) during 01 March to 22 May 2019. The extended range weather forecast for next two weeks (24 to 30 May and 31 May to 06 June) over Konkan region, Marathwada, Vidarbha and Madhya Maharashtra is below normal for both the weeks.

### **Marathwada**

- **Banana:** Cover the fruit bunch of banana with green shade net to avoid the direct incidence of the sun-rays to avoid the scorching effect.
- **Mango:** Due to high temperature, the quality of mango fruit may be affected. To avoid quality loss, harvest mature mango fruits as early as possible in the early morning.
- **Custard apple:** Select sandy loam soils, well-drained soil without heavy clay or rock to avoid root rot disease.
- **Grape:** For early and even sprouting in April pruning grape crop, provide shade by using shade net. At noon time take a spray of water in the orchard due to which the temperature may decrease along with increase in humidity. This will help for early and even sprouting of grapes .
- **Sericulture:** Precaution should be taken so that water stress condition may not occur in mulberry crop. Irrigation management should be done with the help of drip irrigation system as per availability and requirement of the crop.
- **Animal husbandry:** If the farm operations are carried out with the help of Bullocks it should be done early in the morning or at evening to protect the animals from heat waves. To reduce the impact of heat waves, poultry shade may be surrounded with moist gunny bags. Provide 3 to 4 times clean and cold water to animals for drinking purpose.

### **Madhya Maharashtra**

- To control white grub attack after pre monsoon rains, collect white grub adults from Neem, babul trees and put them in kerosene mixed water.
- For control of fruit flies on cucurbit vegetables, install clue-luer traps @ 2 per acre and spray 5% NSKE or neemark /azadiradictin @ 10 ml + 10 lit of water.
- Give clean and sufficient water and green fodder to milch animal and put them under shade to avoid high temperature.

### **Vidarbha**

- With continuance of heat wave conditions, frequent light irrigation coupled with basin mulching is advisable in citrus orchards to reduce solar heat stress. Provide thatches/shading to young fruit plantation and nurseries to reduce heat stress impact.
- Provide proper ventilation and heat protection in the animal/poultry sheds. Put gunny bags or grass on roof of sheds with sprinkling of water to reduce heat impact. Restrict working/ grazing of farm/ draught animals to morning and evening hours and give them plenty of water to drink.

## **Jharkhand**

Amount of rainfall received over Jharkhand during 01 March to 22 May 2019 is 99.6 mm (55 % excess). The extended range weather forecast provided for next two weeks (24 to 30 May and 31May to 06 June) is below normal for both the weeks.

- To conserve soil moisture for a longer period in Green gram, Inter-Culture operation (weeding) must be done.
- Summer Rice: Timely transplanted crop is at grain filling stage and this stage is sensitive of moisture stress. Hence, maintain the water level in the field.
- Fruit trees: Select the suitable place for plantation of different fruit seedlings and prepare/dig the pit and maintain the distance between pit as per requirement of fruit tree.
- Cattle: There is a possibility of attack of heat stroke in animals due to prevailing high day temperature. Hence, animals should be protected against intense heat and should not be exposed in sunlight during noon. Animals should be allowed to bath, put ice cube on their nose and head, and in extreme cases, the medicine Avilin should be injected @ 10 ml for adult, 5 ml for kids and 2 ml for goats.

## **West Bengal**

Amount of rainfall received over Gangetic West Bengal during 01 March to 22 May 2019 is 207 mm (57 % excess). The extended range weather forecast for next two weeks (24 to 30 May and 31May to 06 June) is below normal for both the weeks.

- Boro Rice: If more than 80% grains are ripened, then harvest the crop After harvesting, dry the crop properly as moderate to high rainfall is expected in coming days. Thus, dry the harvested crops in a shaded place.
- Sesame: Weeding should be done properly and irrigate the crop if necessary.
- Under prevalent weather situation, there is a chance of the attack of weevil. To control, apply 2ml Endosulphan per lit of water. At present attack of jute semilooper, bihar hairy catter piller and stem weevil is becoming severe. To control, apply Diclorovos @3 ml per 4 litre of water or Endosulphan 2 ml per litre of water.
- Vegetables: In pumpkin, ridge-gourd, pointed gourd and cucumber, there is a chance of attack of Red-Pumpkin Beetle in the weather condition. To control the pest, apply Dimecron or rogor (1ml per lit. of water).
- In Brinjal, Fruit and shoot borer is very severe in maximum places. Apply Triazophos 40 EC @ 1.5 ml, Spinosad 45 EC @0.2 ml or Cartap Hydrochloride @0.75 g per litre of water alternatively.

## **Assam**

Rainfall received over Assam is 498.4 mm (3% excess) during 01 March to 22 May 2019. The extended range weather forecast for next two weeks (24 to 30 May and 31May to 06 June) is normal for both the weeks.

- Sali Rice: As optimum quantity of rainfall is forecasted in the coming 5 days, summer ploughing in

rice fields is advised. This will kill the eggs and larvae of insects and also will help in moisture conservation in the field.

- Infestation in summer vegetables by Two spotted spider mite is observed due to favourable weather conditions. Infestation of this pest may cause symptoms like downward rolling of leaves and further it dries up. To control this pest, spray Fenpyroximate 5 EC@ 1 tea spoon per 5 litre of water.
- Chilli: Circular spot as well as water soaked sunken lesions with black margin are observed in fruits. To control this disease, spray of captan or captaf 5g/2.5 litre of water may be advised.
- Apiculture: It is a favourable weather condition for honeybees to be flown from their hives. So beekeepers are advised to monitor the honey bee colonies frequently and destroy if any new queen hive is found.
- Cattle: Vaccination should be done against Foot & Mouth disease, BQ, SH and other bacterial diseases in cattle and Buffaloes before the start of monsoon season.

### **Uttarakhand**

Rainfall received over Uttarakhand is 95.8 mm (29% deficit) during 01 March to 22 May 2019. The extended range weather forecast for next two weeks (24 to 30 May and 31May to 06 June) is below normal for both the weeks.

- Barnyard millet, pigeon pea: Hoeing and weeding should be done after 2-3 weeks of emergence. Apply bio-fungicide in field during intercultural operations to minimize the pathogen attack .
- Onion, Garlic: If purple blotch symptom is observed over leaves, spray Ridomil @2g per liter of water with added adhesive in onion and garlic.
- Mushroom: Maintain humidity in the mushroom crop room. Open the doors and window during day time for proper ventilation.
- Potato: Earthing up and mulching should be done in potato and remove the weeds. Apply bio-fungicide in field to minimize the pathogen attack.
- Animal Husbandry: Clean water should be given to animals for drinking. FMD vaccination should be given to cow and buffaloes before onset of monsoon. Use medicine for Endoparasites.

### **Haryana**

Rainfall received over Haryana is 34.2 mm (12% excess) during 01 March to 22 May 2019. The extended range weather forecast for next two weeks (24 to 30 May and 31May to 06 June) is above normal for week-1 and below normal for week-2.

- Withhold irrigation in sugarcane crop.
- Advised to withhold irrigation till 26 May in vegetable crops.
- There is a possibility of dusty winds and thunderstorm farmers are advised to keep the animals under sheds. Provide them clean water to drink to avoid heat stress. Provide 50 grams iodized salt and 50 to 100 grams mineral mixture daily to the cattle/animal with feed & green fodder to keep them healthy.

### **Punjab**

- Rainfall received over Punjab is 48.2 mm rainfall (-3% deficit) during 01 March to 22 May 2019. The extended range weather forecast for next two weeks (24 to 30 May and 31May to 06 June) is



above normal for week-1 and below normal for week-2.

- For the management of early shoot borer in sugarcane, use Tricho-cards having 20,000 eggs of *Corcyra Cephalonia* parasitized (seven days old) by *Trichogramma chilonis* per acre at 10 days interval.
- Cotton: Eradicate the weeds like *kanghi buti*, *peeli buti*, *puth kanda* etc growing on cotton field bunds, waste lands, road side and irrigation channels/canals to avoid further spread of whitefly to cotton field.
- Fruit Plants: For management of physiological fruit drop in mango, spray of 2,4-D sodium salt of horticulture grade can be done @ 10 g in 500 litres of water.
- To manage fruit fly in peach and plum fruits, fix PAU fruit fly traps @ 16 traps per acre.
- To check zinc deficiency in citrus, spray the affected trees with 0.47 zinc sulphate (4.7g/litre of water) solution, without addition of lime, to spring flush.
- Vegetables: Fruit and shoot borer of brinjal should be controlled by spraying 100 ml Sumicidin 20 EC or 200 ml Ripcord 10 EC or 160 ml Decis 2.8 EC in 100-125 litres of water per acre.
- For the control of powdery mildew in cucurbit, spray the crop with Karathane 50-80 ml/acre at the appearance of powdery patches on the leaves. Avoid sprays of sulphur or copper based fungicide on cucurbits.

## Jammu

Rainfall received during 01 March to 22 May 2019 over Jammu is 194.3 mm, which is 37% deficit. The extended range weather forecast for next two weeks (24 to 30 May and 31May to 06 June) is normal for week-1 and below normal for week-2.

- Vegetable crops: To check the attack of red pumpkin beetle, spray chloropyriphos @ 1.5ml/lit of water followed by dusting of ash to protect plants from attack. Spray mancozeb @ 2.5g/lit of water to control anthracnose.
- Moong/mash: Advised to go for hoeing and weeding in moong and mash crop.
- Plough the fallow land for soil solarization against insect pests and weed infestation. Incorporate well rotten FYM in the fields where *Kharif* maize and paddy nurseries are to be sown in June.
- Horticulture and Floriculture: Spray 2,4-D @ 10ppm against citrus fruit drop in citrus.
- White wash the tree trunks with slaked lime and copper sulphate against sunburn and fungal diseases.
- Pruning of old stems of rose and de-suckering of shoot coming from root stock of plants whose flowering is over.

**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.