



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

**Validity: 23 August to 05 September 2019**

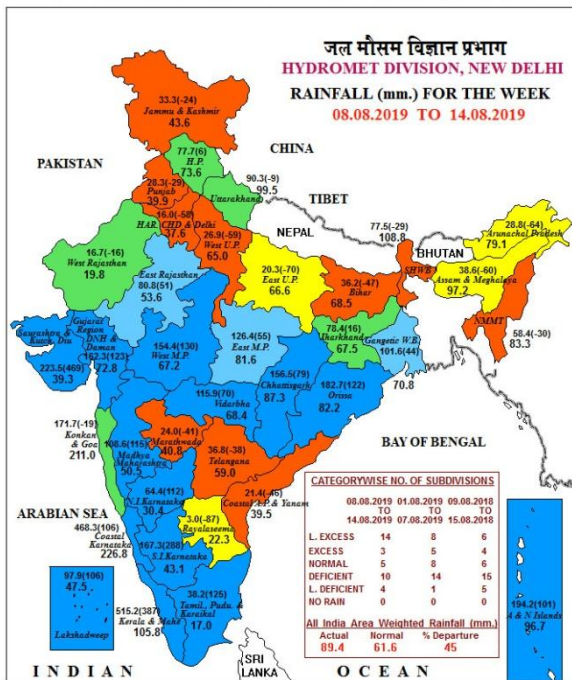
**Date of issue: 23 August 2019**

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**&**  
**Earth System Science Organization**  
**India Meteorological Department**

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

### Realized Rainfall (8<sup>th</sup> to 21<sup>st</sup> August, 2019)

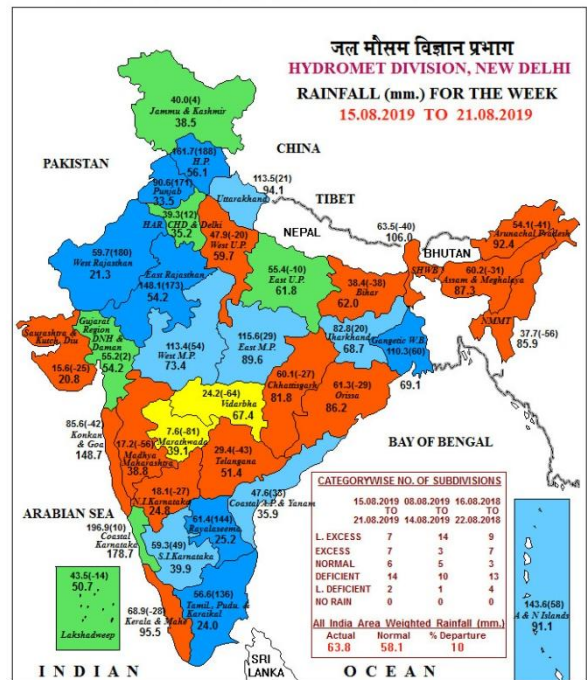
#### भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



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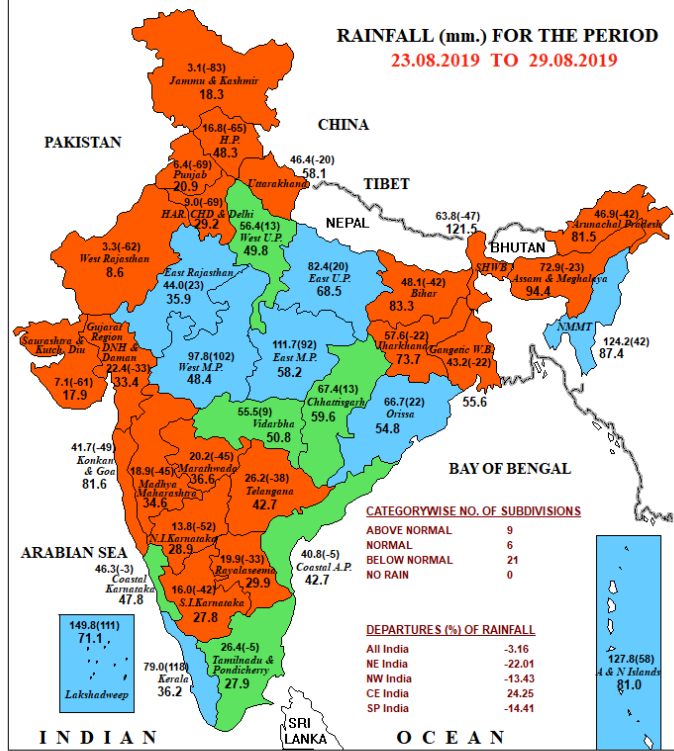
- Normal or above normal rainfall occurred in both the weeks in Uttarakhand, Himachal Pradesh, Rajasthan, Gujarat Region, East Madhya Pradesh, West Madhya Pradesh, Jharkhand, Gangetic West Bengal, Coastal Karnataka, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Lakshadweep and Andaman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

## Extended Range Forecast System

### Rainfall forecast maps for the next 2 weeks (IC – 21 August) (23<sup>rd</sup> August to 5<sup>th</sup> September 2019)

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

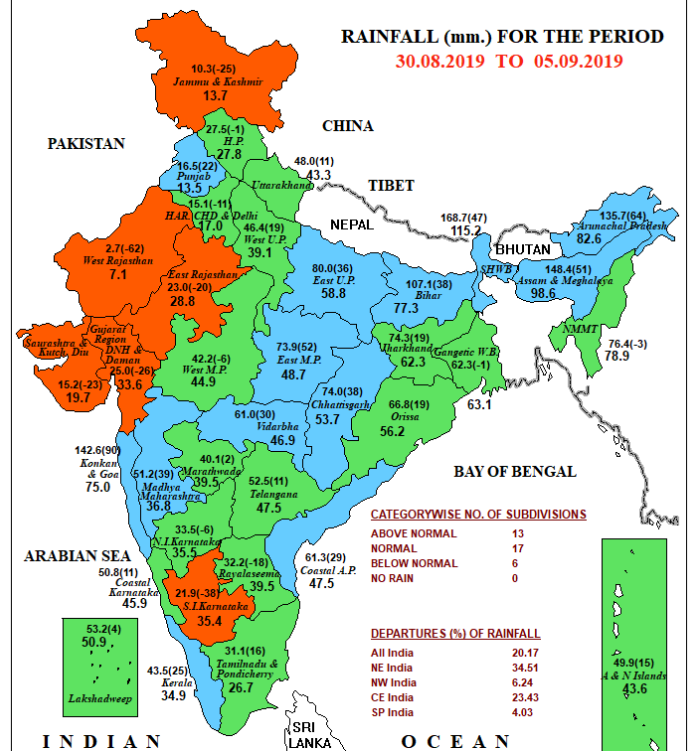


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■ BELOW NORMAL (-20% TO -99%) ■ NO RAIN [-100%] ■ NO DATA

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



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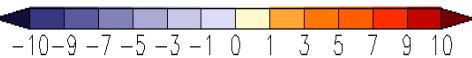
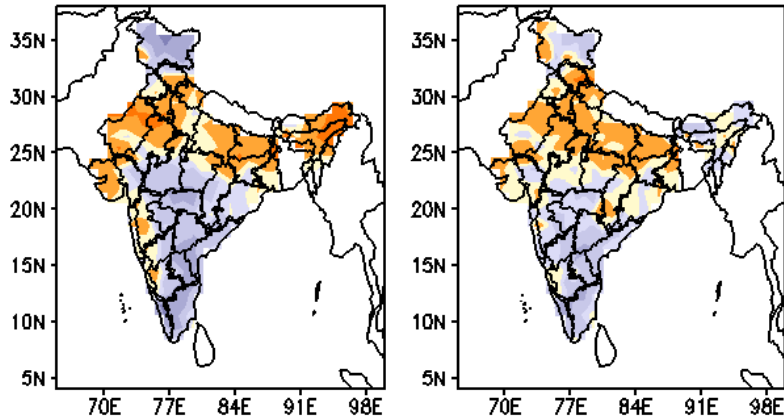
- **Week 1 (23.08.2019 to 29.08.2019):** Mainly above normal rainfall over central parts of India (Odisha, Chhattisgarh, Madhya Pradesh and adjoining parts of Uttar Pradesh, Maharashtra and eastern Rajasthan). Mostly below normal is likely over rest of the region. The coastal belt of Kerala and Karnataka will also experience active rainfall condition during the week.
- **Week 2 (30.08.2019 to 05.09.2019):** Above normal rainfall likely over many parts of country (except some parts of northwest India). Above normal rainfall likely for the country as a whole.

**Maximum and Minimum temperature anomaly ( $^{\circ}\text{C}$ ) forecast  
for next 2 weeks (IC – 21 August)  
(23<sup>rd</sup> August to 5<sup>th</sup> September 2019)**

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

(Week1: 23Aug–29Aug)

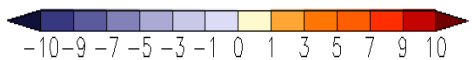
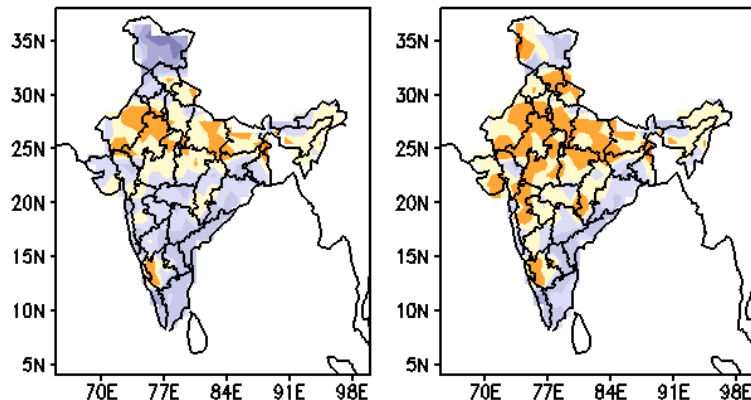
(Week2: 30Aug–05Sep)



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

(Week1: 23Aug–29Aug)

(Week2: 30Aug–05Sep)



**Maximum Temperature (Tmax)**

- **Week 1 (23.08.2019 to 29.08.2019) and Week 2 (30.08.2019 to 05.09.2019):** Tmax anomaly is likely to be positive over northern parts of India during week 1 and week 2, whereas over rest of the region it is below normal.

**Minimum Temperature (Tmin)**

- **Week 1 (23.08.2019 to 29.08.2019) and Week 2 (30.08.2019 to 05.09.2019):** Slightly above normal Tmin over northern parts of India with very weak anomaly.

## Strategic Agricultural Planning based on rainfall during next two weeks till 05<sup>th</sup> September 2019

### Agromet Advisories

#### **Kerala**

Amount of rainfall received over Kerala during the period from 01 June to 21 August 2019 is 1661.2 mm (-1% deficit). The extended range weather forecast for next two weeks (23-29 August and 30 August-05 September) is above normal.

- To control the spread of Bacterial leaf blight in paddy during rainy season, mix 20 g of cow dung in one litre of water and spray the cow dung slurry by mixing with 20g of Pseudomonas in one litre of water.
- Apply fertilizers @ 250g Urea, 285g Rock phosphate, 350g Potash, 500 g MgSO<sub>4</sub> and 2 kg lime per plant in coconut. As a prophylactic measure to control bud rot, apply 1% Bordeaux mixture in the tender leaf axils.
- During the monsoon season, there is a chance of quick wilt disease in pepper. To control quick wilt and pollu disease, drench the soil and with 0.2 % Copper oxychloride and spray the aerial part with 1% Bordeaux mixture as a prophylactic measure. Application Trichoderma/ Pseudomonas culture will control the quick wilt infestation.
- During rainy season, there is a chance of fruit rot and leaf fall in nutmeg. As a prophylactic measure, apply Trichoderma mixture (Add 2 kg Trichoderma to a mixture of 90 kg FYM and 10 kg Neemcake and keep for two weeks with sufficient moisture). Basal application of 2.5 kg of this mixture followed by foliar spray with Pseudomonas (20g/litre) or 1% Bordeaux mixture can control the fruit rot.
- During the rainy season, there is a chance of mahali disease in arecanut. The conidia of the fungus carried by wind and rainwater is favourable for disease spread. Prophylactic spraying of Bordeaux mixture (1%) or Copper Oxychloride 50WP (2g/l) with sticker is recommended.
- In this cool and moist conditions, there is a chance of soft rot disease in ginger. To control soft rot, drench the soil with 1% Bordeaux mixture/0.3% Mancozeb. Apply green leaf mulching to prevent soil erosion and to increase the organic matter content in the soil.
- Prolonged rains/ cloudy days favour the incidence of fungal diseases on leaves and buds in Rubber. To control, spray Indofil M45 4g/ litre.

#### **Karnataka**

Amount of rainfall received over North Interior Karnataka is 426.5 mm (35 % excess), South Interior Karnataka is 600.5 mm (23 % excess) ) and Coastal Karnataka is 2863.3 mm (10 % excess ) during 01 June to 21 August. The extended range weather forecast for next two weeks (23-29 August and 30 August-05 September) over south interior Karnataka is below normal for both the weeks whereas North interior Karnataka is below normal for week-1 and normal for week-2.

#### *South Interior Karnataka*

- Due to warm and humid weather, possibility of pest and disease build up is more in already sown

crops. Take prophylactic measures.

- Wherever over population of crop plants is existing, undertake thinning operation for better availability of soil moisture.

#### *Northern Karnataka*

- As heavy rainfall has been received in most of the districts and forecast of light rainfall is also issued by India Meteorological Department, *Kharif* crops like sunflower, maize, Bt. cotton, sesamum, navane and fodder crops may be taken up wherever possible.

#### **Tamil Nadu**

Amount of rainfall received over Tamil Nadu is 197.9 mm (5 % deficit) during the period of 01 June to 21 August 2019. The extended range weather forecast for next two weeks (23-29 August and 30 August-05 September) is normal for week-1 and week-2.

- Prevailing weather condition is favorable for incidence of boll worm. To control, spray Phosalone 35% EC@ 2.5 l/ ha or Quinalphos 25 EC@ 2.0 l/ha (or) Emamectin benzoate 5% SG @190-220 g/ha.
- Prevailing weather conditions are favorable for Yellow mosaic virus in pulses. To control, spray Dimethoate 30 EC @500 ml / ha or Thiamethoxam 75 WS @1 g/ lit.
- In the prevailing weather condition, shoot and fruit borer occurrence is noticed in Brinjal. To control, remove the affected fruits, terminal shoot showing boreholes and spray Neem Seed Kernel Extract 5 %.

#### **Maharashtra**

Rainfall received over Madhya Maharashtra is 874.8 mm (61% excess), over Marathwada is 327.9 mm (25% deficit), Vidarbha is 670.5 mm (5% excess) and Konkan region 3216.1 mm (38% excess) during 01 June to 21 August 2019. The extended range weather forecast for next two weeks (23-29 August and 30 August-05 September) over Madhya Maharashtra, Marathwada and Konkan are below normal whereas Vidarbha is normal for week-1. For week-2, Madhya Maharashtra, Konkan and Vidarbha are above normal whereas Marathwada is normal.

#### *Marathwada*

- To control pink bollworm in cotton crop, spray Profenophos 40 % + Cypermethrin 4% @ 20 ml per 10 litre of water during clear weather condition. For management of aphids in cotton crop, take a spray of Flonicamid 50 WG @ 2 g Buprofezin 25 SC @ 20 ml per 10 litre of water during clear weather condition. If yellowing of leaves is observed in cotton crop, take a spray of micronutrients grade – II @ 0.5 % and 19:19:19 @ 2% during clear weather condition.
- To control attack of leaf eating caterpillar and stem borer in soybean, spray Chlorantraniliprole 60 ml per acre or Thiamethoxam 12.6 % + Lambda Cyhalothrine 9.5 % 50ml per acre. To control tobacco

leaf eating caterpillar, use two pheromone traps per acre. Also use 20 'T' shaped bird perches per acre.

- For management of aphids in cotton crop take a spray of Flonicamid 50 WG @ 2 g Buprofezin 25 SC @ 20 ml per 10 liter of water during clear weather condition. To control pink bollworm in cotton crop take a spray of Profenophos 40 % + Cypermethrin 4% @ 20 ml per 10 liter of water during clear weather condition.

#### *Madhya Maharashtra*

- To control the leaf eating caterpillars in *kharif* sunflower, greengram, blackgram, pigeonpea etc., spray Chloropyriphos or Quinolphos @ 15-20 ml + 10 litre of water + 5 ml sticker.
- 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* jawar.
- For control of sucking pests in vegetable crops, spraying of 5 % Neem ark or Verticillum leccani (Phule bugicide) 1 kg + 1 l. milk in 200 lit of water or Imidyachloprid 17.8 SL 2 ml per 10 litre of water.

#### *Vidarbha*

- Present weather conditions are favorable for infestation of aphids and jassids. To control, spray Azadirachtin 1500 ppm @ 25 ml or Azadirachtin 0.03% (300 ppm) @ 50 ml or Imidacloprid 17.8% SL 2.5 ml or Profenofos 50% EC@ 20 ml per 10 litres water.
- For monitoring the incidence of stem fly in soybean, erect yellow sticky trap @ 4 per acre, and remove/destroy damaged plant parts.

#### *Konkan*

- If incidence of rice case worm is noticed on rice crop, then flood the field with water followed by dragging the rope to dislodge the cases and drain out water from field after 1-2 hrs. Collect the cases and destroy them. Maintain the water level of 5 cm in the field with fresh water.
- The forecast of increase in temperature which is congenial for vegetative flush in mango. Therefore, for protection of vegetative flush, spray Lambda cyhalothrin 5%EC@ 6ml or Quinalphos 25% EC @25 ml + Bavistin 20g per 10 litre of water.

### **Jharkhand**

Jharkhand received 533.9 mm rainfall which is 27 % deficit during 01 June to 21 August 2019. The extended range weather forecast for next two weeks (23-29 August and 30 August-05 September) is below normal for week-1 and normal for week-2.

- In fallow medium land, farmers with irrigation facility may proceed for maize cultivation with least duration varieties like Birsa Maize -2 which matures in 70 - 80 days. Farmers may also select the variety Birsa Maize -1 which matures in 80 - 85 days.

- In some pockets, crops like urd, groundnut, arhar, mung etc., have been attacked by Bihar hairy caterpillar. Spray the insecticide Dichlorvos (Nuvan) @ 0.5 ml per liter of water.

### **Jammu**

Rainfall received during 01 June to 14 August 2019 over Jammu was 378.5 mm, which is 9% deficit. The extended range weather forecast for next two weeks (23-29 August and 30 August-05 September) is below normal for week-1 and week-2.

- Due to presence of congenial weather, there may be attack of root weevil and thread worm in paddy crop. Under such situation, apply 1 kg/kanal of Carbofuran 3G.
- The present weather conditions are favourable for attack of leaf blight in maize crop, under such situation spray mancozeb 75WP @ 0.25% or Zineb @0.02 %. If attack of stem borer is noticed, then apply the Carbofuran 3G @ 20kg/ha directly into the whorles.

### **Andhra Pradesh**

Rainfall received during 01 June to 21 August 2019 over Coastal AP and Yanam was 375.3 mm (0% deficit) and in Rayalaseema region 194.6(17% deficit). The extended range weather forecast for Coastal AP (23-29 August and 30 August-05 September) is normal for week-1 and above normal for week-2, respectively. For Rayalaseema region, it is below normal for week-1 and normal for week-2.

- Farmers of East Godavari and flood affected areas of Krishna, Guntur district are advised to create drainage facilities and remove excess water from rice fields. Take up gap filling with new seedlings or tillers from the established seedlings, apply 20 kg urea and 10 kg potash for quick recovery of the crop.
- Utilizing the rainfall received, farmers are advised to apply 25 kg urea and 10 kg MOP per acre as top dressing to cotton crop in Krishna, Guntur, Prakasam, Kurnool, Kadapa and Ananthapuramu districts.
- Utilizing the rainfall received, farmers are advised to apply 25 kg urea as top dressing in bajra and kora crops in Rayalaseema and Prakasam districts.

### **Uttarpradesh**

Rainfall received during 01 June to 21 August 2019 over Western Uttar Pradesh was 372.6 mm (26% deficit). The extended range weather forecast for next two weeks (23-29 August and 30 August-05 September) is normal for both week-1 and week-2.

### *Kanpur*

- If Khaira disease is seen under late planted paddy, spray Zinc Sulphate@5.0 kg/ha with 2.0% Urea solution.



- Shallow hoeing is necessary to facilitate better root growth of pulses and oil seed crop.
- If shoot borer incidence is observed in sorghum, maize and pearl millet, apply Phorate 10% G @ 20 kg/ha or Quinolphos 25% EC @ 1.5litre/ha or Dimethoate 30% EC @ 1.0 l /ha in 500 litres of water.

### *Faizabad*

- Under prevailing weather conditions, there is a possibility for attack of pyrilla in sugarcane. Hence farmers are advised follow suitable plant protection measures.

### **West Bengal**

Rainfall received during 01 June to 21 August 2019 over West Bengal was 575.1 (29% deficit). The extended range weather forecast for next two weeks (23-29 August and 30 August-05 September) is below normal for week-1 and normal for week-2.

- Under high humidity and cloudy condition, combined attack of downy mildew and mosaic may be seen in bitter gourd and point gourd. To control, apply Ridomil gold MZ @ 2 g per litre.
- At the time of panicle initiation, farmers are advised to keep 5 to 7 cm water in the paddy fields.

### **Assam**

Rainfall received during 01 June to 21 August 2019 over Assam was 1184.0mm (11% deficit). The extended range weather forecast for next two weeks (23-29 August and 30 August-05 September) is below normal for week-1 and above normal for week-2.

- In order to control the infestation of citrus trunk borer, the holes made by the pest in the trunks should be spiked with wire to kill the grub followed by cleaning and plastering it with wet soil.
- In sali rice, farmers are advised to go for top dressing of urea after 20-25 days of transplanting @ 3 Kg and 1.5 Kg per bigha of land for semi-dwarf and tall traditional varieties respectively.

### **Haryana**

Rainfall received during 01 June to 21 August 2019 over Haryana was 229.4 (28% deficit). The extended range weather forecast for next two weeks (23-29 August and 30 August-05 September) is below normal for week-1 and normal for week-2.

- The existing variable weather condition may favour the infestation of sucking pest. Farmers are advised to keep vigil on white fly infestation. If infestation of white fly above the economical threshold level (ETL), spray 1 litre of Nimbecidine mixed with 250 litre of water per acre. For control of leafhopper, spray 40 ml imidacloprid (Confidor) 200SL mixed with 120-150 litre water per acre, during clear weather condition.

## **Punjab**

Rainfall received during 01 June to 21 August 2019 over Punjab was 357.4mm (3% excess). The extended range weather forecast for next two weeks (23-29 August and 30 August-05 September) is below normal for week-1 and above normal for week-2.

- Do not allow the rain water to stand in the maize crop as this crop is highly sensitive to standing water and promotes bacterial stalk rot.
- Prevailing weather is favourable for the development and spread of fruit rot in chilli. Farmers are advised to give 3-4 sprays of Folicur @ 250 ml or Indofil M-45 or Blitox 50 WP @ 750 g/acre at 10 days interval during clear weather conditions.
- Fix fruit fly traps (16 traps per acre) in guava, to protect the rainy season guava fruits from fruit fly.

## **Bihar**

Rainfall received during 01 June to 21 August 2019 over Bihar was 672.2 (11% deficit). The extended range weather forecast for next two weeks (23-29 August and 30 August-05 September) is below normal for week-1 and above normal for week-2.

- Current weather and present phonological stages of the maize crop is conducive for infestation of stem borer. If infestation is observed, apply Carbofuran 3G@7kg per hectare.
- Present weather conditions are favourable for viral infestation *i.e.* leaf curl symptoms in chilli crop. Affected plants should be uprooted and destroyed. Spraying of Imidacloprid @ 0.3ml/liter of water is suggested to protect the crop.

## **Rajasthan**

Rainfall received during 01 June to 21 August 2019 over East Rajasthan was 653.3mm (45% excess). The extended range weather forecast for next two weeks (23-29 August and 30 August-05 September) is above normal for week-1 and below normal for week-2.

- For control of girdle beetle in soybean, spray Acephate 75 SP 1 g/litre or Triazophos 40 EC 1 ml/litre at 20 days interval.
- In the paddy growing region, if top leaves of plants turned yellow and bottom leaves remained green, farmers may spray Zinc sulphate solution (2.5kg Zinc sulphate dissolved in 500 litres of water/ha).

## **Himachal Pradesh**

Rainfall received during 01 June to 21 August 2019 over Himachal Pradesh was 556.9 mm, which is 2% deficit. The extended range weather forecast for next two weeks (23-29 August and 30 August-05

September) is below normal for week-1 and normal for week-2.

- To control fruit blight and fruit rot disease in pomegranate, spray Mancozeb 600g and Carbendazim 100 g @ 200 litre of water.
- To control the fruit rot in tomato remove the yellow leaves 15 to 20 cm near the ground and bury them into the soil and spray Mancozeb 250g or Redomil 250 g @ 100 litre of water at an interval of 8-10 days.

### **Chattisgarh**

Rainfall received during 01 June to 21 August 2019 over Chattisgarh was 812.7 mm, which is 2% deficit. The extended range weather forecast for next two weeks (23-29 August and 30 August-05 September) is normal for week-1 and above normal for week-2.

- In the rice crop, continuous monitoring of the economically harmful insects should be done. For this light trap should be used and placed at some distance from the crop. The bulb should be lightened from evening 06.30 PM to 10.30 PM and collected insects should be destroyed in the morning hours.
- If leaf caterpillar is observed in soybean crop, apply Trizofas @ 2 ml/ acre or Flubendiamide @ 0.5 ml/litre of water.

***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.*

