



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

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

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

**Realized Rainfall**

**(30<sup>th</sup> August to 12<sup>th</sup> September 2018)**



- Normal or above normal rainfall occurred during last two weeks in Himachal Pradesh, Haryana, Chandigarh & Delhi, East Rajasthan, Madhya Pradesh, Odisha and Assam & Meghalaya.
- Normal or above normal rainfall occurred in either of the last two weeks in Jammu & Kashmir, Uttarakhand, Punjab, Uttar Pradesh, Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Tamil Nadu and Andaman & Nicobar Islands.
- Below normal rainfall occurred in both the weeks in West Rajasthan, Gangetic West Bengal, Nagaland, Manipur, Mizoram, Tripura, Chhattisgarh, Gujarat, Konkan & Goa, Madhya Maharashtra, Marathwada, Vidarbha, Telangana, Andhra Pradesh, Karnataka, Kerala and Lakshadweep.

## Extended Range Forecast System

### Rainfall forecast maps for the next 2 weeks (IC – 12 September) (14<sup>th</sup> to 27<sup>th</sup> September 2018)



### Extended Range Rainfall Forecast

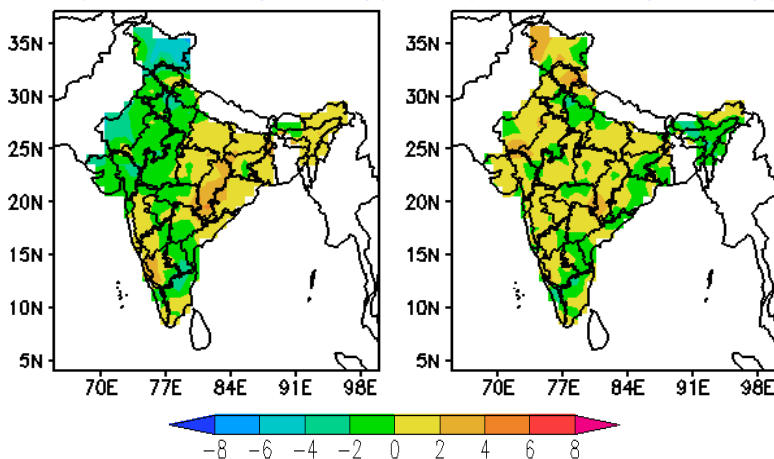
- **Week 1 (14.09.2018 to 20.09.2018):** Mostly weak (below normal) monsoon conditions over entire India.
- **Week 2 (21.09.2018 to 27.09.2018):** Improvement in rainfall condition with normal rainfall over most of subdivisions of India.

**Maximum and Minimum temperature anomaly ( $^{\circ}\text{C}$ ) forecast  
for next 2 weeks (IC – 12 September)  
(14<sup>th</sup> to 27<sup>th</sup> September 2018)**

**MME Bias Corrected Tmax Anomaly (Deg)**

(Week1: 14Sep–20Sep)

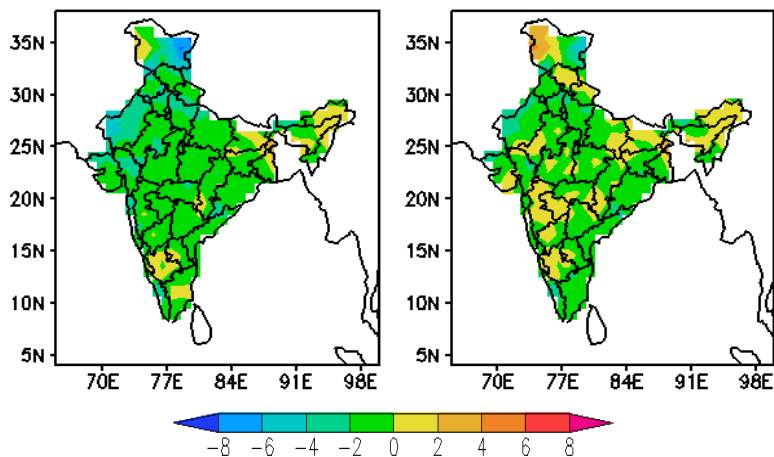
(Week2: 21Sep–27Sep)



**MME Bias Corrected Tmin Anomaly (Deg)**

(Week1: 14Sep–20Sep)

(Week2: 21Sep–27Sep)



**Maximum Temperature (Tmax)**

**Week 1 (14.09.2018 to 20.09.2018) and Week 2 (21.09.2018 to 27.09.2018):** Mostly normal to below normal Tmax in week 1 over the northwest India and slightly above normal Tmax over eastern part of the country during week 1. Slightly above normal Tmax belt is likely over eastern, southern and northern parts of the country during week 2.

**Minimum Temperature (Tmin)**

- **Week 1 (14.09.2018 to 20.09.2018) and Week 2 (21.09.2018 to 27.09.2018):** Mostly normal to below normal Tmin during the period over majority of the subdivisions of India.

## Strategic Agricultural Planning based on rainfall during next two weeks till 27<sup>th</sup> September 2018

### Agromet Advisories

#### Kerala

Rainfall received during the period from 01 June to 13 September 2018 over Kerala is 2434.4 mm, which is 29% excess than normal. The extended range weather forecast provided for next two weeks (14 to 20 and 21 to 27 September) is below normal for both the weeks.

- To control Bacterial Leaf blight in paddy, mix 200 g of cow dung in 1 litre of water and spray the cow dung slurry by mixing with 20g pseudomonas twice at 10 days interval
- To prevent bud rot disease in coconut, small perforated sachets containing 2 g of mancozeb may be tied to the top leaf axil. When it rains, a small quantity of the fungicide is released from the sachets to the leaf base and thus protecting the palm. Spray 1% Bordeaux mixture on the crown of palms.
- There is a chance of Sigatoka disease in banana. As a precaution, Spray Pseudomonas 20g/litre. In case of severe attack, spray 2 ml Hexaconazole or 1 ml Propiconazole per one litre of water by mixing it with a sticker and spray on both the surfaces of the leaf.
- There is a chance of foot rot in pepper. Add 2 kg Trichoderma to a mixture of 90 kg FYM and 10 kg Neemcake and keep for two weeks with sufficient moisture.

#### Tamil Nadu

Rainfall received during the period of 01 June to 13 September 2018 over Tamil Nadu is 204.8 mm, which is 14% deficit as compared to the normal. The extended range weather forecast provided for next two weeks (14 to 20 and 21 to 27 September) is above normal for week-1 and normal for week-2.

- Prevailing weather condition is favourable for fruit dropping in chilli. Spray growth regulators NAA 10 mg/litre on 60<sup>th</sup> and 90<sup>th</sup> days after planting (or) Triaccontanol 1.25 ml/lit on 60<sup>th</sup> and 80<sup>th</sup> day of planting for controlling fruit drops and improving fruit set.
- Prevailing weather condition is favorable for Citrus canker disease incidence. To control the diseases, spray Copper Oxchloride 0.2% at fortnight intervals.
- In the prevailing weather having high cloud cover and moderate humidity, there is a chance for incidence of boll worm in cotton. For controlling this pest, spray Chlorpyriphos 20% EC 1250 ml/ha.
- Farmers are advised to monitor army worm incidence in maize. The larvae scrapping the leaves, makes small to medium elongated pin holes and causes loss of top portion of leaves. It also feeds on tassel. If symptoms were noticed, spray any one of the following pesticides to control the pest.
  - Thiodicarb 70 WP 2g/lit.
  - Flubendiamide 480 SC 3 ml/10 lit.

#### Maharashtra

Rainfall received during 01 June to 13 September 2018 over different meteorological sub divisions of the state viz., Konkan: 2825.1 mm (3% excess), Madhya Maharashtra: 627.8 mm (1% deficit), Vidarbha: 820.3 mm (6% deficit) and Marathwada: 510.2 mm (13% deficit). The extended range weather forecast provided for next two weeks (14 to 20 and 21 to 27 September) for all the sub divisions of Maharashtra is below normal for week-1



and normal for week-2.

### **Marathwada**

- Since dry weather is prevailing, there is a possibility of sucking pests and pink bollworm in cotton crop. To control, take a spray of Pyriproxifen 5 % + Fenprothrin 15 % @ 200 ml or Thiamethoxam 12.6 % + Lambda-Cyhalothrin 9.5 % @ 80 ml or Indoxacarb 14.5% + Acetamiprid 7.7 % @ 200 ml per acre.
- After harvesting of green gram / black gram crop, land preparation should be done for sowing of Rabi crops.
- To control attack of stem borer in sorghum crop, soil application of Carbofuran 3 % @ 8 kg per acre is advised.

### **Madhya Maharashtra**

- To avoid the incidence of stem borer in Rabi sorghum, seed should be treated with Thiamethoxam 35 % F.S 10 ml/ Imidacloprid 48 % F.S10 ml per kg seed followed by 4 gm Sulphur per kg seed for control of smut disease followed by biofertilizers viz. Azotobacter and P.S.B. @25 gm per kg seed.
- For control of thrips and blight of onion, spray Lambda Cyhalothrin 6 ml and Tebuconazole 10 ml and sticker 5-10 ml per 10 L water.

### **Vidarbha**

- To control boll rot, in cotton undertake foliar spray with streptomycin 2.5g + copper oxychloride 25g per 10 litres of water.
- With prevailing subdued rainfall activity, wherever possible, need based protective irrigation is advisable to avoid moisture stress in soybean, particularly under shallow soils in rain deficient areas. If irrigation is not possible, undertake foliar spray of 1% KNO<sub>3</sub> to reduce the impact of moisture stress.

### **Konkan**

- There is possibility of incidence of brown plant hoppers in lowland rice. If 10 hopper/ hill is observed then take a spray of Acephate (75%) 2.25 gm or Fipronil (5%) 2 ml or Imidacloprid (17.8%) 0.2 ml per litre of water. Apply irrigation by intermittent draining.

### **Andhra Pradesh**

Amount of rainfall received over Coastal Andhra Pradesh is 503.1 mm (5% excess) and Rayalaseema is 167.8 mm (45% deficit) during 01 June to 13 September 2018. The extended range weather forecast provided for two weeks (14 to 20 and 21 to 27 September) for Coastal Andhra Pradesh is below normal for week-1 and normal for week-2 and Rayalaseema is normal for both the weeks.

- Incidence of sucking pests was observed in early sown groundnut crop in Ananthapuramu, Kurnool, Chittoor districts. Farmers are advised to spray monocrotophos@1.6ml/l or Dimethoate @2ml/l of water for control of sucking pests.
- Incidence of sucking pests was observed in cotton crop in Krishna, Ananthapuramu and Kurnool districts. Farmers are advised to spray Imidacloprid @ 0.4 ml/l or Acetamiprid @ 0.2g/l or Acephate@ 1.5g/l or monocrotophos@ 1.6 ml/l for control of sucking pests.
- Farmers of Ananthapuramu, Kurnool, Kadapa and Chittoor districts can take up sowing of contingency

crops like horsegram, fodder Jowar and fodder bajra in areas where sowing was not taken up so far, utilizing the rainfall received during last two days.

### **Bihar**

Rainfall received over Bihar during 01 June to 13 September 2018 is 735.7 mm, which is 18% deficit. The extended range weather forecast provided for next two weeks (14 to 20 and 21 to 27 September) is below normal for week-1 and normal for week-2.

- Present weather is congenial for attack of fruit fly in cucurbitaceous crop. In case of heavy damage, spraying of 2.0 litre Malathion 50 EC and 1.0 kg gur mix with 800 litre water is advised for one hectare crop.
- In view of normal rainfall forecast during 21 to 27 September, farmers are advised to apply 30 kg nitrogen/hectare in early transplanted paddy crop which is in panicle initiation stage.
- Present weather condition is conducive for damping off disease in vegetable nursery. For prevention, soil treatment with Trichoderma and proper seed treatment is advised before sowing. In case of severe infestation, spraying of copper oxychloride @ 2.5 gram/litre of water is advised in nursery.
- Nursery sowing of early varieties of cabbage is advised. Pride of India, Golden Acre, Pusa mukta, Pusa agate, and early drum head varieties of cabbage are recommended for sowing under North Bihar agro climatic condition.

### **Uttar Pradesh**

Amount of rainfall received over East Uttar Pradesh region is 735.6 mm (8% deficit) and West Uttar Pradesh is 714.8 mm (3% excess) during 01 June to 13 September 2018. The extended range weather forecast provided for two weeks (14 to 20 and 21 to 27 September) for West Uttar Pradesh is below normal for week-1 and above normal for week-2 and East Uttar Pradesh is below normal for week-1 and normal for week-2.

- Toria sowing should be completed up to 20 September taking recommended varieties (Bhavani T-9, PT-303, PT-507, Type-36 and Tapeshvari).
- If Khaira disease appears under late planted paddy, spray 5.0 kg Zinc sulphate /ha. with 2.0% Urea solution.
- If Sorghum, Maize and Pearl millet are infested by shoot borer and grass hopper, apply forate-10% G @ 20 kg/ha or Quinalphos 25% EC @ 1.5 litre/ha or Dimethoate 30% EC @ 1.0 l /ha with 500 litre water solution.

### **West Bengal**

Rainfall received over Gangetic West Bengal during 01 June to 13 September 2018 is 842.1 mm, which is 17% deficit. The extended range weather forecast provided for next two weeks (14 to 20 and 21 to 27 September) is normal for both the weeks.

- For those fields where *Kharif* rice was sown, apply 4.5 kg Urea per Bigha as second top dressing, when panicle initiation will start. At this stage, attack of Brown spot & Blast may be noticed.

- Start seed sowing of early variety of cabbage (e.g. Pride of India, Pusa early, Kranti etc.) & cauliflower (e.g. Jawharmoti, Bharat Jyoti, Early Banaras etc.) @ 4gm / katha
- The prevailing weather conditions are congenial for the rapid spread of thrips and mites leading to the leaf curling in chilli. As a control measures, spray Difenthiuron @ 0.75g per litre of water at 7-10 days interval.

### **Jharkhand**

Rainfall received over Jharkhand during 01 June to 13 September 2018 is 758.1 mm, which is 22% deficit. The extended range weather forecast provided for next two weeks (14 to 20 and 21 to 27 September) is below normal for both the weeks.

- There is a possibility of attack of fruit borer in maize crop, spray neem based insecticide on upper part of the plant @ 2-3 ml. per litre of water.
- Spray bio-insecticide Delphin @ 2 gm/ litre of water in cauliflower and cabbage against white fly and in brinjal against stem/fruit borer.
- As below normal rainfall is forecasted, farmers are advised to provide desired irrigation to the crops.

### **Rajasthan**

Amount of rainfall received over East Rajasthan region is 584.5 mm (normal) and West Rajasthan is 193.5 mm (23% deficit) during 01 June to 13 September 2018. The extended range weather forecast provided for two weeks (14 to 20 and 21 to 27 September) for West Rajasthan and East Rajasthan is below normal for both the weeks.

- Plan to take up sowing of mustard, toria in conserved soil moisture in the areas where field crops were failed due to heavy rainfall.
- Spray Imidacloprid 0.3 ml /litre of water or Trizophos 40 EC 1 ml/litre of water in cotton, soybean for the control of tobacco cater pillar and sucking pests.
- Continue nursery preparation for capsicum. Undertake nursery sowing of medium duration cauliflower in irrigated areas.
- Apply irrigation in soybean and maize in the region where no rains occurred during last 12-15 days and soil moisture depleted by 50-60 % as Soybean crop is at grain development stage and maize is at tasseling and silking stage.
- As below normal rainfall is forecasted, farmers are advised to provide desired irrigation to the crops.

### **Gujarat**

Rainfall received over Gujarat region is 667.2 mm (22% deficit) and Saurashtra & Kutch is 313.7 mm (29% deficit) during 01 June to 13 September 2018. The extended range weather forecast provided for next two weeks (14 to 20 and 21 to 27 September) for Gujarat region and Saurashtra & Kutch is below normal for both the weeks.



- Frequent light inter-culturing operation should be done to avoid the evaporation losses of soil moisture and to control weeds.
- Under limited irrigation water availability, micro irrigation systems (drip or sprinkler) should be used to irrigate the crop at critical growth stages.

### **Assam**

Rainfall received over Assam is 1174.4 mm (27% deficit) during 01 June to 13 September 2018. The extended range weather forecast provided for next two weeks (14 to 20 and 21 to 27 September) is below normal for week-1 and above normal for week-2.

- The weather is congenial for emergence of leaf folder, army worm, rice hispa in paddy field, which is at tillering stage. To control, farmers are advised to spray Chloropyriphos 20EC or Monocrotophos 40EC @ 1.5 ml per litre of water mainly under clear weather.
- Farmers may go for spraying of 0.2%-0.3% Borax @ 220-320 g/100 litre/bigha for controlling browning disease in early cauliflower field on clear weather.
- Farmers are suggested to sow seeds of green gram and black gram in high lands having sandy-loam textures. The recommended varieties of green gram are T-44, Kopergaon, K-851, ML-56, ML-131 etc. Recommended varieties of black gram are T-9, T-27, Pant U-19, T-122.

### **Punjab**

Rainfall received over Punjab is 382.3 mm rainfall (15% deficit) during 01 June to 13 September 2018. The extended range weather forecast provided for next two weeks (14 to 20 and 21 to 27 September) is below normal for both the weeks.

- The Prevailing weather conditions are favourable for the development of false smut in rice. To manage it, spray Kocide 46 DF @ 500 g in 200 litres of water per acre at boot stage.
- If the incidence of whitefly in cotton is above ETL (6 adults/leaf before 10 am), spray either 80g Ulala 50 WG or 200g Polo/Craze/Ruby/Ludo/Shoku 50 WP in 150 litres of water per acre.
- It is optimum time to start planting of *kharif* onion with bulbsets as well as seedlings.
- It is the right time for the planting of evergreen fruit plants such as citrus, litchi, mango, guava, loquat, ber, amla and papaya.
- Save the animals from ticks, flies, lice during rainy season. Protect wounds from flies to avoid maggot's infestation. Animal sheds should be kept dry and well ventilated.

### **Haryana**

Haryana has received 347.9 mm of rainfall during 01 June to 13 September 2018, which is 19% deficit. The extended range weather forecast provided for next two weeks (14 to 20 and 21 to 27 September) is below normal for both the weeks.

- Farmers are advised to take up weed management and maintain 5-6 cm water level in rice fields. Due to favourable conditions, farmers are advised to keep vigilance on insect/pest in rice crop.

- Farmers are advised to do intercultural operations to conserve soil moisture in vegetable and fruit crops.
- Farmers are advised to keep animals under well ventilated places and provide clean drinking water and green forage as per requirement. Provide 50 grams of iodized salt and 50 to 100 grams of mineral mixture daily with feed & green fodder to keep them healthy.
- Due to dry weather farmers are advised to do harvesting in matured bajra crop.

### **Himachal Pradesh**

Himachal Pradesh has received 729.4 mm of rainfall during 01 June to 13 September 2018, which is 4% deficit. The extended range weather forecast provided for next two weeks (14 to 20 and 21 to 27 September) is below normal for both the weeks.

- Farmers are advised to mend bunds for conserving rain water in rice fields. Bund should be higher and wider so that more rain water can be conserved.
- Farmers are advised to monitor paddy crop against attack of rice blast and brown spot, if lesions appear, spray Carbendazim @ 2 gram per litre of water immediately in clear weather.
- Due to white fly and sucking pests, when yellowing of leaves or dark spots on fruits start appearing in vegetable crops, spray Imidacloprid 17.8 % SC @ 1.0 ml / 3 litre of water in clear weather.
- Farmers who wish to establish new orchards are advised to dig the pits, 1 m X 1 m X 1 m and fill with well decomposed FYM. For prevention against termite and white grubs, the pits should be treated with 5ml of chloropyrifos 20 EC per litre water.

### **Jammu**

Rainfall received during 01 June to 13 September 2018 over Jammu is 515.1 mm, which is 5% excess. The extended range weather forecast provided for next two weeks (14 to 20 and 21 to 27 September) over Jammu is above normal for week-1 and below normal for week-2.

- Farmers are advised to manually rogue out yellow leaf plants (mosaic affected) in *Kharif* pulses at initial stage of attack. Control vector population by spraying systematic insecticides during clear weather at initial stages of attack.
- Sow the seeds of vegetables like Methi, Spinach Beet, Coriander, Radish, Carrot, Beet Root and Spinach may be sown within first fortnight of September for good germination and crop stand.
- Present weather condition is favourable for attack of stem borer in late sown maize, whorl application of carbofuran/ cartap granules @ 5gm /whorl is recommended to control the insect.

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