



# राष्ट्रीय कृषि मौसम परामर्शी सेवाएं बुलेटिन National Agromet Advisory Services Bulletin

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आधारित / based on

विस्तारित अवधि मौसम पूर्वानुमान / Extended Range Weather Forecast (ERFS)

वैधता / Validity: 25 August - 07 September 2023

जारीकर्ता / Issued by

अखिल भारतीय समन्वित कृषि-मौसम विज्ञान अनुसंधान परियोजना

**AICRP on Agro-Meteorology (AICRPAM)**

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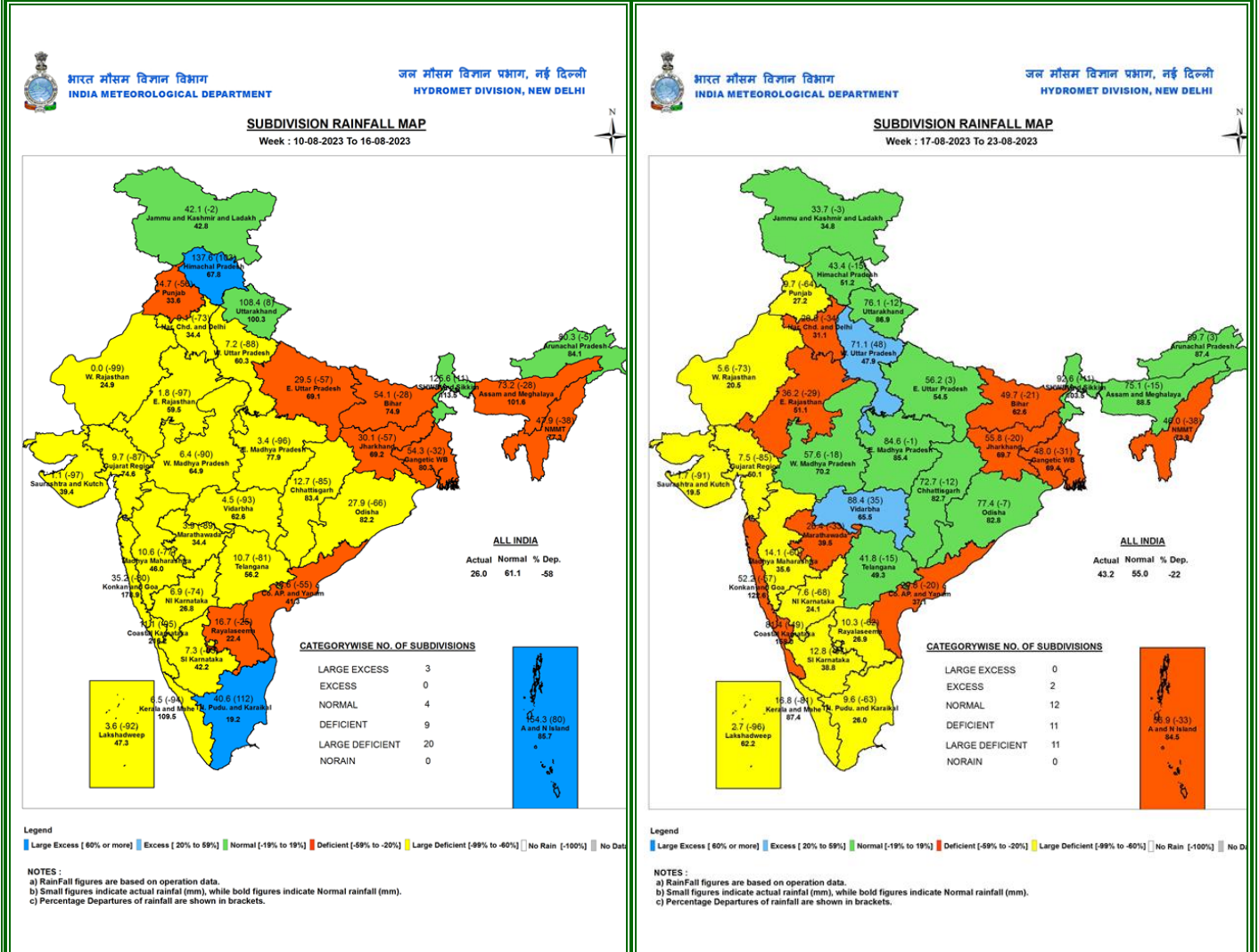
पृथ्वी प्रणाली विज्ञान संगठन

**Earth System Science Organization**

# Realized Rainfall and Extended Range Forecast

## Realized Rainfall

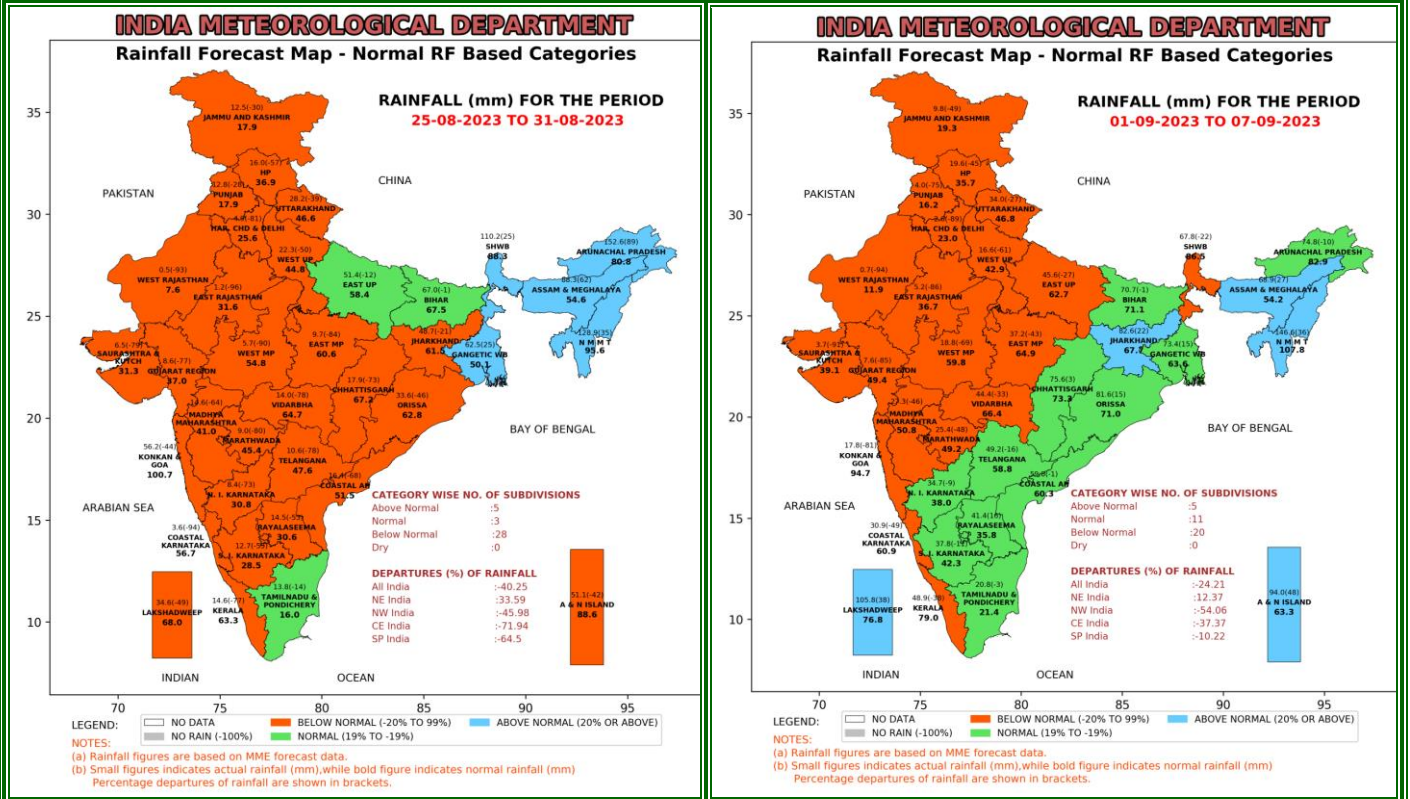
(10<sup>th</sup> August to 23<sup>rd</sup> August, 2023)



- Normal or above normal rainfall occurred in both the weeks over Jammu & Kashmir and Ladakh (UTs), Himachal Pradesh, Uttarakhand, Sub-Himalayan West Bengal & Sikkim and Arunachal Pradesh.
- Normal or above normal rainfall occurred in either of the two weeks over Uttar Pradesh, Assam & Meghalaya, Madhya Pradesh, Chhattisgarh, Odisha, Vidarbha, Telangana, Tamil Nadu Puducherry & Karaikal and Andaman & Nicobar Islands.
- Below Normal rainfall occurred in both the weeks over rest of the country.

## Extended Range Forecast System

### Rainfall forecast maps for the next 2 weeks (IC- 23<sup>rd</sup> August) (25<sup>th</sup> August to 07<sup>th</sup> September, 2023)



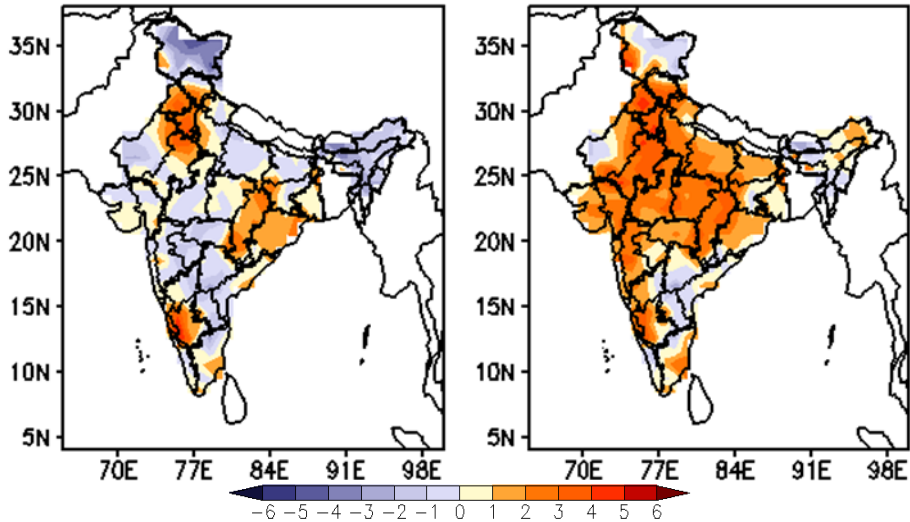
- **Week 1 (25.08.2023 to 31.08.2023):** Rainfall is likely to be normal to above normal over North East India and parts of East India. However, it is likely to be below normal over rest of the country.
- **Week 2 (01.09.2023 to 07.09.2023):** Rainfall is likely to be slightly above normal over East & North East India and normal over most parts of peninsular India. It is likely to be below normal over remaining parts of the country.

**Maximum and Minimum temperature anomaly ( $^{\circ}\text{C}$ ) forecast  
for the next 2 weeks (IC- 23<sup>rd</sup> August)  
(25<sup>th</sup> August to 07<sup>th</sup> September, 2023)**

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

(Week1: 25Aug–31Aug)

(Week2: 01Sep–07Sep)



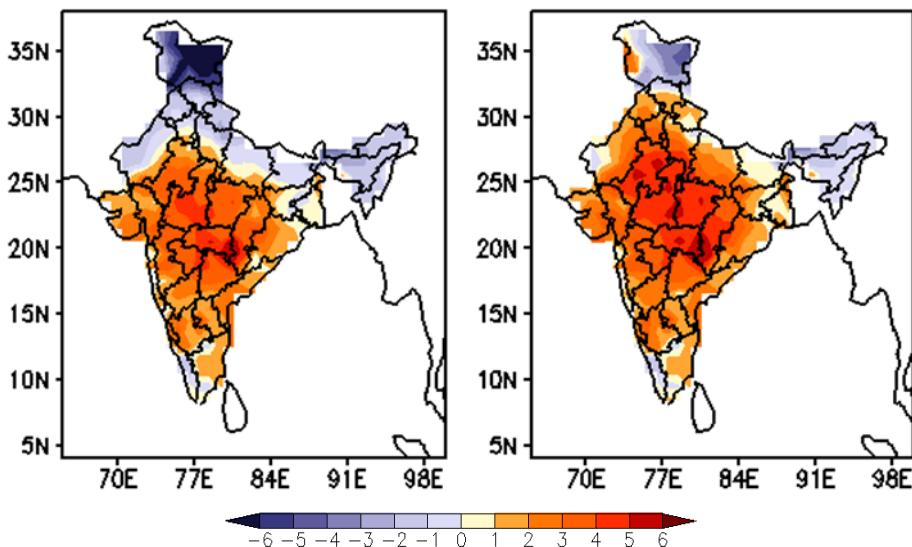
**Maximum Temperature (Tmax)**

- **Week 1 (25.08.2023 to 31.08.2023):** Tmax is likely to be above normal over some parts of North West and East India.
- **Week 2 (01.09.2023 to 07.09.2023):** Tmax is likely to be above normal over most parts of the country.

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

(Week1: 25Aug–31Aug)

(Week2: 01Sep–07Sep)



**Minimum Temperature (Tmin)**

- **Week 1 (25.08.2023 to 31.08.2023):** Tmin is likely to be above normal over West, Central & Peninsular India and parts of East India.
- **Week 2 (01.09.2023 to 07.09.2023):** Tmin is likely to be above normal over most parts of the country.

## **Agromet Advisories**

### **Uttar Pradesh**

The amount of rainfall received over East Uttar Pradesh was 424 mm (-27% deficit) and over West Uttar Pradesh was 457 mm (11% excess) during 01 June - 24 August 2023. The extended range weather forecast (rainfall) for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) is below normal over West Uttar Pradesh and normal over East Uttar Pradesh for week-1 and; below normal over West Uttar Pradesh and East Uttar Pradesh for week-2.

#### *Western Uttar Pradesh*

- During the last two weeks, no rainfall was observed and forecast of below normal rainfall during next week, farmers are advised to provide light irrigation in *kharif* crops like sorghum (vegetative stage), maize (tasselling stage), rice (tillering stage) etc.
- Two-week dry spell observed in Central Plain Uttar Pradesh. Farmers are advised for light irrigation, weeding and hoeing in *kharif* maize and use weeds as a mulch.
- Under prevailing dry weather conditions, farmers are advised to bathe the animals during morning and evening, keep them under shade and provide water 3-4 times a day.
- Under prevailing dry weather condition and forecast of below normal rainfall, farmers are advised for sowing of pigeon pea with short duration varieties like *PDA-11*, *Pusa-9*, *Azad*, *Maveeya -2002*, *IPM 203*, *Narendra Arhar-2*, *Amar*, *Pusa-2* as early as possible.

#### *Eastern Uttar Pradesh*

- Keeping in view of light to medium rainfall during week-1, farmers are advised to do proper arrangement for drainage in all vegetables, pulse, maize and nurseries of the vegetables. Farmers are also advised not to spray any insecticides and pesticides in the standing crops.
- Keeping in view of present weather conditions, farmers are advised to monitor rice crop (vegetative stage) regularly for leaf folder and stem borer infestation. If population is above ETL, then it is advised to broadcast Cartap 4% granules @ 10 kg/acre.
- Transplanting of brinjal, tomato, chilli and early cauliflower on ridge is advised.

### **Uttarakhand**

1036 mm (14% excess) rainfall was received over Uttarakhand during 01 June - 24 August 2023. The extended range weather forecast (rainfall) provided for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) over Uttarakhand is below normal for week-1 and; week-2.

- Due to heavy rainfall in last week, crop lodging and landslides have occurred. Farmers are advised to harvest the ripe crop/vegetables and store them in safe places and maintain the proper drainage.



- Under prevailing weather condition, farmers are advised to strengthen the bunds of rice fields which is at early development/ panicle initiation stage. It is also advised to use pheromone traps/bird perches for pest control.

### **Himachal Pradesh**

795 mm (39% excess) rainfall was received over Himachal Pradesh during 01 June - 24 August 2023. The extended range weather forecast (rainfall) provided for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) over Himachal Pradesh is below normal for week-1 and week-2.

- Heavy to very heavy rainfall has led to occurrences of landslides, cloudbursts, mudflows, and flooding in various regions of the state. As a consequence, a significant portion of the Kangra district, (downstream from the Pong Dam), is inundated due to the release of water. Also, the release of water Kol dam has also inundated areas in Bilaspur and Mandi districts causing losses to different crops.

This has resulted in:

- ✓ Damage to crops in almost all the districts of the state.
- ✓ Significant damage to apple crop as well as other fruit trees in parts of the state (Kullu, Mandi, Shimla and Kinnaur districts).
- ✓ The general public is cautioned not to go near the banks of rivers and drain out the excess water in maize, soybean and vegetable fields.
- ✓ Excess rainfall in major paddy growing regions of the state caused damage to the paddy crops in multiple locations. To mitigate this, it is advised to regulate water levels by draining excess water. For transplanted rice, it is recommended to apply the initial nitrogen topdressing using 65 kg of urea per hectare. In the case of directly seeded crops, this quantity can be decreased to 45 kg of urea per hectare.
- Weather is conducive for infestation of stored grains pests like rice weevil, lesser grain borer and rice moth. For management, it is advised that in grain store bins put one pouch of Celphos (3 g) or Quickphos (12 g) or Fumino pouch in a wet cloth in the middle of bin and keep the bin airtight for some time.

### **Jammu**

473 mm (12% excess) rainfall was received over Jammu during 01 June - 24 August 2023. The extended range weather forecast (rainfall) provided for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) over Jammu is below normal for week-1 and; week-2.

- If brown spots observed in rice crop at tillering stage, it is advised to apply Mancozeb @ 2.5 g/litre of water, during clear weather. Give 2-3 sprays at 10-15 days intervals.
- To control stem borer in maize crop (knee height stage), it is advised to apply Carbofuran granules @ 8 kg/acre (4-5 granules per plant) during clear weather only.

## **Rajasthan**

496 mm (normal) rainfall was received over East Rajasthan during 01 June - 24 August 2023. The extended range weather forecast (rainfall) provided for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) over East Rajasthan is below normal for week-1 and; week-2.

- Farmers are advised to follow plant protection measures in *kharif* crops when the weather is clear or ensure that there is no rain for at least 2 to 3 hours after spraying the insecticide.
- Under prevailing weather conditions, farmers are advised for transplanting of chilli, brinjal and early season cauliflower in a raised bed.
- For the control of yellow mosaic virus in soybean, it is advised to spray Dimethoate 30 EC 1 ml per litre of water and repeat the spray after 15 days intervals, if the pest is noticed.

## **Assam**

1140 mm (-15% deficit) rainfall was received over Assam during 01 June - 24 August 2023. The extended range weather forecast (rainfall) provided for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) over Assam is above normal for week-1 and week-2.

- Due to flood/inundation situation in some districts of the state, farmers are advised to download “MAUSAM” app for weather forecast and “DAMINI” app for lightning alert, intending to help save lives of humans as well as livestock.
- Provide staking to vegetable crop and drain out excess amount of water from low lying crop field.
- Provide clean drinking water and hygienic fodder material for animals.
- Go for weather-based crop insurance
- Farmers are advised to go for need based weeding and top dressing with Urea @ 4.5 kg per bigha in semi dwarf medium and long duration sali rice varieties which are at tillering stage. In case of tall, medium and long duration varieties the dose of Urea for top dressing is advised 1.5 kg per bigha.
- Due to the forecast of above normal rainfall during next two weeks, farmers are advised to make the provision to drain out excess water from the fields of sugarcane, cucurbitaceous vegetables and other standing crops.

## **Jharkhand**

486 mm (-35% deficit) rainfall was received over Jharkhand during 01 June - 24 August 2023. The extended range weather forecast (rainfall) provided for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) over Jharkhand is below normal for week-1 and above normal for week-2.

- State recorded 35 percent less rainfall than normal, due to which agriculture is greatly affected and there is a situation of drought. Farmers are advised to use mulching to save soil moisture in standing crops.

- Under prevailing rainfall deficit condition, it is advised to keep the bunds of the crop field well maintain to accumulate water in paddy crops.
- Weather condition is congenial for incidence of fruit fly and leaf hopper in vegetables. Hence, it is advised to spray Confidor 200 SL (17.8 %) @ 1 ml per 10 litre water solution mixed with 100 g jaggery.
- To reduce the incidence of leaf miner in groundnut crop, it is advised to apply Quinalphos 25 EC or Triazophos 40 EC @ 1 ml per litre of water twice at an interval of 15 days.

### **Bihar**

506 mm (-30% deficit) rainfall was received over Bihar during 01 June - 24 August 2023. The extended range weather forecast (rainfall) provided for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) over Bihar is below normal for week-1 and above normal for week-2.

- Monitoring of *khaira* disease is advised in paddy fields. If symptoms occur, spraying of Zinc sulphate @ 5.0 kg mixed with lime @ 2.5 kg in 500 litres of water is advised for one hectare cropped area.
- Present weather conditions are congenial for planting of fruit trees like *mango, litchi, jackfruit, guava, custard and lemon*.
- In upland areas, sowing of pigeon pea with the recommended varieties viz., Pusa-9 and Sarad for sowing in September is advised. Regular monitoring is advised in July sown pigeon pea crop against insect pest and disease infestation. Intercultural operation is also advised.

### **Chhattisgarh**

720 mm (-15% deficit) rainfall was received over Chhattisgarh during 01 June - 24 August 2023. The extended range weather forecast (rainfall) provided for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) over Chhattisgarh is below normal for week-1 and; normal for week-2.

- Under prevailing weather condition, nursery preparation of cauliflower and cabbage vegetables is advised.
- For ginger and turmeric crops, regular earthing up and second mulching is advised.
- After 35-40 days of second weeding in groundnut, earthing up is advised.

### **Odisha**

760 mm (-9% deficit) rainfall received over Odisha during 01 June - 24 August 2023. The extended range weather forecast (rainfall) provided for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) over Odisha is below normal for week-1 and; normal for week-2.



- To manage Panama wilt in banana crop, it is advised to select disease free planting material and resistant cultivar like *Bantal*, *Robusta*, *Champa*, *Kabuli* etc.
- August and September are the optimum time for tomato planting. Recommended tomato varieties are *Utkal Kumari (BT-10)*, *Utkal Deepti (BT-2)*, *Utkal Raja*, *Utkal Pragyan* and *Swarna Sampad*.
- Farmers are advised to complete all inter-culture operation in groundnut, before start of flowering, else it will damage the peg formation and there will be substantial reduction in yield.

### **Gujarat**

660 mm (-8% deficit) rainfall received over Gujarat during 01 June - 24 August 2023. The extended range weather forecast (rainfall) provided for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) over Gujarat is below normal for week-1 and week-2.

- Undertake intercultural operations, weeding, thinning, gap filling, top dressing of fertilizer, etc. at vapsa condition/optimum soil moisture in sown *kharif* crops
- To control leaf miner in tomato, it is advised to spray Spinosad 3 ml per 10 litres of water in clear and calm weather condition.

### **Maharashtra**

439 mm (-20% deficit) rainfall over Madhya Maharashtra; 667 mm (-8% deficit) rainfall over Vidarbha; 370 mm (-16% deficit) rainfall over Marathwada; and 2543 mm (8% excess) in Konkan region was recorded during 01 June - 24 August 2023. The extended range weather forecast (rainfall) for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) is below normal over Konkan, Madhya Maharashtra, Marathwada and Vidarbha for week-1 and; week-2, respectively.

#### *Vidarbha*

- In early sown *kharif* crops, inter culture operation (weeding/hoeing) is advised during clear weather for the management of weeds and improve soil aeration.
- For control of fruit drop due to fungal disease in fruit orchard, it is advised to spray Copper oxychloride 50% WP @ 30 g per 10 litres of water.

#### *Madhya Maharashtra*

- Due to rainfall deficit condition, there is a dry spell of more than 15-20 days during which early sown *kharif* crops showing wilting symptoms and attack of sucking pests noticed. Farmers are advised for foliar application of 2 per cent KCL on crops for reducing transpiration losses.
- Due to forecast of below normal rainfall for next two weeks, farmers are advised for protective irrigation in soybean crop (flower initiation to pod formation) if moisture stress prevails. Hoeing in late sown soybean is also advised.

- Dust mulch is advised to protect the moisture loss in sunflower crop which is at button stage to flower opening stage. Foliar application of 2 per cent KCL is also advised to reduce transpiration losses through regulating stomatal activities.

#### *Parbhani*

- If water stress is observed in *kharif* crops, irrigation management is advised with the help of drip irrigation system as per the availability of water.
- Due to dry spell and cloudy weather condition, sucking pests may increase in cotton crop. To manage, it is advised to spray 5% NSKE or Diafenthiuron 50 WP @ 1 gram per liter of water or Acetamiprid 20% @ 2 g per 10 litres of water during clear weather condition.
- If water stress is more than 10 Days in *kharif* crops, it is advised to spray of 1% (100 g/10 litre of water) Potassium nitrate (13:00:45). If drying of leaves is observed due to water stress irrigation management is advised with the help of sprinkler irrigation system as per availability of water.
- Light hoeing is advised in pulse crops for weed management and for soil moisture conservation.

#### **Kerala**

895 mm (-46% deficit) received over Kerala during 01 June - 24 August 2023. The extended range weather forecast (rainfall) for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) is below normal for week-1 and; week-2.

- Since air temperature is increasing, it is an advised practice to bury fresh or dried coconut husk around the palm to conserve soil moisture.
- Due to prevailing rainfall deficit condition and forecast of below normal rainfall, farmers are advised for mulching in pepper bed using dry leaves to preserves and maintains soil moisture levels.
- Due to forecast of below normal rainfall in next two weeks, farmers are advised to irrigate the crops according to their needs and mulch properly and also advised to adopt proper management practices at the earliest as there is a higher chance of pest and disease incidence.

#### **Tamil Nadu**

177 mm (-6% deficit) received over Tamil Nadu during 01 June - 24 August 2023. The extended range weather forecast (rainfall) for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) is normal for week-1 and; week-2.

- Weather prevailed is conducive for stem borer incidence in rice (tillering to panicle initiation stage). To control, it is advised to spray Chlorantraniliprole 18.5% SC @ 150

ml/ha or Azadirachtin 0.03% 1000 ml/ha or spray Cartap Hydrochloride 50 % SP @ 1gram per liter of water

- Due to increase in day temperature favours thrips in chilli crop. To control, it is advised to spray Imidacloprid 17.8 % SL @3.0 ml/10 litres.

### **Anantapur**

174 mm (-29% deficit) rainfall was received over Rayalaseema and 369 mm (-8% deficit) rainfall was received over Coastal Andhra Pradesh during 01 June - 24 August 2023. The extended range weather forecast (rainfall) provided for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) is below normal over Rayalaseema and Coastal Andhra Pradesh for week-1 and; normal for week-2.

- There is no rainfall forecast during next week due to which wilting symptoms observed in rainfed crops. Farmers are advised to spray Potassium nitrate (13:00:45) @ 5 g or 19:19:19 or Urea @ 10 g/litre of water at weekly intervals to relieve moisture stress in rainfed crops to some extent.
- Prevailing rainfall deficit condition and forecast of no rainfall during next week, farmers are advised to take up one supplemental irrigation to rainfed crops.
- The present weather conditions are favourable for sucking pests in groundnut (flowering stage) grown in Ananthapuramu, Kurnool, Kadapa and Chittoor districts. To control, farmers are advised to spray Imidacloprid @ 0.3 ml/litre or Lambda-cyhalothrin 05 % EC @ 1ml litre of water.
- Farmers are advised for thinning and regular intercultural operation in redgram and castor to remove the weeds and to maintain optimal plant population and reduce loss of soil moisture.

### **Karnataka**

362 mm (-27% deficit) rainfall received over South Interior Karnataka, 2260 mm (-14% deficit) over Coastal Karnataka and 291 mm (-7% deficit) rainfall received over North Interior Karnataka during 01 June - 24 August 2023. The extended range weather forecast (rainfall) provided for the next two weeks (25 - 31 August 2023 and 01 - 07 September 2023) is below normal over North Interior Karnataka, Coastal Karnataka and South Interior Karnataka for week-1 and; normal over North Interior Karnataka and South Interior Karnataka and below normal over Coastal Karnataka for week-2.

#### *South Interior Karnataka*

- Earthing up is advised in long duration crops like red gram and castor for better availability of soil moisture to the crop rows through conversion of the land into ridges and furrow system.

- Due to rainfall deficit condition, lack of soil moisture observed in kharif crop field. Farmers are advised for intercultural operation recommended for conserve the soil moisture and remove of weeds.
- Mulching is recommended to conserve the soil moisture due to dry spells over the *kharif* crops.

*North Interior Karnataka*

- To manage sucking pests in citrus crop, spraying of 0.3 ml Imidacloprid or spray with 3 per cent biodigester is advised.
- Earthing up in sugar cane crop is advised to ensure optimum plant density and higher yields.

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