



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

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

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जारीकर्ता/ **Issued by**

अखिल भारतीय समन्वित कृषि-मौसम विज्ञान अनुसंधान परियोजना

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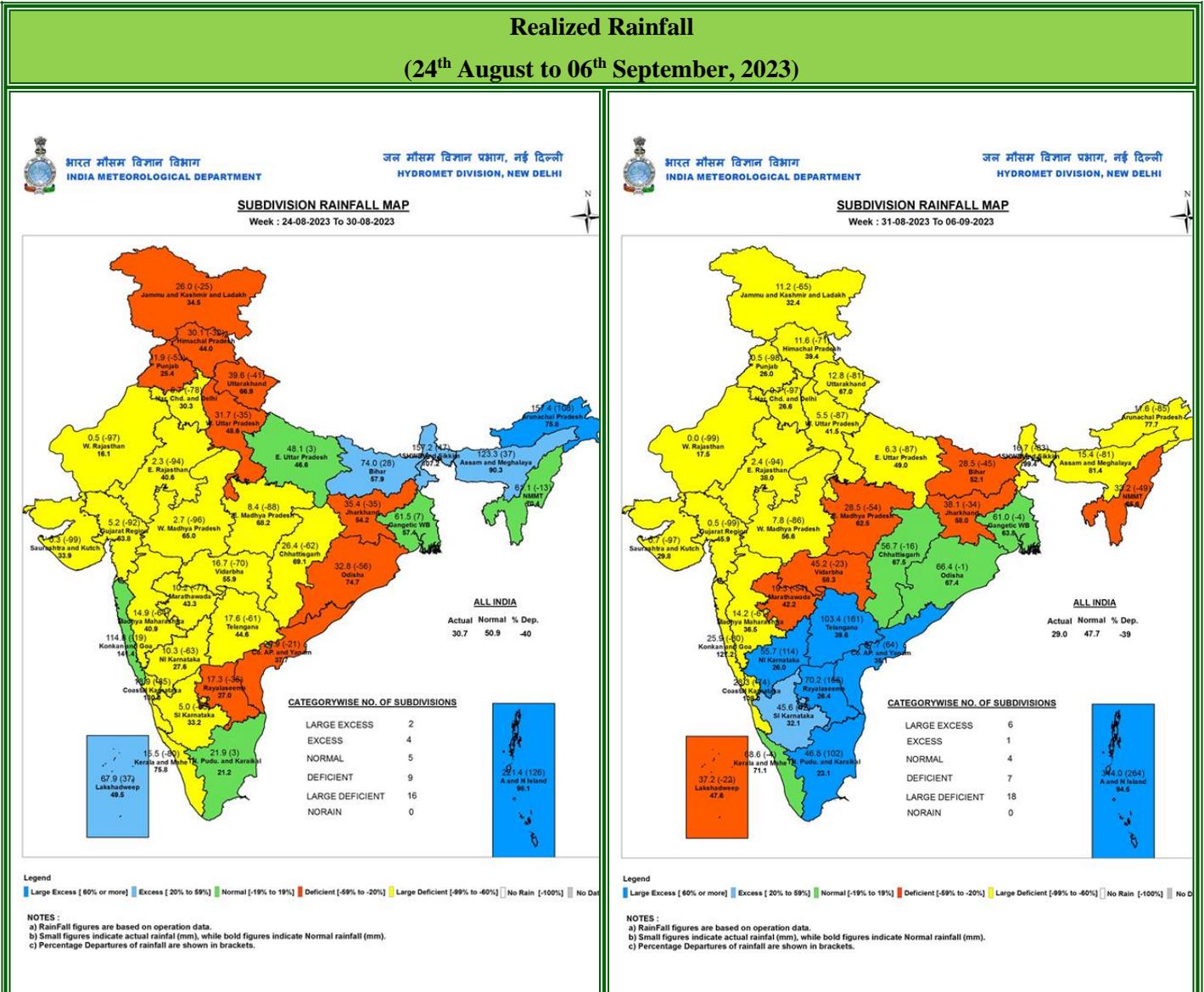
पृथ्वी प्रणाली विज्ञान संगठन

**Earth System Science Organization**

# Realized Rainfall and Extended Range Forecast

## Realized Rainfall

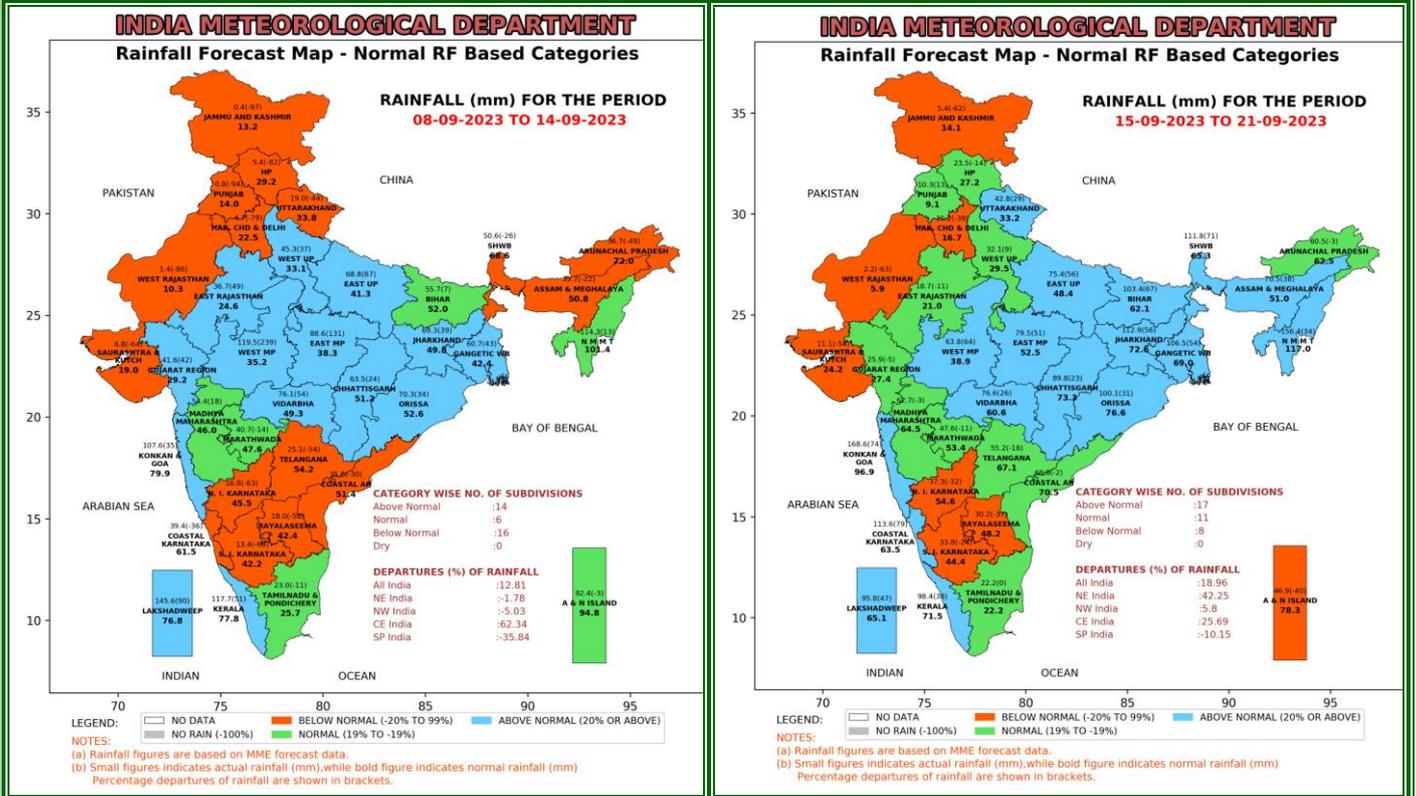
(24<sup>th</sup> August to 06<sup>th</sup> September, 2023)



- Normal or above normal rainfall occurred in both the weeks over Gangetic West Bengal, Tamil Nadu Puducherry & Karaikal and Andaman & Nicobar Islands.
- Normal or above normal rainfall occurred in either of the two weeks over East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh, Nagaland Manipur Mizoram & Tripura (NMMT), Chhattisgarh, Odisha, Konkan & Goa, Telangana, Andhra Pradesh & Yanam, Interior Karnataka, Kerala & Mahe and Lakshadweep.
- 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- 06<sup>th</sup> September) (8<sup>th</sup> September to 21<sup>st</sup> September, 2023)



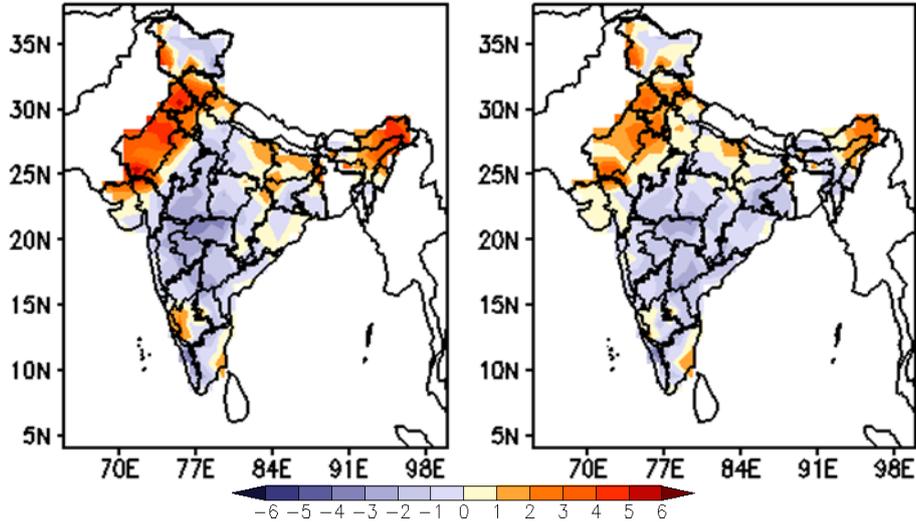
- **Week 1 (08.09.2023 to 14.09.2023):** Rainfall is likely to be normal to above normal over parts of central, north, east and Peninsular India. However, it is likely to be below normal over remaining parts of the country.
- **Week 2 (15.09.2023 to 21.09.2023):** Rainfall is likely to be normal to above normal over most parts of the country.

**Maximum and Minimum temperature anomaly ( $^{\circ}\text{C}$ ) forecast  
for the next 2 weeks (IC- 06<sup>th</sup> September)  
(8<sup>th</sup> September to 21<sup>st</sup> September, 2023)**

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

(Week1: 08Sep-14Sep)

(Week2: 15Sep-21Sep)



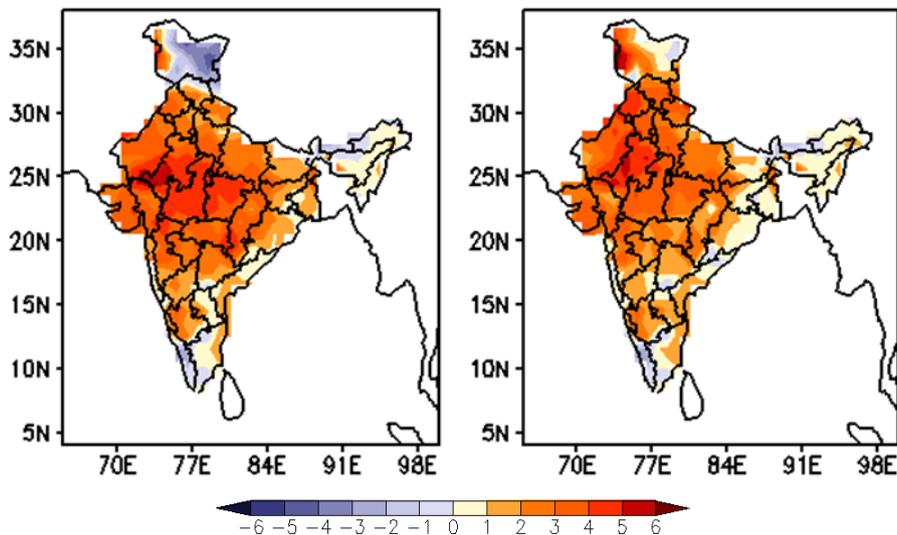
**Maximum Temperature (Tmax)**

- **Week 1 (08.09.2023 to 14.09.2023):** Tmax is likely to be above normal over parts of North West and North East India.
- **Week 2 (15.09.2023 to 21.09.2023):** Tmax is likely to be slightly above over parts of North West and North East India.

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

(Week1: 08Sep-14Sep)

(Week2: 15Sep-21Sep)



**Minimum Temperature (Tmin)**

- **Week 1 (08.09.2023 to 14.09.2023) and Week 2 (15.09.2023 to 21.09.2023):** Tmin is likely to be above normal over most parts of the country.

## Strategic Agricultural Planning based on rainfall till 21 September 2023

### Agromet Advisories

#### Uttar Pradesh

The amount of rainfall received over East Uttar Pradesh was 501 mm (-28% deficit) and over West Uttar Pradesh was 615 mm (2% excess) during 01 June - 10 September 2023. The extended range weather forecast (rainfall) for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) is above normal over West Uttar Pradesh and East Uttar Pradesh for week-1 and; normal over West Uttar Pradesh and above normal over East Uttar Pradesh for week-2.

#### *Western Uttar Pradesh*

- As more weed infestation in the paddy field due to 12 days dry spell in the Central part of Uttar Pradesh is reported, farmers are advised for weeding using recommended weedicide/physical methods.
- Due to forecast of above normal rainfall during next week, farmers are advised not to irrigate the *kharif* crops and drain out excess water from the field.
- There is a possibility stem borer infestation in maize crop. To prevent, spraying of Emamectin benzoate 5% SG @ 200 g/ha in 500-600(0.5gr/liter) litres of water solution during clear weather is advised.

#### *Eastern Uttar Pradesh*

- Withhold irrigation considering the above normal rainfall forecast in this week. Farmers are advised to drain out excess water from the field and crop protect from birds.
- Prevailing weather is congenial for stem borer infestation in paddy (tillering/pre-flowering stage). To control, it is advised to spray Chlorantraniliprole 18.5% SC @ 150 ml/ha and Azadirachtin 0.03% 1000 ml/ha.

#### Uttarakhand

1113 mm (4% excess) rainfall was received over Uttarakhand during 01 June - 10 September 2023. The extended range weather forecast (rainfall) provided for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) over Uttarakhand is below normal for week-1 and; above normal for week-2.

Under prevailing weather condition, it is advised to harvest the mature crops and keep it in safer place and make proper water drainage in vegetables and pulse crop field.

#### Himachal Pradesh

822 mm (23% excess) rainfall was received over Himachal Pradesh during 01 June - 10 September 2023. The extended range weather forecast (rainfall) provided for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) over Himachal Pradesh is below normal for week-1 and normal for week-2.

- In low hills of the state, transplanting of mid – season cauliflower varieties (*Palam Uphar*, *Improved Japanese* and *F1 Megha*) is advised.

- Farmers are advised to maintain room temperature 17-18 °C and relative humidity of 80-85 % in mushroom chambers for good crop. Sprinkle water to maintain humidity but ensure air circulation by fans to prevent water retention on mushroom.
- Farmers are advised for harvesting of mature vegetables at morning and evening hours and after harvesting the crops keep it in the shade and ensure proper drainage in vegetable crops.

### **Punjab**

354 mm (-12% excess) rainfall was received over Punjab during 01 June - 10 September 2023. The extended range weather forecast (rainfall) provided for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) over Punjab is below normal for week-1 and; normal for week-2.

- Due to forecast of below normal rainfall during next week, farmers are advised to apply need based irrigation and application of pesticides to the kharif crops during the period.
- To manage rodent pests in rice crop, cover all the holes during evening and next day place 10 -10 gm bait of Zinc phosphide inside these fresh holes at 6 inches depth. To get better results adopt this practice in whole village at same time.
- It is the optimum time for planting of evergreen pants such as citrus, guava, mango, litchi, sapota, jamun, bael, amla etc.

### **Jammu**

509 mm (2% excess) rainfall was received over Jammu during 01 June - 10 September 2023. The extended range weather forecast (rainfall) provided for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) over Jammu is below normal for week-1 and; week-2.

- Start nursery making practices for *rabi* season crops so that all the nurseries get ready by the end of September. Prepare nursery beds for *knol-khol*, cauliflower, cabbage, and kale.
- Due to forecast of below normal rainfall during next week, farmers are advised to give irrigation as per requirement of crop.

### **Assam**

1285 mm (-17% deficit) rainfall was received over Assam during 01 June - 10 September 2023. The extended range weather forecast (rainfall) provided for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) over Assam is below normal for week-1 and above normal for week 2.

- 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 should be 1.5 kg per bigha.
- Nursery sowing of mid-season varieties of cauliflower like *Improved Japanese*, *Pusa Synthetic*, *Pusa Snowball* etc. under shed-nets or poly houses can be continued.

- High temperature followed by continuous rainy weather is congenial for stem borer and leaf folder infestation in *Sali* paddy at tillering stage. If more than 1 damaged leaf/hill (in case of leaf folder) and 1 egg mass per square meter (in case of stem borer) is observed in the field, immediately spray Thiamethoxam 25 WG @ 100 g/ha (0.2gram/litre of water) or Fipronil 5 SC @ 1000 ml/ha (2ml per litre of water) of land, under fair weather.

### **Bihar**

629 mm (-26% deficit) rainfall was received over Bihar during 01 June - 10 September 2023. The extended range weather forecast (rainfall) provided for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) over Bihar is normal for week 1 and above normal for week 2.

- Continue the sowing of radish varieties such as *Pusa chetki*, *Pusa desi*, *Jounpuri*, *Pusa himani*, *Japani safed*, *Pusa rashmi*, *Punjab safed* and *Arka nishant*. The planting distance should be 25 x 10 cm. Seed rate @4-5 kg/hectare is recommended.
- 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.
- Monitoring of ear head bug is advised in early sown rice (grain filling stage). Apply Folidol dust @ 10-15 kg per hectare in the early morning or late evening.

### **Jharkhand**

596 mm (-32% deficit) rainfall was received over Jharkhand during 01 June - 10 September 2023. The extended range weather forecast (rainfall) provided for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) over Jharkhand is above normal for week 1 and week 2.

- Forecasted cloudy and humid weather favors incidence of stem borer and blast disease in rice. If the infestation happens, it is advised to spray Chlorantraniliprole 18.5% SC @ 75 ml/acre in 200 litres of water.
- Rainfall after a dry spell may aggravate infestation of fall army worm in maize. To control, install 4 pheromone traps /acre and spray 5 ml of 1500 ppm neem oil /litre water.
- Due to possibility of rainfall during next week, it is suitable time for preparation of nurseries of cauliflower for midseason. Recommended varieties are *Pusa Katki*, *Pusa Deepali*, *Pusa Himjyoti* and *Pusa Subhra-4*.

### **Chhattisgarh**

739 mm (-20% deficit) rainfall was received over Chhattisgarh during 01 June - 10 September 2023. The extended range weather forecast (rainfall) provided for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) over Chhattisgarh is normal for week-1 and; week-2.

- Considering the forecast of light to moderate rainfall in coming day. Farmers are advised that impounding condition should not be of more than 5 cm. Due to excess impounding

condition, number of tillers in rice crop are affected. Excess water should be drained out from the field.

- To prevent the fruit shedding in papaya plant, spraying of Naphthalene Acetic Acid (NAA) @ 20 ppm is advised.

### **Odisha**

890 mm (-12% deficit) rainfall received over Odisha during 01 June - 10 September 2023. The extended range weather forecast (rainfall) provided for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) over Odisha is above normal for week-1 and; week-2.

- Due to forecast of above normal rainfall farmers are advised to wait for clear weather and remove excess water from field, before applying any fertilizer in the field.
- 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.
- Areas deficit in rainfall leads to infestation of Epilachna beetle in cucurbit crops. To manage, it is advised to spray neem-based pesticide (Neem Oil 1500 ppm) @ 3-ml/litre of water at early stage of infestation.

### **Gujarat**

718 mm (-15% deficit) rainfall received over Gujarat during 01 June - 10 September 2023. The extended range weather forecast (rainfall) provided for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) over Gujarat is above normal for week-1 and normal for week-2.

- Provide shade to newly planted and small mango plants to protect them from temperature and mulching is also advised around the stem.
- Due to forecast of above normal rainfall, farmers are advised to keep the fodder at safe place to avoid spoilage from rainfall.

### **Maharashtra**

522 mm (-18% deficit) rainfall over Madhya Maharashtra; 772 mm (-10% deficit) rainfall over Vidarbha; 443 mm (-18% deficit) rainfall over Marathwada; and 2845 mm (7% excess) in Konkan region was recorded during 01 June - 10 September 2023. The extended range weather forecast (rainfall) for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) is above normal over Konkan and Vidarbha and normal over Madhya Maharashtra and Marathwada for week-1 and; week-2, respectively.

### *Vidarbha*

- In areas with dry spell situation undertake light inter-cultivation in crops to reduce soil moisture loss and avoid weed competition.
- To avoid the potential losses of productivity, water stressed crop is advised to irrigate at sensitive stages of flowering and grain filling/ pod bearing.

- Nursery sowing of tomato, brinjal, cabbage, cauliflower and sowing of spinach, fenugreek, radish, and carrot, dolichos bean and ivy gourd is advised

#### *Madhya Maharashtra*

- As there is a forecast of normal rainfall it is advised to carry out harvesting of timely sown matured *kharif* green gram in a clean and clear weather condition and keep harvested produce at protected place. After drying of 75 % pods first picking and 8-10 days later second picking of pods is advised.
- As there is possibility of thunderstorm accompanied with lightning and rain with gusty winds at isolated places therefore it is advised to give support of bamboo sticks to the banana plant and bunch or tight the plants and banana bunch with polypropylene strips.
- Due to prevailing cloudy, hot and humid weather, incidence of blast (sigatoka) disease may occur in banana orchard. If incidence is noticed, it is advised to spray Propiconazole 5 ml and mineral oil 100 ml per 10 litres of water during clear weather condition. Repeat two spray at an interval of 20 days.

#### *Parbhani*

- 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 conditions.
- Nipping operation is advised in pigeon pea crop at 55 to 60 days after sowing for more branching.
- Due to dry spell and increase in temperature during last few days, aphids may observe in black gram/green gram crop. For management, it is advised to spray of 5% NSKE or Dimethoate 30% @ 240 ml per acre during clear weather condition.
- For management of fruit drop in Mrug bahar sweet lime (Mosambi), it is advised to spray 1 kg Urea + 30 ml Planofix in 100 litres of water.

#### *Dapoli*

- Due to forecast of above normal rainfall it is advised to make arrangements to drain out excess water from standing crops, vegetables and orchards.
- Because of possibility of rainfall it is also advised to postpone the application of fertilizers and pesticides and intercultural operations in standing crops, vegetables and orchards.

#### **Kerala**

1066 mm (-42% deficit) received over Kerala during 01 June - 10 September 2023. The extended range weather forecast (rainfall) for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) is above normal for week-1 and; week-2.

- Due to the forecast of above normal rainfall, there is a chance of damage in paddy due to flooding. Ensure drainage in paddy fields and strengthen bunds.
- If cloudy condition is prevailed, there is a chance of leaf folder attack in Paddy. It can be controlled by using Trichogramma cards (2 CC per one acre). Cut the cards in to small pieces and fix in different regions of the field. If the infestation is severe, spray Quinalphos@25% EC @ 1 ml per one litre or Acephate 75 % SP 2gram per litre of water.

### **Tamil Nadu**

254 mm (4% excess) received over Tamil Nadu during 01 June - 10 September 2023. The extended range weather forecast (rainfall) for the next two weeks (08 - 14 September 2023 and 15 - 21 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 @ 1 gram per litre of water.
- To avoid lodging in banana orchard, propping and earthing-up operation is advised.

### **Anantapur**

261 mm (-16% deficit) rainfall was received over Rayalaseema and 482 mm (-1% deficit) rainfall was received over Coastal Andhra Pradesh during 01 June - 10 September 2023. The extended range weather forecast (rainfall) provided for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) is normal over Rayalaseema and above normal over Coastal Andhra Pradesh for week-1 and; below normal over Rayalaseema and above normal over Coastal Andhra Pradesh for week-2.

- The present weather conditions are favourable for bacterial leaf blight incidence in pomegranate. The symptoms when observed during new growth stages, spraying of Streptocycline @ 0.5 g and Copper oxychloride @ 3 g/litre of water is recommended.
- Farmers are advised to take up foliar spray of KNO<sub>3</sub> @ 5 grams per litre of water to mitigate the adverse effect of dry spell.
- Farmers are advised to form dead furrows or conservation furrows after last intercultivation in flat method of sowing to conserve the moisture.

### **Karnataka**

427 mm (-26% deficit) rainfall received over South Interior Karnataka, 2367 mm (-19% deficit) over Coastal Karnataka and 367 mm (-3% deficit) rainfall received over North Interior Karnataka during 01 June - 10 September 2023. The extended range weather forecast (rainfall) provided for the next two weeks (08 - 14 September 2023 and 15 - 21 September 2023) is below normal over

North Interior Karnataka, Coastal Karnataka and South Interior Karnataka for week-1 and; below normal over North Interior Karnataka and South Interior Karnataka and above normal over Coastal Karnataka for week-2.

#### *South Interior Karnataka*

- Take up land preparation and strengthen the bund with fodder grass which will facilitate conservation of rainwater due to monsoon showers. Ploughing across the slope will make *insitu* soil moisture conservation.
- Intercultural operation recommended conserving soil moisture and remove of weeds.
- Mulching is recommended for conserve the soil moisture in standing 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.
- To manage the root grub menace pests in the sugarcane fields, application/spreading of 10 kg of bio-insecticide *Metarhizium anisopliae* mixing in dry organic manure or vermi compost is advised.

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