



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

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

वैधता/ Validity: 07 - 20 July 2023

जारीकर्ता/ Issued by

अखिल भारतीय समन्वित कृषि-मौसम विज्ञान अनुसंधान परियोजना

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

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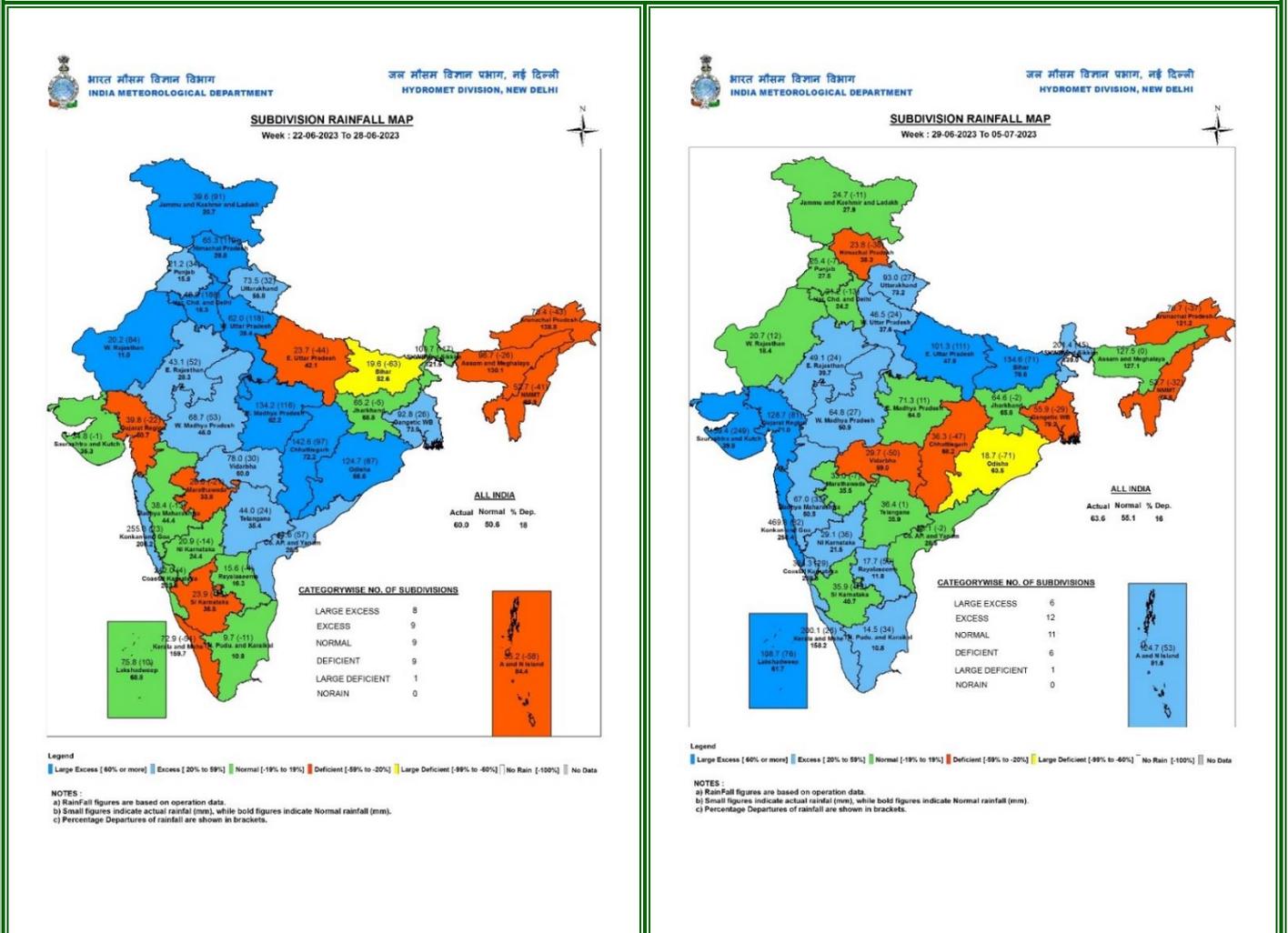
**India Meteorological Department (IMD)**

पृथ्वी प्रणाली विज्ञान संगठन

# Earth System Science Organization

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

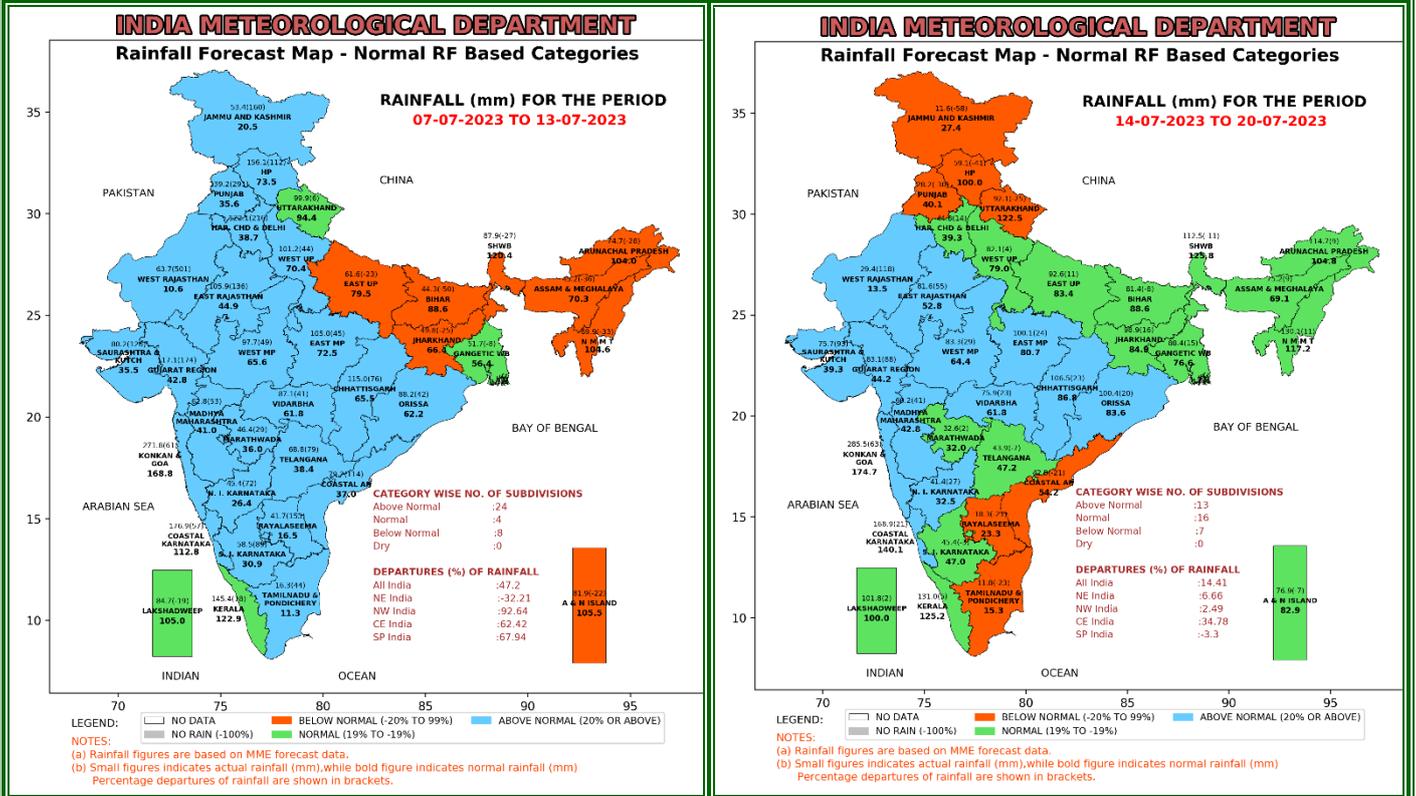
### Realized Rainfall (22<sup>nd</sup> June to 05<sup>th</sup> July, 2023)



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

## Extended Range Forecast System

### Rainfall forecast maps for the next 2 weeks (IC- 5<sup>th</sup> July) (7<sup>th</sup> to 20<sup>th</sup> July 2023)



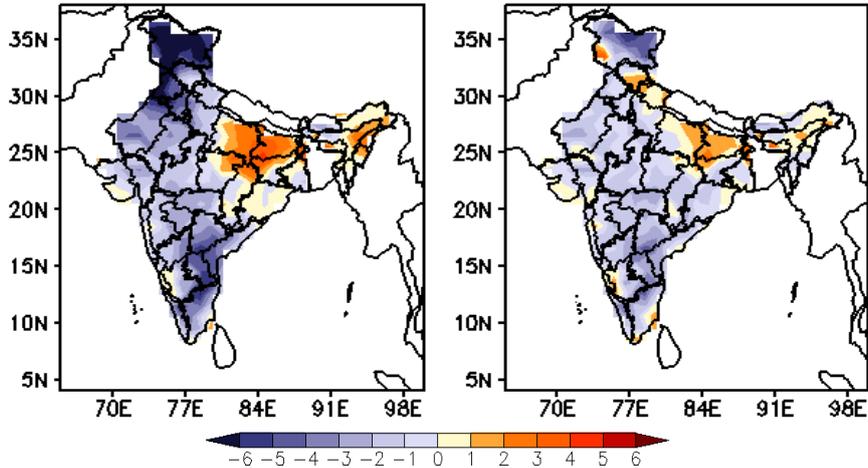
- **Week 1 (07.07.2023 to 13.07.2023):** Rainfall is likely to be above normal over west coast, Central India and North West India.
- **Week 2 (14.07.2023 to 20.07.2023):** Rainfall is likely to be normal to above normal over west coast and Central India.

**Maximum and Minimum temperature anomaly ( $^{\circ}\text{C}$ ) forecast  
for the next 2 weeks (IC- 5<sup>th</sup> July)  
(7<sup>th</sup> to 20<sup>th</sup> July 2023)**

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

(Week1: 07Jul-13Jul)

(Week2: 14Jul-20Jul)



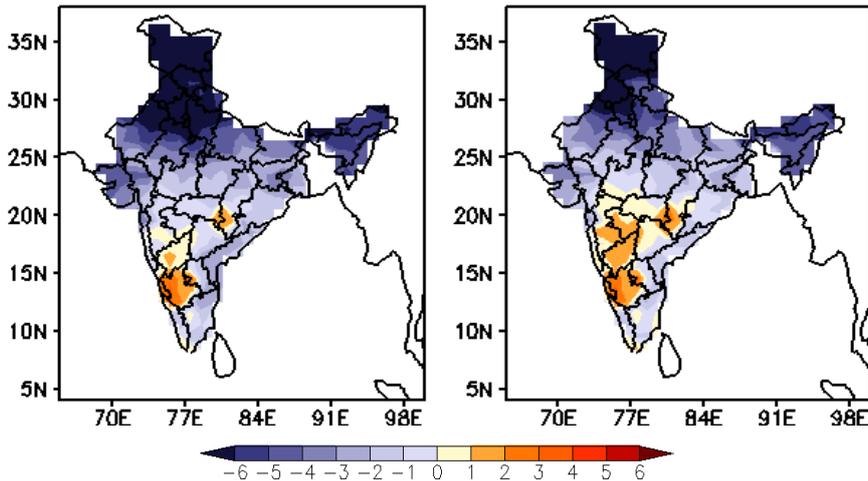
**Maximum Temperature (Tmax)**

- **Week 1 (07.07.2023 to 13.07.2023):** Tmax is likely to be below normal over many parts of the country. However, it will be above normal over some parts of Uttar Pradesh, Bihar, Jharkhand, Chhattisgarh, East Madhya Pradesh and North Eastern states
- **Week 2 (14.07.2023 to 20.07.2023):** Tmax will be slightly above normal over some parts of Uttar Pradesh, Bihar, Jharkhand, Uttarakhand, Himachal Pradesh and North Eastern states.

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

(Week1: 07Jul-13Jul)

(Week2: 14Jul-20Jul)



**Minimum Temperature (Tmin)**

- **Week 1 (07.07.2023 to 13.07.2023) and Week 2 (14.07.2023 to 20.07.2023):** Tmin is likely to be below normal over most parts of the country. However, it is likely to be above normal over some parts of peninsular India.

## **Agromet Advisories**

### **Uttar Pradesh**

The amount of rainfall received over East Uttar Pradesh was 140 mm (-7% deficit) and over West Uttar Pradesh was 145 mm (30% excess) during 01 June - 06 July 2023. The extended range weather forecast (rainfall) for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) is below normal over East Uttar Pradesh and above normal West Uttar Pradesh for week-1 and; normal over East Uttar Pradesh and West Uttar Pradesh for week-2.

#### *Western Uttar Pradesh*

- Due to rainfall in past week and forecast of above normal rainfall during next week, farmers are advised to transplant 30 days old rice nursery in saline soil/flood areas. And, it is also advised that scented rice transplanting should be start after 15th July.
- Under prevailing rainy weather condition and forecast of above normal rainfall during next week, farmers are advised to postpone the sowing of *kharif* maize and start sowing after rainfall at proper moisture condition.
- Farmers are advised for sowing of pigeon pea with recommended high yielding and late maturing varieties like *Malviya Chamatkar*, *Narendra Arhar-2*, *Amar*, *Azad*, *Pusa-2*. And also, drain out excess rain water from the field.
- Under prevailing rainy weather condition, to control mealybug insect in sugarcane crop farmers are advised to spray Monocrotophos 36 % SL @ 1ml per litre of water during clear sky.

#### *Eastern Uttar Pradesh*

- Due to rainfall observed in past week, it is advised to drain excess rain water from the rice nursery and sow short duration rice varieties such as *NDR-2064*, *NDR-80*, *NDR-359*, *NDR-2065*, *NDR-97*, *Pant dhan-12*, *Barani deep*, *IR-50*, *Ratna*, *HUR-3022* and scented rice such as *T-3*, *Pusa Basmati-1*, *Pusa Sungandh-4* and *5* and *Malviya Sugandh 4-3* and *Malviya basmati 10-9* etc.

### **Uttarakhand**

249 mm (1% excess) rainfall was received over Uttarakhand during 01 June - 06 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) over Uttarakhand is normal for week-1 and; below normal for week-2.

- Farmers are advised to remove rotten mulch from crop fields and avoid water stagnation in the ginger field.
- Under prevailing weather conditions, digging in potato crop is advised which is at maturity stage.

- Maintain proper drainage and field sanitation in maize and soybean crop.

### **Himachal Pradesh**

154 mm (13% excess) rainfall was received over Himachal Pradesh during 01 June - 06 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) over Himachal Pradesh is above normal for week-1 and below normal for week-2.

- Due to moderate to rather heavy rainfall throughout the state resulted in floods in several streams within the Lahaul & Spiti district, leading to detrimental consequences for the crops in the fields. The apple orchards in Lahaul & Spiti affected significantly as a result of the floods. Farmers are advised to remove the surplus water from their fields.
- Farmers are advised to go in for transplanting of paddy nursery in their fields at the spacing of 20 x 15 cm and advised to apply NPK (12:32:16) @ 125 kg / ha along with 65 kg urea and 30 kg MOP at the time of transplanting.
- In regions where the maize crop has reached at knee height stage, it is recommended for earthing up crop. Additionally, it is advised to apply the initial nitrogen fertilizer (85 kg urea per hectare) during this stage.

### **Punjab**

112 mm (45% excess) rainfall was received over Punjab during 01 June - 06 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) over Punjab is above normal for week-1 and; below normal for week-2.

- Due to rainy weather condition and forecast of above normal rainfall in next week, farmers are advised not to irrigate or spray the crops during this period.
- Because of rainfall during last week and forecast of above normal rainfall in next week, farmers are advised to remove excess water from maize field, as maize crop is very sensitive to standing water. This precautionary measure is crucial as standing water can have a detrimental impact on maize crops, leading to the development of stalk rot.
- Harvest the cucurbits and other vegetables like tomato, chilli, brinjal and okra at regular intervals to get maximum yield.
- For the management of root-knot nematode in rice crop, it is advised to apply mustard cake @ 40 g per square metre at 10 days before sowing of nursery with last preparatory tillage operation.

### **Hisar**

94 mm (25% excess) rainfall was received over Hisar during 01 June - 06 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) over Hisar is above normal for week-1 and; normal for week-2.

- Due to the forecast of above normal rainfall in next week, farmers are advised to stop the application of water and pesticides in cotton. Also keep check on population of whitefly at regular interval.

- Under prevailing weather condition, farmers are advised to transplant the paddy to the main field. And to control weeds in rice field, use recommended herbicides by mixing with sand in standing water within 2-3 days of transplanting.

### **Rajasthan**

198 mm (85% large excess) rainfall was received over East Rajasthan during 01 June - 06 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) over East Rajasthan is above normal for week-1 and; week-2.

- Due to the forecast of above normal rainfall during next week-1 and 2, farmers are advised to postpone irrigation in summer crops and all types of chemical spraying in the fields. And also, make arrangements to drain out excess water from the groundnut and green gram crop fields.
- Wherever the sufficient moisture is available in the field farmers are advised to complete the sowing of maize. Improved varieties of maize are *Pratap QPM-1*, *HQPM-1*, *HQPM-5*, *PEHM-2* and hybrids are *Pratap hybrid maize-1*, *Pratap Makka-9*, *Pratap hybrid Makka-3*.

### **Jammu**

102 mm (2% excess) rainfall was received over Jammu during 01 June - 06 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) over Jammu is above normal for week-1 and; below normal for week-2.

- Farmers are advised to strengthen the paddy bunds field for *in situ* storage of rain water and utilize the same for puddling. Farmer may go for transplanting of rice seedling (2-3 healthy seedlings per hill)
- Due to forecast of above normal rainfall during next week, it is advised to postpone the sowing of moong/mash till the weather gets clear. Farmers may go for sowing of Mash (var. *Pant U-19*, *Uttara*) & Moong (var. *SML-668*) after receipt of rain at optimum soil moisture condition in rainfed areas e.
- Earthing up is recommended in turmeric. It is also advised to cover ridges with local grass to protect them (ridges) against rainfall as well as conserve soil moisture.

### **Assam**

648 mm (8% excess) rainfall was received over Assam during 01 June - 06 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) over Assam is below normal for week-1 and normal for week-2.

- Farmers who have not yet sown the seeds of long duration *sali* rice varieties are advised to complete sowing in the nurseries within this week. Recommended varieties like *Ranjit*, *Bahadur*, *Piolee*, *Kushal*, *Moniram*, *Bhgalee*, *Aghoni* etc.

- This is the optimum time for sowing of pigeon pea in Assam, up to end of July. Farmers are advised to collect the seeds of suitable high yielding variety viz. *T-21* from recognized sources.
- Due to favourable weather condition incidence of fruit fly and leaf hopper in gourds, baiting with pesticides like Emamectin Benzoate or Flubendiamide mixed with molasses (1%) and fruit juice or spray Cyantraniliprole 10.26 % OD @ 1ml per liter.
- Considering the amount of rainfall received during the past week and forecast of light to moderate rainfall during next two weeks, farmers are advised to avoid waterlogging in jute fields and remove excess water from field immediately by creating field ditches of 20 cm wide and 20 cm depth, along the gradient, at an interval of 10 m.

### **West Bengal**

- 205 mm (-35% deficit) rainfall received over Gangetic West Bengal and rainfall received over Sub Himalayan West Bengal was 691 mm (19% excess) during 01 June - 06 July 2023. The extended range weather forecast (rainfall) for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) is normal over Gangetic West Bengal and below normal over Sub-Himalayan West Bengal during week-1 and; normal over Gangetic West Bengal and Sub-Himalayan West Bengal for week-2.
- Drainage channels should be cleared in periodic intervals to avoid water logging conditions. Harvesting of pointed gourd is advised in low land area.
- Frequent hand weeding is advised in soybean crop up to maximum canopy proliferation.

### **Bihar**

175 mm (-24% deficit) rainfall was received over Bihar during 01 June - 06 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) over Bihar is below normal for week-1 and normal for week-2.

- Complete the nursery sowing of paddy up to 10 July. *Sahbhagi, Prabhat, Dhanlakshmi, Richariya, Saket-4, Rajendra Sweta and Rajendra Bhagwati* are the early varieties of paddy, which are recommended for sowing in north Bihar.
- Land preparation is advised for sowing of pigeon pea. Application of well decomposed FYM/Compost is advised during land preparation.

### **Chhattisgarh**

194 mm (-22% deficit) rainfall was received over Chhattisgarh during 01 June - 06 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) over Chhattisgarh is above normal for week-1 and; week-2.

- Due to the forecast of above normal rainfall, farmers are advised for sowing of paddy crop with proper drainage channels.

- Vaccinate the poultry birds to prevent Ranikhet disease. (first F-1 in age of 7 days and second R2 B in age of 8 weeks)

### Odisha

191 mm (-28% deficit) rainfall received over Odisha during 01 June - 06 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) over Odisha is above normal for week-1 and; week-2.

- Due to the forecast of above normal rainfall during next week-1 and 2, it is advised to make provisions for drainage in kharif maize and pulses etc.
- Under prevailing weather condition, complete the propping of sugarcane and drain out excess water.
- July is the optimum time for cashewnut planting. Recommended HYV are *Vengrulla-1.4*, *BPP-4*, *Bhubaneswar-1*, *VRI-2*, *Hybrid 2-17*.
- Under prevailing weather condition, it is advised to go for sowing of non-paddy crops like Groundnut, Arhar, Sesame, Cowpea etc in rainfed upland

### Gujarat

260 mm (33% excess) rainfall received over Gujarat during 01 June - 06 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) over Gujarat is above normal for week-1 and week-2.

- It is the optimum time for sowing of cucurbits in rainy season. Some popular hybrids are:
  - ✓ **Bottle Gourd**- *Gujarat Anand Bottle Gourd Hybrid-1*, *Anand Bottle Gourd-1*, *Junagadh long tender*, *Pusa Naveen*, *Pusa Samridhi*.
  - ✓ **Bitter Gourd**- *PusaVisesh*, *Pusa-2 mosumi*.
  - ✓ **Pumpkin**- *Anand Pumpkin-1*, *PusaVisvash*, *Pusa Vikash*.
  - ✓ **Ridge Gourd**- *Gujarat Anand Ridge Gourd 1*, *GJH-1*, *Pusa Chikni* etc.
- For the control of citrus canker in lemon, it is advised to spray Copper Oxchloride @ 40 g or Streptocycline 1.5 g in 10 litres of water.

### Maharashtra

131 mm (-34% deficit) rainfall over Madhya Maharashtra; 122 mm (-46% deficit) rainfall over Vidarbha; 101 mm (-39% deficit) rainfall over Marathwada; and 847 mm (-7% deficit) in Konkan region was recorded during 01 June - 06 July 2023. The extended range weather forecast (rainfall) for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) is above normal over Madhya Maharashtra, Marathwada, Konkan and Vidarbha for week-1 and; above normal over Madhya Maharashtra, Konkan and Vidarbha and normal over Marathwada for week-2, respectively.

### *Vidarbha*

- For sowing of pigeon pea crop ensure the availability of seed. Recommended varieties as per the soil type are early duration varieties for medium soil type - (*TAT-10, ICPL 87, AKT-8811*), medium duration varieties for medium to heavy soil type - (*BSMR-736, PKV Tara, BSMR-853*) and long duration varieties for heavy soil type - (*ICPL-87119, C-11*).
- Early maturing varieties of cotton is advised for sowing with higher seed rate, recommended desi varieties are *AKA-5, AKA-7 and AKA-8* with seed rate of 12 to 15 kg/ha. American improved varieties are *AKH-081* with seed rate 15 to 20 kg/ha, *AKH-09-5 (Suvarna/ Shubhra), PKV Rajat and AKH 8828* with seed rate 10 to 12 kg/ha. Cotton desi hybrids *PKVDH-1*, and *PKV-Suvarna* are recommended
- Keep farm animals indoor during thunderstorm/lightning. In farm livestock preventive vaccination for foot and mouth disease (FMD) and preventive deworming for flat worms is advisable.

### *Marathwada*

- Under prevailing weather condition, sowing of pigeon pea crop is advised up to 15th July. It is also advised to apply 25:50:00 Kg NPK per ha at the time of sowing.
- With the onset of monsoon season, it is essential to vaccinate kids and lambs of 3 months and above age group.

### *Madhya Maharashtra*

- Soybean is advised to sow in areas where rainfall more than 100 mm is received. Use the seed of improved varieties like *Phule Durva, P.Kimaya and P. Sangam*.
- Sowing of pigeon pea is also advised with recommended varieties viz., *Rajeshwari, Godavari or BDN -711*.

### **Tamil Nadu**

The amount of rainfall received over Tamil Nadu was 69 mm (15% excess) during 01 June - 06 July 2023. The extended range weather forecast (rainfall) for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) is above normal for week-1 and; below normal for week-2.

- Due to forecast of above normal rainfall during week-1, farmers are advised to do propping in sugarcane to protect the crop.
- As above rainfall is forecasted during next week-1, farmers are advised to avoid spraying chemicals in paddy crop. However, after receipt of rainfall, there is a chance for grain

discolouration. To manage it is advised to spray Carbendazim + Thiram + Mancozeb (1:1:1) 0.2%.

### **Kerala**

528 mm (-32% deficit) received over Kerala during 01 June - 06 July 2023. The extended range weather forecast (rainfall) for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) is normal for week-1 and; week-2.

- Due to the prevailing rainy weather, there is a chance for the development of stem bleeding disease in coconut palms. As a precaution, apply 5 kg neem cake in the basins of the palms. Also, apply 50 g each *Trichoderma* mixed along with organic manures in the basins.
- Prevailing rainfall and winds may cause breakage of the pseudo stem and lodging in banana gardens. To protect, it is advised to provide propping for banana plants and strengthen existing supports.
- In order to prevent fungal diseases during monsoon season, root dipping of vegetable seedlings in *Pseudomonas* solution is advised before planting.

### **Anantapur**

68 mm (-18% deficit) rainfall received over Rayalaseema and 109 mm (-20% deficit) rainfall received over Coastal Andhra Pradesh during 01 June - 06 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) is above normal over Rayalaseema and Coastal Andhra Pradesh for week-1 and; below normal for week-2.

- In Ananthapuramu, Kurnool, Kadapa, Chittoor and Prakasam districts, redgram growing farmers are advised to select the varieties like *LRG-41*, *LRG-52*, *PRG-176*, *ICPL-85063* and *ICPL-87119*. The optimum sowing time for redgram is June to August.
- In Srikakulam, Vizianagaram, Visakhapatnam, Nellore, Chittoor, Ananthapuramu and Kurnool districts, groundnut farmers are advised to select high yielding and drought tolerant groundnut varieties viz., *Kadiri- 6*, *Kadiri-9*, *KadiriHarithandhra*, *Anantha*, *Greeshma*, *Narayani*, *Abhaya* and *Dharani*.

### **Karnataka**

107 mm (-42% deficit) rainfall received over South Interior Karnataka, 854 mm (-21% deficit) over Coastal Karnataka and 78 mm (-36% deficit) rainfall received over North Interior Karnataka during 01 June - 06 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (07 - 13 July 2023 and 14 - 20 July 2023) is above normal over North Interior Karnataka, and Coastal Karnataka and South Interior Karnataka for week-1 and; above normal over North Interior Karnataka and Coastal Karnataka and normal over South Interior Karnataka for week-2.

### *South Interior Karnataka*

- Farmers are advised to treat the red gram seeds with Carbendazim or Thiram @ 2 g/kg of seed 24 hours before sowing (or) with talc formulation of *Trichoderma viride* @ 4g/kg of seed (or) *Pseudomonas fluorescens* @ 10 g/kg seed and *Rhizobium* @ 10 g/kg of seed
- Earthing up operation is advised in long duration crops like redgram and castor to make a better availability of soil moisture to the crop.

### *North Interior Karnataka*

- Under sufficient soil moisture it is advised for sowing of *kharif* crops immediately like sowing of bajra, groundnut (bunch type), maize, Bt. cotton, red gram, sesamum or navane may be taken up on preference
- To manage early shoot borer in sugarcane, spraying of 0.5 ml Imidacloprid dissolved in one litre of water or broadcast 10 kg of Carbofuran granules mixing in sand on the surface of the soil is advised.

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