



राष्ट्रीय कृषि मौसम परामर्शी सेवाएं बुलेटिन National Agromet Advisory Services Bulletin

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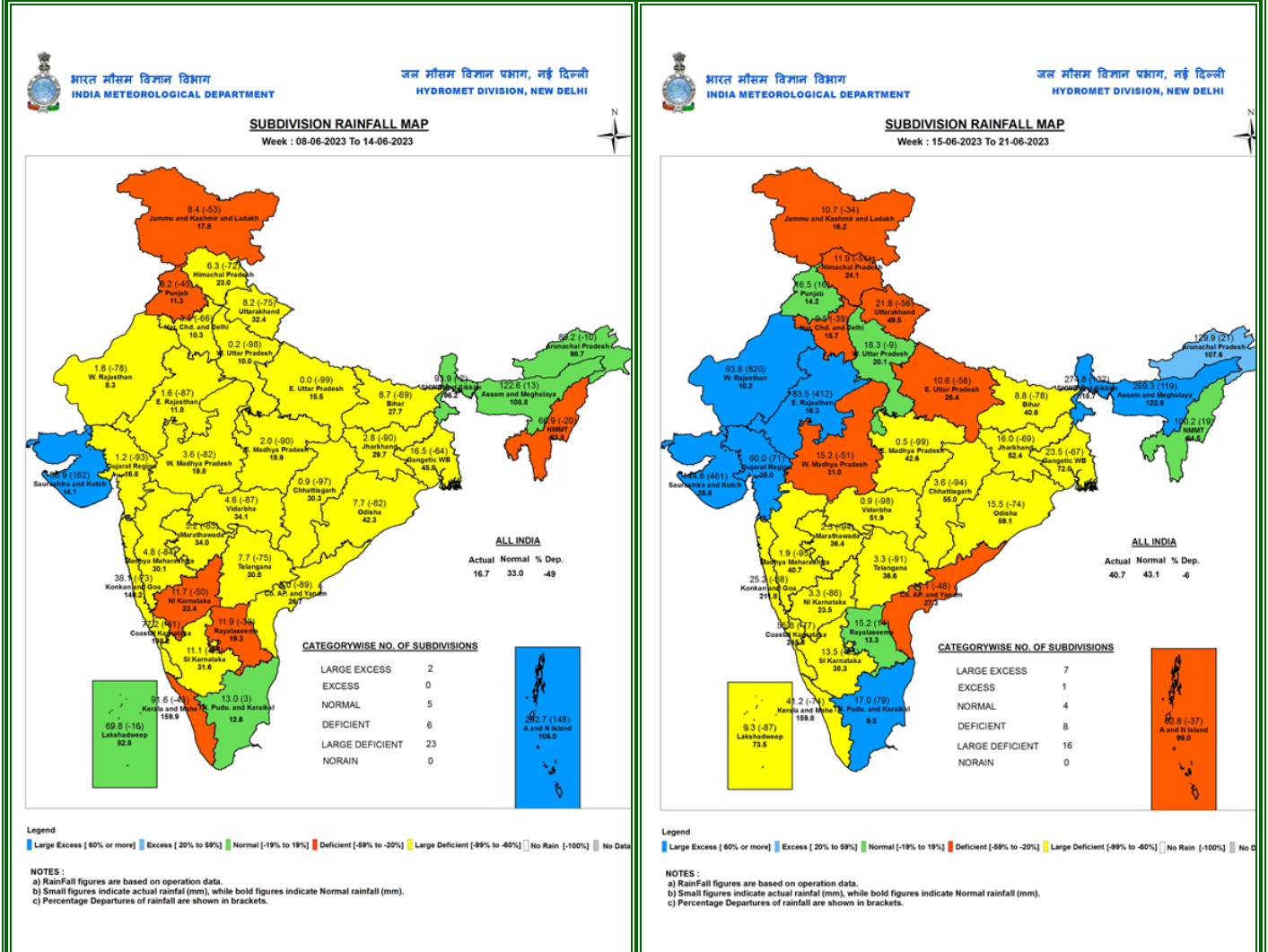
India Meteorological Department (IMD)

पृथ्वी प्रणाली विज्ञान संगठन

Earth System Science Organization

Realized Rainfall and Extended Range Forecast (Rainfall and Temperature)

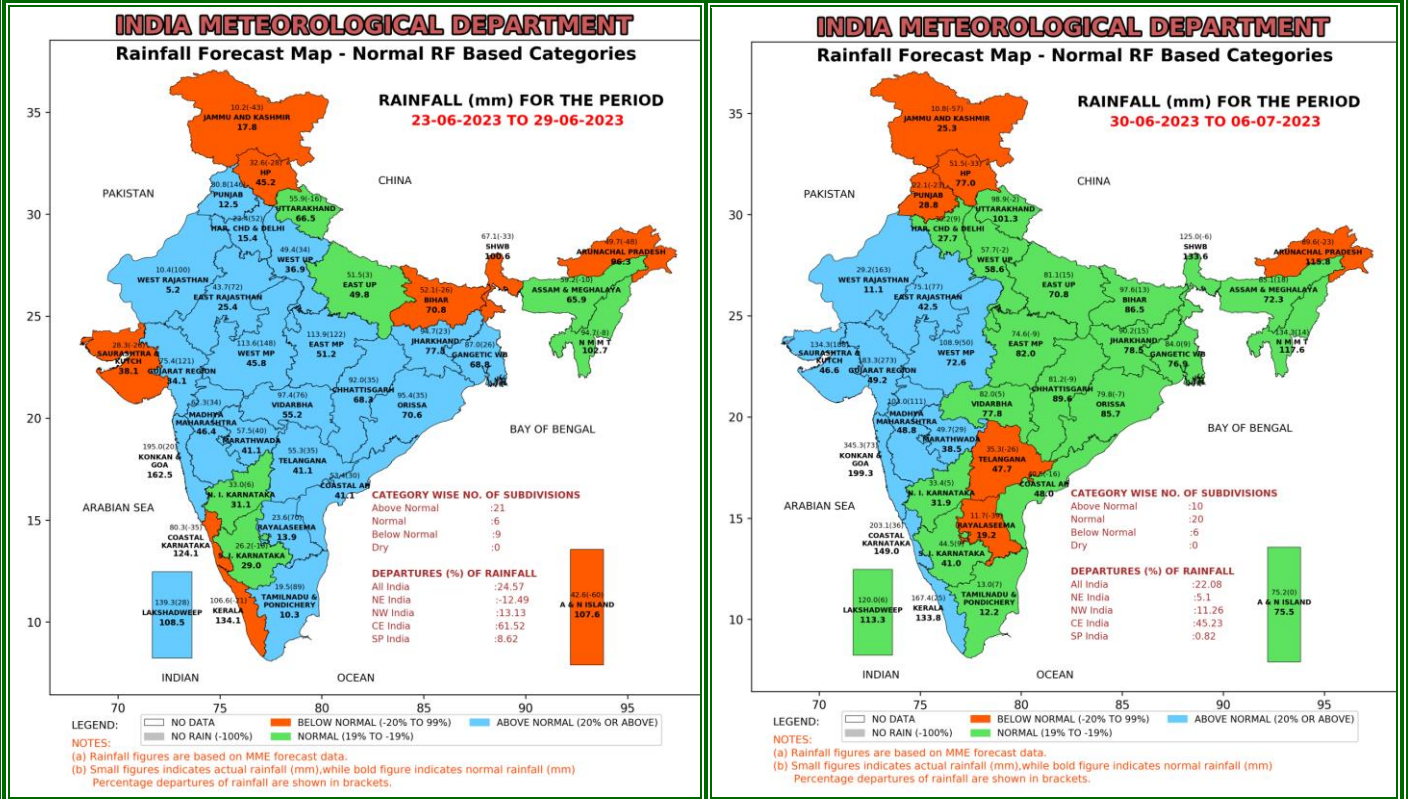
Realized Rainfall (08th June to 21st June, 2023)



- Normal or above normal rainfall occurred in both the weeks over Sub Himalayan West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh, Saurashtra & Kutch and Tamil Nadu Puducherry & Karaikal.
- Normal or above normal rainfall occurred in either of the two weeks over Punjab, West Uttar Pradesh, Nagaland Manipur Mizoram & Tripura (NMMT), Rajasthan, Gujarat Region, Rayalaseema, Lakshadweep and Andaman & Nicobar Islands.
- Below Normal rainfall occurred in both the weeks over rest of States and UTs.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC- 21st June) (23rd June to 06th July 2023)



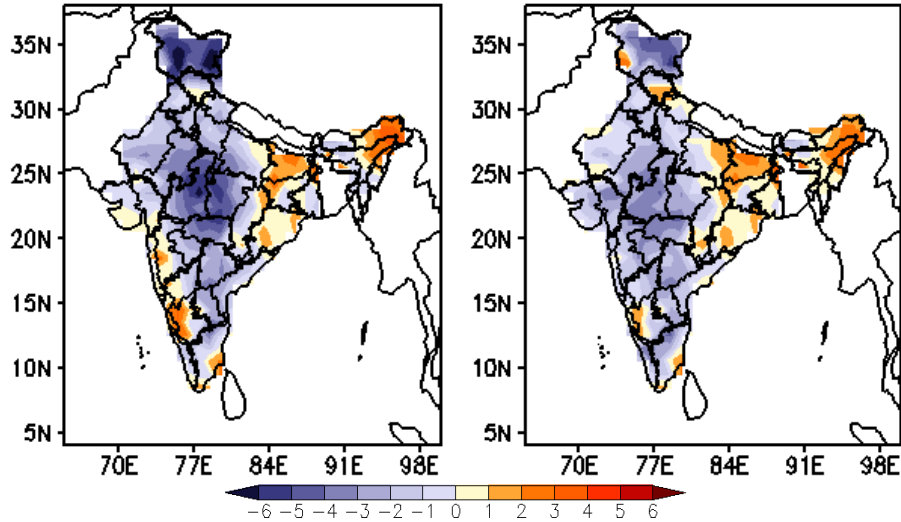
- **Week 1 (23.06.2023 to 29.06.2023) and Week 2 (30.06.2023 to 06.07.2023):** Rainfall is likely to be normal to above normal over most parts of the country.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for the next 2 weeks (IC- 21st June)
(23rd June to 06th July 2023)**

MME forecast Tmax anomaly (Deg C)

(Week1: 23Jun–29Jun)

(Week2: 30Jun–06Jul)



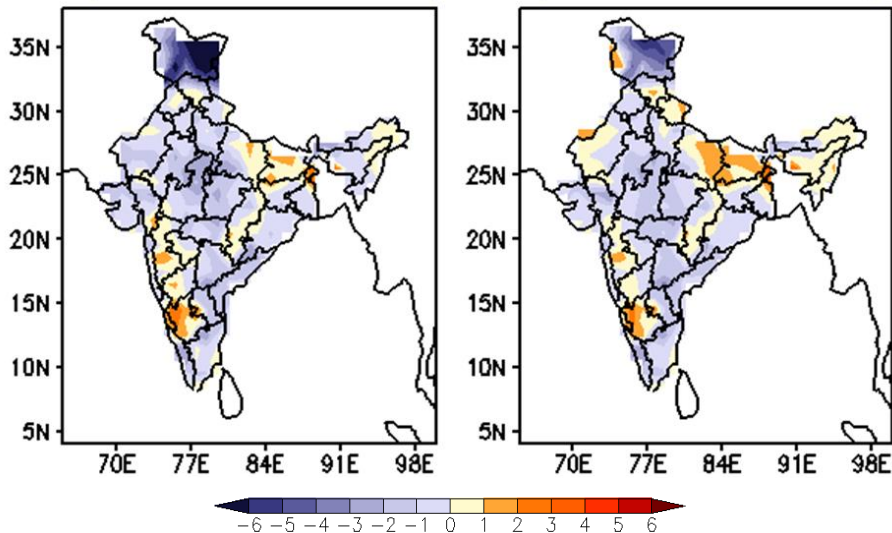
Maximum Temperature (Tmax)

- **Week 1 (23.06.2023 to 29.06.2023) and Week 2 (30.06.2023 to 06.07.2023):** Tmax will be slightly above normal over Northeast India and parts of Bihar, Odisha, Jharkhand, Gangetic West Bengal. However, it is likely to be below normal over rest parts of the country.

MME forecast Tmin anomaly (Deg C)

(Week1: 23Jun–29Jun)

(Week2: 30Jun–06Jul)



Minimum Temperature (Tmin)

- **Week 1 (23.06.2023 to 29.06.2023) and Week 2 (30.06.2023 to 06.07.2023):** Tmin is likely to be below normal over many parts of the country. However, it is likely to be slightly above normal over parts of East and peninsular India.

Agromet Advisories

Uttar Pradesh

The amount of rainfall received over East Uttar Pradesh was 17 mm (-70% large deficit) and over West Uttar Pradesh was 35 mm (-14% deficit) during 01 - 22 June 2023. The extended range weather forecast (rainfall) for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) is normal over East Uttar Pradesh and above normal over West Uttar Pradesh for week-1; normal over both East 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 drain out excess rain water from paddy nursery and advised for sowing of short duration rice varieties like *I18, N-80, N-1, N-2, N-97, Pant dhan-12, Barani deep, IR-50, Ratna, HUR-3022* and scented rice like *T-3, Pusa basmati-1, Pusa sungandh-4 & 5, and Malviya sugandh-4-3* and *Malviya basmati 10-9* etc.
- Under prevailing rainy weather condition and forecast of above normal rainfall during next week-1, farmers are advised to postpone the sowing of *kharif* maize and start sowing after rainfall.
- Due to heavy rainfall received on 22 June, 2023 farmers are advised to keep harvested crops (*zaid* maize, urd and moong) in safer places and threshed grain should be dry in air.
- Under prevailing rainy weather condition, farmers are advised skip irrigation and intercultural operations in sugarcane crop which is at vegetative stage.

Eastern Uttar Pradesh

- Farmers are advised to harvest *zaid* maize.
- Farmers are advised to prepare the fields for paddy nursery with recommended varieties viz., *Shuats Paddy-1, Saket-4, Narendra Paddy-2064, Narendra Paddy-2065, Sarju-52, NDR-97, Pusa Basmati- 1692* and *1847* etc.
- For the management of fruit and shoot borer in brinjal crop at flowering/fruitlet stage, farmers are to spray Chlorantraniliprole 18.5 SC @ 0.4 ml/litre and mix well by sticking and spreading agent.

Hisar

24 mm (-27% deficit) rainfall was received over Hisar during 01 - 22 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) over Hisar is above normal for week-1 and; normal for week-2.

- Farmers are advised to apply need-based irrigation and weeding in cotton crop which is at vegetative stage.

- Transplanting of rice from nursery to field is advised and also apply need-based irrigation in rice nursery.

Uttarakhand

59 mm (-46% deficit) rainfall was received over Uttarakhand during 01 - 22 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) over Uttarakhand is normal for week-1 and; week-2.

- Farmers are advised to provide mechanical support to young fruit plants and vegetables to prevent the crops from lodging due to strong winds.
- Due to chances of light to moderate rainfall, farmers are advised to clean the drainage channels in crop fields; hoeing/weeding is also advised in standing crops.
- Under prevailing weather conditions, farmers are advised to continue the sowing of *kharif* crops like finger millet, soybean, urd, rice bean etc.
- Farmers are advised to harvest mature peach, plum, apricot fruits.

Himachal Pradesh

53 mm (-16% deficit) rainfall was received over Himachal Pradesh during 01 - 22 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) over Himachal Pradesh is below normal for week-1 and week-2.

- Due to rainfall/hailstorm with gusty winds in all over the state, farmers are advised to protect fruit crops viz., apple, apricot and other stone fruits using shade nets. In case of vegetables, farmers can use mulch to protect the recently sown crops.
- Due to forecast of below normal rainfall, it is advised to apply light and frequent irrigation in vegetable crops during morning and evening hours.
- Farmers are advised to go for transplanting of paddy nursery in their fields with the spacing of 20 x 15 cm and direct sowing of recommended varieties of rice.

Varieties Recommended:

- Transplanting: *HPR 2143, HPR 1068, Palam Lal Dhan-1 and Him Palam Dhan-2, Kasturi basmati*
- Direct Seeding: *Sukara Dhan-1, Him Palam Dhan-1, Him Palam Lal Dhan-1*
- Hybrids: *Arize 6129, Arize AZ 6508, Arize Swift*
- Farmers are advised for harvesting / picking of vegetables during morning and evening hours and after harvesting of crops keep them in shade.

Punjab

44 mm (37% excess) rainfall was received over Punjab during 01 - 22 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) over Punjab is above normal for week-1 and below normal for week-2.

- It is optimum time for the sowing of nursery of basmati varieties viz., *CSR 30 and Pusa basmati 1509*.
- To protect paddy/basmati from seed borne diseases, it is advised to treat 8 kg seeds with Sprint 75 WS (Carbendazim + Mancozeb) by making slurry of 24 g fungicide formulation in 80-100 ml water before sowing.
- Harvest the cucurbits and other vegetables like tomato, chilli, brinjal and okra at regular intervals to get maximum yield.
- To protect the fruit pants from summer heat, it is advised to apply light irrigations at regular intervals especially to citrus, pear, litchi, mango orchards bearing fruit in this season.

Assam

446 mm (30% excess) rainfall was received over Assam during 01 - 22 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) over Assam is normal for week-1 and; week-2.

- Because of heavy rainfall during last week over the state, low lying lands are flooded with rainwater, rivers are flowing above danger level. Farmers are requested to download “MAUSAM” app for weather forecast, “MEGHDOOT” app for crop-based advisories and “DAMINI” app for lightning alert, intending to help save lives of human as well as livestock.
- It is also advised to drain out the excess rain water from the kharif maize fields at silk stage, by creating surface drainage channel of 25 cm width
- 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.

Jharkhand

The amount of rainfall received over Jharkhand was 29 mm (-74% large deficit) during 01 - 22 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) over Jharkhand is above normal for week-1 and; normal for week-2.

- There is a forecast of continuous rains during next week. Hence, it is advised to start ploughing in the fields of upland rice during clear weather and finish the sowing of upland rice as soon as possible.
- For protection from termites and stem borers in upland rice, broadcast Neem or Karanj cake @ 200 kg or Bifenthrin 10 % EC @ 1ml/liter water.

Bihar

9.2 mm (-83% large deficit) rainfall was received over Bihar during 01 - 22 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) over Bihar is below normal for week-1 and; normal for week-2.

- Bihar has been experiencing an extended period of heat wave since May 30, with following significant consequences
 - ✓ Surface water bodies dried up.
 - ✓ Crops in the field are wilting. Most affected crops are maize and vegetables.
 - ✓ Litchi and mango were affected.
 - ✓ Farmers are facing problems in nursery sowing of paddy and initial transplanting of long duration varieties are seriously affected.
- Therefore, farmers are advised to transplant in low land areas provide irrigations. And, also provide life-saving irrigation to standing crops such as, maize, vegetables and paddy nurseries.

West Bengal

52 mm (-68% large deficit) rainfall received over Gangetic West Bengal and rainfall received over Sub Himalayan West Bengal was 415 mm (32% excess) during 01 - 22 June 2023. The extended range weather forecast (rainfall) for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) is above normal over Gangetic West Bengal and normal over Sub-Himalayan West Bengal during week-1 and; normal over Gangetic West Bengal and Sub-Himalayan West Bengal for week-2.

- Due to forecast of above normal rainfall during next week, farmers are advised to apply fertilizer in *kharif* rice seed bed during clear weather condition.
- Due to forecast of above normal rainfall during next week, it is advised that harvested vegetables should be keep in shade, clean and dry condition.
- To prevent fruit fly attacks in mango at fruit ripening stage, it is advised to install methyl eugenol traps.

Chhattisgarh

14 mm (-87% large deficit) rainfall was received over Chhattisgarh during 01 - 22 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) over Chhattisgarh is above normal for week-1 and; normal for week-2.

- Due to high temperature condition and heat waves in many parts of the stateCG, there is damage to vegetable and standing field crops. Therefore, mulching is advised in ginger and turmeric crops

- Farmers having the assured irrigation facilities are advised to irrigate the fields for preparing the raised bed for rice nursery.
- Farmers who wish to grow plantation crops are advised for field preparation and digging of pits. Well decomposed Farm yard manure, and recommended dose of fertilizers should be mixed and filled 10 cm above the ground level.

Odisha

38 mm (-72% large deficit) rainfall received over Odisha during 01 - 22 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) over Odisha is above normal for week-1 and; normal for week-2.

- Farmers are advised to go for sowing of paddy in sufficient soil moisture (if the rainfall more than 75 mm for preceding week).
- Under prevailing weather condition, there are chances of early shoot borer infestation in sugarcane crop. To manage, collect and destroy the egg masses manually. In furrow, apply Fipronil 0.3% GR @ 10 kg/acre at the time of first earthing up.

Gujarat

74 mm (7% excess) rainfall received over Gujarat during 01 - 22 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) over Gujarat is above normal for week-1 and; week-2.

- Land preparation for sowing of finger millet is advised. Procure good quality seed from certified source with seed rate 4 to 5 kg/ha. Before sowing, it is advised to treat the seeds with Thiram or Carbendazim @ 3 g/kg seeds to protect against seed or soil born disease.
- For management of wilt or whip smut in sugarcane crop, it is advised to spray fungicide Carbendazim + Mancozeb 15 g/15 liters of water during clear weather conditions.

Maharashtra

14 mm (-86% large deficit) rainfall over Madhya Maharashtra; 10 mm (-91% large deficit) rainfall over Vidarbha; 9.4 mm (-90% large deficit) rainfall over Marathwada; and 68 mm (-85% large deficit) in Konkan region was recorded during 01 - 22 June 2023. The extended range weather forecast (rainfall) for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) is above normal over Konkan, Madhya Maharashtra, Vidarbha and Marathwada for week-1 and; above normal over Madhya Maharashtra, Marathwada and Konkan and normal over Vidarbha for week-2, respectively.

Vidarbha

- Sowing of soybean is advised with recommended varieties viz., *PDKV AMBA, JS 93-05, JS 95-60, JS 20-29, JS 20-34, MAUS-71, MAUS-158.*

- For sowing *kharif* cotton, 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

- Irrigation management is advised during early in the morning or at evening with the help of drip irrigation system in mango and banana orchard.
- Due to forecast of thunderstorm accompanied with lightning and above normal rainfall during next week-1 and week-2 at isolated places, it is advised to harvest the mature vegetable crops as early as possible and store them at safe places.
- In view of thunderstorm accompanied with gusty winds, it is advised to provide staking in vegetables

Madhya Maharashtra

- Sowing of soybean be started only after the receipt of 100 mm rainfall to avoid the risk of double sowing.
- Harvesting, threshing and cleaning of maize crop is advised and after that store at clean place.
- Farmers are advised for soil moisture conservation operations in the field like levelling, bunding etc after *rabi* crop harvesting.
- Do not burn the organic residues or trash left in the field after harvest of *rabi* crops. It can be used for preparation of organic manure.
- Apply Bordeaux mixture paste up to 1-meter height from soil level to avoid trunk cracking in mango.

Konkan

- As there is forecast of above normal rainfall during next week-1 and 2, it is advised to complete the nursery sowing operation of rice, finger millet, proso millet and vegetable crops and also make arrangement for drain out excess water from nursery raised bed.

- Clean the arecanut orchard by removing dry leaves and diseased, infected inflorescence and spray 1% Bordeaux mixture to control 'Koleroga' disease. Repeat the spray 3-4 times at one-month interval.
- To prevent the incidence of bud rot disease on young coconut plant during monsoon season, spray 1% Bordeaux mixture onto the crown region of palm.

Tamil Nadu

The amount of rainfall received over Tamil Nadu was 44 mm (13% excess) during 01 - 22 June 2023. The extended range weather forecast (rainfall) for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) is above normal for week-1 and; normal for week-2.

- Since light rainfall and heavy wind speed is forecasted for week-1 and week-2, farmers are advised to do propping in sugarcane to protect the crop.
- To manage the shoot fly infestation in sorghum crops, farmers are advised to set up the TNAU low-cost fish meal trap @ 12/ha till at 30 days old crop.

Kerala

173 mm (-63% large deficit) received over Kerala during 01 - 22 June 2023. The extended range weather forecast (rainfall) for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) is below normal for week-1 and; above normal for week-2.

- During rainy period, there is a chance of sheath blight, sheath rot, leaf spot disease in *virippu* rice. As a prophylactic measure, either soak one kg of paddy seeds or dip root of seedlings in a solution of *Pseudomonas* culture @ 10 g per one litre of water for 30 minutes.
- As a prophylactic measure to control quick wilt of pepper, it is advised to add 2 kg Trichoderma to a mixture of 90 kg FYM and 10 kg neem cake and kept for two weeks with sufficient moisture.

Anantapur

43 mm (-21% deficit) rainfall received over Rayalaseema and 32 mm (-59% large deficit) rainfall received over Coastal Andhra Pradesh during 01 - 22 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) is above normal over Rayalaseema and Coastal Andhra Pradesh for week-1 and; below normal over Rayalaseema and normal over Coastal Andhra Pradesh for week-2.

- Farmers are advised to select high yielding varieties viz., *Kadiri-6*, *Kadiri Harithandhra*, *Anantha*, *Greeshma*, *Narayani*, *Abhaya*, *Dharani*, *Kadiri Iepakshi* and *TCGS-1694* and farmers are also advised to sow 4-6 rows of bajra/jowar as border crops all around the field to avoid transmission of vectors like thrips which spread PSND/PBND diseases.

- Wherever pre-monsoon rainfall is received, farmers are advised to take up deep ploughings to improve the soil moisture storage capacity, thereby extending the soil moisture availability to crops during the crop growth period.
- In Prakasam district, prevailing weather conditions are conducive for incidence of sucking pest in cotton. To prevent, it is advised to spray Imidacloprid@ 2.5 ml or Flonicamid 50 % WG @3ml/10 litre of water is advised.

Karnataka

43 mm (-59% deficit) rainfall received over South Interior Karnataka, 155 mm (-78% large deficit) over Coastal Karnataka and 23 mm (-69% large deficit) rainfall received over North Interior Karnataka during 01 - 22 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (23 - 29 June 2023 and 30 June - 06 July 2023) is normal over North Interior Karnataka and South Interior Karnataka and below normal over Coastal Karnataka for week-1 and; normal over North Interior Karnataka and South Interior Karnataka and above normal over Coastal Karnataka for week-2.

South Interior Karnataka

- Sowing of redgram is advised for *kharif* sowing with recommended varieties viz., TTB-7, BRG-1,2,4 and 5
- Take up land preparation and strengthen the bund with fodder grass to facilitate conservation of rainwater due to pre-monsoon showers. Ploughing across the slope will make *insitu* soil moisture conservation.

North Interior Karnataka

- To manage early shoot borer, take up 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.
- Land preparation for *kharif* sowing and repairing of bunds, soil and moisture conservation structures should be taken up.

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