



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

AICRP on Agro-Meteorology (AICRPAM)

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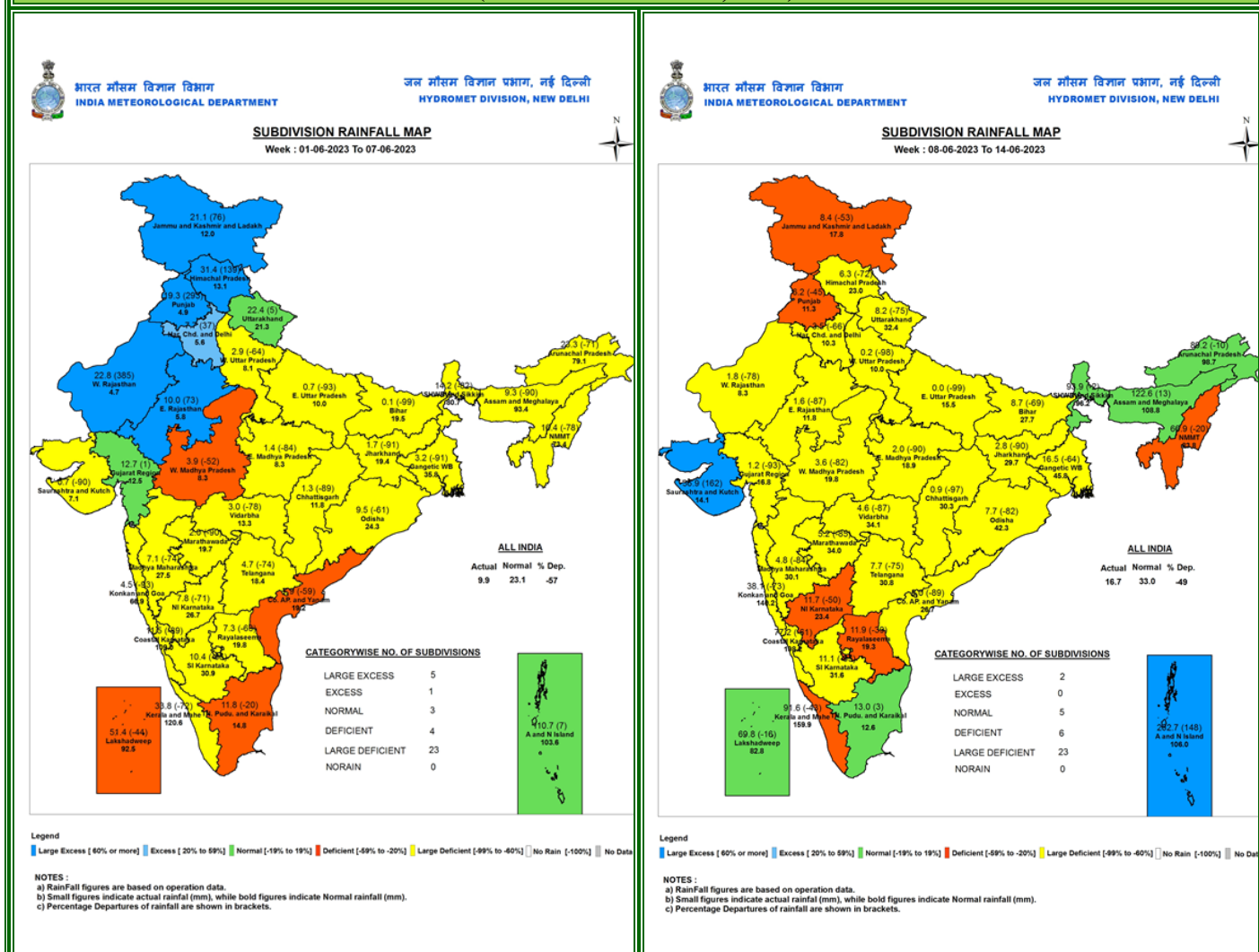
पृथ्वी प्रणाली विज्ञान संगठन

Earth System Science Organization

Realized Rainfall and Extended Range Forecast (Rainfall and Temperature)

Realized Rainfall

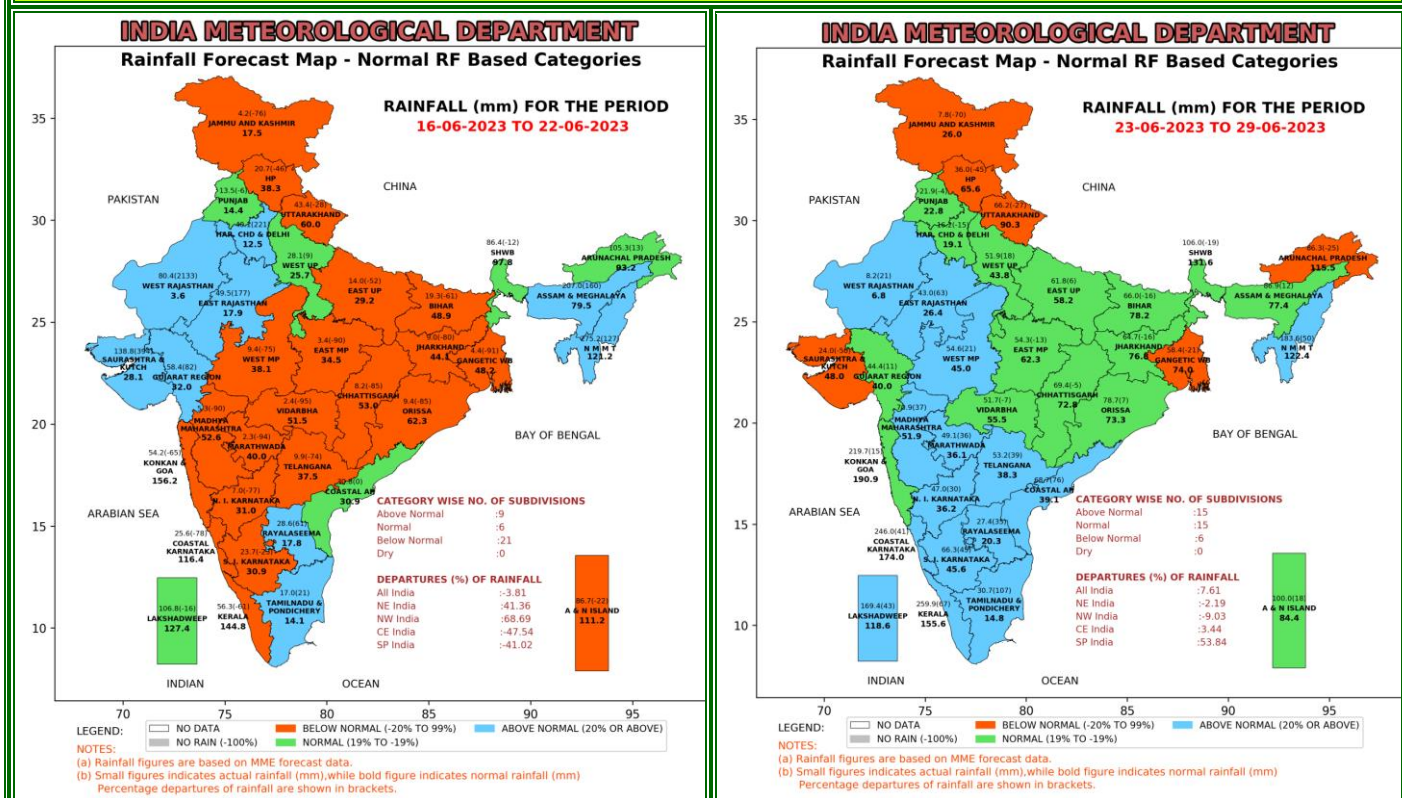
(01st June to 14th June, 2023)



- Normal or above normal rainfall occurred in both the weeks over Andaman & Nicobar Islands.
- Normal or above normal rainfall occurred in either of the two weeks over Jammu & Kashmir and Ladakh (UTs), Himachal Pradesh, Uttarakhand, Punjab, Haryana Chandigarh & Delhi, Rajasthan, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh, Gujarat State, Tamil Nadu Puducherry & Karaikal and Lakshadweep.
- 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- 14th June) (16th to 29th June 2023)



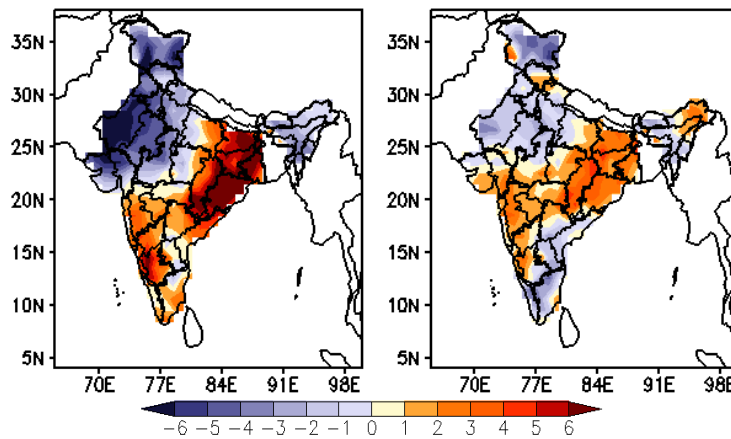
- Week 1 (16.06.2023 to 22.06.2023):** Rainfall activity associated with Western Disturbance is likely over north India. Rainfall activity associated with **Cyclonic Storm "Biparjoy"** is likely over Gujarat and Rajasthan. Rainfall activity is also likely over northeast India and west coast.
- Week 2 (23.06.2023 to 29.06.2023):** Rainfall activity is likely to increase over most parts of the country.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for the next 2 weeks (IC- 14th June)
(16th to 29th June 2023)**

MME forecast Tmax anomaly ($^{\circ}\text{C}$)

(Week1: 16Jun–22Jun)

(Week2: 23Jun–29Jun)



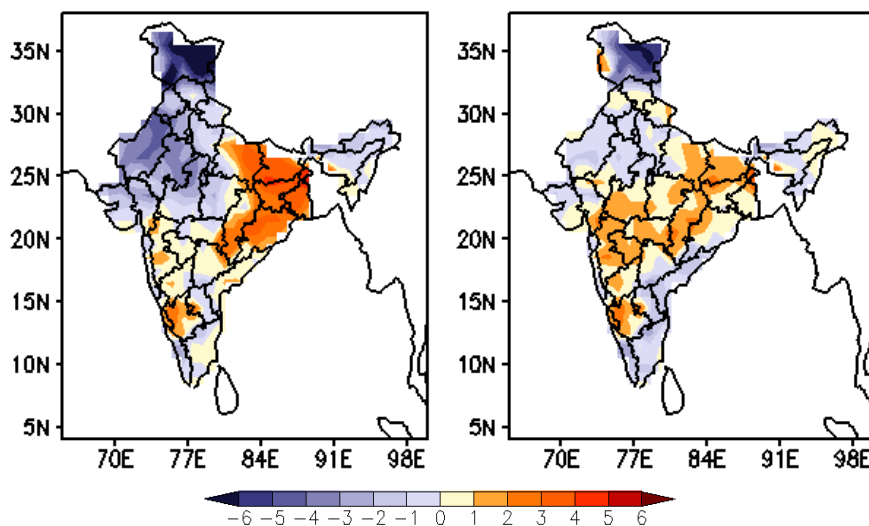
Maximum Temperature (Tmax)

- **Week 1 (16.06.2023 to 22.06.2023):** Tmax is likely to be above normal over East India, Peninsular India and parts over Central India. However, it is likely to be below normal over North, North West and Northeast India.
- **Week 2 (23.06.2023 to 29.06.2023):** Tmax is likely to be above normal over many parts of the country. However, it is likely to be normal to below normal over parts of southern Peninsular and northwest India.

MME forecast Tmin anomaly ($^{\circ}\text{C}$)

(Week1: 16Jun–22Jun)

(Week2: 23Jun–29Jun)



Minimum Temperature (Tmin)

- **Week 1 (16.06.2023 to 22.06.2023):** Tmin is likely to be below normal over many parts of the country. However, it is likely to be above normal over East India and parts of Central & peninsular India.
- **Week 2 (23.06.2023 to 29.06.2023):** Tmin is likely to be slightly above normal over many parts of the country. However, it is likely to be slightly below normal over parts of north, northeast and peninsular India.

Agromet Advisories

Gujarat

15 mm (-56% deficit) rainfall received over Gujarat during 01 - 15 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) over Gujarat is above normal for week-1 and; normal for week-2.

- Due to extremely severe cyclonic storm 'Biparjoy' in Gujarat state, following impact on crops and Agromet advisories issued:

Impact on standing crops and livestock:

- High winds cause deformation/lodging/uprooting of crops.
- High winds also cause shattering of grains from matured plants.
- Tall crops like, banana is susceptible to strong winds.
- Fruit may drops in horticultural and plantation crops like Mango.
- Tree and tree branches fall is likely during rainfall and high wind speed conditions.

Agromet advisories issued

- Provide mechanical support to horticultural and vegetable crops during forecast of high wind velocity.
- Don't leave the harvested crop produce in open field, keep it at safer places and cover the harvested produce (if in the field) with polythene sheet/Tarpaulins.
- Avoid/postpone spraying of any kind of agrochemicals in standing/sown crops in high and gusty winds.
- Avoid/postpone application of irrigation in standing/sown crops.
- Keep and protect the animals in proper shed or protected areas to withstand the heavy wind with thunderstorms and lightening.
- Pick/harvest mango fruits as soon as earlier to avoid fruit dropping.
- In poorly drained field, dig 1 m deep drainage around field.
- Excess water from orchards should be drained out by creating channels as soon as possible.
- Banana plants should be propped with the help of bamboos by placing them against the stems on leaning side at bunch development stage.
- Give mechanical support to the branches to protect the fruits from strong winds.
- Do not keep animals under shade of trees due to high wind speed and moved the livestock to a safe place.
- Partially fallen trees of horticultural crops like mango can be rescued by pruning branches (with machine) and bring them back in standing position with the help of machineries.
- Don't allow the animals grazing outside.
- Don't stay in the farm huts and underneath of trees.

Uttar Pradesh

The amount of rainfall received over East Uttar Pradesh was 0.7 mm (-98% large deficit) and over West Uttar Pradesh, the amount of rainfall received was 3.0 mm (-85% large deficit) during 01 - 15 June 2023. The extended range weather forecast (rainfall) for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) is below normal over East Uttar Pradesh and normal over West Uttar Pradesh for week-1 and; normal over East Uttar Pradesh and West Uttar Pradesh for week-2.

Western Uttar Pradesh

- Farmers are advised to raise rice nursery with medium duration rice varieties such as *Narendra dhan-359, Malviya dhan-36, Narendra dhan -2064, Narendra dhan -2026, or Hybrid varieties as Arize -6444, 6201, PHB-71, KRH-2, PRH-10 and JKRH-401* etc. Nursery can be raised if irrigation water is available.
- Due to hot and dry weather condition, farmers are advised for sowing of medium duration *kharif* maize varieties like *Hybrid Dakan-107, Malveya-2, JH-3459, Prakash, PSM-5, Pro-303, KH-510, MMH-113* and Composite varieties *Novjoti, Pusa-2, Prabhat* and *Azad uttam*.
- Due to prevailing hot and dry weather condition, farmers are advised to harvest mature *zaid* maize, *zaid* urd and moong crops.
- Under prevailing hot and dry weather condition, farmers are advised to do irrigation and intercultural operations in sugarcane crop which is at vegetative stage at proper moisture.

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/fruiting stage, farmers are to spray Chlorantraniliprole 18.5 SC @ 0.4 ml/litre and mix well by sticking and spreading agent.

Hisar

12 mm (-32% deficit) rainfall was received over Hisar during 01 - 15 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) over Hisar is above normal for week-1 and; normal for week-2.

- Farmers are advised to prepare the field and procure the recommended desi cotton crop with certified seeds *HD 123, HD 324 and HD 432*. Due to possibility of rainfall avoid sowing and irrigation operations.
- Due to possibility of dry weather and increase in the air temperature, keeping the animals under sheds during daytime and provide the drinking water as per their requirements.

Uttarakhand

33 mm (-43% deficit) rainfall was received over Uttarakhand during 01 - 15 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) over Uttarakhand is below normal for week-1 and; week-2.

- Transplanting of capsicum seedlings is advised in mid to high altitude regions.
- 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

42 mm (6% excess) rainfall was received over Himachal Pradesh during 01 - 15 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) over Himachal Pradesh is below normal for week-1 and week-2.

- Due to hailstorm and cloudburst, 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.
- Sowing of maize as a grain crop as well as a fodder crop can be done in the irrigated areas. For improving the quality of green fodder farmers may intercrop cowpea or soybean in maize. Varieties recommended for grain purpose are: *Girija Composite, Bajaura makka, HQPM 1, PMZ 4, Palam Sankar Makka 2* while *African tall* variety can be used for green fodder purpose.
- Farmers are advised to go in for nursery sowing 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*
- Sowing of nursery of early season cauliflower and direct sowing of okra, french bean, cucumber and other cucurbits is advised.

Assam

178 mm (-19% deficit) rainfall was received over Assam during 01 - 15 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) over Assam is above normal for week-1 and; normal for week-2.

- Clean citrus orchards, remove fallen fruits and debris to minimize the infestation of sucking pests (fruit sucking moth) in citrus. Poison baiting with malathion 50EC@10ml+100g jaggery+100ml mandarin/citrus fruit juice +900ml water (2 bottles poison bait per 25-30 trees). Or Foliar application with malathion 50 EC @2ml at 10-15 days intervals.

- Cloudy weather, coupled with moderate rainfall during the past week, might lead to early shoot borer infestation in sugarcane crops. To control the pest, burning of the infested canes along with proper earthing up is advocated.

Jharkhand

The amount of rainfall received over Jharkhand was 5.1 mm (-91% large deficit) during 01 - 15 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) over Jharkhand is below normal for week-1 and; normal for week-2.

- Due to the forecast of below normal rainfall during week-1, farmers are advised to start land preparation for sowing of direct seeded upland rice only after receiving light rain water.
- For protection from termites and stem borers in upland rice, broadcast Neem or Karanj cake @ 200 kg or Bifenthrin 10 % EC @ 1ml/liter water.
- Under prevailing weather condition, sowing of ginger is advised with recommended improved varieties such as *Burdawan and Nadia* with seed rate @ 7-8 q/acre

Bihar

9.2 mm (-83% large deficit) rainfall was received over Bihar during 01 - 15 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) over Bihar is below normal for week-1 and; normal for week-2.

- Sowing of *kharif* maize is advised. *Devki, Suwan, Shaktimaan-1, Shaktimaan-2, Rajendra shanker makka-3* and *Ganga 11* varieties are suitable for sowing in North Bihar.
- Farmers are advised for nursery sowing of medium duration rice varieties viz., *Sita, Santosh, Saroj, Rajshri, Prabhat, Rajendra suhasni, Rajendra kasturi and Rajendra bhagwati* in North Bihar.
- Vaccination is advised for all dairy animals against Anthrax and Black Quarter diseases.

West Bengal

21 mm (-77% large deficit) rainfall received over Gangetic West Bengal and rainfall received over Sub Himalayan West Bengal was 144 mm (-26% deficit) during 01 - 15 June 2023. The extended range weather forecast (rainfall) for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) is below normal over Gangetic West Bengal and normal over Sub-Himalayan West Bengal during week-1 and; week-2.

- Due to prevailing heat wave and forecast of below normal rainfall during week-1 and week-2, rice nursery beds may require frequent irrigation. Hence, farmers are advised to arrange irrigation facility accordingly.

- Jute growers are facing a lot of trouble due to the late arrival of monsoon this year. Frequent application of irrigation is advised to ensure proper growth. Otherwise, postpone the sowing and wait for the arrival of the monsoon.
- To save the cattle from ectoparasite infestation, it is advised to keep the cattle shed clean. Neem oil application can be done inside the shed.

Chhattisgarh

2.6 mm (-95% large deficit) rainfall was received over Chhattisgarh during 01 - 15 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) over Chhattisgarh is below normal for week-1 and; normal for week-2.

- Farmers having the assured irrigation facilities are advised to irrigate the fields for preparing the raised bed for rice nursery.
- Mulching is advised in ginger and turmeric crops and manage drainage before rainy season.
- 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.

Madhya Pradesh

3.5 mm (-89% large deficit) rainfall was received over Madhya Pradesh during 01 - 15 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) over Madhya Pradesh is below normal for week-1 and; normal for week-2.

- Due to extreme rise in day temperature and forecast of below normal rainfall during week-1, farmers are advised to irrigate summer crops, vegetables, nurseries, fodder crops and orchards at weekly intervals during early morning or in late evening hours.
- Apply residue mulch in between the rows of vegetables field, to avoid excess removal of soil water through evaporation.
- Farmers are advised to provide fodder to dairy animals during early morning or late evening hours when air temperature is low. Add nutritive supplements in the diets of dairy and poultry animals, as eating habits reduced during high temperature

Odisha

18 mm (-89% large deficit) rainfall received over Odisha during 01 - 15 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) over Odisha is below normal for week-1 and; normal for week-2.

- Keeping in view of heat wave conditions and forecast of below normal rainfall during next week-1, it is advised to apply frequent irrigation to sugarcane, summer maize, vegetable crops and orchards.
- Under prevailing hot and dry weather condition, mulching is advised to reduce the evaporation from soil in orchard crops.
- Prevailing increasing day temperature may cause bacterial wilt disease in tomato and brinjal. To manage, it is advised to spray Streptocycline @ 1 gm in 10 litres water in the root zone.
- For protection against scorching heat, provide shade by covering the mat on the poultry house. Sprinkle water to the shed at regular intervals to control high temperature. Provide clean and adequate water to the poultry.

Maharashtra

13 mm (-80% large deficit) rainfall over Madhya Maharashtra; 8.2 mm (-86% large deficit) rainfall over Vidarbha; 7.4 mm (-88% large deficit) rainfall over Marathwada; and 48 mm (-79% large deficit) in Konkan region was recorded during 01 - 15 June 2023. The extended range weather forecast (rainfall) for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) is below normal over Konkan, Madhya Maharashtra, Vidarbha and Marathwada for week-1 and; above normal over Madhya Maharashtra and Marathwada and normal over Vidarbha and Konkan 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
- In view of heat waves and thunderstorms with lightning at isolated places, it is advised to provide proper ventilation and heat protection for the animal. Hang curtains around the shed and sprinkle it with water.

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.

- To increase yield as well as to maintain soil health intercropping of Pigeon pea + Pearl millet (2:4), Pigeon pea + Sorghum (3:3 or 2:4), Pigeon pea + Soybean/Green gram/Black gram (1:2 or 2:4) is advised to apply.

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

- For raising finger millet and proso millet nursery, select the well-drained soil. Plough the nursery area and bring the soil to fine tilth, add FYM @250 kg per gunta area.
- 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.
- If an irrigation facility is available, then start land preparation for nursery of vegetable crops. For the nursery of brinjal, chilli and tomato crops, prepare raised bed of 3 m length x 1 m breadth x 15 cm height. Mix well-decomposed FYM @500 g per gunta in to soil at the time of bed preparation.

Tamil Nadu

The amount of rainfall received over Tamil Nadu was 25 mm (-13% deficit) during 01 - 15 June 2023. The extended range weather forecast (rainfall) for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) is above normal for week-1 and; 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

130 mm (-57% deficit) received over Kerala during 01 - 15 June 2023. The extended range weather forecast (rainfall) for the next two weeks (16 - 22 June 2023 and 23 - 29 June 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.
- Make sure that the drainage facilities in the waterlogged areas of the coconut orchard are properly maintained. As a prophylactic measure to bud rot disease in coconut, 1% Bordeaux mixture can be sprayed on coconut crown. Pesticides should not be applied during rain.
- During rainy season, there is a chance of rhizome rot in banana. To manage, ensure the proper drainage facilities. As a precaution, drench the basin with three litre of *Pseudomonas* solution (20 g per one litre of water).

Anantapur

19 mm (-55% deficit) rainfall received over Rayalaseema and 12 mm (-76% deficit) rainfall received over Coastal Andhra Pradesh during 01 - 15 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (16 - 22 June 2023 and 23 - 29 June 2023) is above normal over Rayalaseema and normal over Coastal Andhra Pradesh for week-1 and; above normal over Rayalaseema and Coastal Andhra Pradesh for week-2.

- Due to heat wave prevailing over north and south coastal Andhra Pradesh, the public is advised to stay hydrated during the hot weather and follow the precautions in this regard. Further, the farmers are advised to take up farm operations during morning or evening hours and avoid exposure to heated environments
- 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

11 mm (-68% large deficit) rainfall received over South Interior Karnataka, 14 mm (-89% large deficit) over Coastal Karnataka and 9.4 mm (-68% large deficit) rainfall received over North Interior Karnataka during 01 - 15 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (16 - 22 June 2023 and 23 - 29 June 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 Coastal Karnataka and normal over South Interior Karnataka 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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