



राष्ट्रीय कृषि मौसम परामर्शी सेवाएं बुलेटिन National Agromet Advisory Services Bulletin

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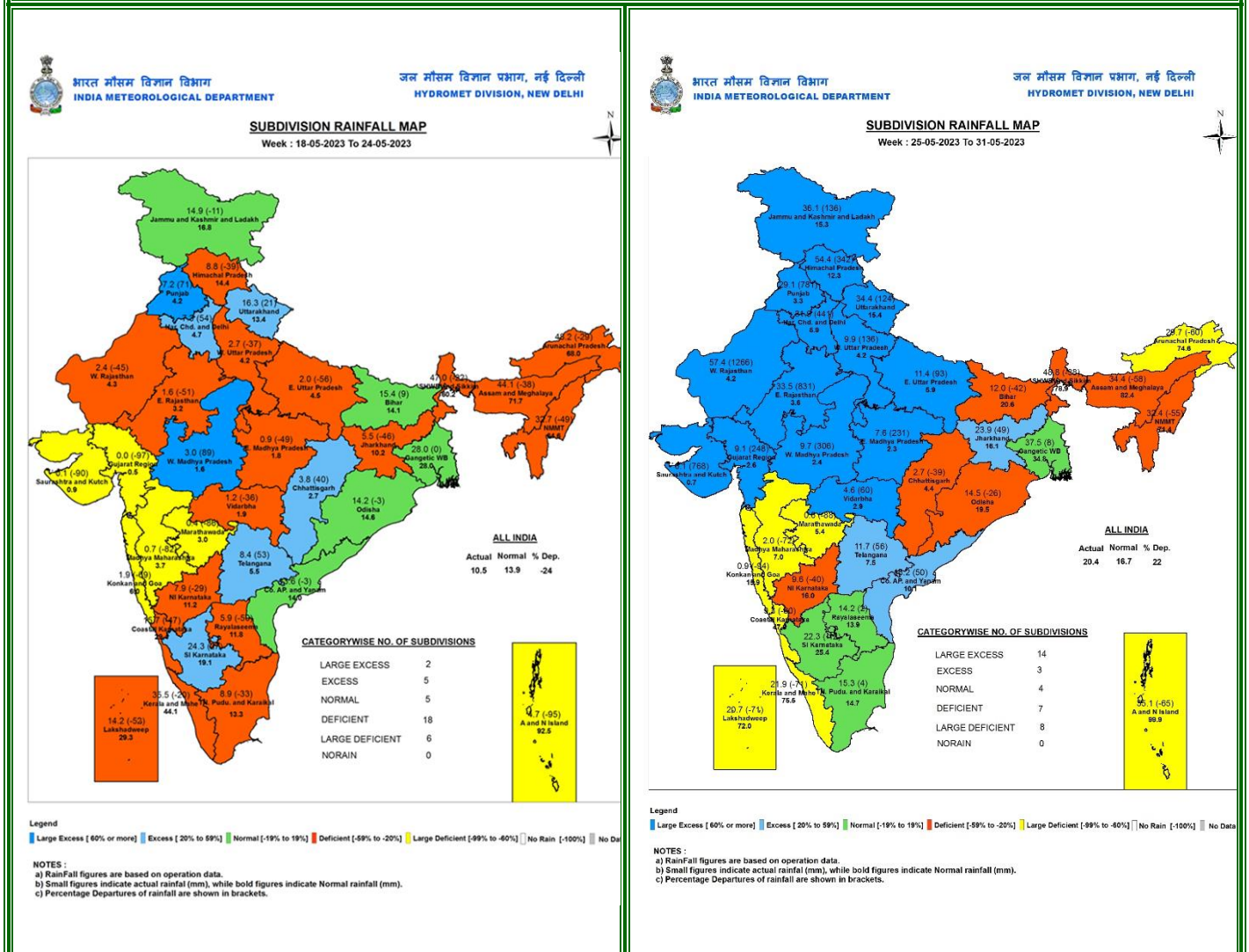
India Meteorological Department (IMD)

पृथ्वी प्रणाली विज्ञान संगठन

Earth System Science Organization

Realized Rainfall and Extended Range Forecast (Rainfall and Temperature)

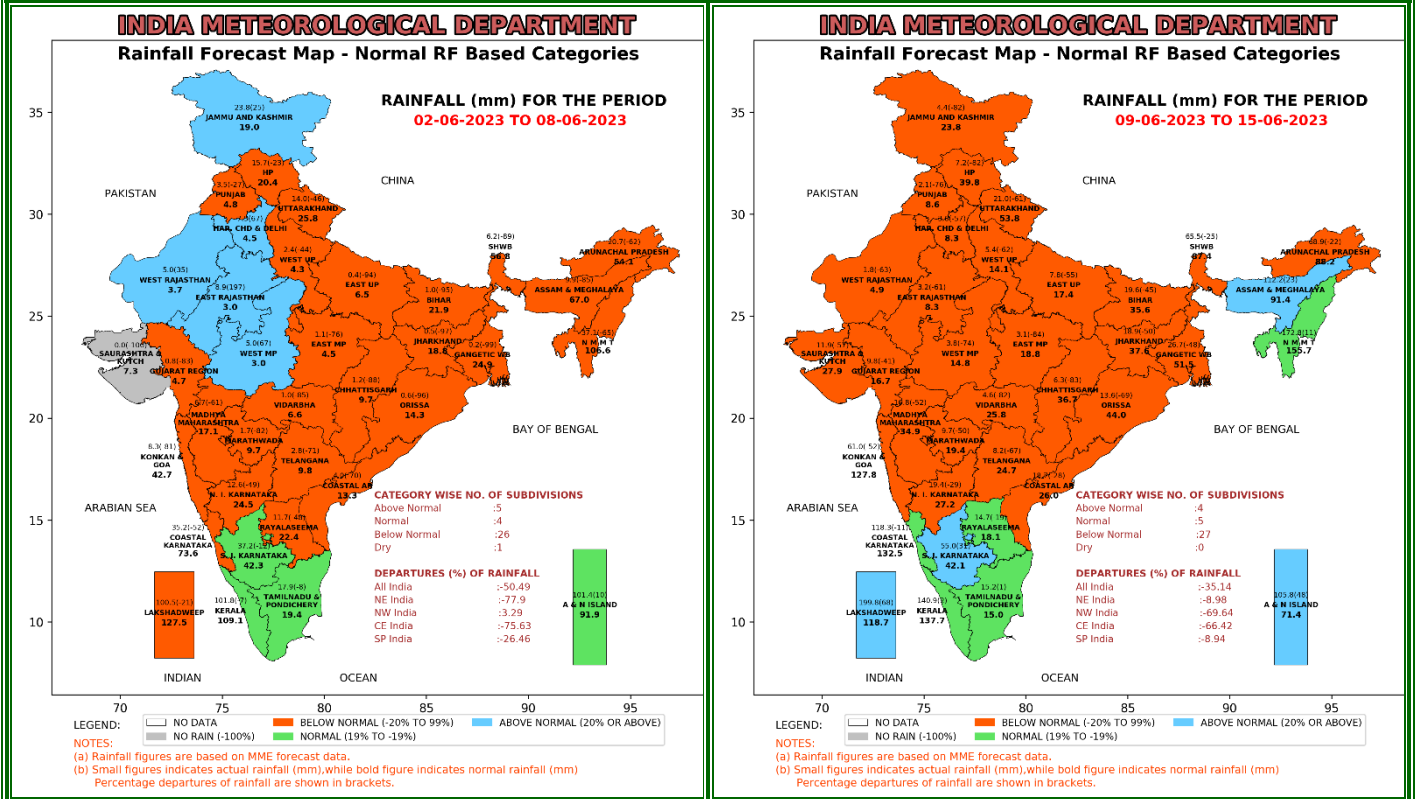
Realized Rainfall (18th May to 31st May, 2023)



- Normal or above normal rainfall occurred in both the weeks over Jammu & Kashmir and Ladakh (UTs), Uttarakhand, Punjab, Haryana Chandigarh & Delhi, Gangetic West Bengal, West Madhya Pradesh, Coastal Andhra Pradesh & Yanam, Telangana and South Interior Karnataka.
- Normal or above normal rainfall occurred in either of the two weeks over Himachal Pradesh, Uttar Pradesh, Bihar, Jharkhand, Odisha, Chhattisgarh, East Madhya Pradesh, Rajasthan, Gujarat State, Vidarbha, Rayalaseema and Tamil Nadu Puducherry & Karaikal.
- Below Normal rainfall/no rain occurred in both the weeks over rest of States and UTs.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC- 31st May) (02nd to 15th June 2023)

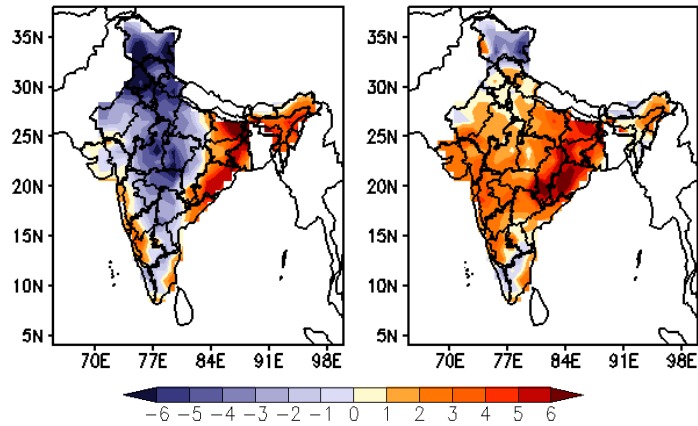


- **Week 1 (02.06.2023 to 08.06.2023):** Rainfall activity associated with Western Disturbance is likely over north India. Rainfall activity is also likely over northeast India, western coastal region, island regions and southern peninsula.
- **Week 2 (09.06.2023 to 15.06.2023):** Rainfall activity is likely over northeast India, western coastal region, island regions and southern peninsula.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for the next 2 weeks (IC- 31st May)
(02nd to 15th June 2023)**

MME forecast Tmax anomaly (Deg C)

(Week1: 02Jun–08Jun) (Week2: 09Jun–15Jun)

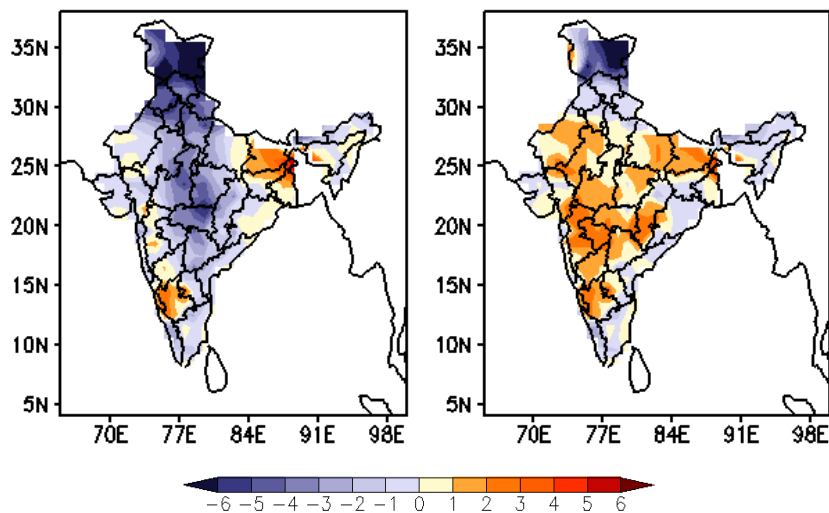


Maximum Temperature (Tmax)

- **Week 1 (02.06.2023 to 08.06.2023):** Tmax is likely to be normal to below normal over most parts of the country. However, it is likely to be above normal over Bihar, Jharkhand, West Bengal, Odisha and parts of west and east coastal regions.
- **Week 2 (09.06.2023 to 15.06.2023):** Tmax is likely to be above normal over most parts of the country except some isolated regions of extreme north India and extreme south peninsula.

MME forecast Tmin anomaly (Deg C)

(Week1: 02Jun–08Jun) (Week2: 09Jun–15Jun)



Minimum Temperature (Tmin)

- **Week 1 (02.06.2023 to 08.06.2023):** Tmin is likely to be below normal over most parts of the country. It is likely to be above normal over parts of Bihar, Jharkhand, West Bengal and Karnataka.
- **Week 2 (09.06.2023 to 15.06.2023):** Tmin is likely to be above normal over most parts of the country. It is likely to be below normal over coastal regions, northeast India and parts of north India.

Strategic Agricultural Planning based on rainfall till 15 June 2023

Agromet Advisories

Uttar Pradesh

No rainfall received over East Uttar Pradesh and over West Uttar Pradesh amount of rainfall received was 0.7 mm (59% excess) during 01 - 02 June 2023. The extended range weather forecast (rainfall) for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) is below normal over East Uttar Pradesh and West Uttar Pradesh for week-1 and; week-2.

Western Uttar Pradesh

- Sowing of *kharif* maize crop is advised with recommended 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*, after the onset of monsoon.
- Due to below normal rainfall forecast during next week-1 and week-2, farmers are advised to do light irrigation in *zaid* maize (milk stage) at evening time.
- Due to prevailing hot and dry weather condition, farmers are advised to harvest mature *zaid* urd and moong crop.
- Broadcast of Phorate 10% CG 10 kg/ha insecticide for protection of stem borer in *zaid* maize at milk stage.

Eastern Uttar Pradesh

- Due to the forecast of below normal rainfall during next two weeks, farmers are advised to provide irrigation in *zaid* maize (milk stage). Weeding and top dressing should be done at proper moisture condition.
- For the management of food borer in brinjal crop at flowering/fruitings stage, farmers are to spray Dimethoate 30% EC and mix well by sticking and spreading agent.
- To protect the vegetables (tomato/chilli/okra) from cut worms, it is advised to spray Profenofos @ 0.5ml/litre of water, sprayed 10 cm away from the root zone at 15 days intervals.

Uttarakhand

17 mm (211% large excess) rainfall was received over Uttarakhand during 01 - 02 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) over Uttarakhand is below normal for week-1 and; week-2.

- Under prevailing weather condition, transplanting of 21-25 days old rice seedling is advised.
- Farmers are advised for sowing of *kharif* crops like finger millet, soybean & maize etc. Seed treatment should be done before sowing.

- Weeding is advised in pigeon pea, barnyard millet and amaranth crops. Keep proper distance between plants by removing dense plants.

Himachal Pradesh

27 mm (700% large excess) rainfall was received over Himachal Pradesh during 01 - 02 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) over Himachal Pradesh is below normal for week-1 and week-2.

- Due to snowfall in upper reaches of Chamba, Kangra, Mandi, Kullu, Lahaul & Spiti, Shimla, Solan and Kinnaur districts and rainfall / hailstorm with gusty winds in all over state. Farmers are advised to protect fruit plant *viz.*, apple, apricot and other stone fruits using shade nets. In case of vegetables farmers can use mulch to protect the recently sown crops.
- The current spell of expected rains might interfere with the harvesting/threshing of wheat in upper areas of the state. The farmers are advised to must take the weather forecast into account while resuming the harvesting/threshing of matured crops.
- 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*
- Farmers are advised to pluck the tea leaves (two leaf and a bud) at 8-10 days interval to maintain the quality and productivity.

Punjab

The amount of rainfall received over Punjab was 16 mm (1365% large excess) during 01 - 02 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) over Punjab is below normal for week-1 and; week-2.

- For the management of root-knot nematode in rice nursery, it is advised to apply mustard cake @ 40 g per square metre 10 days before sowing of nursery.
- Eradicate the weeds like kanghibuti, peelibuti, puthkandaetc growing on cotton field bunds, waste lands, road side and irrigation channels/canals to avoid further spread of whitefly to cotton field.

- Harvest the cucurbits and other vegetables like tomato, chilli, brinjal and okra at regular intervals to get maximum yield. Irrigate crops regularly at the interval of 4-5 days to avoid water stress.
- Paddy straw mulching (10 cm thick layer) in guava orchards can be done in this month to suppress weeds and to conserve soil moisture.

Jammu

The amount of rainfall received over Jammu was 21 mm (435% large excess) during 01 - 02 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) over Jammu is above normal for week-1 and; below normal for week-2.

- Due to sufficient soil moisture, farmers may go for direct sowing of rice and also can continue nursery sowing of early transplanted rice varieties. (var. *IET-1410*, *K-39*, *Ratna*, *PC-19*, *Jaya*).
- Due to chances of gusty winds, proper staking of cucurbit vines (bitter melon, bottle gourd, squash, pumpkin etc.) is recommended. Provide support to the young plants.
- Due to the forecast of above normal rainfall during next week, it is advised to postpone irrigation in fruit orchards.
- To control mango hopper infestation, farmers may spray Imidacloprid @ 0.3ml/litre water or Lambda-cyhalothrin 05 % EC @ 1ml per liter of water during clear weather.

Rajasthan

The amount of rainfall received over East Rajasthan was 3.0 mm (59% excess) during 01 - 02 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) over Rajasthan is above normal for week-1 and; below normal for week-2.

- Due to the forecast of above normal rainfall during next week, farmers are advised to leave the fields open after deep ploughing so that the rain water can be stored in the fields and sow the crops in the accumulated moisture.
- Under prevailing weather condition, timely sowing of cotton is advised. Recommended varieties are: *Ankur-3224* (BG II) and *PCH-9605*.
- For the control of pumpkin beetle and hada beetle in pumpkin crop, it is advised to spray of Diamethoate 30 E.C. @ 1litre /ha during clear weather condition.

Assam

3.5 mm (-86% large deficit) rainfall was received over Assam during 01 - 02 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) over Assam is below normal for week-1 and; above normal for week-2.

- For obtaining higher yield, farmers may go for collection of seeds of recommended sali paddy varieties viz. *Ranjit Sub 1, Bahadur, Satyaranjan, Basundhara, Mahsuri, Ketekijoha* etc.
- In **chronically flood affected areas**, high lands should be selected for raising of varieties viz. *Gitesh, Prafulla*, etc.
- **For flood prone areas**, water-submergence tolerant paddy varieties viz. *Jalashree, Jalkunwari, Swarna Sub-1* etc. should be adopted.
- Interested farmers may select well-drained medium loam soil for ginger cultivation, and complete planting of recommended varieties viz. *Rio-de-Geneiro, Nadia, Karkai, Bardwan, Moran, Jorhat* and *China* within this week.
- Cloudy weather, coupled with moderate rainfall during the past week, might lead to early shoot borer infestation in sugarcane crop. 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 0.5 mm (86% large excess) during 01 - 02 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) over Jharkhand is below normal for week-1 and; week-2.

- Under prevailing weather conditions, farmers are advised to start land preparation for timely (15 to 30 June) sowing of direct seeded upland rice.
- Farmers who wish to prepare papaya seedlings, may sow the seeds in polythene bags filled with soil and well-rotted cow dung manure. After seeding irrigate them as per requirement.
- Harvest summer rice at physiological maturity (80-85% of grains mature from a panicle) to reduce losses due to grain breakage.

Bihar

No rainfall received over Bihar during 01 - 02 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) over Bihar is below normal for week-1 and; week-2.

- Land preparation is advised for paddy nursery. During land preparation, application of cow dung is suggested for good and healthy seedlings.
- Under prevailing weather condition, sowing of ginger is advised. *Maran and Nadia* varieties of ginger are recommended for north Bihar. During land preparation, apply 25 to 30 tons of rotten cow dung, nitrogen@30 to 40 kg, Sulphur @50 kg, potash @80 to 100 kg, zinc sulphate@ 25 to 30 kg, and borax @ 10 to 12 kg per hectare.
- Vaccination is advised for all dairy animals against black quarter and *Hemorrhagic septicemia* diseases.

West Bengal

0.9 mm (-88% large deficit) rainfall received over Gangetic West Bengal and rainfall received over Sub Himalayan West Bengal was 5 mm (-78% large deficit) during 01 - 02 June 2023. The extended range weather forecast (rainfall) for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) is below normal over Gangetic West Bengal and Sub-Himalayan West Bengal during week-1 and; week-2.

- As there is no rainfall forecast during week-1 and week-2, nursery beds may require frequent irrigation so farmers are advised to arrange accordingly.
- Levelling and power tiller operation is advised in the fields after boro rice harvesting for Jute sowing.
- To prevent fruit fly attacks in mango orchard, farmers are advised to install methyl eugenol traps (wooden blocks 5x5x1cm soaked in methyl eugenol, malathion and ethanol @ 6:4:1 during fruiting period @10 traps per hectare, traps should be replenished at 2 months interval. If fruit fly is very serious (> 5/Surveillance trap), give bait sprays on the tree trunks at weekly interval (Bait spray is prepared by mixing 100g of jaggery in one litre of water to which 2 ml of deltamethrin 2.8 EC is to be added).
- 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

0.1 mm (-96% large deficit) rainfall was received over Chhattisgarh during 01 - 02 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) over Chhattisgarh is below normal for week-1 and; week-2.

- Under prevailing weather condition, harvesting of matured summer rice, summer sesamum, summer black gram and green gram crops is advised.
- Inter-cultural operations, fertilizer application, and earthing followed by irrigation are advised in sugarcane at tillering stage.
- Farmers who wish to grow fruit plantation crops are advised for field preparation and digging of pits. Farm yard manure, termite resistant insecticide and recommended dose of fertilizers should be mixed and filled 10 cm above the ground level.

Madhya Pradesh

No rainfall was received over Chhattisgarh during 01 - 02 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) over Chhattisgarh is below normal for week-1 and; week-2.

- Due to extreme rise in day temperature and forecast of below normal rainfall, 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.

Odisha

2.5 mm (-49% deficit) rainfall received over Odisha during 01 - 02 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) over Odisha is below normal for week-1 and; week-2.

- Under prevailing weather condition sowing of rice is advised with recommended upland rice varieties (Matures in 100-120 days) like *Khandagiri, Sahabhagi Dhan, Mandakini, Naveen, GB-1, Bina-11, MTU-1010, Satyabhama, Swarna Shreya* etc. Medium land rice varieties (Matures in 120-140 days) like *MTU 1156, MTU 1153, Lalat, Improved Lalat, Manaswini, MTU-1001, Sampada, Gitanjali, Nua acharmati* etc. Low land rice varieties (Matures >140 days) like *Pratikshya, Swarna, Swarna Sub-1, Mrinalini, Hashanta, Rani Dhan, Pooja, MTU-1064, Sarala, Durga, Pradhan Dhan* etc.
- Due to prevailing dry weather condition and forecast of below normal rainfall during next two weeks, farmers are advised to provide adequate amount of irrigation and apply mulches to maintain high moisture status in the soil.
- For protection against scorching heat, it is advised to provide shade in the poultry house. Sprinkle water on the shed at regular intervals to control high temperature. Provide clean and adequate water to the poultry.

Gujarat

No rainfall received over Gujarat during 01 - 02 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) over Gujarat is below normal for week-1 and; week-2.

- Land preparation for sowing of rice is advised. Farmers are advised to procure good quality certified seeds.
 - Early maturing variety (80-100 days) : GR-6, GR-7, GR -12, Gurjari, I R -28, GAR -3
 - Mid-Late maturing variety (100-120 days) : Jaya, GR -103, GNR - 3, S L R -51214, GNR -2, MTU-1010, AUR-1, GAR-13, Sardar.
 - Late maturing variety (130-140 days) : GAR 14, CR Dhan 300, Krishna Kamod
- Land preparation for sowing of finger millet is advised after harvesting of summer crop. Apply well decomposed FYM/Compost at the time of land preparation.

Maharashtra

1.6 mm (-68% deficit) rainfall over Madhya Maharashtra; no rainfall over Vidarbha and Marathwada; 2.2 mm (-85% large deficit) in Konkan region was recorded during 01 - 02 June 2023. The extended range weather forecast (rainfall) for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) is below normal over Konkan, Madhya Maharashtra, Vidarbha and Marathwada for week-1 and; 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*.
- In view of heat waves and thunderstorms with lightning at isolated places, it is advised to provide proper ventilation and heat protection in the animal. Hang curtains around the shed and sprinkle it with water.

Marathwada

- For sowing of pigeonpea, land preparation is advised by at least one ploughing followed by 2 to 3 harrowing. Apply well decomposed FYM before last harrowing @ 5 tons per hectare.
- Irrigation management is advised in fruit orchards during early in the morning or at evening with the help of drip irrigation system in newly planted fruit plants. Provide shade to newly planted and young fruit plants to protect them from temperature and mulching should be done around the stem.

Madhya Maharashtra

- 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 field like leveling, 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 upto 1 meter height from soil level to avoid trunk cracking in mango.

Konkan

- Due to forecast of below normal rainfall during next week-1 and week-2, farmers are advised for do not undertake the sowing of kharif crops.

- Harvest the mature mango fruits by observing rainfall situation. After harvesting of mango fruits, light pruning is necessary for canopy management and early induction of vegetative flush.
- Start the land preparation for nursery of vegetable crops. For 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 guntha in to soil at the time of bed preparation.

Tamil Nadu

The amount of rainfall received over Tamil Nadu was 3.2 mm (-14% deficit) during 01 - 02 June 2023. The extended range weather forecast (rainfall) for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) is normal for week-1 and; week-2.

- Since dry weather is expected, cotton crops may be harvested.
- To manage the shoot fly infestation in sorghum crops, hence farmers are advised to set up the TNAU low-cost fish meal trap @ 12/ha till at 30 days old crop.

Kerala

7 mm (-74% large deficit) received over Kerala during 01 - 02 June 2023. The extended range weather forecast (rainfall) for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) is normal for week-1 and; week-2.

- Land preparation and nursery for *virippu* paddy (rainfed) can be started after summer rains.
- Improve pre-drainage facilities in areas prone to waterlogging due to monsoon rains. Special crop management is required for agricultural crops before monsoon season.
- Under prevailing weather conditions, there is a chance of sigatoka disease in banana. As a prophylactic measure, it is advised to spray 1% Bordeaux mixture.
- In order to prevent fungal diseases during monsoon season, root dipping of vegetable seedlings in *Pseudomonas* solution is recommended before planting .

Anantapur

5.5 mm (14% excess) rainfall received over Rayalaseema and 0.2 mm (-92% large deficit) rainfall received over Coastal Andhra Pradesh during 01 - 02 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) is below normal over Rayalaseema and Coastal Andhra Pradesh for week-1 and; normal over Rayalaseema and below normal over Coastal Andhra Pradesh for week-2.

- In view of the scorching heat due to heat waves, 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

- Where ever 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.
- Present weather conditions are congenial for the incidence of fruit borer in brinjal grown in East Godavari, Krishna, Guntur, and Nellore districts. To control, spraying of Broflanilide 20% SC @ 1ml/4liter of water is recommended.

Karnataka

6.7 mm (-23% deficit) rainfall received over South Interior Karnataka, 8.8 mm (-56% deficit) over Coastal Karnataka and 4.7 mm (-25% deficit) rainfall received over North Interior Karnataka during 01 - 02 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (02 - 08 June 2023 and 09 - 15 June 2023) is below normal over North Interior Karnataka and Coastal Karnataka and normal over South Interior Karnataka for week-1 and; below normal over North Interior Karnataka, normal over Coastal Karnataka and above normal over South Interior Karnataka week-2.

South Interior Karnataka

- Mango growers advised to harvest matured fruit and try to leave one or two inches of stem in the mango bunch, which helps to avoid sap burn disease.
- In mango, fruit fly damage is also noticed Farmers are advised to install methyl eugenol traps (wooden blocks 5x5x1cm soaked in methyl eugenol, malathion and ethanol @ 6:4:1 during fruiting period @ 10 traps per hectare, traps should be replenished at 2 months interval. If fruit fly is very serious (> 5/Surveillance trap), give bait sprays on the tree trunks at weekly interval (Bait spray is prepared by mixing 100g of jaggery in one litre of water to which 2 ml of deltamethrin 2.8 EC is to be added).

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