



राष्ट्रीय कृषि मौसम परामर्शी सेवाएं बुलेटिन National Agromet Advisory Services Bulletin

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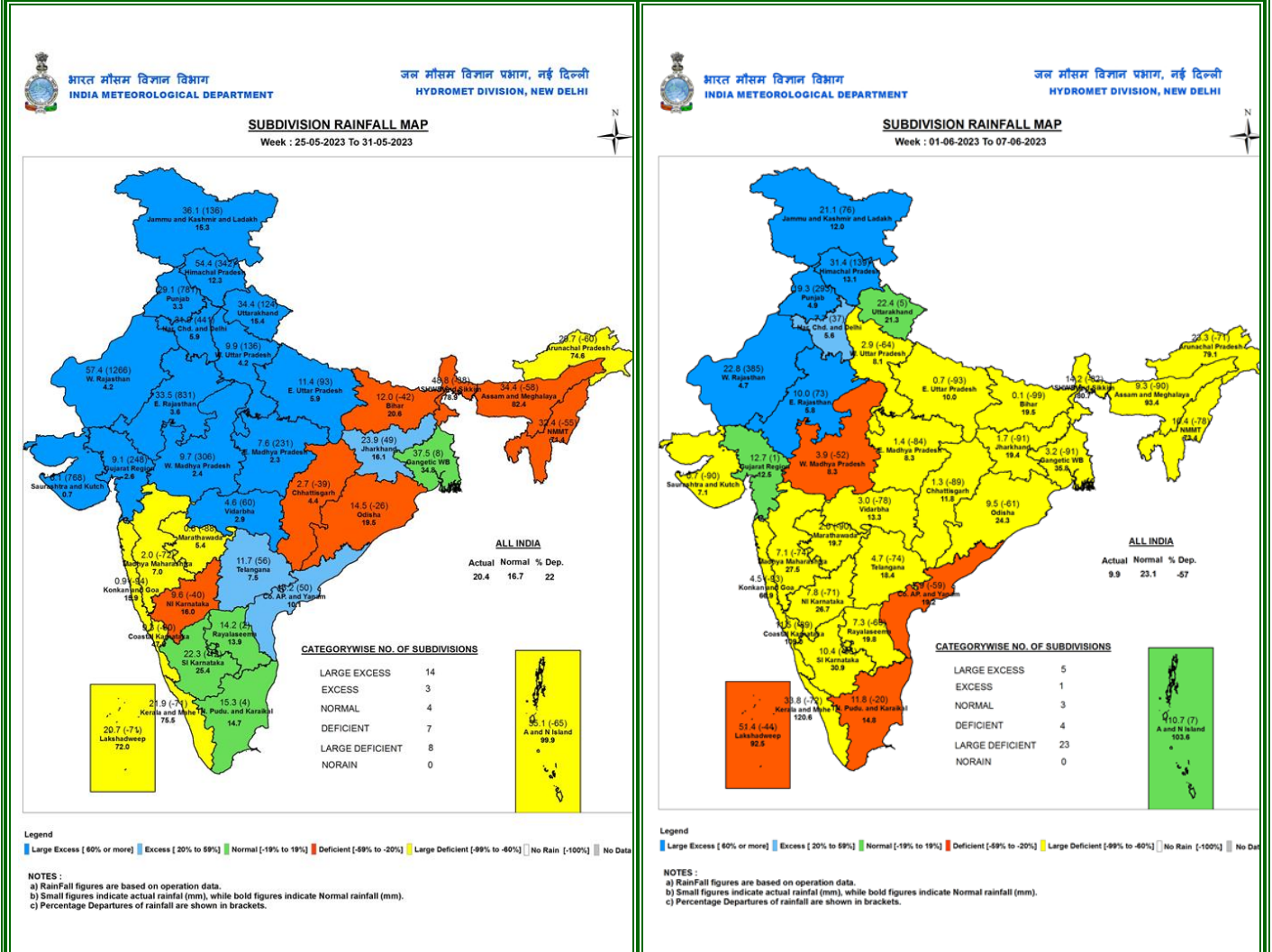
पृथ्वी प्रणाली विज्ञान संगठन

Earth System Science Organization

Realized Rainfall and Extended Range Forecast (Rainfall and Temperature)

Realized Rainfall

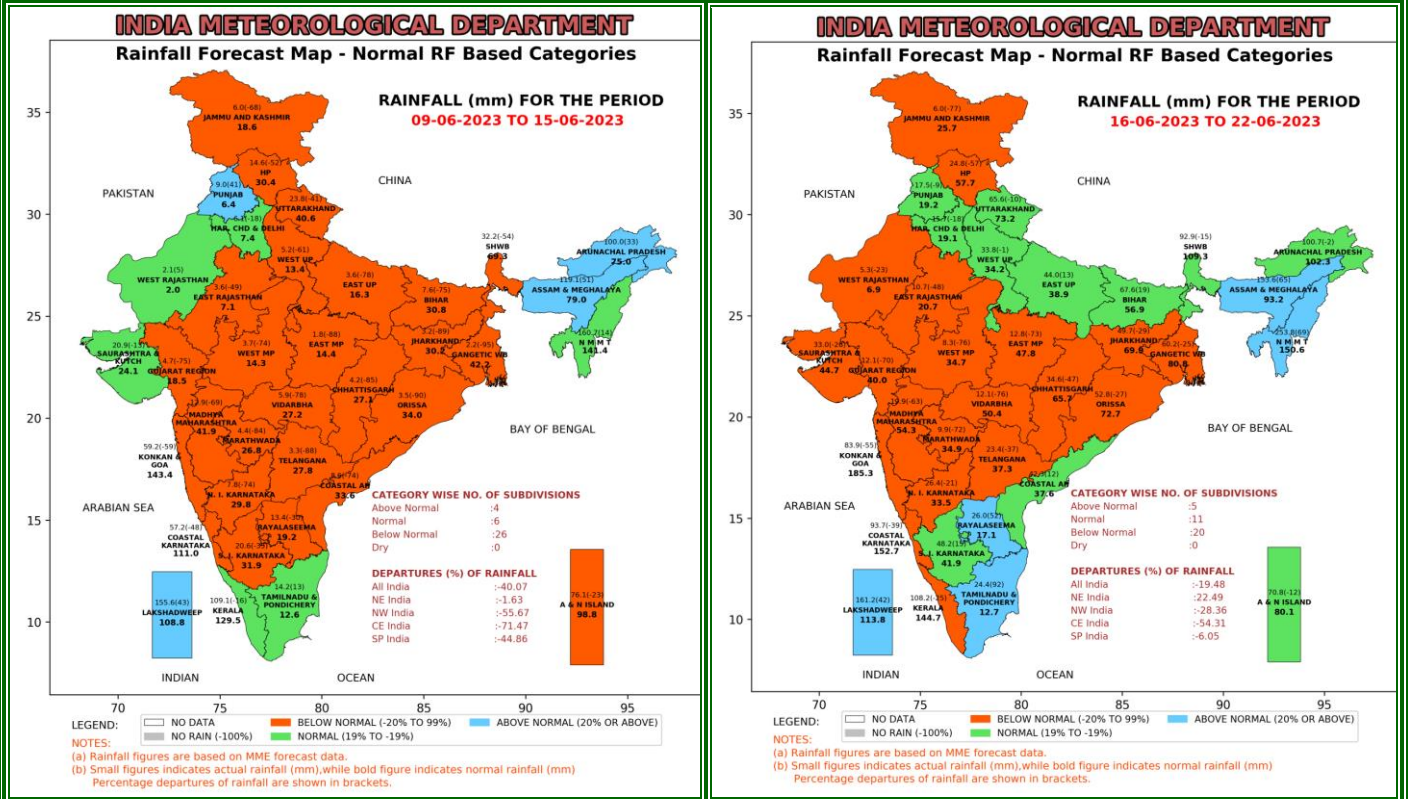
(25th May to 07th June, 2023)



- Normal or above normal rainfall occurred in both the weeks over Jammu & Kashmir and Ladakh (UTs), Himachal Pradesh, Uttarakhand, Punjab, Haryana Chandigarh & Delhi, Rajasthan and Gujarat Region.
- Normal or above normal rainfall occurred in either of the two weeks over Uttar Pradesh, Jharkhand, Gangetic West Bengal, Saurashtra & Kutch, Madhya Pradesh, Vidarbha, Telangana, Andhra Pradesh & Yanam, Tamil Nadu Puducherry & Karaikal, South Interior Karnataka and Andaman & Nicobar Islands.
- Below Normal rainfall occurred in both the weeks over rest of States and UTs.

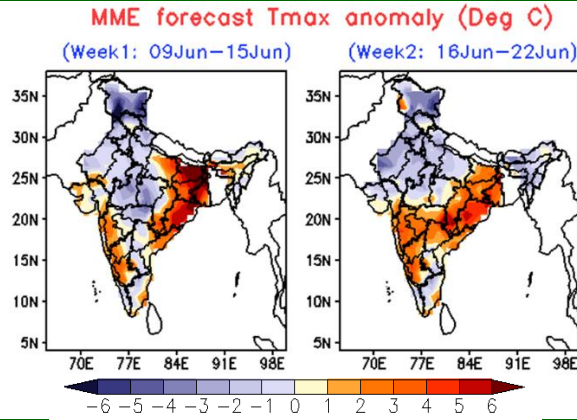
Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC- 07th June) (09th to 22nd June 2023)



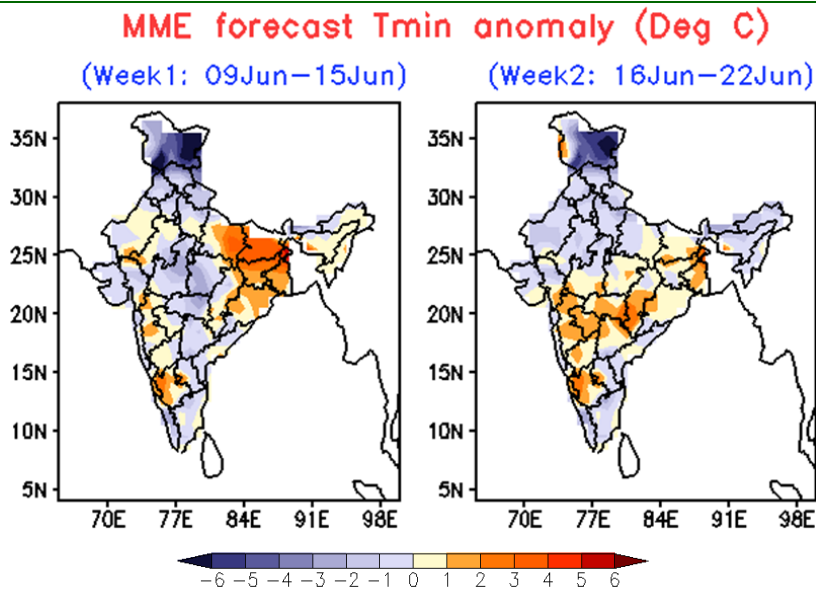
- **Week 1 (09.06.2023 to 15.06.2023):** Rainfall activity associated with Western Disturbance is likely over north India. Rainfall activity is also likely over northeast India and west coast.
- **Week 2 (16.06.2023 to 22.06.2023):** Rainfall activity associated with Western Disturbance is likely over north India, Uttar Pradesh, Bihar, Jharkhand and adjoining region. Rainfall activity is also likely over northeast India and west coast.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for the next 2 weeks (IC- 07th June)
(09th to 22nd June 2023)**



Maximum Temperature (Tmax)

- **Week 1 (09.06.2023 to 15.06.2023):** Tmax is likely to be normal to below normal over most parts of the central India and adjoining northwest India. However, it is likely to be above normal over Odisha, West Bengal, Jharkhand, Bihar, Coastal Andhra Pradesh, coastal Tamil Nadu and western coastal region of Karnataka, Maharashtra and Gujarat.
- **Week 2 (16.06.2023 to 22.06.2023):** Tmax is likely to be normal to below normal over most parts of the central India and adjoining northwest India. It is likely to be above normal over Odisha, Chhattisgarh, West Bengal, Jharkhand, Bihar, Coastal Andhra Pradesh, Maharashtra, Karnataka and parts of Gujarat.



Minimum Temperature (Tmin)

- **Week 1 (09.06.2023 to 15.06.2023):** Tmin is likely to be below normal over most parts of the country. It is likely to be above normal over parts of Uttar Pradesh, Bihar, Jharkhand, West Bengal, Odisha and Karnataka.
- **Week 2 (16.06.2023 to 22.06.2023):** Tmin is likely to be above normal over most parts of Central and East India. It is likely to be below normal over coastal regions, northeast India and north India.

Agromet Advisories

Uttar Pradesh

The amount of rainfall received over East Uttar Pradesh was 0.7 mm (-95% large deficit) and over West Uttar Pradesh amount of rainfall received was 3.0 mm (-95% large deficit) during 01 - 08 June 2023. The extended range weather forecast (rainfall) for the next two weeks (09 - 15 June 2023 and 16 - 22 June 2023) is below normal over East Uttar Pradesh and West Uttar Pradesh for week-1 and; normal 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 and forecast of below normal rainfall during next week, farmers are advised for sowing of *kharif* maize crop under assured irrigation 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*.
- Due to below normal rainfall forecast during next two weeks, 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 crops.
- As hot and dry weather is forecasted during next week, farmers are advised to use green fodder, easily digestible mineral mixture and salt to feed animals.

Eastern Uttar Pradesh

- Due to the forecast of below normal rainfall during the next two weeks, farmers are advised to provide irrigation in *zaid* maize (pre-maturity stage). Weeding and top dressing should be done at proper moisture condition.
- For the management of fruit and shoot borer in brinjal crop at flowering/fruitlet stage, farmers are to spray Dimethoate 30 EC @ 1ml/l or Emamectin Benzoate 5SG @ 0.5 g/litre and mix well by sticking and spreading agent.
- To protect the vegetables (tomato/chilli/okra) from cut worms, it is advised to spray Profenofos @ 0.5 ml/litre of water, sprayed 10 cm away from the root zone at 15 days intervals.

Uttarakhand

22 mm (-16% deficit) rainfall was received over Uttarakhand during 01 - 08 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (09 - 15 June 2023 and 16 - 22 June 2023) over Uttarakhand is below normal for week-1 and; normal for week-2.

- Wheat is in the maturity stage in higher altitude areas. Hence, the farmers are advised to harvest mature crops and keep it in a dry place.
- Under prevailing weather conditions, farmers are advised to continue the sowing of *kharif* crops like finger millet, soybean, urd, rice bean etc.
- Due to occurrence of hail during last week, it is advised to use anti-hail net over fruit trees.

Himachal Pradesh

32 mm (100% large excess) rainfall was received over Himachal Pradesh during 01 - 08 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (09 - 15 June 2023 and 16 - 22 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 and Spiti, Shimla, Solan and Kinnaur districts and rainfall / hailstorm with gusty winds in all over 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.
- 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.

Punjab

The amount of rainfall received over Punjab was 19 mm (231% large excess) during 01 - 08 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (09 - 15 June 2023 and 16 - 22 June 2023) over Punjab is above normal for week-1 and; normal for week-2.

- To protect the fruit crops 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. White wash mixture can be applied on the main trunks of the fruit trees to protect them from intense heat.
- Eradicate the weeds like kanghibuti, peelibuti, puthkanda etc. 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 22 mm (65% large excess) during 01 - 08 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (09 - 15 June 2023 and 16 - 22 June 2023) over Jammu is below normal for week-1 and; 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 sufficient soil moisture for early sown maize crop, therefore farmers are advised to start land preparation for early sown irrigated maize crop.
- Due to the forecast of rise in temperature and below normal rainfall during next week-1 and week-2, it is advised to apply irrigation as per requirement of vegetable crops.
- Protect bee colonies from high temperature by shifting it to shady areas or migrate to cooler places or cover them with wet gunny bags.

Rajasthan

The amount of rainfall received over East Rajasthan was 10.1 mm (38% excess) during 01 - 08 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (09 - 15 June 2023 and 16 - 22 June 2023) over Rajasthan is below normal for week-1 and; week-2.

- Farmers are advised to prepare nursery for tomato. Seed should be sown in nursery after treatment with Thiram 2.0 – 2.5 g/kg of seed.
- For the control of yellow mosaic transmitting whitefly in green gram, by spraying Dimethoate 30 EC @ 1ml/litre of water.

Assam

10.0 mm (-91% large deficit) rainfall was received over Assam during 01 - 08 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (09 - 15 June 2023 and 16 - 22 June 2023) over Assam is above normal for week-1 and; 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.
- 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). 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 1.6 mm (-93% large deficit) during 01 - 08 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (09 - 15 June 2023 and 16 - 22 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.
- Looking at the weather condition, fertilizer application, spraying of insecticides/pesticides and irrigation activities can be done when the weather remains calm.
- 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

0.1 mm (-99% large deficit) rainfall was received over Bihar during 01 - 08 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (09 - 15 June 2023 and 16 - 22 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.

- Under prevailing weather condition, prepare a nursery for long duration rice. Recommended varieties of long duration paddy are *Rajshri*, *Rajendra Mansuri*, *Rajendra Sweta*, *Kishori*, *Swarna*, *Swarna Sub-1*, *BPT-05204*, and *Satyam*.
- Vaccination is advised for all dairy animals against Anthrax and Black Quarter diseases.

West Bengal

3.2 mm (-92% large deficit) rainfall received over Gangetic West Bengal and rainfall received over Sub Himalayan West Bengal was 15.1 mm (-84% large deficit) during 01 - 08 June 2023. The extended range weather forecast (rainfall) for the next two weeks (09 - 15 June 2023 and 16 - 22 June 2023) is below normal over Gangetic West Bengal and Sub-Himalayan West Bengal during week-1 and; below normal over Gangetic West Bengal and normal Sub-Himalayan West Bengal during 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 non-availability of surface water. 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

1.4 mm (-90% large deficit) rainfall was received over Chhattisgarh during 01 - 08 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (09 - 15 June 2023 and 16 - 22 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. Well decomposed Farm yard manure, and recommended dose of fertilizers should be mixed and filled 10 cm above the ground level.

Madhya Pradesh

1.6 mm (-85% large deficit) rainfall was received over Madhya Pradesh during 01 - 08 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (09 - 15 June 2023 and 16 - 22 June 2023) over Madhya Pradesh is below normal for week-1 and; week-2.

- Due to heat wave, 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

10 mm (-63% large deficit) rainfall received over Odisha during 01 - 08 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (09 - 15 June 2023 and 16 - 22 June 2023) over Odisha is below normal for week-1 and; week-2.

- It is time for sowing of maize for green cob purpose under irrigated condition. Grow high yielding varieties like *Navjot*, *Shakti*, *Decan-107*, *Decan-109*.
- For planting of fruit crops in July and August, it is advised to go for digging of pits before onset of monsoon for solarisation of soils to kill the hibernated insects and their eggs.
- To manage pod borer infestation in drum stick, spray Cypermethrin @ 80 g per acre at 15 days interval.

Gujarat

13 mm (-12% deficit) rainfall received over Gujarat during 01 - 08 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (09 - 15 June 2023 and 16 - 22 June 2023) over Gujarat is below normal for week-1 and; week-2.

- Earthing up should be done in the sugarcane field. Farmers are advised to make 1-meter deep drainage ditch to drain excess water, maintain soil fertility and reduce salinity.
- Farmers are advice for deep ploughing in land preparation for pigeon pea sowing with application of 8-10 tons well decomposed FYM. Add *Trichoderma* fungus culture with manure to control the wilt disease.
- For the control of powdery mildew disease in cluster bean, spraying of Hexaconazole 5 EC @10 ml/10 litres are advised.

Maharashtra

7.5 mm (-68% large deficit) rainfall over Madhya Maharashtra; 03 mm (-79% large deficit) rainfall over Vidarbha; 01 mm (-91% large deficit) rainfall over Marathwada; and 5 mm (-95% large deficit) in Konkan region was recorded during 01 - 08 June 2023. The extended range weather forecast (rainfall) for the next two weeks (09 - 15 June 2023 and 16 - 22 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*.
- 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

- For sowing of pigeon pea crop, farmers are advised to select varieties *BDN 2013-41 (Godavari), BDN-711, BSMR-736, BSMR-853 (Vaishali), BDN-716, BDN-2, BDN-708 (Amol), Vipula, Phule Rajeshwari, AKT 8811, PKV Tara* and *ICPL 87119*.
- For plantation of banana, it is advised to select varieties like *Grand Naine, Ardhapuri, Basrai, Shrimanti, Phule pride*, etc.

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 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 13 mm (-24% deficit) during 01 - 08 June 2023. The extended range weather forecast (rainfall) for the next two weeks (09 - 15 June 2023 and 16 - 22 June 2023) is normal for week-1 and; above normal for week-2.

- Since dry weather is expected, cotton crops may be harvested.
- 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

57 mm (-61% large deficit) received over Kerala during 01 - 08 June 2023. The extended range weather forecast (rainfall) for the next two weeks (09 - 15 June 2023 and 16 - 22 June 2023) is normal for week-1 and; below normal for week-2.

- Land preparation and nursery for *virippu* paddy (rainfed) can be started after summer rains.
- Leaf rust disease may become severe in coffee, due to increase in relative humidity. To manage, it is advised to apply 0.5% Bordeaux mixture or plant wax 20 EC @1-2 ml per litre to control the disease.
- 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

11.5 mm (-47% deficit) rainfall received over Rayalaseema and 09 mm (-59% deficit) rainfall received over Coastal Andhra Pradesh during 01 - 08 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (09 - 15 June 2023 and 16 - 22 June 2023) is below normal over Rayalaseema and Coastal Andhra Pradesh for week-1 and; below normal over Rayalaseema and 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

- 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.
- Farmers are advised to select high yielding varieties viz., Kadiri-6, Kadiri Harithandhra, Anantha, Greeshma, Narayani, Abhaya, Dharani, Kadiri lepakshi and TCGS-1694.

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 - 08 June 2023. The extended range weather forecast (rainfall) provided for the next two weeks (09 - 15 June 2023 and 16 - 22 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 *khari* sowing with recommended varieties viz., TTB-7, BRG-1,2,4 and 5
- Mango growers are advised to harvest matured mango fruit and try to leave one or two inches of stem in the mango bunch, which helps to avoid sap burn disease. Later the mango fruits should be wrapped by using papers and then kept in plastic crates.

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