



राष्ट्रीय कृषि मौसम परामर्शी सेवाएं बुलेटिन National Agromet Advisory Services Bulletin

जारी करने की तिथि/ **Date of issue: 22 May 2023**

आधारित/**based on**

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

वैधता/**Validity: 19 May - 01 June 2023**

जारीकर्ता/**Issued by**

अखिल भारतीय समन्वित कृषि-मौसम विज्ञान अनुसंधान परियोजना

AICRP on Agro-Meteorology (AICRPAM)

केंद्रीय बारानी कृषि अनुसंधान संस्थान

Central Research Institute for Dryland Agriculture (CRIDA)

भारतीय कृषि अनुसंधान परिषद

Indian Council of Agricultural Research (ICAR)

और

भारतीय मौसम विज्ञान विभाग

India Meteorological Department (IMD)

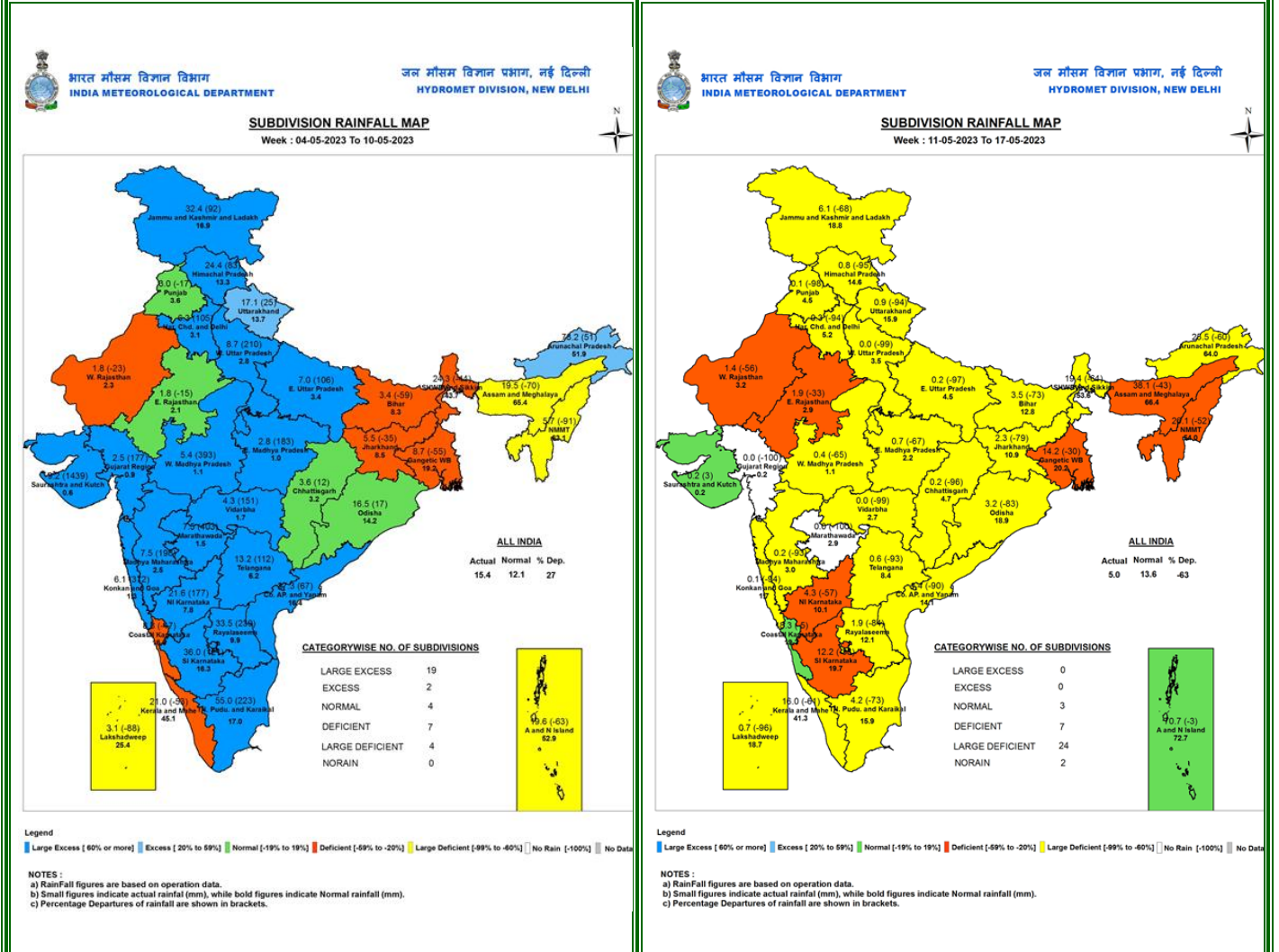
पृथ्वी प्रणाली विज्ञान संगठन

Earth System Science Organization

Realized Rainfall and Extended Range Forecast (Rainfall and Temperature)

Realized Rainfall

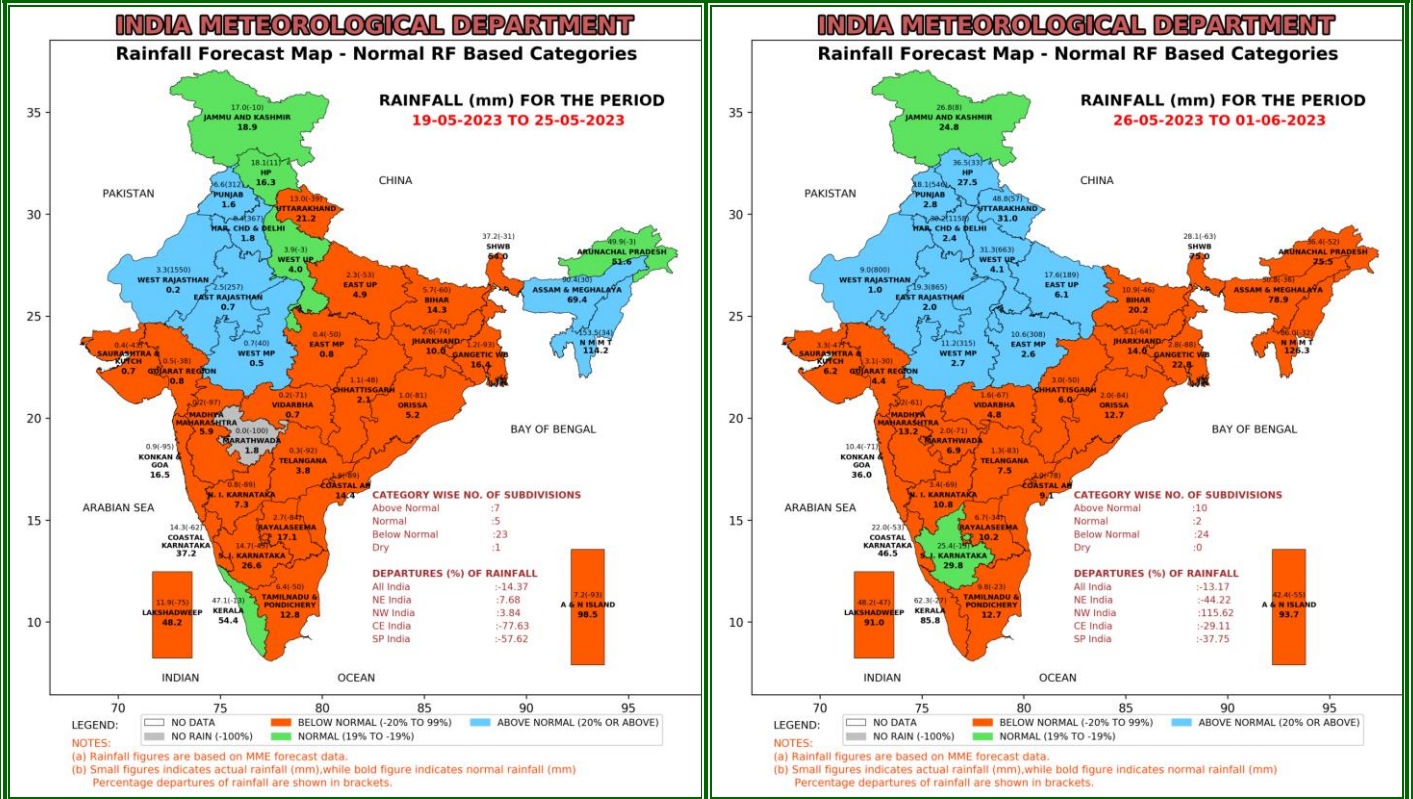
(04th May to 17th May, 2023)



- Normal or above normal rainfall occurred in both the weeks over Saurashtra & Kutch.
- 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, Uttar Pradesh, Arunachal Pradesh, East Rajasthan, Madhya Pradesh, Chhattisgarh, Odisha, Gujarat Region, Maharashtra, Telangana, Andhra Pradesh & Yanam, Karnataka, Tamil Nadu Puducherry & Karaikal and Andaman & Nicobar Islands.
- Below Normal rainfall/no rain occurred in both the weeks over West Rajasthan, Bihar, Jharkhand, West Bengal & Sikkim, Assam & Meghalaya, Nagaland Manipur Mizoram & Tripura (NMMT), Kerala & Mahe and Lakshadweep.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC- 17th May) (19th May to 01st June 2023)



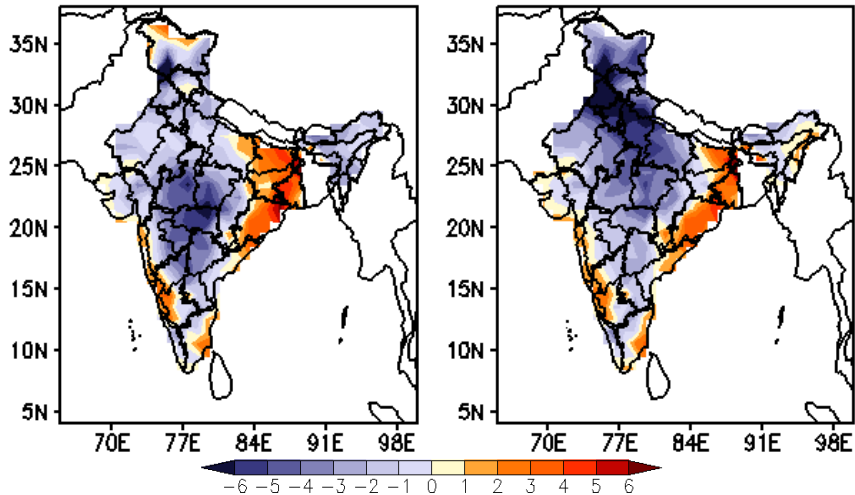
- **Week 1 (19.05.2023 to 25.05.2023):** Rainfall activity associated with Western Disturbance is likely over northwest India. Rainfall is also expected over northeast India.
- **Week 2 (26.05.2023 to 01.06.2023):** Rainfall activity associated with Western Disturbance is likely over northwest and adjoining central India. Rainfall is also expected over northeast India.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for the next 2 weeks (IC- 17th May)
(19th May to 01st June 2023)**

MME forecast Tmax anomaly (Deg C)

(Week1: 19May–25May)

(Week2: 26May–01Jun)



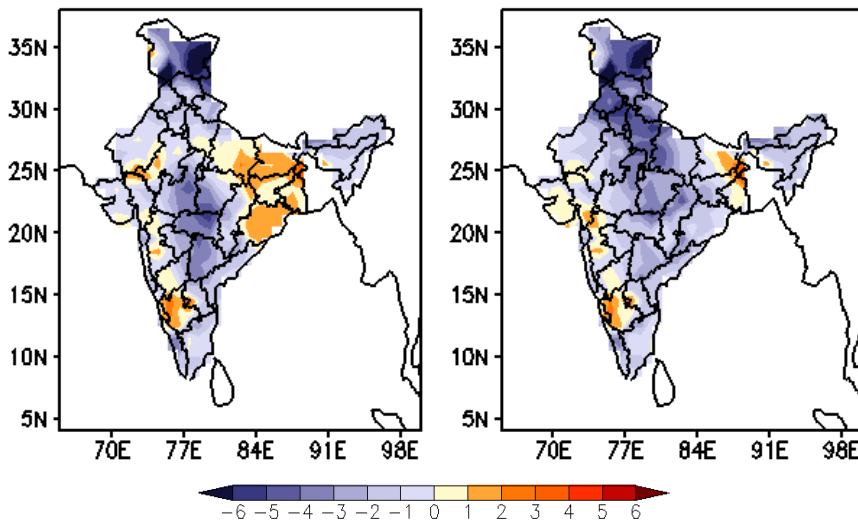
Maximum Temperature (Tmax)

- **Week 1 (19.05.2023 to 25.05.2023) and Week 2 (26.05.2023 to 01.06.2023):** Tmax is likely to be below normal over central and adjoining northwest India. It is likely to be above normal over Bihar, Jharkhand, Odisha, Gangetic West Bengal and parts of Uttar Pradesh, Coastal Andhra Pradesh and coastal Tamil Nadu.

MME forecast Tmin anomaly (Deg C)

(Week1: 19May–25May)

(Week2: 26May–01Jun)



Minimum Temperature (Tmin)

- **Week 1 (19.05.2023 to 25.05.2023):** Tmin is likely to be below normal over many parts of country and above normal over Uttar Pradesh, Odisha, Jharkhand, Bihar, West Bengal and Karnataka.
- **Week 2 (26.05.2023 to 01.06.2023):** Tmin is likely to be below normal over most parts of country.

Agromet Advisories

Uttar Pradesh

The amount of rainfall received over East Uttar Pradesh was 49 mm (105% large excess) and over West Uttar Pradesh was 76 mm (207% large excess) during 01 March - 18 May 2023. The extended range weather forecast (rainfall) for the next two weeks (19 - 25 May 2023 and 26 May - 01 June 2023) is below normal over East Uttar Pradesh and normal over West Uttar Pradesh for week-1 and; above normal over East Uttar Pradesh and West Uttar Pradesh for week-2.

Western Uttar Pradesh

- As per the forecast of hot weather in next week, farmers are advised for light irrigation in *zaid* maize, which is at silking stage, during evening time. Weeding and top dressing should also be done at proper soil moisture.
- Farmers are also advised for light irrigation and intercultural in sugarcane crop which is at vegetative stage.
- For the management of food borer in brinjal crop at flowering/fruitings stage, farmers are advised to spray Azadirachtin 1.0% EC (1000ppm).
- Broadcast of Phorate 10% CG 10 kg/ha insecticide for protection of stem borer in *zaid* maize at silking stage.

Eastern Uttar Pradesh

- Due to chances of increase in temperature, farmers are advised for light irrigation in *zaid* maize (silking stage) during late hours, 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 advised to spray Azadirachtin 1.0% EC (1000ppm).
- 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.
- For protection against infectious Brusal disease (Gumboro), vaccinate 12-14 days old poultry birds. Vaccinate the 1-month-old ducklings with cholera vaccine in order to immunize them against avian cholera.

Assam

275 mm (-37% deficit) rainfall was received over Assam during 01 March - 18 May 2023. The extended range weather forecast (rainfall) provided for the next two weeks (19 - 25 May 2023 and 26 May - 01 June 2023) over Assam is above normal for week-1 and; below normal for week-2.

- Taking into account the amount of rainfall received during the past week, it is advised to avoid waterlogging in jute fields. Remove excess water from the field immediately by creating field ditches of 20 cm wide and 20 cm depth, along the gradient, at an interval of 10 m.
- Interested farmers may select well drained medium loam soil for ginger cultivation, and complete planting of recommended varieties viz. *Rio-de-Genero*, *Nadia*, *Karkai*, *Bardwan*, *Moran*, *Jorhat* and *China* within this week.
- Due to forecast of moderate rainfall during next week-1, it is advised to make provisions for controlled drainage at required intervals in the orchards to drain out the excess water. Provide mechanical support to the banana crop to protect them from lodging due possible strong winds.

Uttarakhand

179 mm (36% excess) rainfall was received over Uttarakhand during 01 March - 18 May 2023. The extended range weather forecast (rainfall) provided for the next two weeks (19 - 25 May 2023 and 26 May - 01 June 2023) over Uttarakhand is below normal for week-1 and; normal for week-2.

- Under prevailing weather condition, farmers are advised for land preparation for rice and sowing of seed of rice in nursery is also advised.
- Farmers are also advised to complete the planting of ginger and use thick mulch materials over the crop.
- Farmers are advised to harvest the mature tomato fruits and install pheromone trap @ 25 per hectare to control the insects.
- Maintain proper ventilation in mushroom crop room. Fix insect proof net in the window to control flies. Avoid over watering to the mushroom bags.

Himachal Pradesh

225 mm (4% excess) rainfall received over Himachal Pradesh during 01 March - 18 May 2023. The extended range weather forecast (rainfall) provided for the next two weeks (19 - 25 May 2023 and 26 May - 01 June 2023) over Himachal Pradesh is normal for week-1 and above normal for week-2.

- Start land preparation for sowing of rice nursery (basmati and long duration hybrids) in the rice growing areas of the state. Before sowing, it is advised to treat the seeds Carbendazim (Bavistin) @ 2.5 g / kg seed.

- Sowing of maize as a grain crop as well as a fodder crop is advised in the irrigated areas. For improving the quality of green fodder farmers may intercrop cowpea or soybean in maize.
- Sowing of nursery of early season cauliflower and direct sowing of okra, french bean, cucumber and other cucurbits is advised. Varieties recommended for okra: *Palam Komal*, *P-8*, *Arka Anamika*, *Parbhani Kranti*, *Kalash Komal* French bean: *Contender*, *Palam mridula*, *Phalguni*, *Arka Komal*.
- Higher temperature prevailing during these days may impact poultry production. For reducing this impact of high temperature farmers are advised to increase feed by 10 % with more protein diet.

Chhattisgarh

101 mm (233% large excess) rainfall received over Chhattisgarh during 01 March - 18 May 2023. The extended range weather forecast (rainfall) provided for the next two weeks (19 - 25 May 2023 and 26 May - 01 June 2023) over Chhattisgarh is below normal for week-1 and; week-2.

- Inter-cultural operations, fertilizer application, earthing followed by irrigation are advised in sugarcane at tillering stage.
- Due to forecast of below normal rainfall during next week-1 and week-2, it is advised to irrigate as per need during flowering and pod formation stage in summer sesamum crops.
- Looking into increasing temperature, farmers are advised to keep their animals in shade and provide regular water to them.
- Under prevailing weather condition, digging of mature summer groundnut crop is advised.

Odisha

150 mm (56% excess) rainfall received over Odisha during 01 March - 18 May 2023. The extended range weather forecast (rainfall) provided for the next two weeks (19 - 25 May 2023 and 26 May - 01 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.
- Farmers are advised for cultivation of green manuring crops immediately after summer ploughing.

- 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.

Jammu

The amount of rainfall received over Jammu was 239 mm (-20% deficit) during 01 March - 18 May 2023. The extended range weather forecast (rainfall) provided for the next two weeks (19 - 25 May 2023 and 26 May - 01 June 2023) over Jammu is normal for week-1 and; week-2.

- Due to the chance of light rainfall during next week, farmers may go for nursery sowing of early transplanted rice varieties. Incorporate the FYM @ 10-15 tons/ ha in the field, where rice is to be transplanted.
- Farmers are advised to white wash the fruit tree (guava /mango/citrus) trunks with slaked lime and copper sulphate against sunburn and fungal diseases.
- Protect bee colonies from high temperature by shifting it to shady/cooler places or cover them with wet gunny bags. To control mite, dusting with Sulphur on top bars @ 1g/frame /Oxalic acid 3.5% treatment per litre of water is advised.

Punjab

The amount of rainfall received over Punjab was 95.5 mm (103% large excess) during 01 March - 18 May 2023. The extended range weather forecast (rainfall) provided for the next two weeks (19 - 25 May 2023 and 26 May - 01 June 2023) over Punjab is above normal for week-1 and; week-2.

- Under prevailing high temperature, thatches or coverings are advised to be established to save the young fruit plants from intense heat with straw or datepalm leaves and also apply frequent watering to young plants.
- 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.
- Farmers are advised to prepare field for *kharif* season and to save water and for ease in management of paddy straw, prefer PAU recommended short duration rice varieties are *PR-126*, *PR-127*, *PR-130* and *HKR-47*.
- Due to rise in temperature, fruit drop is increasing. Farmers are advised to continuously keep the soil moist in peach and plum orchards. In citrus, pear, litchi and mango apply light and frequent irrigations.

Jharkhand

The amount of rainfall received over Jharkhand was 76 mm (30% excess) during 01 March - 18 May 2023. The extended range weather forecast (rainfall) provided for the next two weeks (19 -

25 May 2023 and 26 May - 01 June 2023) over Jharkhand is below normal for week-1 and; week-2.

- To control the attack of gundhi bug insects in summer rice at grain filling stage, farmers are advised to apply Malathion dust 5 % @ 8 kg per acre or Malathion 50 EC @ 2 ml per liter of water during evening hours.
- At the grain filling stage in summer rice, farmers are advised to maintain moisture in the field.
- 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.
- Ploughing in moong bean crop at flowering stage is advised to manage moisture in the soil which can remain for a maximum number of days.

Bihar

The amount of rainfall received over Bihar was 52 mm (normal rainfall) during 01 March - 18 May 2023. The extended range weather forecast (rainfall) provided for the next two weeks (19 - 25 May 2023 and 26 May - 01 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 recommended for good and healthy seedlings.
- Sowing of turmeric and ginger is advised in North Bihar. Recommended varieties for turmeric are *Rajendra Sonia* and *Rajendra Sonali* and for ginger is *Maranand Nadia*.
- Monitoring is advised for infestation of fruit fly in cucurbitaceous crop. If infestation found, spraying of Dimethoate 30 EC @ 2 ml+10 g sugar /liter of water is advised.
- Vaccination is advised for all dairy animals against black quarter and Hemorrhagic septicemia diseases. It is also advised to increase the amount of proteinaceous and calcium feed.

Tamil Nadu

The amount of rainfall received over Tamil Nadu was 179 mm (81% large excess) during 01 March - 18 May 2023. The extended range weather forecast (rainfall) for the next two weeks (19 - 25 May 2023 and 26 May - 01 June 2023) is below normal for week-1 and; week-2.

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

- Since the maximum temperature is increasing, it is advised to ensure clean cool drinking water to the animals at all time. Vitamins and electrolytes can be mixed with water. Quality green fodder should be provided to prevent the production loss.

Kerala

194 mm (-21% deficit) received over Kerala during 01 March - 18 May 2023. The extended range weather forecast (rainfall) for the next two weeks (19 - 25 May 2023 and 26 May - 01 June 2023) is normal for week-1 and; below normal for week-2.

- Under prevailing weather condition, it is recommended to sow dhaincha seeds in the paddy field before the virippu planting season.
- To control downy mildew in snake gourd at vegetative stage, it is advised to spray Mancozeb @ 4g/litre of water.
- Spraying of Bordeaux mixture 1.0% and drenching with Copper oxy chloride @ 4g/litre at monthly intervals prevents phytophthora blight incidence in pepper.

Maharashtra

28 mm (73% large excess) rainfall over Madhya Maharashtra; 44 mm (154% large excess) in Marathwada; 15 mm (73% large excess) in Konkan region and 125 mm (456% large excess) over Vidarbha was recorded during 01 March - 18 May 2023. The extended range weather forecast (rainfall) for the next two weeks (19 - 25 May 2023 and 26 May - 01 June 2023) is below normal over Konkan, Madhya Maharashtra and Vidarbha and no rainfall over Marathwada for week -1 and; below normal over Konkan, Madhya Maharashtra, Marathwada and Vidarbha for week -2, respectively.

Vidarbha

- Farmers are advised to harvest the matured early sown summer groundnut crop. In late sown groundnut crop which is at pod development stage, it is advised to maintain adequate moisture in the soil profile to reduce the impact of heat stress, and provide irrigation at early morning or late evening.
- In view of prevailing strong surface winds condition at isolated places, it is advised to take proper care of livestock with ensure sufficient feed and medication and provide proper ventilation and heat protection for animals.

Marathwada

- As there is a forecast of no rainfall and increase in temperature during week-1, it is advised to provide shade to newly planted and young plants and also mulching should be done around the stem.

- Harvesting of mature vegetables, watermelon and muskmelon crops is advised during early in the morning.
- As per forecast of no rainfall and below normal rainfall during next week-1 and week-2, it is advised for irrigation management especially in vegetable crops during early in the morning or at evening with the help of micro irrigation system.

Madhya Maharashtra

- 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.
- For the control of Fall Armyworm in maize (dough stage), it is advised to use Tricho-cards @ 5 numbers per ha. If outbreak is more, then spraying of Emamectin benzoate 4 % SG @5g or Chlorantraniliprole 18.5 % SC @4ml per 10 lit of water is recommended .
- Apply Bordeaux mixture paste upto 1 meter height from soil level to avoid trunk cracking in mango.

Konkan

- Due to forecast for hot and humid weather, there is possibility for development of spongy tissue disease in harvested mango fruits. To prevent harvest the matured mango fruits before 10 am in the morning and after 4 pm in the evening at 80 to 85% maturity and keep the harvested fruits in shade.
- Due to forecast for rise in temperature, it is advised to provide irrigation in arecanut orchard at 3-4 days interval. Clean the arecanut orchard by removing dry leaves and diseased, infected inflorescence.
- To protect animals from heat, it is advised to sprinkle cold water on animals during the afternoon, it will help to maintain the body temperature and also avoid grazing during noon hours.

Anantapur

128 mm (133% large excess) rainfall received over Rayalaseema and 164 mm (123% large excess) rainfall received over Coastal Andhra Pradesh during 01 March - 18 May 2023. The extended range weather forecast (rainfall) provided for the next two weeks (19 - 25 May 2023 and 26 May - 01 June 2023) is below normal over Rayalaseema and Coastal Andhra Pradesh for week-1 and; week-2.

- In Kurnool, Chittoor, Vizianagaram, West Godavari, Krishna, Guntur, Ananthapuramu and Kadapa districts, present weather conditions are favourable for incidence of mealy bug in

mango. To control mealy bug, spraying of Imidacloprid @ 0.3ml or Dimethoate @ 2.0 ml/litre of water is recommended.

- 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 Cypermethrin 1 ml/litre of water is recommended.
- Due to possibility of increase in temperature and below normal rainfall during next week-1 and week-2, it is advised for proper ventilation for free circulation of air in the animal sheds and also provide clean drinking water to animals and water troughs should be regularly cleaned.

Gujarat

20 mm (694% large excess) rainfall received over Gujarat during 01 March - 18 May 2023. The extended range weather forecast (rainfall) provided for the next two weeks (19 - 25 May 2023 and 26 May - 01 June 2023) over Gujarat is below normal for week-1 and; week-2.

- To control aphid in cowpea crop, it is advised to spray Imidacloprid 17.8 SL @ 3 ml or Thiamethoxam 25 formulation WG @ 3 g in 10 liters of water.
- To control Jassids in okra, it is advised to spray Neem based insecticides 10 ml (5 EC) to 60 ml (0.03 EC) or *Verticillium lecanii* powder at evening hours at an interval of 10 days.

Karnataka

111 mm (10% excess) rainfall received over South Interior Karnataka, 34 mm (-59% large deficit) over Coastal Karnataka and 87 mm (61% large excess) rainfall received over North Interior Karnataka during 01 March - 18 May 2023. The extended range weather forecast (rainfall) provided for the next two weeks (19 - 25 May 2023 and 26 May - 01 June 2023) is below normal over South Interior Karnataka, North Interior Karnataka and Coastal Karnataka for week-1 and; below normal over Coastal Karnataka and North Interior Karnataka and normal over South Interior Karnataka for week-2.

South Interior Karnataka

- Harvest matured mango fruit.
- In mango, fruit fly damage is also noticed suitable control measure by spraying Carbaryl 4 g/litre of water.

North Interior Karnataka

- Considering the forecast of rainfall during next two weeks, farmers are advised to harvest matured wheat, groundnut and sunflower under clear weather condition with necessary precautionary measures.
- Under prevailing weather condition, it is advised to apply 4-6 inch thick hay thatch as a roofing material. Water can be used for spraying the floor and roof of shelter periodically

during peak hot hours which lowers the temperature and consequently reduces the heat load on animals.

West Bengal

130 mm (2% excess) rainfall received over Gangetic West Bengal and rainfall received over Sub Himalayan West Bengal was 297 mm (-3% deficit) during 01 March - 18 May 2023. The extended range weather forecast (rainfall) for the next two weeks (19 - 25 May 2023 and 26 May - 01 June 2023) is below normal over Gangetic West Bengal and Sub-Himalayan West Bengal during week-1 and; week-2.

- Labeling and power tiller operation is advised in the fields after boro rice harvesting for Jute sowing.
- To control the mites in litchi at fruiting stage, application of Abamectin 1.9% EC @ 0.75ml/litre water.
- To prevent fruit fly attacks in mango orchard, it is advised to install methyl eugenol traps.
- 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.

Disclaimer:/अस्वीकरण:

मौसम की भव्यवाणी कई कारकों पर निर्भर करती है जो प्रकृति में गतिशील हैं। यहां दी गई कृषि मौसम संबंधी सलाहों की सफलता मौसम पूर्वानुमान की सटीकता पर निर्भर करती है। किसी भी स्थिति में, भारतीय मौसम विज्ञान विभाग (IMD) और भारतीय कृषि अनुसंधान परिषद (ICAR) उपयोगकर्ता या किसी तीसरे पक्ष के लिए किसी भी प्रत्यक्ष, अप्रत्यक्ष, आकस्मिक, परिणामी, विशेष या अनुकरणीय नुकसान या खोए हुए लाभ के लिए इस बुलेटिन में प्रस्तुत जानकारी का उपयोग या दुरुपयोग करने के लिये उत्तरदायी नहीं होंगे।

The predictability of weather depends on many factors which are dynamic in nature. The success of Agromet advisories provided here depends on the accuracy of the weather forecast. In no event, India Meteorological Department (IMD) and Indian Council of Agricultural Research (ICAR) will be liable to the user or to any third party for any direct, indirect, incidental, consequential, special or exemplary damages or lost profit resulting from any use or misuse of the information presented in this bulletin.