



National Agromet Advisory Services Bulletin

Date of issue: 23 April 2023

based on

Extended Range Weather Forecast (ERFS)

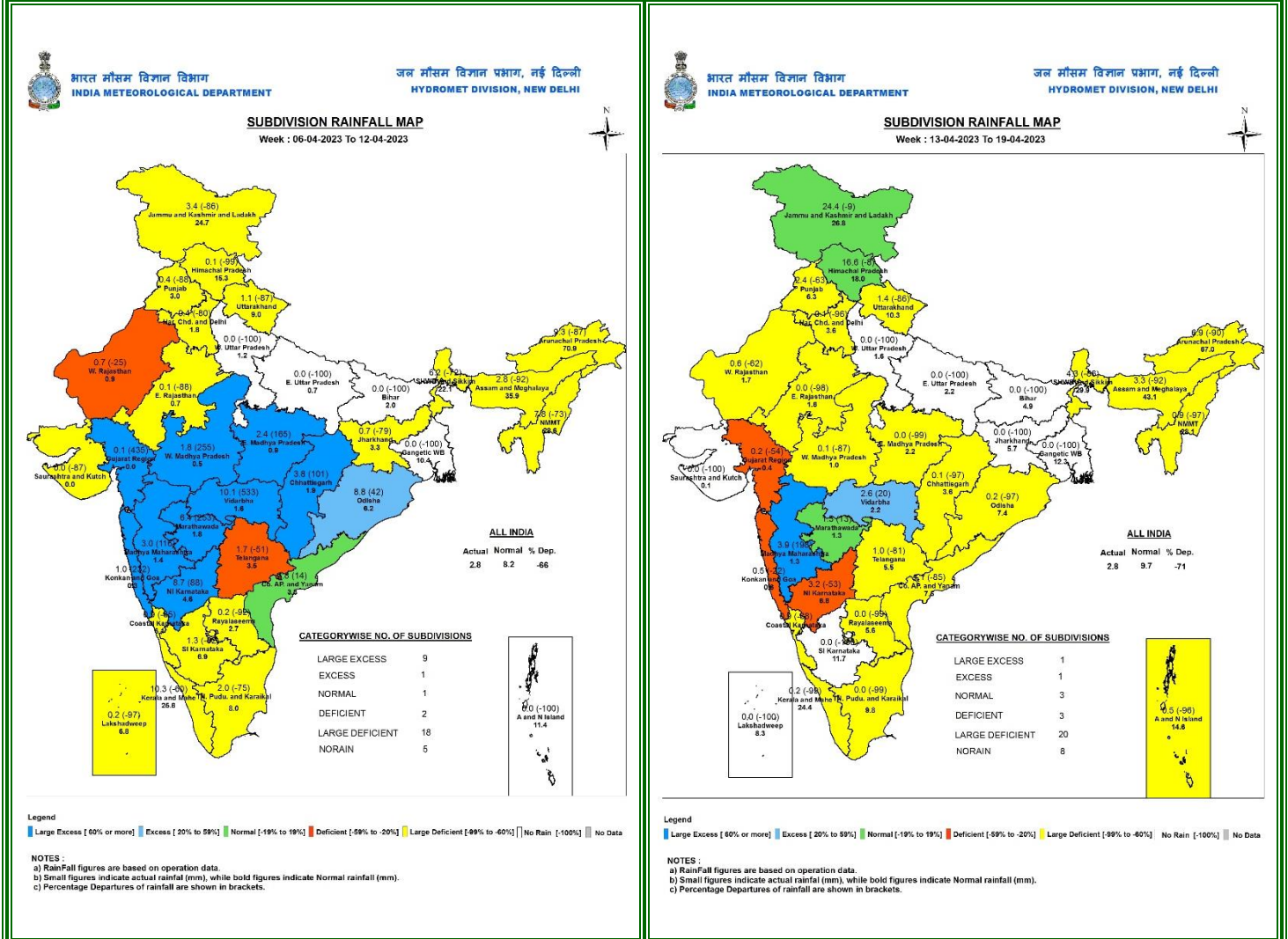
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Issued by

**AICRP on Agro-Meteorology (AICRPAM)
Central Research Institute for Dryland Agriculture (CRIDA)
Indian Council of Agricultural Research (ICAR)
&
India Meteorological Department (IMD)
Earth System Science Organization**

Realized Rainfall and Extended Range Forecast (Rainfall and Temperature)

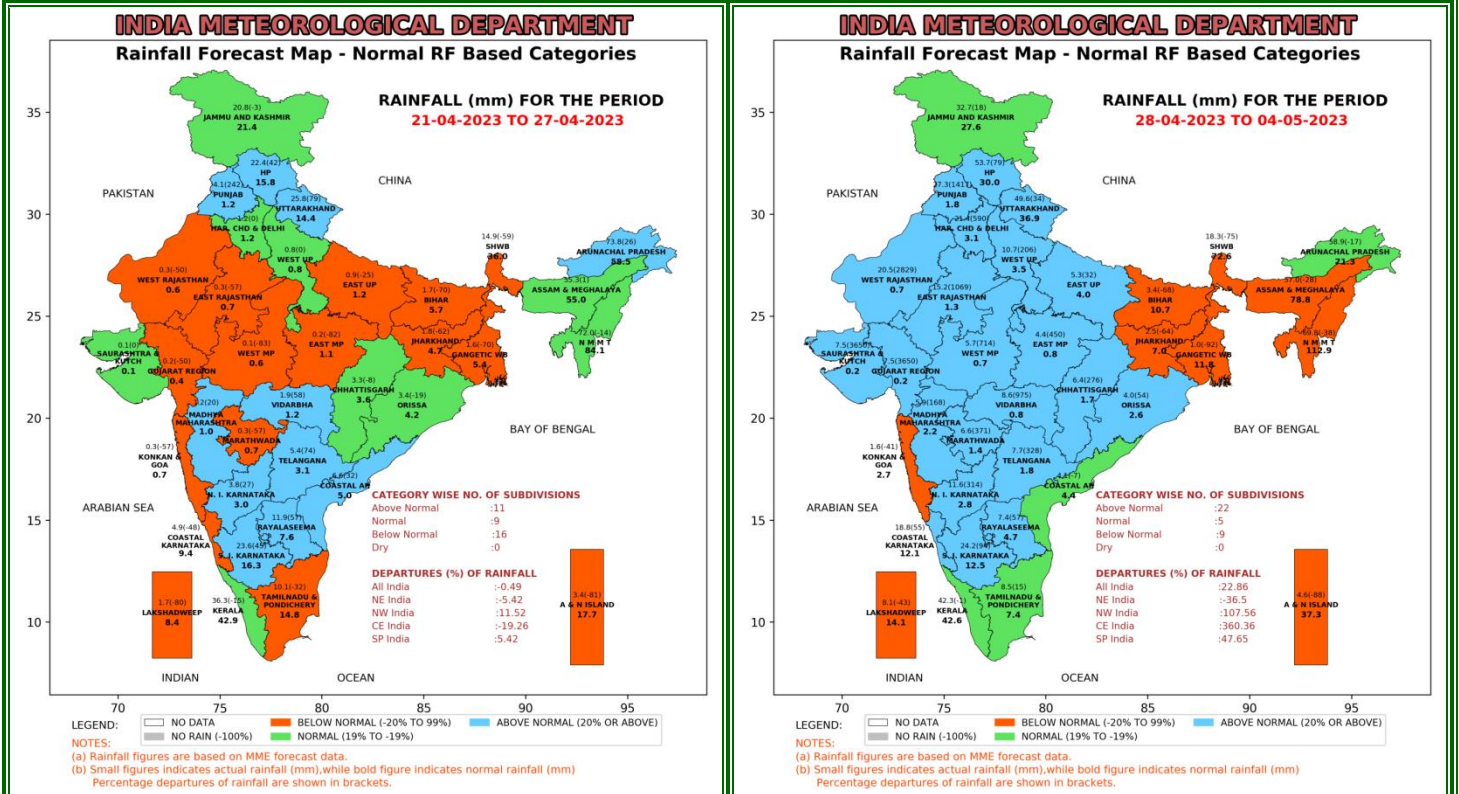
Realized Rainfall (6th April to 19th April 2023)



- Normal or above normal rainfall occurred in both the weeks in Madhya Maharashtra, Marathwada and Vidarbha.
- Normal or above normal rainfall occurred in either of the two weeks over Jammu & Kashmir and Ladakh (UTs), Himachal Pradesh, Gujarat Region, Madhya Pradesh, Chhattisgarh, Odisha, Konkan & Goa, North Interior Karnataka and Coastal Andhra Pradesh & Yanam.
- 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- 19th April) (21st April to 4th May 2023)



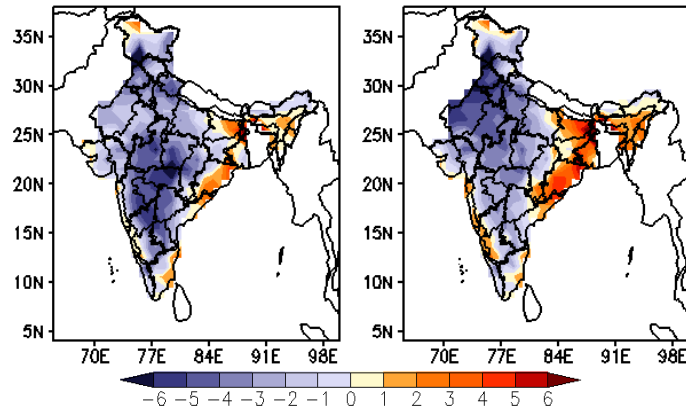
- **Week 1 (21.04.2023 to 27.04.2023):** Rainfall activity associated with Western Disturbance is likely over north India. Rainfall associated with convective activity is likely over parts of northeast India and southern peninsula.
- **Week 2 (28.04.2023 to 04.05.2023):** Rainfall activity associated with Western Disturbance is likely over northwest India.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for the next 2 weeks (IC- 19th April)
(21st April to 04th May 2023)**

MME forecast Tmax anomaly (Deg C)

(Week1: 21Apr-27Apr)

(Week2: 28Apr-04May)



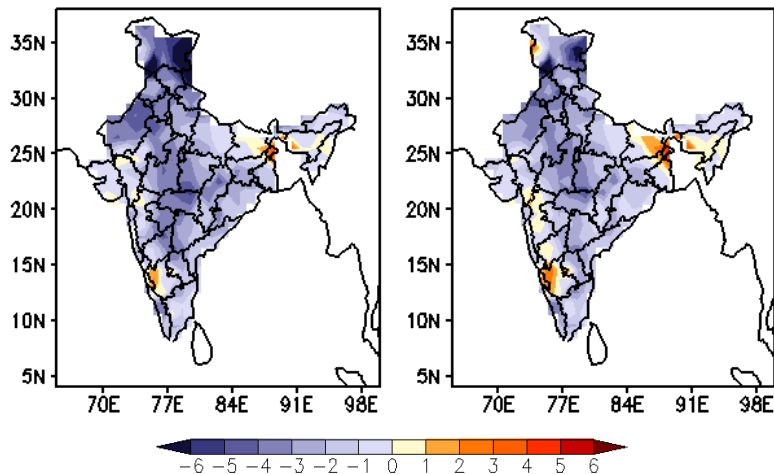
Maximum Temperature (Tmax)

- **Week 1 (21.04.2023 to 27.04.2023) and Week 2 (28.04.2023 to 04.05.2023):** Tmax is likely to be below over most parts of Westcentral and northwest India. It is likely to be above normal over parts of Bihar, Jharkhand, Gangetic West Bengal, Chhattisgarh, Odisha, Coastal Andhra Pradesh, Tamil Nadu & northeastern states.

MME forecast Tmin anomaly (Deg C)

(Week1: 21Apr-27Apr)

(Week2: 28Apr-04May)



Minimum Temperature (Tmin)

- **Week 1 (21.04.2023 to 27.04.2023):** Tmin is likely to be below normal over most parts of country.
- **Week 2 (28.04.2023 to 04.05.2023):** Tmin is likely to be below normal over most parts of country except isolated regions over western India and parts of Jharkhand, Bihar and West Bengal where it is likely to be slightly above normal.

Agromet Advisories

Uttar Pradesh

The amount of rainfall received over East Uttar Pradesh was 27 mm (137% large excess) and over West Uttar Pradesh was 40 mm (175% large excess) during 01 March - 20 April 2023. The extended range weather forecast (rainfall) for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) is below normal over East Uttar Pradesh and normal West Uttar Pradesh for week-1 and; and above normal over East Uttar Pradesh and West Uttar Pradesh for week-2.

Western Uttar Pradesh

- As per the forecast of warm weather during upcoming week, farmers are advised to provide light irrigation in maize and pulse crops (30 DAS) during evening time.
- Therefore, farmers are advised to harvest and thresh the wheat crop as early as possible during clear weather condition and store the grain in safe place.
- As hot and dry weather is forecasted for the coming week, farmers are advised to use green fodder and easily digestible mineral mixture and salt to feed animals. The animals must be given clean and cold water 3-4 times a day. Do not leave the animals to graze from 11 am to 4 pm.
- To protect the *zaid* maize crop from stem borer which is at knee high stage, it is advised to broadcast Phorate 10% CG @ 10 kg/ha.

Eastern Uttar Pradesh

- Under prevailing hot weather and rainfall deficit condition and below normal rainfall forecast during next week, farmers are advised to provide light irrigation to the pulse crops (vegetative stage) and sugarcane crop (emergence stage).
- To protect the vegetable crops (tomato/chilli/ladyfinger) from the infestation of 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.
- Before the onset of monsoon, it is advised to immunize the farm cattle, goat, buffalo, etc. against FMD (Foot & Mouth Disease), HS (Hemorrhagic Septicemia) and BQ (Black Quarter) disease after consultation with local veterinary doctor.

Haryana

54.5 mm (142% large excess) rainfall was received over Haryana during 01 March - 20 April 2023. The extended range weather forecast (rainfall) provided for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) over Haryana is normal for week-1 and; above normal for week-2.

- Under the prevailing weather condition, 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 the possibility of normal rainfall during next week and large excess rainfall during week-2, farmers are advised to harvest and thresh the mature crops like wheat, mustard and chickpea during the period .
- Due to dry weather and increase in the air temperature, it is advised to keep the animals under sheds during daytime and provide the drinking water as per their requirements.

Uttarakhand

107.3 mm (34% excess) rainfall was received over Uttarakhand during 01 March - 20 April 2023. The extended range weather forecast (rainfall) provided for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) over Uttarakhand is above normal for week-1 and week-2.

- Maintain proper drainage channels in tomato and potato fields to avoid water stagnation.
- Staking is advised in vine crops like cucumber which is at seedling/vegetative growth.
- Due to the forecast of above normal rainfall during next two week, farmers are advised to harvest matured wheat and barley crop as soon as possible during clear weather condition.
- Under prevailing rainy weather condition, application of plant protection chemicals to the tomato crop is suspended till weather becomes favourable

Himachal Pradesh

135.2 mm (-15% deficit) rainfall received over Himachal Pradesh during 01 March - 20 April 2023. The extended range weather forecast (rainfall) provided for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) over Himachal Pradesh is above normal for week-1 and; week-2.

- Due to hail/heavy rainfall/snowfall/thunderstorms/gusty winds, lodging of the standing wheat crop has occurred and it is difficult to harvest wheat in lower areas of the state. Farmers are advised to harvest wheat crop only when the weather becomes clear.
- Under prevailing weather condition, there is a chance of fungal infestation in mango orchard. Hence, farmers are advised to spray Hexaconazole 5% SC @ 0.5 ml/litre of water in mango crop and repeat the spray after 15 days. For checking secondary infection of insects, farmers should spray the mango crop with Imidacloprid @ 0.25 ml/ litre water.
- Due to hail/heavy rainfall during last week and forecast of above normal rainfall during next two weeks, farmers are advised to cover apple orchards with anti hail nets to protect flowers and fruit setting from the hail.
- Tranplanting of vegetables like chillies, tomato and brinjal fro nursery to main field is advised in lower and mid hills. Varieties recommended for chilies: *Surjamukhi*, for tomato: *Palam Pink*, *Palam Pride*, *Hybrid 7711*, *Rakshitae* and *Palam Tomato* and for brinjal: *Arka*

Nidhi, Arka Keshav and Hissar Shymal.

Chhattisgarh

48 mm (189% large excess) rainfall received over Chhattisgarh during 01 March - 20 April 2023. The extended range weather forecast (rainfall) provided for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) over Chhattisgarh is normal for week-1 and; above normal for week-2.

- Due to untimely rains at isolated places in few districts of Chhattisgarh, farmers are advised to start harvesting the crops carefully and if the crop has been harvested, keep it in a safe place and make proper arrangements for drainage.
- Considering the increasing temperature, farmers are advised to keep their animals in shade and provide water to them.
- Intercultural operations, fertilizer application, earthing followed by irrigation is advised in sugarcane crop at knee height stage.
- Intercultural operation in summer black gram and green gram crop control should be done after 20-25 days of timely sown crop.
- To control of stem borer in summer paddy, farmers are advised to spray Spray Fipronil 5 S.C.0.5ml or chlorpyrifos 1ml per litre of water.

Madhya Pradesh

31 mm (107% large excess) rainfall received over Madhya Pradesh during 01 March - 20 April 2023. The extended range weather forecast (rainfall) provided for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) over Madhya Pradesh is below normal for week-1 and; above normal for week-2.

- Due to rise in temperature and no rainfall forecast during next week, farmers are advised to provide irrigation in sugarcane crop at weekly intervals and also tie the canes together to prevent from lodging.
- Due to rise in temperature, it is advised to apply irrigation in summer moong and urd, which is at flower initiation stage at weekly intervals.
- As temperature is rising, old citrus trees stem to be pasted with Copper oxychloride (BLITOX) along with lime to protect from diseases.
- For the control of borers in brinjal, okra and tomatoes it is advised to spray Quinalphos 25 EC at 1.5-2 ml/litre water or Spinosad 45 % SC at 10 ml ai/ha.

Odisha

90 (mm) (120% large excess) rainfall received over Odisha during 01 March - 20 April 2023. The extended range weather forecast (rainfall) provided for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) over Odisha is normal for week-1 and; above normal for week-2.

- Farmers are advised to frequently irrigate vegetable crops to avoid high temperature stress.
- Mulching of leaves around newly planted cashewnut plants to conserve moisture is recommended. Provide 20 to 25 litres water per plant.
- Harvest the rice crop at physiological maturity (85% grains matured in a panicle) and looks pale yellow in colour. It will minimize loss due to shattering of grains in summer paddy.
- High diurnal temperature range favours infestation of Neck Blast disease in paddy crop, which is at maturity stage. To control blast disease, it is advised to spray Hexaconazole 5% SC @ 400 ml/acre or Azoxystrobin 18.2% + Difenoconazole 11.4 % S.C @ 200ml/acre or Tebuconazole 50%+ Trifloxystrobin 25 % WG @ 80 g/acre.
- To protect the bee hive from high temperature during day time, it is advised to keep the honey box under shade trees and provide supplement feeding like sugar syrup (2:1 ratio of water and sugar) to honeybees.

Jammu

The amount of rainfall received over Jammu was 156 mm (-30% deficit) during 01 March - 20 April 2023. The extended range weather forecast (rainfall) provided for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) over Jammu is normal for week-1 and; week-2.

- Sowing of Mash (var.) *Pant U-19*, *Uttara* and Moong (var.) *PDM-54*, *ML-131*, *ML 818*, *PS-16*, *PS-7* after receipt of rain in fallow fields is recommended.
- Sowing of summer fodder (maize+cowpea+charri) and bajra is recommended after receipt of rain.
- Due to chances of light rain during next two weeks, it is advised to postpone the harvesting and threshing of wheat and mustard crops and shift thrashed crop to safer places.
- Under prevailing weather condition, farmers are advised to go for sowing of okra with recommended varieties like *Jammu okra 05* and *Arka anamika* @ 1kg/kanal is recommended.
- If leaf blight is observed in onion crop, then it is advised to spray Ridomil MZ @ 2g/litre of water during clear weather condition.
- Give vaccination t against IPD & Gumbroo disease to 7 & 14 days old chick.

Tamil Nadu

The amount of rainfall received over Tamil Nadu was 47 mm (8% excess) during 01 March - 20 April 2023. The extended range weather forecast (rainfall) for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) is below normal for week-1 and; normal week-2.

- Since dry weather is expected, harvesting of pulses is advised.
- Under the prevailing weather condition, leaf miner is observed in citrus orchard. To control, it is advised to spray Fenvalerate 0.2 ml or Dimethoate (Rogor) 2ml/litre.
- 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

52 mm (-47% deficit) received over Kerala during 01 March - 20 April 2023. The extended range weather forecast (rainfall) for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) is normal for week-1 and; week-2.

- Since dry weather condition is prevailing, it is advised to irrigate banana plants and coconut palms. Ensure enough moisture in the soil.
- Under prevailing dry weather condition, there is a chance of mite attack in brinjal. It is advised to apply wettable sulphur 3 g per one litre of water.
- On receipt of pre-monsoon showers, prepare beds for turmeric planting of size 3 m x 1.2 m with a spacing of 40 cm between beds in already tilled land. Whole or split mother rhizomes are used for planting. Mulch the crop immediately after planting.
- Because of prevailing dry weather condition, there is a chance of mite infestation in brinjal. To control, it is advised to apply wettable Sulphur 3 g per one litre of water.
- During cloudy condition, avoid bathing the cow and washing the cattle shed, otherwise more heat will be build up. Provide proper air circulation using fans. Assure increased ventilation in the cattle shed. Ensure sufficient supply of clean drinking water to the animals.

Maharashtra

13 mm (83% large excess) rainfall over Madhya Maharashtra; 14 mm (29% excess) in Marathwada; 8 mm (153% large excess) in Konkan region and 29 mm (90% large excess) over Vidarbha was recorded during 01 March - 20 April 2023. The extended range weather forecast (rainfall) for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) is below normal over Konkan and Marathwada and above normal over Madhya Maharashtra and Vidarbha for week -1 and; below normal over Konkan and above normal over Madhya Maharashtra, Marathwada and Vidarbha for week -2, respectively.

Vidarbha

- Farmers are advised to avoid intercultural operations during peg penetration stage. Light earthing up is also advised at peg initiation stage for effective peg penetration. Also ensure

adequate soil moisture during pegging/peg penetration stage.

- In summer sunflower need based irrigation is advised depending upon soil moisture condition and local weather.
- In earlier sown summer greengram (pod development stage) need based irrigation is advised depending upon soil moisture condition and local weather.
- For control of sap sucking pests of jassids, thrips and white fly in summer sunflower, it is advised to spray of Imidacloprid 17.8 % EC @ 2.0 ml per 10 liters of water.
- During hot summer weather, it is advised to provide sufficient feed/forage, cold water, shelter from heat and follow proper grazing time (morning/evening) for farm/milch animals. Also give them protein-fat bypass supplements and mineral mixture in diet.

Marathwada

- Due to increase in maximum temperature and no rainfall forecast during next week, irrigation management is advised in summer groundnut crop which is at peg formation as per requirement of crop and soil moisture condition. Irrigation should be done during early in the morning or at evening hours with the help of micro irrigation (Drip or Sprinkler) system.
- Due to thunderstorm, rainfall during last week, it is advised to store the threshed grains of *rabi* crops at safe places (Warehouse). If threshing is not possible collect the harvested produce and cover it with plastic paper.
- For moisture conservation and maintenance of soil temperature mulching is advised in Banana orchard. Irrigation should be done early in the morning or at evening hours with the help of drip irrigation system.
- As per forecast of isolated thunderstorm and rainfall it is advised to provide shed to newly planted horticultural crops using shed net to protect them from the intensity of sunlight.

Madhya Maharashtra

- Due to forecast of rainfall during next two week, it is advised to keep the harvested & threshed grains of *rabi* crops for sun drying for 2 to 3 days and store in a safe place by adding 1 to 2 % of Neem leaves.
- 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 (milking stage) it is advised to use Tricho-cards @ 5 numbers per ha. If outbreak is more then, spraying of Emamectin benzoate 5 % SG @5g or Chlorantraniliprole 18.5 % SC @5ml per 10 lit of water is recommended.
- For control of onion blight, spraying of Mancozeb 30 g or Tebuconazole 10 ml in 10 litres of

water is recommended.

Konkan

- Due to forecast for rise in temperature which may leads to premature fruit drops in mango, to minimize the pre-mature fruit drop of mango, as per availability of water, apply 100 liter /tree at weekly or 150 to 200 liter/ tree at 15 days interval from pea to arecanut fruit size also use straw mulch.
- Provide irrigation to first four years old coconut orchard at 3 to 4 days interval and for above four years old orchard provide irrigation at 4 to 5 days interval. Apply 40 liter of water per day to fully grown coconut tree by drip or micro jet irrigation. also use straw mulch to reduce evaporation losses. and provide shed to newly planted orchard.
- Due to prevailing cloudy weather and realized rainfall, there is possibility for anthracnose disease on mango fruits. If incidence is observed, then it is advised to spray Carbendazim 12% + Mancozeb 63% @ 10 g per 10 litres of water.
- There is possibility of increase in temperature. Hence, it is advised to provide clean, hygienic and plenty amount of drinking water to farm animals. To reduce the stress of heat in farm animals, provide roughages by mixing with solution of 1% jaggery and 0.5% salt separately.
- There is forecast for increase in temperature. Hence, to protect poultry birds from heat by covering roof of the shed with insulating materials such as paddy straw, dry coconut leaves and make arrangement for sprinkle cold water on the roof of shed during afternoon time.

Anantapur

42 mm (108% large excess) rainfall received over Rayalaseema and 79 mm (184% large excess) rainfall received over Coastal Andhra Pradesh during 01 March - 20 April 2023. The extended range weather forecast (rainfall) provided for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) is above normal over Rayalaseema and Coastal Andhra Pradesh for week-1 and; normal over Coastal Andhra Pradesh and above normal Rayalaseema over for week-2.

- Under prevailing temperature, light irrigation is advised to provide in mango orchard at 10-15 days interval depending on soil type.
- Farmers are advised to provide need-based irrigations in banana. Irrigation should be given at every 3-4 days intervals. Cover the peduncle and whole bunch with dried banana leaves to protect from direct sunlight.
- Prevailing weather conditions are congenial for the incidence of black thrips and white flies in chillies (flowering stage). Framers are advised to install 30-35 blue and yellow colored sticky traps per acre to capture these insects and reduce their population in the field.
- In Kurnool, Chittoor, Vizianagaram, West Godavari, Krishna, Guntur, Ananthapuramu and Kadapa districts, present weather conditions are favorable for fruit borer incidence in mango (fruit development stage). To control fruit borer, spraying of Chlorpyrifos @

2.5ml+Dichlorvos @ 1.5 ml/litre of water @ 15 days interval is recommended.

Gujarat

12 mm (1214% large excess) rainfall received over Gujarat during 01 March - 20 April 2023. The extended range weather forecast (rainfall) provided for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) over Gujarat is below normal for week-1 and; above normal for week-2.

- Provide support to the young plants of mango to protect them against high wind speed.
- For the management of leaf miner in tomato crop which is at fruiting stage, it is advised to spray Neem seed powder 500 g (5% ark) or Neem seed oil 10 ml (5 EC) to 50 ml (0.03 EC) in 10 liters of water. If more infestation is found, spray Spinosad (45 SC) 3 ml or Cyantraniliprole (10 OD) 20 ml in 10 liters of water.
- To control mealy bug in mango orchard, banding of mango tree with polythene sheet (30-30 cm width) is advised.
- Keep animals under a shed/covered area during day hours to avoid heat stress due to high temperature. Spray phenyl in the animal shed to avoid flies and mosquitos.

Karnataka

15 mm (-58% deficit) rainfall received over South Interior Karnataka and 20 mm (-11% deficit) rainfall received over North Interior Karnataka during 01 March - 20 April 2023. The extended range weather forecast (rainfall) provided for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) is above normal over South Interior Karnataka and North Interior Karnataka for week-1 and; week-2.

South Interior Karnataka

- Provide irrigation in mango orchard, as the fruits are in marble stage, this will help for the better development of fruits. If sufficient water is available, irrigation can be given at 15-20 days interval starting from fruit setting till maturity.
- Fruit drop can be controlled by spraying Naphthalene acetic acid (NAA) @ 20 ppm twice at an interval of 15 days during the early stage (peanut stage/marble stage) of fruit development stage.
- Periodically water spray is advised during peak hot hours to lowers the temperature and consequently reduces the heat load on animals.

North Interior Karnataka

- Under prevailing weather condtion, farmers are advised to harvest matured wheat and sunflower under clear weather condition.
- 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

72 mm (30% excess) rainfall received over Gangetic West Bengal and rainfall received over Sub Himalayan West Bengal was 159.5 mm (24% excess) during 01 March - 20 April 2023. The extended range weather forecast (rainfall) for the next two weeks (21 - 27 April 2023 and 28 April - 04 May 2023) is below normal over Gangetic West Bengal and Sub-Himalayan West Bengal during week-1 and; week-2.

- Groundwater application in boro rice is strictly not advised, especially in the Arsenic prone tract in Nadia. Use of available surface water is advised for irrigation purposes in rice fields. Short duration early transplanted rice varieties advised to harvest within the upcoming week.
- It is advised to use nets to cover maize fields to prevent birds from destroying fresh corn. Matured lower cobs may be picked to mitigate yield loss in the upcoming days.
- Severe hot days along with windless hot nights may cause severe stress in livestock animals. Regular interval bathing along with shaded structures should be arranged accordingly.
- Severe hot days along with windless hot nights may cause severe stress in livestock animals. Regular interval bathing along with shaded structures should be arranged accordingly. Application of ice in the muzzle and forehead in heat stroked cattles.

Disclaimer:

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