



# **National Agromet Advisory Services Bulletin**

**Date of issue: 31 March 2023**

based on

**Extended Range Weather Forecast (ERFS)**

**Validity: 31 March - 13 April 2023**

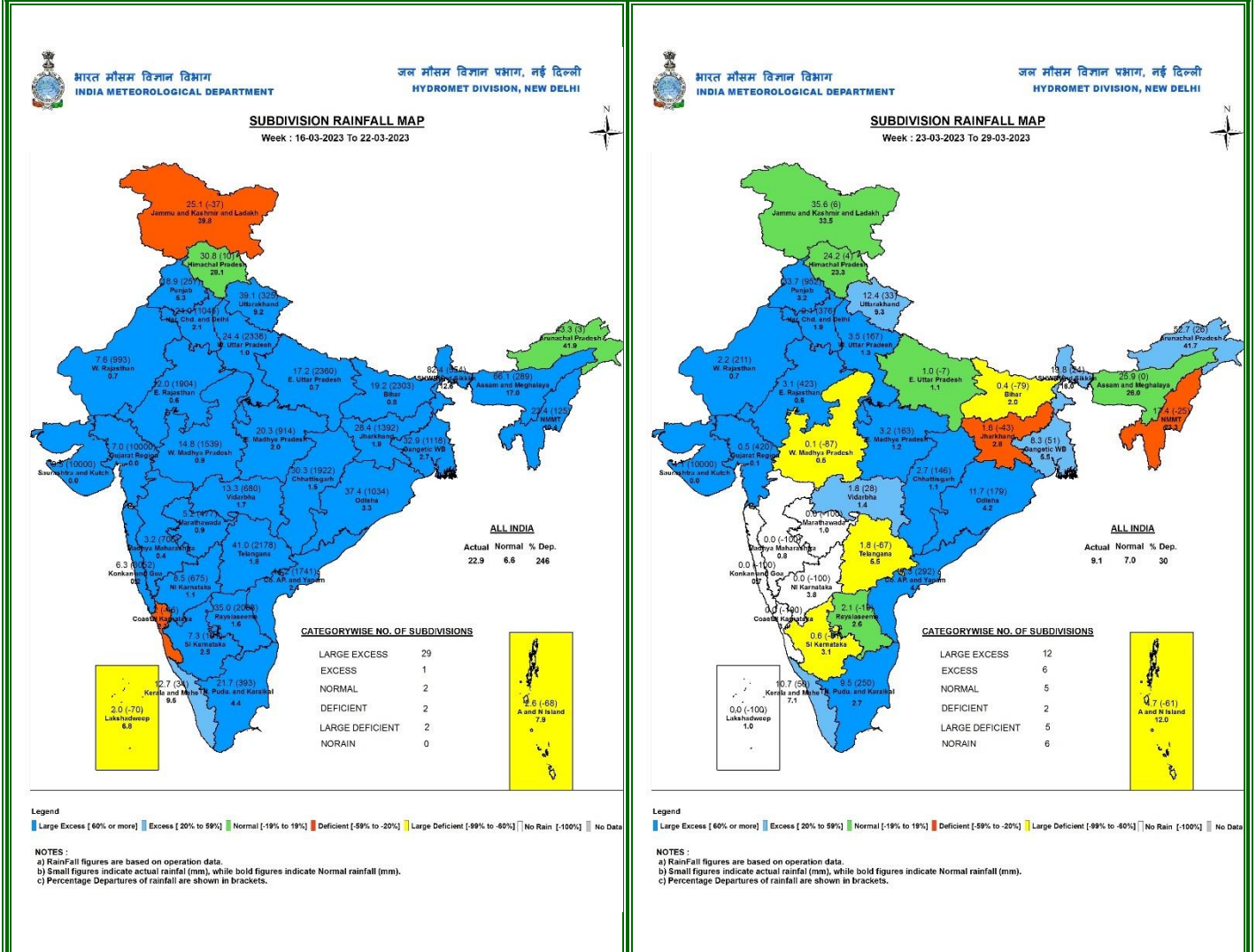
Issued by

**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

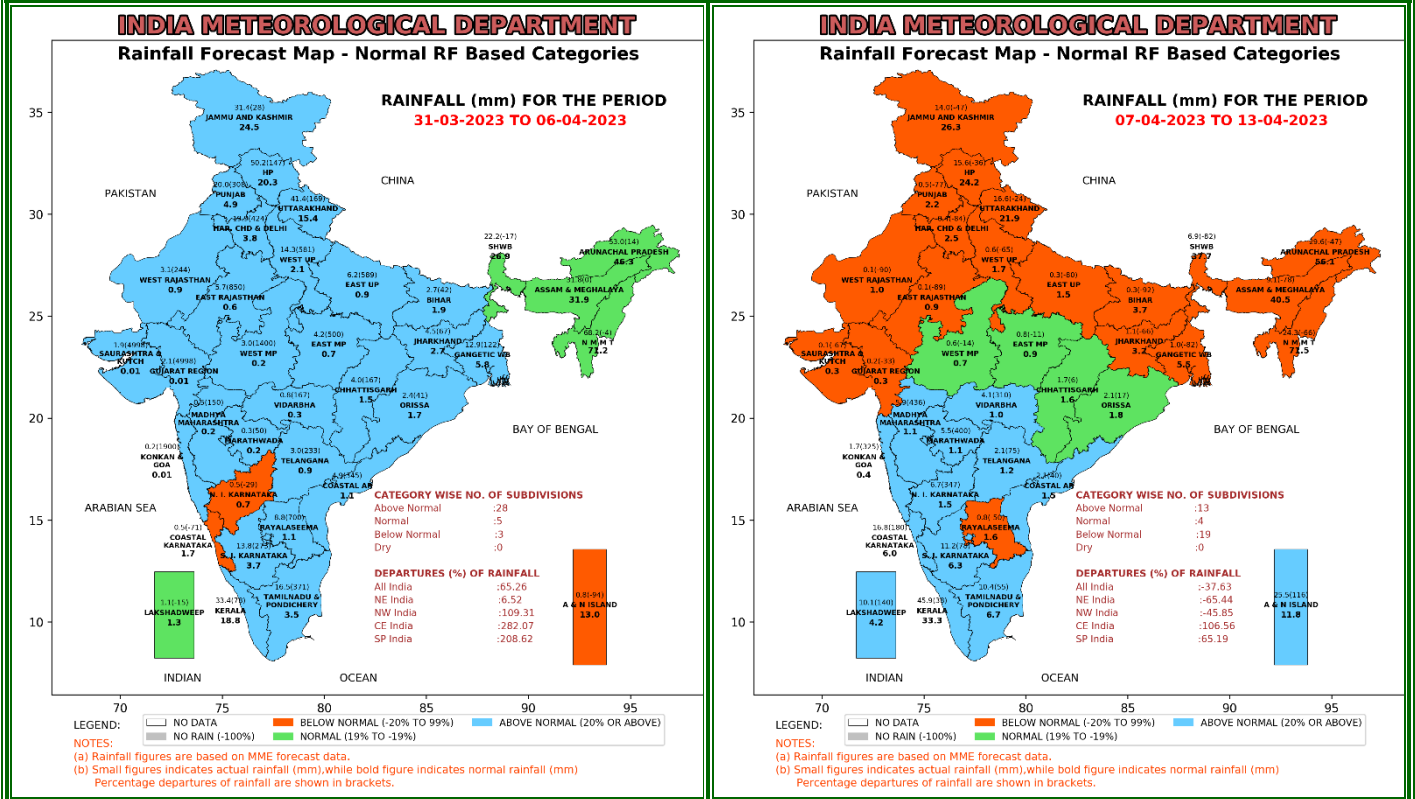
(16<sup>th</sup> to 29<sup>th</sup> March 2023)



- Normal or above normal rainfall occurred in both the weeks in Himachal Pradesh, Punjab, Haryana, Uttarakhand, Uttar Pradesh, Rajasthan, Gujarat State, East Madhya Pradesh, West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh, Vidarbha, Chhattisgarh, Odisha, Andhra Pradesh & Yanam, Tamil Nadu Puducherry & Karaikal and Kerala & Mahe.
- Normal or above normal rainfall occurred in either of the two weeks over Jammu Kashmir & Ladakh, Bihar, Jharkhand, Nagaland Manipur Mizoram Tripura (NMMT), West Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Marathwada, Interior Karnataka and Telangana.
- Below Normal rainfall/no rain occurred in both the weeks over Coastal Karnataka, Lakshadweep and Andaman & Nicobar Islands.

## Extended Range Forecast System

### Rainfall forecast maps for the next 2 weeks (IC- 29<sup>th</sup> March) (31<sup>st</sup> March to 13<sup>th</sup> April 2023)



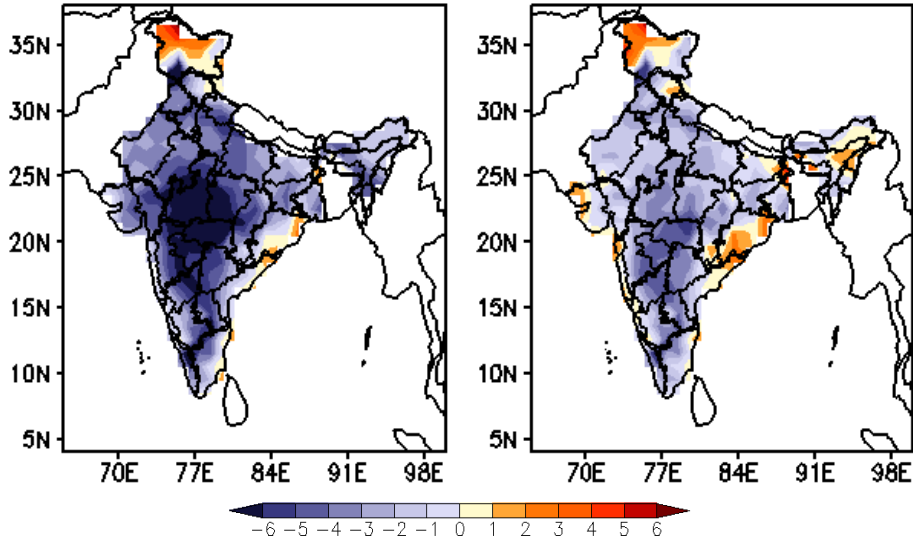
- **Week 1 (31.03.2023 to 06.04.2023):** Rainfall/snowfall activity associated with Western Disturbance is likely over extreme north India. Rainfall associated with convective activity is likely over parts of Northeast India and southern peninsula.
- **Week 2 (07.04.2023 to 13.04.2023):** Rainfall associated with convective activity is likely over southern peninsula.

**Maximum and Minimum temperature anomaly ( $^{\circ}\text{C}$ ) forecast  
for the next 2 weeks (IC- 29<sup>th</sup> March)  
(31<sup>st</sup> March to 13<sup>th</sup> April 2023)**

**MME forecast Tmax anomaly (Deg C)**

(Week1: 31Mar-06Apr)

(Week2: 07Apr-13Apr)



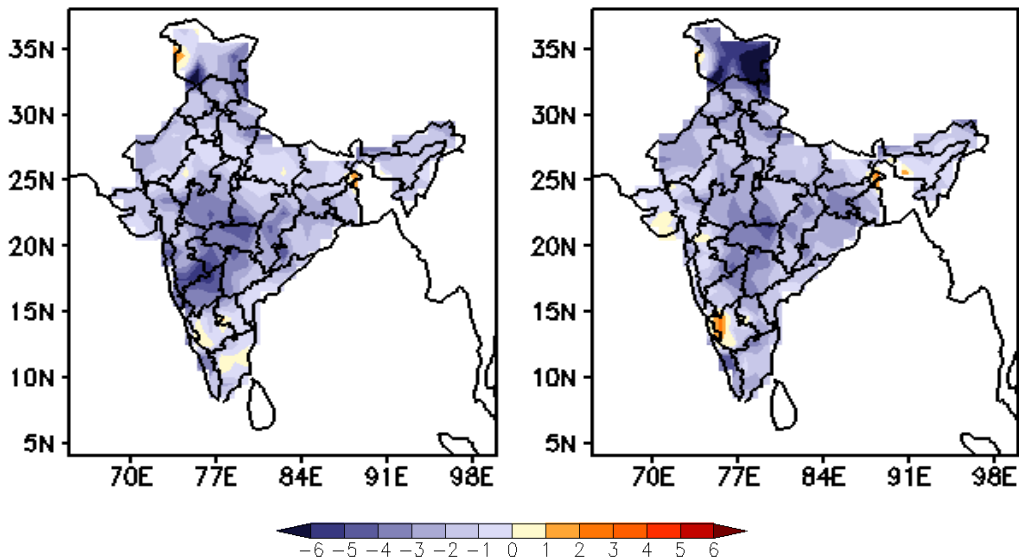
**Maximum Temperature (Tmax)**

- **Week 1 (31.03.2023 to 06.04.2023) and Week 2 (07.04.2023 to 13.04.2023):** Tmax is likely to be below normal over most parts of the country.

**MME forecast Tmin anomaly (Deg C)**

(Week1: 31Mar-06Apr)

(Week2: 07Apr-13Apr)



**Minimum Temperature (Tmin)**

- **Week 1 (31.03.2023 to 06.04.2023) and Week 2 (07.04.2023 to 13.04.2023):** Tmin is likely to be below normal over the country.

## **Agromet Advisories**

### **Uttar Pradesh**

The amount of rainfall received over East Uttar Pradesh was 18 mm (151% large excess) and over West Uttar Pradesh was 28 mm (172% large excess) during 01 - 30 March 2023. The extended range weather forecast (rainfall) for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) is above normal over East Uttar Pradesh and West Uttar Pradesh for week-1 and; below normal over both the subdivisions during week-2.

#### *Western Uttar Pradesh*

- Due to forecast of rainfall forecast during next week, farmers are advised to keep the harvested wheat produce in safer place.

#### *Eastern Uttar Pradesh*

- In view of the possibility of rain in the next week, the farmers are advised to postpone wheat harvest.
- Sugarcane is in emergence stage. Intercultural operations are recommended.

### **Haryana**

34 mm (127% large excess) rainfall was received over Haryana during 01 - 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) over Haryana is above normal for week-1 and below normal for week-2.

- Wheat is in grain development stage. As above normal rainfall is forecasted in the coming week, farmers are advised not to irrigate the crop
- Chick pea is in pod formation/physiological maturity stage. Farmers are advised to withhold the harvesting for next three to four days
- Use lime @ 100 kg/ha in fish ponds to maintain the water quality
- Due to the possibility of lightning and thunderstorms, keep the animals under shed and away from trees. Animals should be given adequate balanced feed and lukewarm water to drink. To provide each cattle/animal 50 grams iodized salt and 50 to 100 grams mineral mixture daily with feed & green fodder/berseem to keep them healthy.

### **Uttarakhand**

60 mm (13% surplus) rainfall was received over Uttarakhand during 01 - 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) over Uttarakhand is above normal for week-1 and below normal for week-2.

- As above normal rainfall is forecasted in the coming week, do not irrigate the wheat crop. Remove weeds like gulli danda and jungli jai (wild oats) before flowering
- Continue the sowing of barnyard millet and French bean

- Ensure proper drainage in potato fields in view of the forecast of above normal rainfall

### **Himachal Pradesh**

63 mm (-44% deficit) rainfall was received over Himachal Pradesh during 01 - 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) over Himachal Pradesh is above normal for week-1 and below normal for week-2.

- Harvesting of matured wheat is recommended only under clear weather conditions during week-2.
- Nursery sowing of chillies, tomato and brinjal (Arka Nidhi, Arka Keshav and Hissar Shymal) as well as transplanting in mid hills is recommended

### **Punjab**

Punjab has received 54 mm rainfall (142% large excess) during 01 - 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) over Punjab is above normal during week-1 and below normal during week-2.

- Farmers are advised to postpone the harvesting of wheat until weather clears up and crop dries properly.
- Farmers are advised to drain away the excess water from crops. Farmers should prepare drainage channels as there are chances of light to moderate rainfall in the coming days
- Harvest the cucurbits and other vegetables like tomato, chilli, brinjal and okra at regular intervals.
- To protect the new flush of fruit plants especially citrus plants from attack of sucking pests, spray Imidacloprid 17.80 % SL@ 0.4 ml per litre or Chlorpyrifos 20 % EC 1ml per litre of water can be used
- To manage powdery mildew in mango, spray Hexaconazole 5% EC @ 1.0 ml per litre of water after weather clears up.
- Do not offer mineral mixture or calcium to those animals with only 15-20 days left for calving. These animals should be kept separate from other animals in a calm and clean place.
- To control ticks and mites, insecticidal sprays can be used like cypermethrin, deltamethrin, amitraz (tactik bath) etc.

### **Rajasthan**

West and East Rajasthan have received 13 mm (198% large excess) and 19 mm (370% large excess) rainfall respectively during 01 – 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) over both the subdivisions are above normal during week-1 and below normal during week-2.

- Harvesting of late sown wheat and barley crop is recommended
- Temperature is favourable for sowing of fodder crops viz., bajra, sorghum maize and lobia. Ensure optimum soil moisture before sowing.

## Gujarat

Gujarat region received 11 mm rainfall (3432% large excess, as the normal rainfall is just 0.3 mm) and Saurashtra & Kutch region received 16 mm rainfall (7744% large excess as the normal rainfall is just 0.2 mm) during 01 – 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) over both the subdivisions is above normal for week-1 and below normal for week-2.

- Sugarcane is in vegetative stage. Apply split dose of nitrogen as per recommendation- 2<sup>nd</sup> dose 30% of 250 kg N/ha at 3 to 3.5 month after planting, 3<sup>rd</sup> dose 20% of 250 kg N/ha at 4 to 4.5 month after planting and 4<sup>th</sup> dose 35% of 250 kg N/ha at 5.5 to 6 month after planting.
- In summer pearl millet irrigation should be given at an interval of 10 to 15 days at critical growth stages of crop.
- Complete harvesting of wheat and chickpea at maturity under clear weather conditions.
- To control whitefly infestation in brinjal, spray neem oil 50 ml or neem seed powder 500 g in 10 liters of water is advised. Spray Diafenthiuron 50 WP 10 g or Acephate 25% + Fenvalerate 3 % EC 10 ml in 10 liters of water in case of heavy infestation.
- Animals should be fed a salt and mixture mineral and green fodder daily.

## Madhya Pradesh

West Madhya Pradesh received 19 mm (312% large excess) and East Madhya Pradesh received 25 mm rainfall (133% large excess) during 01 – 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) is above normal during week-1 and normal during week-2 for both the subdivisions.

- Harvest the wheat as early as possible and keep the produce in a safe place.
- To protect cucurbits from powdery mildew, spray Carbendazim 50%WP 2 g/liter of water in the field.
- To ensure fodder availability during summer, sowing of fodder sorghum is recommended.

## Bihar

20 mm (166% large excess) rainfall was received over Bihar during 01 - 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) over Bihar is above normal for week-1 and below normal for week-2.

- In view of rainfall forecast during 31 March to 2 April, farmers are advised not to harvest wheat from 31 March and remove the already harvested produce from the field
- Sowing soon of green gram (*mung bean*) & black gram (*urd*) is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20kg potash and 20 kg sulphur/ha is advised during land preparation. *Pusa Vishal*, *HUM-16* and *Sona* varieties for *mung bean* and *Pant Urd-19* and *Pant Urd-31*, *Uttra* and *Navin* varieties of *urd* are recommended for sowing in North Bihar. Seed rate @20-25 kg/ha for small sized grain and 30-35 kg/ha for large sized grain with a spacing of 30x10 cm plant to plant is advised. Before sowing, seed should be treated with *rhizobium* culture
- Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest

- In mango orchards, Application of plant growth regulator like Planofix (Naphthyl Acetic Acid-NAA) @1ml/3 liters of water is advised during pea stage of fruit against fruit drop. Monitoring is advised for red pumpkin beetle in cucurbits. The grubs damage the plants by boring into the roots and underground stems. The adult beetles injure the flower, foliage by biting holes in to them. Severe infestation results in the death of the plant or retardation of growth. Dusting of Chlorpyrifos 2% dust @20 kg/hectare near root of the plant is advised for control of grub infestation.

### **Jharkhand**

32 mm (187% large excess) rainfall received over Jharkhand during 01 - 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) over Jharkhand is above normal for week-1 and above normal for week-2.

- Summer rice is in panicle initiation stage. Use cono-weeder for inter cultural operation and broadcast urea @30 kg per acre.
- Chick pea is at physiological maturity in most of the places. farmers are suggested to harvest the crop to avoid scorching sun and high wind velocity.

### **Chhattisgarh**

33 mm (280% large excess) rainfall received over Chhattisgarh during 01 - 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) over Chhattisgarh is below normal for week-1 and; above normal for week-2.

- Due to the rains in the past, there is sufficient moisture in the field. Therefore it is advised to sow urad, moong and sesame in summer.
- Farmers are advised to start harvesting chick pea, which is at physiological maturity, during week-1.
- In summer paddy, farmers are advised to place pheromone traps and light trap nearby the field for the control of stem borer. Spray Lambda-cyhalothrin 05 % EC@0.5ml/liter of water or Carbosulfan 25% EC @0.5 to 1ml/liter of water for the control of stem borer infestation.
- To ensure fodder availability for milch animals during summer, sowing of sorghum is recommended.

### **Odisha**

53 mm rainfall (172% large excess) was received over Odisha during 01 - 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) over Odisha is above normal for week-1 and normal for week-2.

- Paddy is in tillering to panicle initiation stage. Farmers are advised to make bund for conserving rain water in the paddy field.
- Present weather conditions are congenial for blast disease in paddy. To control blast disease, 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 gram/acre under clear weather conditions.

## **West Bengal**

Gangetic West Bengal (GWB) has received 45 mm (83% large excess) and Sub Himalayan WB (SHWB) has received 114 mm (116% large excess) during 01 - 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) over GWB is above normal and that of SHWB is normal during week-1; below normal over both the subdivisions during week-2.

- Harvesting and threshing of chick pea should be done as early as possible.
- Nets should be used to cover maize fields to prevent birds from destroying fresh corn. Excess water should be drained immediately. Prior checking of drainage channels to avoid stagnation of water in the maize field is recommended.

## **Assam**

97 mm rainfall (42% excess) was received over meteorological subdivision that included Assam during 01 – 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) over Assam is normal during week-1 and below normal during week-2.

- In *boro* rice, go for top dressing of urea during panicle initiation stage or 60-65 days after transplanting of seedlings in the main field. Apply urea at the rate of 6 kg in per bigha land. Top dressing followed by weeding using a paddy weeder is recommended, as it will facilitate the incorporation of nitrogenous fertilizer into the soil.
- Land preparation may be initiated for cultivation of maize crop. During final land preparation, apply 7 quintals of FYM at the rate of per bigha land and mix thoroughly. Collect recommended hybrid varieties like Bio 9544, Vivek Maize Hybrid 47, Vivek Maize Hybrid 53 etc. or composite varieties like Dhawal, Navjot etc. for getting higher yield.
- Prevailing weather is favourable for planting of sugarcane sets. Before planting, ridges of previous year crop should be broken down by hoeing or ploughing. Fill up the gaps in ratoons by planting pre-germinated materials, within a month of harvesting of the crop.
- Due to the congenial weather condition, fruit rot or Anthracnose disease may be observed in chilli. In order to control the disease, spraying of Captan 50 WP 0.2% or Dofolatan 0.2% solution at the rate of 2 gram/litre of water can be under fair weather conditions.
- Cercospora leaf spot is a serious disease in green gram and black gram crop. On occurrence, immediately spray Agrimycin or Streptomycin, under fair weather, at an interval of 12-15 days, to effectively control the disease.
- Regularly inspect the droppings of the poultry bird for any disease symptoms. Vaccinate poultry to protect against Ranikhet disease. Provide 1st vaccine to 5-7 days old and 2nd to 21-25 days old poultry birds.

- For protecting against infectious Brusel 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.

### **Jammu**

The amount of rainfall received over Jammu was 76 mm (-50% deficit) during 01 - 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) over Jammu is above normal for week-1 and below normal for week-2.

- Wheat is in hard dough stage. Do not allow water stagnation in the field. Postpone application of plant protection measures.
- Harvest the mustard immediately to prevent the shattering of seeds. Keep the harvested produce in a safer place.
- Provide hay of green forage like stala, lobia, maize, jowar and bajra etc. with kadbi and other green grasses to the milch animals in order to enhance milk production and also to prevent bloating.

### **Tamil Nadu**

The amount of rainfall received over Tamil Nadu was 33 mm (68% large excess) during 01 - 30 March 2023. The extended range weather forecast (rainfall) for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) is above normal for week-1 and week-2.

- Since above normal rainfall is expected in next two weeks, it is advised to post pone the picking of cotton bolls at harvest stage.
- Due to rise in temperature and prevailing weather conditions, swirling wind may occur and damage the banana at five months old age. Provide proper stacking.
- Under the prevailing weather condition citrus canker disease is noticed. To control spray of Copper oxychloride (COC) @ 0.3% followed by 4 sprayings with Streptocyclin 100 ppm + COC @ 0.3 % at monthly intervals after pruning.

### **Kerala**

29 mm (-10% deficit) rainfall was received over Kerala during 01 - 23 March 2023. The extended range weather forecast (rainfall) for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) is above normal for week-1 and week-2.

- The paddy is in heading to 50% flowering stage. The micronutrient deficiency of paddy can be managed by spraying 10 gram of paddy sampoorna in one litter of water.
- Amorphophallus, Colocasia, Greater Yam etc. tubers can now be planted in areas that received summer rains.
- To control the slow wilt disease in pepper, apply neem cake at the base of pepper plants. Also apply 25 grams of the biocontrol agent *Paecilomyces lilacinus* 1% W.P at the base

of each plant. If the incidence is severe, drench the basin of each plant with Copper Oxychloride (COC) @3gram perlitre of water.

- Ensure sufficient supply of clean drinking water to the animals. Allow the animal to graze early in the morning or in the evening to avoid direct sunlight.

### **Karnataka**

North Interior Karnataka received 8 mm rainfall (3% surplus) and South Interior Karnataka received 10 mm rainfall (-19% deficit) and coastal Karnataka received 2 mm rainfall (-80% large deficit) during 01 - 30 March 2023. The extended range weather forecast (rainfall) for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) is above normal for all the three sub-divisions during both the weeks, except for North Interior Karnataka during week-1 (below normal).

#### *South Interior Karnataka*

- Fruit drop in mango 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, under clear weather conditions.
- Leaf hopper and powdery mildew disease incidence is more before flowering and immediately after fruit formation in mango. To manage this, spraying of Imidachloprid @ 0.3ml/ litre of water is recommended.
- Ensure provision of 60 lts. of water/day/animal. Proper ventilation should be maintained for free circulation of air in the sheds. Apply 4-6 inch thick thatch as a roofing material. Water can be used for spraying the floor and roof of shelter.

#### *North Interior Karnataka*

- Maintain optimum soil moisture with timely irrigation in groundnut, which is in pod development to maturity, during week-1.
- To control groundnut leaf miner, spraying of insecticides like Lambda-cyhalothrin 05 % EC 0.8ml/liter or Methoxyfenozide 21.8 % SC@ 1ml/liter water is recommended
- Vaccinate sheep and goats against Enterotoxaemia (ET vaccine).

### **Maharashtra**

6 mm (80% large excess) rainfall over Madhya Maharashtra; 6 mm (-9% deficit) in Marathwada; 7 mm (283% large excess) in Konkan region and 16 mm (52% excess) over Vidarbha was recorded during 01 - 30 March 2023. The extended range weather forecast (rainfall) for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) is above normal over all the four subdivision during both week -1 and week-2.

#### *Vidarbha*

- In view of rainfall during next two weeks, it is advised to avoid water stagnation in groundnut fields, as the crop is in peg formation/penetration stage.
- Undertake hoeing and hand weeding in timely sown summer green gram.
- To leaf miner, thrips and jassids in groundnut undertake spraying of Lambda-cyhalothrin 05 % EC 0.8ml/liter or Methoxyfenozide 21.8 % SC@ 1ml/liter water is recommended

- In sheep and goat, preventive vaccination for Bulkandi disease (Rinderpest) is recommended
- In livestock, preventive vaccination for foot and mouth disease (FMD) and preventive deworming for flat worms is recommended

#### *Marathwada*

- Threshing of harvested *rabi* Sorghum and wheat should be done. Store the threshed grain at safe places.
- For moisture conservation and maintenance of soil temperature mulching should be done in mango orchards. If fruit drop is observed in a mango orchard take a spray of 2 % 13:00:45 + NAA 15 PPM.

#### *Madhya Maharashtra*

- To control fruit drop in mango orchards, spraying of 20 ppm Planofix is advised. And also spraying of Karathane @ 5 ml per 10 litre of water is advised to control powdery mildew.
- To control onion blight, spraying of Mancozeb 30 gm or tebuconazole 10 ml in 10 lit of water is recommended.
- To control Fall armyworm in maize, spraying of Emamectin benzoate 5 % SG @5g or Chlorantraniliprole 18.5 % SC 5ml @ per 10 lit of water is recommended.

#### *Konkan*

- Maintain optimum water level of 5-10 cm in rice field where crop is in panicle initiation to flowering stage. Apply 3<sup>rd</sup> split dose of nitrogen @ 425 gm urea per guntha to the summer rice which is in flowering stage under clear weather conditions.
- The pre-harvest bagging with newspaper bag of size 25 X 20 cm at marble to egg stage as per recommendation of D.B.S.K.K.V. helps to protect the mango fruits from rain, fruit fly incidence, sun scorching and improves quality and spot less fruit in mango. Care should be taken to avoid injury to fruit stalks while bagging fruits with paper bags.
- To avoid pre-mature fruit drops in mango orchards, and improve the quality of mango fruits, spray 1% Potassium nitrate three spray at pea marble and arecanut size stage of mango fruits at an interval of 10-15 days.
- To protect the pea size fruits of mango from hoppers as per blossom protection schedule for mango crop, take a spray of imidacloprid 0.3ml or thiomethoxam 25% WG @ 3 gm per 10 liter of water at pea stage.
- There is a possibility for the incidence of fruit fly on mango. Collect and destroy all fallen fruits and install “Rakshak fruit fly trap” developed by university @ 2 traps per acre.
- Vaccination against Haemorrhagic Septecemia (H.S) disease in farm animals under supervision of veterinary officers is advocated.
- Provide clean, hygienic and plenty of drinking water to farm animals.

#### **Anantapur**

37 mm (310% large excess) rainfall was received over Rayalaseema and 62 mm (358% large excess) rainfall was received over Coastal Andhra Pradesh during 01 - 30 March 2023. The extended range weather forecast (rainfall) provided for the next two weeks (31 March to 06 April, 2023 and 07 - 13 April 2023) is above normal over Rayalaseema and Coastal Andhra Pradesh for

week-1 and; above normal over costal Andra Pradesh and below normal over Rayalaseema during week-2.

- The present weather conditions are favourable for the incidence of stemborer and leaf folder in paddy grown in Ananthapuramu, Kurnool, Chittoor and Nellore districts. To control stemborer and leaf folder, spraying of Cartap hydrochloride @2g or Chlorpyrifos@ 2.5ml/L of water is recommended under clear weather conditions.
- Prevailing weather conditions are congenial for the incidence of stalk rot in maize grown in Kurnool, Prakasam, Ananthapuramu, Krishna, Guntur, YSR Kadapa and Nandyal districts. To control the disease, soil drenching with Carbendazim @ 1 g or Copper Oxy Chloride @ 3 g/L of water is recommended under clear weather conditions.

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