



National Agromet Advisory Service Bulletin
Based on
Extended Range Weather Forecast (ERFS)

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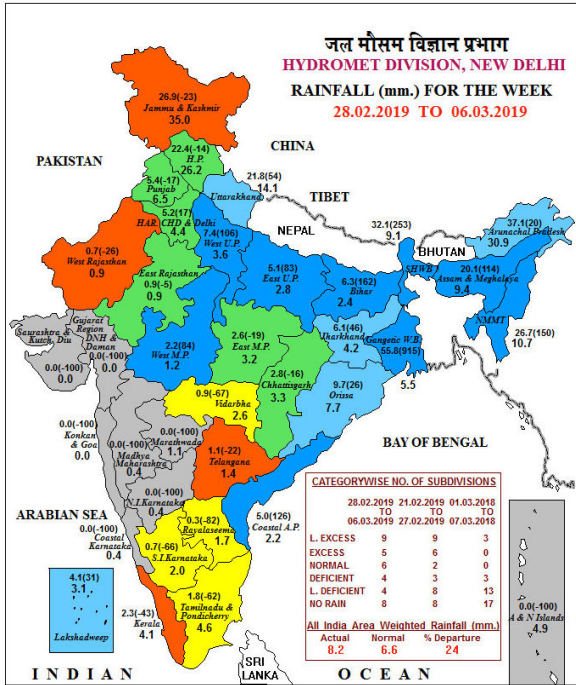
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&
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India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall

(28th February to 13th March 2019)

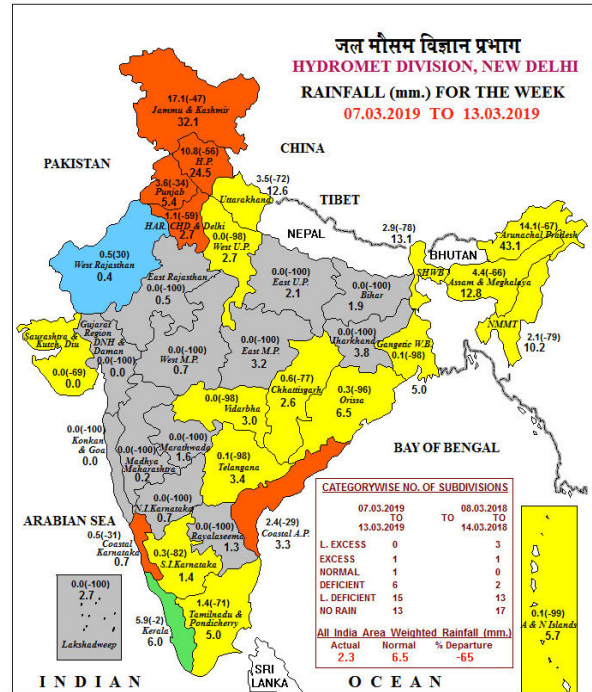
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



LEGEND: ■ L. EXCESS (+60% OR MORE) ■ EXCESS (+20% TO +59%) ■ NORMAL (+19% TO -19%)
 ■ DEFICIENT (-20% TO -59%) ■ L. DEFICIENT (-60% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

NOTES:
 (a) Rainfall figures are based on operational data.
 (b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
 Percentage Departures of Rainfall are shown in Brackets.

भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



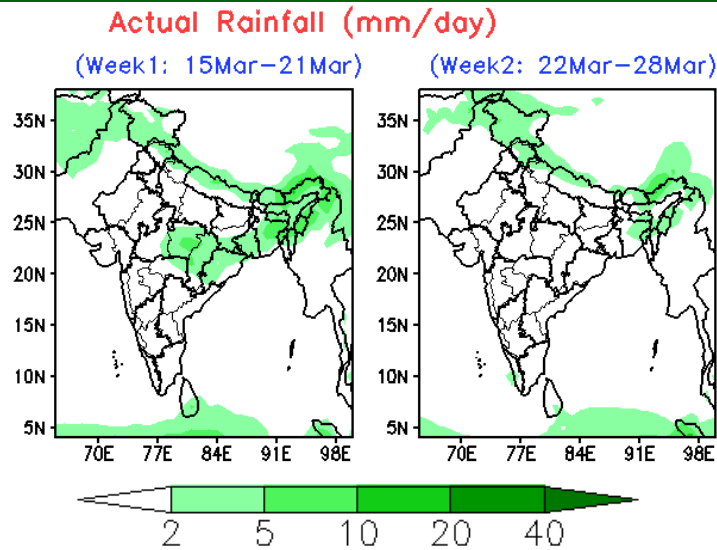
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NOTES:
 (a) Rainfall figures are based on operational data.
 (b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
 Percentage Departures of Rainfall are shown in Brackets.

- Normal or above normal rainfall occurred in either of the two weeks in Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Bihar, Jharkhand, Odisha, West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura (NMMT), West Rajasthan, East Rajasthan, Madhya Pradesh, Chhattisgarh, Kerala, Coastal Andhra Pradesh and Lakshadweep.
- Below normal rainfall / no rain occurred over rest of the country.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 13 March) (15th to 28th March 2019)



Extended Range Rainfall Forecast

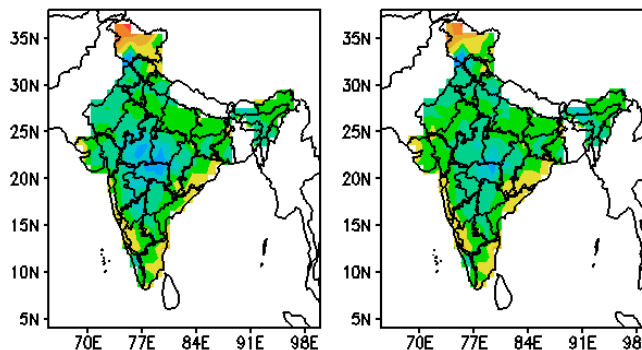
- **Week 1 (15.03.2019 to 21.03.2019):** Some parts of extreme north India and parts of Northeast India and adjoining eastern parts of India to get some rainfall.
- **Week 2 (22.03.2019 to 28.03.2019):** Normal rainfall mostly over major parts of India with some WD associated rainfall over extreme north India is likely.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 13 March)
(15th to 28th March 2019)**

MME Bias Corrected Tmax Anomaly (Deg)

(Week1: 15Mar–21Mar)

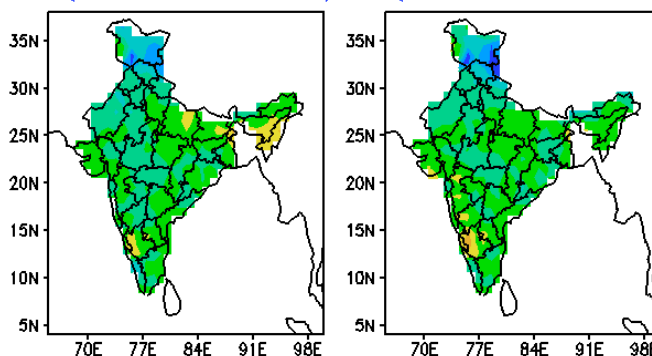
(Week2: 22Mar–28Mar)



MME Bias Corrected Tmin Anomaly (Deg)

(Week1: 15Mar–21Mar)

(Week2: 22Mar–28Mar)



Maximum Temperature (Tmax)

- **Week 1 (15.03.2019 to 21.03.2019) and Week 2 (22.03.2019 to 28.03.2019):** Although the warming over most parts of India started, however, Tmax will remain below normal over the country except some parts of extreme north India and eastern coastal belt.

Minimum Temperature (Tmin)

- **Week 1 (15.03.2019 to 21.03.2019) and Week 2 (22.03.2019 to 28.03.2019):** Tmin is expected to be below normal over most of India. Northern parts of the country will be under the influence of cold condition.

Strategic Agricultural Planning based on rainfall during next two weeks till 28th March 2019

Agromet Advisories

Kerala

Amount of rainfall received during the period from 01 to 14 March 2019 over Kerala is 8.2 mm (15% deficit).

- Farmers are advised to spray Quinalphos (0.05%) 400 ml in 200 litres of water against coffee berry borer.
- White powdery spots are seen on the leaves of cucurbitaceous vegetables. Apply 1.5 ml Tebuconazole or 0.5 ml Difenoconazole per one litre of water. After 10 days, apply 20 gram of Trichoderma viride per one litre of water to control powdery mildew disease of vegetables.
- Keep the pepper field clean. Drench Pseudomonas culture 10gram/ litre of water at basal region against fungal and bacterial diseases. Do not disturb soil near plant base. This will result in quick wilt disease.

Karnataka

Amount of rainfall received during the period from 01 to 14 March 2019 over South Interior Karnataka is 0.7 mm (78% deficit), Coastal Karnataka is 0.5mm (56% deficit) and no rainfall over North Interior Karnataka.

South Interior Karnataka

- The grains of the harvested crops should be properly dried by retaining moisture percentage of 11-12 % in cereals, 9% in pulses, 8% in oilseeds and 5-6% in vegetable seeds for long storage & also to minimize the store pest damage.
- To protect the pulse grains from storage pests, apply oils of castor/ linseed/ neem oil @ 3-5 ml per kg of grains.
- Leaf hopper and powdery mildew disease incidence is more in mango before flowering and immediately after fruit formation hence manage by spraying of Carbaryl, 50WP @4g/litre of water or Imidacloprid @ 0.3ml/ litre of water for management of leaf hopper.

Tamil Nadu

Amount of rainfall received during the period of 01 to 14 March 2019 over Tamil Nadu is 3.1 mm (66 % deficit).

- Prevailing weather condition is favorable for leafhopper, mealy bug and stem weevil incidence in cotton. To control sucking pest, spray Imidacloprid 200 SL 100 ml/ha or Fipronil 5%S C 1500-2000 ml/ha.
- Anticipated weather condition is favourable for fruit rot / die back and fruit borer diseases in chilli. To control, three sprayings with Wettable Sulphur or Copper Oxy Chloride 0.25% is recommended.
- Prevailing weather condition is favorable for citrus canker disease incidence. To control, spray Copper Oxy Chloride 0.2% at fortnight intervals.

Maharashtra

No rainfall received during 01 to 14 March 2019 over different meteorological sub divisions of the state viz., Konkan, Madhya Maharashtra and Marathwada. Amount of rainfall received over Vidarbha is 0.9 mm (83% deficit).

Marathwada

- Apply 100 kg nitrogen per hectare one and half month after sowing in seasonal sugarcane crop and 75 kg nitrogen per hectare in ratoon sugarcane crop with the help of urea.
- For management of army worms in maize crop sown for fodder purpose, farmers are advised to spray Thiamethoxam 12.6 % + Lambda cyhalothrin 9.5 % @ 50 ml per acre.
- Irrigation management should be done in Ambia bahar citrus orchard. Spray 13:00:45 @ 10 gram + Chelated zinc @ 5 gm per litre of water in citrus orchard.
- Irrigation management should be done in banana orchard with the help of drip irrigation system. Give support to the stem of banana plant with the help of soil.

Vidarbha

- Cultivation of summer vegetables like bitter gourd, Indian squash or round melon, ridge gourd, smooth gourd, bottle gourd, cowpea, cluster bean, coriander, etc. can be initiated during this period.
- Need based timely irrigation is advisable to vegetables.
- Sowing of summer greengram(Pusa Vashaki) should be completed by first fortnight of March, 12-15 kg seed rate is recommended for sowing. Seed treatment with Trichoderma @ 6g/kg seed and Rhizobium and PSB (each 250 g /10-15 kg seed) is advisable.
- Broad bed furrow (BBF) sowing with sprinkler irrigation is advisable for summer mung.

Konkan

- Due to variation in temperature there is possibility of fruit drop of mango hence, provide irrigation for alphonso mango @ 150 to 200 litre of water at fortnight interval for 3 to 4 times to reduce fruit drop and increase the size of fruits. Also use straw mulch to reduce evaporation.
- Provide irrigation to newly planted cashew orchard and new growth below graft union should be removed regularly.
- Due to increase in maximum temperature, provide irrigation to coconut orchard at 5 to 6 days interval.

Madhya Maharashtra

- In timely sown wheat, moisture % at the time of harvesting should be 15 %.
- In grapes, mango, pomegranate & sapota orchards, mulching should be done with sugarcane trash & crop residues to avoid loss of water from evaporation.
- In summer groundnut and sunflower, spray Methyl Demeton 20 ml or Imidacloprid 4 ml in 10 litre water to control sucking pests.
- In late sown wheat give irrigation at dough stage (80-85 DAS).
- Give protective irrigation to drumstick and use crop residue for mulching to conserve soil moisture.
- To control powdery mildew & mango hoppers on bloomed mango, spray Imidacloprid (17.8 SL) 3- 4 ml + Sulphur 80 WP 25 gram per 10 litre water.

Uttar Pradesh

Amount of rainfall received over East Uttar Pradesh region is 2.9 mm (36% deficit) and West Uttar Pradesh is 4.8 mm (9% deficit) during 01 to 14 March 2019.

- Farmers are advised to protect pigeon pea, pea and chickpea from insect and pest due to cloudy weather and higher temperature. Spray 1.5 litre Monochrotophos or Quinalphos 20% EC 2.0 litre/ha or Malathion 50 % Ec 2.0 litre/ha with 500 to 600 litre water in clear sky condition.
- Dig out potato crop. Take precaution from late/early blight and aphid, spray Copper oxichloride 3.0 kg/ha with 700-800 litre water solution.
- Sowing of black gram crop should be taken up at clear sky, seed should be treated with Captan or Thiram @ 3.0 gm/kg of seed before sowing. Varieties like T-9, Narender Urd-1, Azaid Urd-1, Uttara, Azad Urd-2, and Shekhar-2 is recommended @ 20-25 kg/ha treated seed.

Odisha

Amount of rainfall received over Odisha during 01 to 14 March 2019 is 5.0 mm (63% deficit).

- Resort to drip and sprinkler irrigation practices wherever possible in the event of limited water availability particularly for commercial crops including fruit orchards and widely spaced vegetables.
- Transplanting of vegetables should be done in afternoon hour to avoid high temperature.
- Due to shortfall in the availability of canal water in some areas , it is suggested that the farmers may adopt alternate furrow irrigation which will economize water requirement by nearly 50%.

West Bengal

Amount of rainfall received over Gangetic West Bengal during 01 to 14 March 2019 is 17.1 mm (67% excess).

- Apply second dose of top dressing @ of 25 Kg nitrogen per hectare of land in Boro rice. In the prevailing weather condition, there may be a chance of the attack of stem-borer. If the infestation is more than 10%, then only apply Hexaconazole 5 EC @ 2.0 ml or Propiconazole 25 EC @ 1 ml per litre of water.
- Cloudy day is expected in next three days. Thus, it is advised to harvest potato crop as early as possible.
- In this weather, there is a chance of leaf-blight and collar-rot in pointed gourd. To prevent the disease, farmers are advised to apply 1ml Ridomil or Indofil-M-85 per litre of water at an interval of three weeks.

Jharkhand

Amount of rainfall received over Jharkhand during 01 to 14 March 2019 is 2.3 mm (69 % deficit).

- Farmers having at least 1 - 2 irrigation facility may proceed for mung cultivation after harvesting of *rabi* crops. Select improved varieties of mung like SML- 668 and sow with seed @ 12 kg per acre. Before sowing, seed must be treated with Rhizobium culture.
- Summer Rice - To control weeds in the field, use cono-weeder after 25-30 days of transplanting. Cono -weeder not only destroys the weeds but also increases soil aeration, which ultimately helps in emergence of more tillers in the plant. Broadcast urea in the crop only after weeding.
- Some small ponds dried away completely in April month. Hence, farmers are advised to harvest the fishes of such type of ponds as soon as possible.

Bihar

Amount of rainfall received over Bihar during 01 to 14 March 2019 is 0.5 mm (87 % deficit).

- Farmers are advised to complete harvesting of mustard and potato before 15th March. Farmers are also suggested to take utmost care in spraying around 15th March.
- Land preparation/ sowing of green gram (mung bean) & black gram (urd) is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per ha is advised during land preparation. Pusa Vishal, Samrat, SML-668, HUM-16 and Sona varieties for mung bean and Pant Urd-19 and Pant Urd-31, Uttra and Naveen varieties of urd are recommended for sowing in North Bihar.
- Complete the sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd, ridge guard, bitter guard at the earliest. Intercultural operation is advised.

Assam

Rainfall received over Assam is 19.0 mm (10% deficit) during 01 to 14 March 2019.

- Farmers can start preparing the land for planting of colocasia, after the harvest of potato, rapeseed and mustard crop. Healthy planting material, improve variety such as Kaka Kachu, White Gaurya, Panchamukhia, Bidhan Chattanya, Ahinia Kachu and Bidhan Jaydeb should be selected.
- Farmers may go for cultivation of Ginger during this period. In order to get rid from rhizome rot, farmers are advised to go for rhizome rot treatment with Indofil M-45 @3gram/litre for half an hour.
- Prepare land for growing green gram and black gram crop. Sandy loam soil is more preferable. Collect recommended varieties like T9, Pant U 19, UG 157 etc. for black gram and Kopergaon, Pratap, AAU 39 etc. for green gram cultivation.
- Land preparation may be started for growing of ridge and sponge gourd. Early sowing helps in escaping fruit fly attack. Select recommended varieties viz. AAUJ-1, AAUJ-2, AAUJ-3 etc. for ridge gourd and Pusa Chikni or other local varieties for sponge gourd.

Haryana

Rainfall received over Haryana is 6.2 mm rainfall (2% deficit) during 01 to 14 March 2019.

- Farmers are advised to temporarily withhold irrigation and chemical spray in wheat, barley and gram crops till 15th March.
- Due to Western Disturbances, farmers are advised to withhold irrigation in existing vegetable crops till 15th March. Farmers are also advised to keep monitoring for pest/ diseases.
- Due to fall in night temperature, high winds and cloudy conditions keep the animals under shed. Keep proper arrangement to keep warm in shed. Provide 50 grams iodized salt and 50 to 100 grams mineral mixture daily with animal feed/fodder to keep them healthy.

Uttarakhand

Rainfall received over Uttarakhand is 15.1 mm rainfall (36% deficit) during 01 to 14 March 2019.

- **Temperate fruits :** Consideration of light to moderate rainfall and hailstorm in next few days, farmer are advised to postpone any type of spray.
- Transplanting of tomatoes, chilli, capsicum, brinjal and cucurbitaceous crops should be done after rain.
- Consideration of gradual decrease in temperatures, farmers are advised to maintain optimum temperatures during mushroom production.

Punjab

Rainfall received over Punjab is 8.7 mm rainfall (20% deficit) during 01 to 14 March 2019.

- Farmers are advised to survey the wheat crop for aphid attack. If 5 or more aphids/earhead is seen, spray 40 ml Confidor 17.8 SL or 20gram Actara 25 WG in 80-100 litres of water per acre.
- In gobhi sarson/ raya, if 50-60 aphids are noticed per 10 cm of terminal portion of central shoot, spray 40 gram Actara 25 WG or 400 ml Ekalux 25 EC or 600 ml Dursban 20 EC in 80-125 litres of water per acre.
- It is the optimum time for the sowing of sugarcane and use recommended varieties like CoPB-92, Co118, CoJ-85, CoJ-64 (early maturing), CoPB-94, CoPB-93, CoPB-91, Co-238, CoJ-88 for mid season and late maturing.
- For the control of purple blotch in onion, spray the crop with 600 gram of Indofil M-45 mixed with 200 ml of Triton or linseed oil in 200 litres of water per acre as soon as first symptom of purple blotch appears in the crop. The spray should be repeated at 10 days interval.

Himachal Pradesh

Himachal Pradesh has received 31.5 mm of rainfall during 01 to 14 March 2019, which is 30% deficit.

- Weather is conducive for infection of blight in potato and tomato. Constant monitoring is advised.

- As soon as weather clears, intercultural operations of radish, carrot, turnip, spinach, carrot, broccoli and lettuce may be done.
- For monitoring of borer in vegetables (brinjal, cauliflower, cabbage, tomato etc.) farmers are advised to use pheromone traps.
- Apply mulch and well rotten FYM on ginger, turmeric, colcasia and leafy vegetables.

Jammu

Rainfall received during 01 to 14 March 2019 over Jammu is 44.6 mm, which is 27% deficit.

- For control of collar rot and root rot in rabi pulses, rogue out the severely infected plants and drench affected areas with thiram @ 0.2% or carbendazim @ 0.1%.
- To control red pumpkin beetle in cucurbits especially cucumber and bottle gourd, incorporate phorate granules 10 gram in the pits during transplanting.
- Apply Ridomil-MZ @ 2.0 gm/litre of water, if attack of white rust is observed in Mustard.
- The weather condition is favourable to yellow rust under such situation farmers are advised to regularly monitor wheat fields for yellow rust and if noticed apply Propiconazole (Tilt) @ 25ml in 25 litres of water.

***Disclaimer:** 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 forecasts. In no event will India Meteorological Department (IMD) and Indian Council of Agricultural Research (ICAR) 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 on this bulletin.*