



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

Validity: 29 March to 11 April 2019

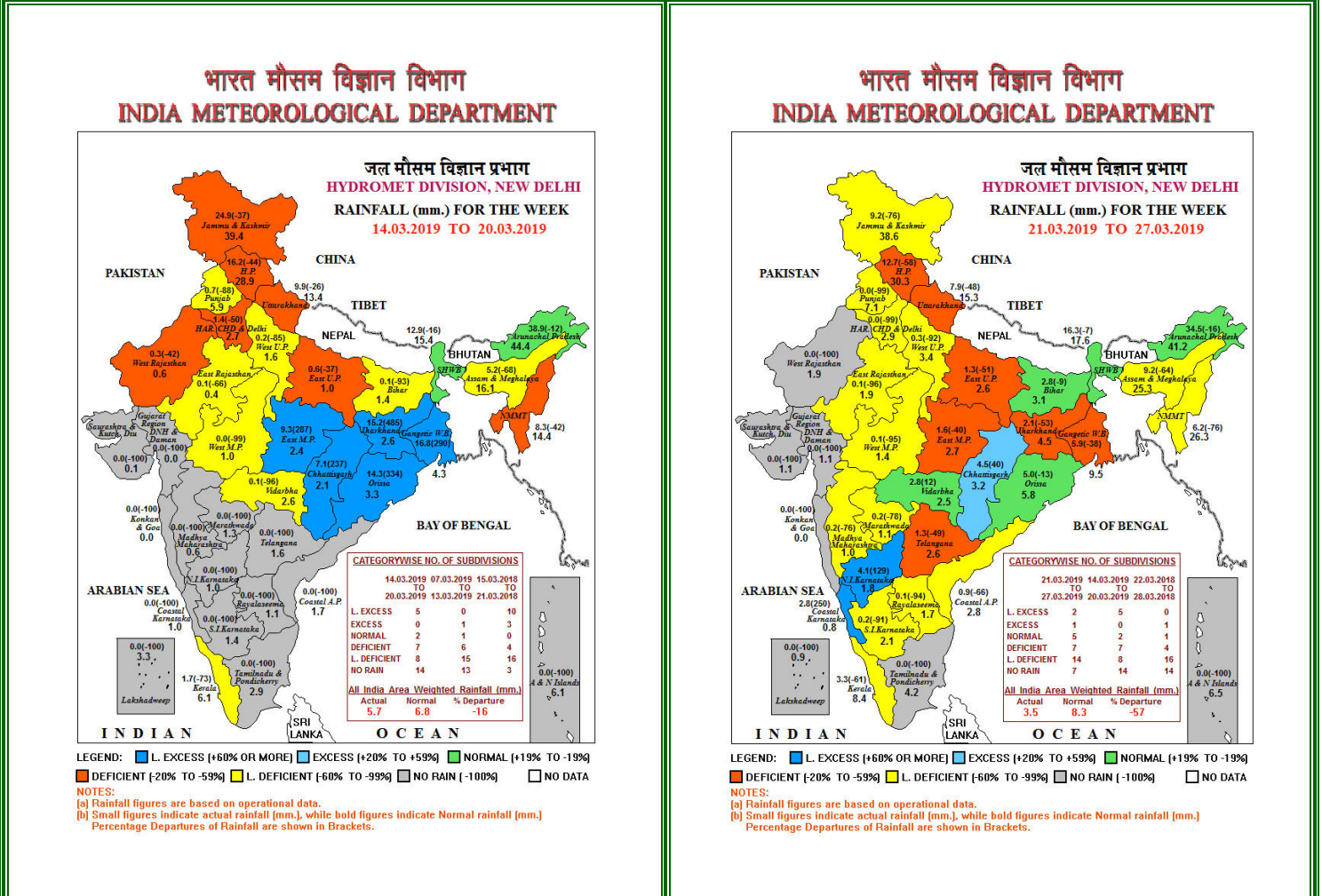
Date of issue: 29 March 2019

Issued by
Indian Council of Agricultural Research (ICAR)
All India Coordinated Research Project on Agricultural Meteorology (AICRPAM),
Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad.
&
Earth System Science Organization
India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall

(14th to 27th March 2019)



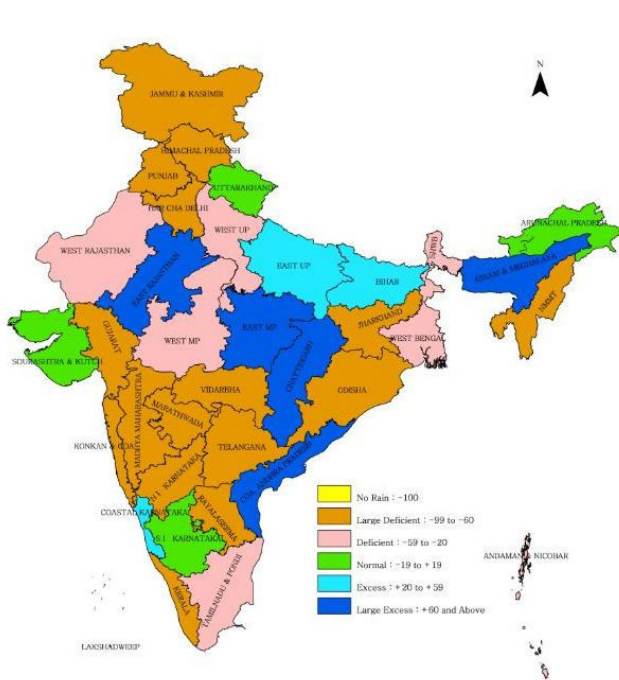
- Normal or above normal rainfall occurred in both the weeks in Arunachal Pradesh, Sub-Himalayan West Bengal & Sikkim, Odisha and Chhattisgarh.
- Normal or above normal rainfall occurred in either of the two weeks in Jharkhand, Gangetic West Bengal, East Madhya Pradesh Coastal Karnataka and North Interior Karnataka.
- Below normal rainfall / no rain occurred over rest of the country.

Extended Range Forecast System

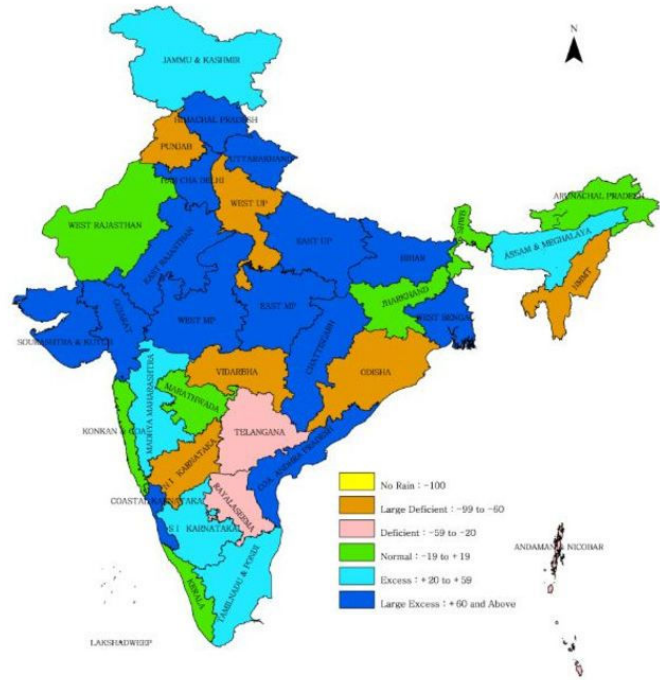
Rainfall forecast maps for the next 2 weeks (IC – 27 March) (29th March to 11th April 2019)

Week 1 (29.03.2019 to 04.04.2019)

Week 2 (05.04.2019 to 11.04.2019)



@AICRPAM, CRIDA
Based on the data given by IMD

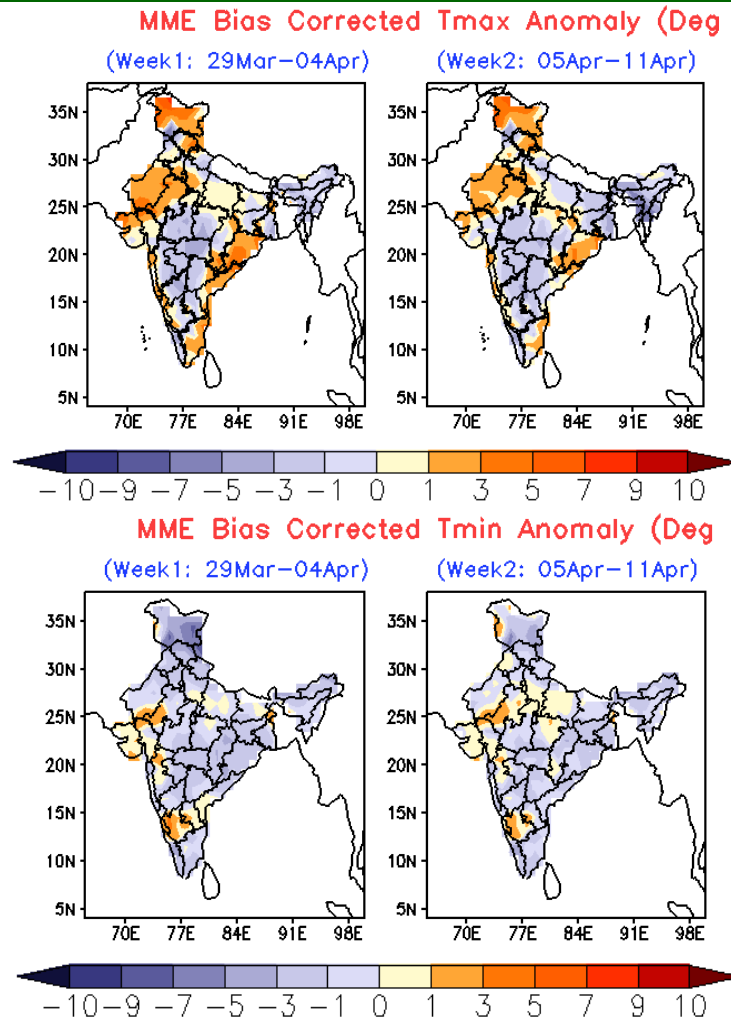


@AICRPAM, CRIDA
Based on the data given by IMD

Extended Range Rainfall Forecast

- **Week 1 (29.03.2019 to 04.04.2019) and Week 2 (05.04.2019 to 11.04.2019):** Northeast India and adjoining eastern states like Bihar, Jharkhand, West Bengal and Odisha will get rainfall associated with pre-monsoon thunderstorm activity. Western Disturbances associated rainfall over extreme north India likely particularly in week 2.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 27 March)
(29th March to 11th April 2019)**



Maximum Temperature (Tmax)

- **Week 1 (29.03.2019 to 04.04.2019) and Week 2 (05.04.2019 to 11.04.2019):** Although the warming over most parts of India started, however, Tmax will remain below normal over the central parts of India. However, over northern most parts of India, northwest India and southeastern coastal states of India Tmax will be above normal.

Minimum Temperature (Tmin)

- **Week 1 (29.03.2019 to 04.04.2019) and Week 2 (05.04.2019 to 11.04.2019):** Tmin is expected to be below normal over most of India. However, some isolated regions of India likely to experience above normal Tmin.

Strategic Agricultural Planning based on rainfall during next two weeks till 11th April 2019

Agromet Advisories

Kerala

Amount of rainfall received during the period from 01 to 28 March 2019 over Kerala is 13.1 mm (46% deficit). The extended range weather forecast for next two weeks (29 March to 4 April and 5 to 11 April) is large deficient for week-1 and normal for week-2.

- There is a chance of sigatoka disease in banana. As a precaution, spray 20 gram pseudomonas per one litre of water.
- Take necessary control measures against cardamom thrips, white flies etc. It is advised to give a heavy irrigation once in a fortnight.
- 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.

Karnataka

Amount of rainfall received during the period from 01 to 28 March 2019 over South Interior Karnataka is 0.7 mm (89% deficit), Coastal Karnataka is 3.3 mm (13% excess) and over North Interior Karnataka 4.1 mm (9% excess). The extended range weather forecast for next two weeks (29 March to 4 April and 5 to 11 April) over north interior Karnataka is large deficient for both the weeks, over south interior Karnataka is normal for week-1 and excess for week-2 and over coastal Karnataka is excess for week-1 and large excess for week-2.

South Interior Karnataka

- In already harvested fields, farmers are advised to remove the half cutted stubbles of pigeon pea from their fields. This will avoid multiplication and spreading of sterility mosaic disease.
- 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.

Tamil Nadu

Amount of rainfall received during the period of 01 to 28 March 2019 over Tamil Nadu is 3.1 mm (81 % deficit). The extended range weather forecast for next two weeks (29 March to 4 April and 5 to 11 April) is deficient for week-1 and excess for week-2.

- Prevailing weather condition is favorable for citrus canker disease incidence. To control, spray Copper Oxy Chloride 0.2% at fortnight intervals.
- Anticipated weather condition is favourable for fruit rot / die back and fruit borer diseases in chilli. To control, three sprayings with wetttable Sulphur or Copper Oxy Chloride 0.25% is recommended.
- For protecting banana from high wind speed, mount the soil around the base of the tree and give

support by using casuarinas poles.

Maharashtra

Amount of rainfall received over Madhya Maharashtra is 0.2 mm (89% deficit), over Marathwada is 0.2 mm (95% deficit), over Vidarbha is 3.8 mm (64% deficit) and no rainfall received over Konkan region during 01 to 28 March 2019. The extended range weather forecast for next two weeks (29 March to 4 April and 5 to 11 April) is large deficient over all the sub divisions of Maharashtra for week-1 and large deficient over Vidarbha, normal over Marathwada and Konkan, excess over Madhya Maharashtra for week-2.

Marathwada

- Harvesting, boiling, drying, polishing operations should be carried out in turmeric crop.
- During water stress condition in sugarcane crop, remove lower mature as well as dry leaves and use it for mulching.
- Due to high temperature, the loss of water through evaporation and transpiration is more. Hence, irrigate the banana crop as per their requirement.
- Irrigation management should be done in citrus orchard to reduce loss of fruit drop. If deficiency of nutrients is observed on the leaves, spray 13:00:45 @ 15 gram + Chelated Zinc @ 5 gram per litre of water. Apply Bordeaux pest to the stem.

Vidarbha

- With increasing temperature and evaporative demand, organic mulching in fruit orchard basins particularly of new/young plantation is advisable to conserve moisture, maintain thermal regime and economize irrigation water.
- Under the prevailing weather condition, summer crops like groundnut, sunflower, sesame, green gram vegetables should be irrigated within 7 to 8 days interval.
- Cultivation of summer vegetables like okra, bitter gourd, tinda, ridge gourd, smooth gourd, bottle gourd, cowpea, cluster bean, coriander can be undertaken during this period with sufficient irrigation facility.

Konkan

- During summer, to protect the mango tree from increasing temperature, apply 1% bordo paste to the base of stem.
- 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.
- Due to increase in maximum temperature, provide irrigation to coconut orchard at 5 to 6 days interval. Provide support and shade to newly planted coconut orchard.

Madhya Maharashtra

- For control of fruit drop in mango, spraying of Carbendazim 12% + Mancozeb 63% combinative fungicide @ 20 gram per litre of water should be done.

- In grapes, mango, pomegranate and sapota orchards, mulching should be done with sugarcane trash & crop residues to avoid loss of water from evaporation.
- Grains harvested in rabi season should be dried for 2 to 3 days in sunlight. Care should be taken that moisture percent in grains should not be more than 10 percent while its storage.
- Give clean, sufficient water and green fodder to milch animals and place them under shade to protect them from high temperature.

Uttar Pradesh

Amount of rainfall received over East Uttar Pradesh region is 4.8 mm (41% deficit) and West Uttar Pradesh is 5.3 mm (48% deficit) during 01 to 28 March 2019. The extended range weather forecast for next two weeks (29 March to 4 April and 5 to 11 April) over East Uttar Pradesh is excess for week-1 and large excess for week-2 and over West Uttar Pradesh is deficient for week-1 and large deficient for week-2.

- Irrigate late sown wheat crops at critical stages i.e. anthesis and milking stage.
- Protect pigeon pea and chickpea from insect and pest due to cloudy weather and higher temperature. If pod borer and semi lopper is observed, 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.
- Sowing of maize crop should be taken up at clear sky, seed should be treated with 2.5 g Thiram or 2.0 g Agro-san G.N @ 3.0 g /kg of composite seed.
- Similarly sowing of black gram should be taken up with seed @ 20-25 kg/ha of varieties like T-9, Narender Urd-1, Azaid Urd-1, Uttara, Azad Urd-2 and Shekhar-2 treated with Captan or Thiram @ 3.0 g/kg of seed.

Odisha

Amount of rainfall received over Odisha during 01 to 28 March 2019 is 24.8 mm (10% excess). The extended range weather forecast for next two weeks (29 March to 4 April and 5 to 11 April) is large deficient for both the weeks.

- 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.
- Stem borer infestation has been found in maize. Release 20,000 eggs of *Trycogramma chilonies* twice at 10 days interval. If not controlled, spray 2 ml Chloropyriphos or Monochrotophos or Quinalphos in 1 litre water.
- Flowering of summer groundnut has been started. Complete hoeing, weeding followed by earthing up without any delay. Do not disturb the soil to avoid disturbances in pegging. Apply 250 kg Gypsum or 200-300 kg of Calcium Sulphate/ha.
- Current temperature favours thrips infestation in summer groundnut. Spray 400 ml Dimethoate or Endosulfan or 50 ml Imidacloprid in 200 litre water per acre.

Jharkhand

Amount of rainfall received over Jharkhand during 01 to 28 March 2019 is 19.5 mm (33 % excess). The extended range weather forecast for next two weeks (29 March to 4 April and 5 to 11 April) is large

deficient for week-1 and normal for week-2.

- Maintain the water level in transplanted rice and broadcast urea after 25-30 days of transplanting.
- Wheat: Most of the crops are at milking to grain filling stage. At this stage, moisture stress may affect the yield adversely. Hence, maintain the soil moisture of the field and irrigate the field accordingly.
- Spray bioinsecticide like Halt, Delfin or Biolep @ 1.5 gram per litre of water during clear weather in Brinjal and ladyfinger against fruit borer.
- Mango/ Litchi : Irrigate the fruit bearing trees at regular interval. Spray Planofix @ 5 ml per 10 litre of water to check dropping of tiny fruits. Spray Sulfex @ 2 gram per litre of water against Powdery mildew disease.

Chhattisgarh

Amount of rainfall received over Chhattisgarh during 01 to 28 March 2019 is 13.4 mm (29 % excess). The extended range weather forecast for next two weeks (29 March to 4 April and 5 to 11 April) is large excess for both the weeks.

- Keep a vigil on summer crops like paddy, groundnut, moong and vegetables from insects. Regular monitoring should be done.
- Harvest pulse and oilseed crops as delay in harvesting may cause seed scattering. Seeds should be sundried to bring moisture to 8-10%.
- Interculture operation should be done in the February sown crops like okra, cowpea and cluster bean immediately followed by irrigation.
- Irrigation management should be done timely in summer vegetables.
- sorghum / jowar should be sown for feeding milch animals during summer season.

Bihar

Amount of rainfall received over Bihar during 01 to 28 March 2019 is 3.4 mm (60 % deficit). The extended range weather forecast for next two weeks (29 March to 4 April and 5 to 11 April) is excess for week-1 and large excess for week-2.

- Sow green gram and black gram. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur per hectare 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, Ultra and Naveen varieties of urd are recommended for sowing in North Bihar.
- Sowing of Kohwa variety of jowar is advised.
- Complete the sowing of summer vegetables at the earliest. Intercultural operation is advised in 20-25 days old summer vegetables such as lady's finger, pumpkin, cucumber, sponge gourd, bottle gourd.

Assam

Rainfall received over Assam is 33.4 mm (47% deficit) during 01 to 28 March 2019. The extended range weather forecast for next two weeks (29 March to 4 April and 5 to 11 April) is large excess for week-1 and excess for week-2.

- Ahu rice (Transplanted) : Farmers are advised to provide irrigation in furrows to saturate the surface soil of the nursery bed. However, standing water to a depth of 2-3 cm should be maintained at least 2-3 days before uprooting.
- Due to favorable weather, leaf spot may be observed in green gram and black gram crop. To control this disease, spray Carbendazim 0.05% @ 300-500 g in 600-700 litre of water at 12-15 days interval on clear weather. Go for weeding at 20-25 days after sowing.
- Due to favourable weather condition, infestation of cutworm may be seen in Okra. To control this pest, apply Malathion 50 EC @ 5 ml per 3 litre of water at seven days interval on clear weather.
- Planting of banana suckers may be continued. Before planting dip the corm in clay slurry followed by spraying 40 gram of Furadon to control nematode infestation in banana crop.

Haryana

Rainfall received over Haryana is 7.5 mm (37% deficit) during 01 to 28 March 2019. The extended range weather forecast for next two weeks (29 March to 4 April and 5 to 11 April) is large deficient for week-1 and large excess for week-2.

There is a possibility of dry weather and rise in day temperature and light to moderate winds up to 29th March.

- Harvest and thresh the mustard crop.
- Apply irrigation in wheat and gram.
- In morning or late evening hours, berseem crop can be cut for fodder to feed the livestock.
- Sow ladyfinger, bottle gourd, cucumber, ridge gourd and summer radish. Due slightly increase in day temperature, farmers are advised to apply light irrigation in the planted vegetable crops as per their crop requirement.

Punjab

Rainfall received over Punjab is 9.4 mm rainfall (61% deficit) during 01 to 28 March 2019. The extended range weather forecast for next two weeks (29 March to 4 April and 5 to 11 April) is large deficient for both the weeks.

- Survey the wheat crop for aphid attack. If 5 or more aphids/earhead is seen, farmers are advised to spray 20 gram Actara 25 WG in 80-100 litres of water per acre.
- Complete 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.

- To control powdery mildew in cucurbits, spray 50-80 ml Karathane 25 EC using 100 litres of water per acre. Repeat, if the need arises at 14 days interval.
- 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 60.7 mm of rainfall during 01 to 28 March 2019, which is 42% deficit. The extended range weather forecast for next two weeks (29 March to 4 April and 5 to 11 April) is large deficient for week-1 and large excess for week-2.

- In mango and citrus, avoid irrigation during flowering for good fruit setting.
- For successful cultivation of mushroom, maintain room temperature 18-22 °C and relative humidity around 85%.
- It is optimum time to resume picking in tea at 6-7 days interval to maintain quality and productivity of tea.

Jammu

Rainfall received during 01 to 28 March 2019 over Jammu is 78.7 mm, which is 43% deficit. The extended range weather forecast for next two weeks (29 March to 4 April and 5 to 11 April) is large deficient for week-1 and excess for week-2.

- To control loose smut of wheat, rogue out affected plants and destroy by burning or deep burying under soil to avoid further dispersal.
- Due to presence of sufficient moisture in the soil, sowing of summer vegetables should be done without any further delay. Transplanting of tomato, brinjal and chillies from nursery to field crop can also be done during this period.
- Spray Zineb or Mancozeb @ 2.5 gram/litre in chickpea, if attack of Ascochyta blight appears, during clear weather.

***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. There is no sub divisional wise rainfall map received from IMD.*