



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

Validity: 08 to 21 March 2019

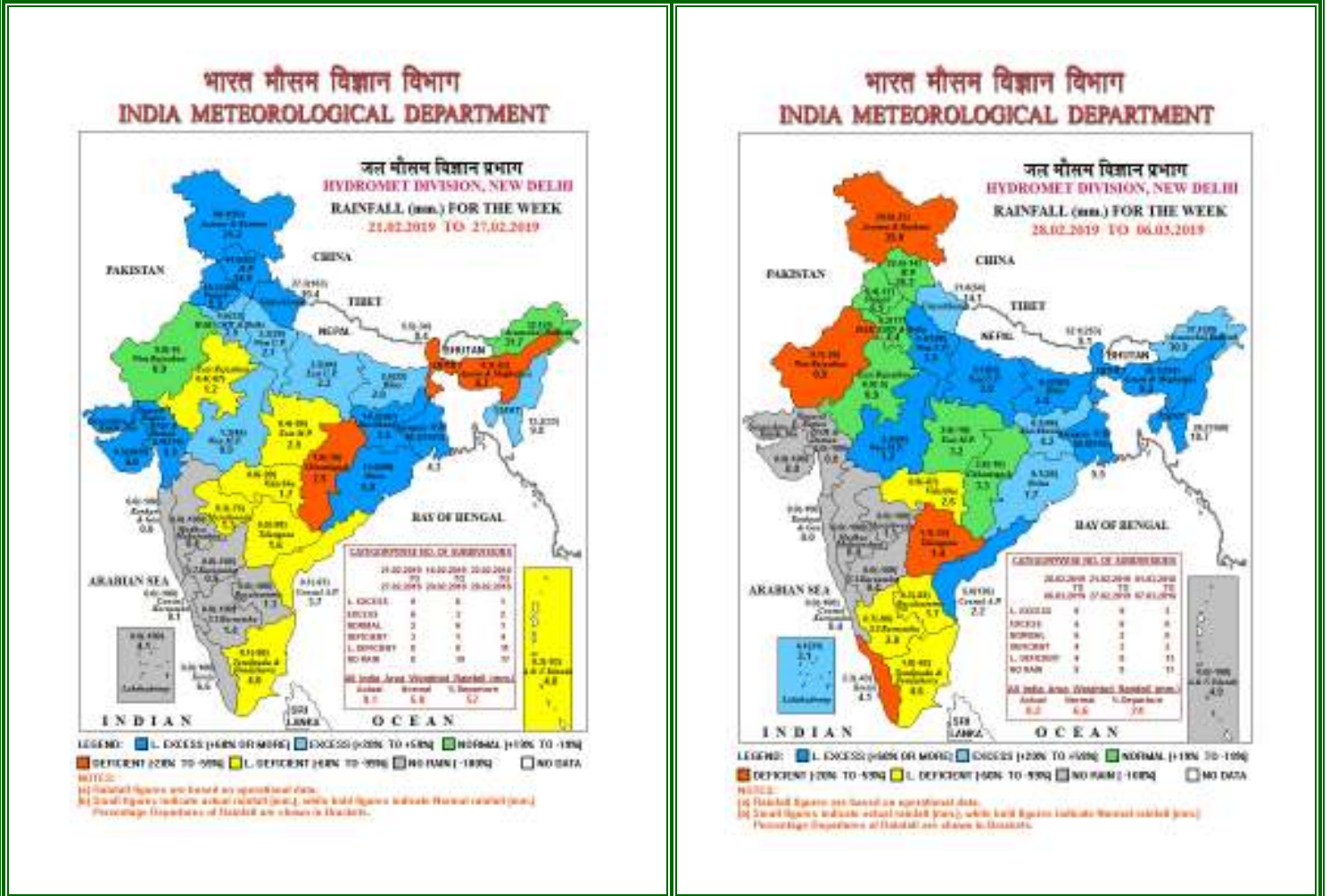
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&
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India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall

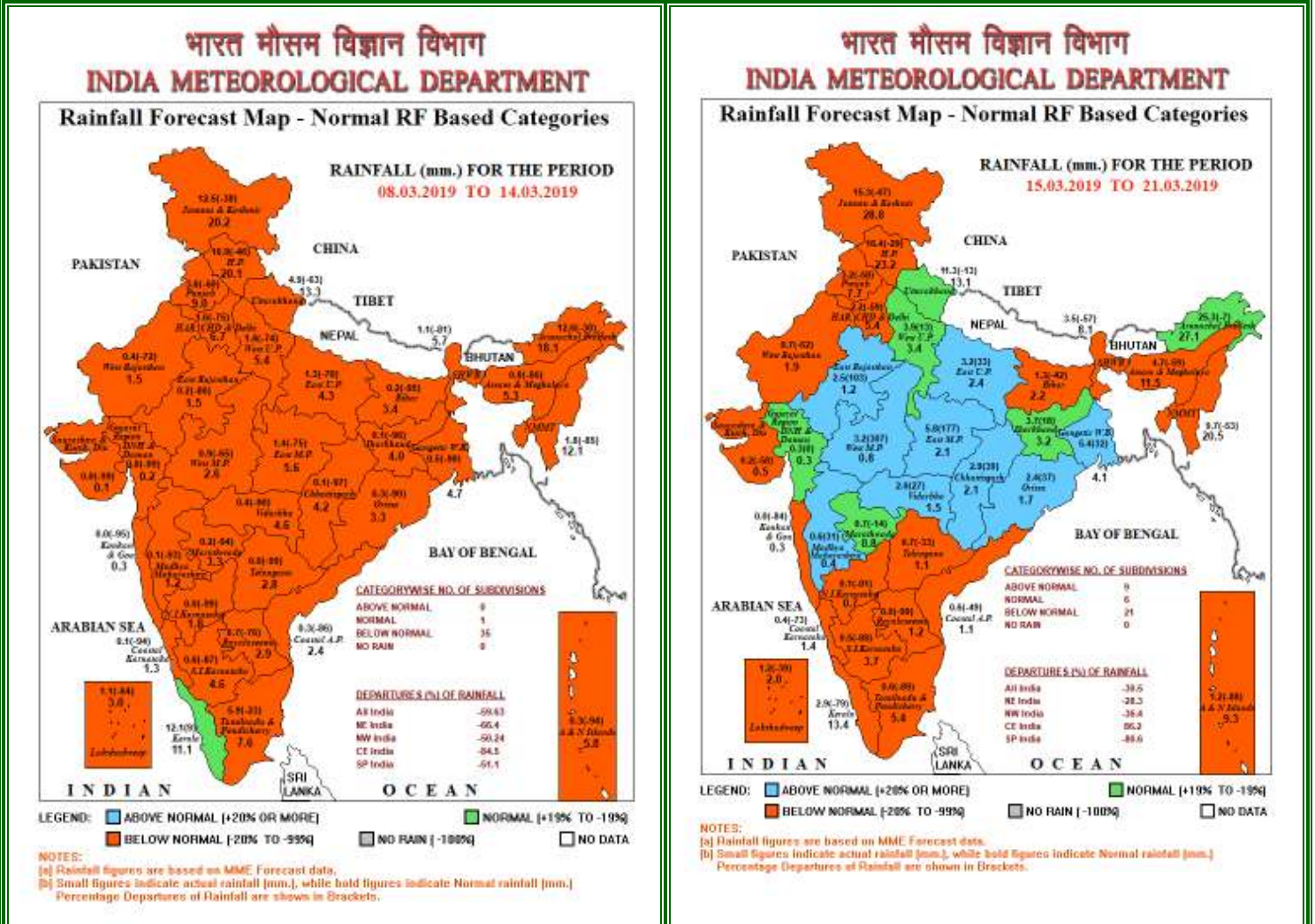
(21st February to 6th March 2019)



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

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 6 March) (8th to 21st March 2019)



Extended Range Rainfall Forecast

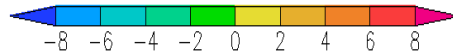
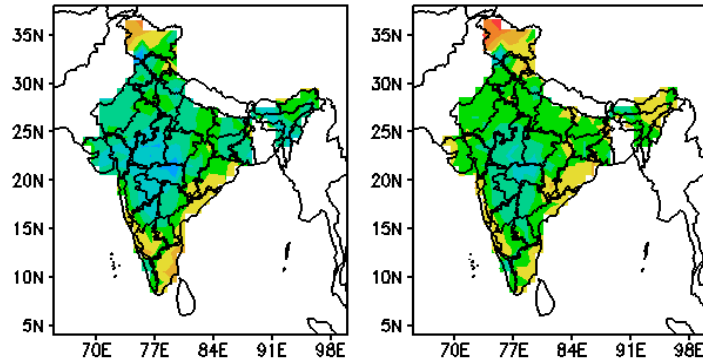
- **Week 1 (08.03.2019 to 14.03.2019) and Week 2 (15.03.2019 to 21.03.2019):** Some parts of extreme north India and parts of Northeast India and adjoining eastern parts of India to get some rainfall. However, the weekly rainfall over the country will be below normal during this period.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 6 March)
(8th to 21st March 2019)**

MME Bias Corrected Tmax Anomaly (Deg)

(Week1: 08Mar–14Mar)

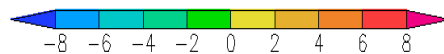
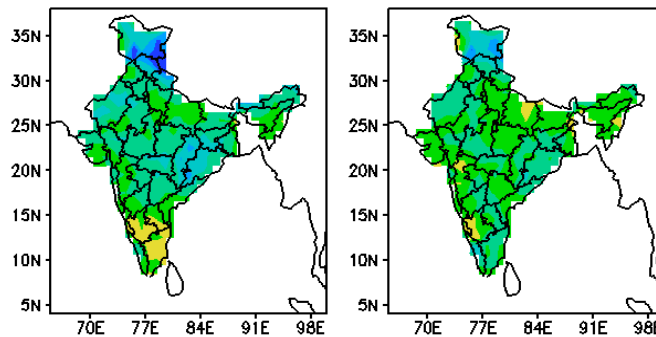
(Week2: 15Mar–21Mar)



MME Bias Corrected Tmin Anomaly (Deg)

(Week1: 08Mar–14Mar)

(Week2: 15Mar–21Mar)



Maximum Temperature (Tmax)

- **Week 1 (08.03.2019 to 14.03.2019) and Week 2 (15.03.2019 to 21.03.2019):** 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, eastern coastal belt and parts of northeast India.

Minimum Temperature (Tmin)

- **Week 1 (08.03.2019 to 14.03.2019) and Week 2 (15.03.2019 to 21.03.2019):** 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 21st March 2019

Agromet Advisories

Kerala

Amount of rainfall received during the period from 01 to 06 March 2019 over Kerala is 2.3 mm (36% deficit). The extended range weather forecast provided for next two weeks (08 to 14 to 15 to 21 March) is normal for week-1 and below normal for week-2.

- Propping should be followed to reduce the damage due to high wind velocity of spodoptera in banana. Destroy the affected leaves along with the Spodoptera. For severe attack, spray Flubendiamide (Fame) 2 ml/10 litre of water.
- 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 the affected plants of cucurbitaceous vegetables. If any fruits are present, harvest them. Then 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.
- Due to the increase in air temperature, the attack of insects such as thrips, mite and white flies etc can affect cowpea. Farmers are advised to apply 10 grams of Verticillium in 1 litre of water or neem based insecticides.

Karnataka

Amount of rainfall received during the period from 01 to 06 March 2019 over South Interior Karnataka is 0.7 mm (65% deficit) and no rainfall over North Interior and coastal Karnataka. The extended range weather forecast provided for 08 to 14 to 15 to 21 March over all the subdivisions of Karnataka is below normal for both the weeks.

South Interior Karnataka

- 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 observed in mango before flowering and immediately after fruit formation. Hence spray Carbaryl, 50WP @4g/litre of water or Imidacloprid @ 0.3ml/ litre of water for management.
- Ensure proper cross ventilation to avoid ammonia accumulation in poultry farm.

Tamil Nadu

Amount of rainfall received during the period of 01 to 06 March 2019 over Tamil Nadu is 1.7 mm (58 % deficit). The extended range weather forecast provided for next two weeks (08 to 14 to 15 to 21 March) is below normal for both the weeks.

- Prevailing weather condition is favorable for Leafhopper, Mealy bug and Stem weevil incidence in cotton. To control, farmers are advised to 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. Spray Wettable Sulphur or Copper Oxy Chloride 0.25% to control.
- Prevailing weather condition is favorable for Citrus canker disease incidence. To control, spray Copper Oxy Chloride 0.2% at fortnight intervals.
- For protecting banana from high wind speed, mount the soil around the base of the tree and give support by using Casuarinas poles.

Maharashtra

No rainfall received during 01 to 06 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 (64% deficit). The extended range weather forecast provided for next two weeks (08 to 14 to 15 to 21 March) over all the subdivisions of Maharashtra is below normal for week-1 and over Madhya Maharashtra and Vidarbha is above normal, over Marathwada is normal and over Konkan is below normal for week-2.

Vidarbha

- Undertake proper schedule of irrigation at the time of wheat grain development stage.
- Sowing of summer Mung (Pusa Vashaki) should be completed up to second week of March and 12-15 kg seed rate is recommended for sowing. Seed treatment with Trichoderma 6g/kg seed and, Rhizobium and PSB (each 250g / 10-15 kg seed) is advisable.
- Recommended varieties for cultivation of watermelon during this period include Asahi Yamato, Sugar baby, Arka Manik and Pusa bedana. Recommended muskmelon varieties are Pusa Sharbati, Pusa Madhuras, Hara Madhu.
- Cultivation of summer vegetables like bitter gourd, tinda, ridge gourd, smooth gourd, bottle gourd, cowpea, clusterbean, coriander, etc. can be initiated during this period.

Konkan

- Due to increasing rate of evaporation, irrigate the groundnut crop at an interval of 8-10 days.
- Due to variation in temperature, there is possibility of fruit drop of mango. Hence, provide irrigation in alphonso mango @ 150 to 200 litres 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.
- Due to increase in maximum temperature, provide irrigation to coconut orchard at 8-10 days interval.
- If the incidence of aphids, leaf hoppers, leaf eating caterpillars, leaf minor is noticed on tomato, brinjal, chilli etc., spray malathion 20 ml or Dimethoate 15 ml per 10 litres of water at 10 to 15 days interval.

Uttar Pradesh

Amount of rainfall received over East Uttar Pradesh region is 2.9 mm (20% excess) and West Uttar Pradesh is 4.8 mm (84% excess) during 01 to 06 March 2019. The extended range weather forecast provided for two weeks (08 to 14 and 15 to 21 March) for West and East Uttar Pradesh is below normal for week-1 and over West Uttar Pradesh is normal and over East Uttar Pradesh is above normal for

week-2.

- Due to cloudy weather and higher temperature, there is possibility of pod borer and semi lopper infestation. Spray 1.5 litre/ha 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.
- Aphids can attack in late sown mustard crop. Spray Chlorpyriphos 20% EC @ 1.0 litre/ha or monochrotophos 36 % S.L. @ 500 ml/ha with 500-600 litre of water solution in clear sky condition.
- Dig out early sown potato crop. Take precaution from late/early blight and aphid, spray Copper oxichloride 3.0 kg/ha with 700-800 litre water solution or 2.0 g /litre water Mancozeb to control.
- Sowing of black gram crop should be taken up at clear sky, seed should be treated with Captan or Thiram @ 3.0 gram/kg of seed before sowing and varieties T-9, Narendra Urd-1, Azaid Urd-1, Uttara, Azad Urd-2, and Shekhar-2 should be sown 20-25 kg/ha treated seed.

Odisha

Amount of rainfall received over Odisha during 01 to 06 March 2019 is 5.2 mm (25% deficit). The extended range weather forecast provided for next two weeks (08 to 14 to 15 to 21 March) is below normal for week-1 and above normal for week-2.

- Rainfed mustard sown during October is at maturity stage. Farmers are advised to go for harvesting and dry the plants under sun for easy threshing and safe storage. Cloudy weather may favour the infestation of leaf webber in irrigated mustard. To control leaf webber, spray 200 ml Etofenprox or Deltamethrin per acre.
- Go for sowing of summer green gram and black gram. Grow improved high yielding varieties. For green gram, PDM 54, PDM 11, PDM 84-143 and OUM 11-5 and for black gram- Pant-U-19, Pant-U-30 and Pant -U 26 and Sarala.
- Spray 300 ml Ethion or 400 ml Carbusulphan or Chloropyriphos in 200 litre water to control Thrips in Chilli.
- Early planted sugarcane crop is at 75 days stage. Go for hoeing and weeding. Apply 33 kg N followed by earthing up.

West Bengal

Amount of rainfall received over Gangetic West Bengal during 01 to 06 March 2019 is 17.0 mm (227% excess). The extended range weather forecast provided for next two weeks (08 to 14 to 15 to 21 March) is below normal for week-1 and above normal for week-2.

- In the prevailing weather condition, there may be a chance of the attack of Stem borer in Boro rice. To control sheath blight, apply Hexaconazole 5 EC @ 2.0 ml or Thifluzamide 24 SC @ 0.75 ml or Propiconazole 25 EC @ 1 ml per litre of water.
- Harvest potato crop as early as possible otherwise tuber will rot within the soil due to presence of high moisture.
- In next five days, sunny and dry weather is expected and in this condition attack of aphid may be found in mustard crop. To control aphid attack, apply 1.5 ml Oxydemeton methyl per litre of water.
- There is a chance of leaf blight and collar-rot in pointed gourd. To prevent the disease, apply 1ml Ridomil or Indofil-M-85 per litre of water at an interval of three weeks.

- As the temperature is likely to increase, there is a chance of the attack of Mites in mango. To control the pest, apply 1-2 gram sulphur pesticide per litre of water.

Jharkhand

Amount of rainfall received over Jharkhand during 01 to 06 March 2019 is 2.3 mm (37 % deficit). The extended range weather forecast provided for next two weeks (08 to 14 and 15 to 21 March) is below normal for week-1 and normal for week-2.

- Most of the wheat crops are at grain filling / hardening stage and this stage is sensitive to moisture stress. Hence, irrigate the field as per the status of soil moisture. If ear head is affected with loose smut disease (in which ear head appears black and does not bear any grain) and the weed Phalaris minor appears in the field, destroy them carefully after hand picking and burning.
- Farmers going for summer mung, may proceed immediately for sowing. Select improved variety of mung S.M.L.- 668 and sow the seed @ 12 kg per acre. Before sowing, seed must be treated with Rhizobium culture.
- Gram, pea and lentil crops are at pod formation/grain filling stage. If the crops are attacked by pod borer insect, spray bioinsecticide like Delphin @ 2 gram per litre of water.
- Control the attack of pumpkin beetle immediately in cucurbitaceous plant. Spray Chlorpyrifos (4 ml. per litre of water to control.

Bihar

Amount of rainfall received over Bihar during 01 to 06 March 2019 is 0.5 mm (76 % deficit). The extended range weather forecast provided for next two weeks (08 to 14 and 15 to 21 March) is below normal for both the weeks.

- As dry weather is forecasted, farmers are advised to harvest mustard and potato crops.
- Land preparation/ sowing of green gram and black gram is advised. Application of 20 kg nitrogen, 45 kg phosphorus, 20 kg potash and 20 kg sulphur/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, Ultra and Naveen varieties for urd are recommended for sowing in North Bihar.
- Regular monitoring is advised for thrips infestation in onion. If the insect population is above ETL, spraying of Profenofos@1ml/litre or Imidacloprid @1ml/4 litre of water is advised.

Rajasthan

Amount of rainfall received over West Rajasthan is 0.7 mm (11% excess) and over East Rajasthan is 0.5 mm (9% deficit) during 01 to 06 March 2019. The extended range weather forecast provided for next two weeks (08 to 14 and 15 to 21 March) for West and East Rajasthan is below normal for week-1 and over West Rajasthan is below normal and above normal over East Rajasthan for week-2.

- Harvest the mustard crop of physiological maturity and store at safe place.
- Sowing should be done for summer season's green gram and use improved varieties like K-851, Ganga-8 & PusaVishal.
- This is suitable time for sowing of summer season cucurbitaceous vegetables.

- Start sowing of summer groundnut and use improved varieties like T.A.G.- 24, T.G.-37A, G.G.-2 and D.H.-86.

Assam

Rainfall received over Assam is 14.9 mm (79% excess) during 01 to 06 March 2019. The extended range weather forecast provided for next two weeks (08 to 14 and 15 to 21 March) is below normal for both the weeks.

- **Rapeseed and mustard:** Seeds should be stored in cool, dark cupboard, away from the direct heat or sunlight, seeds should also be tightly closed when not in use.
- Farmers can go for cultivation of ginger. In order to get rid from rhizome rot, farmers are advised to apply rhizome rot treatment with Indofil M-45 @3g/litre for half an hour.
- Prepare land for growing green gram & 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 ridge and sponge gourd. Early sowing helps in escaping fruit fly attack. Select recommended varieties like 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 5.1 mm rainfall (42% excess) during 01 to 06 March 2019. The extended range weather forecast provided for next two weeks (08 to 14 and 15 to 21 March) is below normal for both the weeks.

- Farmers are advised to apply irrigation in wheat and barley crop as there should be no water stress at anthesis stage.
- Harvest sugarcane crop as per market/sugar mill demand and apply irrigation in late sown crop.
- Apply light irrigation and keep monitoring for pest/ diseases in vegetable crops.
- Livestock: Provide dry bedding during night time. 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 11.6 mm rainfall (5% excess) during 01 to 06 March 2019. The extended range weather forecast provided for next two weeks (08 to 14 and 15 to 21 March) is below normal for week-1 and normal for week-2.

- Keeping the increasing temperature in view, farmers are advised to start field preparation for sowing of lady finger in polyhouses.
- Prepare the fields and start sowing of Potato.
- **Temperate fruits:** Insecticides should be spray before flowering or initiation of new leaves during evening time. Adhesive should be added in insecticide. Remove newly emerging sprouting/buds

which are grown below the grafted part.

Punjab

Rainfall received over Punjab is 5.1 mm rainfall (7% deficit) during 01 to 06 March 2019. The extended range weather forecast provided for next two weeks (08 to 14 and 15 to 21 March) is below normal for both the weeks.

Cloudy weather is likely to prevail in the coming days. Weather parameters are likely to remain as follows: Maximum Temperature 23.0-27.0°C, Minimum Temperature 8.0-11.0 °C. Wind speed 7-11 km/h.

- Farmers are advised to spray Manganese Sulphate 0.5 % solution if wheat crop shows manganese deficiency symptoms. If wheat crop show deficiency of sulphur, broadcast 100 kg of Gypsum/acre and irrigate the field.
- To control karnal bunt disease in wheat, farmers are advised to spray 200 ml propiconazole (Tilt) per acre using 200 litres of water at ear emerge7nce stage in wheat meant for seed production only.
- It is the best time for direct sowing of all the cucurbits, okra and cowpea.
- For the control of purple blotch in onion, spray the crop with 600 g 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 19.8 mm of rainfall during 01 to 06 March 2019, which is 3% deficit. The extended range weather forecast provided for next two weeks (08 to 14 and 15 to 21 March) is below normal for both the weeks.

- It is optimum time for nursery raising of tomato, brinjal, chillies, cole crops and capsicum crops in poly-houses.
- Weather is conducive for infection of blight in potato and tomato. Constant monitoring is advised.
- For monitoring of borer in vegetables (brinjal, cauliflower, cabbage, tomato etc.) farmers are advised to use pheromone traps.
- Farmers are advised to apply mulch and well rotten FYM in ginger, turmeric, colcasia and leafy vegetables.

Jammu

Rainfall received during 01 to 06 March 2019 over Jammu is 26.6 mm, which is 7% deficit. The extended range weather forecast provided for next two weeks (08 to 14 and 15 to 21 March) over Jammu is below normal for both the weeks.

- Monitor wheat crop for yellow rust and leaf spot attack, if observed apply propiconazole (Tilt) @ 0.1% 2-3 sprays at 15 days interval are recommended.
- Apply Ridomil-MZ @ 2.0 gram/litre of water, if attack of white rust is observed in mustard crop.
- 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%.
- Spray copper oxychloride @ 3gram/litre in citrus to check dieback, gummosis, anthracnose and citrus canker. For control of leaf minor and Citrus psylla, spray 0.1% dimethoate.

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