



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

Validity: 02 to 15 November 2018

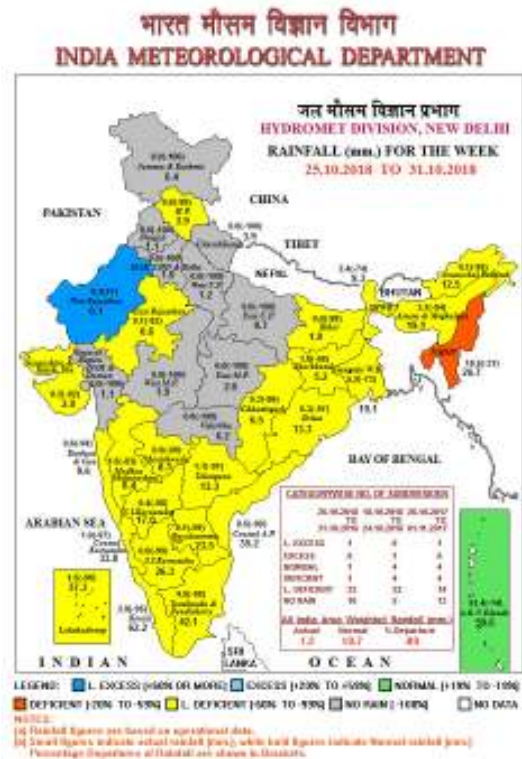
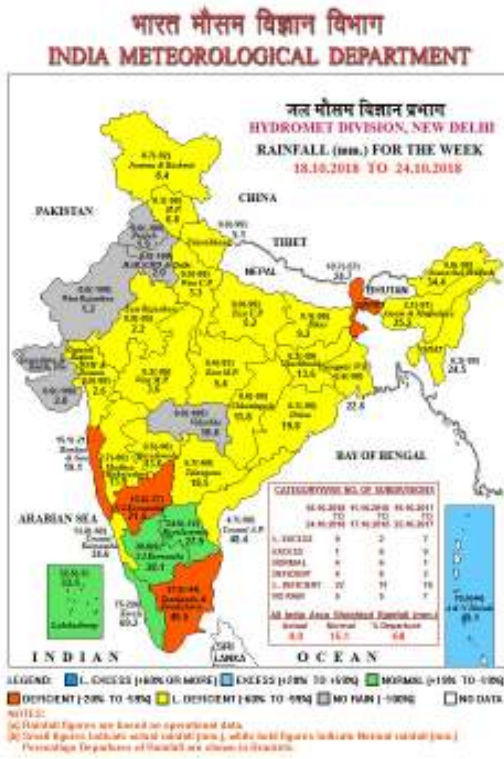
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Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall

(18th to 31st October 2018)



- Normal or above normal rainfall occurred during last two weeks in Andaman & Nicobar Islands.
- Normal or above normal rainfall occurred in either of the last two weeks in Rayalaseema, South Interior Karnataka, Kerala, West Rajasthan and Lakshadweep
- Below normal rainfall occurred in both the weeks in Himachal Pradesh, East Rajasthan, Chhattisgarh, Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Gangetic West Bengal, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa Madhya Maharashtra, Marathwada, Coastal Karnataka, North Interior Karnataka, Telangana, Coastal Andhra Pradesh and Tamil Nadu.
- Below normal rainfall / no rain occurred in either of the two weeks in Jammu & Kashmir, Uttarakhand, Uttar Pradesh, Punjab, Haryana, Chandigarh & Delhi, Madhya Pradesh, Gujarat State and Vidarbha.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 31 October)
(2nd to 15th November 2018)



Extended Range Rainfall Forecast

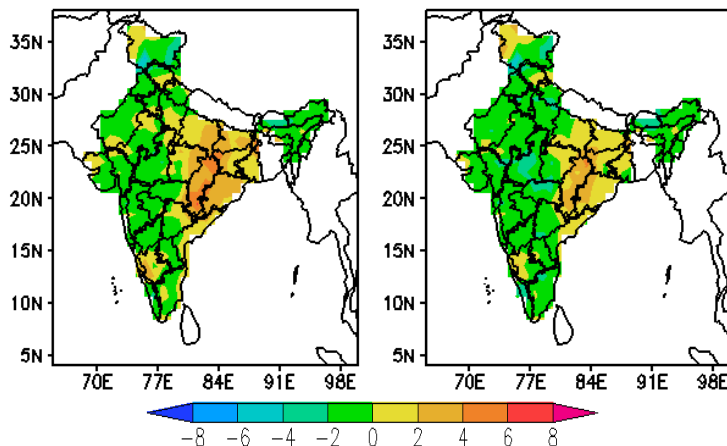
- **Week 1 (02.11.2018 to 08.11.2018):** Main rainfall over Sri Lanka and adjoining Indian Ocean and parts of extreme south peninsula. Also parts of extreme north India is expected to get precipitation.
- **Week 2 (09.11.2018 to 15.11.2018):** Increase in northeast monsoon rainfall over southern peninsula and Tamil Nadu during the week.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 31 October)
(2nd to 15th November 2018)**

MME Bias Corrected Tmax Anomaly (Deg)

(Week1: 02Nov–08Nov)

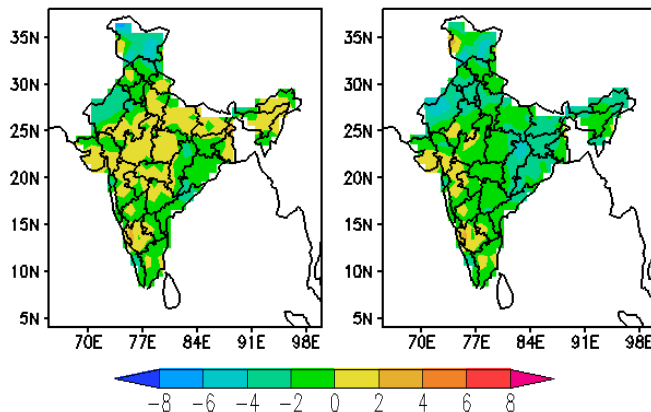
(Week2: 09Nov–15Nov)



MME Bias Corrected Tmin Anomaly (Deg)

(Week1: 02Nov–08Nov)

(Week2: 09Nov–15Nov)



Maximum Temperature (Tmax)

- **Week 1 (02.11.2018 to 08.11.2018) and Week 2 (09.11.2018 to 15.11.2018):** Tmax likely to be mostly above normal over eastern part and below normal over rest of India during the period.

Minimum Temperature (Tmin)

- **Week 1 (02.11.2018 to 08.11.2018):** Mostly below normal Tmin over parts of Northwest India and eastern coastal region during week 1.
- **Week 2 (09.11.2018 to 15.11.2018):** Mostly below normal Tmin over the country with Odisha, Chhattisgarh, Gangetic West Bengal, Jharkhand areas expected to be below normal by 4°C .

Strategic Agricultural Planning based on rainfall during next two weeks till 15th November 2018

Agromet Advisories

Kerala

Rainfall received during the period from 01 October to 01 November 2018 over Kerala is 304.3 mm, which is 4% excess than normal. The extended range weather forecast provided for next two weeks (02 to 08 and 09 to 15 November) is below normal for week-1 and above normal for week-2.

- This is the best time to sow cabbage and cauliflower seeds in the nursery beds. Addition of pseudomonas culture to the soil at the time of planting of cabbage and cauliflower will help to reduce fungal diseases. There is a chance of spodoptera in vegetables. If the attack is severe, spray quinalphos 2ml per one litre of water or chlorantraniliprole 3 ml per 10 litre of water.
- Apply Ekalux @ 2ml/litre if the attack of pollu beetle is found severe in Pepper. Drench the soil with 0.2% Copper oxy chloride and apply Bordeaux mixture as a prophylactic measure to control Quick wilt disease.

Tamil Nadu

Rainfall received during the period of 01 October to 01 November 2018 over Tamil Nadu is 157.7 mm, which is 12% deficit as compared to the normal. The extended range weather forecast provided for next two weeks (02 to 08 and 09 to 15 November) is below normal for week-1 and above normal for week-2.

- As rainfall is expected in the coming days, apply fertilizers to dry land crops viz cotton 40:20:40, sorghum 40:20:0 and pulses 12.5: 25: 12.5 NPK/ha.
- Leafhopper incidence is observed in cotton. To control, spray Imidacloprid 200 SL 100 ml/ha or Fipronil 5%SC 1500-2000 ml/ha.
- Yellow mosaic virus was noticed in pulses. Foliar spray of neem formulation 3 ml/litre or spray dimethoate 30 EC 500 ml/ha and repeat after 15 days, if necessary.
- Root rot incidence is noticed in cotton. To control root rot disease in cotton, spot drench with 0.1% Carbendazim or 0.05% Benomyl.

Maharashtra

Rainfall received during 01 October to 01 November 2018 over different meteorological sub divisions of the state viz., Konkan: 50.3 mm (58% deficit), Madhya Maharashtra: 20.0 mm (75% deficit), Vidarbha: No rainfall and Marathwada: 9.2 mm (87% deficit). The extended range weather forecast provided for next two weeks (02 to 08 and 09 to 15 November) for Madhya Maharashtra is below normal for week-1 and normal for week-2 and over remaining subdivisions of Maharashtra is below normal for both the weeks.

Marathwada

- To control tur pod borer in pigeonpea crop, use of Pheromone traps @ 5 per acre during bud initiation stage or spray 5 % Neem seed kernel extract or Emamectin benzoate 5 % @ 80 ml per acre. Protective irrigation should be applied as per availability and requirement of water in pigeonpea crop.
- As per availability of water, sowing of chickpea crop should be done after irrigating the field. Seed treatment of Thiram @ 4 gm per kg or Carbendazim @ 2 gm per kg seed should be done before sowing.
- Picking of cotton crop should be done. Ratooning must be avoided. To control dahiya disease in cotton

crop, take a spray of water-soluble sulfur @ 25 gm or Carbendazim @ 10 gm per 10 litre of water. Spray magnesium sulphate 20 gm + DAP or 13:00:45 @ 150 gm per 10 litre of water to overcome nutrient deficiency in cotton crop.

- To control Tikka disease in *rabi* groundnut, take a spray Chlorothalonil 75 % WP @ 25 gm or Carbendazim 50 WP @ 10 gm per 10 litre of water.

Konkan

- There is a possibility of shoot borer incidence on mango, if incidence is noticed collect and destroys infected plant part. Take a spray of Quinalphos 25% EC @ 20 ml or Monocrotophos 36% SL @ 11ml per 10 litre of water.
- There is possibility of tea mosquito bug incidence on new flush of cashewnut, if incidence is noticed spray monocrotophos 36 SL 15 ml or lambda cyhalothrin 5% EC 6 ml per 10 litre of water.
- Due to increase in temperature, provide irrigation in spice orchard at 7-8 days interval.
- If incidence of leaf eating caterpillar, white fly, hoppers and aphids is noticed on leafy vegetable crops, spray malathion 20 ml per 10 litres of water at 10 to 15 days interval.

Vidarbha

- Under irrigated condition chickpea (JAKI 9218, Vijay) can be sown till second fortnight of October. Seed treatment with Rhizobium+ PSB (each 25 g / kg seed) and biofungicide Trichoderma @ 4 g per kg seed is advisable.
- To reduce fruit drop in mandarin orange, spray of 1.5 g Gibberellic acid + 1 kg Urea + 100 gm Carbendazim 50% WP per 100 litres of water is advisable, spray may be repeated after 15 days.
- Transplanting of cabbage and cauliflower, and seed sowing of radish, carrot, leafy vegetables and onion nursery can be initiated during this period.

Madhya Maharashtra

- To control white grub in sugarcane apply drenching of 50EC Chloropyriphos @1 L + 400 L water near sugarcane roots with the help of sprayer without nozal or apply granular insecticides 10% phorate / 0.3 % fipronil / 0.4 % chlorantraniloprole @ 25 kg/ ha well mixed into soil of ridges/ furrow.
- Install 5 pheromone traps/ha in pigeon pea using helilurefor to destroy eggs of *Helicoverpa armigeraspray* emamectin benzoate @ 4 gm per 10 litre water.
- Hoeing and thinning operation should be carried out in 10-15 days after sowing of *rabi* crops and also give protective irrigation.

Bihar

Rainfall received over Bihar during 01 October to 01 November 2018 is 17.5 mm, which is 73% deficit. The extended range weather forecast provided for next two weeks (02 to 08 and 09 to 15 November) is below normal for both the weeks.

- Sowing of *rabi* maize is advised. Application of 10-15 ton FYM ,60 kg nitrogen, 75 kg phosphorus and 50 kg Potash per hectare during land preparation. Shaktiman-white 1,2, Shaktiman-4 yellow, Ganga-11 orange yellow, Rajendrasanker makka-1 Rajendrasanker makka-2.
- Farmers are advised to complete the sowing of Baruna, Pusa bold, Kranti, Pusamahak and Rajendrasuflam varieties of mustard at the earliest. After germination of mustard crop, plant to plant

spacing should be maintained at 12-15 cm by thinning.

- Land preparation is advised for *rabi* crops such as wheat and gram. Application of well decomposed FYM@150-200 quintal/ha is advised. Ploughing and planking should be done properly to conserve the moisture in the soil.
- Regular monitoring of sucking insect-pests such as white fly, leaf hopper and aphid is advised in vegetables crop. These insect-pests work as vector to transmit diseases from the diseased to healthy plants in the crop field. For prevention, spraying of Imidacloprid 17.8 %SL @ 0.3ml/liter of water is advised.

Uttar Pradesh

Amount of rainfall received over East Uttar Pradesh is 0.3 mm (99% deficit) and West Uttar Pradesh is 6.5 mm (85% deficit) during 01 October to 01 November 2018. The extended range weather forecast provided for two weeks (02 to 08 and 09 to 15 November) for West and East Uttar Pradesh is below normal for both the weeks.

- Most of the sorghum crops are at seed setting stage, so farmers are advised to provide moisture through light irrigation in the field.
- Sowing of pea (Azad P-2 and P-3) should be done immediately. If white fly is observed, apply Malathion dust 5% @ 20-25 kg/ha.
- Potato (Kufari chandramukhi, Kufari Bahar, Kufari Badshah, Kufari Anand, Kufari Lalima, Kufari Surya, kufari chipsona-1, kufari chifsona-3 and Kufari stlaj) should be planted in this week.
- Sowing of recommended varieties of Mustard viz, Varuna (T-59), Basnti, Rohini, Maya, Urvarshi, Narendra Swarna rai-8, NDR-8801 should be done.
- Wheat sowing should be started. Recommended varieties are PBW-343, Raj-1555, DL-803-3, HI-8381, HI-8498, UP-2338, K-9107, HD-2967, DBW-17 from first week of Nov 2018.

West Bengal

Rainfall received over Gangetic West Bengal during 01 October to 01 November 2018 is 66.1 mm, which is 49% deficit. The extended range weather forecast provided for next two weeks (02 to 08 and 09 to 15 November) is below normal for both the weeks.

- Possibility of spread of thrips and mites leading to the leaf curling in chilli. As a control spray Difenthiuron @ 0.75g per litre of water at 7-10 days interval.
- Start preparation of land for planting of potato.
- Start sowing of Sita, Vagirathietc variety of mustard. Maintain seed rate as 1kg per hectare. Before final land preparation, apply 11.5 kg Urea, 33 kg SSP and 8.5 kg MOP per Bigha.

Odisha

Rainfall received over Odisha during 01 October to 01 November 2018 is 120.3 mm, which is 8% excess. The extended range weather forecast provided for next two weeks (02 to 08 and 09 to 15 November) is below normal for both the weeks.

- Fruit fly in cucurbits has been found. To control it, farmers are advised to use 15 poison baits per acre prepared by adding 2 ml Malathion + 30g gur in 1 litre water.

- To control aphids in cowpea, spray 50 ml Imidacloprid per acre. Harvest the beans 7 days after application.
- To control fruit and shoot borer in brinjal, release 20,000 Tricogama Parasites per acre or spray 1 litre 300 ppm Neem based pesticides or 1000 g Carbaryl per acre

Jharkhand

Rainfall received over Jharkhand during 01 October to 01 November 2018 is 23.7 mm, which is 68% deficit. The extended range weather forecast provided for next two weeks (02 to 08 and 09 to 15 November) is below normal for both the weeks.

- Farmers are advised to start sowing of Linseed crop. Recommended varieties for this region are Sweta, Shubhra, T-397 etc. 8-9 kg seeds are required for cultivation in one acre.
- For rainfed wheat, farmers may select one of the recommended varieties like HDR77, K-8027, Birsa genhu – 3 etc. 50 kg seeds are required for cultivation in one acre. Seed may be sown in line at a distance of 22 cm (Row to row) and 7 cm. (Plant to plant). Before sowing seed should be treated with fungicide like Bavistin.

Rajasthan

Amount of rainfall received over East Rajasthan region is 1.2 mm (93% deficit) and West Rajasthan is 0.4 mm (93% deficit) during 01 October to 01 November 2018. The extended range weather forecast provided for two weeks (02 to 08 and 09 to 15 November) for West and East Rajasthan is below normal for both the weeks.

- Sowing of mustard should be done with the row to row spacing of 30 cm. Use improved varieties for mustard like Bio-902, Varuna and Giriraj.
- Sowing of Cumin should be done in western Rajasthan before 15th November. Use improved varieties like RZ-209, RZ-19, RZ-223 and Gujarat cumin with seed rate of 12 kg/ha.
- Field sanitization should be done before sowing of *rabi* crops. Bunds, channels, uncultivated fields and field roads should be cleaned by removing weeds.
- Field preparation should be done for sowing of oat & wheat.

Assam

Rainfall received over Assam is 46.8 mm (70% deficit) during 01 October to 01 November 2018. The extended range weather forecast provided for next two weeks (02 to 08 and 09 to 15 November) is normal for week-1 and below normal for week-2.

- Farmers are advised to prepare their lands and apply lime at least 21 days prior to sowing of mustard seeds and also collect high yielding varieties such as M-27, TS-36, TS-38 etc. The optimum sowing time is 20th October to 20th November for getting higher yield.
- Sowing of cauliflower seeds @8-10gm/m² for mid season varieties (like Improved Japanese, Pusa Synthetic, Pusa Snowball) and cabbage seeds @10gm/m² for early varieties (like Golden Acre, Pride of India, Pusa Mukta) and late maturity varieties (like Drum head) can be sown in this week.
- Suggested to go for routine vaccination for livestock and poultry against the dreaded virus. The floor and dairy shed should be cleaned with suitable antiseptic solution and maintain a proper sanitation.

Haryana

Rainfall received over Haryana is 2.9 mm rainfall (83% deficit) during 01 October to 01 November 2018. The extended range weather forecast provided for next two weeks (02 to 08 and 09 to 15 November) is normal for week-1 and below normal for week-2.

- Farmers are advised to sow mustard with recommended certified seeds like RH 30, RH 0749, RH 0406, Varuna, Luxmi, if sufficient moisture is available in the field. Before sowing of mustard, seed should be treated with 2 gram Carbendazim per kilogram gram seed.
- Dry weather condition is forecasted, farmers are advised for picking the cotton.
- Farmers are advised to prepare the field and start sowing of oats and Berseem fodder crop with certified seeds.
- Due to fall in night temperature keep the animals under shed. Provide 50 grams iodized salt and 50 to 100 grams mineral mixture daily with animal feed/fodder to keep them healthy.

Punjab

Rainfall received over Punjab is 4.2 mm rainfall (81% deficit) during 01 October to 01 November 2018. The extended range weather forecast provided for next two weeks (02 to 08 and 09 to 15 November) is above normal for week-1 and below normal for week-2.

- Farmers are advised to treat wheat seed with 13 ml Raxil Easy/Orius 6 FS by dissolving in 400 ml water or 120 g Vitavax Power 75 WS or 80 g Vitavax 75 WP or 40 g Seedex 2 DS/Exzole 2 DS per 40 kg seed.
- Farmers can do hoeing to control weeds in pea.
- Avoid heavy irrigation to deciduous fruit tree like pear, peach, plum and grapes.
- Apply 500 g urea, 1250 g Single Super Phosphate and 750 g Murate of Potash to the fully grown guava plants during this month.
- To control leaf minor in citrus, 200 ml crocodile/ confidor 17.8 SL (imidacloprid) or 160 g Actara 25 WG (thiamethoxam) in 500 litres of water.

Himachal Pradesh

Himachal Pradesh has received 11.6 mm of rainfall during 01 October to 01 November 2018, which is 73% deficit. The extended range weather forecast provided for next two weeks (02 to 08 and 09 to 15 November) is above normal for week-1 and below normal for week-2.

- Use mulches for conserving soil moisture.
- Take note of rainfall forecast before applying irrigation to crops.
- Before *rabi* crop sowing add well decomposed FYM or compost as it improves the physical and biological properties of the soil and also increases water retention and nutrient status of the soil.
- Farmers are advised to complete mustard sowing immediately.
- Sowing of timely sown wheat varieties may be continued.

- Tomato and capsicum may be transplanted in poly-houses.

Jammu

Rainfall received during 01 October to 01 November 2018 over Jammu is 22.0 mm, which is 43% deficit. The extended range weather forecast provided for next two weeks (02 to 08 and 09 to 15 November) over Jammu is above normal for week-1 and below normal for week-2.

- Sowing of Potato (variety Kufri Badshah, K.Sinduri, K.Chipsona & K.Sona) can be taken up.
- Farmers may go for sowing of leafy vegetables. Transplant all cole crops (knol khol, cabbage, cauliflower and broccoli) without any delay.
- In vegetable and horticulture crops, remove the water suckers and keep the area clean. Remove the tying material from bud/graft union. If the plants show week growth under apply light dose of urea.

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