



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

Validity: 23 November to 06 December 2018

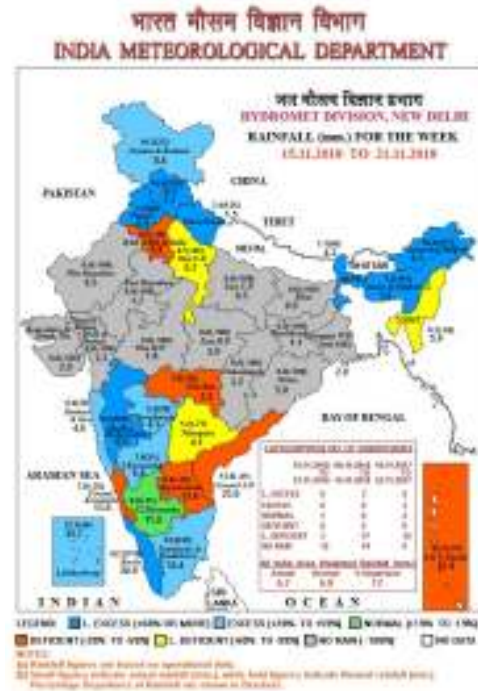
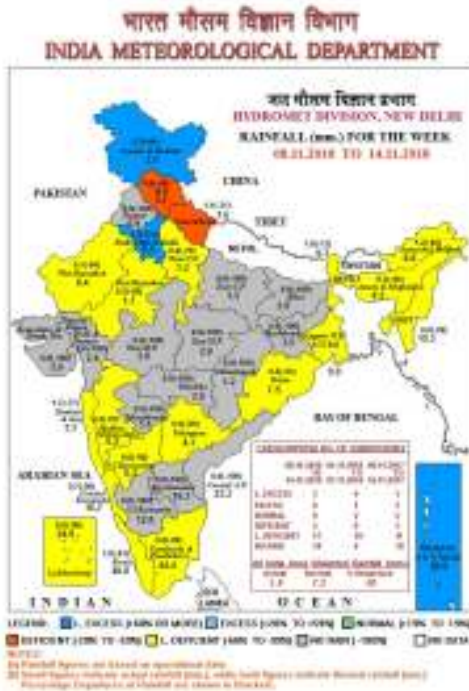
Date of issue: 22 November 2018

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

(8th to 21st November 2018)



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

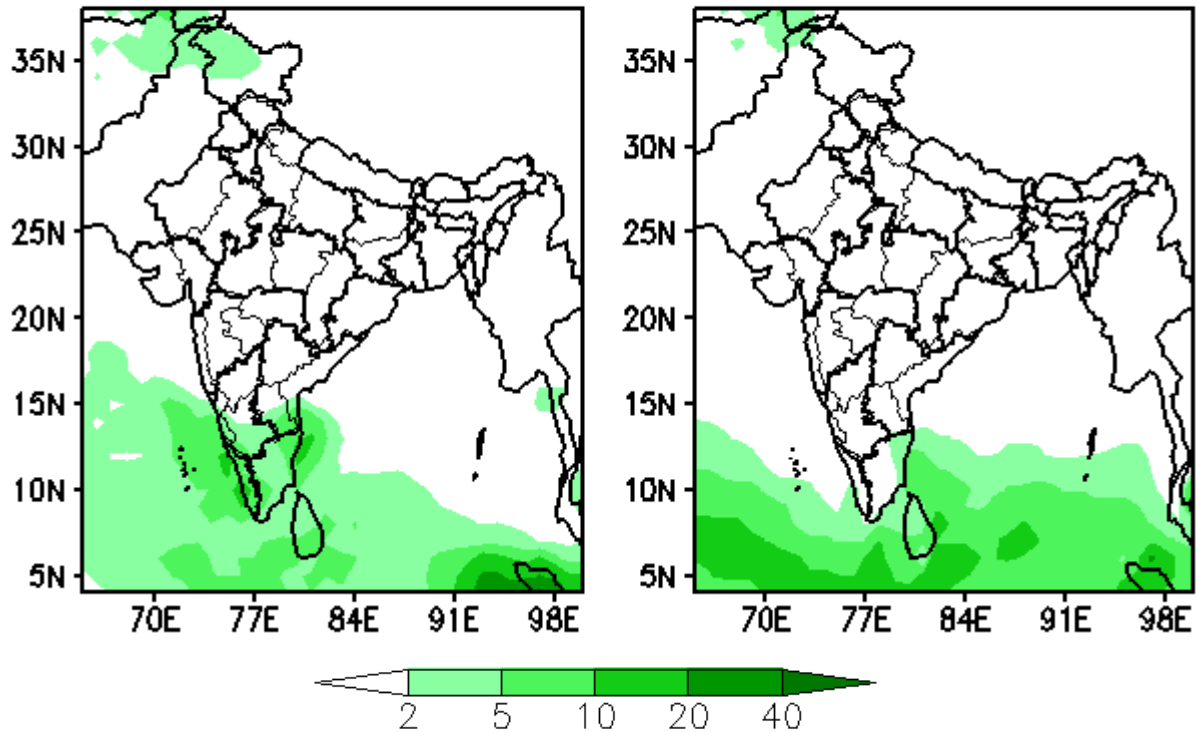
Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 21 November)
(23rd November to 6th December 2018)

Actual Rainfall (mm/day)

(Week1: 23Nov–29Nov)

(Week2: 30Nov–06Dec)



Extended Range Rainfall Forecast

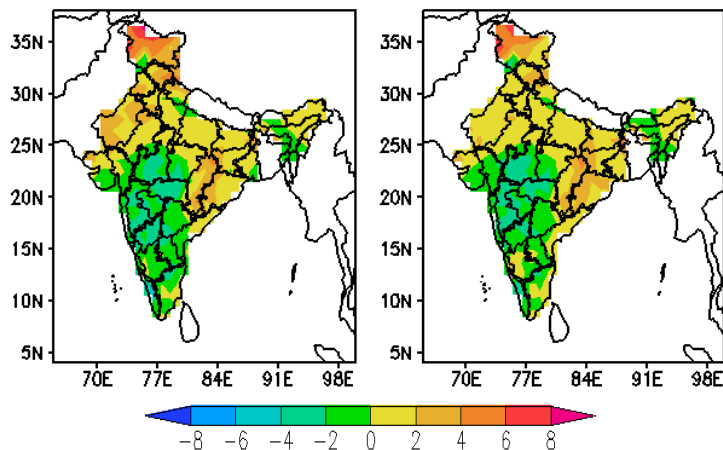
- **Week 1 (23.11.2018 to 29.11.2018):** Normal rainfall activity over extreme north India and also parts of south peninsula (the northeast monsoon subdivisions).
- **Week 2 (30.11.2018 to 06.12.2018):** Below normal rainfall activity over northeast monsoon subdivisions in south peninsula including Tamil Nadu.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 21 November)
(23rd November to 6th December 2018)**

MME Bias Corrected Tmax Anomaly (Deg)

(Week1: 23Nov–29Nov)

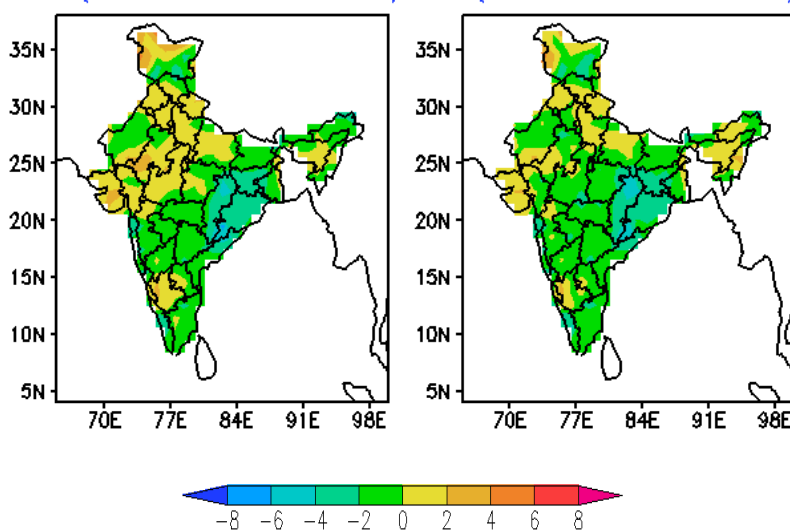
(Week2: 30Nov–06Dec)



MME Bias Corrected Tmin Anomaly (Deg)

(Week1: 23Nov–29Nov)

(Week2: 30Nov–06Dec)



Maximum Temperature (Tmax)

- **Week 1 (23.11.2018 to 29.11.2018) and Week 2 (30.11.2018 to 06.12.2018):** Tmax over Western part of India (Maharashtra and west Madhya Pradesh) and south peninsula is expected to be slightly below normal, whereas rest of India is expected to be above normal.

Minimum Temperature (Tmin)

- **Week 1 (23.11.2018 to 29.11.2018) and Week 2 (30.11.2018 to 06.12.2018):** Mostly below normal Tmin over the eastern coastal states of India, adjoining central India and parts of south peninsula and slightly above normal over north western parts of India.

Strategic Agricultural Planning based on rainfall during next two weeks till 06th December 2018

Agromet Advisories

Kerala

Rainfall received during the period from 01 October to 21 November 2018 over Kerala is 402.2 mm, which is 4% deficit than normal.

- There is a chance of aphids in cowpea. Apply 2% neem oil emulsion or apply 20 g *Verticillium lecanii* per one litre of water in 10 days interval. If aphid attack is severe, apply 3 ml Imidacloprid or 2 g Thiamethoxam per 10 litre of water.
- Green ginger can be harvested. To control soft rot, drench the soil with 1% Bordeaux mixture/0.3% mancozeb. Application of pseudomonas, split application of fertilizers and increased application of organic fertilizers are found to be effective in controlling the disease. Spray 0.1% malathion to control shoot borer.
- **Cardamom:** Take necessary phyto-sanitary measures to manage capsule rot (Azhukal disease) and spray 1% Bordeaux mixture (500-1000 ml/plant).
- **Coconut:** Plough the inter spaces for controlling the weed growth and enhancing the infiltration of rain during NE monsoon. Keep vigilance against Red palm weevil attack.

Tamil Nadu

Rainfall received during the period of 01 October to 21 November 2018 over Tamil Nadu is 256.1 mm, which is 19% deficit as compared to the normal.

- As rainfall is expected in the coming days apply fertilizers to dry land crops @ NPK kg/ha. Cotton 40:20:40, Sorghum 40:20:0, Maize - 60:30:30 for Alfisols and 40:20:0 for Vertisols and Pulses 12.5: 25: 12.5 NPK/ha.
- Prevailing weather condition is favourable for leaf folder infestation in maize. To control, spray any one of the pesticide to control.
 - Azadirachtin 0.03% 1000 ml/ha
 - Chlorpyrifos 20 EC 1250 ml/ha

Maharashtra

Rainfall received during 01 October to 21 November 2018 over different meteorological sub divisions of the state viz., Konkan: 63.8 mm (54% deficit), Madhya Maharashtra: 36.2 mm (62% deficit), Vidarbha: 1.8 mm (97% deficit) and Marathwada: 16.0 mm (82% deficit).

Marathwada

- Protective irrigation should be applied in pigeon pea with an interval of 15 days. To control tur pod borer in pigeon pea crop, spray Emamectin benzoate 5% @ 80 ml or Lambda cyhalotrin 5 % @ 200 ml per acre.
- To control fall army worms in maize crop, spray Thiamethoxam 12.6 % + Lambda cyhalotrin 9.5 % @ 50 ml per acre. Protective irrigation should be applied with an interval of 15 days.
- Irrigation management should be done during early in the morning or at evening with the help of sprinkler irrigation system in germinated chickpea crop.
- Due to cloudy weather condition, infestation of disease may increase in grape orchard. Control major

should be applied for management of it. Irrigation management should be applied in grape orchard.

- To control powdery mildew disease in chilli, spray Sulphur 80 % WP @ 25 g or Myclobutanil 10 % WP @ 10 g per 10 litres of water.

Vidarbha

- In pigeonpea, to control pod fly undertake spray of Quinolphos 25% EC @ 20 ml in 10 litres of water. To manage the initial incidence of pod borer, spray 5% neem seed extract above ETL level (10-20 larvae/plant) undertake spray of Chlorantraniliprole 18.5% SC 2.5 ml or Emamectin benzoate 5% SG @ 3 g in 10 litres of water.
- For delayed sowing of irrigated wheat, varieties like AKW-381, HI-977, AKW-1071 (Purna), HD 2501, AKW 4627 are recommended. Follow seed treatment with Carbendazim @ 2.5 g / kg seed. Also, seed treatment with Azatobacter and PSB @ 25 g each / kg seed treatment is advisable. Use fertilizer @ 40:40:40 kg NPK/ha at sowing and remaining N @ 40 kg/ha at 18-20 days stage at first irrigation.
- Undertake top dressing of nitrogen @ 40 kg per hectare to 25-30 days old irrigated rabi sorghum. Ensure adequate soil moisture at top dressing. Apply top dressing of nitrogen fertilizer @ 40 kg N/ha to 30 days old maize crop at adequate soil moisture under protective irrigation.

Madhya Maharashtra

- To control army worm / pod borer on *rabi* crops, spray quinalphos/ chlorpyrifos/ monocrotophos @ 15 – 20 ml + 10 litres water with 5 ml sticker.
- Due to congenial climate for disease development, spraying of carbendazim 12% + mancozeb 63% @ 2 g per 1 litre water for control of alternaria leaf spot of safflower and sunflower to be carried out.
- To control white grub in sugarcane, apply drenching of 50EC Chloropyrifos @ 1 litre + 400 litre water near sugarcane roots with the help of sprayer without nozzle or apply granular insecticides 10% phorate / 0.3 % fipronil / 0.4 % chlorantraniliprole @ 25 kg/ ha well mixed into soil of ridges/ furrow.

Karnataka

Rainfall received during 01 October to 21 November 2018 over different meteorological sub divisions of the state viz., North Interior Karnataka: 47.6 mm (65% deficit), South Interior Karnataka: 114.6 mm (39% deficit) and coastal Karnataka: 165.7 mm (30% deficit).

South Interior Karnataka

- Red gram: To control of leaf roller pest spray Methomyl -40 SP @ 2 g/litre . If pod borer noticed, spray Indoxycarb 14.5 SC @ 0.5 ml/litre or Spynosad 45 SC @ 0.15 ml/litre or Chloropyrifos 20 EC @ 2ml/litre. If Wilt diseases noticed in field –Drenching Carbendazim 50 WP 2 g/litre of water.

Andhra Pradesh

Amount of rainfall received over Coastal Andhra Pradesh region is 74.7 mm (73% deficit) and Rayalaseema is 61.0 mm (67% deficit) during 01 June to 27 September 2018.

- Army worm incidence is noticed in Jowar crop in Kurnool, Prakasam, Ananthapuramu and Kadapa districts. Farmers are advised to take up spraying of Emamectin Benzoate @ 0.5 g/l or Lambda cyhalothrin @ 1ml/ litre of water for control.
- Incidence of spotted pod borer observed in redgram crop in Prakasam, Ananthapuramu, Kurnool,

districts. Farmers are advised to spray Chlorpyrifos @2.5ml/litre and Dichlorovos@1ml/litre for control of the pest.

- Farmers of Kadapa, Chittoor, Nellore district are advised to take up sowing of greengram, blackgram utilizing the rainfall received during the week.

Bihar

Rainfall received over Bihar during 01 October to 21 November 2018 is 17.5 mm, which is 75% deficit.

- Farmers are advised to give priority in sowing of wheat crop. PBW-343, PBW-443, K-9107, HD-2733, HD-2824, HD-2967, HUW-206, HUW-468, K-307, CBW-38, DBW-39 varieties of wheat are recommended for timely sowing under irrigated condition.
- Pusa-256, KPG-59 (Udai), KWR-108, pant G-186 and Pusa-372 varieties of gram are recommended for sowing in north Bihar region. Seeds should be treated with Vitavax@2.0 gm/kg.
- Farmers are advised to complete the sowing of *rabi* maize by the end of this month. Application of 10-15 ton FYM, 60 kg nitrogen, 75 kg phosphorus 50 kg Potash per hectare during land preparation is advised.
- Weeding is advised in vegetable crops. Give irrigation as per status of soil moisture. Regular monitoring of insect-pests is also advised.

Uttar Pradesh

Amount of rainfall received over East Uttar Pradesh is 0.4 mm (99% deficit) and West Uttar Pradesh is 7.3 mm (84% deficit) during 01 October to 21 November 2018.

- Land preparation and sowing of wheat, barley, rai and late pulse and potato crop etc.
- The conservation of soil moisture and water management, the life saving irrigation is to be applied from the stored water.
- Mulching and inter culture operation should be made in the field.
- Irrigation channel should be kept free from weeds.

West Bengal

Rainfall received over Gangetic West Bengal during 01 October to 21 November 2018 is 70.8 mm, which is 52% deficit.

- Boro-rice: Start nursery bed preparation. Also start collecting seeds of improved varieties.
- Mustard: Start sowing of Sita, Vagirathi etc varieties.
- Chilli, Brinjal, Tomato: As there is no chance of rainfall for next 5 days, irrigation should be given. As leaf wetness period is increasing due to morning dew fall, powdery mildew and leaf spot may be initiated. Continuous vigilance is needed.
- Potato: Planting should be done as early as possible, delay transplanting may result late blight and reduce crop yield.

Chhattisgarh

Rainfall received over Chhattisgarh during 01 October to 21 November 2018 is 4.1 mm, which is 94% deficit.

- Before sowing, the seed of vegetables should be treated with Metalexyl @ 1 gram per kilogram of seed.
- Apply Borax @ 100 gram and Magnesium Sulfate @ 80 gram per tree near the root zone and mixed properly in the soil.
- To increase the water use efficiency in horticulture crop adopt drip irrigation system.
- Seed treatment is mandatory in gram crop. For seed treatment, apply Carbendazim @ 1.5 gram + Rhizobium culture @ 6 to 10 gram and Trichoderma @ 6 to 10 gram/kg seed.
- If there is recurring infestation of wilt and collar rot disease in chick pea / gram crop in each year, follow crop rotation for *rabi* wheat, lathyrus, safflower and linseed crops.
- Prepare the fields for sowing of rabi crops and go for sowing of chickpea, safflower, linseed and lentil in time.

Odisha

Rainfall received over Odisha during 01 October to 21 November 2018 is 121.2 mm, which is 12% deficit.

- The early sown rabi groundnut crop is at 3 week stage . Go for weeding and hoeing. Apply 100 kg Gypsum by broadcasting or side dress 50 Kg of Gypsum . Irrigate the crop if required.
- Dry weather and prevailing temperatures of the November month are favourable for Banana (dwarf type) planting .
- Irrigate sugarcane crop if required. To control early shoot borer in sugarcane, spray 2.5 ml Monochrotophos in each litre water.

Jharkhand

Rainfall received over Jharkhand during 01 October to 21 November 2018 is 24.3 mm, which is 71% deficit.

- In one month old crops of potato, apply urea @ 50 kg per acre after earthing up and irrigate the crop at an interval of 10-15 days.
- In wheat crops sown in th month of October, spray Isoproturon (300 gm ai) and 2,4, D (200 gm ai) in 240 litre of water to control weeds in one acre of land.
- For cultivation of Barley, select improved varieties like Jyoti, Ratna, D. L. - 36, B.R.-32 (all irrigated condition) and B.R.- 31, K.-125 (un irrigated condition).
- There is a chance of the attack of powdery mildew disease in table pea, in which white powder appears on leaves and stem. To control this disease, spray Kairathen @ 1 ml per litre of water or Sulfex @ 3 gm per litre of water.

Rajasthan

Amount of rainfall received over East Rajasthan region is 1.4 mm (93% deficit) and West Rajasthan is 0.5 mm (93% deficit) during 01 October to 21 November 2018.

- In mustard, hoeing and thinning should be done where crop is at 20 to 25 days and keep plant to plant distance 10-20 cm. Top dressing of 30 kg nitrogen along with irrigation can be done where the crop attain 30-35 days.
- This is right time for normal sowing of wheat as the mean temperature around 20⁰C is suitable for sowing of wheat in southern Rajasthan for getting higher yield. The improved varieties are Raj-4037, Raj-3077, Raj- 3765, HD-2864, GW-322, Raj-1555, HI-8498, HI-1544 and Lok-1.
- Sowing of Carrot, Radish & Beetroot should be done in this fortnight. Improved varieties are for Carrot: Nantes, Pusayamadamini, Radish: Japanese White and Pusa Himani, Beetroot: Crimson Globe etc.

Assam

Rainfall received over Assam is 63.8 mm (64% deficit) during 01 October to 21 November 2018.

- Seeds of recommended varieties of Boro paddy like Mahsuri, IR Dinanath, Swarnabh and Kanaklata may be sown in the nursery bed during this entire month. Sowing may be delayed depending on duration of varieties.
- Farmers are advised to continue the land preparation and planting of potato. Apply 19 kg urea, 45 kg SSP and 12 kg MOP per bigha during the time of final land preparation. Select recommended potato varieties like Kufri Chandramukhi, Kufri Jyoti, Kufri Megha, Kufri Badshah, Kufri Sindhuri, Pukhraj etc for higher production.
- For vegetable crops like brinjal, carrot and tomato, farmers are advised to top dress fertilizers with dry compost in ring method at 25 days interval. Wipe out plants affected by Bacterial wilt and drench root zone of unaffected plants with mixture of 1gm Hing +5 gm Turmeric in 10 litre water. Do not plant brinjal and tomato nearby.

Haryana

Rainfall received over Haryana is 4.8 mm rainfall (76% deficit) during 01 October to 21 November 2018.

- Due to dry weather conditions farmers are advised to do sowing of Barley with recommended varieties like BH 393, BH 902, BH 885, BH 986. Before sowing, seeds should be treated with Bavistin or Vitavex 2.0 g per Kg of seed.
- Due to dry weather conditions, farmers are advised to go for sowing of gram crop with recommended variety for irrigated area like C 235, HC 5 and un-irrigated/rainfed variety HC 1. Farmers are advised to treat the gram seed with Bioderma 4 gram and 1 gram Vitavex mix with 5 ml water for 1 kg seed.
- Recommended varieties like WH 283, WH 542, DBW 17, WH 711, WH 1105. Before sowing seeds should be treated with Bavistin or Vitavex 2.0 g per Kg of seed.
- 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 6.7 mm rainfall (74% deficit) during 01 October to 21 November 2018.

- It is optimum time to sow wheat varieties PBW 550, Unnat PBW 550.
- To protect potato crop from late blight, spray the crop with Indofil M-45/Mass M-45/Markzeb/Antracole/Kavach @ 500-700 g or Mark copper/Copper oxychloride at 750-1000 g per acre using 250-350 litres of water per acre.
- It is optimum time to sow root crops like radish, turnip and carrot. Use 2 kg seed for turnip and 4 kg seed for carrot and radish per acre. Before sowing, treat the seed with Captan or Thiram @ 3 g per kg of seed.
- Stop irrigation to deciduous fruit trees like peach, plum, grapes and pear.

Himachal Pradesh

Himachal Pradesh has received 48.9 mm of rainfall during 01 October to 21 November 2018, which is 9% deficit.

- Advised to complete potato sowing in lower and mid hill regions of the state and it is also time to sow/transplant Methi, Palak and Broccoli.
- Complete the sowing of berseem, lucerne and oats, after mixing with the seeds of gobhi sarson with these fodder seeds to have nutritious fodder for feeding the milch animals.
- Before sowing of rabi crops, add well decomposed FYM or compost to improve the physical, biological and water retention properties/nutrient status of the soil.
- Apply manures and fertilizers in mango.

Jammu

Rainfall received during 01 October to 21 November 2018 over Jammu is 99.6 mm, which is 70% excess.

- Sowing of mustard crop var. Kranti can be taken up in irrigated areas
- Sowing of Pea (variety. AP-1, Bonnevillea, Rachna and Arkel) may be completed in rainfed areas and taken up to 25 November in irrigated areas.
- To control cabbage fly, spray cypermethrin @ 1ml/litre of water or spinosad @ 0.5ml/litre of water. Spray rogor or Metasystox @ 1.5ml/litre of water to control aphid. The sowing of potato, radish, carrot, garlic, peas and spinach can be done.
- Leaf curling in tomato due to attack of white fly is observed. Spray dimethoate 1.5ml/litre of water as a control measure.

***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.*