



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

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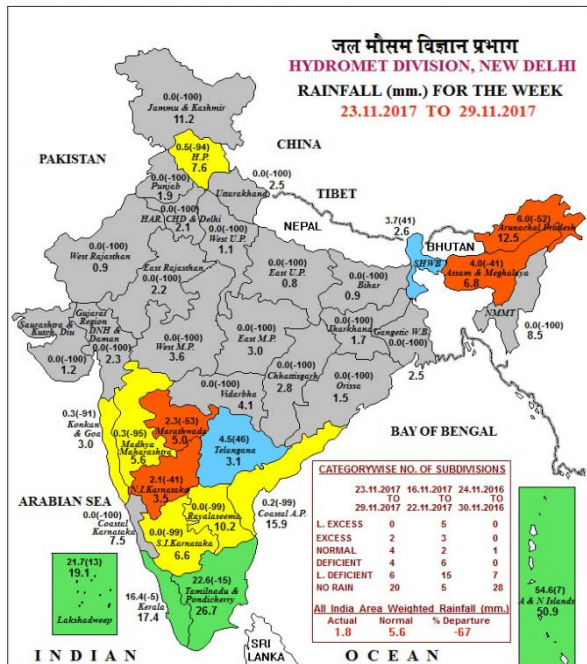
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&
Earth System Science Organization
India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall

(23rd November to 6th December 2017)

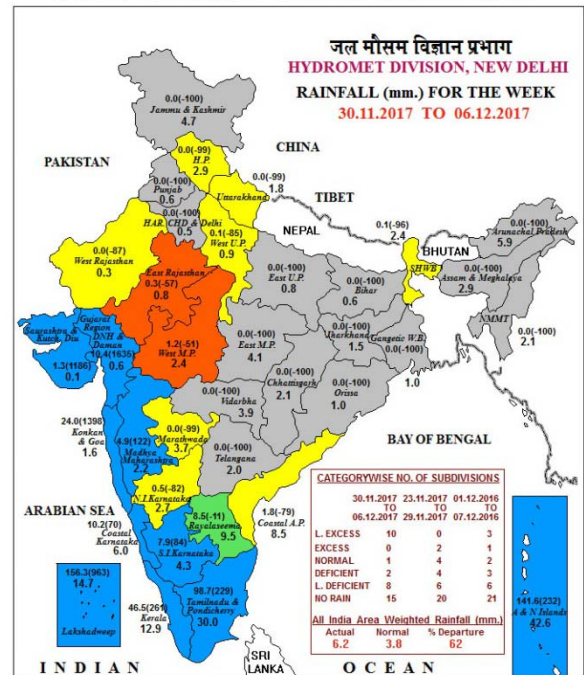
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



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.

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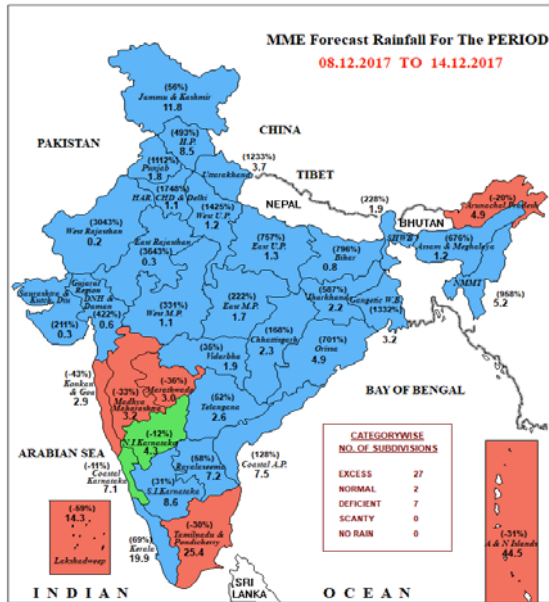
- Normal or above normal rainfall occurred during last two weeks in Kerala, Tamil Nadu, Lakshadweep and Andaman & Nicobar Islands.
- Normal or above normal rainfall occurred in either of the last two weeks in Konkan & Goa, Madhya Maharashtra, Gujarat, Su-Himalayan West Bengal & Sikkim, Telangana, Rayalaseema,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

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 06 December)

(8th to 21st December 2017)

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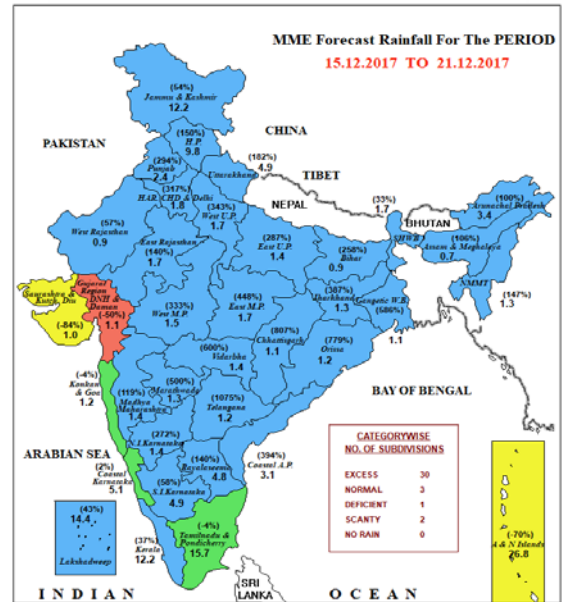


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NOTES:

- (a) Rainfall figures are based on MME Forecast.
- (b) Bold figures indicate Forecast Normal rainfall (mm).
- (c) Percentage Departures of Rainfall are shown in Brackets.

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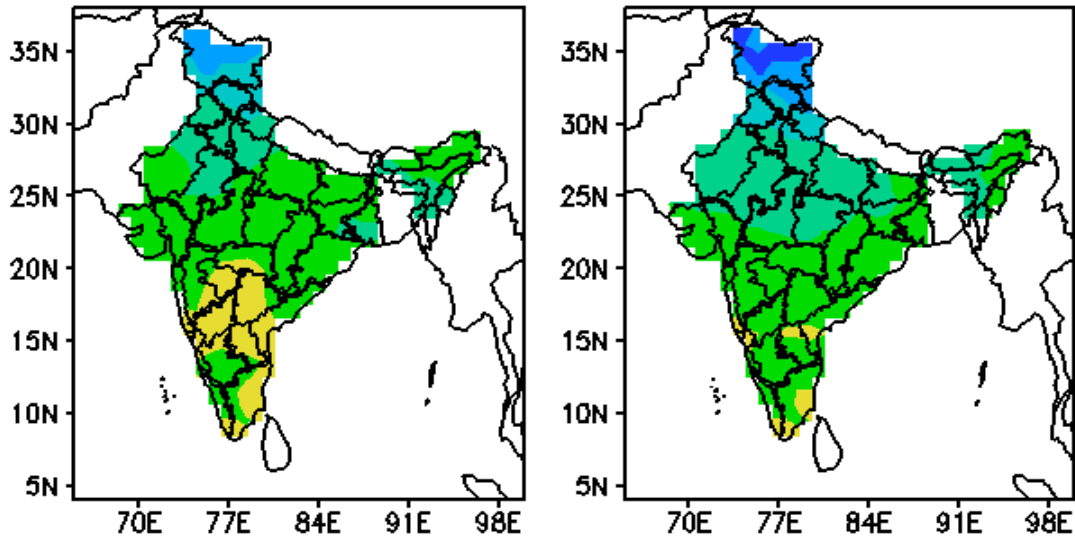
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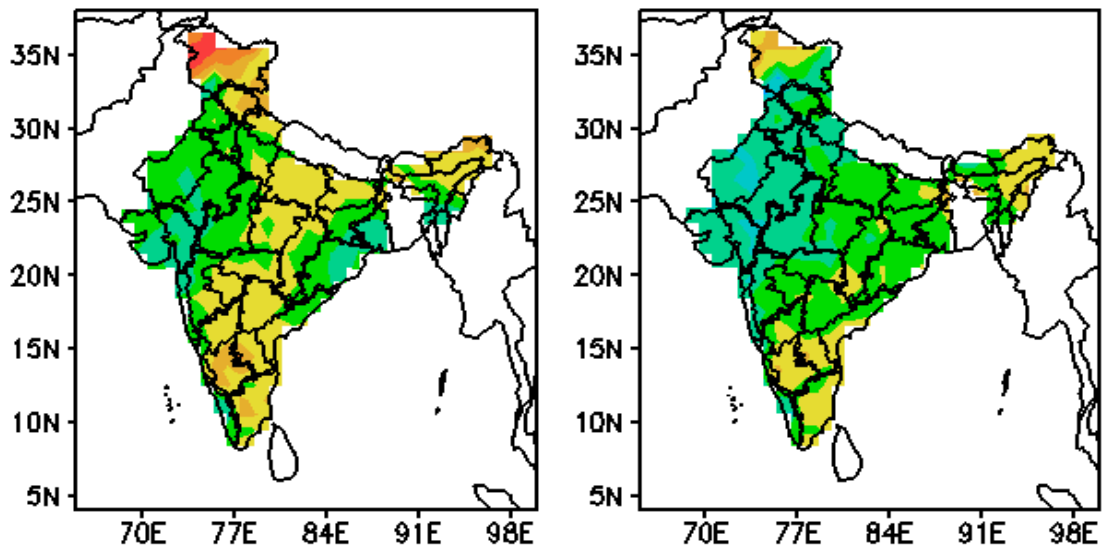
- Extended Range Forecast indicates that during week 1 (08-14 Dec.) the country is expected to get mostly above normal rainfall. Associated with the cyclonic circulation over the Bay of Bengal and its northwest ward movement, the coastal belts like Odisha, Andhra Pradesh, Gangetic West Bengal (GWB) and adjoining regions will likely to get above normal rainfall. Except few subdivisions like Tamil Nadu, subdivisions over Maharashtra, Assam etc, (which is expected to receive normal to below normal rainfall) most of India is expected to get normal to above normal rainfall.
- During week 2 (15-21 Dec), above normal rainfall over the country is expected, except some regions over Gujarat. Tamil Nadu is expected to get normal rainfall.

Maximum and Minimum temperatures and anomaly ($^{\circ}\text{C}$) for next 2 weeks (IC – 06 December)
(8th to 21st December 2017)

MME Bias Corrected Actual Tmax (Deg C)
(Week1: 08Dec–14Dec) (Week2: 15Dec–21Dec)



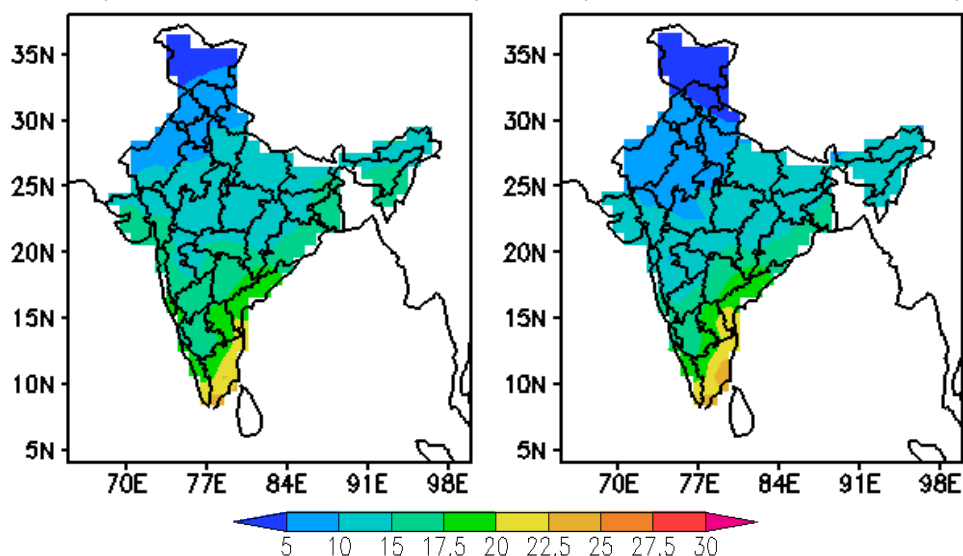
MME Bias Corrected Tmax Anomaly (Deg)
(Week1: 08Dec–14Dec) (Week2: 15Dec–21Dec)



MME Bias Corrected Actual Tmin (Deg C)

(Week1: 08Dec-14Dec)

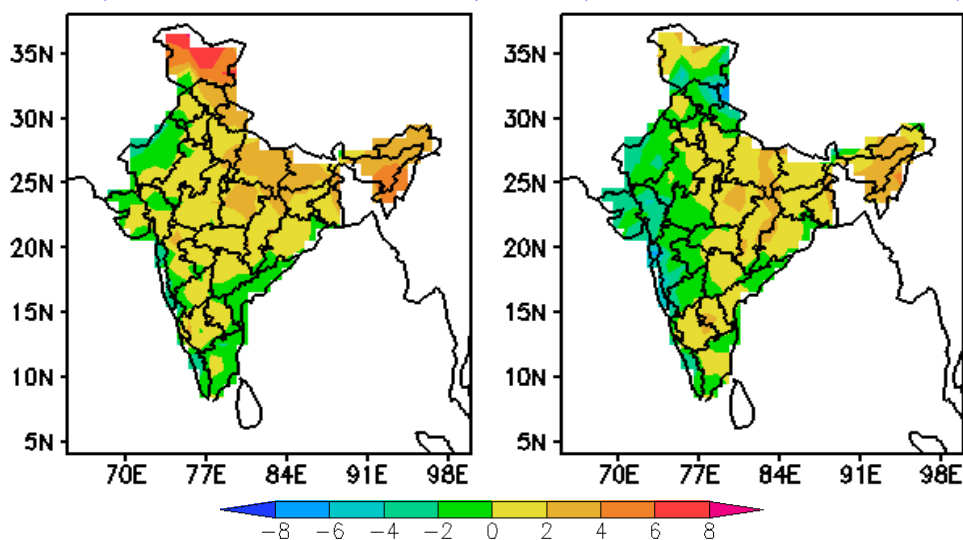
(Week2: 15Dec-21Dec)



MME Bias Corrected Tmin Anomaly (Deg)

(Week1: 08Dec-14Dec)

(Week2: 15Dec-21Dec)



- **Maximum Temperature (Tmax):** Northwest India, western coastal regions and parts of eastern regions (Odisha, GWB etc) will have below normal Tmax during **week 1** with the remaining regions of India will have above normal Tmax during the week 1. During **week 2**, except some parts of eastern coastal regions and south peninsula, most of India will have below normal Tmax during week 2.
- **Minimum Temperature (TMin):** Except some regions of northwest India, extreme north India and parts of eastern coastal regions, Tmin is expected to be above normal during **week 1**. During **week 2**, Northwest and western parts of India will have below normal Tmin, whereas, it will be above normal Tmin over remaining regions during week 2.

Strategic Agricultural Planning based on rainfall during next two weeks till

21st December 2017

Agromet Advisories

Tamil Nadu

Rainfall Situation

Rainfall received during the period of 01 October to 06 December 2017 over Tamil Nadu is 383.6 mm, which is 2% excess from the normal. The extended range weather forecast provided for next two weeks (08 to 14 December and 15 to 21 December) for Tamil Nadu is below normal for week-1 and normal for week-2.

- Expected high cloud cover with light to moderate rainfall is conducive for spreading of yellow mosaic Virus in pulses. So, farmers are advised to spray Dimethoate 20 EC @ 500 ml /ha or Thiamethoxam 75 WS @ 1 g/ 3 litre and to repeat the spray after 15 days.
- Prevailing Weather condition is congenial for the occurrence of cutworm incidence in sunflower. The larvae feed on the tender leaves, shoots and petals causing defoliation. To control this pest, farmers are recommended to Hand pick the cutworm larvae and destroy and to spray insecticide Dichlorvos 76EC @ 500 ml/ha.
- High cloud cover associated with high relative humidity will be favourable for thrips problem in chilli. To control thrips, farmers are recommended to spray any one of the following systemic insecticides, Imidachlorprid 17.8 % SL @ 3 ml/ 10 litre of water or Dimethoate 30 % EC @ 1.0 ml/lit.

Kerala

Rainfall Situation

Rainfall received during the period of 01 October to 06 December 2017 over Kerala is 424.9 mm, which is 6% deficit from the normal. The extended range weather forecast provided for next two weeks (08 to 14 December and 15 to 21 December) for Kerala is above normal for both the weeks.

- Prevailing weather condition is favorable for rice bug attack. So, farmers are advised to apply neem based pesticides @ 3ml per liter of water for rice bug attack. Pesticides application should be done either before 9 am or after 3 pm.
- The weather condition is favorable for fruit fly. Farmers are advised to remove and destroy affected and decayed fruits. Use special pheromone traps like cue lure (6 nos/acre) for vegetable fruit fly or Thulasi/fruit traps. If the attack is not reduced, spray mixture of malathion @ 2 ml per litre of water + jaggery 10 g at flowering and fruit initiation.

Karnataka

Rainfall Situation

Rainfall received during 01 October to 06 December 2017 over different meteorological subdivisions of Karnataka are as follows: South Interior Karnataka: 201.3 mm (normal); North Interior Karnataka: 155.0 mm (10% surplus) and Coastal Karnataka: 218.5 mm (14% deficit). The extended range weather forecasts

provided are: Normal rainfall for Coastal Karnataka and above normal for South Interior Karnataka during 08 to 14 December and 15 to 21 December, respectively. Normal rainfall forecasted during 1st week, followed by above normal rainfall during 2nd week over North Interior Karnataka.

South Interior Karnataka

- As excess rainfall is forecasted, farmers are advised to postpone the harvesting, sun drying and winnowing of Kharif crops like Ragi, Maize and Groundnut in next couple of days.
- Postpone the spraying operation in horticultural crops due to forecast of moderate rainfall and high wind speed.
- The following recommended short duration crops and varieties are suggested for sowing of rabi crops in this month. Cowpea: KBC-1, TVX-944 and PKB-4; Sunflower: Morden, KBSH-1, 41, 44 & 52 and Niger: KBN-1, No-71. On black soils, Bengal gram (Annigeri-1, J.J-11, KAK-2, Vishal) and Field bean (Avare) : HA-1,3 and 4.
- Farmers are advised to use nylon mesh to control entering of UJI fly to sericulture unit. Use recommended chemical to control of UJI fly.

North Interior Karnataka

- Under the forecasted weather condition, downy mildew in grapes, sucking pests in safflower and pod borer in chickpea is expected to grow very fast, and therefore spray schedule must be strictly followed.
- Farmers are advised to give de-worming medicines to livestock. Vaccinate (ET vaccine) sheep and goats against Enterotoxemia. For milch animals regularly follow schedule of 1 kg feed + 50 g mineral mixture per 2 litres of milk yield and feed all animals with both green and dry fodder.
- Farmers are advised to keep the animal habitation dry to avoid hoof infection and to prevent fly breeding.

Maharashtra

Rainfall Situation

Rainfall received during the period of 01 October to 06 December 2017 over different meteorological sub divisions of the state are: Vidarbha: 57.8 mm (24% deficient); Marathwada: 102.8 mm (6% surplus); Madhya Maharashtra: 122.1 mm (18% surplus) and Konkan & Goa: 181.6 mm (25% surplus). The extended range weather forecast provided for 08 to 14 December is below normal for Konkan & Goa, Madhya Maharashtra and Marathwada, whereas for Vidarbha it is above normal. During the second week (15 to 21 December), normal rainfall was forecasted for Konkan and Goa, whereas above normal for Madhya Maharashtra, Marathwada and Vidarbha.

Marathwada

- Due to the cloudy weather, there is possibility of attack of aphids in rabi sorghum, safflower and vegetable crops. Farmers are advised to spray Thiomethaxom 25 WG @ 2 g or dimethoate 30 EC @ 10 ml in 10 lit of water.
- Due to cloudy weather, vegetable crops such as guar, tomato, chilli, okra etc. may get infested by powdery mildew. Farmers are advised to spray water soluble 80% sulphur @ 2 gm per lit. and if

the infestation gets severe take a spray of diafenoconazole @ 0.5 ml + potassium bicarbonate @ 5 gm per lit. of water.

- Due to prevailed cold weather, incidence of aphids on vegetable crop may occur and to control this farmers are advised to apply dimethoate 15 or thimethoxam @ 3-4 gm + 10 lit of water.

Jharkhand

Rainfall situation

Rainfall received over Jharkhand during the period of 01 October to 06 December 2017 is 106.2 mm, which is 23% excess from the normal. The extended range weather forecast provided for (08 to 14 December and 15 to 21 December) in Jharkhand is above normal for both the weeks.

- As excess rainfall is forecasted, farmers are advised not to irrigate the potato crop and spray the fungicide like Saaf @ 2 gm per litre of water) or Redomyl @ 1.5 gm per litre of water to control the Blight disease after rainfall.
- Timely sown Pigeon pea crop is at fruiting stage. Weather condition is favourable for the attack of Fruit borer insect, which is possible at this stage. Farmers are advised to spray immediately the insecticide Endoxacarb @ 0.5 ml per liter of water to control the insect.
- Weather is favourable for attack of F.M.D. in milch animals. Animals should be vaccinated twice in a year as preventive measures of this disease. Cattle should be protected from cold waves and keep their place warm and do not allow them to remain in open sky after sunset and before sunrise.

Rajasthan

Rainfall Situation

Rainfall received during the period of 01 October to 06 December 2017 over the meteorological subdivisions of West Rajasthan and East Rajasthan are 0.6 mm and 0.5 mm, respectively over the period, which is 93% deficient in West and 98% deficient in East Rajasthan. The extended range weather forecast provided for 08 to 14 December and 15 to 21 December is above normal for both West Rajasthan and East Rajasthan.

East Rajasthan

- Farmers are advised to skip irrigation in field crops for few days as adequate soil moisture is there due to receipt of light to medium rainfall during this week and also top dress the remaining dose of nitrogen in mustard, methi and early sown wheat (CRI stage).
- Farmers are recommended to take higher seed rate i.e. 125 kg/ha for late sown wheat varieties Raj-4037, Raj-4238, Raj-3765, HD-2932, Lok-1.
- This is right time for application of remaining doses of nitrogen fertilizer in 15-25 days old vegetable crops, as there will be adequate soil moisture present in soil due to light rainfall during this week.
- Looking to the sudden dip in minimum temperature, take suitable protection measures to protect poultry birds and livestock.

Bihar

Rainfall Situation

Bihar received 49.6 mm of rainfall during the period of 01 October to 06 December 2017, which is 31% deficient to the normal. The extended range weather forecast provided for (08 to 14 December and 15 to 21 December) Bihar is above normal for both the weeks.

- Excess rainfall was forecasted, so farmers are advised to complete the sowing of late rabi sown mustard and recommended varieties viz.. Rajendra rai picheti (RAURD-9403), Rajendra anukul (RAURD-1002) and Rajendra suflam (RAURDL 02-01) which are suitable for late sowing in this region.
- Farmers are advised not to give irrigation in early sown wheat crop which reaches Crown Root Initiation (CRI) stage (21-25 days after sowing) as the excess rainfall is forecasted. Application of 30kg nitrogen per hectare is advised 2-3 days after the rainfall
- Farmers are advised to finish the planting of potato at the earliest and recommended varieties viz. Kufri Jyoti, Kufri Ashoka, Kufri Pukharaj, Kufri Chandramukhi, Kufri Badhsha, Kufri Lalima, Kufri Sinduri, Kufri Arun, Kufri Girdhari, Kufri Sadabahar, Kufri Anand, Kufri Pusker, Rajendra lu 1, Rajendra lu 2 and Rajendra alu 3, are suitable for planting in north Bihar region.
- Weeding and earthing- up are advised in early sown potato crop, which has attained the height of 12-15 cm.
- Farmers are advised to provide vaccination to milch animals and buffalo's against foot and mouth disease. Against Degnala disease, administer mineral mixture@50 gm to adult animals and 20 gm to calves every day.

Uttar Pradesh

Rainfall Situation

Rainfall received during the period of 01 October to 06 December 2017 over meteorological subdivision of the state Uttar Pradesh: West UP is 0.7 mm (99% deficient) and East UP is 3.0 mm (95% deficient). The extended range weather forecast provided for next two weeks for both West UP and East UP is above normal.

- As excess rainfall is forecasted, farmers are advised not to irrigate the rabi wheat.
- Farmers are advised for late sowing rabi wheat during these weeks. Recommended varieties for late sowing of wheat are as HI-1563, DBW-16, K-9423, K-9533, K-9162, NW-1076 and PBW-373. Recommended varieties for saline soil are; KRL-210, KRL-19, K-8434 and NW-1067.
- As excess rainfall was forecasted, farmers are advised to go for weeding and thinning in late sown mustard crop.
- Farmers are also advised for weeding and hoeing in gram, pea and lentil crop.

Assam

Rainfall Situation

Rainfall received during the period of 01 October to 06 December 2017 over Assam is 225.4 mm, which is 22% surplus, compared to the normal. The extended range weather forecast provided for Assam is above normal for both weeks.

- Farmers are advised to do the thinning operation in rapeseed and mustard to maintain the optimum plant population in the field and to conserve soil moisture.
- Farmers are recommended to do earthing up operation at 25 days after planting (stolon formation stage), just before first irrigation.
- In cole crops, depending upon the crop stages weeding should be done at 20 days after transplanting. Spraying malathion 50 EC @ 1.5ml/lit to protect the crop from leaf eating caterpillars. Vaccination to control the ranikhet disease of poultry may be done during this period.

Haryana

Rainfall Situation

Rainfall received during the period of 01 October to 06 December 2017 over Haryana is 1.5 mm, which is 94% deficit than the normal. The extended range weather forecast provided for weeks 1 and 2 (08 to 14 December and 15 to 21 December) for Haryana is above normal for both the weeks.

- Farmers are advised to avoid irrigation in Indian rapeseed and mustard in the view of excess rains and to go for intercultural operation to control weeds.
- Farmers are advised to withhold irrigation in wheat as there is possibility of rains. Late sowing of wheat is advised to postpone.
- Keep the animals in sheds during night time and to pay special attention to young animals and provide them dry bedding at night. Provide 50 grams iodized salt and 50 - 100 grams mineral mixture daily with animal feed/fodder to keep them healthy.

Himachal Pradesh

Rainfall Situation

Rainfall received during the period of 01 October to 06 December 2017 over Himachal Pradesh is 7.2 mm, which is 89% deficit than the normal. The extended range weather forecast provided for (08 to 14 December and 15 to 21 December) for Himachal Pradesh is above normal for both the weeks.

- As above normal rainfall is forecasted, farmers are not advised to irrigate the wheat field at CRI stage and fodder berseem at 15-20 days. The area where sowing is yet to be completed, farmers are advised to complete sowing with recommended late sowing varieties. Farmers are advised to avoid irrigation in normal sown wheat and mustard crops. Hoeing & weeding operations are recommended under irrigated conditions only.

Jammu

Rainfall Situation

Rainfall received during the period of 01 October to 06 December 2017 over Jammu and Kashmir is 11.6mm, which is 85% deficit from the normal. The extended range weather forecast provided for (08 to 14 December and 15 to 21 December) over Jammu & Kashmir is above normal for both the weeks.

- As excess rainfall has been forecasted, farmers are recommended to take sowing of wheat crop with any one of the recommended varieties viz. WH-1021, PBW-590, PBW-373, Raj-3077, Raj-3765, and DBW-16. And in normal sown wheat crop, apply second dose of fertilizer after receipt of rain at optimum soil moisture condition.

- Due to chance of excess rainfall, farmers are advised to apply 1st dose of nitrogen fertilizer as top dressing in normal sown mustard crop.
- Farmers are advised for earthing up operation in potato after receipt of rainfall and to watch aphid population properly.

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.