



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

Validity: 28 June to 11 July 2019

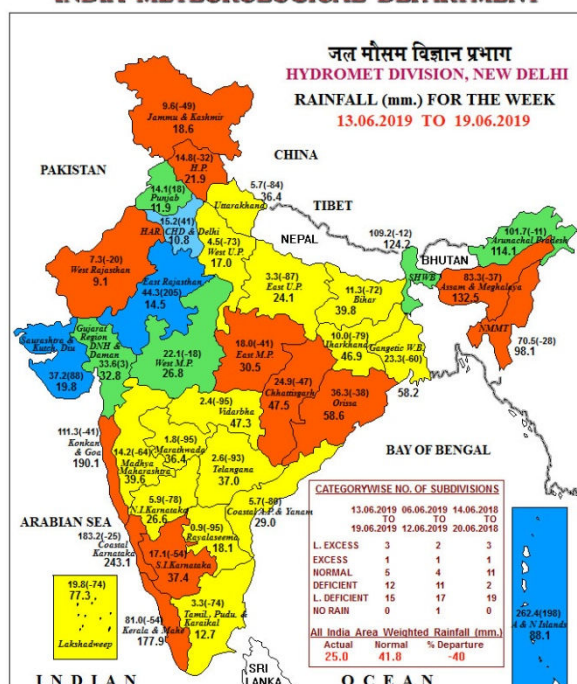
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&
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India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall (13th to 26th June, 2019)

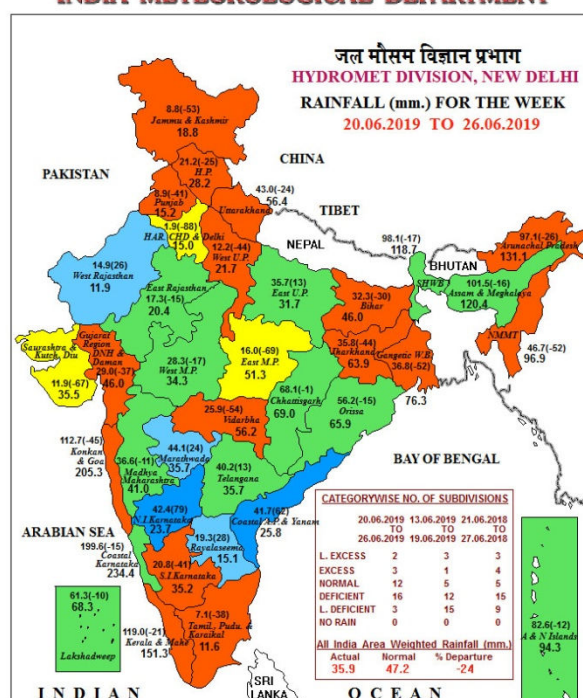
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



LEGEND: L. EXCESS (+60% OR MORE) EXCESS (+20% TO +59%) NORMAL (+19% TO -19%)
DEFICIENT (-60% TO -99%) L. DEFICIENT (-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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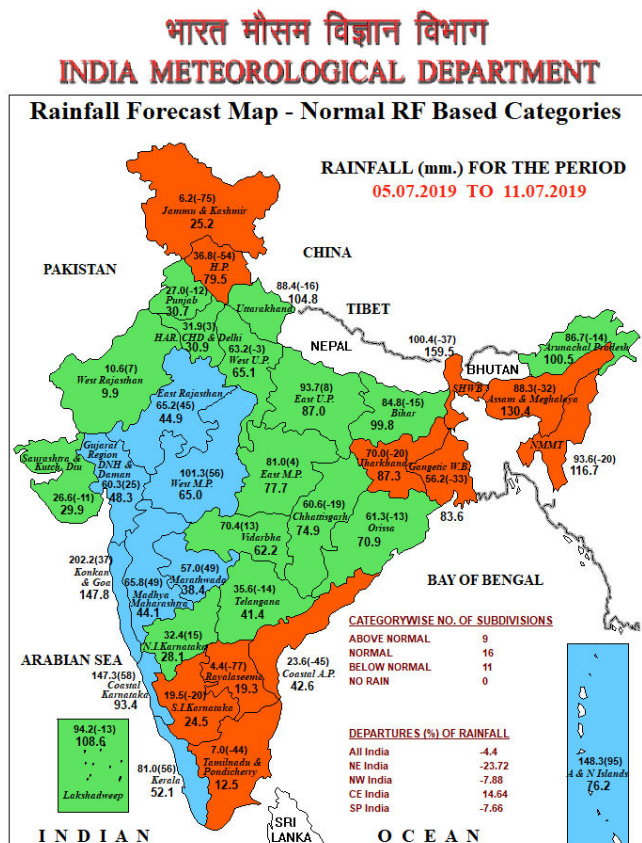
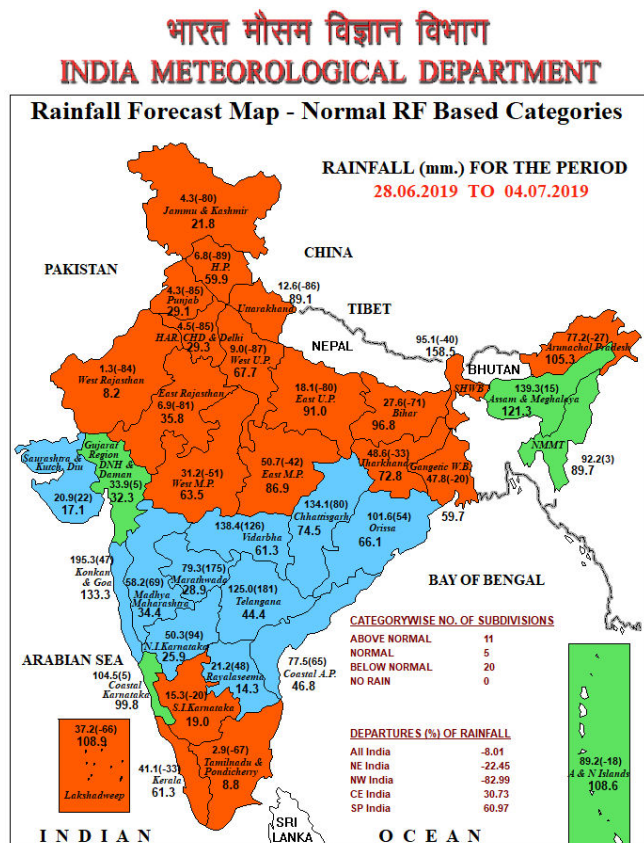
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(a) Rainfall figures are based on operational data.
(b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
Percentage Departures of Rainfall are shown in Brackets.

- Normal or above normal rainfall occurred in both the weeks in East Rajasthan, West Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands.
- Normal or above normal rainfall occurred in either of the two weeks in Punjab, Haryana, Chandigarh & Delhi, East Uttar Pradesh, West Rajasthan, Gujarat Region, Saurashtra & Kutch Diu, Madhya Maharashtra, Marathwada, Odisha, Chhattisgarh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura (NMMT), Coastal Karnataka, North Interior Karnataka, Telangana, Coastal Andhra Pradesh & Yanam, Rayalaseema and Lakshadweep.
- Below normal rainfall occurred in both the weeks in Jammu & Kashmir, Uttarakhand, Himachal Pradesh, West Uttar Pradesh, East Madhya Pradesh, Konkan & Goa, Vidarbha, Bihar, Jharkhand, Gangetic West Bengal, South Interior Karnataka, Kerala & Mahe and Tamil Nadu Puducherry & Karaikal.

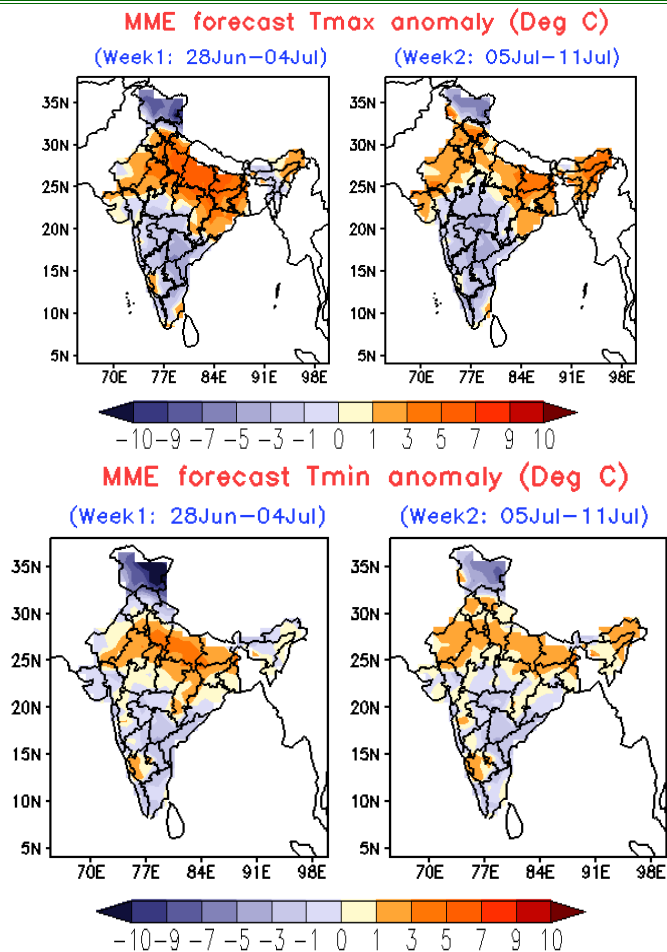
Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 26 June) (28th June to 11th July 2019)



- Week 1 (28.06.2019 to 04.07.2019):** Associated with strengthening of monsoon circulation over central India, monsoon condition will improve over central India and adjoining south peninsula will be active in week 1. Large negative departure of rainfall over Northeast India and Northwest India is expected during week 1. However, country as a whole it will be normal to slightly below normal.
- Week 2 (05.07.2019 to 11.07.2019):** For the country as a whole in week 2 also likely to be normal. Monsoon rainfall will increase over north India and will maintain over central India with the progress of monsoon over the northern Indian region. Rainfall will be deficient over Northeast India.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 26 June)
(28th June to 11th July 2019)**



Maximum Temperature (Tmax)

- **Week 1 (28.06.2019 to 04.07.2019) and Week 2 (05.07.2019 to 11.07.2019):** Tmax anomaly is likely to be positive over north India, Indo Gangetic Plain and parts of eastern India during the period.

Minimum Temperature (Tmin)

- **Week 1 (28.06.2019 to 04.07.2019) and Week 2 (05.07.2019 to 11.07.2019):** Mainly above normal Tmin over Indo Gangetic Plain.

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

Agromet Advisories

Kerala

Amount of rainfall received during the period from 01 to 27 June 2019 over Kerala is 355.1 mm (35% deficit). The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) is below normal for week-1 and above normal for week-2.

- The farmers are advised to go for land preparation for paddy. Soak seeds for 30 minutes in a solution of Pseudomonas culture @ 10g/litre per kg of seeds. The above seed treatment can also be used to control sheath blight, sheath rot, leaf spot disease etc. Transplant seedlings at 4-5 leaf stage.
- There is a chance of bud rot in coconut during rainy season. Keep three numbers each of perforated Mancozeb sachets (5 g) around spindle leaves as a prophylactic measure against bud rot.
- Due to monsoon showers, there is a chance of Sigatoka disease in banana. As a precaution, spray Pseudomonas 20g/litre. In case of severe attack, spray 2 ml hexaconazole or 1 ml propiconazole per one litre of water by mixing it with a sticker and spray on both the surface of the leaf.

Karnataka

Amount of rainfall received over North Interior Karnataka is 90.4 mm (1% deficit), South Interior Karnataka is 90.0 mm (26% deficit) and Coastal Karnataka is 450.6 mm (37 % deficit) during 01 to 27 June 2019. The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) over North Interior Karnataka is above normal for week-1 and normal for week-2, over South Interior Karnataka is below normal for both the weeks and over Coastal Karnataka is normal for week-1 and above normal for week-2.

South Interior Karnataka

- TTB-7, BRG-1,2,4&5 are recommended varieties of red gram.
- Ganga-11, Deccan -103, Vijaya composite, Composite NAC-6004,6002, Hybrid-Nityashree (NAH-2049) are recommended varieties of maize.
- TMV-2, JL-24, KCG-6 are recommended varieties of groundnut.

Tamil Nadu

Amount of rainfall received during the period of 01 to 27 June 2019 over Tamil Nadu is 31.6 mm (35 % deficit). The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) is below normal for both the weeks.

- In the prevailing weather condition, shootfly occurrence is noticed in sorghum. To control, spray Dimethoate 30 EC @ 500 ml/ha or Neem seed kernel extract 5%.
- Prevailing dry weather condition is favorable for Citrus canker / scab disease incidence. To control, spray Copper Oxy Chloride 0.2% at fortnight intervals.
- In the prevailing weather condition, Rhinoceros beetle and Red palm weevil occurrence is noticed in coconut. To control, remove and burn all dead coconut trees in the garden (which is likely to serve as breeding ground) to maintain good sanitation.

Maharashtra

Amount of rainfall received over Madhya Maharashtra is 67.0 mm (48% deficit), over Marathwada is 64.1 mm (44% deficit), Vidarbha is 34.9 mm (74% deficit) and Konkan region 252.7 mm (54% deficit) during 01 to 27 June 2019. The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) over all the sub divisions of Maharashtra is above normal for week-1 and over Vidarbha is normal for week-2 and above normal over remaining subdivisions for week-2.

Marathwada

- Before sowing of cotton seed, treat it with Thiram 75 % @ 6 g / kg seed or Carbendazim 50 % @ 1.5 g / kg seed.
- Soybean seed treatment with Thiram + Carboxin 2:1 @ 3.0 g/kg should be done. Use Trichoderma Viride @ 8 to 10 g / kg seed. After this treatment, seed should be treated with Rizobium and Phosphorus Solubilizing bacteria (PSB) @ 250 g per 10 kg of seed or 100 ml per 10 kg seed (liquid form).
- Treat the pigeonpea seed with 2.5 g Thiram or Carbendazim @ 1.5 to 2.0 g or 3 to 4 g Trichoderma powder per kg seed.

Madhya Maharashtra

- If sufficient moisture is available in soil, carryout sowing of all dryland *kharif* crops like tur, blackgram, greengram, bajra, sunflower. For intercropping, bajra + tur (2:1) and sunflower + tur (2:1) should be followed.
- Treat seed of all *kharif* crops before sowing. To protect pigeonpea, greengram, blackgram, cowpea, soybean, sunflower etc. from soil borne wilt and root rot diseases, treat the seed with Trichoderma @ 5 kg per seed.
- Use certified seeds of recommended varieties of various crops for *kharif* sowing.

Konkan

- If water stress is observed in rice nursery, farmers are advised to provide irrigation.
- Due to intermittent rainfall, there is a possibility of armyworms incidence in rice, finger millet and proso millet nurseries, hence monitor the nurseries for pest incidence. If incidence of armyworm is noticed, spray Dichlorvos 76% WSC @1.3 ml per litre of water at evening hours when wind is calm.
- If seedlings of brinjal and chill crops are ready for transplanting, transplant the seedlings on ridges and furrow with spacing of 60 x 60 cm. Dip the seedlings for 5 minute in Dimethoate solution @ 1ml per litre of water before transplanting.

Vidarbha

- For cotton sowing, recommend deshi varieties including AKA-5, AKA-7 and AKA-8 with seed rate of 12 to 15kg/ha and spacing of 60 x 15 cm.
- When about 60-75 mm monsoon rainfall has occur in 2-3 days, sowing of *kharif* crops like soybean should be undertaken.
- For pigeon pea, recommended varieties are PKV Tara, ICPL-87119 and C-11 spaced at 60x30 cm with seed rate of 12 to 15 kg/ha. Seed treatment/inoculation is advisable at the time of sowing. Use Rhizobium @ 25 g/kg, PSB @ 25 g/kg and bio-fungicide Trichoderma @ 4 g /kg of seed.

Andhra Pradesh

Amount of rainfall received over Coastal Andhra Pradesh is 63.5 mm (38% deficit) and in Rayalaseema 49.0 mm (32% deficit) during 01 to 27 June 2019. The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) over Coastal Andhra Pradesh and Rayalaseema is above normal for week-1 and below normal for week-2.

- Farmers are advised to complete land preparation and keep the inputs ready to take up *kharif* sowings in all districts of Andhra Pradesh.
- Farmers are advised TO wait until accumulation of minimum of 50 mm rainfall in light soils and 75 mm in black soils after onset of monsoon to take up sowing of rainfed crops.
- Farmers can take up sowing of Sesame in Vishakhapatnam and East Godavari districts with the available soil moisture. They can select high yielding varieties like Hima, Sarada (YLM 66) for sowing.
- Groundnut sowings can be taken up, where ever sufficient rainfall is received in North coastal and southern zone. Farmers can go for sowing of groundnut only under assured irrigation in Chittoor, Nellore, Kadapa, Kurnool and Ananthapuramu districts up to end of June

Odisha

Amount of rainfall received over Odisha during 01 to 27 June 2019 is 126.1 mm (28 % deficit). The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) is above normal for week-1 and normal for week-2.

- The weather and time is optimum for sowing of green manuring crops like Sesbania and sunhemp in areas receiving convectional rain. Green manuring crops are sown in medium and low land condition at 6-8 weeks before planting.
- Now the weather is optimum for sowing of arhar. Go for high yielding varieties like Prabhat, Upas-120, ICPL-86012 (early duration). Asha, Visakha (medium duration). Before sowing seeds are to be treated with 2 g Bavistin/kg seeds.
- The weather is optimum for sowing of maize for green cob purpose under irrigated condition . Grow high yielding varieties @ 6 kg seeds/acre. Apply one third of N and all P & K of the recommended dose of 50:24:24 kg NPK/acre. Sow the seeds in lines with spacing of (45-60)x20 cm at 5 cm deep.

Jharkhand

Amount of rainfall received over Jharkhand during 01 to 27 June 2019 is 63.4 mm (60 % deficit). The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) is below normal for both the weeks.

- Farmers are advised to adopt ridge and furrow method for cultivation of different crops except rice. This method has several advantages like maximum yield, conservation of rain water in furrow, checking soil erosion and avoiding rotting of the plant in the event of excess rain.
- Due to irregularities of rainfall, farmers may prefer cultivation of crops having lower water requirement like Arhar, Urd (Blackgram), Marua (Finger millet), Jowar (Bajra), Soybean etc. Farmers who wish to cultivate Rice, Maize or Groundnut in upland must go for inter - cropping.
- Proceed for direct seeding of rice, maize and groundnut with least or medium duration varieties.

Bihar

Amount of rainfall received over Bihar during 01 to 27 June 2019 is 71.6 mm (44 % deficit). The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) is below normal for week-1 and normal for week-2.

- As light to medium rainfall has occurred over North Bihar districts, farmers are advised to give priority for nursery sowing of paddy.
- Sowing of *kharif* vegetables such as lady's finger, pumpkin, cucumber, sponge gourd, bottle gourd is advised.
- Sowing of *kharif* onion in raised bed is advised. Agrifound Dark Red (ADR), N-53, Bhima super, Arka kalyan are recommended varieties for sowing in North Bihar region.
- Sowing of sesamum is advised. Krishna, Kaakee safed, Kalika, Pragati varieties are recommended for sowing in North Bihar. Application of 60 quintal compost, 20 kg Nitrogen, 20 kg Phosphorus and 20 kg Potash per hectare is advised during land preparation.

Uttar Pradesh

Amount of rainfall received over East Uttar Pradesh is 43.4 mm (44% deficit) and West Uttar Pradesh is 20.8 mm (62% deficit) during 01 to 27 June 2019. The extended range weather forecast over East and West Uttar Pradesh for next two weeks (28 June to 4 July and 05 to 11 July) is below normal for week-1 and normal for week-2.

- As per rainfall received and delayed onset monsoon, farmers are advised to sow medium duration rice varieties such as Narendra dhan -359, Malviya dhan-36, Narendra dhan -2064, Narendra dhan -2026, or Hybrid varieties i.e. Arize -6444, 6201, PHB-71, KRH-2, PRH-10 and JKRH-401 etc.
- Sowing of *Kharif* maize varieties such as Hybrid Dakan-107, Malviya-2, JH-3459, Prakash, PSM-5, Pro-303, KH-510, MMH-113 and Composite varieties Novjoti, Pusa-2, Prabhat and Azad uttam should be sown with 18-20 kg/ha treated seed in this week.
- Sowing of pigeon pea of early varieties like Paras, UPAS-120, Pusa-992 and T-21 etc should be initiated during last weeks of June with 12-15 kg/ha treated seed.

Chhattisgarh

Amount of rainfall received over Chhattisgarh during 01 to 27 June 2019 is 103.7 mm (31 % deficit). The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) is above normal for week-1 and normal for week-2.

- Monsoon rainfall has started in maximum portions of Chhattisgarh state. Therefore farmers should start sowing of *kharif* crops like paddy, soybean, arhar, sesamum, maize etc. Sowing should be done in lines with treated seeds.
- Prepare seedlings for *kharif* vegetables.
- Need based intercultural operations should be done in tomato, brinjal, chilli, okra and other vegetable crops.
- Seed of high yielding varieties should be arranged for direct sown vegetables and field preparation should be done accordingly.

Rajasthan

Amount of rainfall received over East Rajasthan is 62.3 mm (32% excess) and West Rajasthan is 22.8 mm (24% deficit) during 01 to 27 June 2019. The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) over East and West Rajasthan is below normal for week-1 and normal over West Rajasthan and above normal over East Rajasthan for week-2.

- With adequate rainfall during last week, there is sufficient moisture for sowing of *kharif* crops. Use the advanced varieties of maize like Aravali Maize-1, Pratap Maize -3, Pratap Maize -5, Pratap Sankar Maize-1, Pratap Sankar Maize -2 and Bio-9637.
- Advanced varieties of groundnut T.G.37A, D.H.86, Pratap peanut-1, Pratap peanut-2, GG-7, T.A.G.-24, JL-24 is recommended.
- Use advanced varieties of soybean like PK-472, JS-335, Pratap Soya-1, Pratap Soya-2, Pratap Raj Soya-24, MACS 450, N.R.C. 37, J.S. 93-05, M.AU-81, JS.97-52, J.S. 95-60, Pratap Soya 45, J.S. 20-34, J.S. 20-29 with a seed rate of 80 kg/ha.

Gujarat

Amount of rainfall received over Gujarat region is 63.5 mm (38% deficit) and in Saurashtra and Kutch 49.0 mm (32% deficit) during 01 to 27 June 2019. The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) over Gujarat region is normal for week-1 and above normal for week-2 and over Saurashtra & Kutch is above normal for week-1 and normal for week-2.

- Sowing can be done in rice nursery seed bed with following popular and recommended varieties of paddy i.e. NAUR-1, GNR-2 (Costal area) GNR-3, GNR-4, GNR-5, GNR-6, GNR-7, GNRH-1 (Long duration), Jaya, Gurjari, GR-5, 7, 8, 9, IR-28, Purna and GAR-13.
- Select pearl millet varieties like GHB-558, GHB-744, GHB-905, GHB-732, GHB-538 for *kharif* season. Sowing of seed should be undertaken with spacing of 45 cm between two rows and 10 to 15 cm between two plants.
- Timely sowing of groundnut should be done after sufficient rainfall. Select the certified seed of groundnut for cultivation. Interculturing and hand weeding should be carried out in pre-sown groundnut.

Assam

Rainfall received over Assam is 270.9 mm (37% deficit) during 01 to 27 June 2019. The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) is normal for week-1 and below normal for week-2.

- Complete the sowing of well germinated seeds of Sali rice in the nursery bed within this month. Attack of pests like green leaf hopper, thrips and disease like brown spot, blast in nursery bed of rice is expected. To control, farmers are advised to apply any systemic insecticide like Chloropyrriphos, Quinalphos etc during fair weather condition.
- Farmers may initiate land preparation for sesamum cultivation. Well drained sandy loam soils are best suited for the crop. Select recommended varieties such as SP 1181(Madhavi), Gauri, Vinayak, ST 1683 and Punjab Til No.1.
- Complete the sowing operation of soybean within this month. For soybean cultivation, select well drained loamy soils free from water-logging. Recommended fertilizer dose of urea, SSP, and MOP @

6, 50 and 10 kg/bigha, respectively, should be applied during the time of final land preparation.

Haryana

Rainfall received over Haryana is 18.0 mm rainfall (52% deficit) during 01 to 27 June 2019. The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) is below normal for week-1 and normal for week-2.

- Transplanting of 25-30 days old seedlings of paddy is in progress. Avoid deep planting for better crop establishment and fill up the gaps within a week. Maintain 5-6 cm standing water up to maximum tillering stage.
- Farmers are advised for interculture operation/hoeing for conserving the soil moisture and weed control in cotton.
- Keep fields prepared for sowing of bajra and guar after rains. Procure the certified seeds of recommended varieties of guar, bajra, maize, cluster bean.
- Farmers are advised to apply light irrigation in planted vegetable crops as per requirement. Make arrangement to avoid plant damage (particularly staked creeper) from anticipated gusty winds.

Punjab

Rainfall received over Punjab is 24.9 mm rainfall (35% deficit) during 01 to 27 June 2019. The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) is below normal for week-1 and normal for week-2.

- Protect cucurbits from downy mildew by spraying Indofil M-45/Kavach @ 300-600 g in 100-200 litres of water per acre at weekly interval. Under heavy disease risk, spray of Ridomil Gold @ 500 g or Aliette @ 600 g at 10 days interval.
- Apply half the nitrogen dose at thinning and remaining half at flowering stage of cotton. Eradicate the weeds like kanghi buti, peeli buti, puth kanda etc growing on cotton field bunds, waste lands, road side and irrigation channels/canals to avoid further spread of whitefly to cotton field.
- To check fruit and shoot borer attack in brinjal, spray 80 ml Coragen 18.5 SC or 80 g Proclaim 5SG in 100-125 litres of water per acre.

Jammu

Rainfall received during 01 to 27 June 2019 over Jammu is 75.4 mm, which is 25% excess. The extended range weather forecast for next two weeks (28 June to 4 July and 05 to 11 July) is below normal for both the weeks.

- Sowing of maize varieties like Vivek-25, Vivek QPM-9, HM-5 and HQPM-1 is recommended.
- Farmers can go for transplanting of vegetables.
- Sowing of mixed fodder Jowar + Bajra+ Maize + cowpea and transplanting of non basmati rice is in progress.

***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.*