



National Agromet Advisory Service Bulletin

Based on

Extended Range Weather Forecast (ERFS)

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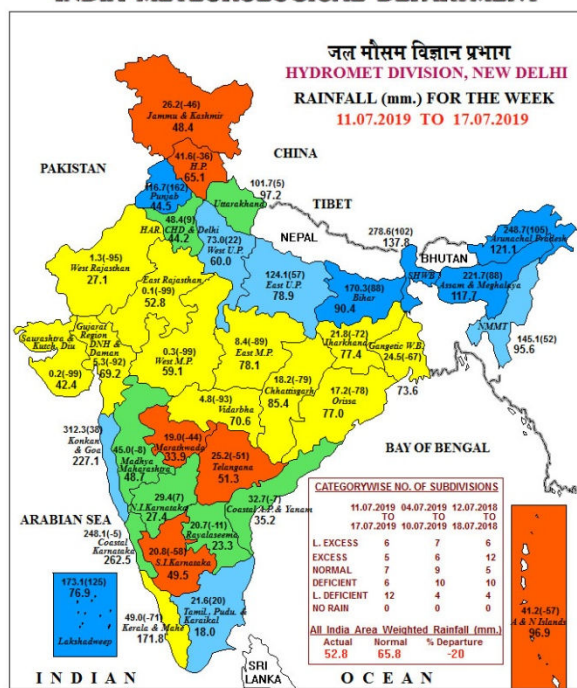
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India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall

(11th July, 2019 to 24th July, 2019)

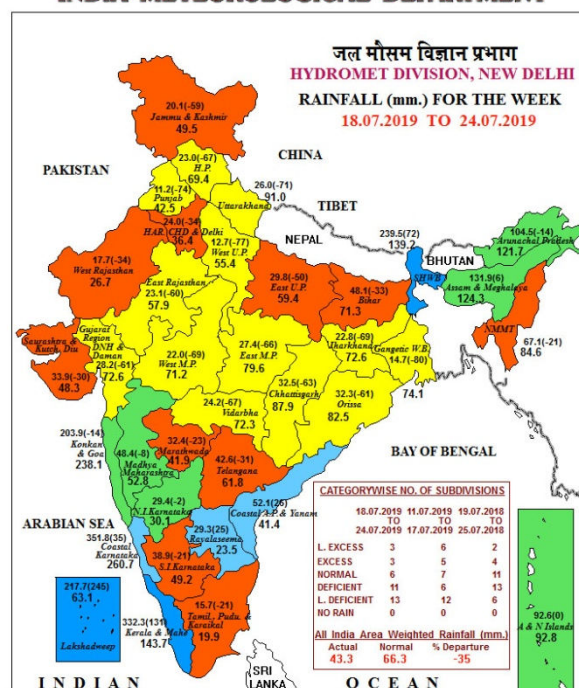
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



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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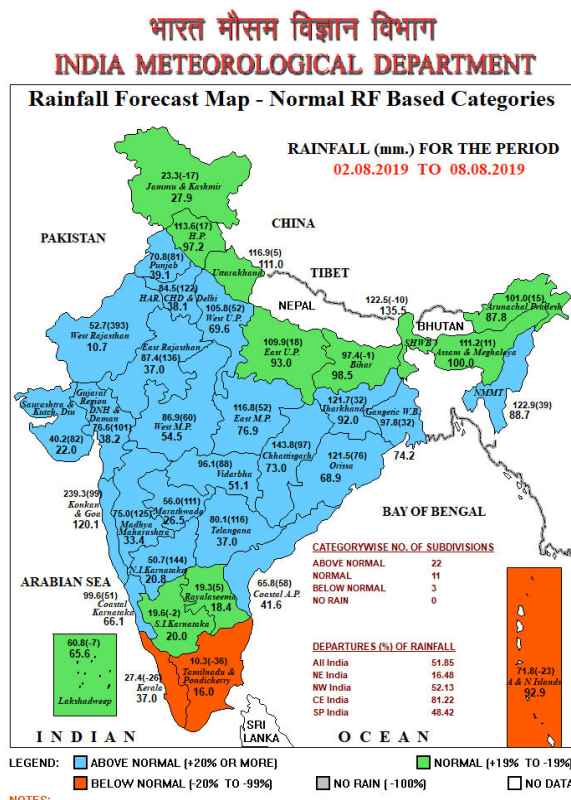
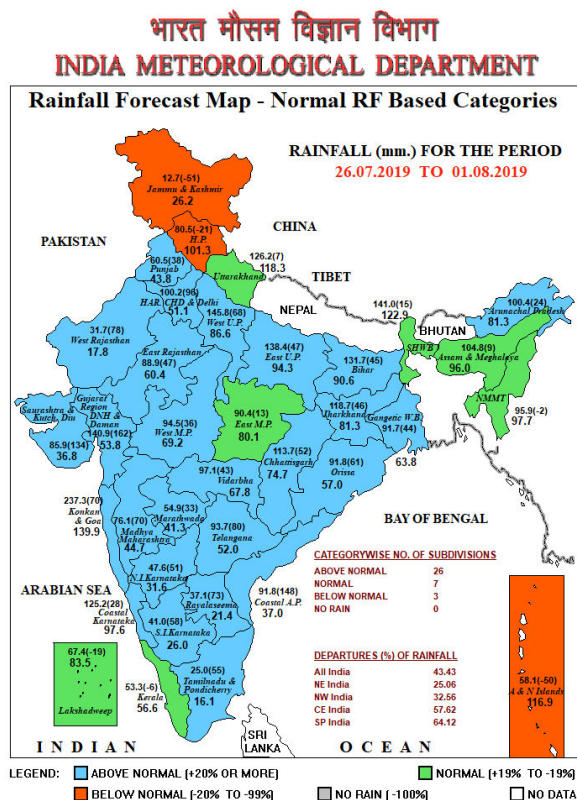
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NOTES:
[a] Rainfall figures are based on operational data.
[b] Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
Percentage Departures of Rainfall are shown in Brackets.

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

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 24 July) (26th July to 8th August 2019)



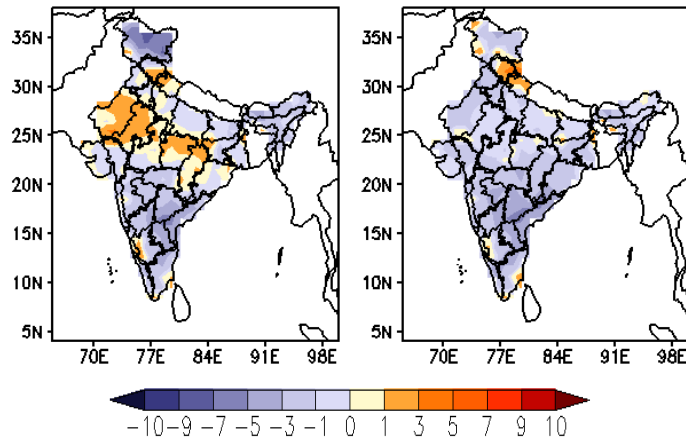
- Week 1 (26.07.2019 to 01.08.2019) and Week 2 (02.08.2019 to 08.08.2019):** As indicated in the previous week, monsoon will be strengthened over Central, NW, NE India and South Peninsula during week 1 and week 2 with mostly above normal rainfall over the country as a whole.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 24 July)
(26th July to 8th August 2019)**

MME forecast Tmax anomaly (Deg C)

(Week1: 26Jul–01Aug)

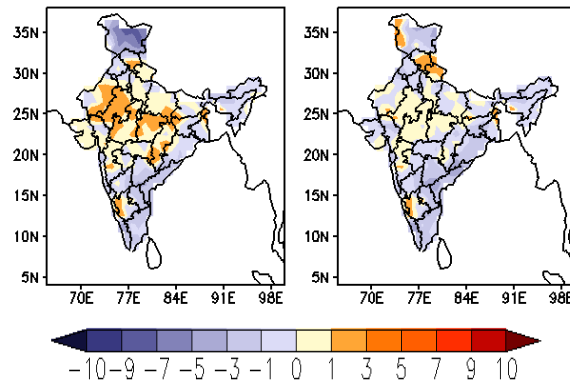
(Week2: 02Aug–08Aug)



MME forecast Tmin anomaly (Deg C)

(Week1: 26Jul–01Aug)

(Week2: 02Aug–08Aug)



Maximum Temperature (Tmax)

- **Week 1 (26.07.2019 to 01.08.2019):** Tmax anomaly is likely to be positive over small parts of NW India during week 1. However, over the rest of the country, it is likely to be negative (below normal) during week 1.
- **Week 2 (02.08.2019 to 08.08.2019):** Mostly below normal Tmax over India during week 2.

Minimum Temperature (Tmin)

- **Week 1 (26.07.2019 to 01.08.2019) and Week 2 (02.08.2019 to 08.08.2019):** Above normal Tmin is likely mainly over North West and Central India, whereas, normal Tmin is likely over rest of the parts of India during the period.

Strategic Agricultural Planning based on rainfall during next two weeks till 08st August 2019

Agromet Advisories

Kerala

Amount of rainfall received over Kerala during the period from 01 June to 25 July 2019 is 889.8 mm (26% deficit). The extended range weather forecast for next two weeks (26 July to 01 August and 02 to 08 August) is normal for week-1 and below normal for week-2.

- Since cloudy weather is prevailed, to control bacterial leaf blight in paddy, mix 20 g of cow dung in one litre of water and spray the cow dung slurry by mixing with 20g of pseudomonas in one litre of water.
- Since humid conditions prevailed in the state, there is a chance of bud rot in coconut plantations. Hence keep three numbers of perforated Mancozeb sachets (5 g) per palm around spindle leaves as a prophylactic measure against bud rot.
- Due to continuous rain, there is a chance of foot rot in pepper. Add 2 kg Trichoderma to a mixture of 90 kg FYM and 10 kg Neemcake and kept for two weeks with sufficient moisture.

Karnataka

Amount of rainfall received over North Interior Karnataka is 207.6 mm (4% excess), South Interior Karnataka is 239.4 mm (23% deficit) and Coastal Karnataka is 1529.8 mm (12 % deficit) during 01 June to 25 July 2019. The extended range weather forecast for next two weeks (26 July to 01 August and 02 to 08 August) is above normal over all the sub divisions of Karnataka for week-1 and normal over South Interior Karnataka and above normal over North Interior Karnataka and coastal Karnataka for week-2.

North Interior Karnataka

- Plough the land across the slope which is to be spared for sowing of Rabi crops so as to facilitate better conservation of soil and soil moisture.
- Vaccinate livestock against Foot and Mouth disease (FMD vaccination), Black Quarter disease (BC vaccination) and *Haemorrhagic Septicaemia*.

South Interior Karnataka

- Undertake interculture operation to control the weeds and to increase the moisture availability to crops. Interculture operation creates a soil mulch thereby conserving the soil moisture to the advantage of crop plants.
- Wherever, the long duration crops like redgram and castor has been sown, undertake earthing up operation in addition to the above agronomic measures.
- Due to high humidity (warm and humid weather) possibility of pest and disease build up is more in already sown crop. Take prophylactic measures depending on the crop.

Tamil Nadu

Amount of rainfall received over Tamil Nadu is 77.6 mm (31 % deficit) during the period of 01 June to 25 July 2019. The extended range weather forecast for next two weeks (26 July to 01 August and 02 to 08 August) is above normal week-1 and below normal for week-2.

- In prevailing weather condition, cotton aphid is noticed. To control, spray Dimethoate 30 EC @500ml/ha or Acetamiprid 20% SP @50 g/ha.
- In the prevailing weather condition, paddy stem borer incidence is noticed. ETL: 25% Dead heart symptoms. Farmers are advised to spray Neem seed kernel extract to controls stem borer or Azadirachtin 0.03% 1000 ml/ha or insecticides Chlorpyrifos 20% EC 1.25 l/ha or Chlorantraniliprole 18.5% SC 150 ml/ha.
- The Prevailing weather condition is conducive for occurrence of Red spider mite in ladyfinger. To control, spray Neem Seed Kernel Extract 5 %.

Andhra Pradesh

Rainfall received over coastal Andhra Pradesh during the period of 01 June to 25 July 2019 is 178.6 mm (21 % deficit). The extended range weather forecast for next two weeks (26 July to 01 August and 02 to 08 August) is above normal for both the weeks.

- Use the available soil moisture from the rainfall received during the last week. Farmers are advised to take up sowing of crops like direct seeded rice, redgram, cotton, chilli direct sowing/nurseries, maize, castor, bajra, foxtail millet in Krishna, Guntur, Prakasam districts.
- Wherever sufficient rainfall is available, farmers can go for sowing of direct sown rice, transplanting of rice, ragi, sowing of maize in Srikakulam, Vizianagaram and Vishakhapatnam districts.
- Farmers are advised to treat the groundnut seed with Tebuconazole @ 1g or mancozeb @ 3 g per kg of seed. They are advised to go for intercropping of groundnut+ redgram/castor in 7:1 ratio. Sowing of 3-4 rows of maize/jowar/bajra as border crops will help control of sucking pests.

Maharashtra

Rainfall received over Madhya Maharashtra is 358.9 mm (6% excess), over Marathwada is 177.8 mm (34% deficit), Vidarbha is 238.5 mm (41% deficit) and Konkan region 1705.6 mm (13% excess) during 01 June to 25 July 2019. The extended range weather forecast for next two weeks (26 July to 01 August and 02 to 08 August) over all the sub divisions of Maharashtra is above normal for both the weeks.

Marathwada

- Select MAUS-71, MAUS-81, MAUS-158, JS-93-05, JS-2029, MACS-450 or KDS-344 varieties of soybean for sowing purpose. Make use of soybean + pigeonpea (4:2) inter cropping system.
- For management of fall armyworm in maize crop, spray Thiamethoxam 12 % + Lambda – Cyhalothrin 9.5 ZC @ 5 ml or Spinetoram 11.7 SC @ 4 ml per 10 litre of water.
- Weed management and irrigation should be done as per requirement and availability of water in banana orchard.

Madhya Maharashtra

- To control the leaf eating caterpillars on *kharif* sunflower, greengram, blackgram, pigeonpea etc., spraying of Chloropyriphos or Quinolphos @ 15-20 ml + 10 litre of water + 5 ml sticker is recommended.
- Thinning should be carried out in *kharif* sown crops and keep the fields weed free.
- If sufficient rains are received in second fortnight of July, carryout sowing of pigeon pea, bajra and sunflower. For intercropping bajra + pigeon pea (2:1) and sunflower + pigeon pea (2:1) should be followed.
- Wherever the incidence such as white grub, termites, nematodes is there, mix the granular insecticide (10% phorate) with the applying fertilizers @ 15 kg/ha.

Vidarbha

- In rainfall deficient areas with insufficient soil moisture condition remaining sowing of pigeonpea should be done upon receipt of sufficient rains. For sole pigeonpea recommended varieties include AKT-8811, PKV Tara, BSMR-853, BSMR-736, ICPL-87119.
- In deficient areas with insufficient soil moisture condition remaining sowing of *kharif* crops should be done upon receipt of sufficient rains. Preferably use early duration varieties with 20% higher seed rate.
- Alternate contingency crops/intercropping system under prevailing late sown condition include sesame (AKT-64), pearl millet (PKV Raj, Phule Adishakti, Phule Mahashakti), sunflower (TAS-82, LFSH-171), pearl millet+pigeonpea (4:2), sunflower+pigeonpea (2:1) intercropping system.
- For control of khaira disease in acid lime, undertake spray of Copper oxychloride 30 g and Streptocycline 1 g in 10 litres of water is advised.

Konkan

During next five days there is forecast for heavy rain, therefore,

- Maintain optimum water level in rice field by proper bunding.
- It is advice to complete transplanting operation of rice seedlings as per availability of irrigation water.
- It is advice to complete transplanting operation of finger millet seedlings.
- Make arrangement for drain out excess water from vegetable crop field.

Jharkhand

Jharkhand received 253.0 mm rainfall which is 44 % deficit during 01 June to 25 July 2019. The extended range weather forecast for next two weeks (26 July to 01 August and 02 to 08 August) is above normal for both the weeks.

- Collect rain runoff water from upland to medium and low land by channel, prepare the land for transplanting .Give support to cucurbitaceous crops with poll and coconut rope and facilitate drainage in all upland crops, plantation of new trees, weeding , intercultural operation and broadcasting of rest dose of urea in upland crop.
- Fertilizer application before transplanting of rice is advised in the following manners. Medium Land- Half dose of Urea@ 86Kg/ha, full dose of SSP @ 250 Kg/ha and MOP @ 34 Kg/ha. Low- land -Half dose of Urea @ 130 Kg/ha, full dose of SSP @375 Kg/ha and MOP @ 67 Kg/ha.
- Weeding, intercultural operations and earthing should be done in 30 days standing crop of pigeon pea.

West Bengal

Rainfall received over Gangetic West Bengal during 01 June to 25 July 2019 is 234.6 mm (54 % deficit). The extended range weather forecast for next two weeks (26 July to 01 August and 02 to 08 August) is above normal for both the weeks.

- Light to moderate rainfall is expected in coming days. Higher air temperature is also expected. So it is advised to complete the sowing operations as well as transplanting operations with sufficient irrigation in aman rice. Ensure weed free seed bed and make proper drainage channel. Use suitable and improved varieties like IET-4786, Khitish, Swarna, IR-36, etc.
- In case of late sown jute crop, attack of Bihar hairy caterpillar and semilooper may be prevalent. To control, apply 1.5 ml Chlorpyrifos per litre of water.
- In pumpkin, ridge-gourd, pointed gourd and cucumber, there is a chance of attack of Red-Pumpkin Beetle in the weather condition. To control the pest apply Dimecron or rogor (1ml per litre of water).

Bihar

Rainfall received over Bihar during 01 June to 25 July 2019 is 455.4 mm (4 % excess). The extended range weather forecast for next two weeks (26 July to 01 August and 02 to 08 August) is above normal for week-1 and normal for week-2.

- In view of rainfall forecast, priority should be given for transplanting of rice in low and medium land areas. Application of 30 kg Nitrogen, 60 kg Phosphorus and 30 kg Potash for long and medium duration varieties and 25 kg Nitrogen, 40 kg Phosphorus and 30 kg Potash per hectare for short duration varieties is recommended.
- Land preparation is advised for *kharif* onion. Application of 150-200 quintals of cow dung/hectare is suggested during land preparation.
- Sowing of Pigeon pea in upland areas is advised. Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13 varieties of pigeon pea are recommended for sowing in North Bihar.
- Nursery sowing of chili in raised seedbed is advised. Improved varieties such as Pant mirch-3, Krishna, Arka lohit, Pusa jwala, Pusa sadabahar, Punjab lal, Kashi anmol are recommended.

Odisha

Rainfall received over Odisha during 01 June to 25 July 2019 is 322.4 mm (32 % deficit). The extended range weather forecast for next two weeks (26 July to 01 August and 02 to 08 August) is above normal for both the weeks.

- Give life saving irrigation in both direct seeded and transplanted rice fields.
- Early sown cotton, maize and groundnut crop is at 3 week stage, go for hoeing and weeding. Provide dust mulching to conserve soil moisture.
- During this period, cotton crop may be infested with sucking pests like jassid, aphid and thrips. To control, spray 40g Thiamethoxam 25% WG or 20 g Clothianidin 50% WDG in 200 litres of water.

Chhattisgarh

Rainfall received over Chhattisgarh during 01 June to 25 July 2019 is 347.1 mm (28 % deficit). The extended range weather forecast for next two weeks (26 July to 01 August and 02 to 08 August) is above normal for both the weeks.

- In the upland areas with less rainfall condition, early paddy varieties like Tulsi, Aditya, Kalinga-3, Samleshwari, Vanprabha, Indira R-1 (Rajeshwari), Indira Barani Dhan-1 should be selected and sown in lines.
- In the regions where rainfall deficient is received, the farmers can grow paddy varieties like Harhuna in the soils like Matasi and dorsa.
- The areas where sowing has not been possible due to no rain situation, farmers are advised to go for sowing of moong (variety Pusa Vishal and HUM-1) and Urad crop (TU 94-2, TAU-2, KU 96-3, Indira Urad-1), Maize Grain (Prakash, Pusa shigrah makka-1, Vivek Hybrid-9, Navajot, Johar Makka-216) and Maize fodder (African tall, Composite) etc.
- To select healthy seeds for rice crop, seeds should be kept in salt solution of 17%. After the bold seed have settled down, these should be taken out of water.

Rajasthan

Amount of rainfall received over East Rajasthan is 208.2 mm (10% deficit) and West Rajasthan is 63.7 mm (45% deficit) during 01 June to 25 July 2019. The extended range weather forecast for next two weeks (26 July to 01 August and 02 to 08 August) over East and West Rajasthan is above normal for both the weeks.

- After receipt of good rainfall, resowing of early maturing varieties of pulse, clusterbean and sesame crops can be carried out in the locations where crop failed due to prolong dry spell.
- Hoeing in maize and groundnut is advised for dust mulch. Apply life saving irrigation where the crops are wilting due to prolong dry spell.
- In soybean crops of 15-20 days or 5th leaf stage farmers are advised to spray herbicide Imazethapyr 75g/ha or Propaquizalofop 50g/ha for the control of broad and grassy weeds. Insecticides spray should be done under clear sky conditions.
- Monsoon may be active during coming days so make provision for water harvesting.

Assam

Rainfall received during 01 June to 25 July 2019 over Assam is 946.6 mm (1% excess). The extended range weather forecast for next two weeks (26 July to 01 August and 02 to 08 August) is normal for both the weeks.

- Farmers may start transplanting of sali rice seedlings in medium low land areas. In case of short duration, high yielding varieties, the age of seedlings during the time of transplanting should be 21 days and for of long duration varieties the age of seedling should be 30-40 days.
- Farmers can plant the sucker, slip and crown of pine apple at a distance of 30, 60 and 90 cm from plant to plant, row to row & bed to bed respectively. Apply 24g urea, 12g SSP and 16g MOP per

plant. Treat the planting materials by dipping in Mancozeb 2g/l to protect from bud rot.

- To control red rot disease of sugarcane water stagnation in the field should be avoided and rouging of the affected plants should be practiced.
- 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.

Haryana

Haryana received 113.3 mm rainfall (33% deficit) during 01 June to 25 July 2019. The extended range weather forecast for next two weeks (26 July to 01 August and 02 to 08 August) is above normal for both the weeks.

- Paddy: Transplanting of 50-55 days old seedlings of short duration varieties for late transplanting of and 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.
- Due to possibility of rain farmers are advised to drain out the excess rain water in the cotton crop if required. Farmers are advised to withhold irrigation.
- In view of Possibilities of rain, farmers are advised to postpone sowing of fodder crops.
- Farmers are advised to postpone irrigation and spray operations in existing vegetable crops. Make arrangement to raise new orchard during monsoon season.
- Farmers may follow the above advisories with a caution.

Jammu

Rainfall received during 01 June to 25 July 2019 over Jammu is 166.0 mm, which is 24% deficit. The extended range weather forecast for next two weeks (26 July to 01 August and 02 to 08 August) is below normal for week-1 and normal for wee-2.

- In order to retain the rain water due to present rainfall in paddy field and further chances of rain strengthen and raise the height of field bunds.
- Due to prevailing weather condition monitor crop for attack of cutworm in early sown maize and pulse crop.
- Give proper support to the young fruits plants.
- Avoid direct contact of cucurbits with soil in order to rotting of fruits.
- Due to present rainfall and further chances of rainfall go for transplanting of brinjal, chilli, early cauliflower and knol khol without any further delay.

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