



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

**Validity: 12 to 25 July 2019**

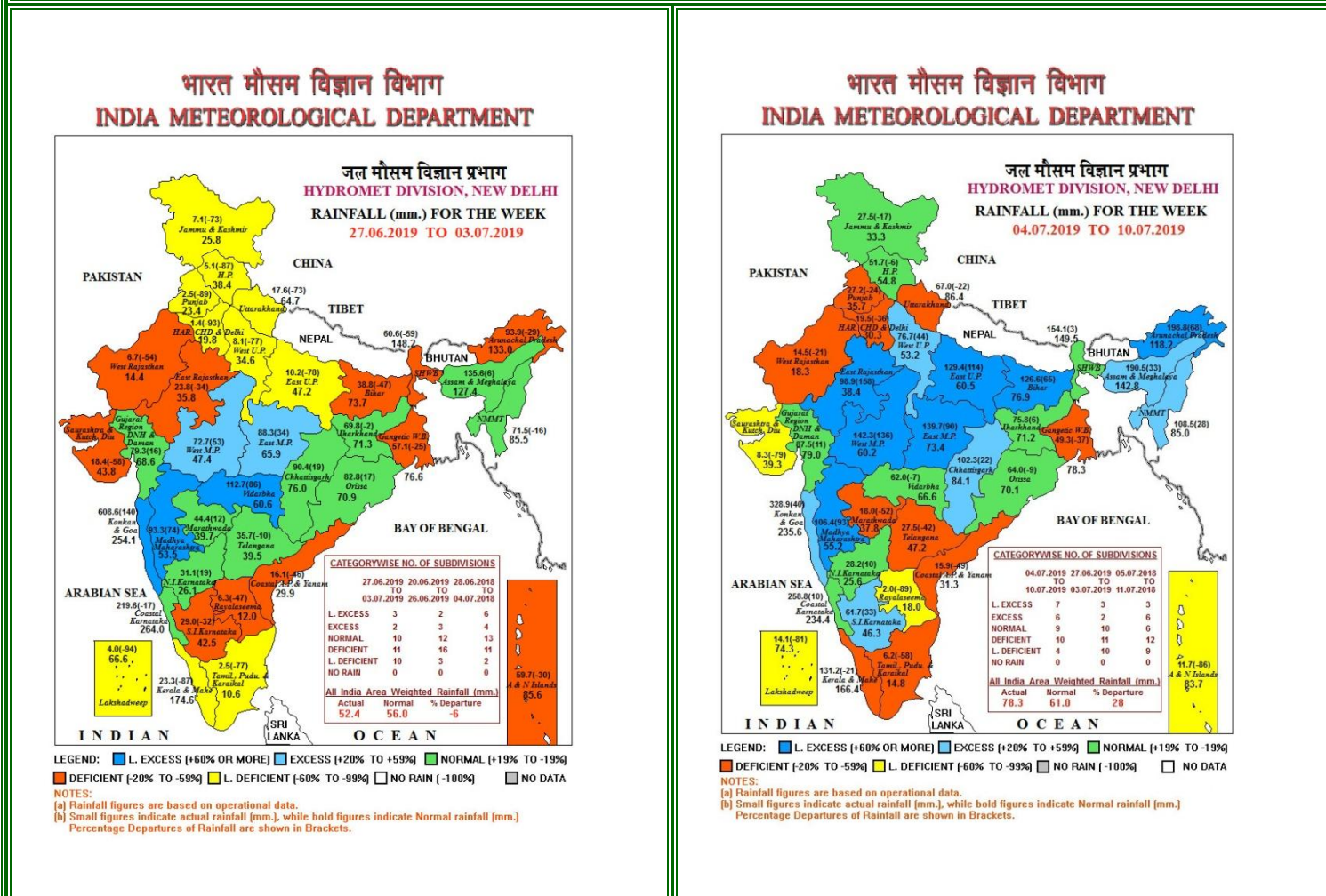
**Date of issue: 12 July 2019**

**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

(27<sup>th</sup> June, 2019 to 10<sup>th</sup> July, 2019)



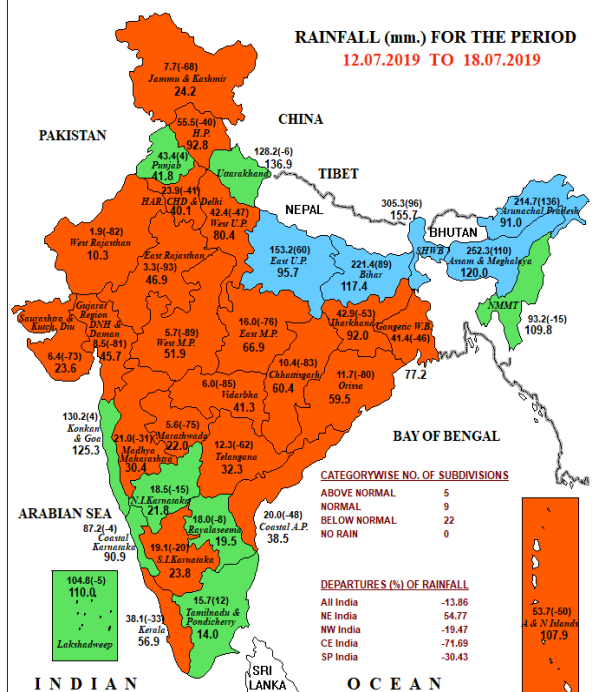
- Normal or above normal rainfall occurred in both the weeks in Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura (NMMT), Madhya Pradesh, Madhya Maharashtra, Vidarbha, Jharkhand, Odisha, Chhattisgarh, Gujarat Region, Konkan & Goa, North Interior Karnataka and Coastal Karnataka.
- Normal or above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

## Extended Range Forecast System

### Rainfall forecast maps for the next 2 weeks (IC – 10 July) (12<sup>th</sup> July to 25<sup>th</sup> July 2019)

#### भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT

##### Rainfall Forecast Map - Normal RF Based Categories

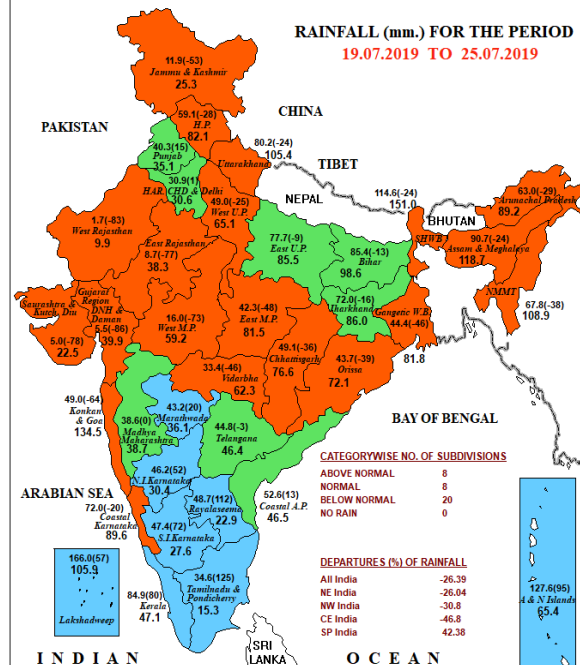


**LEGEND:** ■ ABOVE NORMAL (+20% OR MORE) ■ NORMAL (+19% TO -19%)  
■ BELOW NORMAL (-20% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

**NOTES:**  
 (a) Rainfall figures are based on MME Forecast 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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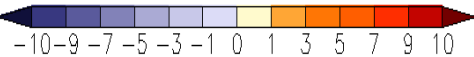
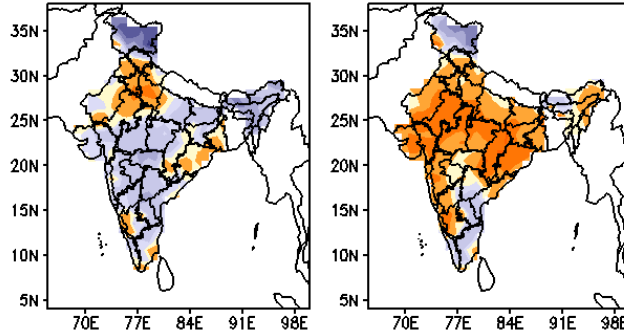
- **Week 1 (12.07.2019 to 18.07.2019):** Mostly above normal rainfall over Indo-Gangetic plains (UP, Bihar, SHWB Met Sub-divisions) and North-Eastern states. However, it will be below normal over Southern peninsula, Central India and Northwest India. For country as a whole, it will be normal to slightly below normal.
- **Week 2 (19.07.2019 to 25.07.2019):** For the country as a whole, week 2 is also likely to be below normal. Monsoon rainfall will be mainly over Southern Peninsula and adjoining central parts of India. Below normal rainfall over North-West, Central and North-East India during the period.

**Maximum and Minimum temperature anomaly ( $^{\circ}\text{C}$ ) forecast  
for next 2 weeks (IC – 10 July)  
(12<sup>th</sup> July to 25<sup>th</sup> July 2019)**

**MME forecast Tmax anomaly (Deg C)**

(Week1: 12Jul–18Jul)

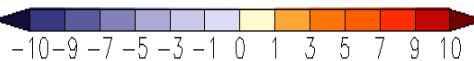
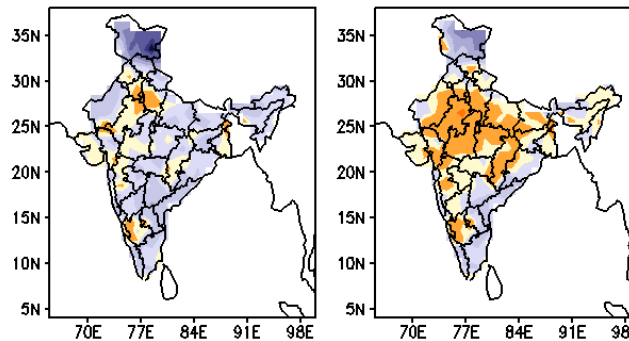
(Week2: 19Jul–25Jul)



**MME forecast Tmin anomaly (Deg C)**

(Week1: 12Jul–18Jul)

(Week2: 19Jul–25Jul)



**Maximum Temperature (Tmax)**

**Week 1 (12.07.2019 to 18.07.2019) and Week 2 (19.07.2019 to 25.07.2019):** Tmax anomaly is likely to be below normal during week 1 over most parts of central India. During week 2, it is expected to be mostly above normal except parts of south peninsula and extreme north India.

**Minimum Temperature (Tmin)**

**Week 1 (12.07.2019 to 18.07.2019) and Week 2 (19.07.2019 to 25.07.2019):** Mainly below normal Tmin over most parts of India during week 1. Whereas, above normal Tmin over parts of Northwest India and central India during week 2.

## **Strategic Agricultural Planning based on rainfall during next two weeks till 25<sup>th</sup> July 2019**

### **Agromet Advisories**

#### **Kerala**

Amount of rainfall received during the period from 01 June to 11 July 2019 over Kerala is 509.3 mm (43% deficit). The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July) is below normal for week-1 and above normal for week-2.

- Due to cloudy weather, there is a chance of leaf folder attack in Virippu Paddy. It can be controlled by using trichogramma cards (2CC per one acre). Cut the cards in small pieces and fix in different regions of the field. If the attack is severe, spray Quinalphos @ 2ml per one litre of water.
- There is a chance of bud rot in coconut plantations due to humid condition. Hence, keep three numbers of perforated Mancozeb sachets (5 g) per palm around spindle leaves as a prophylactic measure against bud rot.
- Due to the pre-monsoon showers, there is a chance of sigatoka disease in banana. As a precaution, spray Pseudomonas 20g/litre. In case of severe attack spray 1 g Bavistin by mixing it with gum in 1 litre of water on lower surface of leaf.
- There is a chance of downy mildew attack in vegetables due to south west monsoon. Application of Trichoderma 20g/litre under the leaves in 15 days interval is effective.

#### **Karnataka**

Amount of rainfall received over North Interior Karnataka is 149.0 mm (4% excess), South Interior Karnataka is 179.7 mm (15% deficit) and Coastal Karnataka is 933.6 mm (23 % deficit) during 01 June to 11 July 2019. The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July) over North Interior Karnataka is normal and over South Interior Karnataka is below normal for week-1 and for North and South Interior Karnataka is normal for week-2 and over Coastal Karnataka is normal for week-1 and above normal for week-2.

#### **South Interior Karnataka**

- Under mono cropping, long duration recommended varieties for redgram are TTB-7, BRG-1,2,4&5, for maize Ganga-11, Deccan -103, Vijaya composite, Composite NAC- 6004,6002, Hybrid-Nityashree ( NAH-2049) and under double cropping, short duration recommended varieties for ragi are Indaf-8, MR-1 and 6, for groundnut are TMV-2, JL-24, KCG-6, for cowpea are TVX-944, KBC-1, for green gram are PS-16, PDM-84,17 and for black gram are Karagao-3, T-9, Rashmi (LBG-625).
- Inter cultivation in mango is advised to protect soil moisture in field. Deep ploughing is taken up to expose the soil to kill the different stages of insect.
- Vaccinate the cows against the Foot and Mouth Disease (FMD) & Black Quarter.
- Sericulture: Flacherie disease is found in all seasons of the year, particularly its incidence is high in rainy season. Care to be taken that infections should not enter from outside. Recommended bed disinfectants like Suraksh, Vijetha, Ankush, Samrakshak etc., are to be dusted in each stage in the bed as to control the disease as per recommended dose. Infected worms should be removed at the earliest using forceps, collected in a basin with lime powder and buried in the soil. Never feed the silkworms with mulberry sprayed with insecticides/pesticides before the completion of the recommended 'safe period'. The silkworms fed on such leaves develop flacherie symptoms.

## **Tamil Nadu**

Amount of rainfall received during the period of 01 June to 11 July 2019 over Tamil Nadu is 40.3 mm (45 % deficit). The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July ) is normal week-1 and above normal for week-2.

- Prevailing weather condition is favourable for citrus canker incidence. To control, spray Copper Oxy Chloride 0.2% at fortnight intervals.
- Prevailing weather is also favourable for Die back / Anthracnose disease incidence in chilli. To control, three sprayings with Captan 0.2% or Miltox 0.2% is recommended.
- Rhinoceros beetle is being noticed in coconut. To control, collect and destroy the various bio-stages of the beetle from the manure pits (breeding ground of the pest) whenever manure is lifted from the pits. Soak castor cake at 1 kg in 5 litre of water in small mud pots and keep them in the coconut gardens to attract and kill the adults.
- Remove and burn all wilting or damaged palms in coconut gardens to prevent further perpetuation of the pest.
- Avoid the cutting of green leaves. If needed, they should be cut about 120 cm away from the stem in order to prevent successful inward movement of the grubs through the cut end.

## **Maharashtra**

Amount of rainfall received over Madhya Maharashtra is 266.7 mm (13% excess), over Marathwada is 126.4 mm (34% deficit), Vidarbha is 209.5 mm (20% deficit) and Konkan region 1189.3 mm (14% excess) during 01 June to 11 July 2019. The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July ) over Vidarbha, Marathwada and Madhya Maharashtra is below normal, and is normal over Konkan for week-1 and over Vidarbha and Konkan is below normal, for Marathwada it is above normal and for Madhya Maharashtra it is normal for week-2.

### **Marathwada**

- After receipt of sufficient amount of rainfall (75 mm and above), select short duration variety of Bt cotton for sowing purpose. Sowing of cotton crop can be done up to 15th July.
- Select short duration variety of pigeonpea (BDN-708, BDN-711) for sowing purpose.
- Avoid sowing of black gram / green gram.
- For management of fall Armyworm in maize crop, treat the seeds with Cyantraniliprole 19.80 % + Thiamethoxam 19.80 % @4 ml per Kg of seed.
- Sowing of pearl millet crop should be done after receipt of sufficient amount of rainfall.

### **Madhya Maharashtra**

- If sufficient moisture is available in soil, carryout sowing of all dryland *kharif* crops like pigeon pea, blackgram, greengram, bajra, sunflower. For intercropping bajra + pigeon pea (2:1) and Sunflower + pigeon pea (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.
- Wherever the incidence of white grub, termites, nematodes etc., pests infesting through the soil is seen, mix the granular insecticide(10% phorate) with the fertilizers @ 15 kg/ha.

## Vidarbha

- In areas with sufficient realized rains, continuation of *kharif* sowing is advisable without further delay. Areas with insufficient pre-sowing rains, *kharif* crops should be sown after receiving rainfall of sufficient rains. Preferably use early duration varieties with 20% higher seed rate.
- For cotton sowing, recommended desi varieties (AKA-5, AKA-7 and AKA-8) and American improved varieties like (AKH-081, PKV Rajat and AKH 8828) should be taken up. Under late sowing condition, use of 20-25% more than recommended seed rate and reduced intra-row spacing is advisable.
- For medium soil type, pigeon pea early duration varieties (ICPL 87, AKT-8811), for medium to heavy soil type, medium duration varieties (PKV Tara, BSMR-853) and for heavy soil type long duration varieties (BSMR-736, ICPL-87119) should be taken up.
- Avoid taking green gram and blackgram as sole crop for delayed sowing beyond 7th July. Include them as intercrops with slightly higher seed rate in cotton + greengram/blackgram (1:1) or pigeon pea + greengram / blackgram (2:4) or sorghum + greengram/pigeonpea (3:3).
- Avoid soybean sowing under insufficient soil moisture condition and crop should be sown after receiving sufficient rains. Recommended early duration soybean varieties are JS 93-05, JS 95-60, JS 20-29, JS 20-34, MAUS-71, MAUS-158.
- Recommended sorghum varieties for early duration are CSH-30, medium duration are CSH-35, SPH-1635 and improved varieties are PDKV Kalyani, CSV-20, CSV-27, CSV-34.
- Apply urea fertilizer @1 kg/ha for rice nursery. Sowing should be done this week considering local soil moisture status and minimum rainfall receipt of 75mm to 100mm. The seed rate of fine varieties and course varieties are 35-40 and 50 kg/ha, respectively.

## Andhra Pradesh

Amount of rainfall received over Coastal Andhra Pradesh is 92.8mm (38% deficit) and in Rayalaseema 59.3 mm (37% deficit) during 01 June to 11 July 2019. The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July) over Coastal Andhra Pradesh is below normal and over Rayalaseema is normal for week-1 and over Coastal Andhra Pradesh is normal and over Rayalaseema is above normal for week-2.

- In view of the deficit rainfall, 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 are advised to take up rice nurseries in Srikakulam, Vizianagaram, Vishakhapatnam, East and West Godavari, Krishna and Guntur districts under assured irrigation conditions. Seed rate is 30 kg/acre of main field. Treat the seed with carbendazim@2g/kg of seed before sowing.
- Farmers can go for sowing of groundnut, foxtail millet, redgram, cotton, castor crops only after receiving sufficient rainfall for sowing under rainfed conditions in Southern zone and scarce rainfall zone.
- Farmers of Krishna zone are advised to take up sowing of pulses only after receiving sufficient rainfall. Treat the seed with Mancozeb@3g/kg of seed or Carbendazim @1 g per kg seed and Imidachloprid @ 5 ml or Thomethaxim @5 g per kg seed for controlling sucking pest incidence.

## Jharkhand

Amount of rainfall received over Jharkhand during 01 June to 11 July 2019 is 207.7 mm (31 % deficit).

The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July ) is below normal for week-1 and normal for week-2.

- If the field is heavily infested with termites, before sowing, seeds must be treated with insecticide Chlorpyrifos 20 E.C. @ 8 -10 ml. per kg of seed. Seeds of pulse crops must be treated with Rhizobium culture. Farmers have sown the crops earlier, should maintain the plant population per unit area by filling the gap either by sowing of extra seeds or rouging the extra plants in the field.
- Farmers may sow the maize crop with medium duration varieties like Suwan composite-1, H.Q.P.M.-1, Ganga Safed - 5, Vinay, Shaktiman - 1 for green cob and early duration varieties like Birsa maize-1, Birsa maize-2, Priya etc. for grain purpose. To keep the crop field weed free, spray weedicide Utrazine @ 4 g per litre of water after 2 – 3 days of sowing.
- Construct the channel around seed bed of rice, Broadcast urea in 10-15 days old seedlings @ 2 kg per 100 sq. meter of area. Farmers may start transplanting with 10 – 12 days old seedlings under SRI method. Nursery bed should be flooded, at the time of up-rooting of seedlings, so that roots of seedlings may remain damage less at the time of transplanting. Farmers have seedlings of 18- 21 days, but sufficient water is not available for puddling may collect rain water flowing from upland as runoff in desired field.

### **Bihar**

Amount of rainfall received over Bihar during 01 June to 11 July 2019 is 237.0 mm (15 % deficit). The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July ) is above normal for week-1 and normal for week-2.

- As light rainfall has occurred over North Bihar districts and in view of the rainfall forecast, farmers are advised to prepare the bunds of their fields so that rain water could be collected for paddy transplanting. It is also advised to transplant 20-22 days old paddy seedlings in medium and low land areas. Application of 30 kg Nitrogen, 60 kg Phosphorus and 30 kg Potash with 25 kg Zinc Sulphate or 15 kg chelated Zinc per hectare is advised during land preparation. Complete the nursery sowing of paddy at the earliest. *Sahbhagi, Prabhat, Dhanlakshmi, Richariya, Saket-4, Rajendra Sweta and Rajendra Bhagwati* are the early varieties of paddy, which are recommended for sowing in north Bihar land preparation. Application of well decomposed FYM/Compost is suggested during land preparation.
- Complete the nursery sowing of *kharif* onion in raised bed at the earliest. Agrifound Dark Red (ADR), N-53, Bhima super, Arka kalyan are recommended varieties for sowing in North Bihar region. Seed should be treated with Captain or Thiram@2.0 gram /kg of seed. Protect the onion nursery crop against damping off disease infestation.
- Farmers are advised to plant healthy banana suckers. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia* are the tall varieties and *Grandnaine, Robesta, Basrai, PHIA-1* are the dwarf varieties recommended for planting in North Bihar. *Battisha, Sawa, Bankel, Kachkel* varieties for vegetable use and *Kothia, Muthia, Dudhsaager, and Chakia* varieties are suggested for both vegetable and fruit purpose. The planting distance should be 2.1x2.1 meters for long varieties and 1.5x1.5 meters for dwarf varieties.
- Livestock: Vaccination of cattles is advised against Anthrax, Black Quarter and H.S. diseases. Maintain hygiene conditions at the place where animals are kept.



## Uttar Pradesh

Amount of rainfall received over East Uttar Pradesh is 183.2 mm (1% deficit) and West Uttar Pradesh is 105.6 mm (26% deficit) during 01 June to 11 July 2019. The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July) over West Uttar Pradesh is below normal for both the weeks and over East Uttar Pradesh is above normal for week-1 and normal for week-2.

- As per rainfall received, farmers are advised that transplanting of rice should be continuous by 10 to 12 cm high or 2-3 leaves available seedlings. Seedling should be treated with Tricoderma- viridy @ 4.0% water solution.
- In *Kharif* maize crop, thinning and weeding may be done after 15-20 days after sowing. Drain out excess rain water from fields.
- Sowing of sorghum composite varieties like Varsa, SPV-1388, and Vijeta and hybrid varieties as CSH-18,13 and CSH-23 with 10-12 kg/ha composite and 7-8 kg/ha hybrid treated seed are advised in sloppy fields.
- Sowing of pigeon pea late sown varieties like Bahar, Amar, Azad, Pusa-9, Malviya vikash, Malviya chamtkar, Narendra arhar-1, Narendra arhar-2 and IPA-203 etc. should be taken up @ 12-15 kg/ha with treated seed. Drain out excess water followed by thinning.
- Animals: Vaccinate the animals against Foot and Mouth disease. Follow a regular vaccination programme in cattle, buffalo, goat, sheep and poultry to prevent the infectious diseases.

## Chhattisgarh

Amount of rainfall received over Chhattisgarh during 01 June to 11 July 2019 is 296.4 mm (4 % deficit). The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July) is below normal for both the weeks.

- Monsoon rainfall has started in maximum regions of Chhattisgarh state. Therefore farmers should start sowing of *kharif* crops like paddy, soybean, arhar, sesamum and maize. Sowing should be done in lines. Seed treatment should be done before sowing. Granular fertilizers should be applied through seed drill.
- 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. The seeds should be washed with clean water, dried in shade and can be sown after seed treatment.
- Prepare seedlings for *kharif* vegetables.
- Need based intercultural operations should be done in tomato, brinjal, chillies, okra and other vegetable crops.
- Dairy animal should not be allowed to suffer from rain drenching. Cattle shed should be keep dry as far as possible to prevent from foot rot disease.

## Rajasthan

Amount of rainfall received over East Rajasthan is 185.0 mm (52% excess) and West Rajasthan is 44.7 mm (28% deficit) during 01 June to 11 July 2019. The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July) over East and West Rajasthan is below normal for both the weeks.

- Sowing of soybean should be done in this week with seed rate of 80 kg/ha of improved varieties

are PK-472, JS-335, Pratap Soya-1, Pratap Soya-2, Pratap Raj Soya-24. Spray pendimethalin 1 kg in 500-600 litres of water before emergence for the control of weeds in soybean

- Farmers are advised to start sowing of cucurbits. Improved varieties of bottle gourd are Pusa Naveen, Pusa Samridh, for bitter gourd are Pusa Visesh, Pusa-2 Mosumi, for pumpkin are Pusa Visvash, Pusa Vikash and for ridge gourd is Pusa Sneha.
- Farmers are advised for sowing of sweet corn variety Madhuri and baby corn during this week. Spray of Atrazine 1-1.5 kg a.i/ha. in 800 litre of water is recommended for effective weed control in maize.

### **Assam**

Rainfall received over Assam is 593.9 mm (15% deficit) during 01 June to 11 July 2019. The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July ) is above normal for week-1 and below normal for week-2.

- 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.
- During this monsoon period, farmers are advised to provide mechanical support to sugarcane by bamboo sticks in order to prevent the plant from logging.
- Poultry growers can use the hybrid variety of chicken like BV300, Babcock, BV 380 etc for egg production purpose.

### **West Bengal**

Rainfall received over Gangetic West Bengal is 195.4 mm rainfall (47% deficit) during 01 June to 11 July 2019. The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July ) is below normal for both the weeks.

- Heavy rainfall is expected in coming days. Thus, complete the sowing as well as transplanting operations 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.
- Complete the intercultural operations in jute. In the present weather condition, attack of stem and root rot is common. To control, apply 0.1% Carbendazim or 0.25% Mancozeb. Spraying should be done during non-rainy days.
- In pumpkin, ridge-gourd, pointed gourd and cucumber, there is a chance of attack of red-pumpkin beetle. To control, apply Dimecron or Rogor (1ml per litre of water). Brinjal fruit and shoot borer is very severe in maximum places. Apply Triazophos 40 EC @ 1.5 ml, Spinosad 45 EC @0.2 ml or Cartap Hydrochloride @0.75 g per litre of water alternatively.

## **Haryana**

Rainfall received over Haryana is 38.9 mm rainfall (55% deficit) during 01 June to 11 July 2019. The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July ) is below normal for week-1 and normal for week-2.

- 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.
- Possibilities of rain, farmers are advised not to start the sowing of guar, bajra, maize. Keep fields prepared for sowing after rains and procure the certified seeds of recommended varieties of guar, bajra, maize, cluster bean.
- Transplant 25-30 days old seedlings of paddy 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.

## **Himachal Pradesh**

Rainfall received over Himachal Pradesh is 109.1 mm rainfall (36% deficit) during 01 June to 11 July 2019. The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July ) is below normal for both the weeks.

- Maize sowing should be completed where sufficient rains has been occurred.
- Apply second dose of nitrogen in apple orchard.
- To control the mango hopper, spray Mascran or Nuacran @ 40 ml or 200 ml per 200 litres of water.
- In litchi, fruit borer is appearing. For control, spray cypermethrin 10 EC @ 1 ml per litre of water at 15 days interval.
- Monitor lady finger crop against mite attack. If population is above threshold, then spray Ethion @ 1.5-2 ml/litre of water.
- Transplant the samplings of tomato, capsicum, gourd, chilli etc., in the well prepared fields.

## **Uttarakhand**

Rainfall received over Uttarakhand is 163.0 mm rainfall (44% deficit) during 01 June to 11 July 2019. The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July ) is normal for week-1 and below normal for week-2.

- Transplanting may be done in paddy. Apply Butachlor herbicide as per recommendation within 1-3 days of transplanting. Apply FYM/fertilizers as per recommendation of soil testing.
- Transplanting may be done in tomatoes, chilli capsicum, brinjal, and cucurbitaceous crops. Use Black polythene as mulch to avoid water logging and emergence of weeds. Staking should be done. Build suitable structures for storage of rainwater.
- Animal Husbandry: Avoid water logging in cattle sheds. Vaccinate all the animals (except pregnant animals). Dry grass is also used with green grass.

## **Punjab**

Rainfall received over Punjab is 54.5 mm rainfall (44% deficit) during 01 June to 11 July 2019. The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July ) is normal for both the

weeks.

- It is advised for transplanting of basmati rice varieties like Punjab Basmati-5, Punjab Basmati-4, Punjab Basmati-3, Punjab Basmati-2, Pusa basmati-1637, Pusa Basmati-1121 during this period and apply 1/3 nitrogen at the time of transplanting or upto 7 days after transplanting and second 1/3 dose 21 days after transplanting of rice.
- Drain out excess rain water from the fields of cotton. Apply remaining half dose of nitrogen at flowering stage. Eradicate the weeds like kanghi buti, peeli buti, puth kanda etc growing on field bunds, waste lands, road side and irrigation channels/canals to avoid further spread of whitefly to cotton field.
- Drain out excess rain water from the fields of vegetables. It is the right time for sowing of all the cucurbits, okra, rainy season tomato varieties, brinjal, cowpeas and early varieties of cauliflower.
- Fix fruit fly traps (16 traps per acre) in guava to protect the rainy season guava fruits from fruit fly.

### **Jammu**

Rainfall received during 01 June to 11 July 2019 over Jammu is 110.0 mm, which is 8% deficit. The extended range weather forecast for next two weeks (12 to 18 and 19 to 25 July ) is below normal for both the weeks.

- Farmers are advised to bund their fields for in situ storage of rain water and utilize the same for puddling and continue transplanting of rice seedlings which have attained 4-6 leaves. Recommended varieties are China-1039, IET-1410, Ratna, PC-19, SJR-5, Jaya & Basmati. Keep the rice crop free from weeds either by hand weeding or by application of butachlor weedicide@30 kg/ha. It is advised for transplanting of Basmati rice crop.
- It is advised to drain out excess water from the fields of maize crop. To avoid stagnate water in the fields.
- As there is a chance of rainfall, it is advised to harvest and thresh the summer pulse crops as early as possible.
- It is also advised to go for first cut of summer fodder as there is a chance of rainfall.

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