



कृषि मौसम परामर्शी सेवाएं बुलेटिन National Agromet Advisory Services Bulletin

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AICRP on Agro-Meteorology (AICRPAM)

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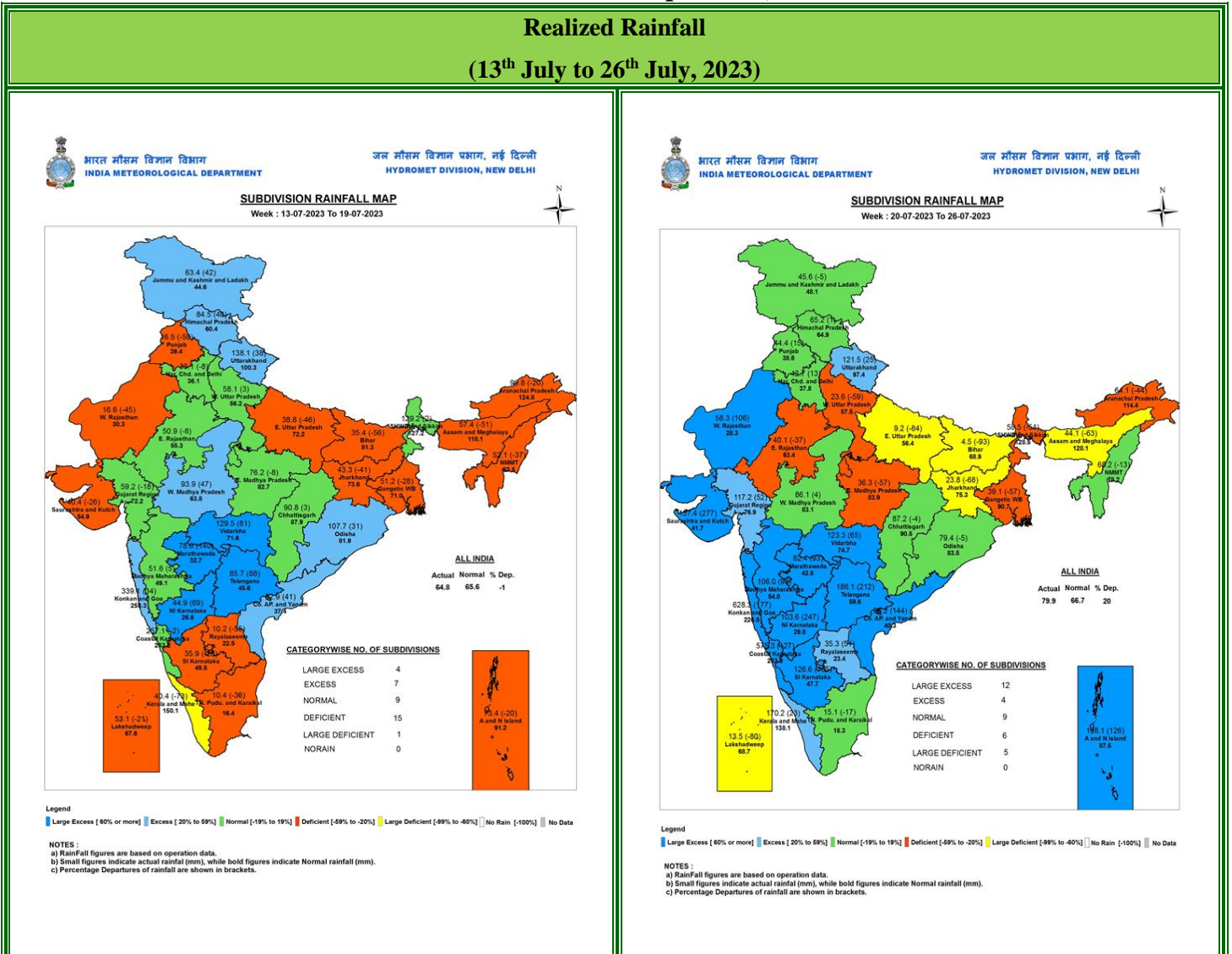
पृथ्वी प्रणाली विज्ञान संगठन

Earth System Science Organization

Realized Rainfall and Extended Range Forecast (Rainfall and Temperature)

Realized Rainfall

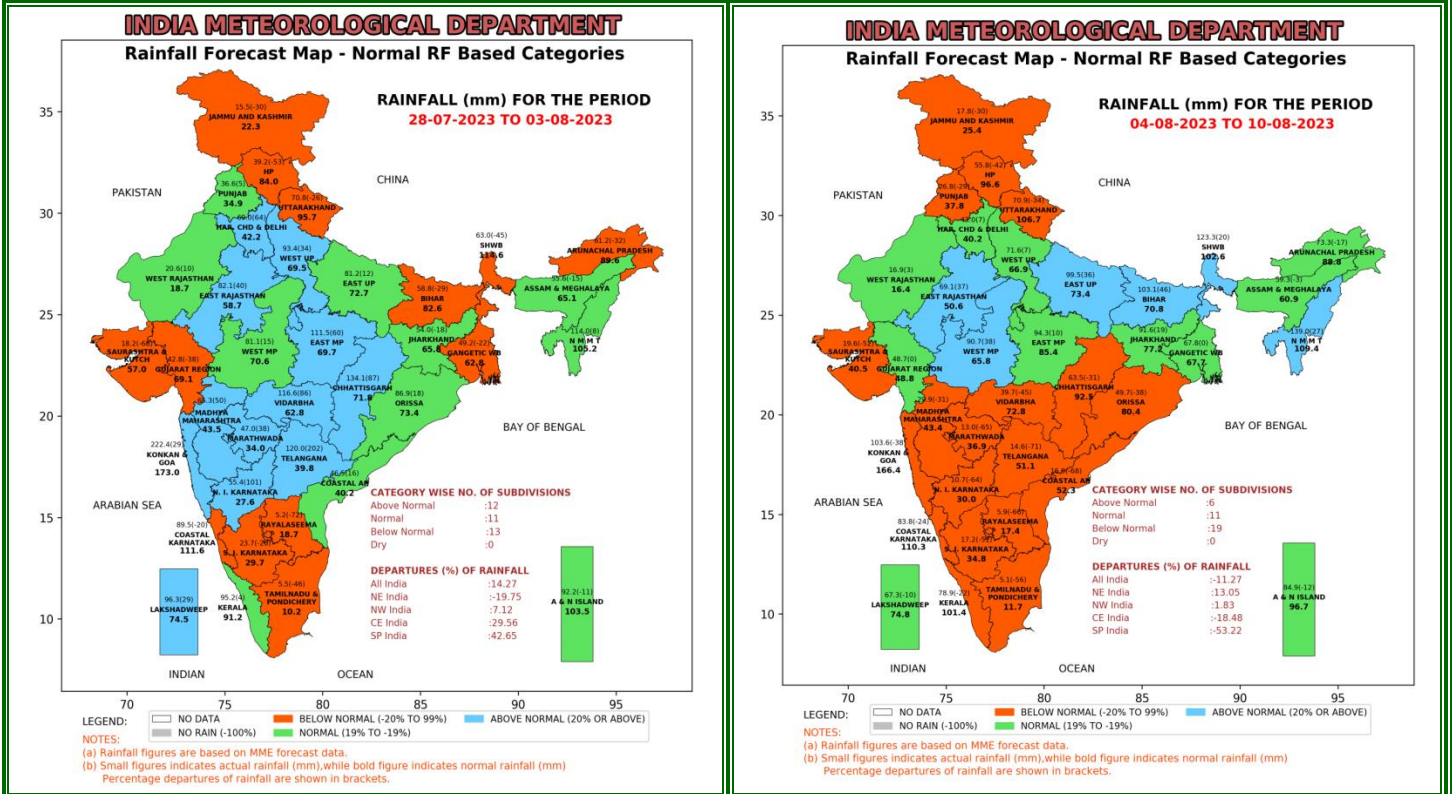
(13th July to 26th July, 2023)



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

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC- 26th July) (28th July to 10th August, 2023)



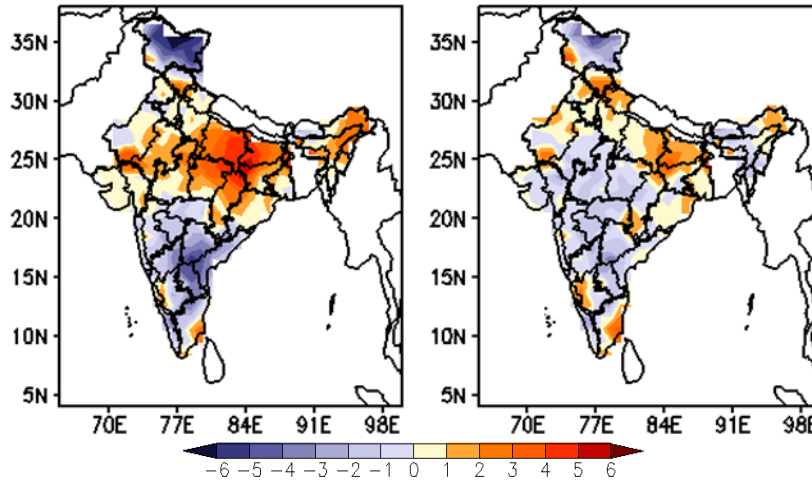
- **Week 1 (28.07.2023 to 03.08.2023):** Rainfall is likely to be above normal over parts of west coast, Central India and Northwest India. However, it is likely to be below normal over parts of Indo Gangetic Plains and adjoining East & Northeast India.
- **Week 2 (04.08.2023 to 10.08.2023):** Rainfall is likely to be normal to above normal over Indo-Gangetic plains and adjoining Central & Northeast India. However, it is likely to be below normal over rest of the country.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for the next 2 weeks (IC- 26th July)
(28th July to 10th August, 2023)**

MME forecast Tmax anomaly (Deg C)

(Week1: 28Jul-03Aug)

(Week2: 04Aug-10Aug)



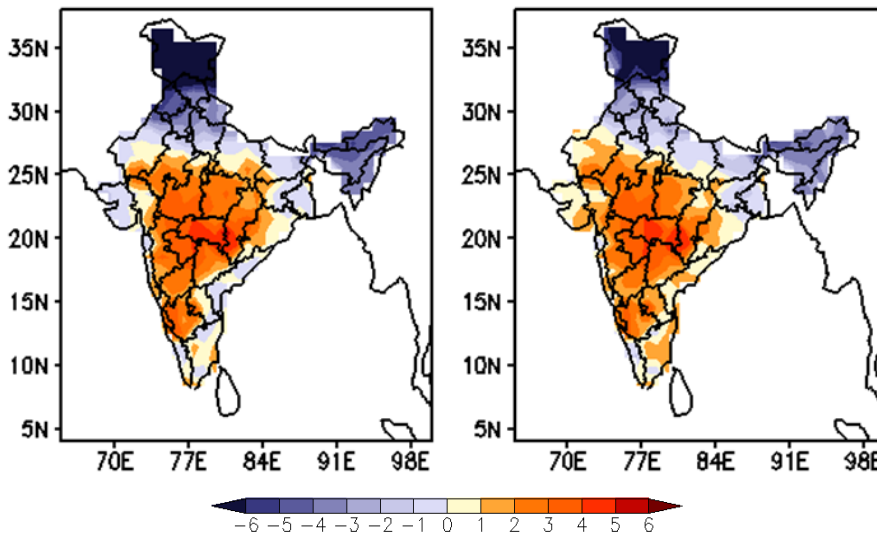
Maximum Temperature (Tmax)

- **Week 1 (28.07.2023 to 03.08.2023):** Tmax is likely to be above normal over most parts of the country except peninsular India.
- **Week 2 (04.08.2023 to 10.08.2023):** Tmax is likely to be above normal over parts of Northwest and East India. However, it is likely to be slightly below normal over rest of the country.

MME forecast Tmin anomaly (Deg C)

(Week1: 28Jul-03Aug)

(Week2: 04Aug-10Aug)



Minimum Temperature (Tmin)

- **Week 1 (28.07.2023 to 03.08.2023) and Week 2 (04.08.2023 to 10.08.2023):** Tmin is likely to be above normal over most parts of Central and peninsular India. However, it is likely to be below normal over parts of Northwest, East and Northeast India.

Agromet Advisories

Uttar Pradesh

The amount of rainfall received over East Uttar Pradesh was 233 mm (-32% deficit) and over West Uttar Pradesh was 345 mm (21% excess) during 01 June - 27 July 2023. The extended range weather forecast (rainfall) for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) is normal over East Uttar Pradesh and above normal over West Uttar Pradesh for week-1 and; above normal over East Uttar Pradesh and normal over West Uttar Pradesh for week-2.

Western Uttar Pradesh

- Under prevailing weather condition, farmers are advised for transplanting of short duration rice varieties.
- After rainfall, farmers are advised for weeding and hoeing in maize crop, which is at emergence stage.
- To control mealybug infestation in sugarcane crop, farmers are advised to spray Monocrotophos 36 % SL @ 1.5 ml per litre of water during clear sky.
- Sowing of sesame is advised with recommended varieties like *Gujrat Til-6, RT-346, RT-351, Tarun, Pragati* and *Shekhar* in clear sky.

Eastern Uttar Pradesh

- For the management of zinc deficiency in rice which is at transplanting stage, it is advised to spray 5.0 Zinc sulphate mixed 20 kg Urea in 500 litres water solution during clear sky.
- Under prevailing weather condition, farmers are advised for sowing of the maize. Recommended medium duration maize varieties are *viz., Hybrid Dakan-107, Malveya hybrid-2, JH-3459, Prakash, PSM-5, Pro-303, KH-510, MMH-113, Azad hybrid-1, Azad hybrid-2, DKC-7074* and Composite varieties *Novjoti, Pusa-2, Sweta* and *Azad uttam*.

Uttarakhand

665 mm (24% excess) rainfall was received over Uttarakhand during 01 June - 27 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) over Uttarakhand is below normal for week-1 and; week-2.

- Regular monitoring of nitrogen deficiency in rice crop is advised. Farmers are recommended to apply 1.0 kg urea/nali or foliar application of urea 1% at weekly intervals (2 times) during early vegetative growth.
- Due to prevailing rainy weather condition, it is advised to maintain proper drainage in pulse crops and monitor the crops for pests and diseases.
- Planting the saplings of multipurpose tree species like *bhimal, khadik, bedu, guiral, banj, napier grass* etc in Van Panchayat Bhoomi or fallow lands or any other suitable sites is

advised.

- To control stem borer in maize crop during vegetative growth, it is advised to spray Cartap hydrochloride 50% SP or Dimethoate 30% EC during clear weather.

Himachal Pradesh

535 mm (67% large excess) rainfall was received over Himachal Pradesh during 01 June - 27 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) over Himachal Pradesh is below normal for week-1 and week-2.

- The heavy to rather heavy rainfall, landslides, cloudbursts, mud flows, and floods that have occurred throughout the state has caused the waterlogged conditions in crops such as maize and other *kharif* crops. Extensive damage has been inflicted on apple, rice, maize, pea, and tomato crops. The general public is cautioned not to go near the banks of rivers and drain out the excess water in maize, soybean and vegetable fields.
- Under prevailing weather condition, it is advised to prepare proper bunds in paddy fields for water conservation.
- Weeding and hoeing in the standing vegetable crops (picking/reproductive stage) is advised for optimum growth.
- For the management of fall armyworm in maize crop and farmers are advised to spray Emamectin benzoate @ 0.4 g/litre or Spinetoram @ 0.5 ml / litre or Chlorantraniliprole @ 0.4 ml / litre.
- In regions where the maize crop has reached knee height stage, it is recommended for earthing up. Additionally, it is advised to apply the initial nitrogen fertilizer (85 kg urea per hectare) during this stage.

Punjab

238 mm (44% excess) rainfall was received over Punjab during 01 June - 27 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) over Punjab is normal for week-1 and; below normal for week-2.

- Farmers are advised that after draining out excess rainwater from the rice field, apply recommended dose of nitrogen fertilizer. Keep water standing in paddy field only for 2 weeks and thereafter apply irrigation.
- In flooded areas, it is advised to drain out excess water from the fields of maize, cotton, vegetables, pulses, fodder and orchards. Farmers are also advised not to irrigate or spray the crop during the period.
- Farmers are advised to harvest the cucurbits and other vegetables like tomato, chilli, brinjal and okra at regular intervals to get maximum yield.
- For the management of white fly, uproot and destroy leaf curl affected plants. If population reaches above ETL, it is advised to spray 1 gram of Diafenthiuron 50WP or 1ml or of

Dimethoate 30EC in 1 litre.

Rajasthan

387 mm (42% excess) rainfall was received over East Rajasthan during 01 June - 27 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) over East Rajasthan is above normal for week-1 and; week-2.

- Due to the forecast of above normal rainfall in next two weeks, farmers are advised to postpone irrigation in summer crop and all types of chemical spraying in the fields. Also make arrangements to drain out excess water from groundnut and green gram crop fields.
- Where sufficient moisture is available in the field, farmers are advised to complete the sowing of maize. Recommended improved varieties of maize are *Pratap QPM-1, HQPM-1, HQPM-5, PEHM-2 and Pratap hybrid maize-1, Pratap Makka-9, Pratap hybrid Makka-3.*
- Under sufficient soil moisture condition, sowing of soybean is advised. Recommended improved varieties of soybean are *Pratap soya-1, Pratap Raj soya- 24, NRC-37.*

Hisar

288 mm (54% excess) rainfall was received over Hisar during 01 June - 27 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) over Hisar is above normal for week-1 and; normal for week-2.

- Due to the forecast of above-normal rainfall during week-1, farmers are advised to stop the irrigation and pesticides spray in cotton and monitor the population of whitefly, thrips and bollworm.
- Under prevailing weather conditions, farmers are advised to transplant the paddy from nursery to main field and apply fertilizers as recommended by CCS HAU, Hisar. Use recommended herbicides for control of weeds by mixing with sand in standing water within 2-3 days of transplanting.

Assam

841 mm (-14% deficit) rainfall was received over Assam during 01 June - 27 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) over Assam is normal for week-1 and week-2.

- Due to flood/ inundation situation in the state, farmers are advised to download “MAUSAM” app for weather forecast and “DAMINI” app for lightning alert, intending to help save lives of humans as well as livestock. Provide staking to vegetable crop and drain out excess amount of water from low lying crop field.
- Farmers who have not yet sown the seeds of long duration *sali* rice varieties are advised to complete sowing in the nurseries within this week. Recommended varieties like *Ranjit, Bahadur, Piolee, Kushal, Moniram, Bhgalee, Aghoni* etc.
- Land preparation for sowing of green gram and black gram seeds is advised. Select upland, well drained sandy loam soil for these crops. The recommended varieties for green gram are

Pratap, T-44, Kopergaon, K-851, M L-56 and M L-131, for black gram viz., T-9, T-27, T-122, Pant U-19 etc

- Prevailing weather is favourable for caseworm infestation in early transplanted sali rice crops (early seedling stage). Farmers are advised to drain out the excess amount of water from the rice field as to reduce pest population.

West Bengal

333 mm (-39% deficit) rainfall received over Gangetic West Bengal and rainfall received over Sub Himalayan West Bengal was 1048 mm (7% excess) during 01 June - 27 July 2023. The extended range weather forecast (rainfall) for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) is below normal over Gangetic West Bengal and Sub-Himalayan West Bengal during week-1 and; normal over Gangetic West Bengal and above normal over Sub-Himalayan West Bengal week-2.

- Due rainfall deficit condition and forecast of below normal rainfall, farmers are advised to irrigate medium duration kharif rice which is at panicle initiation stage by the end of the week.
- To protect the cattle from ectoparasite infestation, it is advised to keep the cattle shed clean and dry and also apply Neem oil inside the shed.

Bihar

243 mm (-47% deficit) rainfall was received over Bihar during 01 June - 27 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) over Bihar is below normal for week-1 and above normal for week-2.

- Planting of healthy suckers of banana is advised. *Alpaan, Champa, Kanthali, Maalbhog, Chinia, Sakerchinia, PHIA-23* (tall varieties) and *Grandnaine, Robesta, Basrai, PHIA-1(Gold finger), BRS-1* (dwarf varieties) which are recommended for planting in North Bihar.
- Sowing of pigeon pea in upland areas is advised. *Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1* and *Malvyia-13* varieties of pigeon pea are recommended for sowing in North Bihar.

Jharkhand

245 mm (-48% deficit) rainfall was received over Jharkhand during 01 June - 27 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) over Jharkhand is normal for week-1 and week-2.

- Farmers are advised to intercrop improved varieties of pigeon pea viz., *Birsa Arhar-1, Birsa Arhar-2, Bahar, Upas, IPA 203* with short duration improved varieties of groundnut/paddy/urd /turmeric /jowar/soybean/okra/maize.
- Farmers are advised to prepare channel to collect runoff water from upland, medium land

and make rice fields for transplanting in lowland.

- To control stem borer and leaf roller in maize crop it is advised to apply granular insecticide Fipronil 0.3 G or Cartop hydrochloride 4G, @ 12 to 15 granules in the apical leaf and 3 to 4 g around a plant after 15 to 20 DAS.

Chhattisgarh

461 mm (-10% deficit) rainfall was received over Chhattisgarh during 01 June - 27 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) over Chhattisgarh is above normal for week-1 and; normal for week-2.

- During past week, flooding was observed in Bijapur and Sukma district and intermittent dry spells observed in Koriya, Raigarh, Korba, Narayanpur, Surajpur, Balrampur, Janjgir, Kabirdham, Bemetara, Jashpur, Kondagaon and Surguja districts, due to this transplanting of rice is delayed in deficient rainfall areas. Farmers are advised for adopting water conservation agronomic techniques.
- In case of continuous rainfall situation and to avoid delay sowing in direct seeding and nursery sowing, lehi method should be adopted. There should not be excess rainfall in the fields otherwise germinated seeds will get rotten/ destroyed.
- The present weather is suitable for planting of fruit crops like *papaya*, *mango*, *guava* and *banana* and agroforestry plants. Therefore, farmers are advised to complete planting operation in time.
- Intercultural operations is advised in vegetable fields for weed control and arrange staking for creeper vegetables like bitter gourd, gourd and other pumpkin vegetables.
- Due to forecast of light to moderate rainfall, farmers are advised to maintain proper drainage channels in the orchards field.

Odisha

441 mm (-12% deficit) rainfall received over Odisha during 01 June - 27 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) over Odisha is normal for week-1 and; below normal for week-2.

- Under prevailing weather condition, farmers of low land are advised to go for transplanting of 21 days rice seedlings in the main field.
- Hoeing and earthing up is advised in early sown pigeon pea after 3-4 week of sowing.
- If leaf blast is observed in rice nursery, it is advised to spray Tebuconazole 50% + Trifloxystrobin 25% WG @ 0.4 g or Isoprothiolane 40 EC @ 1.5 ml per litre of water. Repeat the spray at 7-10 days interval.

Gujarat

562 mm (33% excess) rainfall received over Gujarat during 01 June - 27 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) over Gujarat is below normal for week-1 and normal for week-2.

- During monsoon season in addition to recommended dose of fertilizer, it is advised to give bio-fertilizers viz., Azotobacter 50 ml, PSB 50 ml, KMB 50 ml and Trichoderma 100 g per to adult mango tree before or after 15 days of fertilizer application.
- Farmers are advised to make drainage channel to remove excess rain water from pigeon pea fields. And, for the management of *Helicoverpa* caterpillars, planting of yellow marigold around the field as well as between the crops is advised.

Maharashtra

343 mm (-4% deficit) rainfall over Madhya Maharashtra; 496 mm (11% excess) rainfall over Vidarbha; 292 mm (4% excess) rainfall over Marathwada; and 2145 mm (33% excess) in Konkan region was recorded during 01 June - 27 July 2023. The extended range weather forecast (rainfall) for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) is above normal over Madhya Maharashtra, Marathwada, Konkan and Vidarbha for week-1 and; below normal for week-2, respectively.

Vidarbha

- In early sown soybean, cotton and pigeon pea fields, inter culture operation (weeding/hoeing) is advised during clear weather for the management of weeds and improve soil aeration.
- For weed control in soybean at early vegetative stage, it is advised to spray early post emergence herbicidal Imazethapyr 10% SL @ 20 ml or Propaquizafop 2.5% + Imazamox 3.75 % @ 40 ml per 10 litres of water.
- Keep farm animals indoor during thunderstorm/lightning. In farm livestock preventive vaccination for foot and mouth disease (FMD) and preventive deworming for flat worms is advisable.

Madhya Maharashtra

- Nipping the apical bud of pigeon pea crop is advised for more branching.
- To control leaf eating caterpillar in mango, foliar spray of Chlorpyrifos + Cypermethrin @ 2 ml/litre of water is advised.

Konkan

- Due to heavy to very heavy rainfall with extremely heavy rainfall received in blocks of Raigad Ratnagiri and Thane district. Farmers are advised to drain out excess water from rice, finger millet nursery, vegetable crop, turmeric, papaya, banana, coconut, arecanut, sapota,

new fruit crop orchard. Postpone fertilizer application and pesticide spraying.

- Maintain optimum water level of 2.5 to 5 cm in transplanted rice field and make arrangement to drain out excess water from transplanted rice field as well as from nursery.
- Due to forecast of above normal rainfall during next week-1, it is advised to maintain optimum water level of 2.5 to 5 cm in transplanted rice field and make arrangement to drain out excess water from transplanted rice field as well as from nursery.
- Due to forecast of above normal rainfall during next week-1, farmers are advised to postpone the basal dose of fertilizer application in rice.
- As forecast for above normal rainfall during next week, it is advised to do transplanting of rice only during low intensity of rain.

Parbhani

- Due to heavy rainfall received during last week and forecast of above normal rainfall, it is advised to remove the excess amount of water stagnated in the vegetable crops and *kharif* crop fields. And, also harvest the mature vegetables.

Kerala

844 mm (-31% deficit) received over Kerala during 01 June - 27 July 2023. The extended range weather forecast (rainfall) for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) is normal for week-1 and; below normal for week-2.

- There is a chance for the development of bacterial leaf blight disease in the paddy (*virrupu* rice) nursery. As a prophylactic measure, it is advised to spray 20 g of *Pseudomonas* in one litre of water only during clear weather condition.
- To control sigatoka leaf spot disease in banana, it is advised to cut and remove all severely affected leaves and spray Propiconazole 1 ml/ litre of water.
- In order to prevent fungal diseases during monsoon season, root dipping of vegetable seedlings in *Pseudomonas* solution is advised before planting.

Anantapur

139 mm (-8% deficit) rainfall was received over Rayalaseema and 304 mm (23% excess) rainfall was received over Coastal Andhra Pradesh during 01 June - 27 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) is below normal over Rayalaseema and normal over Coastal Andhra Pradesh for week-1 and; below normal over Rayalaseema and Coastal Andhra Pradesh for week-2.

- In Ananthapuramu, Kurnool, Kadapa, Chittoor and Prakasam districts, redgram growing farmers are advised to select the varieties like *LRG-41*, *LRG-52*, *PRG-176*, *ICPL-85063* and

ICPL-87119. The optimum sowing time for redgram is June to August.

- In Srikakulam, Vizianagaram, Visakhapatnam, Nellore, Chittoor, Ananthapuramu and Kurnool districts, groundnut farmers are advised to select high yielding and drought tolerant groundnut varieties viz., *Kadiri- 6, Kadiri-9, Kadiri Harithandhra, Anantha, Greeshma, Narayani, Abhaya and Dharani*.
- Farmers growing pearl millet are advised to select bajra varieties viz., *ABV-04, Raj-171, Pusa-61 and PSV-56* and treat the seeds with Thiram or Captan @ 3g/kg of seed.

Karnataka

318 mm (-2% deficit) rainfall received over South Interior Karnataka, 1985 mm (9% excess) over Coastal Karnataka and 258 mm (25% excess) rainfall received over North Interior Karnataka during 01 June - 27 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (28 July - 03 August 2023 and 04 - 10 August 2023) is above normal over North Interior Karnataka and below normal over Coastal Karnataka and South Interior Karnataka for week-1 and; below normal over North Interior Karnataka, Coastal Karnataka and South Interior Karnataka for week-2.

South Interior Karnataka

- Intercultural operation is advised to conserve soil moisture due to shortage of rainfall.
- Wherever over population of crop plants exist, undertake thinning operation for better availability of scarce soil moisture to the reduced population of crop plants.
- Deep ploughing is recommended in mango orchard. Rainwater harvesting through opening circular trenches around the tree at a distance of 6 feet and width at 9 inches, as well as depth and mulching the trenches with dry mango and green leaf manuring helps in retaining sufficient soil moisture in soil.

North Interior Karnataka

- Under sufficient soil moisture condition, sowing of *kharif* crops is advised like sowing of bajra, groundnut (bunch type), maize, Bt. cotton, redgram, sesamum or navane.
- To make efficient use of available soil and water resources and to get higher returns, the following intercropping systems can be taken up in light and medium black soils. Bajra + Groundnut (bunch) in 2:4 row proportion; bajra + redgram in 2:1 row proportion; groundnut (bunch) + redgram in 3:1 or 4:2 row proportion, redgram + sesamum in 1:2 or 2:4 row proportion.
- To manage early shoot borer in sugarcane at vegetative stage, spraying of 0.5 ml Imidacloprid dissolved in one litre of water or broadcast 10 Kg of Carbofuran granules mixing in sand on the surface of the soil is advised.

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