



राष्ट्रीय कृषि मौसम परामर्शी सेवाएं बुलेटिन National Agromet Advisory Services Bulletin

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विस्तारित अवधि मौसम पूर्वानुमान/ Extended Range Weather Forecast (ERFS)

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जारीकर्ता/ Issued by

अखिल भारतीय समन्वित कृषि-मौसम विज्ञान अनुसंधान परियोजना

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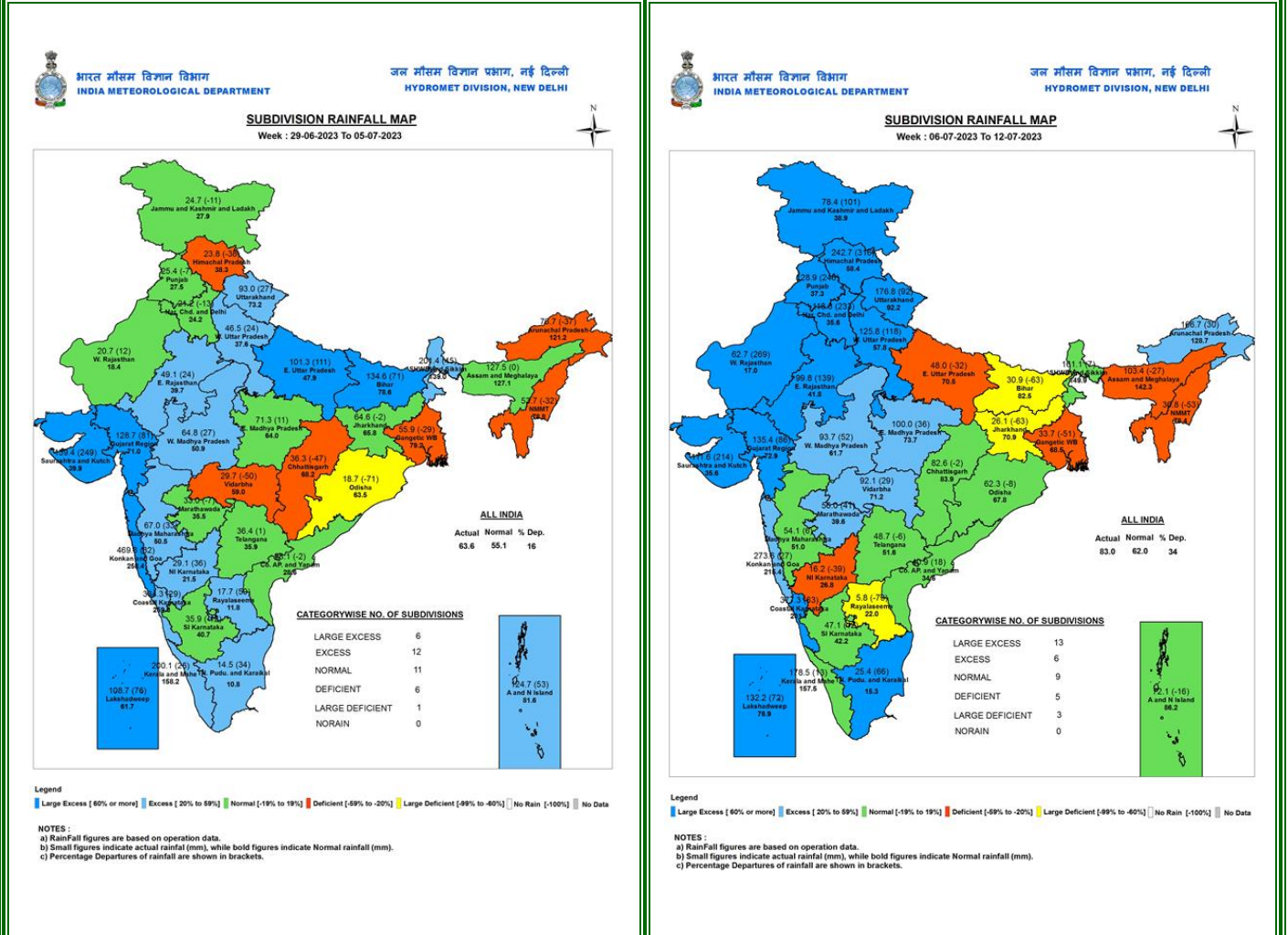
पृथ्वी प्रणाली विज्ञान संगठन

Earth System Science Organization

Realized Rainfall and Extended Range Forecast (Rainfall and Temperature)

Realized Rainfall

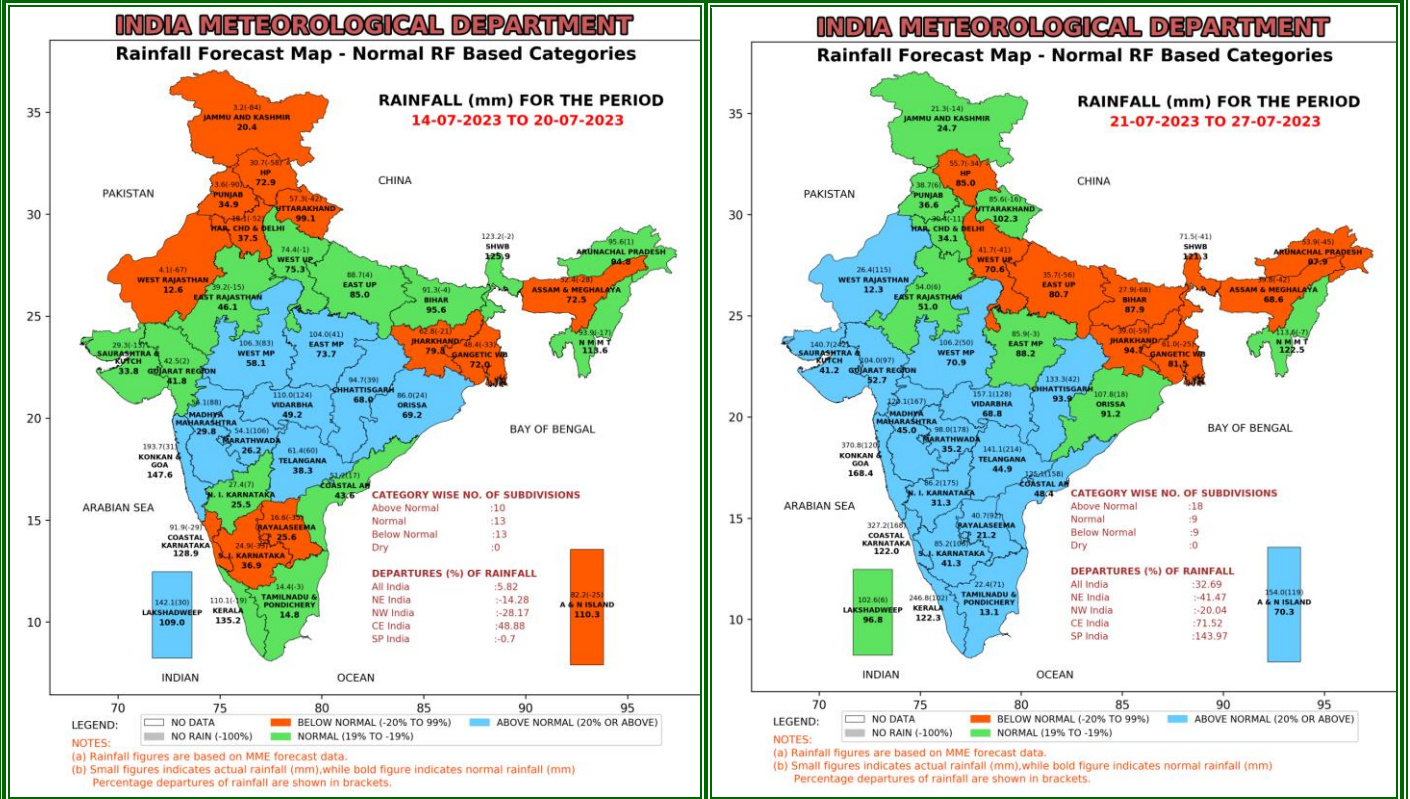
(29th June to 12th July, 2023)



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

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC- 12th July) (14th to 27th July 2023)



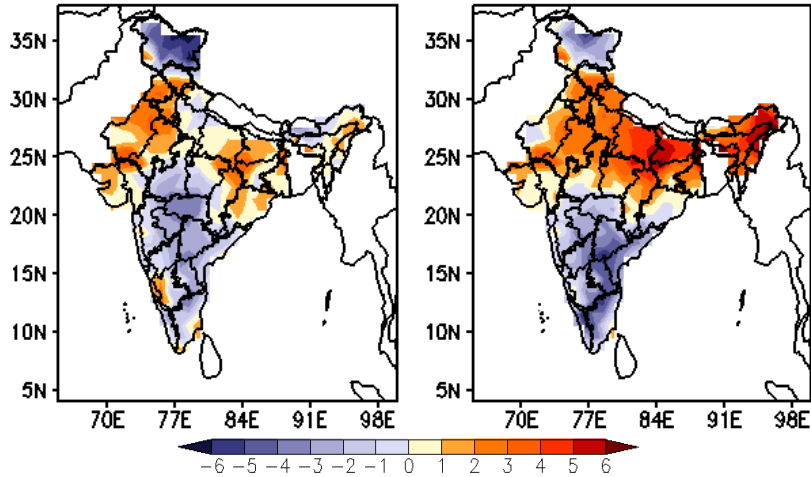
- **Week 1 (14.07.2023 to 20.07.2023):** Rainfall is likely to be above normal over Central India. However, it is likely to be below normal to normal over northwest, north and northeast India.
- **Week 2 (21.07.2023 to 27.07.2023):** Rainfall is likely to be normal to above normal over many parts of country. However, it is likely to be below normal over Indo-Gangetic plains and northeast India.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for the next 2 weeks (IC- 12th July)
(14th to 27th July 2023)**

MME forecast Tmax anomaly (Deg C)

(Week1: 14Jul–20Jul)

(Week2: 21Jul–27Jul)



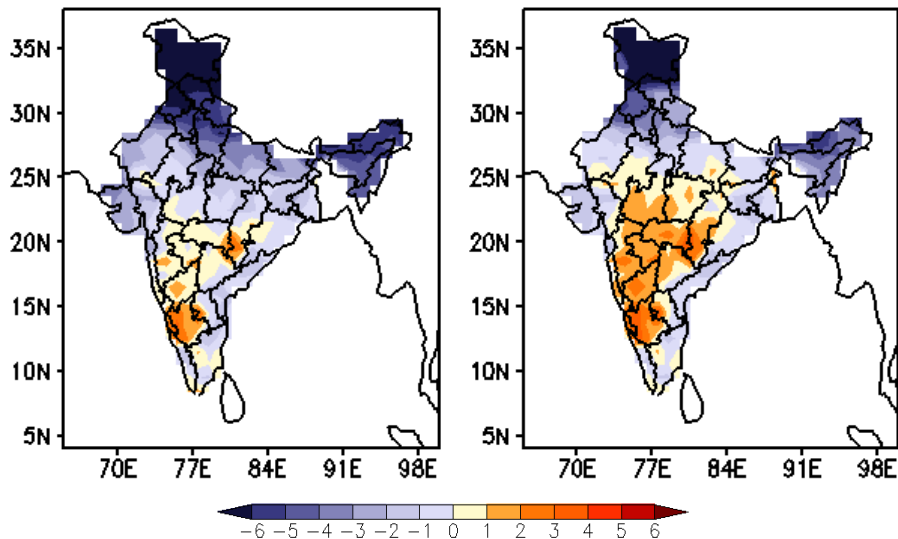
Maximum Temperature (Tmax)

- **Week 1 (14.07.2023 to 20.07.2023):** Tmax is likely to be above normal over many parts of northwest and eastern India.
- **Week 2 (21.07.2023 to 27.07.2023):** Tmax is likely to be above normal over North west, East and North East India including Indo Gangetic plains.

MME forecast Tmin anomaly (Deg C)

(Week1: 14Jul–20Jul)

(Week2: 21Jul–27Jul)



Minimum Temperature (Tmin)

- **Week 1 (14.07.2023 to 20.07.2023):** Tmin is likely to be below normal over most parts of the country.
- **Week 2 (21.07.2023 to 27.07.2023):** Tmin is likely to be below normal over many parts of the country. However, it is likely to be above normal over parts of central and peninsular India.

Agromet Advisories

Uttar Pradesh

The amount of rainfall received over East Uttar Pradesh was 191 mm (-14% deficit) and over West Uttar Pradesh was 278 mm (64% excess) during 01 June - 13 July 2023. The extended range weather forecast (rainfall) for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) is normal over East Uttar Pradesh and West Uttar Pradesh for week-1 and; below normal over East Uttar Pradesh and West Uttar Pradesh for week-2.

Western Uttar Pradesh

- Under prevailing rainy weather condition, if rice nursery is not raised, then farmers are advised to go for direct seeded rice with short duration variety.
- Due to rainfall in past week and forecast of above-normal rainfall during next week, farmers are advised to transplant 30 days old rice nursery in saline soil/flood areas. And, it is also advised that transplanting of scented rice should be started after 16 July.
- Under prevailing rainy weather condition and forecast of normal rainfall during next week, farmers are advised to postpone the sowing of *khari* maize and start sowing after rainfall at proper moisture condition.
- Sowing of short duration maize hybrid varieties are advised like *Vivak Shankar Makka-27*, *Shakti-1*, *Pro-303*, *KH-9051*, *MM-113*, *X-1123* and Composite varieties: *Kanchan*, *Gaurav*, *Surya*, *Pragti*, *Naveen*, *Shweta* and *Novjot* should be sown with 18-20 kg/ha treated seed.
- To control mealybug insect in sugarcane crop farmers are advised to spray Monocrotophos 36 % SL @ 1.5ml per litre of water during clear sky.

Eastern Uttar Pradesh

- Due to rainfall received during the past week, it is advised to drain excess rain water from the rice nursery and sow short duration rice varieties such as *NDR-2064*, *NDR-80*, *NDR-359*, *NDR-2065*, *NDR-97*, *Pant dhan-12*, *Barani deep*, *IR-50*, *Ratna*, *HUR-3022* and scented rice such as *T-3*, *Pusa Basmati-1*, *Pusa Sungandh-4* and *5* and *Malviya Sugandh 4-3* and *Malviya basmati 10-9* etc.

Uttarakhand

432 mm (28% excess) rainfall was received over Uttarakhand during 01 June - 13 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) over Uttarakhand is below normal for week-1 and; normal for week-2.

- Farmers are advised to maintain proper drainage in rice fields, which is at seedling stage and strengthen the bunds.

- To control fruit fly infestation in cucurbitaceous vegetables, install pheromone trap/poison traps in the field.
- Under prevailing weather condition farmers are advised to postpone the sowing of vegetable pea, radish, coriander etc.

Himachal Pradesh

393 mm (101% large excess) rainfall was received over Himachal Pradesh during 01 June - 13 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (14 - 20 July 2023 and 21 - 27 July 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 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.
- Farmers are advised to go in for transplanting of paddy nursery in their fields at the spacing of 20 x 15 cm and advised to apply NPK (12:32:16) @ 125 kg / ha along with 65 kg urea and 30 kg MOP at the time of transplanting.
- For the management of stem borer in rice crop during transplanting stage, farmers are advised to use Carbofuran 3G (granules) @ 33 kg/ha at 10 days after transplanting in standing water.
- In regions where the maize crop has reached at knee height stage, it is recommended for earthing up crop. Additionally, it is advised to apply the initial nitrogen fertilizer (85 kg urea per hectare) during this stage.

Punjab

219 mm (86% large excess) rainfall was received over Punjab during 01 June - 13 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) over Punjab is below normal for week-1 and; normal for week-2.

- Because of heavy rainfall during last week, farmers are 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 chemicals to the crop during the period.
- 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.
- Maize is very sensitive to standing water, so excess water may be drained out from the maize field to keep stalk rot under control.
- Damage due to standing water in maize field can be minimized by two sprays of 3 per cent urea solution at weekly interval or by applying additional nitrogen @ 12-24 kg (25-50 kg urea) per acre in case of moderate to severe damage after the flooding is over

Rajasthan

289 mm (92% large excess) rainfall was received over East Rajasthan during 01 June - 13 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) over East Rajasthan is normal for week-1 and; week-2.

- Due to the forecast of light to moderate rainfall during week-1 and 2, farmers are advised to postpone irrigation in summer crops and all types of chemical spraying in the fields. And also, drain out excess water from the groundnut and green gram crop fields.
- Wherever the sufficient moisture is available in the field farmers are advised to complete the sowing of maize. Improved varieties of maize are *Pratap QPM-1*, *HQPM-1*, *HQPM-5*, *PEHM-2* and hybrids are *Pratap hybrid maize-1*, *Pratap Makka-9*, *Pratap hybrid Makka-3*.

Jammu

164 mm (17% excess) rainfall was received over Jammu during 01 June - 13 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) over Jammu is below normal for week-1 and; normal for week-2.

- Under prevailing weather condition, farmers may complete the late sowing of maize crop (var. *Vijay composite*, *Mansar Composite* and *JMC-3*) at vattar/optimum soil moisture condition of soil with seed rate of 20-25 kg/ha by 20 July.
- Due to forecast of below normal rainfall during next week, Farmers are advised to go immediately for sowing of Mash (var. *Pant U-19*, *Uttara*) & Moong (var. *SML-668*) at optimum soil moisture condition in rainfed areas.
- Farmers are advised to ensure staking with plastic string in vegetable crops to avoid losses from gusty winds and heavy rain. Fruits must be protected from direct contact with soil and apply straw, leaves etc below fruits to prevent them from rotting.

Assam

745 mm (normal) rainfall was received over Assam during 01 June - 13 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) over Assam is below 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.
- This is the optimum time for sowing of pigeonpea in Assam, up to end of July. Farmers are advised to collect the seeds of suitable high yielding variety viz. *T-21* from recognized sources.

- Due to congenial weather conditions, symptoms of gummosis disease may be observed in the citrus crops. To manage, it is advised to scraped out affected portion without injuring the wood followed by smearing it with Bordeaux paste. And also, make provisions to drain out the excess water from the orchards.
- To prevent lodging of sugarcane crops due to rainfall, it is advised to provide mechanical support to the crops by using bamboo sticks or tying 4 to 5 canes together with their leaves.

West Bengal

231 mm (-40% deficit) rainfall received over Gangetic West Bengal and rainfall received over Sub Himalayan West Bengal was 904 mm (25% excess) during 01 June - 13 July 2023. The extended range weather forecast (rainfall) for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) is below normal over Gangetic West Bengal and normal over Sub-Himalayan West Bengal during week-1 and; below normal over Gangetic West Bengal and Sub-Himalayan West Bengal for week-2.

- Drainage channels should be cleared in periodic intervals to avoid water logging conditions. Harvesting of pointed gourd is advised in low land area.
- Frequent hand weeding is advised in soybean crop up to maximum canopy proliferation.

Bihar

209 mm (-33% deficit) rainfall was received over Bihar during 01 June - 13 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) over Bihar is normal for week-1 and below normal for week-2.

- Due to rainfall that occurred in last week and the forecast of light to moderate rainfall during next week, farmers of North Bihar are advised to prepare the bunds in their fields to collect rain water for paddy transplantation.
- 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.
- Farmers are advised to complete the nursery sowing of *kharif* onion in a raised bed at the earliest. *Agrifound Dark Red (ADR), N-53, Bhima super, Arka kalyan* are recommended varieties for sowing in the North Bihar region. Seed should be treated with Captain or Thiram @ 2.0 g/kg of seed.
- Present weather is favourable for planting of new saplings of fruit plants (mango, litchi, guava, jackfruit, citrus, papaya and banana) and forestry plants. Application of 50 kg FYM is suggested for per plant.

Jharkhand

176 mm (-44% deficit) rainfall was received over Jharkhand during 01 June - 13 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) over Jharkhand is normal for week-1 and below normal for week-2.

- Farmers are advised for sowing of maize. Recommended high yielding varieties are: of timely mature: PMH-3; of medium timely mature: Malviya sankar makka, BAUMH-3, Early maturity: BAUMH-05, Prakash, Extras Early maturity: Vivek sankar makka, Hybrid: HQPM-1, HQPM-5 and BAUQMH-07 (Late maturity) with recommended dose of fertilizer.

Chhattisgarh

269 mm (-19% deficit) rainfall was received over Chhattisgarh during 01 June - 13 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) over Chhattisgarh is above normal for week-1 and; week-2.

- Due to the forecast of above normal rainfall, farmers are advised for sowing of *kharif* crops with proper drainage channels.
- Due to forecast of above normal rainfall during next week-1 and 2 farmers are advised to maintain proper drainage channels in the orchards field.
- Vaccinate the poultry birds to prevent Ranikhet disease. (first F-1 in age of 7 days and second R2 B in age of 8 weeks)

Odisha

244 mm (-27% deficit) rainfall received over Odisha during 01 June - 13 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) over Odisha is above normal for week-1 and; normal for week-2.

- For better utilization of soil moisture, farmers are advised to go for land preparation for sowing of non-paddy crops like groundnut, arhar, castor green gram, black gram and sesame in upland areas.
- Due to the forecast of above normal rainfall during next week-1 and 2, it is advised to make provisions for drainage in *kharif* maize and pulses etc.
- Under prevailing weather condition, complete the propping of sugarcane and drain out excess water.
- Cover the vegetable nursery with polythene to protect it from heavy rain and make drainage arrangement.
- Farmers are advised to keep rain water in the main rice field by bunding for timely puddling and transplanting.

Gujarat

287 mm (44% excess) rainfall received over Gujarat during 01 June - 13 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) over Gujarat is normal for week-1 and above normal for week-2.

- Under prevailing weather condition, transplanting of 20-25 days old paddy seedlings is recommended in a well-prepared main field and use 2-3 plants per hill for planting with spacing of 20 cm between row and 15 cm between plants.
- Monitor groundnut crop for infestation of aphids. If infestation is observed, spray Imidacloprid 17.8% EC @3 ml in 10 litres of water

Maharashtra

178 mm (-29% deficit) rainfall over Madhya Maharashtra; 224 mm (-25% deficit) rainfall over Vidarbha; 132 mm (-35% deficit) rainfall over Marathwada; and 1084 mm (-4% deficit) in Konkan region was recorded during 01 June - 13 July 2023. The extended range weather forecast (rainfall) for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) is above normal over Madhya Maharashtra, Marathwada, Konkan and Vidarbha for week-1 and; week-2, respectively.

Vidarbha

- For pigeon pea crop, sowing is advised only after receipt of sufficient rainfall for sowing. Recommended varieties as per the soil type are early duration varieties for medium soil type - (*TAT-10, ICPL 87, AKT-8811*), medium duration varieties for medium to heavy soil type - (*BSMR-736, PKV Tara, BSMR-853*) and long duration varieties for heavy soil type - (*ICPL-87119, C-11*).
- Continuation of cotton sowing is advisable in areas with sufficient soil moisture and sufficient realized rains over past days. Under late sown condition, use short duration varieties such as desi early maturing varieties *AKA-5, AKA-7 and AKA-8* with seed rate of 12 to 15 kg/ha. American improved varieties are *AKH-081* with seed rate 15 to 20 kg/ha, *AKH-09-5 (Suvarna/ Shubhra), PKV Rajat and AKH 8828* with seed rate 10 to 12 kg/ha. Cotton desi hybrids *PKVDH-1 and PKV-Suvarna* are recommended
- 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.

Marathwada

- Sowing of *kharif* crops is advised only after receipt of (75 to 100 mm) rainfall. The areas where sufficient amount of rainfall has been not received, farmers are advised to wait for sowing.

- Under prevailing weather condition, sowing of pigeon pea crop is advised up to 15th July. It is also advised to apply 25:50:00 Kg NPK per ha at the time of sowing.
- If sufficient moisture is available in soil sowing of direct sown vegetable crops viz., okra, bitter gourd, ridge gourd, pumpkin is advised.

Madhya Maharashtra

- Soybean is advised to sow in areas where rainfall more than 100 mm is received. Use the seed of improved varieties like *Phule Durva*, *P.Kimaya* and *P. Sangam*.
- Sowing of pigeon pea is also advised with recommended varieties viz., *Rajeshwari*, *Godavari* or *BDN -711*.

Konkan

- Due to heavy to very heavy rainfall received during last week, 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.
- Farmers are advised for cultivation of niger crop in the upland well drain field and incorporate FYM or compost @ 50 kg/guntha at the time of ploughing.
- Due to prevailing humid condition, there is a possibility of incidence of 'Koleroga' disease in arecanut orchard. For management, it is advised to clean the arecanut orchard and spray 1% Bordomixture. Repeat the spray 3-4 times at one-month interval or 0.3 % Fosetyl-Al 80% WP @ 3 g per 10 litres of water during clear weather.

Tamil Nadu

The amount of rainfall received over Tamil Nadu was 97 mm (28% excess) during 01 June - 13 July 2023. The extended range weather forecast (rainfall) for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) is normal for week-1 and; above normal for week-2.

- Wind and rainfall may damage the coconut crop which is at young seedling stage. Hence farmers are advised to provide to young seedlings. Also, advised for earthing up and raising of green manure that can hold the rain water for crop stand.
- To avoid lodging in banana orchard which is at vegetative stage to bunch formation stage, propping and earthing-up operation is advised.

Kerala

625 mm (-33% deficit) received over Kerala during 01 June - 13 July 2023. The extended range weather forecast (rainfall) for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) is normal for week-1 and; above normal for week-2.

- To control bud rot in coconut, it is advised to cut and remove the affected portion and apply 10% Bordeaux paste on affected portion and protect from rain.
- During rainy season, there is a chance of rhizome rot in banana. To manage, it is advised to ensure proper drainage facilities in orchard. And, as a precaution, drench the basin with three litre of *Pseudomonas* solution (20 g per one litre of water). Pesticides should not be applied during rainy period.
- In order to prevent fungal diseases during monsoon season, root dipping of vegetable seedlings in *Pseudomonas* solution is advised before planting.

Anantapur

76 mm (-28% deficit) rainfall received over Rayalaseema and 149 mm (-12% deficit) rainfall received over Coastal Andhra Pradesh during 01 June - 13 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) is above normal over Rayalaseema and Coastal Andhra Pradesh for week-1 and; below normal 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*, *KadiriHarithandhra*, *Anantha*, *Greeshma*, *Narayani*, *Abhaya* and *Dharani*.

Karnataka

148 mm (-35% deficit) rainfall received over South Interior Karnataka, 1145 mm (-13% deficit) over Coastal Karnataka and 94 mm (-37% deficit) rainfall received over North Interior Karnataka during 01 June - 13 July 2023. The extended range weather forecast (rainfall) provided for the next two weeks (14 - 20 July 2023 and 21 - 27 July 2023) is normal over North Interior Karnataka and below normal over Coastal Karnataka and South Interior Karnataka for week-1 and; above normal over North Interior Karnataka, Coastal Karnataka and South Interior Karnataka for week-2.

South Interior Karnataka

- 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.
- Recommended for pruning of dried twigs and branches done in June-July month to facilitate the sunlight to bear the more fruits in next seasons.

- Earthing up operation is advised in long duration crops like redgram and castor to make a better availability of soil moisture to the crop.

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