



राष्ट्रीय कृषि मौसम परामर्शी सेवाएं बुलेटिन
National Agromet Advisory Services Bulletin

जारी करने की तिथि / Date of issue: 28 November 2023

आधारित / based on

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

वैधता / Validity: 24 November - 07 December 2023

जारीकर्ता / Issued by

अखिल भारतीय समन्वित कृषि-मौसम विज्ञान अनुसंधान परियोजना

AICRP on Agro-Meteorology (AICRPAM)

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भारतीय कृषि अनुसंधान परिषद

Indian Council of Agricultural Research (ICAR)

और

भारतीय मौसम विज्ञान विभाग

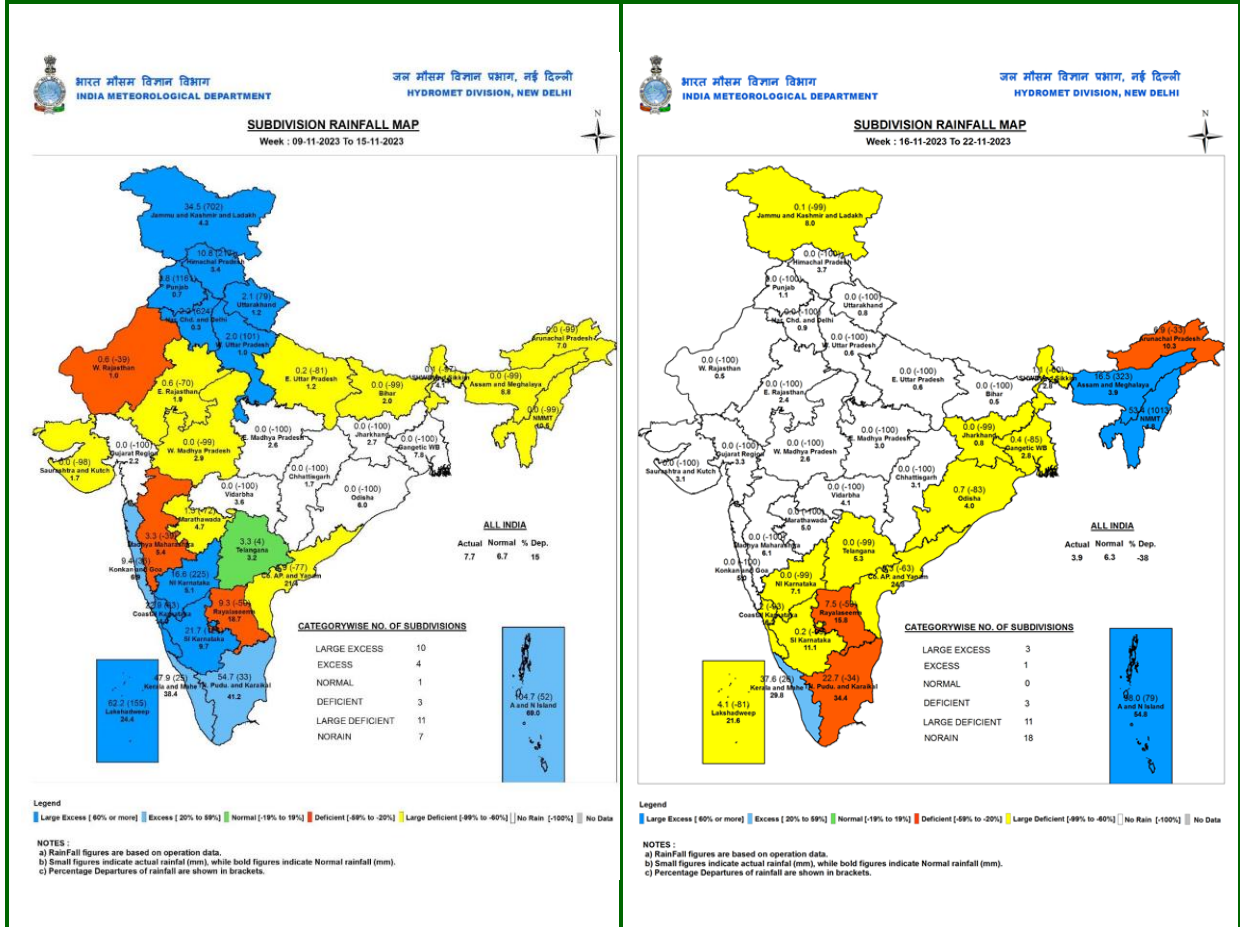
India Meteorological Department (IMD)

पृथ्वी प्रणाली विज्ञान संगठन

Earth System Science Organization

Realized Rainfall and Extended Range Forecast

Realized Rainfall (09th to 22nd November, 2023)

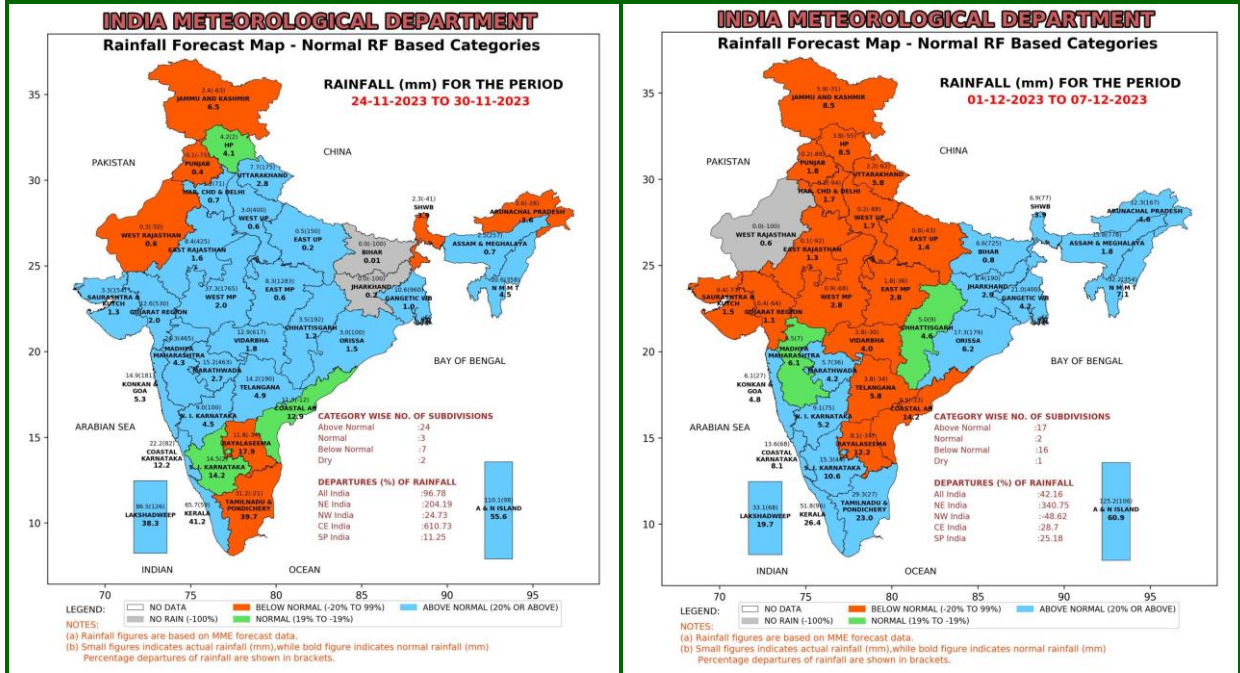


- Normal or above normal rainfall occurred in both the weeks over Kerala & Mahe and Andaman & Nicobar Islands.
- Normal or above normal rainfall occurred in either of the two weeks over Jammu & Kashmir and Ladakh (UTs), Himachal Pradesh, Uttarakhand, Punjab, Haryana Chandigarh & Delhi, West Uttar Pradesh, Assam & Meghalaya, Nagaland Manipur Mizoram & Tripura (NMMT), Konkan & Goa, Karnataka, Telangana, Tamil Nadu Puducherry & Karaikal and Lakshadweep.
- Below Normal rainfall/no rain occurred in both the weeks over rest of the country.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC- 22nd November)

(24th November to 07th December, 2023)



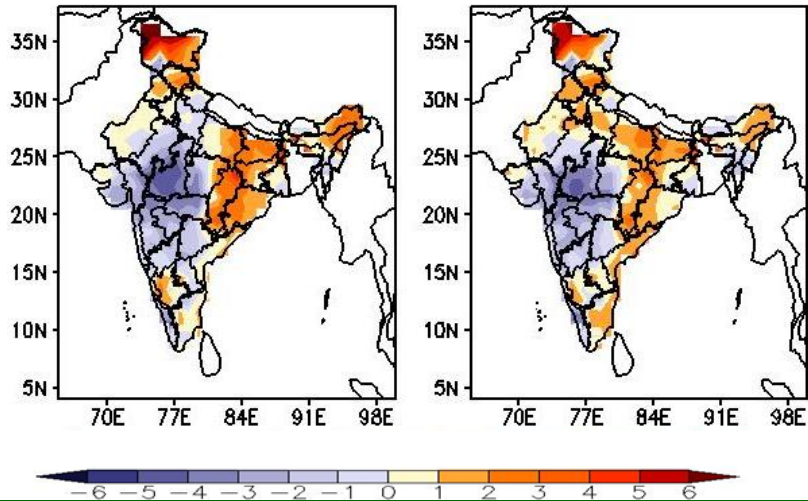
- **Week 1 (24.11.2023 to 30.11.2023):** Rainfall is likely to be above normal over Kerala coast, West Madhya Pradesh, some parts of Maharashtra and Gujarat.
- **Week 2 (01.12.2023 to 07.12.2023):** Rainfall is likely to be above normal over some parts of Kerala and Tamil Nadu.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for the next 2 weeks (IC- 22nd November)
(24th November to 07th December, 2023)**

MME forecast Tmax anomaly (Deg C)

(Week1: 24Nov–30Nov)

(Week2: 01Dec–07Dec)



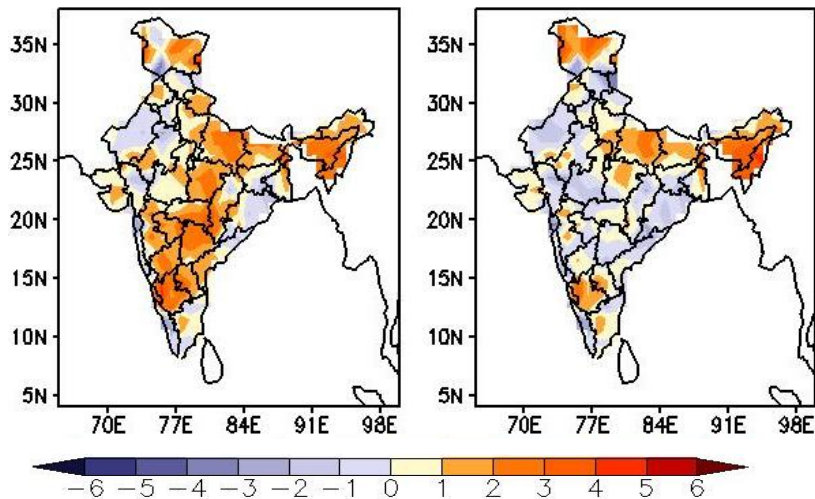
Maximum Temperature (Tmax)

- **Week 1 (24.11.2023 to 30.11.2023) and Week 2 (01.12.2023 to 07.12.2023):** Maximum temperature is likely to be below normal over Central India, West India, Kerala and some parts of North East India.

MME forecast Tmin anomaly (Deg C)

(Week1: 24Nov–30Nov)

(Week2: 01Dec–07Dec)



Minimum Temperature (Tmin)

- **Week 1 (24.11.2023 to 30.11.2023):** Minimum temperature is likely to be above normal over most parts of the country. However, it is likely to be below normal over Kerala, some parts of North West and East India.
- **Week 2 (01.12.2023 to 07.12.2023):** Tmin is likely to be below normal over Kerala, many parts of North West & Central India and some parts of East India.

Agromet Advisories

Uttar Pradesh

The amount of rainfall received over East Uttar Pradesh was 39 mm (8% excess) and over West Uttar Pradesh was 11 mm (-51% deficit) during 01 October - 23 November 2023. The extended range weather forecast (rainfall) for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) is above normal over West Uttar Pradesh and East Uttar Pradesh for week-1 and below normal rainfall over West Uttar Pradesh and East Uttar Pradesh for week-2.

Western Uttar Pradesh

- Sowing of irrigated timely sown wheat varieties is advised with recommended varieties like *K-9107*, *K-9006*, *UP-2382*, *NW-1012*, *HP-1761*, *HUW-468*, *PBW-343* *DBW-187*, *DBW-202*, *HD-3226* and *HP-1731*.
- Under prevailing weather condition, sowing of gram is also advised with recommended varieties like *Avarodhi*, *KWR-108*, *Radhey*, *JG-16*, *KGD-1168* and *K-850* with 80 kg seed/hectare at proper moisture condition.
- Under prevailing weather condition, if leaf roller observed in pigeon pea at vegetative/branching crop then it is advised to spray Spinosad 45 % SC @ 2ml per 10 litre water or Quinalphos 25 EC 1.4 litre/ha with 500 to 600 litres of water ((1 to 1.4 ml/litre water) is advised.

Weeding is advised in garlic (leaf formation/leaf development stage) and in onion (seedling stage) crop.

Himachal Pradesh

38 mm (normal rainfall) rainfall was received over Himachal Pradesh during 01 October - 23 November 2023. The extended range weather forecast (rainfall) provided for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) over Himachal Pradesh is below normal for week-1 and; normal for week-2.

- Under prevailing weather condition, farmers are advised to go for sowing of timely sown wheat crop. The varieties recommended are *HPW 368*, *HPW 349*, *HS 562*, *HPW 249*, *HPW 236*, *VL Gehun 907*, *HS 507* and *HPW 155*. A seed rate of 100 kg/ha is recommended.
- Farmers are advised to go for sowing for barley crop. The varieties recommended are *Him Palam Jau 1* (*HBL 713*), *HBL 276* (*Harit*), *HBL 113* (*Vimal*), *HBL 391* (*Gokul*) *BHS 400* (*Pusa Sheetal*) while dual purpose varieties (for green fodder and grain) that can be sown include *BHS 380* (*Pusa Losar*) and *Him Palam Jau 2* (*HBL 804*).
- In mid hills of the state, sowing of pea (*PB 89*, *Azad P-1*, *Azad P-3* and *GS-10*) is advised at a spacing of 45-60 x 5-10 cm. Before sowing, it is recommended to mix well rotten FYM @ 200 q/ha in addition to 185 kg/ha of IFFCO (12:32:16) fertilizer and MOP 50 kg/h.
- Sowing of root vegetables like radish (*Japanese White*, *Chinese Pink*, *Miro Early*), Turnip (*PTWG*), Carrot (*Nantes*, *Chanteny*, *Pusa Yamdagni*) and leafy vegetable like Spinach (*Pusa Harit*, *Pusa Bharti*) and Fenugreek (*IC-74*, *Palam Soumava*, *Pusa Kasuri*).

Jammu

115 mm (97% large excess) rainfall was received over Jammu during 01 October - 23 November 2023. The extended range weather forecast (rainfall) provided for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) over Jammu is below normal for week-1 and; week-2.

- Due to sufficient moisture in soil, farmers are advised to continue sowing of wheat (var. *JAUW-672, DBW-296, HD-3406, HD-3369, HD-3237*). Treat the seed with Tebuconazole 2 DS @1.25 g/kg of seed to protect seedling blight and root rot disease. Apply the recommended dose of fertilizer as basal dose.
- Sowing of late sown mustard crop variety (*NRCHB101*) is advised to sow by the end of this week due to sufficient soil moisture. Further delay in sowing will cause reduction in yield.
- Farmers are advised to give shallow hoeing to crops like spinach, coriander and fenugreek after first cut and apply Urea @ 1kg/kanal.

Punjab

33 mm (189% large excess) rainfall was received over Punjab during 01 October - 23 November 2023. The extended range weather forecast (rainfall) provided for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) over Punjab is below normal for week-1 and; week-2.

- Farmers are advised to complete the sowing of wheat varieties *PBW 826, PBW 869, PBW 824, PBW 803, Sunehri (PBW 766), PBW-1 Chapati, DBW-222, DBW-187, HD-3226, Unnat PBW-343, Unnat PBW-550, PBW-1 Zn, PBW-725, PBW-677, HD-3086, WH-1105 and HD-2967* under irrigated conditions.
- Farmers are advised to start farm operations like irrigation, pesticide application, etc. as dry weather is likely to prevail during the next week.
- It is the optimum time for the sowing of desi gram PDG-4 under rainfed conditions. It is advised that do not sow this variety in humid areas of Punjab.
- It is best time for sowing of spinach, fenugreek, coriander, radish, turnip and main season varieties of pea viz., *Punjab 89 and Mithi Phali*. This time is also optimum for transplanting of tomato, brinjal, chilli and capsicum for early and higher yield.

Haryana

12 mm (normal rainfall) rainfall was received over Haryana during 01 October - 23 November 2023. The extended range weather forecast (rainfall) provided for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) over Haryana is below normal for week-1 and; week-2.

- Under prevailing weather condition, field preparation for timely sowing of mustard/chickpea/potato crops is advised.

- Farmers are advised to provide each cattle/animal 50 g iodized salt and 50 to 100 g mineral mixture daily with feed and green fodder/sorghum/maize to keep them healthy.

Rajasthan

2.0 mm (-91% large deficit) rainfall was received over East Rajasthan during 01 October - 23 November 2023. The extended range weather forecast (rainfall) provided for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) over East Rajasthan is above normal for week-1 and; below normal for week-2.

- Prevailing weather conditions are suitable for sowing of wheat. Farmers are advised to start the sowing of wheat with improved varieties like Raj-3077, WH-147, GW-190, GW-322, GW- 273, HI- 1544, Raj- 4037, HI- 8498, Lok-1 and Raj-3765.
- Farmers are advised to provide first irrigation in mustard crop at 30 days. There is possibility of mustard sawfly infestation, if it causes more serious damage then spray Quinalphos 25 % EC@1 to 1.5 ml or Dimethoate 30 % EC @1ml per litre of water.

Bihar

95 mm (55% excess) rainfall was received over Bihar during 01 October - 23 November 2023. The extended range weather forecast (rainfall) provided for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) over Bihar is no rainfall for week-1 and; above normal for week-2.

- Farmers are advised to complete the sowing of *rabi* maize by the end of this month. *Shaktiman-1 white, Shaktiman-2 white, Shaktiman-3 yellow, Shaktiman-4 yellow, Shaktiman-5 yellow, Ganga-11 orange yellow, Rajendra sanker makka-1 Rajendra sanker makka-2, and Rajendra sanker makka, deepjwala varieties of hybrid maize and Deoki white, Lakshmi white and Suwan yellow* varieties of composite maize are recommended for sowing in North Bihar. Application of 10-15-ton FYM, 60 kg nitrogen, 75 kg Phosphorus 50 kg Potash per hectare during land preparation is advised.
- Farmers are advised to complete the planting of potato at the earliest. Weeding and earthing-up are advised in early sown potato crop, which has attained the height of 15-20 cm. Give light irrigation based on moisture condition of the field.
- Farmers are advised to finish the timely sown wheat crop till the 10th December for good growth and productivity. *PBW-343, PBW-443, K-9107, HD-2733, HD-2824, HD-2967, HUW-206, HUW-468, K-307, CBW-38, DBW-39* varieties of wheat are recommended for timely sowing under irrigated condition.

West Bengal

178 mm (15% excess) rainfall received over Gangetic West Bengal and rainfall received over Sub Himalayan West Bengal was 190 mm (22% excess) during 01 October - 23 November 2023. The extended range weather forecast (rainfall) for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) is above normal over Gangetic West Bengal and below normal over Sub-Himalayan West Bengal during week-1 and; above normal over Gangetic West Bengal and Sub-Himalayan West Bengal during week-2.

- Farmers are advised to completely dry the harvested seeds of okra crop before storing.
- To monitor and control aphid, jassid, mite, white fly and other sucking pest in brinjal crop at flowering stage, sticky traps are suggested to install. Apply Alike against sucking and chewing pests like flies and aphids.

Assam

160 mm (-8% deficit) rainfall was received over Assam during 01 October - 23 November 2023. The extended range weather forecast (rainfall) provided for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) over Assam is above normal for week-1 and; week-2.

- Sowing of seeds of rapeseed and mustard is advised to continue. During final land preparation, it is advised to apply 3 to 4 quintals of FYM along with 12 kg Urea, 30 kg SSP and 3 kg MOP in rapeseed. For mustard, application of 23 kg Urea, 33 kg SSP and 7 kg MOP along with 1.0 kg Borax per bigha of land is recommended.
- For spring harvest of pumpkin, sow the seeds of recommended varieties like Arka Suryamukhi (small sized), Arka Chandan (medium sized) etc. in the nurseries from this week. Prior to sowing, treat the seeds with Carboxin or Nabam @ 3g/kg seeds. Make provisions for temporary sheds to protect the seedbeds from the predicted above normal rainfall.

Chhattisgarh

32 mm (-54% deficit) rainfall was received over Chhattisgarh during 01 October - 23 November 2023. The extended range weather forecast (rainfall) provided for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) over Chhattisgarh is above normal for week-1 and; normal for week-2.

- Farmers are advised to harvest the matured rice crop and keep it in the field at safe places for proper sun drying only for 3-5 days.
- Looking into the decrease in temperature, dairy farmers are advised to keep the animals in the cattle shed with concrete / brick roof.

Madhya Pradesh

16 mm (-63% deficit) rainfall was received over Madhya Pradesh during 01 October - 23 November 2023. The extended range weather forecast (rainfall) provided for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) over Madhya Pradesh is above normal for week-1 and; below normal for week-2.

- Intercultural operation is advised between rows of pigeon pea which is at flower-seed formation stage.
- Sowing of *rabi* season sugarcane in the field particularly in Central Narmada Valley agroclimatic zone is advised.
- Nipping is advised in chickpea crop to increase number of branches per plant.

Odisha

86 mm (-35% deficit) rainfall received over Odisha during 01 October - 23 November 2023. The extended range weather forecast (rainfall) provided for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) over Odisha is above normal for week-1 and; week-2.

- Harvest matured paddy crop and store them in safer place after 3-4 days sun drying.
- November is the optimum time for planting of dwarf variety of banana. Plant Dwarf *Cavendish and Robusta variety* in 2×2-meter distance and 0.5×0.5×0.5-meter pit size. 300 to 400 g disease free suckers or tissue culture suckers are advised to use.
- For controlling red rot disease in sugarcane, it is advised to spray Carbendazim 12% + Mancozeb 63% WP @ 400 g/acre or Metalaxyl 8% + Mancozeb 64% WP @ 400 g/acre by mixing it in 200 litres of water.

Maharashtra

27 mm (-72% large deficit) rainfall over Madhya Maharashtra; 5 mm (-92% large deficit) rainfall over Vidarbha; 9 mm (-90% large deficit) rainfall over Marathwada; and 109 mm (-19% deficit) in Konkan region was recorded during 01 October - 23 November 2023. The extended range weather forecast (rainfall) for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) is above normal over Konkan, Madhya Maharashtra, Marathwada and Vidarbha for week-1 and; above normal over Konkan, Marathwada, normal over Madhya Maharashtra and below normal over Vidarbha for week-2, respectively.

Parbhani

- Due to increase in maximum temperature along with less soil moisture, dry root rot disease may observe in pigeon pea crop during flowering/pod filling stage. For management, drenching of Trichoderma or Biomix @ 200 g/ 200 ml per 10 litres of water is advised at infected area.
- As per forecast of above normal rainfall during next week, picking of cotton is advised as early as possible and store the harvested produce at safe places.
- Farmers are advised to apply curtains of gunny bags to poultry, sheep and goat animal shed to protect the animals from cold, during early morning. Make use electric bulbs in poultry shed.

Konkan

- Farmers are advised to complete the sowing of lablab bean crop till November in order to avoid reduction of yield due to delay sowing.
- Land preparation and sowing of *rabi* crops like cow pea and mustard is advised.
- There is possibility of incidence of tea mosquito bug on new flush of cashewnut. If incidence is noticed then it is advised to spray Lambda cyhalothrin 5% EC @ 6 ml per 10 litres during clear weather (no rainfall).

Vidarbha

- For delayed sowing of irrigated wheat (November 15 - December 15) use varieties - PDKV Sardar (AKAW 4210-6) and AKW-1071(Purna). Follow seed treatment with Carbendazim @ 2.5 g / kg seed.
- Undertake need based intercultural in earlier sown chick pea crop and keep the field weed free. Need based protective irrigation is advisable in earlier sown chickpea.

Kerala

541 mm (22% excess) received over Kerala during 01 October - 23 November 2023. The extended range weather forecast (rainfall) for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) is above normal week-1 and; week-2.

- Spraying of Bordeaux mixture 1.0% and drench Copper oxy chloride 4g/litre at monthly intervals to prevent Phytophthora incidence in pepper plants.
- To control the shoot borer attack of brinjal, spray 5% neem seed kernel extract or any *Bacillus thuringiensis* formulations along with jaggery.
- Due to high relative humidity, there is a chance of leaf blotch diseases in turmeric. As a prophylactic measure, it is advised to spray 2 ml Hexaconazole or 1 ml Propiconazole or 2-g SAAF or 2.5 g Copper oxychloride or 2 g Copper hydroxide dissolved in one litre of water.

Tamil Nadu

287 mm (-10% deficit) received over Tamil Nadu during 01 October - 23 November 2023. The extended range weather forecast (rainfall) for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) is below normal week-1 and; above normal for week-2.

- Due to continuous rainy days, intermittent drizzles, cloudy weather, low night temperature less than 22 °C and longer leaf wetness favours blast incidence in paddy crop. To manage, it is advised to spray Carbendazim 50 WP @ 500 g/ha or Tricyclazole 75 WP @ 500 g/ha after observing initial infection of the disease.
- Continuous rainfall and wind may damage the banana crop stand. Hence, farmers are advised for earthing-up and propping to avoid lodging.
- Farmers are request to take sowing of dryland crops with proper drainage facilities across the field to collect rain water

Anantapur

58 mm (-70% large deficit) rainfall was received over Rayalaseema and 75 mm (-73% large deficit) rainfall was received over Coastal Andhra Pradesh during 01 October - 23 November 2023. The extended range weather forecast (rainfall) provided for the next two weeks (24 - 30 November 2023 and 01 - 07 December 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, Chittoor and Kadapa districts, under irrigated conditions, farmers are advised to take up *rabi* groundnut sowings and select the varieties *Dharani*, *Narayani*, *K6*, *K7*, *Kadiri Amaravathi*, *Bheema*, *TCGS1157* and *TCGS1073*. Further, seed treatment with Imidacloprid 600 FS @2 ml+4ml water per kg seed is recommended to control bud necrosis and stem necrosis.

Karnataka

137 mm (-55% deficit) rainfall received over South Interior Karnataka, 214 mm (-14% deficit) over Coastal Karnataka and 35 mm (-72% large deficit) rainfall received over North Interior Karnataka during 01 October - 23 November 2023. The extended range weather forecast (rainfall) provided for the next two weeks (24 - 30 November 2023 and 01 - 07 December 2023) is above normal over North Interior Karnataka and Coastal Karnataka and normal over South Interior Karnataka for week-1 and; above normal over North Interior Karnataka, South Interior Karnataka and Coastal Karnataka for week-2.

South Interior Karnataka

- Paclobutrazol soil application @ 5 g a.i. per plant is recommended for uniform flowering behaviour in Mango crop.
- For biological control of pod borer insect in redgram at pod development to maturity stage, it is advised to spray HaNPV@200LE 400 litre with teepol (1 ml/lit of water). Pheromone traps are advised for *Helicoverpa armigera* @ 12/ha.
- Early sown ragi crop is in grain filling stage and maturity stage, farmers are recommended for earhead tying to protect from lodging of crop.

North Interior Karnataka

- Farmers are advised for repeated inter-cultivation to conserve soil moisture and provide protective irrigation as per requirement of the crop.
- To conserve moisture, farmers are advised to adopt drip irrigation along with crop residue mulch helps in water saving.

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