



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

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AICRP on Agro-Meteorology (AICRPAM)

केंद्रीय बारानी कृषि अनुसंधान संस्थान

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भारतीय कृषि अनुसंधान परिषद

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India Meteorological Department (IMD)

पृथ्वी प्रणाली विज्ञान संगठन

Earth System Science Organization

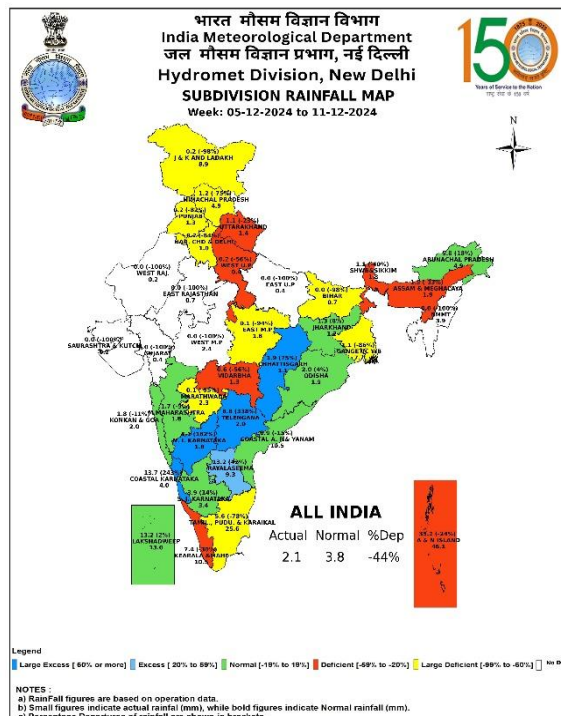
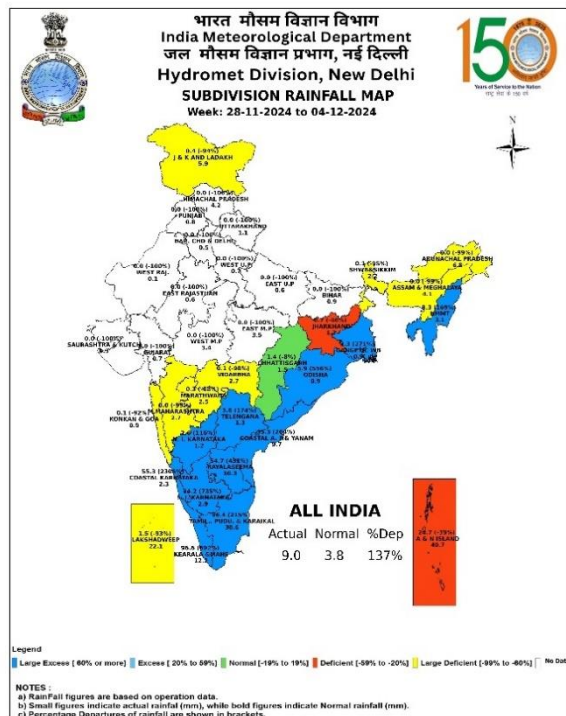
वास्तविक वर्षा तथा विस्तारित अवधि पूर्वानुमान

Realized Rainfall and Extended Range Forecast

(वर्षा और तापमान)
(Rainfall and Temperature)

Realized Rainfall

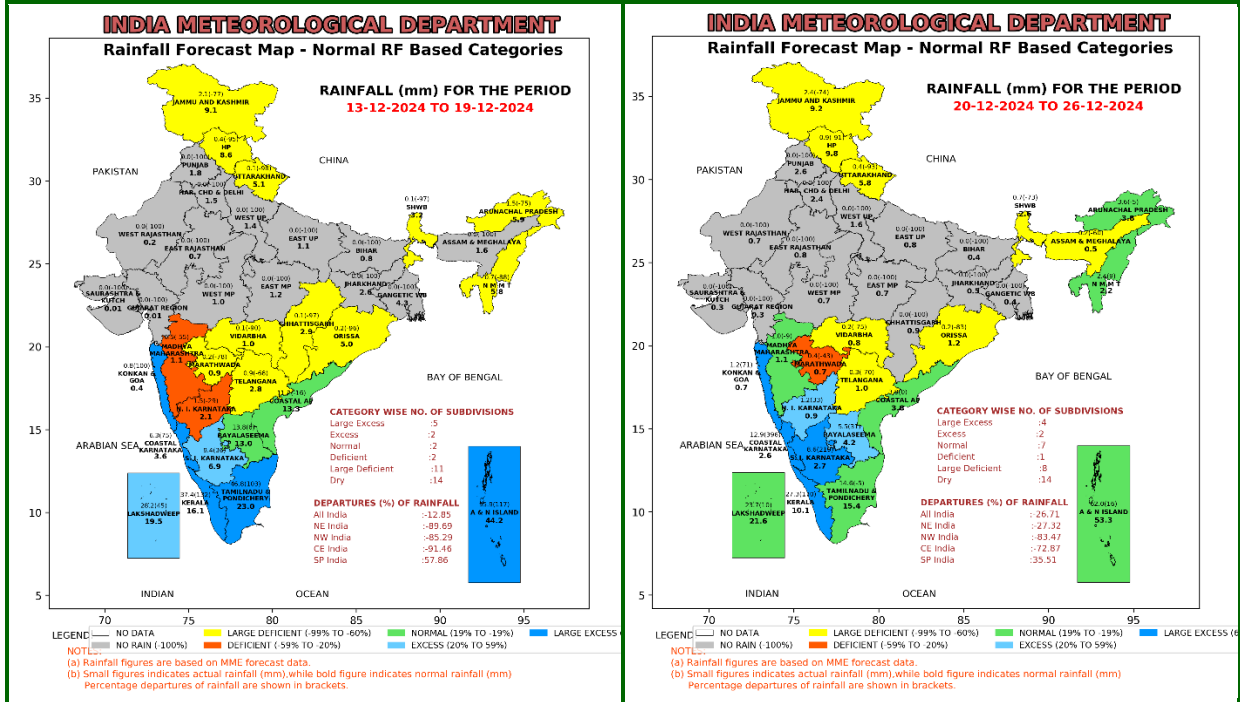
(28th November to 11th December, 2024)



- Normal or above-normal rainfall occurred in both weeks over Odisha, Chhattisgarh, Telangana, Andhra Pradesh & Yanam, and Karnataka.
- Normal or above normal rainfall occurred in either of the two weeks over Arunachal Pradesh, Nagaland Manipur Mizoram & Tripura (NMMT), Gangetic West Bengal, Jharkhand, Konkan & Goa, Madhya Maharashtra, Tamil Nadu Puducherry & Karaikal Kerala & Mahe and Lakshadweep.
- Below Normal rainfall/no rain occurred in both the weeks over rest of the States & UTs.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC- 11th December, 2024) (13th to 26th December, 2024)



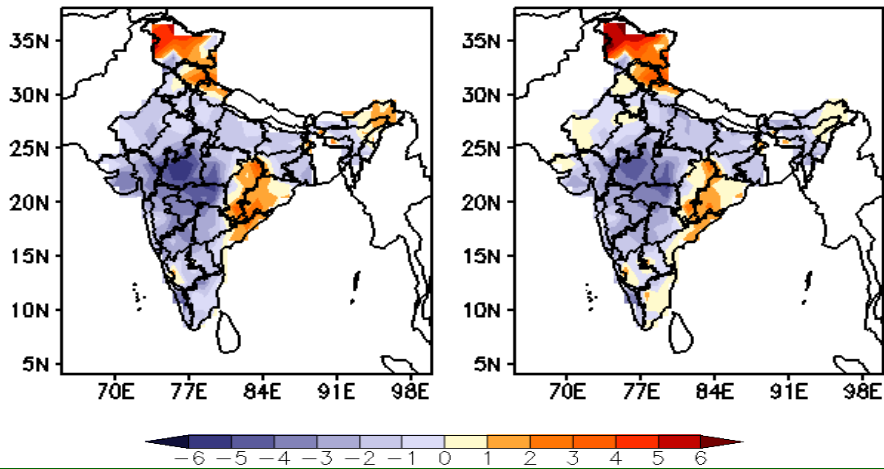
- **Week 1 (13.12.2024 to 19.12.2024):** Rainfall is likely to be above normal over Kerala and Tamil Nadu. It is likely to be below normal over Jammu & Kashmir.
- **Week 2 (20.12.2024 to 26.12.2024):** Rainfall is likely to be above normal over Kerala. It is likely to be below normal over Jammu & Kashmir and Himachal Pradesh.

**Maximum and Minimum temperature anomaly ($^{\circ}$ C) forecast
for the next 2 weeks (IC- 11th December, 2024)
(13th to 26th December, 2024)**

MME forecast Tmax anomaly (Deg C)

(Week1: 13Dec–19Dec)

(Week2: 20Dec–26Dec)



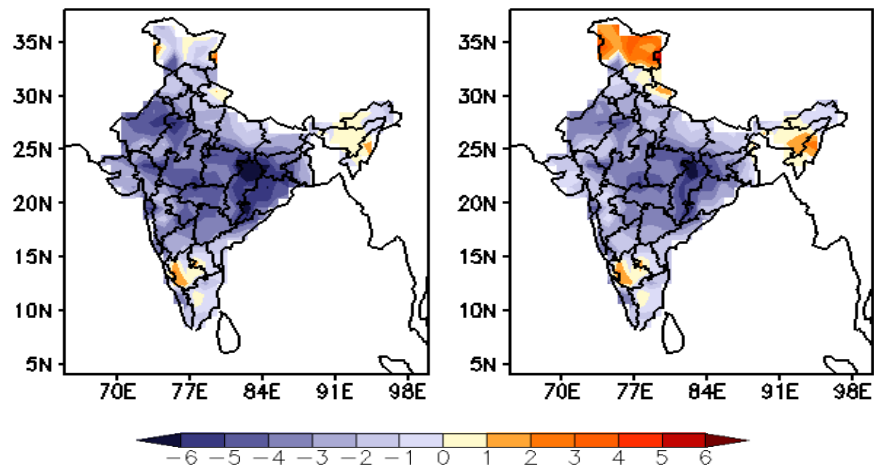
Maximum Temperature (Tmax)

- **Week 1 (13.12.2024 to 19.12.2024):** Maximum temperature is likely to be below normal over most parts of the country. However, it is likely to be above normal over Jammu & Kashmir, Himachal Pradesh, Odisha, Chhattisgarh and parts of Uttarakhand, Coastal Andhra Pradesh and Northeast India.
- **Week 2 (20.12.2024 to 26.12.2024):** Maximum temperature is likely to be above normal over Central India, many parts of Northwest & West India and some parts of East India. However, it is likely to be above normal over Jammu & Kashmir, Himachal Pradesh, Odisha and parts of Uttarakhand, Chhattisgarh and Coastal Andhra Pradesh.

MME forecast Tmin anomaly (Deg C)

(Week1: 13Dec–19Dec)

(Week2: 20Dec–26Dec)



Minimum Temperature (Tmin)

- **Week 1 (13.12.2024 to 19.12.2024):** Minimum temperature is likely to be below normal over most parts of the country.
- **Week 2 (20.12.2024 to 26.12.2024):** Minimum temperature is likely to be below normal over the country except parts of Jammu & Kashmir, Karnataka and Northeast India.

Strategic Agricultural Planning based on rainfall till 16 December 2024

Agromet Advisories

Kerala

Kerala received rainfall of 486.3 mm (1% normal) from 01 October to 15 December 2024. The extended range weather forecast (rainfall) for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) is large excess rainfall for week 1 and week 2.

- To manage Bacterial Leaf blight disease in paddy, dissolve 20 g of cow dung in one litre of water and spray the supernatant liquid by mixing with 20g of pseudomonas. Adopt field sanitation. Remove the affected parts and burn them using kerosene. If the attack is severe spray 6 g of Streptocycline in 30 litres of water.
- For the control of leaf spot in banana, rhizome treatment in 50g Pseudomonas per litre water for 30 minutes; spray Pseudomonas 20g per litre at initial stages, or 1% Bordeaux mixture can be sprayed 3 to 4 times in 3 to 4 weeks interval.
- Apply 1% Bordeaux mixture or 0.3% copper oxychloride solution in the heart of the crown. Apply lime. Spray borax also on leaves @ 5g per litre. Also adopt all the basal management practices as described for the yellowing, above.
- Ideal time for mulching arecanut. Keep the garden clean and start irrigation. In rubber protect the young leaves of budded seedlings from shedding due to fungal diseases spray a solution of Copper oxychloride 4g in 1 litre of water.
- As a prophylactic measure to control foot rot in black pepper, apply 150 grams of Trichoderma enriched neem cake - cow dung mixture in the basins of the vines and incorporate thoroughly with the soil. If disease already appeared, drench soil in the plant basins with Redomil 0.2% (2g per litre of water). Spray the same on the leaves.

Tamil Nadu

Tamil Nadu received rainfall of 564.6 mm (37% excess) from 01 October to 15 December 2024. The extended range weather forecast (rainfall) for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) is large excess rainfall for week 1 and normal rainfall for week 2.

- In Paddy (crop establishment), Maintain the water level to avoid crop damage.
- In sorghum and maize, Continuous rainfall and wind may affect the crop stand; hence farmers are requested to practice earth up and form new ridges to provide additional anchorage to the plants.
- Due to water stagnation, yellowing of leaves is noticed. Hence, foliar spray of 2% DAP + 1% KCl (MOP) or TNAU pulse wonder @ 2 kg/acre may be given.
- Since rainfall with wind speed >10 kmph is expected, provide propping to early season sugarcane. Create drainage facilities.
- High wind speeds may damage the physical appearance of the crop. Hence, farmers are advised to practice propping. Earthing up should be practised to avoid lodging in banana.
- In cotton, Crop residue mulching may be done to reduce soil erosion. Precaution may be taken to avoid water stagnation in the field. Immediate action for earth up and forms new ridges to avoid lodging of crops due to continuous rainfall.
- Due to water stagnation, yellowing of leaves is noticed. Hence, foliar spray of 2% DAP + 1% KCl (MOP) or TNAU pulse wonder @ 2 kg/acre may be given.

Karnataka

South Interior Karnataka received rainfall of 283.1 mm (45% excess); Coastal Karnataka received 352.7 mm (35% excess) rainfall and 136.0 mm (05% normal) rainfall was received by North Interior Karnataka from 01 October to 15 December 2024. The extended range weather forecast (rainfall) provided for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) is large excess rainfall over Coastal Karnataka, Excess rainfall over South Interior Karnataka and Deficit rainfall over North Interior Karnataka for week 1 and; large excess rainfall over Coastal Karnataka, South Interior Karnataka and excess rainfall over North Interior Karnataka during week 2.

South Interior Karnataka

- A well-marked low-pressure area over the southwest & adjoining southeast Bay of Bengal. It is likely to cause light rainfall forecasted by the domain district in the next 5 days.
- Postpone irrigation to standing rabi crops.
- Precautionary measures taken while harvesting late Kharif crops.
- The grains of the harvested crops should be properly dried by retaining moisture percentage of Cereals 11-12 %, Pulses-9%, Oilseeds-8% and Vegetable seeds 5-6% for long storage & also minimizes the store pest damage.
- To protect the pulse grains from storage pests, apply oils (Castor/ linseed/honge/neem oil) @ 3-5 ml per kg of grains.
- Maintain optimum room temperature in the sericulture and poultry unit.
- To control aphids and whiteflies in Field beans and Cowpea, spray Carbosulfan 25% EC @ 1 ml/ litre of water.

North Interior Karnataka

- Weather is congenial for leaf reddening in cotton, spraying of Magnesium Sulphate @ 10 grams per litre of water and 2 % urea solution is advised.
- To manage pod borer spray 0.6 gram of Thiodicarb 75 WP or 2.0 ml of Profenophos 50 EC or 0.6 gram of methomyl 40 SP at the time of flowering and pod filling stage.
- Cut the matured cane and spread the trash in between the rows and apply 20 Kg Urea and 20 Kg Super Phosphate fertilizer per acre of trash. After this apply 2.5 Kg of trash decomposing bacteria mixed in dung slurry to facilitate early decomposition of the trash.
- To manage pod borer in chickpea, take up spraying of 0.2-gram Imamectin benzoate dissolved in one litre of water.
- High relative humidity and intermittent rainy weather are congenial for the development of Downey mildew disease to control the spraying of 1 per cent Bordo mixture.

Andhra Pradesh

From 01 October to 15 December 2024, Coastal Andhra received 352.7 mm (35% excess) and 328.1 mm (43% excess) of rainfall in the Rayalaseema region. The extended-range weather forecast (rainfall) provided for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) shows normal rainfall over Rayalaseema and Coastal Andhra Pradesh for week 1 and excess rainfall over Rayalaseema and normal rainfall over Coastal Andhra Pradesh for week 2.

- Rabi groundnut crop is at vegetative stage. Farmers are advised to create stress during the vegetative stage and provide irrigation up to 20-25 days after sowing for synchronous

flowering. All suggested to apply gypsum @200 kg per acre at maximum flowering stage followed by take up hand weeding.

- In the Godavari zone of A.P, the sugarcane crop is at the grand growth to the harvesting stage. The current climatic conditions may increase the occurrence of aphids, which can spread the YLD disease. To manage the vector, spray dimethoate at a concentration of 2 mL/L. The rains may cause sugarcane to wilt. To control, and avoid waterlogging, remove and destroy any affected plants, spraying of copper oxychloride (3 g/l) is advised.
- In the North coastal zone of Andhra Pradesh, farmers who go for zero till maize production, can go for sowing of maize with varieties like DHM 117, DHM 119 and DHM 121 after harvesting rice. Follow a seed rate of 8 kg/ acre duly following the seed treatment with mancozeb @ 3g/kg of seed.
- In the Krishna zone of Andhra Pradesh, leaf spots are likely to be expected in the current climatic conditions and they can be controlled by spraying Mancozeb @ 3 gm or Hexaconazole @ 2 ml or Chlorothalonil @ 2 g per litre of water.
- Current weather conditions are congenial for wilt incidence in gram, spraying hexaconazole @2.0 ml per litre of water is advised. Present weather conditions are favourable for the incidence of Helicoverpa in Bengal gram in a lesser rainfall zone. To control, spraying of Indoxacarb @1.0 ml/L or Rynaxypyr @0.2ml/L or Flubendiamide @ 0.2 ml/L of water is recommended.
- Present weather conditions are favourable for sucking pest incidence in mango. For control, full-grown trees, especially centre branches, have to be pruned to facilitate adequate light penetrance. Spray neem oil @ 5 ml per litre of water and based on the intensity of infestation spray systemic insecticides i.e., imidacloprid 17.8SL @ 0.3 ml or thiamethoxam @ 0.2 g per litter of water is recommended.
- Present weather conditions are favourable for fruit canker incidence in sweet oranges, spraying of copper oxychloride @3.0 g and streptomycin @ 0.5 gm per litter of water is recommended.

Odisha

Odisha received rainfall of 82.0 mm (-40% deficit) from 01 October to 15 December 2024. The extended range weather forecast (rainfall) provided for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) is a large deficit rainfall over Odisha for week 1 and week 2.

- Now the weather is optimum for nursery sowing of rabi rice. 10 decimal area is sufficient for nursery sowing for one-acre planting.
- Use low-cost polythene cover above the vegetable nursery to avoid poor germination due to low temperature.
- Carry out weeding, hoeing and other intercultural operations in rabi vegetables.
- Rice grains must be dried under the sun for 3-4 days to 14% moisture for consumption and 12% moisture for seed purposes.
- There will be chances of infestation of sucking pests, leaf blight, and powdery mildew in the rabi crops and vegetables, due to low night temperature. Monitor the crops and vegetables, and if symptoms are noticed, undertake appropriate plant protection measures.
- Due to a decrease in minimum temperature and foggy conditions there may be chances of late blight in tomatoes, to avoid late blight precautions must be taken during the initial infection stage. Spray 2.5 g Metalaxyl + Mancozeb/lit of water. Mix 3 gram of Trichoderma per kg of seed during seed treatment. Avoid excess nitrogen fertilizer and close spacing of plants.

- In winter the number of feeders should be increased. Feed should be available to the bird whole of the day. During the winter season, birds take less water so far maintenance of water in the body, it is necessary to give a continuous supply of fresh water which can be taken by the bird. To maintain the heat in the poultry shed, install heaters in the shed. Use 200W bulbs to generate heat in small-scale operations.

Maharashtra

Madhya Maharashtra received rainfall of 104.6 mm (2% normal), 72.3 mm (-24% deficit) rainfall over Marathwada, 241.4 mm (73% large excess) rainfall over Konkan, and 42.4 mm (-43% deficit) rainfall over Vidarbha was recorded from 01 October to 15 December 2024. The extended range weather forecast (rainfall) for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) is deficit rainfall over Madhya Maharashtra, large deficit rainfall over Marathwada and Vidarbha, large excess rainfall over Konkan for week 1; and large excess rainfall over Konkan, normal rainfall over Madhya Maharashtra, deficit rainfall over Marathwada and large deficit rainfall over Vidarbha for week 2, respectively.

Marathwada

- Irrigation management should be done in chickpea crop as per requirement with the help of a sprinkler irrigation system. Due to cloudy weather conditions, if an infestation of pod borer is observed in timely sown chickpea crop for management of pod borer make use of T-shaped bird perches @ 20 per acre and two pheromone traps per acre. For management of pod borer in timely sown chickpea crop take a spray of 5 % NSKE or Quinalphos 25% EC @ 20 ml per 10 litres of water. Intercultural operation should be done for weed management in chickpea crop.
- For management of Rhizome fly in turmeric take a spray of Quinalphos 25 % @ 20 ml or Dimethoate 30 % @ 15 ml per 10 litres of water with an interval of 15 days during clear weather conditions. Cover the rhizome with the help of soil. (As the label claim was not given by Central Insecticides Board for Rhizome fly in turmeric the research recommendation of the university is mentioned here). For management of leaf spot disease in Turmeric crop take a spray of Azoxystrobin 18.2% + Difenconazole 11.4% (Premixed Fungicide) @ 10 ml + 5 ml Sticker per 10 litres of water during clear weather conditions. As per requirement irrigation management should be done in turmeric crop.
- Fall in minimum temperature, infestation of aphids may be observed in the Safflower crop. For management take a spray of Dimethoate 30 % @ 13 ml or Acephate 75 % @ 10 grams per 10 litres of water. As per infestation of weed in safflower crop, one to two weeding and hoeing should be done 25 to 50 days after sowing. Top dressing of nitrogen @ 65 Kg Urea per hectare should be done in irrigated safflower one month after sowing and irrigating the crop.
- Change of weather it is necessary to focus on the management of livestock and other animals for milk production, an adequate amount of mineral solution should be given to milk animals. Animals should be given deworming medicine as per the advice of a veterinary doctor. Livestock should not tie up in open areas
- Stop the irrigation in the Ambhe Bahar citrus orchard. For fruit development in citrus take a spray of 00:00:50 @ 15 g per litre of water. Intercultural operation should be done for weed management & Irrigation management should be done in the citrus orchard as per requirement.

Vidarbha

- Undertake clean picking of burst bolls in earlier sown cotton and properly dry the produce before storage, variety-wise. A foliar spray of 2% DAP at the boll development stage is advisable for better productivity.
- Undertake need-based intercultural in earlier sown crops and keep the field weed-free. Need-based protective irrigation is advisable in earlier sown chickpeas.
- Undertake need-based intercultural in earlier sown crops and keep the field weed-free. Need-based protective irrigation is advisable in earlier sown chickpeas.
- 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. Also, seed treatment with Azotobacter and PSB @ 25 g each / kg seed treatment is advisable. Use fertilizer @ 40:40:40 kg NPK/ha at sowing and remaining N @ 40 kg/ha at 18-20 days stage at first irrigation.

Konkan

- The roots of the tree need to be stressed for the mango blooming. For this, one meter of grass around the trunk of the mango orchard should be removed to pulverize the soil in the basin, shallow ploughing should be done in the open space in the mango orchard, the cleaning of the orchard should be completed as soon as possible so that the amount of water in the soil in the mango orchard can be reduced quickly and help the tree to bear stress.
- Clean the Cashew Nut orchard field by removing weeds, and diseased infected branches.
- Fertilizer's second dose should be applied to the arecanut orchard from December to January. For arecanut plants older than three years, 160 grams of urea and 125 grams of muriate of potash should be applied per tree using the ring method. While applying these fertilizers to orchards under three years of age, one-third of the dose should be given in the first year and two-thirds in the second year.
- If groundnut cultivation is to be done using transparent plastic mulch (5 to 6 microns), plough the land thoroughly and level it. Then, mix 100 to 150 kg of well-composted farmyard manure per guntha into the soil. Afterwards, prepare raised beds of 5-7 cm in height and 60 cm in width for mulching. Maintain a 30 cm distance between two beds. If drip irrigation is to be used, spread the drip irrigation system on the beds before laying the mulch.
- For the cultivation of mustard, plough the soil after the harvest of Kharif rice when the soil is at field capacity. Incorporate 50 kg/ guntha FYM or compost at the time of ploughing.
- At the rhizome formation stage, the turmeric crop is likely to experience water scarcity. Additionally, since the rhizome formation stage is highly sensitive to soil moisture, it is essential to ensure an adequate water supply to the crop as needed.

Madhya Maharashtra

- A foliar spray of 2% Urea for chickpeas under moisture stress conditions is advised and a second spray of 2% Potassium Nitrate 10-15 days after the first spray is advised.
- Foliar application of 2% Potassium Nitrate on Sorghum for reduction of severity of moisture stress is advised.
- For control of Alternaria leaf spot disease of safflower, spraying of combi-fungicide Carbendazim (12%) + Mancozeb (63%) @ 2 gm per litre of water is suggested.
- For control of pod borer of chickpea, spraying of biopesticide HANPV (Heliokil) @ 1 ml per litre of water or Insecticide chlorantraniliprole 18.5 % S.C. 2.5 ml per 10 litre of water is recommended.

Gujarat

Gujarat received a rainfall of 41.1 mm (27% excess) from 01 October to 15 December 2024. The extended range weather forecast (rainfall) provided for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) over Gujarat is no rainfall for week 1 and week 2.

- Avoid over-irrigation of the crop to prevent cumin wilt and fungal disease. Postponed the irrigation in cumin crop in case of dew.
- Carry out topping by removing the flower head alone or along with some of the top leaves of the bidi tobacco plant according to types of variety, generally 13 to 15 and 17 to 20 leaves. Carry out intercultural operations and weeding operations. Orobanche shoots should be removed regularly and should be burned or disposed of properly.
- Irrigation should be done at 10 to 12 days intervals as per Potato crop and soil required. Loamy sand required irrigation at 8 to 10 days intervals.
- Apply Tricoderma 5 to 6 kg/ha to prevent the wilt-related disease in Cumin after 15-20 days after sowing.

Chhattisgarh

Rainfall received over Chhattisgarh was 30.9 mm (-57% deficit) from 01 October to 15 December 2024. The extended range weather forecast (rainfall) provided for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) over Chhattisgarh is large deficit rainfall for week 1 and no rainfall for week 2.

- After the rice harvest is over, the field will attain proper tilth condition. At that time, 2-3 times criss-cross ploughing and planking should be done. If the field is not well prepared, low germination of wheat crop is obtained. Use improved varieties of wheat like: Ratan, Chhattisgarh wheat-3, Chhattisgarh-1036 and Chhattisgarh-1018 etc. for sowing with the seed rate @ 100-125 Kg. per hectare
- For management and monitoring of pod borer in pigeonpea, install pheromone traps and T-shaped pegs (for birds to sit) and change the pheromone septa every 15 days.
- Sowing of chickpea in time will help to prevent wilt disease. If there is a recurring infestation of wilt and collar rot disease of gram crop each year, follow the crop.
- Use improved varieties of mustard like: Pusa Jai Kisan, Pusa Bold, Vardan, Varuna, Kranti and Chhattisgarh Mustard etc. for sowing with the seed rate @ 4-5 kg per hectare.
- When the safflower crop is at the stage of 20-25 days, control weeds by weeding.

Madhya Pradesh

Rainfall received over East Madhya Pradesh was 16.9 mm (-67% large deficit), and 34.9 mm (-21% deficit) over West Madhya Pradesh from 01 October to 15 December 2024. The extended range weather forecast (rainfall) provided for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) over Madhya Pradesh is no rainfall for week 1 and week 2.

- Nipping is required in chickpeas to increase the number of branches per plant. Light irrigation is applied at the flowering stage. For Garden peas at the pod-picking stage. Picking is done followed by light sprinkler irrigation.
- Irrigation at the CRI stage, followed by urea application. Care should be taken that the leaf should not be wet while applying/broadcasting of urea in the field. Post-emergence herbicide application in 20-25 days old crop.

- Intercultural operation is practised between rows of pigeonpea.
- Light irrigation in spinach, fenugreek, cauliflower, cabbage, carrot and radish. Potato farmers are advised to earthing up followed by fertilizer application followed by irrigation in one-month-old crops.
- Weed is controlled under fruit canopy. Apply fertilizers under the fruit trees as per the recommendations in mango, due to dryness around the tree, termite infestation may occur. Soil drenching with suitable insecticide.
- Due to dryness in the atmosphere in the coming days, light irrigation is needed at 30-35 DAS.
- Inter-row cultivation of chickpea and wheat is practised

Assam

Rainfall received over Assam was 210.9 mm (14% normal) from 01 October to 15 December 2024. The extended range weather forecast (rainfall) provided for the next two weeks for Assam is (13 December - 19 December 2024 and 20 December - 26 December 2024) with no rainfall for week 1 and large deficit rainfall for week 2.

- The optimum sowing time of seed in the seedbed for boro paddy is November to December. Therefore, it is advised to collect seeds of recommended varieties of Boro rice such as Dinanath, Swamabh, Joymati etc. Flat seedbed of 125 cm wide, 10 cm long with a 30 cm gap between two beds. Six to eight such beds are required for transplanting 1 bigha. About 6 Kg of seeds are required for transplanting 1 bigha of the main field.
- Thinning and weeding should be done in fair weather after 15-20 days after sowing. To control the pest spray chlorantraniliprole @18.5 SC @ 0.2 ml/lit or neemacin 1500 ppm @3ml/lit of water in the early morning to reduce this pest infestation.
- Supply of irrigation water in the potato field is one of the important aspects to increase the tuber yield. Hence, the furrow method of irrigation has to be advocated. Three irrigations should be applied in the potato field. Firstly, at 25 days (Stolon formation stage), second at 60 days (Tuber formation stage) and finally 80 days (Tuber development stage) after the emergence of the sprout.
- Land preparation and sowing may be continued for rabi pulses like lentil, rajmah, pea, lathyrus and oilseeds like linseed and niger. Thinning and weeding of already sown oilseed and pulse crops may be done within 15-21 days of sowing.

West Bengal

Gangetic West Bengal received rainfall of 205.6 mm (24% excess) and Sub Himalayan West Bengal received 174.2 mm (8% normal) rainfall from 01 October to 15 December 2024. The extended range weather forecast (rainfall) for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) is no rainfall over Gangetic West Bengal and large deficit rainfall over Sub-Himalayan West Bengal during week 1 and week 2.

- Paddy seeds may be treated with Trichoderma viride to prevent future fungal infection. Swarna Sub-1, IR-64, MTU 1010, Pusa Basmati, Arize 6444 Gold are some of the popular rice varieties. In the upcoming days, temperature is expected to substantially fall so farmers are advised to cover the seed bed to avoid yellowing.
- In the lentil, Pusa Ageti, and Bidhan-lentil, L-4727 are the recommended varieties. The recommended fertilizer dose for lentil is 20:40:20 kg/ha (N:P:K). 20 kg/ha Sulphur may be helpful in better seed quality.

Jharkhand

Jharkhand received rainfall of 62.7 mm (-26% deficit) from 01 October to 15 December 2024. The extended range weather forecast (rainfall) provided for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) over Jharkhand is a no rainfall for week 1 and week 2.

- Farmers who want to cultivate wheat at this time should choose only its recommended late varieties (HI-1583, DBW-107, HD-3118 etc.). While sowing late, use a seed rate of a little more than usual (50 kg per acre) and treat the seeds with the fungicide drug Bavistin (2-2.5 g per kg seed) at a distance of 18-20 cm (row to row) and 7-9 cm (Sow at a distance of (plant to plant). To conserve soil moisture and control weeds, irrigate crops sown 20-25 days before weeding and one day after irrigation, and apply urea as per requirement (20-22 kg per acre). Timely sown chickpea is in the germinating stage; If available moisture is not sufficient in the soil for germination, farmers are advised to go for first irrigation. Complete earthing up in 25 to 30 days old potato crop and after making the soil friable, add the remaining quantity of nitrogen (65 kg urea per acre).
- Timely sown chickpeas are at the germinating stage; farmers are advised to go for the first intercultural operation in 25 to 30 days crops. If sufficient moisture is not present, irrigate the field.
- Complete earthing up in 25 to 30 days old potato crop and after making the soil friable, add the remaining quantity of nitrogen (65 kg urea per acre).
- As Onion is shallow rooted crop, so at bulb developing stage (after 60 days) due to forecasted dry weather farmers are advised to go for irrigation.
- Farmers who want to cultivate early Peas, should arrange for good-quality seeds, fertilizers etc. Choose the recommended early pea variety, Arkel. For sowing in one acre, 40 kg seeds, 35 kg urea, 200 kg SSP. And 25 kg of muriate of potash is required.
- When transplanted cabbage and cauliflower seedlings are established in three weeks, go for hoeing, weeding and apply 55kg urea per acre followed by irrigation.

Uttar Pradesh

Western Uttar Pradesh received rainfall of 0.3 mm (-99% large deficit) and 3.1 mm (-92% large deficit) rainfall received over Eastern Uttar Pradesh from 01 October to 15 December 2024. The extended range weather forecast (rainfall) for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) is no rainfall over Eastern Uttar Pradesh and Western Uttar Pradesh during week 1 and week 2.

Eastern Uttar Pradesh

- To get higher production under irrigated conditions, sow wheat varieties like DBW 187 (Karan Vandana), PBW-826, HD-3249, K-1006 (salt tolerant), HD2967, K-0307, DBW-39, DBW 222 (Karannarendra), DBW 303 (Karan Vaishnavi), WH-1105, WH-1270, HD-3386, HD-3086 etc. as early as possible.
- Sowing should be done by recommended varieties of Gram Avarodhi, KWR-108, Radhey, JG-16, KGD-1168 and K-850 with 80kg/ha seed for unirrigated condition.
- For lentil, complete the sowing of recommended varieties such as IPL-230, IPL-321, IPL-225, IPL-329, Pant Masoor-9, KLB-345 (Shekhar-4), KLS-122 (Shekhar-5), KLS-09-3 (Krishi), KLB-2008-4 (Kriti) as early as possible.
- Thinning is needed. Apply light sprinkler irrigation at 30-35 days after dry sowing conditions.

- Use water sanitizer at the rate of 400 grams potassium permanganate per acre or 500 ml per acre to protect the fish from infection.

Jammu

Jammu received rainfall of 20.9 mm (-77% large deficit) from 01 October to 15 December 2024. The extended range weather forecast (rainfall) provided for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) over Jammu is a large deficit rainfall for week 1 and week 2.

- Apply 1st top dressing of nitrogen fertilizer after light irrigation if the crop is 20 to 25 days old. Farmers are advised to continue sowing of late sown wheat crop varieties (DBW-173, DBW-90,) after light pre-sowing irrigation to attain vattar condition of the soil. Increase seed rate by 10%. Treat the seed with tebuconazole 2DS @ 1.25 g/kg of seed to protect against seedling blight and root rot disease. Apply the recommended dose of fertilizer as a basal dose.
- Irrigation is recommended. The first top dressing of nitrogen fertilizer is recommended in 30 to 35 days old in Gobi sarsoon and mustard crops after irrigation. Install delta sticky traps (5/kanal), if aphid is observed in toria crop.
- Irrigation is recommended. Nipping is recommended after irrigation in 3-4-week-old crops. Hoeing & weeding is recommended.
- Staking is recommended. Weeding & hoeing is recommended in cole crops.
- Protect young plants from low temperatures. Remove the stock sprout, suckers and water sprout from budded/grafted plants. Spray 200ppm NAA against mango malformation.

Rajasthan

East Rajasthan received 11.4 mm rainfall (-53% deficit) and 4.5 mm (-60% large deficit) rainfall was received over West Rajasthan from 01 October to 15 December 2024. The extended range weather forecast (rainfall) provided for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) no rainfall over East Rajasthan and West Rajasthan for week 1 and week 2.

- Farmers are advised to complete the sowing of wheat. Improved varieties: - Raj-3077, W.H.-147, G.W.-190, G.W.-322, G.W.- 273, H.I.- 1544, Raj- 4037, H.I- 8498, Lok-1 and Raj-3765. Seed rate: - 100 kg seed per ha. Application of Chlorpyrifos (20EC) @ 5 litres per ha. with pre-irrigation is recommended before sowing in the fields having perennial problems of termite infestation. The recommended dose of fertilizer for N: P: K is 120, 50 and 40 kg/ha.
- Complete the sowing of barley in this week. Improved varieties: R.D-2035, R.D-2786, R.D-2715, R.D-2849 and B.H.- 902. Application of Chlorpyrifos (20EC) @ 5 litres per ha. with pre-irrigation is recommended before sowing in the fields having perennial problems of termite infestation.
- To control blight in gram. Spray of Mencozeb @ 2g/ litre of water.
- Sowing of potatoes should be done as soon as possible. Selection of cultivars can be done based on need. Cultivars: -Kufri Badshah (Late blight tolerant), Kufri Jyoti (Short duration), Kufri Alankar, Kufri Chandramukhi. Row to row ' plant to plant spacing of 45cm ' 20cm or 60cm ' 15 cm is advised. Seed treatment with 2.0 gm Carbendazim mixed per litre of water per kilogram of seed for five minutes should be done. Thereafter, seeds should be dried in the shade before planting in the field.

- After 30 and 50 days, in the standing crop of late cabbage, 66 kg of nitrogen per hectare should be given.
- Complete the sowing of opium this week. The seed rate is 5kg/ha and the improved varieties are Chetak.

Punjab

Rainfall of 2.7 mm (-84% large deficit) was received over Punjab from 01 October to 15 December 2024. The extended range weather forecast (rainfall) provided for the next two weeks (13 December - 19 December 2024 and 20 December - 26 December 2024) over Punjab is np rainfall for week 1 and week 2.

- Under late sown irrigated conditions varieties PBW 752, PBW 771 and PBW 757 should be sown. For wheat sown after 15th December, apply 55 kg DAP or 155 kg single super-phosphate per acre at sowing.
- Apply light irrigation to sensitive crops to protect them from frost. Sow the nursery of chilli and brinjal which is to be transplanted in February-March.
- Efforts can be started to protect the young evergreen fruit plants from cold weather. Apply one irrigation to ber orchards at this time as the trees are laden with fruits. Planning, layout and other preparations can be started for the establishment of new orchards of pear, peach, plum, grapes, fig etc
- For the management of canker in citrus, spray streptocycline 50 g + 25 g copper sulphate in 500 litres of water per acre or Bordeaux mixture (2:2:250) during this month.
- To check black scurf disinfect the tubers with systiva@80 ml or emesto prime @83 ml or monceren @250ml in 100 litre of water. Irrigate all the vegetables in the field as the weather is expected to be dry in the coming 3-4 days.

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