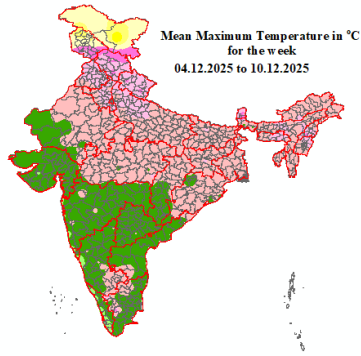


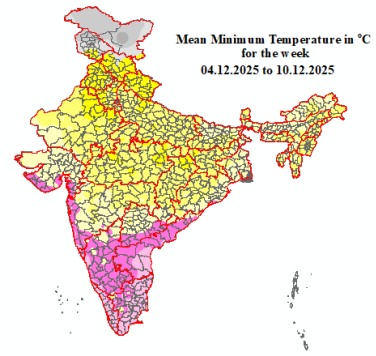
Spatial distribution of weather parameters for the week 04.12.2025 to 10.12.2025

**Mean Maximum Temperature (°C) for the week
04.12.2025 to 10.12.2025**



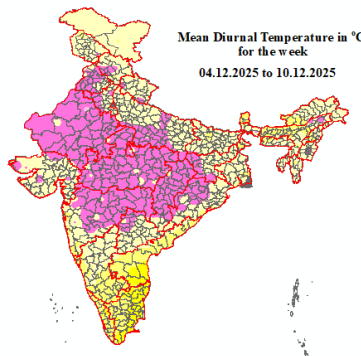
No Data -4 0 4 8 12 16 20 24 28 32 36 40 44 > 44

**Mean Minimum Temperature (°C) for the week
04.12.2025 to 10.12.2025**



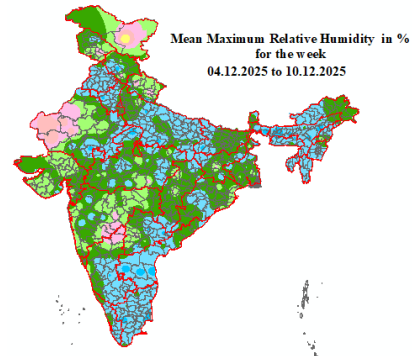
No Data -4 0 4 8 12 16 20 24 28 32 36 40 44 > 44

**Mean Diurnal Temperature Variation (°C) for the week
04.12.2025 to 10.12.2025**



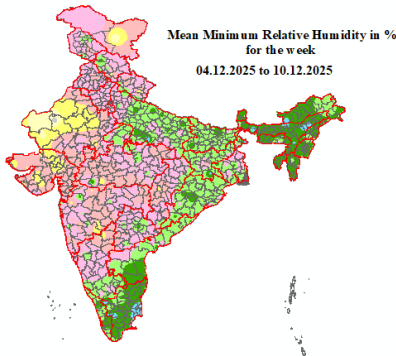
No Data -4 0 4 8 12 16 20 24 28 32 36 40 44 > 44

**Mean Maximum Relative Humidity (%) for the week
04.12.2025 to 10.12.2025**



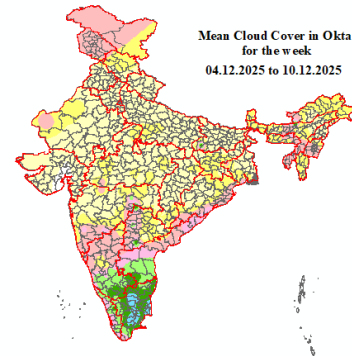
0 10 20 30 40 50 60 70 80 90 100

**Mean Minimum Relative Humidity (%) for the week
04.12.2025 to 10.12.2025**



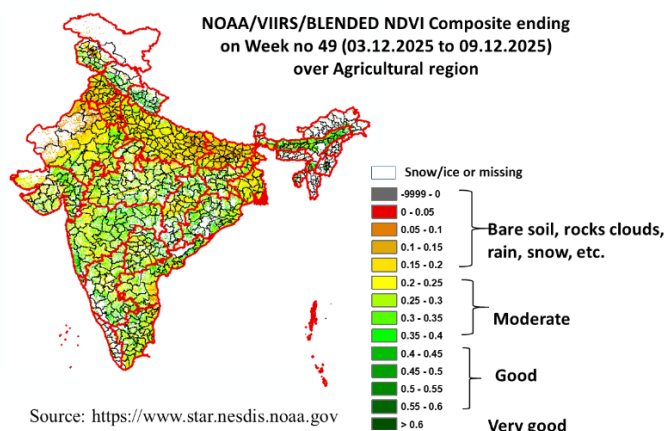
0 10 20 30 40 50 60 70 80 90 100

**Mean Cloud Cover (okta) for the week
04.12.2025 to 10.12.2025**



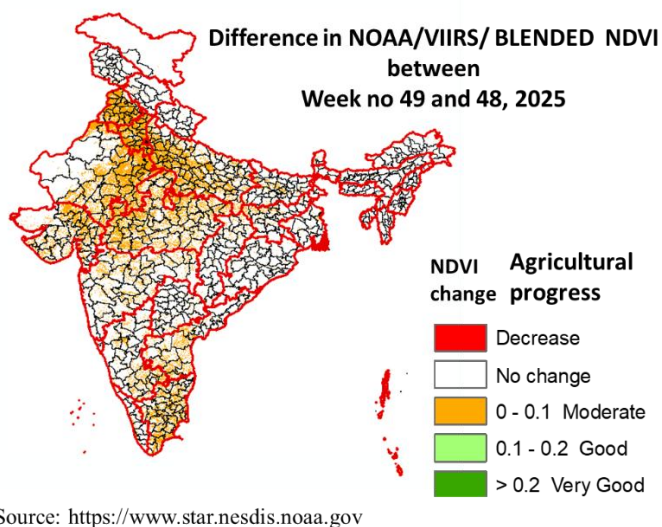
No Data 1 2 3 4 5 6 7 8

NOAA/VIIRS/BLENDED NDVI composite for the week number 49 (03.12.2025 to 09.12.2025) over Agricultural regions of India



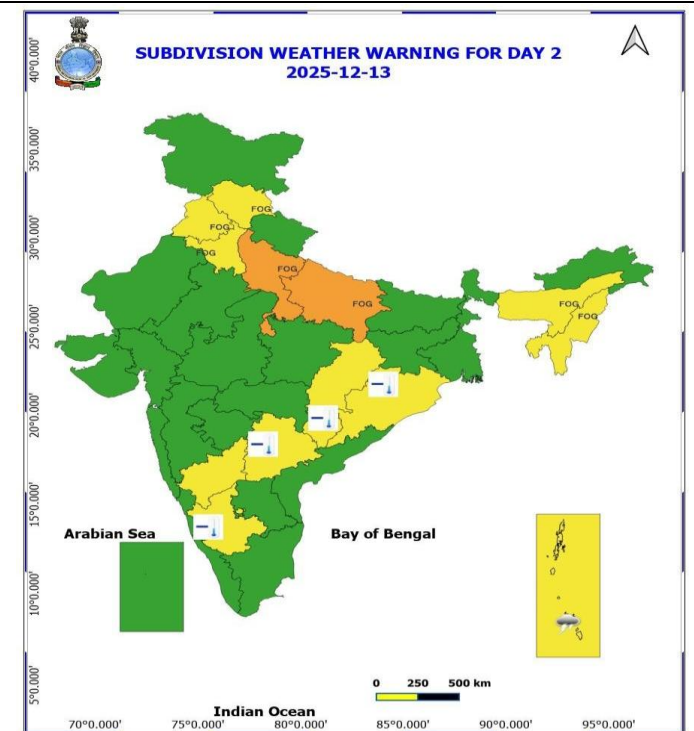
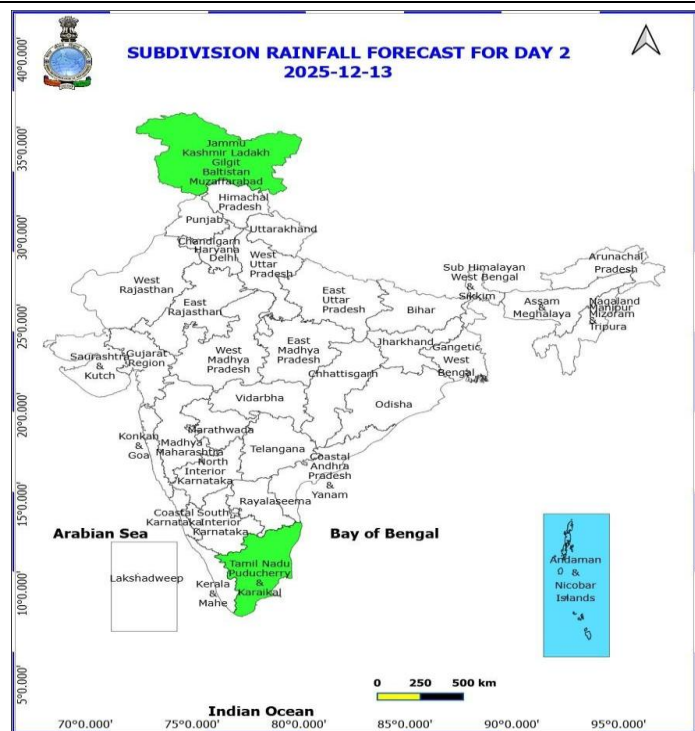
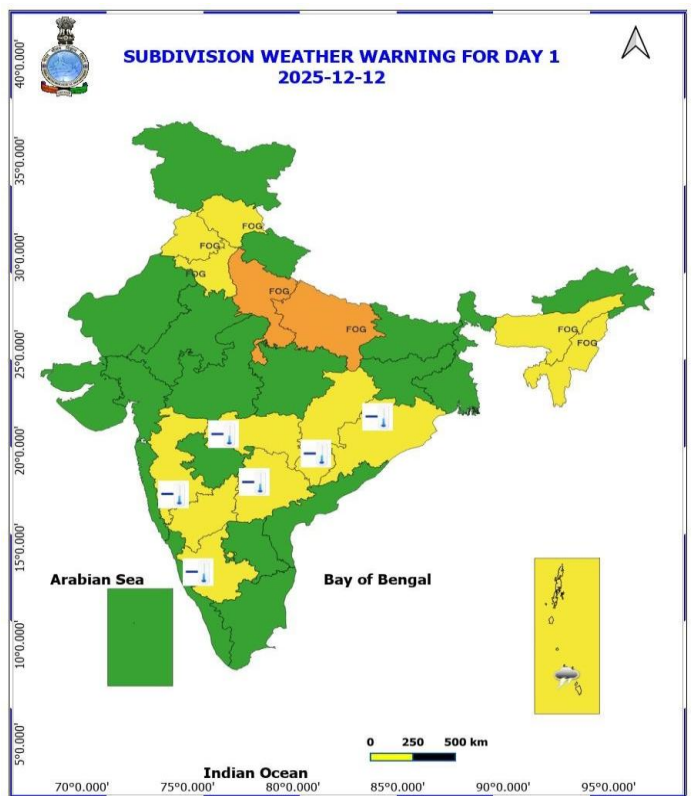
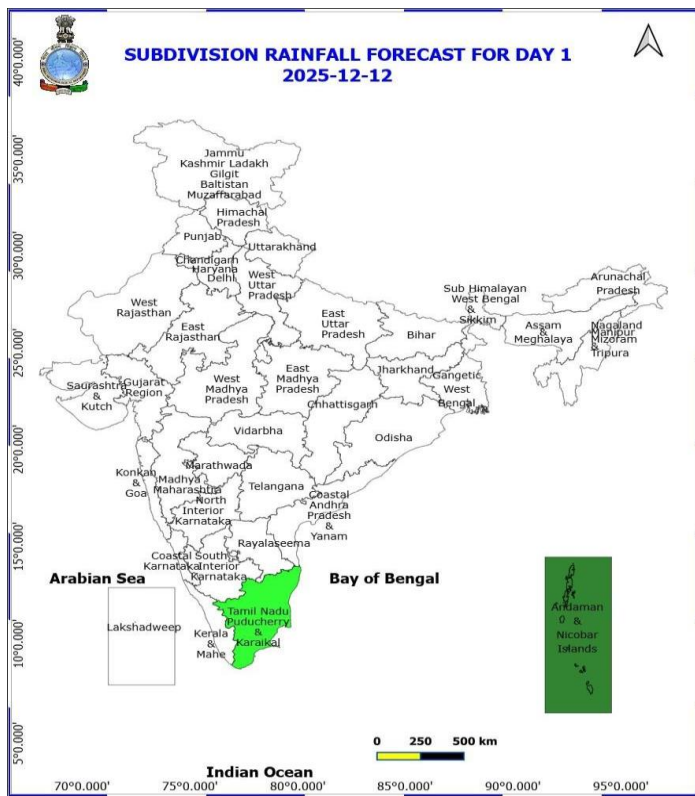
Agricultural vigour was good at many places of Uttarakhand; at a few places of North Eastern States, Sikkim, Odisha , North Coastal Andhra Pradesh, Coastal Karnataka and at isolated places of Sub Himalayan West Bengal, Jharkhand, Chattisgarh, Eastern districts of Telangan, South Konkan & East Madhya Pradesh.

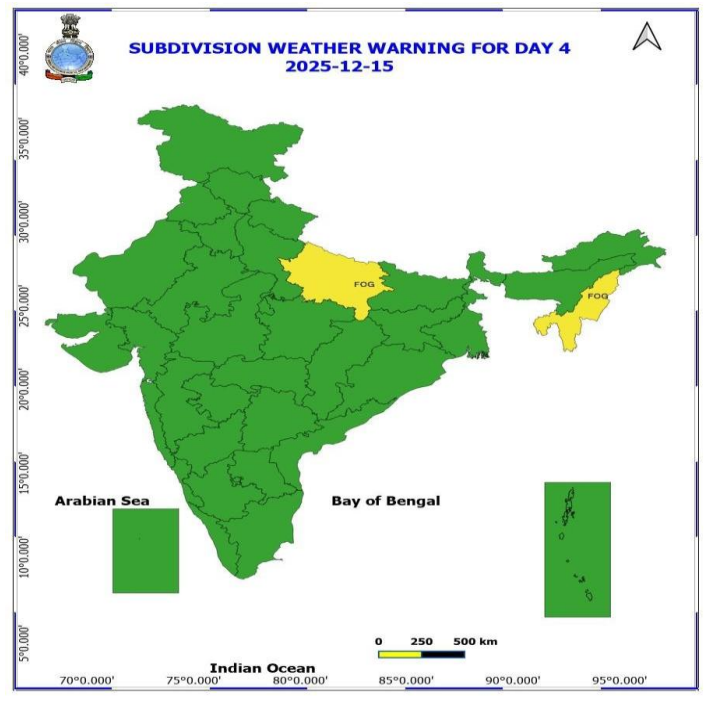
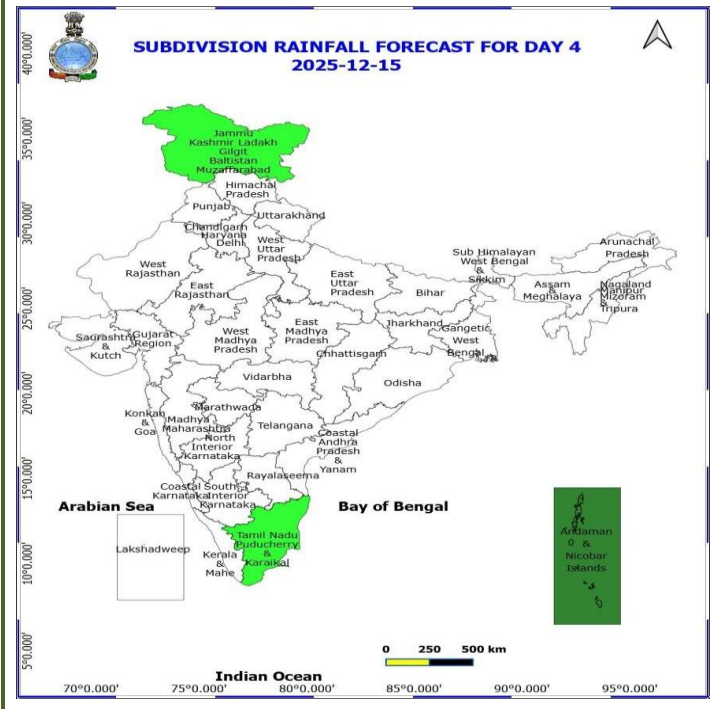
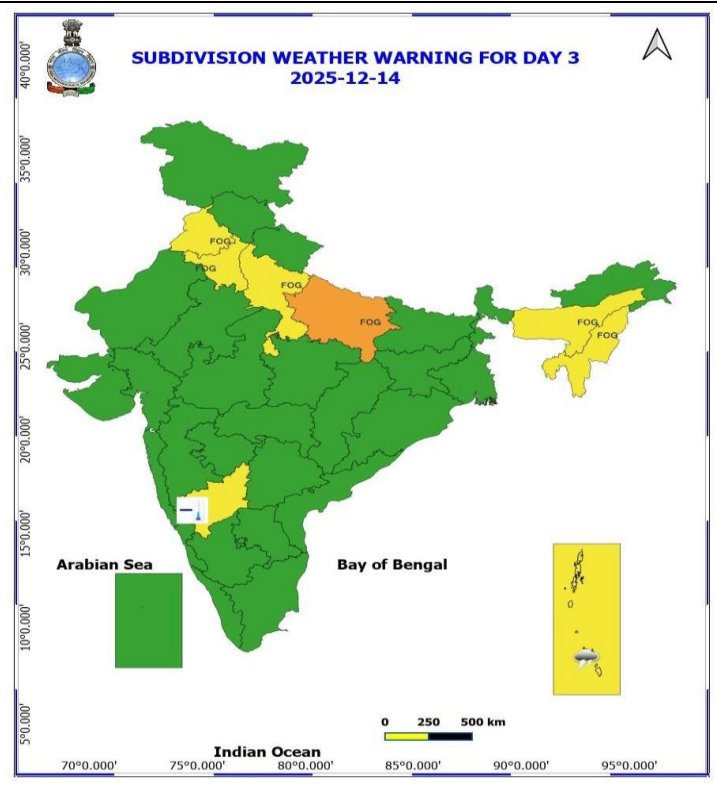
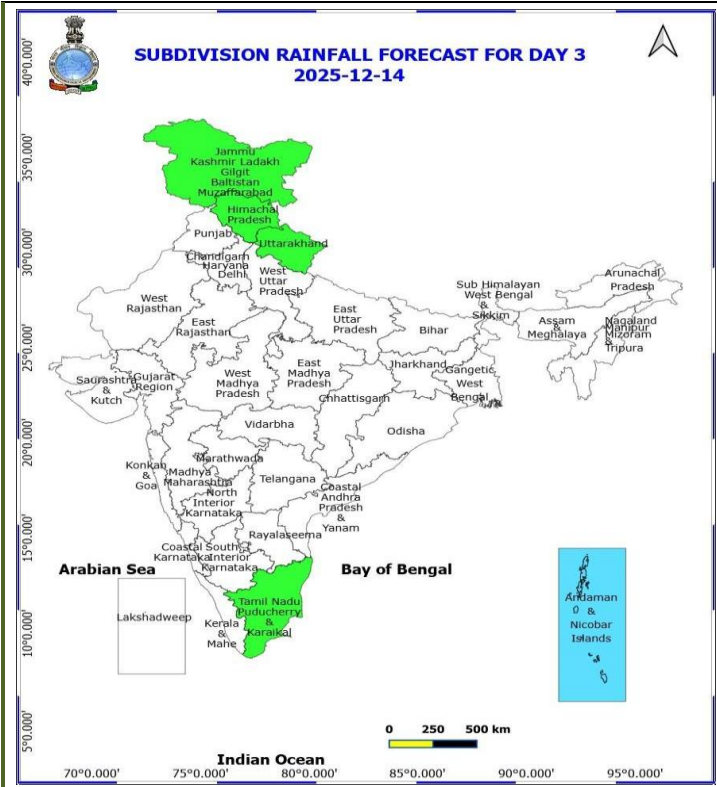
Difference in NOAA/VIIRS/BLENDED NDVI between week number 49 and 48, 2025

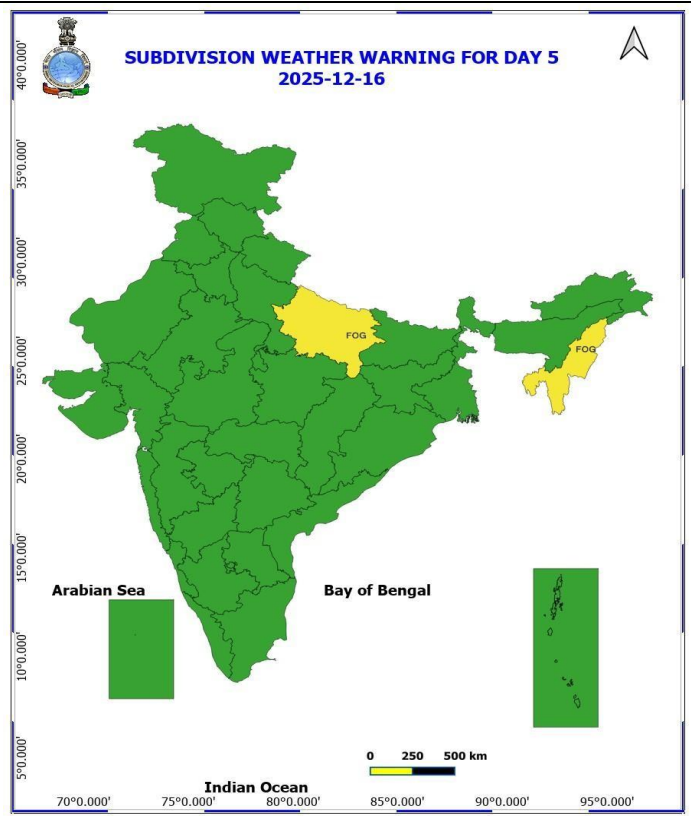
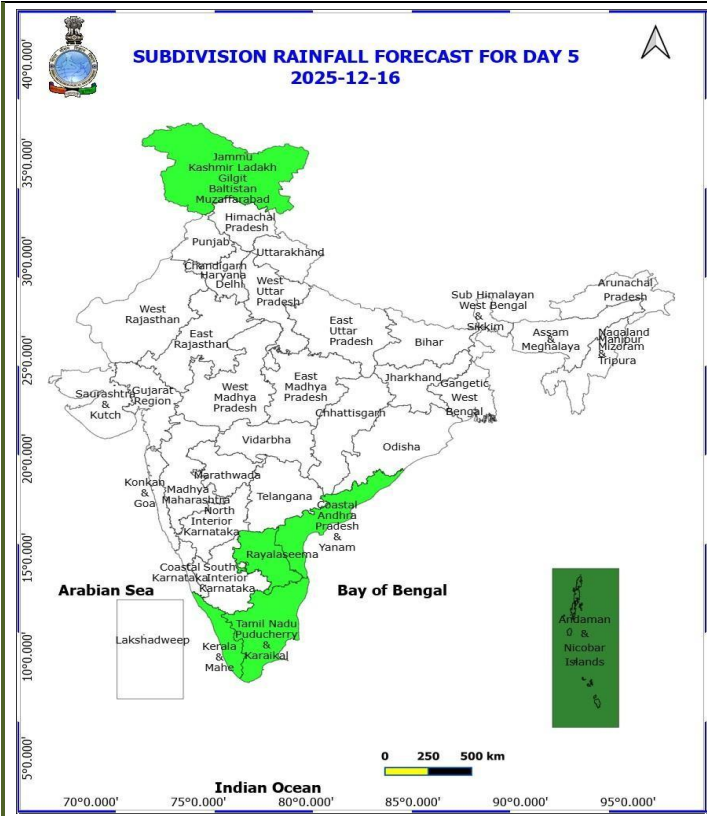


Difference in agricultural vigour was good at few places of Tamilnadu, West Madhya Pradesh & East Rajasthan and at isolated palces in the districts adjoining East Rajasthan of West Uttar Pradesh..

Sub-Divisionwise Rainfall Forecast and weather warning for next 5 days







Legend	Category	% Stations
WS	Widespread/Most Places	76-100
FWS	Fairly Widespread/Many Places	51-75
SCT	Scattered/ A Few Places	26-50
ISOL	Isolated Places	1-25
DRY	No Rain	0

No heavy Rainfall	Heavy Rainfall / Snowfall
Heavy	
Very heavy	
Exceptionally Heavy	
No TS	Thunderstorm / Squall / Hailstorm
Light TS	
Moderate TS	
Severe TS / Very Severe TS / Hailstorm	

Weather Warning during next 5 days

12 December (Day 1)

- ❖ **Thunderstorm accompanied with lightning & gusty winds(30-40kmph)** very likely at isolated places over Andaman & Nicobar Islands.
- ❖ **Cold wave to Severe Cold wave conditions** very likely at isolated places over North Interior Karnataka; **Cold wave conditions** very likely at isolated places over Chhattisgarh, Madhya Maharashtra, Odisha, South Interior Karnataka, Telangana and Vidarbha.
- ❖ **Fog** very likely at isolated pockets over Assam & Meghalaya, Haryana, Chandigarh & Delhi, Himachal Pradesh, Nagaland, Manipur, Mizoram and Tripura, Punjab and Uttar Pradesh.
- ❖ Squally weather with wind speeds reaching 35 kmph to 45 kmph gusting to 55 kmph is likely to prevail over Gulf of Mannar & adjoining, some parts of Comorin area, along and off south Tamil Nadu coast.

13 December (Day 2)

- ❖ **Thunderstorm accompanied with lightning & gusty winds(30-40kmph)** very likely at isolated places over Andaman & Nicobar Islands.
- ❖ **Cold wave to Severe Cold wave conditions** very likely at isolated places over North Interior Karnataka; **Cold wave conditions** very likely at isolated places over Chhattisgarh, Odisha, South Interior Karnataka and Telangana.
- ❖ **Fog** very likely at isolated pockets over Assam & Meghalaya, Haryana, Chandigarh & Delhi, Himachal Pradesh, Nagaland, Manipur, Mizoram and Tripura, Punjab and Uttar Pradesh.
- ❖ Squally weather with wind speeds reaching 35 kmph to 45 kmph gusting to 55 kmph is likely to prevail over Gulf of Mannar & adjoining Comorin area.

14 December (Day 3)

- ❖ **Thunderstorm accompanied with lightning & gusty winds(30-40kmph)** very likely at isolated places over Andaman & Nicobar Islands.
- ❖ **Cold wave conditions** very likely at isolated places over North Interior Karnataka.
- ❖ **Fog** very likely at isolated pockets over Assam & Meghalaya, Haryana, Chandigarh & Delhi, Nagaland, Manipur, Mizoram and Tripura, Punjab and Uttar Pradesh.
- ❖ Squally weather with wind speeds reaching 35 kmph to 45 kmph gusting to 55 kmph is likely to prevail over Gulf of Mannar & adjoining Comorin area.

15 December (Day 4)

- ❖ **Fog** likely at isolated pockets over East Uttar Pradesh and Nagaland, Manipur, Mizoram and Tripura.
- ❖ Squally weather with wind speeds reaching 35 kmph to 45 kmph gusting to 55 kmph is likely to prevail over Gulf of Mannar & adjoining Comorin area.

16 December (Day 5)

- ❖ **Fog** likely at isolated pockets over East Uttar Pradesh and Nagaland, Manipur, Mizoram and Tripura.
- ❖ Squally weather with wind speeds reaching 35 kmph to 45 kmph gusting to 55 kmph is likely to prevail over Gulf of Mannar & adjoining Comorin area.

Warning for fishermen

- As **Squally weather with wind speeds reaching 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail over Gulf of Mannar & adjoining, some parts of Comorin area, along and off south Tamil Nadu coast during next 24 hours; **Squally weather with wind speeds reaching 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail over Gulf of Mannar & adjoining Comorin area during next 4 days, **fishermen are advised not to venture into these areas.**

Salient advisories

- As **rain/thundershowers are very likely at many places** over Andaman & Nicobar Islands on 13th & 14th December, 2025, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid waterlogging.
- As **Thunderstorm accompanied with lightning & gusty winds (30-40 kmph)** very likely at isolated places over Andaman & Nicobar Islands during next 72 hours, provide mechanical support to banana & papaya plantations and staking to young plants and vegetables. Undertake propping in sugarcane.
- As **Cold wave to Severe Cold wave conditions** very likely at isolated places over North Interior Karnataka during next 48 hours; **Cold wave conditions** very likely at isolated places over Madhya Maharashtra and Vidarbha during next 24 hours, over Chhattisgarh, Odisha, South Interior Karnataka, Telangana during next 48 hours and over North Interior Karnataka on 14th December, 2025, apply light and frequent irrigation /sprinkler irrigation in the evening to protect the crops from cold injury. To protect young fruit plants from chilly winds, cover young fruit plants with straw/polythene sheets/gunny bags.
- Sowing/Transplanting/Harvesting
 - harvesting of toria; sowing of late-sown wheat, garlic; transplanting of onion in Jammu & Kashmir
 - sowing of wheat; nursery sowing of onion; planting of garlic; transplanting of cauliflower, cabbage, knolkhol, broccoli & Chinese cabbage in Himachal Pradesh
 - harvesting of matured tomato and cauliflower; nursery sowing of tomato; sowing of lentil, pea, chick pea and radish; transplanting of onion in Uttarakhand
 - sowing of chickpea, wheat, barley, field pea, lentil, garden pea, mustard & rapeseed, radish, spinach, fenugreek, coriander, fennel, celery, cumin; nursery sowing of *rabi* onion; planting of early varieties of

sugarcane, potato & garlic; transplanting of broccoli, cabbage, cauliflower, brinjal, tomato & chilli in Uttar Pradesh

- harvesting of matured sugarcane; nursery sowing of *rabi* onion; sowing of wheat, mustard, pea, radish, carrot, *Chini* sarson, coriander, fenugreek, palak; transplanting of *Gobhi* Sarson, tomato in Punjab
- sowing of wheat & barley in Haryana
- sowing of wheat, barley, opium; nursery sowing of *rabi* onion in Rajasthan
- picking of cotton; harvesting of Elephant foot yam, tender tannia leaves; sowing of chickpea, wheat, green gram, Indian bean, cumin, fennel, coriander, pointed gourd & little gourd; planting of sugarcane & sweet potato in Gujarat
- harvesting of soybean; sowing of wheat in Madhya Pradesh
- harvesting of matured late rice varieties; sowing of wheat, pea, gram & mustard; transplanting of vegetables in Chhattisgarh
- harvesting of matured Sali rice, ginger; nursery sowing of Boro rice; sowing of *rabi* maize, rapeseed, mustard, lentil, peas, rajma, black gram & rajmah, and planting of potato in Assam
- harvesting of matured rice & ginger in Nagaland
- harvesting of rice, black gram & Mandarin oranges; sowing of lentil, mustard, sunflower, wheat, chickpea, sesame & winter maize; planting of potato in West Bengal
- sowing of late-sown mustard; planting of potato in Bihar
- sowing of gram, pea, green gram and cole crops in Jharkhand
- harvesting of matured sugarcane; nursery sowing of rice & finger millet; sowing of sorghum, groundnut, sunflower, green gram, black gram, groundnut & maize in Andhra Pradesh
- harvesting of matured paddy, finger millet, pigeon pea, maize, groundnut, sunflower, sugarcane, areca nut, black pepper, ginger and turmeric; picking of cotton; sowing of wheat, black gram, green gram, horse gram, chickpea, mustard, sorghum, linseed, groundnut, beans & sunflower in Karnataka
- harvesting of rice, finger millet, sugarcane; sowing of maize, sorghum, groundnut, sunflower, pearl millet, short duration pulses and fodder crops; transplanting of 25-30 days rice in Andhra Pradesh
- sowing of black gram and green gram in Telangana
- picking of cotton and sowing of wheat & mustard in Maharashtra

➤ Pest and Disease

- In Telangana, drench the soil with Copper-Oxy Chloride @ 3g per litre of water twice at 5-7 days interval to control Macrophomina Wilt in chickpea.
- In Gujarat, spray Mancozeb 0.2% @ 30g plus concentrated desi soap solution @ 25ml in 10 litres of water to control blight in the potato crop; if required, repeat the spray after 10 days.
- In Odisha, spray Thiamethoxam 25 WG @ 0.5g per liter of water to control thrips in onion crop.
- In Tamil Nadu, release parasitoid Trichogramma japonicum @1,00,000/ha at active tillering stage (37, 44 and 51 DAP) or spray Azadirachtin 0.03% @ 4 ml or Cartap hydrochloride 50% SP @ 2g or Flubendiamide 20 WG @ 0.25g or thiamethoxam 25 WG @ 0.2g per litre of water to manage stem borer in rice.
- In Uttarakhand, spray Neem oil @ 2-3ml or Imidacloprid 17.8 SL @ 0.25ml per litre of water to control aphids in toria crop.

Detailed Agromet Advisories

SOUTH INDIA [TAMIL NADU, TELANGANA, ANDHRA PRADESH, KARNATAKA, KERALA]

Realised Rainfall: Significant rainfall occurred in Alappuzha, Kannur & Kottayam districts in Kerala; in Chengalpattu, Chennai, Cuddalore, Dindigul, Kallakuruchi, Kanchipuram, Karaikal, Mayiladuthurai, Perambalur, Puducherry, Thanjavur, Tirunelveli, Tiruvallur, Tiruvarur & Villupuram districts in Tamilnadu; in Annamayya,

SPSR Nellore, Tirupati & YSR districts of Andhra Pradesh. Weather remained mainly dry over rest of the region.

Advisories:

- **As Cold wave to Severe Cold wave conditions** very likely at isolated places over North Interior Karnataka during next 48 hours; **Cold wave conditions** very likely at isolated places over South Interior Karnataka, Telangana during next 48 hours and over North Interior Karnataka on 14th December, 2025, apply light and frequent irrigation /sprinkler irrigation in the evening to protect the crops from cold injury. To protect young fruit plants from chilly winds, cover young fruit plants with straw/polythene sheets/gunny bags.

Tamilnadu

- In North Eastern Zone, farmers are advised to avoid fertilizer, herbicides application and pesticides spraying operation during heavy rain.
- In Western Zone, to improve boll bursting and yield in cotton, spray 2.5 kg per acre of TNAU cotton plus during rainless days.
- In Coastal Zone, to manage rice stem borer in rice, release parasitoid *Trichogramma japonicum* @1,00,000/ha at active tillering stage (37, 44 and 51 DAP) or Azadirachtin 0.03% @ 4 ml/l or Cartaphydrochloride 50% SP @ 2g/l or Flubendiamide 20 WG @ 0.25 g/l or thiamethoxam 25 WG @ 0.2 g/litre.
- In Cauvery Delta Zone, to improve growth in areas where growth of paddy is poor, mix 22 kg of urea with 18 kg of Gypsum and 4 kg of neem powder per acre and keep it overnight, then sprinkle the field with 17 kg of potash.
- In High Rainfall Zone, wind speed is anticipated, provide mechanical support to banana to avoid lodging. For nut bearing coconut, undertake root feeding of TNAU coconut tonic @ 200 ml per tree.
- In High altitude Hilly Zone, to manage wilt in pepper, farmers are advised to apply *Trichoderma asperellum* / *Bacillus subtilis* @ 25g and Neem cake @ 500g / vine is recommended.
- In South Zone, undertake harvesting of vegetable crops.
- In Southern Zone, to control thrips in cardamom, spray Thiamethoxam @ 5gm + sticky agent @ 10ml per 10 litres of water.

Kerala

- In High Altitude Zone, short duration vegetable crops like amaranthus, cow pea etc. can be cultivated in the interspaces of newly planted banana crop. Apply first dose of fertilizers (50:65:65g NPK per plant). Spray 1% Bordeaux mixture as a prophylactic measure to control leaf spot.
- In Problem Area Zone, undertake harvesting of rice. For the control of red palm weevil in coconut, traps of fermented alcohol or pineapple can be made and the insects thus trapped can be killed using any insecticides.
- In Northern Zone, give propping to all soft slender stemmed crops like banana, vegetables, climbers, etc. Weather is congenial for pseudostem weevil in banana. Adopt field sanitation. Remove the affected parts and burn it using kerosene. Apply *Beauveria bassiana* @ 20 g l-1 at 5, 6 and 7 months after planting.
- In Central Zone, weather is congenial for bacterial leaf blight in paddy, dissolve 20 g of cow dung in one liter of water and spray the supernatant liquid by mixing with 20g of pseudomonas. If the attack is severe spray 6 g of Streptocycline in 30 litre of water.
- In Southern Zone, black pepper plants are prone to pollu disease. To manage this, ensure proper shading in the plantation and spray 1% Bordeaux mixture. Additionally, prepare a solution by mixing 1 gram of Carbendazim and Mancozeb in 1 litre of water and spray it on the plants.

Andhra Pradesh

- In North Coastal Zone, undertake harvesting of rice and continue harvesting of sugarcane. Prior to harvesting the rice crop, undertake sowing of sunhemp in the field.
- In High Altitude Tribal Zone, undertake harvesting of rice, finger millet. Provide light irrigation and undertake weeding to improve aeration in horse gram, black gram & ginger.
- In Krishna Godavari Zone, continue harvesting of rice. Undertake transplanting of 25-30 days rice nurseries. Transplant 2-3 seedlings per hill and maintain 33 seedlings as optimum plant population per square metre. Undertake sowing of maize & sorghum.

- In Scarce Rainfall Zone, continue sowing of *rabi* groundnut; boarder crops like sorghum / bajra can be sown around the groundnut field to protect from PSNV; spray pre-emergence application of pendimethalin 30% E.C @ 1.0-1.5 litre/acre and mixed with 200 litres of within 24-48 hrs after sowing in groundnut.
- In Southern Zone, undertake sowings of *rabi* crops like groundnut, sunflower, pearl millet, short duration pulses crops and fodder crops at optimum soil moisture conditions. Due to rains received during last week, there is possibility of iron deficiency in black gram; to correct it, spray iron sulphate @ 5.0g + salt @ 0.5g along with urea @ 20g/litre of water.

Telangana

- In Northern Telangana, the prevailing low night temperatures can harm vegetable crops such as tomato, brinjal, onion, okra and chilli; apply 7-10cm mulch (paddy straw/dried grass or leaves) around plants to retain soil warmth and protect roots from cold injury.
- In Southern Telangana, complete sowing of black gram and green gram. Prevailing low night temperatures may cause deficiency of Zinc in rice nursery; to correct it, spray Zinc Sulphate @ 2g per litre of water. Prevailing weather conditions are congenial for the incidence of Macrophomina Wilt in chickpea; to control, drench the soil with Copper-Oxy Chloride @ 3g per litre of water twice at 5-7 days interval.

Karnataka

- In Coastal Zone, utilizing the residual soil moisture, undertake sowing of Dicot crops like black gram, green gram, beans and green manure.
- In Hill Zone, undertake harvesting of paddy, cotton and areca nut.
- In North Transition Zone, undertake picking of cotton; sundry the produce after picking. Provide light irrigation to *rabi* crops where irrigation is possible. Carry out interculture operations in *rabi* crops to control weeds and conserve the soil moisture.
- In Central Dry Zone, continue harvesting of matured paddy, *ragi*, maize, groundnut, sunflower, pulses. Use mulching in vegetables/young orchards to reduce moisture loss.
- In North East Dry Zone, continue harvesting of rice, pigeon pea, groundnut and picking of cotton. Carry out inter cultivation in *rabi* sorghum, chickpea, groundnut and sunflower. Mustard can be grown immediately after harvest of paddy for better utilization of residual soil moisture and nutrients. Due to the prevailing low temperature, there is chance of flower drop in all the crops; spray 0.25ml Naphthyl acetic acid per litre of water. If fruit borer is noticed in chilli, spray Thiodicarb 75 WP @ 1g or Emamectin benzoate 5 SG @ 0.3g or Chlorfenapyr 10 SC @ 1.0ml or Novaluron 10 EC @ 0.75ml per litre of water.
- In North Dry Zone, undertake harvesting of pigeon pea, cotton and sugarcane. Provide irrigation at pod filling stage. The present weather conditions are favourable for pod borer, spray 0.6g of Thiodicarb 75 wp or 2.0ml of Profenophos 50 EC or 0.6g of Methomyl 40 SP at the time of flowering and pod filling stages. High relative humidity and intermittent rains weather congenial to develop Downey mildew in cotton, take up spraying of 1% Bordo mixture.
- In South Transition Zone, undertake harvesting of paddy, maize, areca nut, finger millet, black pepper, ginger and turmeric. Undertake sowing of short duration pulses like horse gram, green gram and black gram in the residual soil moisture immediately after harvest ing paddy crop.
- In Southern Dry Zone, undertake harvesting of paddy, maize; ensure proper sun drying for 2–3 days and store the grains in a safer place. To protect vegetable nurseries from cold, give light irrigation in the evening and cover with dry grass or plastic sheet at night. Provide irrigation to field crops, banana, coconut, and areca nut.

Animal Husbandry

- In Tamilnadu, in milking animals use potassium permanganate solution to wash the udder before milking to prevent mastitis infection.

NORTHEAST INDIA [ARUNACHAL PRADESH, ASSAM & MEGHALAYA, NMM&T]

Realised Rainfall: Weather remained mainly dry over the region.

Advisories:

Arunachal Pradesh

- Complete the harvesting of WRC rice and soybean. To protect field pea, mustard, potato, cole crops from the ongoing cold and dry weather, give light irrigation at regular intervals. Cover the base of plants with a thin layer of paddy straw or crop residue to conserve moisture and keep the soil warm. Spray neem oil @ 3–5ml per litre of water once every 7–10 days to manage powdery mildew disease in pea crop. Spray Neem Oil (1500 ppm) @ 5ml per litre of water at intervals of 7–10 days to control aphids in mustard crop.

Assam

- In Hill Zone, continue sowing of recommended varieties of *Boro* rice and mustard. Complete the sowing of *rabi* maize. Apply irrigation to newly transplanted vegetable seedlings every alternate day. As foggy weather is forecasted, protect newly-sown *Boro* rice seedlings by covering the seedbeds with a transparent polythene sheet. Give light irrigation to newly-sown maize crop during the morning hours to prevent damage due to low temperatures and moisture stress. During the vegetative stage of mustard, manage pests like aphids and diseases such as white rust/blight with timely sprays of Mancozeb/Carbendazim @ 2-3ml/litre of water.
- In Lower Brahmaputra Valley Zone, continue sowing of *Boro* rice; undertake main field preparation for transplanting of *Boro* rice seedlings; seedlings at 5-6 leaf stage are suitable for transplanting. Due to congenial weather condition, there is chance of late blight disease in potato; to control the disease, spray Dimethomorph 50 WP @ 1g per litre of water followed by Copper Oxychloride 50 WP @ 2g per litre of water in alternative application (3 sprays with the Dimethomorph and 3 sprays with Copper Oxychloride) at an interval of 12 days; apply mulching under rain fed condition using water hyacinth, straw etc. to increase the tuber yield and also to maintain optimum thermal environment.
- In Upper Brahmaputra Valley Zone, continue nursery bed preparation and sowing of *Boro* rice. As dry weather is forecasted in the coming 5 days, provide irrigation to the rapeseed, mustard and *rabi* vegetable crops like cauliflower, cabbage, broccoli, knol-khol, brinjal, radish, beans, leafy vegetables, etc. as per requirement. To control attack of red ant and cut worm in potato, incorporate Thimet (@ 3kg per bigha) in the soil around the plant at the time of earthing up. To control sigatoka leaf spot disease in the banana plantations, go for 4-5 sprayings of Azoxystrobin 23% SC @ 1ml/litre of water or Trifloxystrobin 25% WP @ 1 to 1.5g/litre of water at 30 days interval; provide irrigation in the banana plantations.
- In Barak Valley Zone, continue harvesting of matured *Sali* rice. Continue nursery sowing of recommended seeds of *Boro* rice; undertake main field preparation for transplanting of *Boro* rice seedlings. Due to the dropping of temperature, root disease may be seen in rajma; uproot the damages seedlings and apply Sectin @ 1.5ml/litre water against root rot. After the emergence of sprout in potato field, three irrigations should be applied - first at 25 days (stolon formation stage), Second at 60 days (tuber formation stage) and third at 80 days (tuber development stage).
- In Central Brahmaputra Valley Zone, continue harvesting of matured *Sali* rice. Continue sowing of *Boro* rice; undertake main field preparation for transplanting of *Boro* rice seedlings. Continue sowing of wheat, rapeseed, mustard, peas, lathyrus, lentil, *rajmah*, lathyrus and planting of potato.
- In North Bank Plain Zone, continue harvesting *Sali* rice and planting of potato. Continue nursery bed preparation and sowing of *Boro* rice. Spray Dimethoate 30EC or Chlorpyrifos @ 2ml/litre with a spray volume of 500-700 l/ha for hand sprayer & 200-250 l/ha for power sprayer against aphids and saw fly attack in rapeseed and mustard crops.

Meghalaya

- Maintain proper soil moisture for better germination & growth of field pea, cole crops and other vegetable crops. Give light irrigation every 5-7 days, depending on soil moisture and avoid over irrigation. Apply mulching with dry leaves, straw or plastic to conserve moisture and reduce weed growth. For tall pea varieties provide stakes or trellising once plants reach 15–20 cm height.

Manipur

- Undertake transplanting of onion, garlic, coriander, radish, carrot and fenugreek. Prolonged foggy weather may adversely affect vegetable and fruit crops, especially in the nurseries. Mulching with disease free mulching material may be done to avoid effects of fog during winter. Monitor soil moisture and insect-pest infestation on

crops like rapeseed, field pea regularly. Spray Imidacloprid 17.8% SL @ 0.25 ml/ litre water against aphid in cole crops.

Mizoram

- Undertake harvesting of turmeric and matured pods of sesame. Insects such as thrips and diseases such as blight may attack onion and garlic plants as a result of the fluctuating humidity, low temperature and fog; to control, spray Lambda Cyhalothrin 5 EC @ 6ml + Tebuconazole @ 10ml in 10 litres of water.

Nagaland

- Continue harvesting of matured rice and ginger. In the prevailing weather, continue timely intercultural operations and provide light irrigation if dry weather persists long. In the prevailing weather monitoring mustard crop against leaf miner pest. Yellow sticky traps or cards may reduce the density of leaf miners. During the prevailing dry weather, mulching should be done in the banana basins with waste paddy straw or dried leaves which will reduce the rate of irrigation and considerably improve the bunch quality. Keep the soil loose by harrowing from time to time.

Tripura

- Undertake sowing of *Boro* rice; apply irrigation to protect the *Boro* rice seedlings in the seedbed from the cold at night. There may be attack of Bacterial Wilt in the field of brinjal, tomato, chilly, etc.; spray Carbofuran @ 5 kg per kani. Earthing up of potatoes may be done 25 days after planting; depending upon the soil moisture status, apply first irrigation at 25 to 30 days, second irrigation at 60 days and third irrigation at 80 days after sowing. To conserve the moisture for longer period, mulching with locally available materials may be done. Present moderate temperature and humidity favours the infestation of saw fly in mustard crop during vegetative stage; to manage, spray Thiamethoxam 25WG @ 3g per 10 litres of water.

Animal Husbandry

- Protect pigs against cold by increasing the energy feed like maize/rice bran. Use bedding material. Vaccinate against swine flu.
- Protect poultry birds from sudden drop in temperature. Cover the wall with hessian cloth/ polythene sheet during night time. Provide good source of light and heat in poultry shed. Maintain proper hygiene in poultry houses. Increase energy feed up to 5% (like maize, rice bran, etc.).

Fishery

- Apply following chemicals to protect the fish population against various bacterial diseases prevalent in winter season - Potash @ 4-5mg/litre of water, Sukrena WS @ 1 litre per bigha of water and Lime in required doses.

EAST INDIA [JHARKHAND, BIHAR, ODISHA, WEST BENGAL & SIKKIM, ANDAMAN & NICOBAR ISLANDS]

Realised Rainfall: Significant rainfall occurred in South Andaman and Nicobar Districts of Andaman & Nicobar Islands. Dry weather prevailed over rest of the region.

Advisories:

- As **rain/thundershowers are very likely at many** places over Andaman & Nicobar Islands on 13th & 14th December, 2025, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid waterlogging.
- As **Thunderstorm accompanied with lightning & gusty winds (30-40 kmph)** very likely at isolated places over Andaman & Nicobar Islands during next 72 hours, provide mechanical support to banana & papaya plantations and staking to young plants and vegetables. Undertake propping in sugarcane.
- As **Cold wave conditions** very likely at isolated places over Odisha during next 48 hours, apply light and frequent irrigation /sprinkler irrigation in the evening to protect the crops from cold injury. To protect young fruit plants from chilly winds, cover young fruit plants with straw/polythene sheets/gunny bags.

Odisha

- In Western Undulating Zone, monitor Fruit and Shoot borer in tomato and brinjal crops; to manage, install pheromone traps or Wata traps @ 8 traps per acre. To control thrips in onion crop, spray Thiamethoxam 25 WG @ 0.5g per liter of water. For reducing risk of fungal infection in harvested seed cotton during storage dry

the produce to a moisture content of 8-10%.

- In East and South-Eastern Coastal Plain, address the risk of Rodents/Rats in fields and surrounding areas, control it by placing one Aluminium Phosphide 6% tablet (12g) per burrow and sealing it with mud. For protecting stored grains from insect/pests, fumigation is advised using Aluminium phosphide tablets @ 3 tablets/ton of grain (9g total) in air-tight containers. Monitor papaya crops for the Papaya Leaf Curl Virus vector, the Whitefly; to manage, install Yellow Sticky traps.
- In West Central Table Land Zone, focus on managing pests in stored Kharif Rice; fumigate the stored grains using Aluminium phosphide tablets, applying a limit of 3 tablets (9g total) per ton of grain in air-tight conditions. In the rapeseed/mustard nursery, prevent damping off disease by drenching the nursery with Captan @ 2g per liter of water. Regular monitoring of all vegetable crops is advised to detect early infestation of sucking insects.
- In North Eastern Ghat Zone, to prevent damping off in the vegetable nursery, drench the seedbed using Captan @ 2g per liter of water. For Tomato seedlings, drench the seed bed with a mixture of Streptocycline @ 0.1g and Carbendazim @ 1g per liter of water to protect against damping off. For preventing pests in the stored paddy grains meant for seed purposes, mix Neem or Karanja oil @ 1 liter per 100 kg of seeds before storage.
- In North Central Plateau Zone, monitor vegetable nurseries for Damping off disease; drench the nursery bed @ 2g of Captan per liter of water. In brinjal crops at the fruit formation stage, control Phomopsis Blight disease by spraying Metalaxyl 8% + Mancozeb 64% WP @ 400g per acre. To manage Wilt disease in brinjal and chilli, drench the root zone with 200ml of Tebuconazole mixed with 20g of Streptocycline per acre, using 200 liters of water.
- In North Western Plateau Zone, vigilance is required against the Kalimundi pest attacking cabbage and cauliflower; to control, apply 400g of DT product or 250g of SNPV per acre, alternating the application every week. In mustard crop, address Downy mildew by spraying Mancozeb @ 400g mixed in 200 liters of water per acre. To manage Powdery mildew in mustard, spray 1 kg of Sulfur mixed in 200 liters of water per acre.
- In Mid-Central Table Land Zone, for biological control of Powdery mildew in Green gram and Black gram, spray *Trichoderma viridae* @ 5g per liter of water. Due to current weather conditions, the population of aphids may rise in the groundnut crop; to control, spray neem-based pesticide (15000 PPM) @ 600ml per acre, mixed in 200 liters of water. To manage aphids in mustard, release *Trichogramma chilonis* cards @ 1-2 cards per acre (100,000/ha) weekly for six weeks.
- In North Eastern Coastal Plain Zone, monitor papaya crop for Whitefly - the vector of the Papaya Leaf Curl Virus; to control, install Yellow Sticky traps and, if necessary, spray Flonicamid 50WG @ 0.3g per liter of water. In tomato, chilli and brinjal, control the Fruit borer pest by spraying Neem Oil (1500 ppm) @ 5ml per liter of water.
- In South Eastern Ghat Zone & Eastern Ghat High Land Zone, prepare nursery for Rabi paddy; treat seeds with Carbendazim (@ 2g/kg) to prevent diseases. In tomato, chilli and brinjal, manage Fruit and Shoot borers by installing Pheromone traps @ 5 traps per acre. For the management of Blight in tomato and chilli, spray Mancozeb or Copper oxychloride, @ 2g per liter of water; for the control of aphids and Whitefly, spray Neem-based pesticide (1500 ppm) @ 5ml per liter of water.

Animal Husbandry

- In Odisha, focus on protecting livestock and poultry from cold by keeping them in covered sheds with dry bedding and providing warm water and extra feed. Vaccination against common diseases (FMD, HS, BQ, Anthrax, PPR) is necessary. For poultry, maintain the optimal brooder temperature (32-35 °C) using heaters or bulbs and ensure constant fresh water. In Pisciculture, reduce fish feeding by 50-75%, stop organic manuring, and use treatments like Potassium permanganate to prevent cold-weather diseases like EUS.

Bihar

- In North East Alluvial Zone, undertake sowing of mustard this week; keeping the temperature in mind, before sowing, have the soil tested for sulphur, if there is a shortage, add 20 kilograms of sulphur per

hectare to the field during the final ploughing, after that, sow early maturing varieties; sow in furrows 30 x 15 cm apart and 3-4 cm deep. Prepare the fields for planting potato; make a solution of Carbendazim + Mancozeb @ 2g/litre of water and treat the tubers by dipping them in it.

- In North West Alluvial Plain Zone, monitor the crops such as wheat, maize, peas, lentils and rajma from Kajra (Katua) Pillu; in case of excessive damage, spray Chlorpyrifos 20 EC @ 2.5ml per litre of water; do weeding and earthing-up. Give light irrigation as per requirement to the potato crop planted last month.
- In South Bihar Zone, complete the sowing of late-sown mustard. For healthy onion seedlings, remove weeds from the nursery at intervals of 10 to 12 days and provide light irrigation. Irrigate wheat and vegetable crops as needed. Protect potato, vegetables, and fruit nurseries from cold night temperatures and monitor the vegetables and pulses crops for pest/disease due to high morning humidity.

Jharkhand

- In Western Plateau Zone, go for sowing of gram, pea, green gram and cole crops. Carry out fertilizer and pesticide application and irrigation activities. There is a possibility of infestation of pod borer pests in the pigeon pea crop which is in the pod formation stage; to control, use Imidacloprid 17.8 SL or Spinosad 45 SC @ 0.5ml per litre of water.

Animal Husbandry

- In Bihar, vaccinate all animals against HS and BQ diseases. For green fodder production, use barseem (Meskawi and Bardhan), oat (Kent) variety and Lucerne.

West Bengal & Sikkim

Sub-Himalayan West Bengal

- In Hill Zone, undertake harvesting of Mandarin oranges and store in a dry, cool area. Complete the planting of potato. Apply need-based irrigation to cabbage, broccoli and garden pea crops.
- In Terai Zone, complete sowing of mustard and winter maize. Undertake planting of potato. Monitor cucumber, bottle gourd, squash, pumpkin for Downey Mildew disease due to foggy conditions.
- In Old Alluvial Zone, continue harvesting of matured rice and black gram; after harvesting, produce should be dried in the field for 2-3 days and thereafter threshing should be done. Complete the sowing of mustard and winter maize crops. For the management of fruit borer and stem borer in brinjal, apply Triazophos 40 EC @ 1.5ml or Spinosad 45 EC @ 0.2ml or Cartap Hydrochloride @ 0.75g per litre of water.

Gangetic West Bengal

- In Coastal Saline Zone, complete the threshing of Aman paddy. Boro paddy is at seedling stage, take special care for preventing low temperature shock; remove water from the seed bed through channel; apply water only when soil of seed bed will be found with hairlike cracks; arrange a transparent polythene cover over the seed bed. Undertake sowing of sunflower.
- In Laterite and Red Soil Zone, complete the harvesting of matured kharif rice; carry out proper drying of harvested grains to prevent fungal infections due to foggy conditions; store grains in dry, well-ventilated areas and use fumigants to prevent pest attacks. Prepare land and sow rabi crops like potato, lentil, mustard, sunflower, wheat, chickpea, and sesame for optimal growth and yield.

Andaman & Nicobar Islands

- Continue harvesting of cinnamon bark and black pepper berries. Undertake sowing of green gram. Maintain field sanitation in the banana plantation; remove old leaves to prevent pest build-up.

Animal Husbandry

- In West Bengal, provide warm bedding using dry straw and ensure proper insulation in sheds to protect cattle from cold stress. Vaccinate cattle against Foot and Mouth Disease (FMD) and Haemorrhagic Septicaemia (HS) to safeguard their health during winter. Deworm cattle to enhance nutrient absorption and boost immunity during the cold season.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Realised rainfall: Weather remained dry over the region.

Advisories:

- **As Cold wave conditions** very likely at isolated places over Madhya Maharashtra and Vidarbha during next 24 hours, apply light and frequent irrigation /sprinkler irrigation in the evening to protect the crops from cold injury. To protect young fruit plants from chilly winds, cover young fruit plants with straw/polythene sheets/gunny bags.

Maharashtra

- In Konkan, as dry weather is expected during next 5 days, continue harvesting of matured arecanut. Complete sowing of mustard. Provide irrigation to newly planted orchards, vegetables and nurseries as per the requirement. Undertake intercultural operations in horse gram, cowpea, sweet corn and baby corn. Apply urea fertilizer @ 825g per guntha to one month old transplanted chilli and @ 1.1 kg per guntha to one month old transplanted brinjal and tomato To control sap sucking pest in horse gram and cow pea, spray Lambda Cyhalothrin 5% EC @ 6ml per 10 litres of water.
- In Madhya Maharashtra, as dry weather is expected during next 5 days, continue picking of cotton. Complete sowing of wheat. In view of cold wave conditions at isolated places on 12th December, due to low temperatures, the growth of wheat may be hampered, irrigation should be applied during the evening hours as required, and nutrients should not be applied to the soil during cold weather. Spray thiourea @ 500 ppm (500g thiourea in 1000 litres of water) and also apply irrigation during evening hours to protect sensitive crops like gram from cold injury. Apply light and frequent irrigation/sprinkler irrigation in rabi crops and grape vines during evening hours to protect them from cold injury and to avoid cracking of grape berries. Cover young fruit plants with sarkanda / straw / polythene sheets / gunny bags, erect shade nets around grape vines and pomegranate orchards to minimize cold impact. To protect banana plantations from cold injury, erect barriers using sorghum/pearl millet/maize stalks or install green shade nets around the plantations, apply organic mulching such as sugarcane trash or soybean husk around the plants, apply irrigation during evening hours. Due to cloudy and humid weather in last week the incidence of blight is observed in onion, to control spray Diphenconazole 25% EC @ 10ml per 10 litres of water.
- In Marathwada, as dry weather is expected during next 5 days, continue picking of cotton. Complete sowing of irrigated wheat. Apply second dose of 50 kg of Nitrogen per ha to 20 to 30 days old wheat. Due to foggy weather, increase the incidence of pod borer in pigeon pea is observed, to control spray of Emamectin benzoate (5 SG) @ 4.4g or Indoxacarb (15.8 EC) @ 6.6ml per 10 litres of water. To control sucking pest (aphids, jassids & thrips) in onion, spray 5% NSKE.
- In Vidarbha, as cold wave conditions is likely to persist at isolated places on 12th December apply light and frequent irrigation in pigeon pea, chickpea, linseed, safflower and mustard. As mainly dry weather is expected during next 5 days, continue picking of cotton Complete sowing of irrigated wheat,continue intercultural operations in timely sown rabi sorghum, sesame, chickpea, linseed, mustard and safflower. Apply irrigation in timely sown wheat. Due to cloudy weather, to control pod borer in pigeon pea, spray Quinalphos 25% EC @ 16ml or Emamectin Benzoate 5% SG @ 3g per 10 litres of water. To control sap sucking pest (aphids) in irrigated / late-sown safflower, spray Dimethoate 30% EC @ 13ml/10 litres of water.

Gujarat

- In Middle Gujarat Zone, pick the cotton lint from opened cotton bolls. Complete the late-sowing of wheat. Maintain consistent soil moisture in the tobacco field to prevent stunted growth and small leaves. Undertake earthing up in banana upto 15-20cm height around root zone and frequently remove suckers around the mother plant; in prevailing dry and cool weather conditions, apply irrigation to ensure optimum soil moisture conditions in the standing banana crop.
- In Bhal and Coastal Zone, pick the cotton lint from opened cotton bolls. Spray insecticides like Triazophos 35 EC or Profenophos @ 10ml or Fenvalerate @ 5ml mixed in 10 litres of water to control pod borer and pod fly infestation in pigeon pea crop.
- In North West Zone, undertake sowing of *Rabi* fennel. Continue sowing of late-sown wheat, chickpea, cumin and lucerne. To control pink bollworm in Hybrid/ B.T. cotton, spray Deltamethrin or Triazophos @ 10ml in 10 litres of water.

- In North Gujarat Zone, complete the sowing of wheat, chickpea and cumin. Irrigate the timely-sown wheat crop at CRI stage. Apply light irrigation during evening hours to mustard, chick pea, potato, castor, cotton and horticultural crops to minimize the adverse effects of prevailing cold weather conditions. There are chances of blight in the potato crop; to control, spray Mancozeb 0.2% @ 30g plus concentrated desi soap solution @ 25ml in 10 litres of water; if required, repeat the spray after 10 days.
- In South Saurashtra Zone, continue sowing of cumin and coriander; seeds must be treated with fungicides Captan or Thiram or Carbendazim @ 2g/ kg to prevent wilt. Complete the sowing of late-sown wheat varieties; apply irrigation to the timely-sown crop at CRI stage; to control aphids on tender leaves of wheat, spray Neem oil 1% @ 20ml or NSKE 5% per litre. Apply need-based irrigation to the standing *Rabi* crops.
- In South Gujarat Zone, carry out picking of cotton in the morning hours. Continue planting of sugarcane. Continue sowing of *Rabi* pulses like Indian bean, gram & green gram. For the control of sucking pests in pigeon pea, spray Beuveria Basiana @ 40gm or Thiamethoxam 25WG 0.01% @ 4g or Flonicamid 50 WG @ 4g mixed in 10 litres of water.
- In South Gujarat Heavy Rainfall Zone, carry out harvesting of Elephant foot yam and tender tannia leaves. Undertake sowing of pointed gourd and little gourd in the gaps. Carry out planting of sweet potato cuttings. Apply need-based irrigation to pulses and vegetable crops.
- In North Saurashtra Zone, continue sowing of wheat, gram, cumin, fennel, coriander and garlic. Monitor the pigeon pea crop for pod fly and pod borers; if infestation is observed, spray Quinalphos or Profenophos @ 20ml/10 litres of water for the control of pod fly and Spinosad @ 4ml or Emamectin benzoate @ 7g/10 litres of water for the control of pod borer complex.

Animal Husbandry

- In Gujarat, feed animals with a mixture of green grass + hay + minerals + dry feed. Newly borne calves should be protected from cold conditions. All milch animals should be kept in cattle sheds during night. Udder of milking animals must be properly cleaned with Zinc oxide or boric powder. It is recommended to vaccinate cattle against Hemorrhagic Septicemia.

CENTRAL INDIA [M.P, CHHATTISGARH]

Realised Rainfall: Weather remained dry over the region.

Advisories:

- **As Cold wave conditions** very likely at isolated places over Chhattisgarh during next 48 hours, apply light and frequent irrigation /sprinkler irrigation in the evening to protect the crops from cold injury. To protect young fruit plants from chilly winds, cover young fruit plants with straw/polythene sheets/gunny bags.

Madhya Pradesh

- In Satpura Plateau Zone, carry out nipping of gram plants for more branching at branching stage (30-35 DAS); thinning should be done for proper plant to plant spacing of 12-15 cm. In view of dry weather conditions, irrigate the mustard crop which is about 30-35 days old and broadcast of nitrogen. To control sucking pests in Bt cotton, spray Thiamethoxam at 5.0 to 7.5g per pump (0.35–0.5 g per liter of water); to control flower and pod drop, spray Planofix @ 0.3ml per liter of water.
- In Nimar Valley Zone, when branches emerge in gram at the age of 30 days, carry out nipping followed by irrigation. In wheat crop, first irrigation should be done at the age of 20 to 25 DAS; after irrigation, sprinkle 25 kg/acre urea; for weed control, mix 160g/acre of Clodinofof 15% + Metsulfuran 1% in 200 litres of water and spray it with flat fan nozzle when the field is moist at 30 DAS.
- In Jhabua Hills Zone, chick pea is at vegetative stage, use 'T' shaped bird perches @ 20-25 per hectare and Pheromone trap @ 8 traps/ hectare to control of caterpillars in early stage; if caterpillars attack increases, spray Emamectin benzoate @ 10ml/pump; give irrigation to chickpea crop at 30 to 35 DAS; undertake for more branching. During the boll opening stage of cotton, keep field neat & clean; timely and neatly pick cotton bolls to ensure good market value.
- In Gird Zone, first irrigation should be done in mustard crop at 35-40 days' stage and after irrigation, give adequate amount of nitrogen. To control weeds in gram crop, weeding must be done once during the growth

stage. In pea crop give first irrigation at the stage of 35 to 40 days from sowing.

- In Central Narmada Valley Zone, prepare field for sowing of wheat crop under dry condition with the help of seed drill and turbo happy seeder; after sowing, irrigate the crop. In late harvested paddy fields use zero tillage machine for sowing of wheat. In Brinjal crop, apply Betacyfluthrin 8.49% + Imidacloprid 19.81% OD @ 80-100ml/acre for control of pests.
- In Malwa Plateau Zone, harvest soybean crops timely after physiological maturity to prevent yield/quality deterioration; harvest early maturing soybean varieties once 90% of pods turn yellow, sun-dry the harvested soybean before threshing.
- In Vindhya Plateau Zone, carry out soil bunding and apply first irrigation in the potato crop. To control powdery mildew disease in pea, beans, chick pea, lentil, coriander and cucurbits etc., spray Carbendazim 0.1%.
- In Bundelkhand Zone, in view of the current and forecasted dry weather conditions, carry out hoeing and weeding in the vegetable and fruits crops; apply irrigate and broadcast / apply urea. If shoot and fruit borer attack is observed in brinjal crop, spray Quinalphos 25 EC @ 2.0ml per litre of water.
- In Kymore Plateau and Satpura Hill Zone, pigeon pea is at flowering stage, use 'T' shaped bird perches @ 20-25 & Pheromone traps @ 8 traps per acre to control caterpillars in early stage; if attack is more (2-3 caterpillar in one-meter row), spray Triazophos @ 800 ml/ha. Start early sowing of green vegetables like radish, fenugreek, spinach, mustard (vegetable purpose), coriander and turnip at optimum soil moisture conditions.

Chhattisgarh

- In North Hill Zone, prepare nursery for rabi vegetables crops. Procure good quality seeds of wheat and start field preparation; use 100 kg seeds per ha for sowing. Sowing of mustard may be done; before sowing, soil testing for sulphur should be done and in deficient areas 20 kg sulphur per hectare should be applied during last ploughing. Sowing of gram should be done; before sowing ensure optimum soil moisture for better seed germination. Sowing of pea should not be delayed as late sowing reduces the yield and exposes the crop to insect damage; before sowing, ensure optimum soil moisture for better seed germination.
- In Bastar Plateau Zone, undertake harvesting of matured mid-late rice variety. Undertake sowing of improved variety of chickpea. Irrigation should be done at all the critical stages of mustard like during branch formation, flowering, pod formation and grain filling. Irrigation should be done at all the critical stages of Lathyrus like before flowering and during grain filling. For transplanting of improved varieties of tomato and cauliflower, spray nitrogen: phosphorus: potash @ 100:80:60 per hectare respectively. For transplanting of improved varieties of chilli and brinjal, spray nitrogen: phosphorus: potash @ 120:80:60 per hectare respectively. Undertake sowing of improved variety wheat; treat seeds with Carbendazim @ 2g per kilogram; use Azotobacter and PSB cultures for biofertilizer treatment.
- In Chhattisgarh Plain Zone, harvest the matured paddy crop on priority basis; after harvesting, use happy Seeder for direct sowing of rabi seeds along with agricultural residue (para) management. Sowing of chickpea in time will help to prevent wilt disease; if there is recurring infestation of wilt and collar rot disease in gram crop every year, follow crop rotation with rabi wheat, lathyrus, safflower and linseed crops. For management and monitoring of pod borer in pigeon pea, install pheromone traps and T-shaped pegs and change the pheromone septa every 15 days; if attack is more, spray Indoxacarb 14.5 SC @ 353-400 ml /ha. In case of aphid infestation in mustard crop, use predatory insect (lady bird beetle) or Chrysopa; in case of heavy infestation, use insecticide Dimethoate (Roger) 30EC @ 1 litre/hectare in 600-800 litres of water or Imidacloprid @ 5ml mixed in 15 litres of water; if required, spray again at an interval of 15 days.

Animal Husbandry

- In Madhya Pradesh, to protect animals from cold, spread straw/dry grass on the floor at night and tie the animals in the sun during the day.
- In Chhattisgarh, to protect 6-7 weeks-old poultry birds from Ranikhet and Smallpox diseases, undertake proper vaccination of the birds. Animal bedding should be dry and changed daily.

NORTH INDIA [JAMMU & KASHMIR (UTs), HIMACHAL PRADESH, UTTARAKHAND, PUNJAB, HARYANA, DELHI, UTTAR PRADESH & RAJASTHAN]

Realised Rainfall: Weather remained mainly dry over the region.

Advisories:

Punjab

- In Western Zone, undertake late sowing of wheat and nursery of rabi onion. Transplanting of Gobhi Sarson is more profitable during the period than direct sowing. It is optimum time for sowing of raya varieties and African sarson. Undertake sowing of pea and European varieties of carrot.
- In Western Plain Zones, undertake sowing of late-sown varieties of wheat and apply first irrigation to early-sown wheat. Undertake transplanting of Gobhi sarson. Undertake harvesting of early maturing varieties of sugarcane and apply light irrigation if needed for late varieties of sugarcane. Irrigate vegetable crops as per the requirement.
- In Undulating Plain Zone, continue sowing of wheat and mustard. Apply irrigation to the timely-sown mustard crop. Cover the newly planted fruit saplings with date palm leaves or sarkanda and apply water as per their requirement.
- In Sub Montane Undulating Zone, complete the sowing of late varieties of rabi crops. Give first irrigation and second dose of nitrogen 3 weeks after sowing of wheat. Carry out thinning of mustard crop three weeks after sowing. Undertake sowing of radish, carrot, *Chini* sarson, coriander, fenugreek, palak and nursery sowing of onion.
- In Central Plain Zone, undertake sowing of late-sown wheat under irrigated conditions. Undertake harvesting/crushing (for mill purpose) of early maturing varieties of sugarcane; protect crop from frost by applying irrigation around mid-December. Complete the harvesting of toria to avoid losses owing to shattering. Carry out hoeing to gram and lentil to keep weeds under check. Complete the transplanting of tomato seedlings in the first fortnight of this month. Protect the sensitive and young fruit plants such as mango, papaya, guava, litchi, dragon fruit etc against cold. Apply 1-2 irrigations to fruit trees laden with fruits e.g. guava, ber, citrus.

Haryana

- In Western Zone, continue sowing of wheat crop under irrigated condition; apply first irrigation after 21 days after sowing of wheat crop. Undertake sowing of barley. Carry out weeding, thinning and weeding operation in timely sown mustard crop. Apply the required irrigation in the standing vegetable crops.
- In **Kaithal, Karnal & Kurukshetra** districts, in view of the prevailing dry weather, provide light irrigation in wheat, sugarcane, mustard and potato crops.

Delhi

- Undertake late sowing of wheat. Keeping dry weather conditions in view, irrigate wheat crop which is in CRI stage (21-25 days after sowing). Undertake transplanting of onion and healthy seedlings of tomato, cauliflower, cabbage, knol-khol and broccoli in a raised bed. Due to high relative humidity, infection of blight may occur in potato and tomato; monitor the crops and, if symptoms appear, spray Dithane-M-45 @ 2g/litre of water. Thinning and weeding is recommended in late-sown mustard crop; if low temperatures continue for two weeks, monitor the crop for white rust.

Uttar Pradesh

- In Western Plain Zone, continue sowing of wheat in irrigated condition; apply light irrigation in wheat 20-25 days after sowing (at crown root initiation stage). Complete the sowing of chickpea 2207 (Awadh) as soon as possible. Continue weeding followed by irrigation in the vegetable crops sown in October. Prepare the field for transplanting onion; mix rotten dung manure of 25 to 30 quintal per hectare 3 to 4 weeks before transplanting; use 7 to 8 weeks old seedlings and transplant at a distance of 15 × 10cm. Continue planting of garlic at optimum soil moisture conditions. Undertake weeding in mustard crop after 25-30 days of sowing. In mustard, pruning/thinning of excessively dense plants may be done 15-20 days after sowing or before the first irrigation; keep 10-15 cm distance between plants.
- In Central Zone, apply first irrigation 20-25 days after sowing (Crown root Initiation stage in wheat crop; if broad-leaved weeds are seen, sprinkle sulfosulfuran solution in 500-600 liters of water @ 75% WP 33g/ha or matribujin 70% WP 250g/ha. Undertake nipping in the gram crop, if the crop has reached height of 15-20 cm.

For control outbreak of cutworm (caterpillar insect) in chick pea crop, spray Chlorpyrifos 50% EC + Cypermethrin 5% EC @ 2.0 liters/ha in 500-600 liters of water. Weeding and irrigation may be done as per the requirement of timely-sown vegetables. In mustard crop, apply first irrigation 30-35 days after sowing; for the control of saw fly and hairy caterpillar, spray Emamectin Benzoate 5% SG @ 200g/ha in 500-600 litres of water. In pea crop, weeding & hoeing may be done after 20-25 days of sowing. Carry out the transplanting of papaya seedlings.

- In Bundelkhand Zone, continue transplanting of broccoli, cauliflower, cabbage and tomato, chilli, etc.; recommended spacing may be maintained; nursery preparation may be started for late crop. Irrigate all crops as per requirement. Continue thinning and weeding in mustard crop; apply irrigation at 30-35 DAS. Apply first irrigation in wheat crop at 21-22 DAS; fertilizers may be applied at 4-5 days after first irrigation. Continue nursery sowing of *rabi onion*; 10 kg/ha seeds may be used for sowing; before sowing, seeds may be treated with Captan @ 2.5 g/kg of seeds.
- In Eastern Plain Zone, continue sowing of rapeseed, garden pea and garlic. Continue sowing of wheat at optimum soil moisture. Continue planting of potato and transplanting of early broccoli, cabbage, cauliflower, brinjal, tomato, and chilli. Continue sowing of Sarson saag, bathua, radish, French radish, spinach, fenugreek and coriander. Continue planting of early varieties of sugarcane. Continue sowing of garden pea. Continue sowing of barley under irrigated conditions by selecting recommended varieties. Continue sowing of recommended varieties of lentil. Arrange seeds of recommended varieties for nursery sowing of *rabi onion*. Continue sowing of coriander, fennel, fenugreek, nigella, celery, cumin and soya. For simultaneous control of both narrow and broad leaf weeds, spray 3.3 liters of Pendimethalin 30% EC per hectare by dissolving it in 600 liters of water within 3 days after sowing. To prevent fruit rot disease in amla, spray borax (@ 6 to 8g per litre of water) and use recommended quantity of fertilizers in the trays. To prevent canker disease in lemon, spray 2 to 3g Copper oxychloride or 600mg streptomycin per litre of water.

Rajasthan

- In Sub Humid Southern Plain and Aravali Hill Zone, complete the sowing of wheat, barley. In late sown mustard, apply first irrigation before flowering. To control blight in gram, spray of Mancozeb @ 2g/litre of water. Undertake sowing of *rabi onion*. Complete the sowing of opium in this week.
- In Flood Prone Eastern Plain Zone, carry out hoeing & weeding in mustard crop and use agro chemicals if needed. For the management of vector of leaf curl virus in chilli, spray Spiromesifen 240 SC @ 1ml/liter of water.
- In Transitional Plain Zone of Inland Drainage Zone, apply first irrigation in mustard and the remaining quantity of nitrogen at 28-35 DAS. Spray half a kilogram of 2-4 D. Ester Salt 38% EC chemical per hectare to destroy broad leaf weeds in the barley crop. Apply the first irrigation to wheat 20-25 days after sowing when the crown roots are setting.
- In Hyper Arid Partially Irrigated Western Plain Zone, apply top dressing of 15kg urea/bigha in wheat with first irrigation. Apply first irrigation in mustard at 25 days after sowing.
- In Semi-Arid Eastern Plain Zone, complete the sowing of wheat (late sown varieties). To control blight, white rust and mildew in mustard, spray COC 50 WP @ 3g per litre of water. Apply first irrigation to mustard at 30-35 DAS, to gram at 40-50 DAS and to barley at 25-30 DAS.
- In Arid Western Plain Zone, complete the sowing of wheat at the earliest. To control weeds in cumin crop, spray Oxadiargyl or Oxyfluorfen @ 50g per hectare after 20 days of sowing.
- In Irrigated North Western Plain Zone, apply first irrigation at 25-30 days (CRI Stage) after sowing the timely sown wheat and barley crops. Irrigate the gram crop after 50-55 DAS.
- In Southern Humid Plain Zone, complete the sowing of wheat. In the timely-sown mustard/rapeseed, gram fields, first hoeing and weeding should be done at 25 to 35 days after sowing. Continue picking of cotton. To control shoot borer in mango, remove affected grafts or seedlings and spray with recommended insecticides.
- In Southeastern Humid Plain Zone, for controlling broad leaf weeds in wheat, spray 2,4-D ester 500g or 2,4-D Amine salt 750g active ingredient per hectare by dissolving it in 500-700 liters of water at 30-35 days after

sowing. Complete the sowing of barley by selecting recommended varieties.

Himachal Pradesh

- In Mid Hills Sub Humid Zone, farmers are advised to monitor the aphid population in cabbage and cauliflower; if noticed, spray neem-based formulation @ 2ml/litre of water.
- In Sub Montane and Low Hills Sub Tropical Zone, complete the sowing of wheat; ensure proper soil moisture. Continue nursery sowing of onion and planting of garlic. Complete the transplanting of cauliflower, cabbage, knol-khol, broccoli and Chinese cabbage.
- In High Hills Sub Temperate Wet Zone, continue nursery sowing of onion and sowing of wheat.

Jammu & Kashmir

- In Sub Tropical Zone, continue sowing of late-sown wheat varieties. Harvest the matured toria crop if 75-80% of the pods (Siliqua) turn brown in colour. Keep the bundles of harvested crop in stacks for 6-7 days. Dry the harvested crop well before threshing. Carry out hoeing & weeding in potato and 20 days old lentil crop. Carry out staking in peas.
- In Intermediate Zone, in view of the dry weather conditions, carry out intercultural operations (like hoeing) in one month old wheat, mustard, chick pea and field pea crops to suppress weed growth and conserve moisture. Carry out hoeing cum weeding operation in onion, garlic and root crops to keep down weeds. Provide staking to the pea vines. Protect vegetable crops from frost by covering them with suitable thatching material prepared from Sarkanda/rice straw or any other material.
- In Valley Temperate Zone, transplanting of onion seedlings may be carried out in well prepared fields. Planting of garlic and pran may be done. Avoid field operations early in the morning when frost or dew is present to prevent damage to tender tillers. Maintain mulching using straw, leaves, or crop residues around the base of plants as protection against frost injury. Avoid any field operations during early morning hours when frost or frozen dew is present on foliage. Polyhouses may be utilized for growing leafy vegetables. Maintain weed free conditions in all vegetable crop fields.

Uttarakhand

- In Bhabar and Tarai Zone, complete late sowing of chick pea and lentil at the earliest. Harvest the matured tomato fruits and flower heads of cauliflower. Continue sowing of vegetable pea and radish. On occurrence of frost/fog, irrigation should be applied to the fields at regular intervals. Apply irrigation to rapeseed and mustard crops as per requirement. First irrigation in timely sown wheat crop should be applied at 20-25 DAS; 3-4 days after irrigation application top dressing of urea should be done; weeding and hoeing should be done at 25-30 days and 45-50 days after sowing.
- In Hill Zone, continue transplanting of onion. Apply light irrigation in the evening to protect vegetables and other crops from frost. Build a frost barrier structure for protection against frost in small fruit plants. Monitor crops for pests and disease infestation and take precautionary measures accordingly. Carry out pit digging work for plantation of temperate fruits. Apply irrigation in standing crops like wheat, potato, rapeseed crops as per requirement. To control aphid attack in toria crop, spray Neem oil @ 2-3ml or Imidacloprid 17.8 SL @ 0.25ml per litre of water.
- In Sub Humid Sub Tropic Zone, apply light irrigation to chickpea, lentil, rapeseed and mustard to prevent frost damage. Apply irrigation to wheat and barley, 20-25 days after sowing. Undertake nursery sowing of tomato and cover it with a plastic sheet to encourage germination.

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