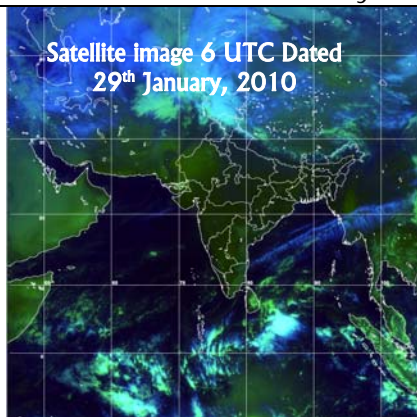




National Agromet Advisory Bulletin

Thursday, 28th January (For the period 28th January to 1st February, 2010)



Rainfall Forecast valid upto 1430 hours IST of 31st January, 2010

- **Few Places:** Jammu & Kashmir and Himachal Pradesh.
- **Isolated Places:** Arunachal Pradesh, Uttarakhand, Punjab, Chhattisgarh, Tamil Nadu & Puduchery, and Andaman & Nicobar Islands.
- **Dry:** West Bengal, Sikkim, Orissa, Jharkhand, Bihar, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Chhattisgarh, Maharashtra, Gujarat, Andhra Pradesh, Telangana, Rayalaseema, Kerala, Karnataka and Lakshadweep.
- **Mainly dry:** Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Haryana, Delhi, West Rajasthan and Coastal Andhra Pradesh.

Major features of weather forecast (upto 1430 hours IST of 31st January, 2010).

- Fog / shallow fog conditions would occur in the morning hours over parts of East Uttar Pradesh, Bihar and Sub-Himalayan West Bengal & Sikkim during next 24 hours.
- Maximum temperatures may rise by about 2°C over Uttar Pradesh and Bihar during next 24 hours.
- No significant change in minimum temperatures over western Himalayan region and adjoining plains of northwest India during next 48 hours and slight fall thereafter.
- Scattered rain / snow would occur over parts of western Himalayan region during next 2 days.
- Isolated rain / thundershowers would occur over adjoining plains of northwest India during next 2 days.

Weather Outlook (upto 1430 hrs IST of 2nd February, 2010)

- Isolated rain / snow would occur over western Himalayan region.
- Isolated rainfall activity may occur over Arunachal Pradesh.
- Dry weather conditions will prevail over remaining parts of the country.

Advisories for cold injury in Jammu & Kashmir, Punjab, Haryana, Himachal Pradesh, Uttar Pradesh, Delhi and Madhya Pradesh

- Farmers in Jammu & Kashmir, Punjab, Haryana, Himachal Pradesh, East Uttar Pradesh and Delhi are advised to undertake the following measures to safeguard the crops from cold injury –
 - Apply irrigation to the crops in the early morning to overcome adverse effects of low night temperature.
 - Arrange for burning farm waste materials around the field to reduce the impact of low temperature.

Advisories for the remaining States

- As there was no significant rain in the country during last week and mainly dry weather is likely to prevail in most of the States during next five days, farmers are advised to apply need based irrigation to the standing crops.

Advisories for pest and disease

- Due to favourable weather condition, there are chances of pest and disease incidences in the following regions:
 - pod borer in gram and blight in mustard in Rajasthan.
 - *alternaria* blight, downy mildew and white rust in rapeseed and mustard, early and late blight in potato, aphids in sarson and *raya* in Punjab.
 - pod borer in gram and pea, thrips in onion and late blight in potato in Delhi.
 - blight in gram and lentil, aphids in mustard and late blight in potato in West Bengal.
 - aphids in mustard in Uttarakhand.
 - aphids in pulses and mustard, late blight in potato, blight in mustard and tikka in groundnut in Orissa.
- Farmers are advised to undertake plant protection measures, if required.

Issued by

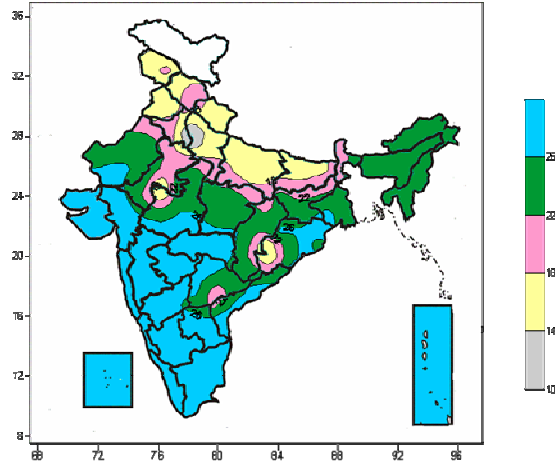
National Agrometeorological Advisory Service Centre,

Agricultural Meteorology Division, India Meteorological Department, Shivajinagar, Pune.

The bulletin is also displayed in the website (<http://www.imdagrimet.org>) of the Division

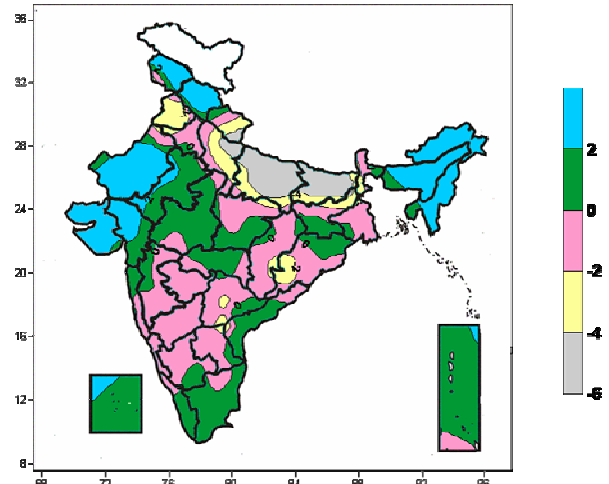
Contour maps for the week ending 27.01.10

Actual Mean Maximum Temperature (°C) in India for the week ending 27.01.10



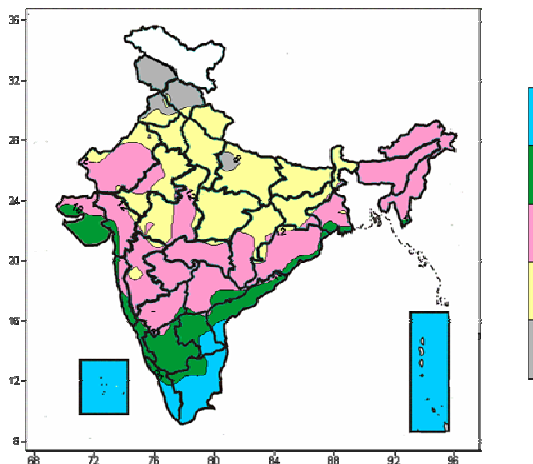
Actual Mean Maximum temperature ranged between 22 to 26°C over most parts of West Rajasthan, Madhya Pradesh, Chattisgarh, Jharkhand, Gangetic West Bengal, North East India, some parts of East Rajasthan, Sub-Himalayan West Bengal, Orissa, Gujarat, Vidarbha, Andhra Pradesh, North Interior Karnataka, 18 to 22°C over most parts of Sub-Himalayan West Bengal & Sikkim, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Rajasthan, Uttar Pradesh, Madhya Pradesh, Bihar, Jharkhand, Orissa, Chattisgarh, Telangana, Coastal Andhra Pradesh, 14 to 18°C over most parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Uttarakhand, Uttar Pradesh, Bihar, some part of Haryana, Delhi, East Rajasthan, West Madhya Pradesh, Chattisgarh, Orissa, 10 to 14°C over some parts of Haryana, West Uttar Pradesh, 26°C and above over remaining parts of the country.

Maximum Temperature (°C) Anomaly in India for the week ending 27.01.10



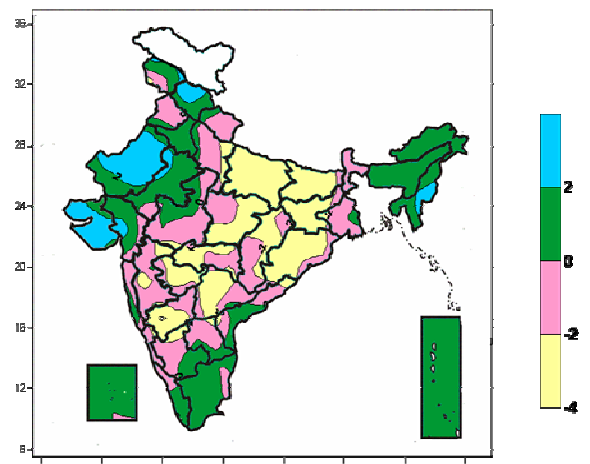
Actual Mean Maximum temperature anomaly ranged between 2°C and above over most parts of Jammu & Kashmir, Himachal Pradesh, North East India, West Rajasthan, Saurashtra & Kutch, Gujarat, some parts of East Rajasthan, Andaman & Nicobar, Lakshadweep Island, 0 to 2°C over most parts of East Rajasthan, Madhya Pradesh, Coastal Andhra Pradesh, Vidarbha, Tamil Nadu, Kerala, Andaman & Nicobar, Lakshadweep Island, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, West Rajasthan, Haryana, West Bengal, Assam, Tripura, Jharkhand, Orissa, Chattisgarh, Konkan, Madhya Maharashtra, Gujarat, Kutch, Telangana, Rayalaseema, South Interior Karnataka, -4 to -2°C over most parts of Punjab, some parts of Uttarakhand, Haryana, West Rajasthan, Uttar Pradesh, Bihar, Jharkhand, Sub-Himalayan West Bengal, Orissa, Chattisgarh, Andhra Pradesh, -6 to -4 over most parts of East Uttar Pradesh, Bihar, some parts of Uttarakhand, West Uttar Pradesh, -2 to 0°C over remaining parts of the country.

Actual Mean Minimum Temperature (°C) in India for the week ending 27.01.10



Actual Mean Minimum Temperature ranged between 20°C and above over most parts of Kerala, Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands, some parts of Coastal Andhra Pradesh, Rayalaseema, 16 to 20°C over most parts of Saurashtra & Kutch, Konkan & Goa, Coastal & South Interior Karnataka, Rayalaseema, Coastal Andhra Pradesh, some parts of Gujarat, Gangetic West Bengal, Coastal Orissa, Telangana, North Interior Karnataka, Tamil Nadu, Kerala, 8 to 12°C over most parts of Haryana, Delhi, Uttarakhand, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Bihar, Jharkhand, Chattisgarh, Sub-Himalayan West Bengal & Sikkim, some parts of West Rajasthan Himachal Pradesh, Punjab, Orissa, Madhya Maharashtra, Vidarbha, 4 to 8°C over most parts of Jammu &

Minimum Temperature (°C) Anomaly in India for the week ending 27.01.10

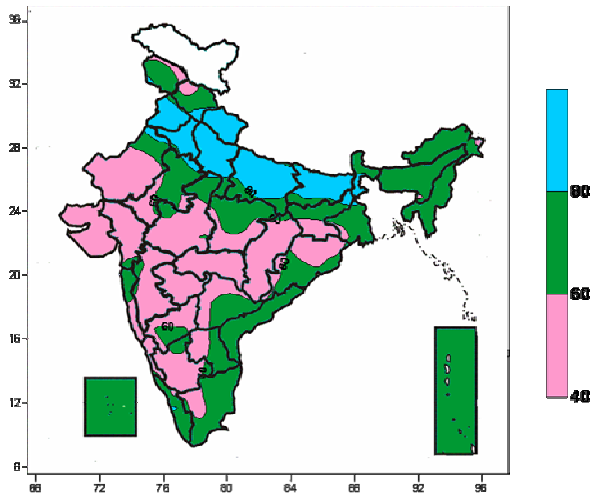


Minimum Temperature anomaly ranged between 2°C and above over most parts of West Rajasthan, Saurashtra & Kutch, some parts of Jammu & Kashmir, Himachal Pradesh, East Rajasthan, Manipur, Mizoram, Gujarat, 0 to 2°C over most parts of Himachal Pradesh, Haryana, Delhi, East Rajasthan, North East India, Gujarat, Tamil Nadu, Kerala, Andaman & Nicobar, Lakshadweep Islands, some parts of Jammu & Kashmir, Uttarakhand, Punjab, West Rajasthan, West Uttar Pradesh, Gangetic West Bengal, Saurashtra, Konkan & Goa, West Madhya Pradesh, Andhra Pradesh, South Interior Karnataka, -4 to -2°C over most parts of East Uttar Pradesh, Bihar, Jharkhand, East Madhya Pradesh, Orissa, Marathwada, Vidarbha, Telangana, North Interior Karnataka, some parts of West Uttar Pradesh, Gangetic West Bengal, Chattisgarh,

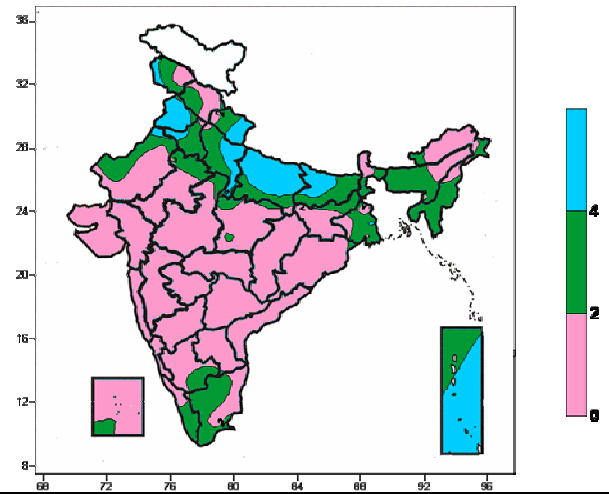
Kashmir, Himachal Pradesh, Punjab, some parts of East Uttar Pradesh, 12 to 16°C over remaining parts of the Country.

West Madhya Pradesh, Madhya Maharashtra, Coastal Andhra Pradesh, Rayalaseema, Coastal Karnataka, South Interior Karnataka, -2 to 0°C over remaining parts of the Country.

Relative Humidity (%) over India for the week ending 27.01.10



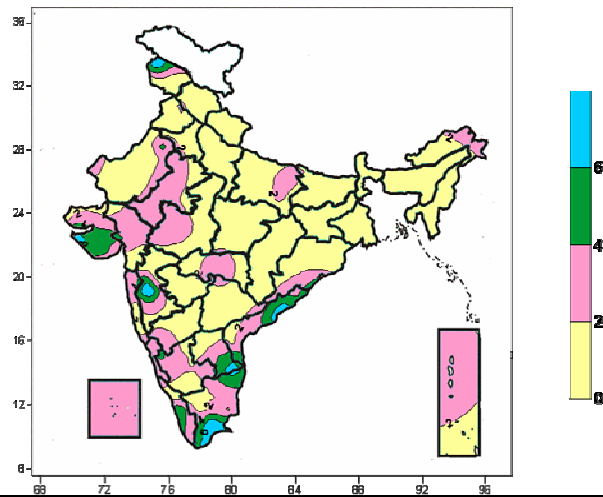
Cloud amount (okta) over India for the week ending 27.01.10



Relative humidity between 80% and above over most parts of Punjab, Haryana, Delhi, Uttarakhand, Uttar Pradesh, Bihar, some parts of Rajasthan, Sub-Himalayan West Bengal, Jharkhand, 60 to 80% most parts of Jammu & Kashmir, Himachal Pradesh, East Rajasthan, East Madhya Pradesh, West Bengal & Sikkim, North East India, Coastal Orissa, Andhra Pradesh, Tamil Nadu, Kerala, Andaman & Nicobar, Lakshadweep Islands, some parts of Punjab, Haryana, West Rajasthan, West Madhya Pradesh, Uttar Pradesh, Bihar, Jharkhand, Chattisgarh, South & North Interior Karnataka, Konkan, Madhya Maharashtra, Gujarat, 40 to 60% over remaining parts of the country.

Cloud amount 4 okta and above over most parts of East Uttar Pradesh, Punjab, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Haryana, West Rajasthan, Uttarakhand, West Uttar Pradesh, Bihar, 2 to 4 okta over most parts of Haryana, Delhi, West Uttar Pradesh, West Bengal, Assam & Meghalaya, Manipur, Mizoram, Tripura, Kerala, Tamil Nadu, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Rajasthan, Punjab, East Uttar Pradesh, Bihar, Jharkhand, Arunachal Pradesh, Nagaland, Madhya Pradesh, South Interior Karnataka, Andaman & Nicobar, Lakshadweep Islands, 0 to 2 okta over remaining parts of the country.

Wind speed (knots) over India for the week ending 27.01.10



Wind speed ranged between 6 knots and above over some parts of Jammu & Kashmir, Saurashtra, Kutch, Madhya Maharashtra, Tamil Nadu, Rayalaseema, Coastal Andhra Pradesh, 4 to 6 knots over some parts of Jammu & Kashmir, Saurashtra & Kutch, West Rajasthan, Madhya Maharashtra, South Interior Karnataka, Tamil Nadu, Kerala, Rayalaseema, Coastal Andhra Pradesh, 2 to 4 knots over most parts of East Rajasthan, Gujarat, Coastal & South Interior Karnataka, Andaman & Nicobar, Lakshadweep Islands, some parts of Jammu & Kashmir, West Rajasthan, Saurashtra & kutch, Madhya Pradesh, East Uttar Pradesh, Arunachal Pradesh, Vidarbha, Konkan & Goa, Madhya Maharashtra, Coastal Orissa, Andhra Pradesh, Tamil Nadu, Kerala, North Interior Karnataka, 0 to 2 knots over remaining parts of the country.

Zonewise Agromet Advisories

NORTH WEST INDIA [J & K, H. P., UTTARAKHAND, PUNJAB, HARYANA, DELHI, UP]

Himachal Pradesh

- **Realised Rainfall:** There was no significant rainfall in most of the districts of the State during last week.
- **Rainfall Forecast:** Isolated to scattered rain is likely to occur over the State during next 48 hours and Weather will be mainly dry after that.
- **Major Rabi Crops:** Wheat (tillering), gram and lentil (vegetative / flowering / pod formation) and vegetables.
- **Advisory:**
 - Farmers are advised to undertake the following measures to safeguard the crops from cold injury.
 - Apply light and frequent irrigation to the crops in the early morning to overcome chilling injury.
 - Arrange for burning farm waste materials around the field to reduce the impact of low temperature.
 - Undertake weeding and apply irrigation in wheat, gram and lentil.
 - Undertake sowing of radish (var. Early Meno White, Japanese White, Chinese Pink and Plump Hriday), peas (Palm Priya or Linclon) in the fields. Treat the seeds with 2.5 g Sevin or bavistin per kg of seeds before sowing of pea crop. Drench the crop with Dithane M-45 @ 2 g and Bavistin @ 1 g for the control of damping off of nursery.
 - As there was no significant rainfall in the State during last week and no significant rain is likely to occur during the period, the farmers are advised to apply need based irrigation to wheat, gram, lentil and vegetable crops.
- **Major Seasonal Crop:** Fruit crops, floral crops and Vegetables.
- **Advisory:**
 - Weather condition is conducive for cleaning and preparation of basins in the orchards.
 - It is time for nursery raising of tea plants in polythene tubes. Do lopping of the tree in the tea orchards to have more sunlight.
 - Start transplanting the fruit plants of good & right varieties in already made pits.
 - Complete the work of preparation basins in temperate fruits. Complete the training and pruning in stone fruits.
 - In apple plants of more than ten years apply well rotten FYM (100 kg), Super phosphate (2 kg once in two years) and 1 kg of Potash.
 - For nursery raising stratify the seeds of temperate fruits by placing seeds and sand in alternate layers in a wooden box. Keep the material moist and it will be ready for sowing after one month.
 - It is time for planting the winter flowers annuals viz. calendula, aster, larkspur, dianthus, African daisy, stasis, lupines, petunia, flox, nicotiana, vanadium and torinia. Flowers can be raised in the pots, hanging pots, rocks etc. Keep the flower beds free from the weeds. Remove the apical shoot in winter annuals to have more side branches to cover the entire pot. It is time for sowing of bulbous flowers like fresia, tulips and nargis etc.
 - It is also an optimum time for transplanting of Strawberries in raised beds.
 - As there was no significant rainfall in the State during last week and no significant rainfall is likely to occur during the period, the farmers are advised to apply need based irrigation to floricultural crops.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - citrus canker, spray streptocyclin sulphate 500 ppm solution for the control of canker in citrus.
 - aphids in floricultural crops, spray malathion @ 0.05%.
 - downy mildew in cruciferous vegetables, for control spray ridomil MZ @ 25 g per litre of water at 15 days interval. For control of powdery mildew in peas, spray celfex @ 25 g per 10 litres of water or karathane @ 5 ml per 10 litres of water.
 - To control the root borer in apple, irrigate the basins after removing the upper soil with 10-15 liters of the solution of Chlorpyrifos 20 E.C. @ 5 ml per liter of water.
 - powdery mildew in cauliflower, spray Dithane M-45 (500 g) or Redomil MZ (500 g) per 200 liters of water. If need arises repeat the spray after 12-15 days.
- **Animal Husbandry:**
 - For milch animals follow schedule of 1 kg feed+50 g mineral mixtures per 2 litres of milk. This schedule will maintain the reproductive ability of animals.

- Undertake deworming of animals. Ensure cleanliness in cows having advanced pregnancy to avoid mastitis. Protect the animals from cold as temperature is expected to fall in next week.
- For the control of ticks and mites in animals spray butox @ 2 ml per litre on animal's body / skin and @ 1-3 ml / litre of water in cowsheds.
- **Poultry:**
 - Protect the birds from cold and increase the feed by 10%. Replace the poultry houses with fresh litter to avoid wetting and keep the houses clean and ensure clean drinking water to the birds.
 - Climate is congenial for attack of Diarhiria and cocksedia. So, consult the nearby veterinarian. Put marbel (calcium) grits for calcium for layers.
- **Fisheries:**
 - With the advancement of the winter the metabolic activity of the fish falls and as a result the quality of the fish meat is improving and it is becoming tastier and can fetch a better price and may be sold at premium rates.
 - It is also time to disinfect the fish tank by draining out the water and exposing the bottom floor of the tank to direct sunlight.
- **Honeybees:**
 - Due to winter season enough flora is not available for bees, therefore, farmers are advised to give artificial feed of 50% sugar and 50% water solution to honey bees.
 - Also ensure proper packing to the apiary to protect from cold.

Uttarakhand

- **Realised Rainfall:** There was no significant rainfall in most of the districts of the State during last week.
- **Rainfall Forecast:** Isolated rainfall is likely to occur after 24 hours over the State.
- **Major Rabi crops:** Wheat (vegetative/earhead emergence), mustard, lentil, pea, chickpea, rajmah(early vegetative)
- **Advisory:**
 - Farmers are advised to undertake the following measures to safeguard the crops from cold injury.
 - Apply light and frequent irrigation to the crops in the early morning to overcome chilling injury.
 - Arrange for burning around the field using farm waste materials to reduce the impact of low temperature.
 - Farmers are advised to top dress Urea @ one kg per Nali in wheat to boost the ear head emergence utilizing the last week rainfall with facilities of irrigation.
 - Complete weeding and intercultural operations and top dress 1/2 kg Urea per Nali in mustard crop.
 - Undertake weeding and intercultural operations in other standing crops like pea, chickpea, rajmah etc. for their better growth.
 - Complete harvesting and threshing operations of matured toria crop during this week.
- **Major Seasonal Crop with stage:** Sugarcane (planting/early vegetative), cabbage, cauliflower, garlic, tomato (vegetative), French bean (early vegetative).
- **Crop Condition:** Good
 - **Advisory:**
 - Continue harvesting of matured crop of sugarcane and complete sowing of winter sugarcane.
 - Farmers are advised to undertake weeding in early sown garlic crop and give irrigation for better crop growth. However, if irrigation facilities are not available, then put straw mulch in between rows for moisture conservation and to protect the crops from cold injury.
 - Continue digging of matured potato crop as per maturity of tubers as dry weather is expected.
 - As no significant rainfall is expected during this week, farmers are advised to sprinkle water in early nursery of tomato, onion and other vegetable crops like coriander, spinach, radish, mentha etc. during this week by sprinkler method.
 - Apply need based irrigation to the standing vegetable crops like coriander, spinach, radish, mentha etc.
 - Farmers are advised to protect the newly planted orchard form cold by providing thatches around the seedling and arrange smoking around the field.
 - Continue sowing of tomato varieties like VL Tomato-3, Pant T-3, Him Sona, Him Shikhar etc. varieties in nursery under optimum soil moisture. Farmers may go for sowing of capsicum with varieties like

California Vander, Pus Dipti, Anupam, Heera, Indira, Supriya and Bharat etc. under optimum soil moisture in nursery.

- Continue sowing of VL Bean-1 and VL Bean -2 varieties of french bean during this week. If pods of vegetable pea are ready then harvest and sent to the nearby market. Continue digging of potato crop on maturity of tubers and then take them to the market for selling.
- Apply irrigation in onion and other vegetable crops like coriander, spinach, radish, mentha etc. during this week.
- Undertake weeding, hoeing and mulching in cauliflower, cabbage and Shimla mirchi.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - white rust in pea, spray 0.5 % solution of Carbendazim immediately at an interval of 10 days.
 - aphids in mustard. If the aphids are seen in 10 % population, then spray 200 SL Imidachlorpid @ 3 ml per 10 litre of water.

Punjab

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Isolated rainfall is likely to occur during next 48 hours and mainly dry weather thereafter over the State.
- **Major Rabi Crops with stage:** Wheat(early vegetative/tillering), raya, rapeseed and mustard (early vegetative/vegetative), potato(vegetative)
- **Advisory:** Farmers are advised to undertake the following measures to safeguard the crops from frost injury.
 - Apply light and frequent irrigation to the crops in the early morning.
 - Arrange for burning around the field using farm waste materials.
 - Farmers are advised apply second irrigation to wheat.
 - Undertake intercultural operations in early sown wheat, raya, taramira, lentil and chickpea.
 - To early sown raya, apply 45 kg urea per acre with first irrigation.
 - Weeding operation in timely sown rape seed and mustard crops may be undertaken.
- **Major Seasonal crop with stage:** Sugarcane (early vegetative/vegetative), vegetable crops (vegetative)
- **Crop Condition:** Good
 - **Advisory:** Farmers are advised to protect the non seed and seed sugarcane crop from frost by frequent and light irrigation. For ratoon crop, harvest it at close to the ground as possible for better sprouting. Apply irrigation to the harvested field and plough it in between the rows for weed control.
 - Farmers are advised to cut the fodder at intervals in Lucerne to make the fodder available during the lean period.
 - Farmers are advised to undertake sowing of early crop of muskmelon, watermelon, bottle gourd and pumpkin in poly bags. This technique is suitable for raising early crops of all the cucurbits in the kitchen gardens and for commercial cultivation of muskmelon, water melon, pumpkin, ash gourd and bottle gourd. Use seed rate of 200-500 g to raise seedlings for one acre.
 - Pruning of deciduous fruit trees like peach, plum and pear may be carried out. The fruit plants like peach, plum and bare-rooted ber may be planted. Old unproductive pear trees can be rejuvenated during this period.
 - Harvest the kinnow fruits as the best time for harvesting kinnow fruits starts from 15th January. For the fruits intended to be consumed after more than 10 days, individual seal packing may be done. Use high density polyethylene (HDPE) bags for individual packing of kinnow fruits and seal the open end by heating or with rubber band after narrowing and twisting it.
 - Continue the cold wave protection measures for nursery plants.
- **Advisory for Plant Protection:** Weather conditions are favourable for mild incidences of –
 - alternaria blight/downy mildew/white rust in rapeseed and mustard. Spray the crop with 250 g Blitox or Dithane M 45 in 100 litres of water per acre for the control. Start sprays when the crop is 75 days old. Repeat spray at 15 days interval.
 - early and late blight of potato, spraying the crop with Dithane M 45 @ 500-700 g/acre.
 - powdery mildew in pea, spray the crop with Karathane @ 80 ml/acre or Suflex @ 600 g/acre.
 - aphid in sarson/ raya, spray the crop with 40 g Actara 25 WG or 400 ml of Metasystox 25 EC in 100 litres of water per acre.
 - powdery mildew in ber. Spray Karathane 20 EC @ 0.05%.

- **Animal Husbandry:** Arrange dry bedding to animals helps to save them from cold. Entry of very cold winds inside the shed should be minimized. Keep the animals under roof in night and in the sun during the day time.

Haryana

- **Realised Rainfall:** Dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Dry/mainly dry weather is likely to occur over the State.
- **Major Rabi Crops:** Wheat(early vegetative/tillering), raya and mustard(early vegetative/vegetative)
- **Advisory:**
 - Farmers are advised to undertake the following measures to safeguard the crops from cold injury.
 - Apply light and frequent irrigation to the crops in the early morning to overcome chilling injury.
 - Arrange for burning around the field using farm waste materials to reduce the impact of low temperature.
 - Apply the irrigation in timely sown raya/mustard crop.
 - Farmers are advised to prepare field and complete sowing of sunflower hybrids varieties like MSFH-8, KBSH-1, KBSH-44, PAC-36, HSFH-848 and PCHS-234 by 15th February. Treat the seed with Bavistin 2 g or Thiram 3 g/kg seed.
 - Undertake sowing of recommended varieties of maize like HM-4 and HQPM-1 by first week of February. Treat the seed with Imidacloprid or Thiomethoxam @ 6 ml/kg seed to protect from shoot fly.
- **Major Seasonal crop with stage:** Sugarcane (early vegetative/vegetative), vegetable crops (vegetative)
- **Crop Condition:** Good
- **Advisory:**
 - Apply light irrigation to autumn planted sugarcane crop. Cover the soil with stubbles of harvested crop as trash mulch in ratoon crop.
 - Continue sowing desi varieties of radish (Punjab Pasand & Punjab Safed), turnip (L-1 & 4-white) and carrot (No. 29 PC-34 and Sel. 21), pea, potato and palak (Punjab Green). Transplant fully developed seedlings (4-6 week old) of main season varieties of cauliflower. Sowing of late season varieties of cauliflower i.e. Snow-Ball-16, Pusa Snow ball 1 & Pusa Snow ball K-1 can be continued.
 - This is suitable time for planting of evergreen fruit plants like sweet orange, mandarin, lime, lemon, guava and ber. For checking pre-harvest fruit drop, spray the trees with 10 ppm of 2, 4-D and 0.3% of Zinc sulphate. In citrus, leaf miner can be checked by spraying 500 ml of Sumicidin 20 EC or 1000 ml Ripcord 10 EC or 1250 ml Hostathion 40 EC in 500 litres of water. In grapes, spray the vines with Bavistin @ 400g/400 litres of water to control anthracnose.
 - Farmers are advised to undertake weeding and hoeing and intercultural operations in tomato, onion and chilli.
- **Advisory for Plant Protection:** Weather conditions are favourable for mild incidences of –
 - white rust and saw fly in mustard, farmers are advised to monitor the crop and spray 600 grams Mancozeb/Dithane M-45 in 250 to 300 liters of water per acre to control white rust, if required. Spray Malathion 50 EC @ 200 ml or Endosulphan 35EC @ 400 ml in 200 lit. of water/acre to control saw fly.
 - bacterial blight in guar, farmers are advised to spray the crop with 400ml blitox and 30 grams of streptomycin in 200 liters of water per acre.
- **Animal Husbandry:** Farmers are advised to protect animals against from cold winds. Farmers are advised to give the 50grams Iodized salt and 50 to 100 grams mineral mixture daily to keep them healthy.

Delhi

- **Realised Rainfall:** Weather was mainly dry during last week.
- **Rainfall Forecast:** Mainly dry weather is likely over the State.
- **Major Rabi Crops:** Wheat (tillering); pea and gram (flowering / pod initiation); vegetable crops (vegetative / flowering / fruiting).
- **Advisory:**
 - Irrigation is advised in late sown wheat crop of 22-25 days old. Application of final dose of nitrogen should be applied after 3-4 days of irrigation. Application of weedicide such as 2, 4-D @ 0.5-0.75 Kg / ha against wide leaf weeds is advised after 30-35 days of sowing.

- Sowing of spinach, coriander, fenugreek may be done in present weather conditions. Foliar spray of 20 kg urea per acre may be done to maintain foliage health.
- Intercultural operations should be undertaken in cole crops and also in carrot, radish, turnip and sweet potato.
- Light irrigation should be given after each harvest of berseem.
- Preparation of field may be done for transplanting of summer chilli crops seedlings in polyhouses.
- As dry weather prevailed over the State during last week and mainly dry weather is likely to prevail during the period, the farmers are advised to apply need based irrigation to the standing crops.
- **Plant Protection:**
 - As weather is dry and congenial, application of Chlorpyrifos @ 1 litre mixed in 50 kg of sand in the evening hours for control of termite is recommended followed by subsequent irrigation.
 - Weather conditions are favourable for mild incidences of –
 - pod borer in gram, installation of Pheromone traps @ 3-4 traps per acre is advised to monitor pod borer population if flowering has reached 10-15%. “T” shaped bird perches in and around crop field may be installed.
 - diamond back moth in cole crops, installation of Pheromone traps @ 3-4 traps per acre to monitor the pest population of diamond back moth is advised.
 - late blight in potato, in present weather conditions constant monitoring of crop against attack of late blight is advised. Spraying of Diethane M-45 @ 2 ml / litre of water is recommended.
 - thrips in onion, constant monitoring of timely sown onion crop against attack of thrips should be done. Spraying of Carbaryl @ 2 grams per litre of water is advised.
 - purple blotch disease in onion, monitoring of crop against infection of purple blotch should be done. Need based spraying of Diethane M -45 @ 3 grams per litre of water is advised (400-500 litres/ hectare).
 - aphids in root crops, foliar spray of Metasystox @ 1 ml per litre of water is advised.
 - white rust in late sown mustard crops, removal of older leaves near surface and spraying of Sulfox is advised.
 - pod borer in pea and fruit borer in tomato, constant monitoring of pea against pod borer and tomato against fruit borer with installation of pheromone traps @ 3-4 traps per acre is advised. Spraying of *Bt* formulation is advised.

Uttar Pradesh

- **Realised Rainfall:** All the districts of the State received no significant rainfall during last week.
- **Rainfall Forecast:** Dry weather is likely to occur over West and East Uttar Pradesh.
- **Major *rabi* crops:** Wheat (early vegetative/tillering), maize, gram, pea, and lentil (early vegetative).
 - As there was no rainfall in most of the districts and dry weather is likely for the next five days, the farmers are advised to apply irrigation to the standing *rabi* crops. Farmers are advised to save *rabi* crops from frost / fog and severe cold by arranging smoke around the field along with light watering and spray the solution of Bavistin.
 - Weeding and hoeing, and top dressing of recommended amount nitrogen may be done in wheat and to control broad leaf weeds apply 2, 4 – D sodium salt @ 625gm/ hectare.
 - Undertake weeding, intercultural operation and top dressing in barley, gram, pea, rai, mustard and lentil.
 - Weeding, hoeing, watering as per requirement, application of recommended fertilizers may be done in pea, lentil, winter vegetables, vegetable pea, turmeric, potatoes, mango, lemon, mustard, alsi crops.
- **Major Seasonal Crop with stage:** Sugarcane (grand growth), winter sown sugarcane(early vegetative), vegetables (vegetative/fruitletting), mango (fruit setting).
- **Crop Condition:** Good
- **Advisory**
 - Undertake weeding, intercultural operations and application of fertilizers in the standing crops like sugarcane, vegetables and mentha.
 - Undertake first cutting of fodder barseem.
 - Sowing of garlic may be done after purification of seeds at the seed rate 500- 700 kg seeds/ hectare at distance 15 x 7.5 cm.

- Weeding, hoeing raise of soil use of recommended fertilizers along with watering as per requirement may be done in sown winter crops of Sugarcane.
- Farmers are advised to make smoke around the mango garden along with light watering to save from frost / fog.
- Harvesting of early varieties of potato and turmeric may be done and weeding, hoeing and watering as per requirement may be done.
- Harvesting, marketing of winter vegetable may be done along with watering as per requirement.
- Weeding, hoeing watering as per requirement in garlic in interval of 15 days may be done.
- Transplant the ready seedlings of Onion in the main field.
- Undertake interculturing by ploughing in between rows and watering as per requirement in interval of 15 days may be done in banana garden and to save from frost / fog make smoke around the garden along with light watering.
- Undertake interculturing by ploughing in between rows and application of recommended fertilizers along with watering as per requirement may be done in mango garden and to save from frost/ fog make smoke around the garden along with light watering.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
 - sawfly in mustard, spray the solution of Endosulphon 35 EC @ 1.25 litre per hectare in 600 – 800 litre of water.
 - mal formation disease in mango, spray the solution of Naphthalene Acetic acid @ 200 ppm or 4ml. Planofix in 9 litre of water.
 - cankers disease in lemon, spray the solution of Blitox 3-4 gram/litre of water.
 - fruit borer in tomato and brinjal, spray the solution of Carbaryl @ 2 g / litre of water.

J & K

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Rainfall is likely to occur at a few places over the State during next 24 hours and at isolated places there after.
- **Major Rabi crops:** Wheat, barley, brown sarson (vegetative), vegetables (vegetative/ flowering/ fruiting).
- **Advisory:**
 - Farmers are advised to undertake the following measures to safeguard the crops from cold injury.
 - Apply light and frequent irrigation to the crops in the early morning to overcome chilling injury.
 - Arrange for burning around the field using farm waste materials to reduce the impact of low temperature.
 - In orchards cover fruit plants with sarkanda or other such materials in order to protect from cold/frost.
 - Undertake transplanting of tomato and onion crop in Jammu division during these days.
 - Undertake intercultural operations, application of fertilizers and pesticides in mustard, gram, field peas and other cole vegetable crops on a non rainy day.
 - Weed control application in early sown wheat crop by hand hoe or apply isoproturon @ 0.75 a.i.+2,4-D ethyl ester @ 500ml /ha on a non rainy day for control of both types of weed (broad & narrow leaves), when crop is 30-35 days old.
 - Undertake hoeing and weeding in transplanted crops like cabbage, cauliflower, kale and other standing crops on a non rainy day.
- **Plant Protection:**
 - Due to dry weather conditions, there are chances of termite incidences in wheat and barley crop. To control spray Endosulphan 35 EC @ 2.285 liters/ha or Chloropyriphos 20EC @ 4.0 liters/ha.
 - The prevailing weather condition may likely to increase the infestation of aphid in early sown mustard crop. To control spray Metasystox @ 0.03 per cent or Chloropyriphous @ 0.05 per cent & repeat the spray after 15 –20 days interval.
 - Weather conditions are favourable for the incidences of cabbage butterfly, aphids and thrips in cole crops. Spray Malathion @ 0.2 % to control cabbage butterfly in cole crops and for controlling aphids and thrips, spray Metasystos @ 2 ml / litre of water.
 - The prevailing weather condition may likely to increase the infestation of aphids in early sown mustard crop; spray Metasystox @ 0.03 per cent or Chloropyriphous @ 0.05 per cent to control & repeat the spray after 15 –20 days interval.

- Weather conditions are favourable for the incidences of stem rot of berseem; with hold irrigation for a few days after each cutting and give one spray of carbendazim 50 WP @ 0.1 %.
- Spraying of chemicals may be undertaken on a non rainy day
- **Animal Husbandry:** Due to decrease in temperature cover the poultry shed with gunny bags in order to protect the birds from cold weather. Protect the pregnant and milch animals from cold and feed them mineral mixture regularly.

Rajasthan

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Dry/mainly dry weather is likely to prevail over the State.
- **Major Seasonal Crop with stage:** wheat, gram, mustard (vegetative) vegetable crops (flowering / fruiting / harvesting)
- **Crop Condition:** Good
- **Advisory:**
 - Undertake intercultural operations in sweet gourd, cucumber, pumpkin, bitter gourd, tinda, tomato and ladies finger.
 - Sow seeds in nursery for raising seedling of autumn vegetables. Use following improved varieties for nursery sowing: Tomato: Pusa Rubi, Pusa Early and Vihar. Brinjal: Pusa Summer Prolific Round, Pusa Summer Prolific Long, Meghdoot, Navin and Arka Bahar, Cucumber: Balam and Pusa Sahyog. Smooth gourd: Chikni and Nasdar.
 - Start weeding in gram and mustard crops.
 - Start preparation of field for the sowing of cluster bean, cowpea & early cucurbits like muskmelon, watermelon, ridge gourds, bitter gourds etc.
 - Apply irrigation and top dress nitrogen in late sown wheat crop.
- **Animal Husbandry:**
 - Vaccinate animals against FMD and BQ in consultation with local veterinarian. Arrange for curtains in poultry in Bharatpur region.
- **Plant Protection:** Weather conditions are favourable for
 - pod borer attack in gram; dust Melathion 5% or Methyl Parathion 2% @ 20-25 kg/ha before flowering and pod formation.
 - soft rot/ black rot of cabbage; spray streptomycin 200 mg or copper oxychloride 2 g/lit of water.
 - Cutworm may cause serious damage to gram crop during night. Apply Chlorophyphos @2.5 lit/ha with irrigation water.
 - Due to favourable weather conditions, methi, pea, cumin and coriander are likely to be affected by powdery mildew attack. Spray Karathane @ 1.0 ml or calaxin @ 1.0 ml per litre water or dust sulphur @ 25 kg per hectare
 - Mango hopper may attack mango plants. To control this insect spray Melation 50 EC @ 1.0 ml or Endosulfan 35 EC @ 1.5 ml per litre water.
 - Alternaria blight (black spot) disease may attack mustard crop in some pockets. Destroy the plants infested with the disease. Spray Iprodione or Mencozeb @ 2 kg/800 litre solution. Repeat the spray in 15 days interval.

EAST INDIA [JHARKHAND, BIHAR, ORISSA, WEST BENGAL & SIKKIM]

Bihar

- **Realised Rainfall:** Mainly dry weather prevailed over the state during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major Rabi Crops:** Wheat (tillering), maize, gram, pea, and lentil(early vegetative/vegetative), potato(vegetative)
 - As there was no rainfall in the State and dry weather is likely for the next five days, the farmers are advised to apply irrigation to the standing *rabi* crops.
 - Farmers are advised to provide second irrigation in November sown wheat for better growth of crop and also provide irrigation in wheat crop if it comes in panicle stage or emergence of panicle and should be last top dressed with urea @ 88 kg /ha. For control of weeds in December sown wheat weeding should be provide by hand or spraying of Isoproturon @ 1 kg a.i./ha dissolve in 700 to 800 liters of water.

- Undertake weeding, intercultural operation and top dressing in barley, gram, pea, and lentil.
- Farmers are advised to apply irrigation and last dose of nitrogen for better growth and yield of Oat.
- Provide irrigation, weeding and earthing up in *rabi* maize crop.
- Prepare the field and undertake sowing of vegetables and fodder crops.
- Farmers are advised to provide the irrigation in potato at the interval of 10 to 15 days to protect from cold weather.
- Prepare the field for sowing of sunflower, maize and transplanting of onion seedling.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
 - late blight in potato, spray Dithane M-45 or Ridomil @ 2gm/liter of water for control of late blight of potato.
 - aphid in mustard and rai, apply metasystox (25 EC), Monocrotophos @ 2gm per liter of water to protect the crop.
 - powdery mildew in peas. Apply Sulfex @2gm/liter of water or Bavistin @1gm/ liter of water or Kara than 1gm /liter of water for control of the disease.
 - stem borer, pod borer in peas, gram. Spray Endosulphan (35EC) @1.5 ml/liter of water at 15 days of intervals.
 - powdery mildew disease in mango, spray Metasystox @ 1.0 ml or Sulphex @ 2.0 gm per litre of water + Planofix @ 1.0 ml./4.5liter of water.
- **Major Seasonal Crop with stage:** Sugarcane (grand growth) and vegetables (vegetative/fruited), mango (fruit setting).
- **Crop Condition:** Good
- **Advisory**
 - Undertake weeding, intercultural operations and application of fertilizers in the standing crops like sugarcane, vegetables and mentha.
 - Complete sowing Barseem at the earliest and undertake first cutting of fodder.
 - Sowing of garlic may be done after purification of seeds at the seed rate 500- 700 kg seeds/ hectare at distance 15 x 7.5 cm.
 - Apply irrigation, top dressing with urea and plant protection measures must be done as per need in vegetable crops like tomato, brinjal, cauliflower, cabbage etc.
 - Apply irrigation in potato at an interval of 10 to 15 days to protect from cold weather and pala.
 - Apply irrigation to newly planted fruits trees to protect from the cold weather, if the fruit trees are in flowering, then not apply irrigation to the garden.

Jharkhand

- **Realised Rainfall:** There was no significant rainfall during last week over the State.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major *Rabi* Crops:** Wheat(early vegetative/tillering), rai, toria, gram, peas, potato, mustard(vegetative/flowering)
- **Crop Condition:** Good
- **Advisory:**
 - As there was no significant rainfall in most of the districts and dry weather is likely for the next five days, the farmers are advised to apply irrigation to the standing *rabi* crops.
 - Apply second irrigation to crops sown in the month of November and third irrigation may be given at the interval of 15 to 20 days. Rest of the urea may be given before flowering. Farmers are advised to do interculturing at regular interval.
 - At the time of flowering of mustard, apply urea 20 to 25 kg/acre. Apply first irrigation at the time of flowering and second irrigation at pod formation. During the time of flowering, farmers are advised to top-dress urea @ 20 to 25 kg per acre two days after irrigation.
 - Undertake weeding, intercultural operations and top dressing in early sown *rabi* crops.
- **Major Seasonal Crop with stage:** Sugarcane (vegetative/grand growth), vegetables(vegetative)
- **Crop Condition:** Good
- **Advisory:**

- Farmers are advised to spray ammonium molybdate 1gm/litre of water in cauliflower to manage the deficiency of molybdenum and to maintain the quality of flower. Apply required irrigation in morning.
- Farmers who seeded potato crops in early November may apply urea 50 kg /acre. Farmers are advised to give irrigation at 10 to 15 days interval. Farmers who have taken early potato may go for onion in fallow land after harvesting of potato. Irrigate the crop to protect the crops from cold.
- Farmers are advised to apply top dressing of urea to tomato only when the moisture is available in the soil. Apply need based irrigation at the interval of 10 to 15 days.
- Farmers are advised to stop irrigation and digging of potato may be done, if potato is in matured condition.
- Apply irrigation and undertake interculture operations in tomato crop.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
 - aphid in mustard and rai, apply metasystox (25 EC), monocrotophos @ 2gm per liter of water to protect the crop.
 - fruit borer in brinjal, Spray emidochloropid @ 1.0 ml/liter of water.
 - powdery mildew in early pea. Spray cairathane @ 1ml/litre of water or sulfex 3gm/litre of water.
 - blight disease in tisi, spraying of mancozeb @ 2ml/litre of water is recommended.
 - leaf folder in arhar, spray Endosulfan @ 2ml/litre of water. To protect the plant from aphid spray the plant with Methyl Demeton @ 1.0 ml/litre of water.
 - tikka disease in late sown groundnut. Farmers are advised to spray Sitara @1 ml/ litre of water.
 - powdery mildew in early pea. In this white powder like substance may be seen on leaves, stem etc. Farmers are advised to spray as a preventive spraying of cairathane @ 1ml/litre of water or sulfex 3gm/litre of water.
 - leaf folder and pod borer in arhar, apply endosulfan @ 2ml/litre of water. Spray with monocrotophos @1 ml/litre of water to control pod borer.

Orissa

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Dry weather is likely to occur over the State during next five days.
- **Major rabi Crops:** wheat (tillering/jointing), pulses, sunflower, groundnut (vegetative), mustard (pod formation/maturity).
- **Advisory:**
 - As there was no rainfall in the State during last week and mainly dry weather is likely for the next five days, apply irrigation to the *rabi* crops.
 - Undertake weeding, intercultural operations and application of fertilizers of *rabi* pulses like lentil, field pea and chickpea.
 - Undertake field preparation for sowing of summer maize, groundnut and sunflower. Early sown summer sunflower crop is at 20 days, go for hoeing and weeding. Thin out seedlings keeping one healthy plant per hill and complete sowing of sunflower by the end of this week.
 - Undertake nursery sowing of summer rice and complete transplanting within January. Select varieties among Khandagiri, Lalat and Surendra etc. 10 decimal area is sufficient for nursery sowing for one acre planting. In early sown nursery, maintain water depth upto the base of the plant followed by weeding when the crop is around 3-4 leaf stage. Plant one seedling per hill in SRI method.
 - Undertake intercultural operations, top dressing and earthing up followed by light irrigation in sunflower. Apply gypsum @ 2.5 q/ha to sunflower, if it is not applied at the time of sowing.
 - Undertake harvesting of matured mustard crop and dry the plants under sun for easy threshing and safe storage.
 - **Major Seasonal Crop with stage:** Sugarcane (early vegetative), vegetables (fruiting / harvesting), onion (vegetative).
- **Crop Condition: Good**
- **Advisory:**
 - Undertake transplanting of cole crops at 3-week stage.
 - Undertake weeding, intercultural operations and application of fertilizers.

- This is the ideal time for planting of marigold. Undertake planting with seedlings of Ceracol variety may be planted at 30 x 30 cm spacing and fertilizer @ 40:80:80 kg N-P₂O₅- K₂O /acre may be applied at the time of land preparation.
- **Plant protection:** Weather conditions are favourable for mild incidence of
 - spodoptera in cabbage and cauliflower. Farmers are advised to go for alternate spraying of B.T product 1 kg or 250 LE SLNPV/acre at weekly interval or use 4 Trichogramma cards per acre.
 - aphid in pulses and mustard. Apply 4 ml Neem based pesticide or 2 ml Metasystox per each litre of water to control aphids.
 - leaf eating caterpillar in vegetable crops. Spray Endosulfan @ 2 ml/l to control.
 - diamond back moth, mustard saw fly and borer in cole crops, spray Malathion @ 2ml/l of water.
 - late blight in potato, spray with 2 kg Dithane-M-45 in 500 l of water thoroughly.
 - blight in irrigated mustard. Spray 1 kg Copper Oxchloride or 800 g Dithane-M 45/acre in 200 litre of water to control
 - tikka disease in groundnut. Spray Saaf/Sixer @2g/litre of water.
 - fruit and shoot borer brinjal, aphids and white fly in tomato, thrips in chilli. Spray Endosulfan @ 2ml/litre of water or at later stages, apply 150g Dimilin and 300g Caldan in 200 litre of water in 1 acre to control fruit and shoot borer in brinjal. To control the attack of aphids and white fly, apply Metasystox @ 2ml/ litre of water. To control thrips in chilli, spray Metasystox or Rogor @ 2ml/litre of water.
- **Animal Husbandry:** calf and kids are susceptible to respiratory infection mostly pneumonia. Provide warm and comfortable housing to animals. Now-a-days, poultry birds are prone to respiratory infection and CRD (Chronic Respiratory Diseases). Provide comfortable warm housing and good ventilation. In case of disease outbreak, therapeutic measures are to be taken up. Vaccination for FMD (Foot and Mouth Disease) of animals is to be taken up. In case of disease outbreak, strict isolation of affected animals should be done.

West Bengal

- **Realised Rainfall:** There was no significant rain during last week in most of the districts of the State.
- **Rainfall Forecast:** Mainly dry weather is likely to prevail over the State.
- **Major Crops:** *Boro* rice, vegetables, mustard.
- **Crop Stage:** Sugarcane (vegetative), vegetable crops (vegetative / flowering / fruiting), mustard (flowering / pod formation), *boro* rice (seedling / transplanting), potato (tuber formation).
- **Crop Condition: Good**
- **Advisory:**
 - The seedlings of *boro* rice are ready for transplanting within five to six weeks (4-5 leaves stage). 100 kg of FYM or compost per bigha is spread uniformly after first ploughing and 9 kg of urea (two splits), 54 kg of SSP and 11 kg of MOP per bigha should be incorporated into the soil after seven days of first ploughing. Two to three seedlings may be planted at 20 x 15 cm spacing and in the depth of 5 cm in the main field. The level of water is maintained at a depth of 2-3 cm during transplanting.
 - As night temperature is low, the young seedlings of *boro* rice should be applied with irrigation water during night to protect the seedlings from low temperature and fog and drain out the water in the next morning. To avoid the cold injury in seed bed, drag the rope in the early morning to drop down the dew from leaf canopy.
 - Two percent urea or DAP (20 g of urea or DAP per litre of water) should be sprayed at the time of pod formation stage to increase the yield of pulse crops (gram, lentil and *Lathyrus*).
 - Undertake sowing of high yielding varieties of groundnut like A.K. 12-24, J. L.-24.
 - Initiate preparation of cultivation of ladies finger, Kakrol, Amaranthus etc.
 - As there was no significant rain during last week and mainly dry weather is likely to prevail, apply irrigation to wheat and mustard crop at flowering stage.
 - For vegetables like ridge gourd, bitter gourd and pumpkin, weeding should be done and soil should be loosened. Then topdressing with nitrogen fertilizer along with a light irrigation is also recommended. For those crops about to bear fruits, make the soil loose at the base of the plant followed by weeding. In fruit dropping case of chilli, brinjal and tomato, spray Planofix @ 1 ml per 4 litres of water.

- **Plant protection:**

- Due to high humidity and fog, pulses (gram, lentil and *Lathyrus*) may be infected by blight and rust diseases. Farmers are advised to spray the crop with *Tricoderma* @ 5gm / litre of water, if the disease symptoms appear.
- High humidity and fog during last few days may cause incidence of late blight disease in potato. If disease symptoms appear, spray the crop thoroughly with Copper oxichloride @ 4 g or Mancozeb @ 2.5 g or Cymoxnil 8 % + Mancozeb 64% @ 2.5 g or Metalaxil 8% + Mancozeb 64% @ 2.5 g or Samskil 8 % + Mancozeb 64 % @ 2.5 g per litre of water at 10-12 days intervals.
- Weather conditions are favourable for mild incidences of –
 - downy mildew in pointed gourd, apply 2 gm crilexyl or ridomil per litre of water during late afternoon.
 - aphid in mustard in Old Alluvial Zone, apply Rogor @ 1.5 ml / litre of water.

Sikkim

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Mainly dry weather is likely to prevail over the State.
- **Major crops:** (a) **High hills (1500 to 2000 m): Large Cardamom:** Vegetative **Rabi Vegetables:** Harvesting, **Wheat:** Active Tillering/Flowering/Milking. (b) **Medium hills (1000 to 1500 m): Large Cardamom:** Vegetative **Rabi Vegetables:** Harvesting, **Mustard:** Flowering/Grain formation/ Maturity **Wheat:** Active Tillering/Flowering/Milking; (c) **Low Hills (Below 1000 m): Large Cardamom:** Vegetative **Rabi Vegetables:** Harvesting, **Mustard:** Flowering/Grain Formation/ Maturity. **Wheat:** Active Tillering
- **Crop Condition:** Good
 - **Advisory:**
 - Harvesting of cardamom may be completed. Maturity may be assessed when the capsule of the top most spike turn dark brown and when the capsule come out easily while pulling.
 - Undertake intercultural operations in wheat, mustard and potato to keep the field weed free.
 - Harvesting of vegetables may be undertaken.
 - Harvesting of orange fruits should be done by tree fruit harvester or by hand plucking without damaging the trees.
- **Plant protection:**
 - Chirke and Foorkey infected cardamom plants may be destroyed by uprooting and buried in the pits at regular intervals.
 - Regular inspection may be carried out to observe caterpillar/shoot borer/shoot fly incidence, if any, and may be hand picked and destroyed mechanically.

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

Assam

- **Realised Rainfall:** Dry weather prevailed during last week.
- **Rainfall Forecast:** Mainly dry weather is likely to prevail over the State.
- **Major Rabi Crops:** Wheat (tillering), potato (tuber formation), pea and mustard (flowering / pod formation), vegetables (vegetative / flowering / fruiting / harvesting).
- **Advisory:**
 - As night temperature is low, the young seedlings of *boro* rice should be applied with irrigation water during night to protect the seedlings from low temperature and drain out the water in the next morning. Transplant the seedlings in main field at 3-4 leaf stage. While preparing main field apply fertilizer @ 18 kg Urea, 27 kg SSP, 6 kg MOP per bigha.
 - Apply irrigation to wheat as the period will continue to be dry. Second Topdressing is to be done 3 days after irrigation. Apply irrigation water in early morning due to low temperature.
 - Second earthing up should be done in 75-80 days old potato crop. This should be followed by adequate irrigation.
 - As there was no significant rain during last few weeks, apply irrigation to tomato, mustard, pea, vegetables etc.

- Due to prevailing dry weather arrange for Pitcher drip irrigation in coconut and areca nut for the ensuing period. Alternately after irrigation, mulch the base of the palm with dry hyacinth or with dry straw.
- Land preparation for early summer vegetables like ladies finger, ridge gourd etc. should be started during this period.
- Under rainfed condition optimum time of sowing of squash is mid January to mid February. Suitable varieties are long white, pointed green, round white etc. Seed should be sown @ 10.5 Kg / bigha maintaining a spacing of 2-3 m (row to row) and 1-2 m (plant to plant). Pit size should be 15 cm x 15 cm x 15 cm. After planting the row should be covered with a thin layer of rice straw for better conservation of moisture.
- Farmers are advised to collect the high yielding varieties such as Pratap (SG-1) for green gram and Pant-U-19 for black gram. Seeds should be sown January onwards to March. 3 kg seeds / bigha are required for line sowing in the spacing of 30 cm (row to row) and 10 cm (plant to plant).
- **Major Seasonal Crop:** sugarcane (vegetative / maturity), fruit crops.
- **Crop Condition:** Good
- **Advisory:**
 - Matured sugarcane may be harvested during this period.
 - After harvesting of Khasi mandarin is over, the plants should be neatly pruned. Diseased and dead branches, water suckers should be removed. Spray 1% Bordeaux mixture as preventive measures against multiple diseases. The crop should be irrigated as there is no rain for last few weeks. Mulching around the base of the plant helps in reducing moisture loss.
- **Plant protection:**
 - Chances of late blight infestation is less in tomato as the weather is relatively dry and the sky is clear for several weeks. Hence, spraying of pesticide should be restricted.
 - Weather conditions are favourable for mild incidences of –
 - loose smut disease of wheat, infected plants should be rouged out and burnt or buried, away from the field.
 - aphids in the rapeseed and mustard crop, spray Dimethoate 30 EC @ 2 ml / litre or Chloropyriphos 20 EC @ 2 ml / litre or Rogor 30 EC @ 1-1.5 ml / liter of water. Spraying should be done during afternoon to protect the pollinators like honeybee.
- **Fishery:** As the water level of ponds are going down, the fishery owners may arrange for partial harvesting of marketable sized fish (>700gm). Measures to be taken to prevent EUS disease through liming. To control EUS, dip treatment in 500 ppm potassium permanganate solution may be practiced.
- **Animal Husbandry:**
 - Vaccination to control the Ranikhet & Gumboro diseases of poultry may be done during this period. Artificial lighting may be provided in the poultry house to raise the temperature and to keep the house comfortable for the birds.
 - Dry paddy straw for hay making and preserve for future use.

Arunachal Pradesh

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Mainly dry weather is likely over the State during next 24 hours and isolated rainfall thereafter.
- **Major rabi Crops:** Pea, maize, potato
- **Crop Stage:** Pea(vegetative/pod formation), maize(vegetative/flowering), potato(tuber formation)
- **Crop Condition:** Good.
- **Advisory:**
 - Farmers are advised to undertake the following measures to safeguard the maize, pea and potato crops from frost injury in Tawang district.
 - Apply light and frequent irrigation to the crops in the early morning.
 - Arrange for smoke by burning around the field using farm waste materials.
 - Undertake weeding, intercultural operations and top dressing of fertilizers in pea, maize and potato.
- **Major Seasonal Crop:** Vegetables
 - As there was no rainfall in the State during last few weeks, apply irrigation to the *rabi* crops.

- Farmers are advised to protect the pea, maize and potato from heavy frost by application of light irrigation in Tawang district. In rest of the districts rain water may be conserved to maintain the adequate moisture in the field.
- Matured fruits of orange, guava and pineapple may be harvested for sale and avoid over maturity.
- Transplanted vegetables may be provided with proper irrigation and weeding be done followed by fertilizer application.
- Harvest the winter crop of vegetables which are ready for harvest particularly the cauliflower curd be avoided to over mature.
- Light irrigation in potato may be given for good tuberisation followed by earthing up and fertilizer application.
- **Plant Protection:** Weather conditions are favourable for mild incidence of
 - blight in potato, may be protected by spraying the metalaxyl containing fungicide @ 2g/lit water.
 - aphids in pea, spray Endosulfan @ 2 ml/lit of water to protect from pea aphids.
- **Animal Husbandry:** Vaccination and deworming from time to time for gastrointestinal parasites be done with mineral mixture supplement in feed.

SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS]

Andhra Pradesh

- **Realised Rainfall:** Mainly dry weather prevailed over the State.
- **Rainfall Forecast:** Dry/mainly dry weather is likely to prevail over the State
- **Major Crops:** Cotton, Sugarcane and Vegetables
- **Crop Stage:** boll development (cotton). Early sown *rabi* crops are at late vegetative/flowering stage.
- **Crop Condition:** Good.
- **Advisory:**
 - As there was no rainfall during last week, farmers are advised to apply irrigation to standing *rabi* crops like groundnut.
 - Third split dose of fertilizer ie, 35 kg urea and 15 kg MOP per acre is to be applied for cotton in Krishna, Guntur and Prakasam districts. Spraying 2% urea or 2% KNO₃ should be taken up two times at weekly intervals.
 - Farmers are advised to undertake intercultural operations in *rabi* crops to keep the fields weed free.
 - Arrange for harvesting Bengalgram as the crop is at maturity stage.
- **Plant protection:** Present weather conditions are congenial for the incidence of
 - leaf folder in paddy, spray quinolphos 2 ml/lit or monocrotophos 1.6 ml/lit of water and spray 200 litres of spray fluid per acre.
 - blast in rice; spray Tricyclazole @ 0.6 g per litre of water, followed by application of urea as top dressing.
 - powdery mildew and thrips in vegetable crops, spray Tridimorph @ 1.0 ml or Dinocap @ 1.0 ml per litre of water for powdery mildew disease and Malathion or Dimethoate or Methyl dematon @ 2.0 ml per litre of water for control of thrips.
 - corynespora leaf spot and powdery mildew on blackgram and greengram. To control corynespora leafspot spray copper oxychloride (0.3%) or mancozeb (0.25%), for powdery mildew, spray carbendazim (0.1%) soon after the appearance of the disease.
 - As temperature is rising in Guntur district there is chance of incidence of sheath blight on rice. To control keep field bunds weed free as a precautionary measure. If sheath blight incidence is observed, spray propiconazole 25 EC@1.0/L or hexaconazole 5EC@2.0ml/L or validamycin 3L @2.0 ml/L.
- **Husbandry:** The prevailing weather conditions are congenial for the occurrence of
 - Haemorrhagic Septicemia in cattle
 - ET and sheep pox in sheep
 - Ranikhet disease in poultry
 - To prevent the diseases, vaccinate the animals
 - To prevent blue tongue disease in sheep, farmers are advised to keep the sheep in sheds.

Karnataka

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major Crops:** Wheat (Ear head emergence), Pigeonpea (maturity), Sunflower (maturity), Vegetables (Flowering/fruitletting), *Rabi* Sorghum (Ear head emergence), Bengalgram (Pod filling), Safflower (Flower emergence).
- **Advisory:**
 - Farmers are advised to provide irrigation to rabi crops as dry weather is likely to prevail for the next five days and there was no significant rainfall during last week.
 - Farmers in Bidar are advised to undertake transplanting of brinjal seedlings in the main field.
 - Sowing of sunflower and transplanting of onion under irrigated condition can be continued in Bijapur.
 - Farmers are advised to undertake intercultural operations in sugarcane and *rabi* vegetable crops like brinjal, cabbage, cauliflower, capsicum and tomato to keep the fields weed free.
 - Farmers of Bijapur district are advised to complete harvesting of pigeonpea, chickpea, sorghum and sunflower as early as possible. After harvesting and threshing, do not burn the crop residue, the residue can be used for making compost or vermin compost
 - Farmers are advised to remove the weeds from 30-35 days old groundnut crop, undertake intercultural operations to loosen the soil.
 - In Uttar Kannada district, farmers are advised to continue harvesting/threshing of paddy and arecanut crop.
 - Farmers of Uttar Kannada district are advised to take up the sowing of pulses like Black gram, Green gram and also the green manure crop sun hemp to utilize residue moisture after harvesting of paddy crop, farmers can make the arrangement of seeds.
 - In paddy fields where there is no residual moisture, in such fields farmers can undertake deep ploughing, so that the soil pathogens will die and inturn it will help to reduce pest incidence for the next paddy crop.
 - In view of prevailing, low minimum temperatures, apply Dormix @ 30 ml per litre of water on pruned branches for obtaining better bud break on grapes.
- **Plant protection:** Present weather conditions were congenial for the incidence of
 - powdery mildew in Mango in Uttar Kannada district, spray Carbendazim @1 gm / lit of water or Hexaconazole @1g / lit of water.
 - hoppers in mango in Uttar Kannada district, spray Melathion @ 2ml / lit of water or Monocrotophos @ 1.25ml / lit of water.
 - *Heliothis* in onion crop, spray 0.3 Indoxicarb or 0.1 ml spinosad dissolved in one liter of water.
 - Thrips and purple blotch in onion. To control thrips, spray the crop with 1.7 ml Dimethoate or 1 ml Monocrotophos dissolved in one liter of water and to control Purple blotch spray with 2 g. Kavatch + 0.5 g. Acetamidid dissolved in one liter of water.
 - leaf eating caterpillar in Bengalgram. To control the pest, spray the crop with 4 g carbaryl or 1 ml Methyl parathion or 2 ml Chlorpyrifos dissolved in one liter of water.
 - leaf spot in Banana. Farmers should take up spraying of DM-45@ 1.7 ml/lit of water to control it.
 - thrips in Groundnut. To control farmers are advised to spray the Dimethoate @3g/lit of water.
 - pod borer in gram; spray Profenophos or Indoxacarb @ 0.3/l or Spinosad @ 0.2 ml or Acephate @ 1 g per liter of water.
 - aphids in Safflower crop in Raichur. For effective control of aphids spray Dimethioate 30 EC @ 1.7ml/liter of water.

Kerala

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Mainly dry weather is likely to prevail over the State.
- **Major *Rabi* Crops:** Rice (second crop at panicle initiation stage)
- **Crop Stage:** seedling/early vegetative (*mundakan* rice).
- **Crop Condition:** Good.
- **Advisory:**
 - Farmers in Wayanad are advised to undertake harvesting of rice crop. Complete transplanting of rice by the end of this month and use 20-25 days old seedlings for better yield. Select short-medium duration

varieties for summer crop. Apply 200 kg lime at the time of first ploughing. Farmers are advised to soak the seeds in pseudomonas solution (10 gram per kilogram seed) for 12 hours. Apply 90 kg factomphos and 15 kg urea per hectare as basal dose.

- Farmers are advised to harvest the matured rice crop in some areas of southern zone. Weather conditions like clear sky and dryness are favourable for harvesting the crop and drying. In other areas of southern zone it is in the grain filling stage. Since dry conditions have been predicted maintain water level in the field for proper grain filling and thereby reduce chaffiness.
- This is the proper time for puncha (third season) seed bed preparation in Kannur district. Farmers are advised to apply FYM or compost to increase the water holding capacity.
- **Major Seasonal Crop:** Vegetables and plantation crops (coconut, arecanut, pepper and cashew). Time for planting of coffee and arecanut
 - Farmers are advised to prepare the land by burning stubbles of previous crop for summer cultivation of vegetables, Treat vegetable seeds with Bavistin @ 2g/kg of seed before sowing.
 - Farmers are advised to apply FYM @ 25t/ha and urea, rajphos and MOP to the tune of 163 kg, 555 kg and 105 kg /ha, respectively, at the time of transplanting of cabbage and cauliflower,. The spacing for the same is 45 cm x 45 cm.
 - Fresh planting of banana can be continued during this period in Ernakulam.
 - This is ideal time for planting rainfed banana. In existing crops apply mulch and start irrigation. Apply 25 g phorate or 20 g Carbofuran around the rhizome for reducing nematode population.
 - Farmers are advised to undertake intercultural operations, plant protection measures, weeding, and earthing up.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - sucking pest in cowpea and bittergourd, spray the plants with neem oil emulsion. For this, dissolve 60g of bar soap on half litre of water and mix the emulsion with 1 lit of neem oil by vigorous stirring. The solution should be diluted 40 times for spraying purpose.
 - aphids and mealy bugs in vegetables. Spraying of tobacco decoction can effectively control these sucking pests. Steep 500g of tobacco waste in 4.5 litres of water for 24 hours. Dissolve 120g ordinary bar soap in 500 ml of water separately in another vessel Add the soap solution to tobacco decoction and stir well. Dilute this stock solution 6-7 times with water and use for spraying.
 - Sigatoka leaf spot disease in banana, spray 1% Bordeaux mixture or Tilt 25 EC (1 ml/lit of water) after cutting the severely affected leaves and burning it. Apply neem-garlic emulsion to control the vectors spreading Bunchy top virus.
 - tea mosquito bug and twig blight in cashew. To control, spray Quinalphos 2 ml/litre (25 E.C) + Mancozeb 2 g/litre against Tea Mosquito Bug and apply Bordeaux paste on the cut surface after removing the branches affected by twig blight.
 - mahali disease in arecanut. To control apply 1% Bordeaux mixture.
 - red palm weevil in coconut in southern zone. To control, seal all the holes seen on the trunk except the topmost one. Pour Sevin (50%) @ 8g/2l through this hole using a funnel and seal this hole also.
 - Farmers are advised to keep the cardamom field weed free, apply mulch and continue irrigation. It is also advised to give a heavy irrigation once in a fortnight. Destroy the katte disease affected plants.
- **Animal Husbandry:**
 - Cattle should be provided with drinking water since dry conditions are being expected. In the case of poultry bred under deep litter system, farmers are advised to see that the litter is not damp. Damp litter will lead to several fungal diseases.

Tamil Nadu

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Rainfall is likely at isolated places during next 24 hours and mainly dry weather thereafter.
- **Major Rabi Crops:** Groundnut, pulses and *thaladi* rice, sugarcane, banana and vegetables.
- **Crop Stage:** rice (tillering), pod development (pulses), picking (cotton)
- **Crop Condition:** Good
- **Advisory:**

- As there was no significant rainfall during last week, farmers are advised to apply need based irrigation to the crop.
- Farmers in Cuddalore, Kancheepuram, Thiruvallur and Chengalpattu are advised to undertake sowing of rice in mat nursery for SRI cultivation.
- Farmers in Tuticorin, Virudunagar and Thirunelveli are advised to undertake harvesting of maize, sorghum, sunflower and cotton as dry weather conditions prevail during these days.
- Undertake harvesting of pulse crops in Tuticorin
- Farmers in Thanjavur, Trichy, Nagappattinam and Thiruvarur are advised to undertake sowing of rice fallow pulses; black gram and green gram in harvested samba field. The varieties ADT 3 and 4 in Black gram and ADT 3 in Green gram are suitable rice fallow pulses in cauvery delta zone.
- Undertake intercultural operations and application of fertilizers in thaladi rice and vegetables and sugarcane.
- In vegetable belt area, farmers are advised to spray NAA (Growth hormone) for controlling of flower dropping and increase fruit selling.
- To avoid the evaporative loss of soil moisture after receiving the rain, farmers are advised to go for mulching the inter row spacing with crop residues or weed biomass.
- **Plant Protection:** Weather conditions are favourable for
 - sucking pests and fruit borer in chilli in Thirunelveli; spray Methyl demeton @ 200 ml/acre and Chlorpyrifos @ 600 ml/acre for fruit borer..
 - powdery mildew disease in blackgram. To control farmers are advised to undertake spraying of wettable sulphur at 1 kg per acre.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Maharashtra

- **Realised Rainfall:** Dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State during the period.
- **Major *kharif* Crops:** *tur*.
- **Major *rabi* Crops:** *jowar*, safflower, sunflower, linseed, gram, wheat, mustard and vegetables.
- **Major summer crops:** summer rice, groundnut.
- **Crop Stage:** *tur* (maturity / harvesting), *rabi jowar* (flowering / grain formation/ grain maturity at some places), safflower (head formation), sunflower (floral bud initiation / head formation), gram (flowering / pod formation), wheat (tillering / ear emergence), mustard (flowering / pod formation), linseed (floral bud initiation), vegetables and summer rice (seedlings/ transplanting in South Konkan), summer groundnut (sowing / germination in Konkan).
- **Crop Condition:** Satisfactory.
- **Advisory:**
 - Conserve moisture in the crop field at maturity stage of *kharif* crops.
 - Undertake planting of sugarcane (*suru*).
 - Complete preparatory tillage & start sowing of summer groundnut & summer sunflower.
 - Undertake transplanting of summer rice in Konkan. Maintain 2-3 cm water level after transplanting in the field.
 - Apply second dose of Nitrogen (50 kg N / ha) to brinjal, tomato and cucurbitaceous vegetables one month after sowing in Konkan.
 - As weather was dry during last few weeks and there is no chance of rainfall during next five days, apply protective irrigation to the standing crops.
- **Major Seasonal Crop:** Fruit crops and Sugarcane (pre-seasonal) (tillering), Sugarcane (*Suru*) (planting).
 - Undertake spraying, fertilizer application in the standing crops.
 - Continue harvesting of already matured red gram.
- **Plant Protection:**
- Due to cold weather during night, there is possibility of attack of powdery mildew in cucumber, bitter gourd, ridge gourd crop. Spray Denocap @1 ml per liter of water.
- Weather conditions are favourable for mild incidences of –
 - *Helicoverpa* in gram, use 5 pheromone traps or nuclear polyhydrosis virus per ha. Prepare solution of 500 crushed caterpillars in water, filter it and mixed in 500 litres of water and apply for one ha.

- downy mildew in cabbage, cauliflower and broccoli crops, spray Metalaxyl MZ-72 @ 2 g per litre of water.
- stem borer in newly planted sugarcane, spray Endosulfan 4% powder @ 50 kg per ha or Endosulfan 35 EC @ 700 ml per 500 liter of water per ha.
- powdery mildew on grape, spray Tridemefan @ 250 gm or Panconazol @ 5 ml per 10 liters of water.
- powdery mildew on mango blossom, spray water soluble Sulphur powder @ 2 g per liter of water or dust 300 mesh Sulphur powder @ 20 kg per ha.
- **Fishery:**
 - Besides natural feed, use groundnut cake, rice husk or wheat husk in same proportion. Mix this feed in water for feeding two times a day.
 - Sampling of fish with the small net may be done fortnightly. Feeding of the fish may be given at 6% of body weight of the fish during initial stocking period.
 - Water quality analysis may be carried out at regular interval. The following parameters should be checked – date and time of sampling, water temp., dissolved oxygen, pH etc. If any uneven changes occur, necessary measures need to be taken.
 - Necessary pre-stocking management may be carried out by ornamental fish farmers.

Gujarat

- **Realised Rainfall:** Dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major Rabi Crops:** wheat, potato, mustard, gram, vegetables.
- **Crop Stage:** wheat (tillering), mustard (pod formation / seed formation), gram (pod formation / seed formation) and vegetables (vegetative / flowering / fruiting / harvesting).
- **Crop Condition:** Crop condition is satisfactory.
- **Advisory:**
 - Apply irrigation to wheat at booting stage as dry condition is prevailing over the State during last few weeks.
 - Undertake sowing of summer groundnut at 22.5 cm x 30 cm spacing with a seed rate of 120 kg / ha and select varieties like GG-2, GG-4, GG-7 and GG-26 for sowing. Apply 25 kg N and 50 kg P₂O₅ / ha at the time of land preparation. Treat the seeds with thirum @ 3 g / kg seeds before sowing.
 - Farmers are advised to apply irrigation to gram and mustard as the crops are at pod formation / seed formation stage.
 - Wherever seedlings are ready, farmers are advised to prepare main field and start transplanting of summer rice.
 - This is proper time for sowing of summer ladies finger. For sowing of summer ladies finger select varieties like Pusa Savani, Parbhani Kranti and Guj. Okra -2.
 - Undertake sowing of summer bajra and select varieties from GHB-526 and GHB-558.
 - Farmers are also advised to apply irrigation to pigeonpea, isabgul and vegetable crops like brinjal, tomato, chilli, fenugreek and garlic as dry weather is prevailing for last few weeks.
 - Cut maize at tasseling stage for fodder purpose.
- **Major Seasonal Crop:** Fruit crops and Sugarcane (vegetative / harvesting).
 - Pluck fully matured fruits of papaya, ber, guava, pomegranate and citrus and take them to market after sorting and grading.
- **Plant Protection:**
 - As weather is dry, application of Chlorpyrifos @ 1.25 liters per hectare is recommended with irrigation water to control termite in wheat crop.
 - Weather conditions are favourable for mild incidences of –
 - white rust in mustard, spray Mancozeb @ 25 g in 10 litres of water. It is advisable to spray twice in 10-12 days interval.
 - aphids, jassids and thrips in mustard, spray Methyl-o-demeton 10 ml or Dimethoate 10 ml or Phosphamidon 3 ml in 10 litres of water.
 - mango hopper, spray Dimethoate @ 10 ml or Endhosulphan @ 20 ml per 10 litres of water.
 - sucking pests in ladies finger, spray Rogor or Nuvan @ 0.015 % in 10 liters of water.

- thrips in cotton, spray triazophos @ 20 ml or methyl-o-dematone 5 ml or dimethoate 10 ml in 10 liters of water.
- thrips in onion and garlic, whenever the thrips population reach ETL of 15 nymphs / leaf, application of Endosulfan 35 EC @ 20 ml / 10 litres of water is recommended.
- blight in cumin, spray Mancozeb @ 25 g /10 litres of water, four times at an interval of 10 days.
- powdery mildew in mango, spray Carbendazim @ 10 g or Wettable Sulphur 30 g / 10 liters of water.
- shoot borer in brinjal, remove and destroy infested shoot. Arrange to put at least 12 to 15 pheromone traps / ha and spray Endosulphan @ 21 ml or DDVP @ 5 ml /10 litres of water.
- thrips causing leaf curl in chilly, spray Triazophos 40 EC @ 10 ml or Acephate 75 SP @ 10 g / 10 litres of water at 10 to 12 days interval.
- powdery mildew in cucurbitaceous crops, cluster bean and ladies finger, spray wettable Sulphur @ 25 g / 10 litres of water two to three times at an weekly interval.
- **Animal Husbandry:** Provide warm water to lactating animals. Keep young calves indoors during night time to avoid cold stress. Vaccinate animals for diseases in consultation with local veterinarian.

CENTRAL INDIA [M.P., CHHATTISGARH]

Madhya Pradesh

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major Rabi Crops:** wheat, pulses, gram (vegetative), sugarcane (cane development), cotton (boll development/ maturity) and vegetable crops (late vegetative)
- **Crop Condition:** Satisfactory.
- **Advisory:**
 - Farmers are advised to undertake intercultural operations and irrigation in early sown wheat crop at 21 days after sowing and give nitrogen fertilizer 1/4th recommended dose by urea as top dressing.
 - Undertake pit preparation for planting of new orchard crops.
 - Farmers are advised to continue transplanting of onion, cabbage.
 - Farmers are advised to undertake sowing of ladyfinger under irrigated conditions.
 - Undertake sowing of coriander and fenugreek.
- **Animal Husbandry:** Protect calves from cold. Cattle should be vaccinated to save them from infections diseases like Black Quarter and FMD etc. The animals should be dewormed. Take care the pregnant animals and feed them balance diet. Provide the animal's clean water and balance and nutrients rich food.
- **Plant Protection:** Weather conditions are favourable for-
 - leaf eating caterpillars in gram; spray neem seed kernal Extract (5%), use pheromone traps (4 in one acre), Use Trichoderma culture or Endosulphan 35 EC 2 ml / liter in Gram.
 - aphids in safflower; spray Roger @ 750 ml / ha for the control of. Apply split dose of nitrogen fertilizer in wheat. Irrigate Wheat crop if water is available.
 - pod borer in arhar; spray Quinalphos 25 EC @ 2 ml/litre. Spray neem seed kernal extract (5%), use pheromone traps (4 in one acre).
 - early blight in potato; spray Diethen M45 @ 2-3 gm/liter (use 500-600 lit. water).
 - sucking pest on chilly, tomato, brinjal, spray Dimetoate 1 ml per litre of water or Phosphomedan 3 ml per 10 litre of water.

Chattisgarh

- **Realised Rainfall:** Dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major Rabi Crops:** Wheat (tillering / ear emergence), gram (pod initiation / pod development), mustard (pod formation / pod development).
- **Crop Condition:** Good.
- **Advisory:**
 - Start transplanting of summer rice if the nursery is ready for transplanting.

- Considering the below normal maximum and minimum temperature in most part of the state, it is advised to postpone the sowing of sunflower and other crops till the rise of temperature.
- Intercultural operations and weeding is advised in sunflower and groundnut. Fertilizer application followed by irrigation should also be done in sunflower after weeding.
- Wheat crop is at tillering / ear emergence stage. This stage of the crop is critical for moisture and nutrient stress. Hence, farmers are advised to go for second top dressing of N and then irrigate the fields.
- Presently mustard and gram are at pod formation / pod development stage. Irrigation at this stage is required for proper growth of these crops. Avoid water logging in the fields. Use of sprinkler should be encouraged for irrigation.
- Seedlings of cucurbitaceous crops may be prepared in polythin bags, so that crops may be sown whenever there will be congenial weather condition.
- **Major Seasonal Crop with stage:** Sugarcane (vegetative), vegetables (flowering / fruiting / harvesting).
- **Advisory:**
 - Interculture, fertilizer application, earthing up followed by irrigation is advised in sugarcane crop wherever the crop is at knee height stage.
- **Plant Protection:** Present weather conditions may be favourable for the infestation of pod borer in gram, powdery mildew in oilseeds and pulses and late blight in potato.
 - It is advised to install light traps / Pheromone traps for initial control of adults of gram pod borer. At least five Pheromone traps should be installed in one hectare area for effective control. Apart from these bamboo sticks of about 1 m length can also be installed at every 20-25 m distanced, so that the birds can easily sit on these sticks to eat maximum number of larvae.
 - Under present weather conditions incidence of powdery mildew may occur in oilseed and pulses. For effective control of powdery mildew spray Calxine @1ml/litre (200 ml/acre) or Sulfex @3g/litre (600 g/acre). At least 200 litre of solution should be used for one acre of area.
 - Apply Redomil to control late blight in potato.