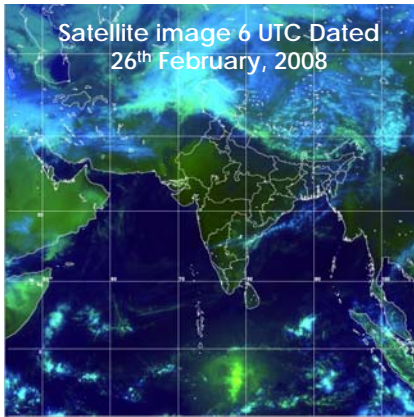




National Agromet Advisory Bulletin

Thursday, 25th February (For the period 25th February to 1st March, 2010)



Satellite image 6 UTC Dated
26th February, 2008

Rainfall Forecast valid upto 0830 hours IST of 28th February, 2010

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

Major features of weather forecast (upto 0830 hours IST of 28th February, 2010)

- Isolated to scattered rain / snow would occur over Jammu & Kashmir during next 3 days and over Himachal Pradesh during next 2 days.
- Isolated rain / snow would occur over Uttarakhand on 26th February.
- Isolated to scattered rain / thundershowers would occur over northeastern states during next 2-3 days.
- Fall in minimum temperatures by 2°C over Rajasthan, Uttar Pradesh and central & east India during next 2-3 days.
- Gradual rise in maximum temperatures over plains of northwest India during next 3 days.
- Dry weather conditions will continue to prevail over remaining parts of the country.

Weather Outlook (upto 0830 hrs IST of 2nd March, 2010)

- A fresh western disturbance likely to affect western Himalaya region from 28th February.
- Isolated rain / thundershowers would occur over parts of northeastern states.
- Dry weather conditions will prevail over remaining parts of the country.

Advisories for cold / frost injury in Arunachal Pradesh

- Farmers in Tawang district of Arunachal Pradesh are advised to arrange for burning farm waste materials around the field to reduce the impact of low temperature and to safeguard the crops from cold / frost injury.

Advisories for irrigation

- As there was no significant rain in most of the remaining parts of the country during last week and no significant rain is likely to occur 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 conditions, there are chances of pest and disease incidences in the following regions:
 - downey mildew in cabbage and cauliflower and powdery mildew in peas in Himachal Pradesh.
 - aphids in mustard and vegetables, thrips and purple blotch in onion and pod borer in gram and pea in Delhi.
 - stem borer in rice, late blight of potato and blight in wheat in West Bengal.
 - aphids in late sown mustard, collar rot and root rot in gram and loose smut in wheat in Jammu & Kashmir.
 - yellow rust and flag smut in wheat, pod borer in gram and alternaria blight in raya in Punjab.
 - powdery mildew in grapes, bacterial leaf blight in pomegranate and leaf miner in groundnut, leaf spot and bud necrosis in sunflower in Karnataka.
- Farmers are advised to undertake plant protection measures, if required.

Issued by

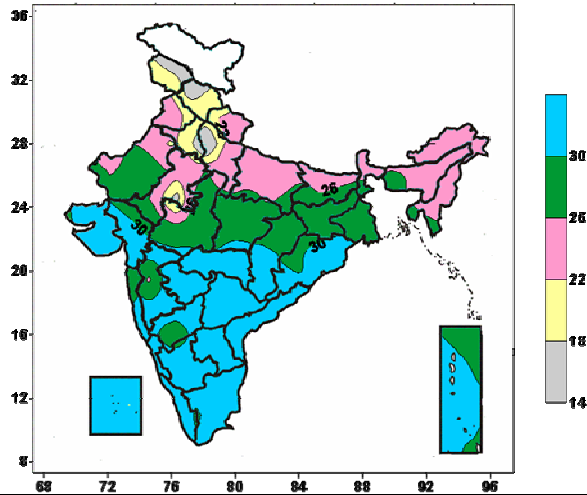
National Agrometeorological Advisory Service Centre,

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

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

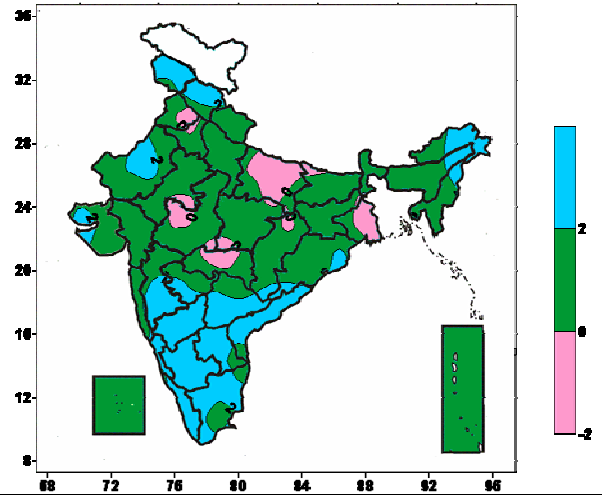
Contour maps for the week ending 24.02.10

Actual Mean Maximum Temperature (°C) In India for the week ending 24.02.10



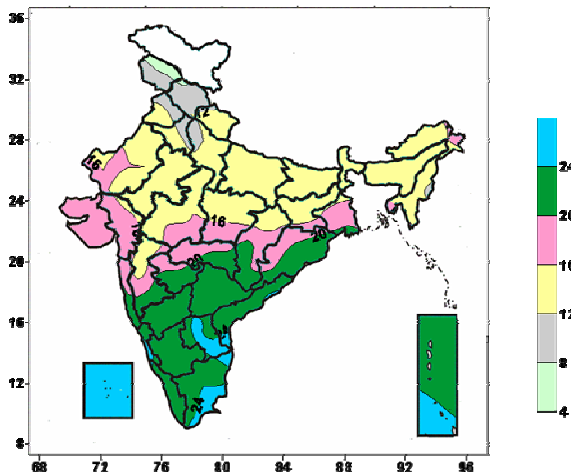
Actual Mean Maximum temperature ranged between 30°C and above over most parts of Saurashtra & Kutch, Gujarat, Marathwada, Vidarbha, Orissa, Karnataka, Andhra Pradesh, Kerala, Tamil Nadu, Andaman & Nicobar, Lakshadweep Islands, some parts of Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Chhattisgarh, 22 to 26°C over most parts of Punjab, Uttarakhand, Uttar Pradesh, East Rajasthan, Sikkim, Northeast India, some parts of Haryana, West Rajasthan, Bihar, Sub-Himalayan West Bengal, West Madhya Pradesh, 18 to 22°C over most parts of Himachal Pradesh, some parts of Jammu & Kashmir, Punjab, Haryana, Delhi, Uttarakhand, West Uttar Pradesh, East Rajasthan, West Madhya Pradesh, 14 to 18°C over some parts of Jammu & Kashmir, Himachal Pradesh, Rajasthan, West Uttar Pradesh, 26 to 30°C over remaining parts of the country.

Maximum Temperature (°C) Anomaly In India for the week ending 24.02.10



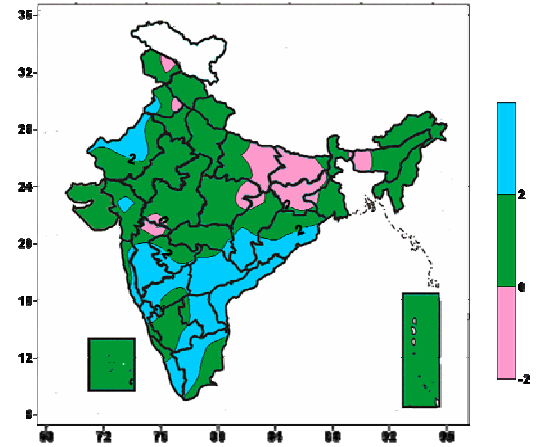
Actual Mean Maximum temperature anomaly ranged between 2°C and above over most parts of Himachal Pradesh, Madhya Maharashtra, Karnataka, Andhra Pradesh, Tamil Nadu, Kerala, some parts of Jammu & Kashmir, West Rajasthan, Saurashtra & Kutch, Orissa, Chhattisgarh, Marathwada, Arunachal Pradesh, Assam & Meghalaya, Nagaland -2 to 0°C over most parts of East Uttar Pradesh, some parts of Punjab, Haryana, East Rajasthan, Bihar, Gangetic West Bengal, Chattisgarh, Vidarbha, Madhya Pradesh, 0 to 2°C over remaining parts of the country.

Actual Mean Minimum Temperature (°C) In India for the week ending 24.02.10



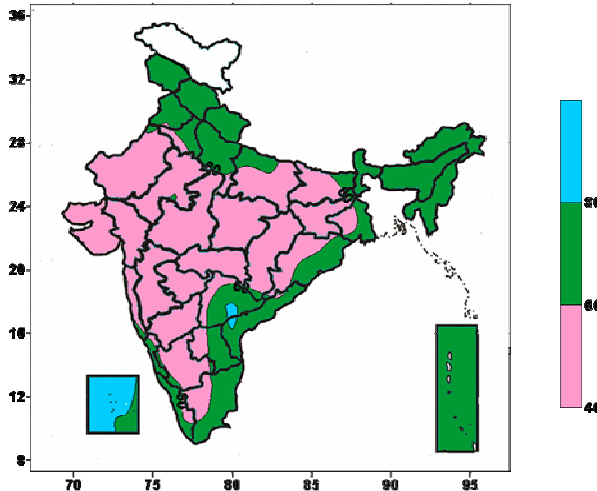
Actual Mean Minimum Temperature ranged between 24°C and above over most parts of Lakshadweep Islands, some parts of Coastal Andhra Pradesh, Rayalaseema, Tamil Nadu, Coastal Karnataka, Andaman & Nicobar Island, 20 to 24°C over most parts of South Maharashtra, Karnataka, Andhra Pradesh, Tamil Nadu, Kerala, some parts of Chattisgarh, Orissa, Gangetic West Bengal, 16 to 20°C over most parts of Gujarat, Saurashtra & Kutch, North Maharashtra, Gangetic West Bengal, some parts of West Rajasthan, South Madhya Pradesh, Chattisgarh, Orissa, Jharkhand, Arunachal Pradesh, Tripura, 8 to 12°C over most parts of Jammu & Kashmir, Himachal Pradesh, some parts of Punjab, Haryana, West Uttar Pradesh, Uttarakhand, Manipur, 4 to 8°C over some parts of Jammu & Kashmir, Himachal Pradesh, 12 to 16°C over remaining parts of the Country.

Minimum Temperature (°C) Anomaly In India for the week ending 24.02.10



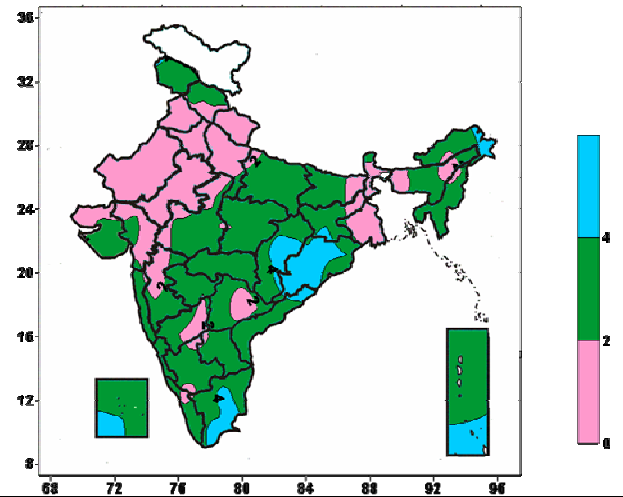
Minimum Temperature anomaly ranged 2°C and above over most parts of Madhya Maharashtra, Andhra Pradesh, some parts of Punjab, West Rajasthan, Gujarat, Chhattisgarh, Orissa, Konkan & Goa, Marathwada, Vidarbha, Chattisgarh, Orissa, Kerala, Tamil Nadu, Karnataka, -2 to 0°C over most parts of Bihar, Jharkhand, some parts of Jammu & Kashmir, Punjab, East Uttar Pradesh, Gangetic West Bengal, Assam & Meghalaya, Madhya Pradesh, Chattisgarh, Madhya Maharashtra, 0 to 2°C over remaining parts of the Country.

Relative Humidity (%) over India for the week ending 24.02.10



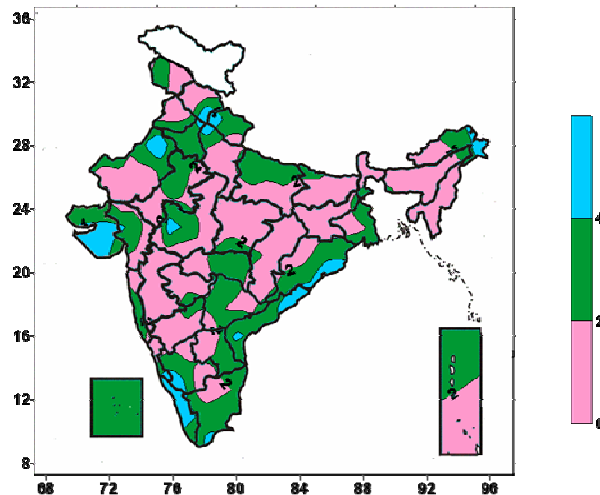
Relative humidity between 80% and above over most parts of Lakshadweep Island, some parts of Coastal Andhra Pradesh, Telangana, 60 to 80% over most parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Delhi, West Uttar Pradesh, West Bengal & Sikkim, North East India, Andhra Pradesh, Coastal Karnataka, Kerala, Andaman & Nicobar Island, some parts of East Uttar Pradesh, Rajasthan, Konkan & Goa, Tamil Nadu, Coastal Orissa, Bihar, 40 to 60% over remaining parts of the country.

Cloud amount (okta) over India for the week ending 24.02.10



Cloud amount 4 okta and above over most parts of Orissa, some parts of Jharkhand, Arunachal Pradesh, Chattisgarh, Coastal Andhra Pradesh, Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands, 0 to 2 okta over most parts of Punjab, Haryana, Delhi, Uttarakhand, West Uttar Pradesh, West Bengal, Rajasthan, some parts of East Uttar Pradesh, Bihar, Jharkhand, Assam & Meghalaya, Arunachal Pradesh, Mizoram, Saurashtra & Kutch, Gujarat, Madhya Pradesh, Madhya Maharashtra, Telangana, Interior Karnataka, Kerala, 2 to 4 okta over remaining parts of the country.

Wind speed (knots) over India for the week ending 24.02.10



Wind speed ranged between 4 knots and above over some parts of Himachal Pradesh, Uttarakhand, Haryana, West Rajasthan, Arunachal Pradesh, Orissa, West Madhya Pradesh, Saurashtra & Kutch, Gujarat, Arunachal Pradesh, Coastal Andhra Pradesh, Coastal & South Interior Karnataka, Tamil Nadu, Kerala, 2 to 4 knots over most parts of Uttarakhand, Haryana, Delhi, Coastal Andhra Pradesh, Tamil Nadu, Lakshadweep Island, some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Uttar Pradesh, Bihar, West Bengal, Arunachal Pradesh, Assam & Meghalaya, Orissa, Chattisgarh, Konkan, & Goa, Marathwada, Vidarbha, Rajasthan Saurashtra & Kutch, Madhya Pradesh, Telangana, Rayalaseema, Kerala, Karnataka, Kerala 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 rain over the State during last week.
- **Rainfall Forecast:** Rain is likely to occur at isolated or at a few places over the State during next 48 hours and mainly dry weather thereafter.
- **Major Rabi Crops:** Wheat (ear emergence / flowering), mustard, gram and lentil (pod formation) and vegetables.
- **Advisory:**
 - Farmers of mid and high hills 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.
 - Farmers are advised to apply third dose of Nitrogen (CAN @ 10 kg per bigha) to cole crops.
 - As there is sufficient moisture in soil, it is optimum time for nursery sowing of tomato, brinjal, chillies and capsicum crops. Summer squash crops should be raised in poly tubes in the poly house so that plants may be ready after 15 days for transplanting in the field.
 - It is time for sowing of potato in mid hills region. Procure the healthy and disease free bulbs for planting. The cut bulbs may be treated with Dithane M-45 @ 0.5% solution for 20-25 minutes and dry them in shadow. Ensure that each cut potato bulbs should contain three eyes (buds) and weight should be 30-50g.
- **Major Seasonal Crop:** Fruit crops, floral crops and Vegetables.
- **Advisory:**
 - Protect the plants of mango and litchi from cold injury / frost in mid and high hill regions. Put polythene grass thatch on north side of the plant. Pruning works in peach pear plum almonds can be taken up.
 - Pruning work can be carried out in the tea orchards. The large trees causing shadow may be lopped so that enough sunshine can be received by tea plants. Start the seed stratification of tea seeds so that it can be planted during February and March.
 - The intercultural operations and weeding can be done in the flower beds. Burn the dried leaves or grass or inert material in the garden so that ill effects of frost can be avoided.
 - As there is moisture in soil for transplanting of new fruit plantations, 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 and apple.
 - 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.
- **Plant Protection:**
 - These days weather is conducive for attack of stored grain pests like rice weevil, lesser grain borer and rice moth. In Grain store bins put one pouch of celhpos (3 g) or quickphos (12 g) or Fumino pouch in a wet cloth in the middle of bin and keep the bin airtight for some time. This will protect the wheat grains from stored grain pests.
 - To control the root borer in apple irrigate the basins, after removing the upper soil, with 10-15 liters of the solution of Chlorpyrifos (Durmet/Dursban 20 E.C. @ 5 ml per liter of water).
 - Weather conditions are favourable for mild incidences of –
 - downy mildew in Cole crops, spray Dithane M-Z @ 2-3 g per litre of water at an interval of 10-15 days.
 - powdery mildew in peas, spray sulfex @ 25 g per 10 litres of water or karathane @ 5 ml per 10 litres of water.
 - aphids in flowers, spray malathion / metasystox @ 0.1% for the control.
 - 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:**
 - The newly born calves may be protected against the cold as the weather is conducive for white scour, naval ill and pneumonia. Pregnant and lactating cows and buffaloes should be given 2 kg feed for their body maintenance and additional 1 kg for developing calves with mineral mixture @ 15-30 g per day.
 - For milch animals 2 kg feed + 1 kg additional feed per 2.5 kg milk production should be given. Mineral mixture supplement should be given to animals and local veterinarian should be contacted immediately.
 - Carry out regular vaccination of animals. Put uromin bricks for licking to animals for 5 minutes in the morning and evening.
- **Poultry:**
 - Replace the poultry houses with fresh litter to avoid wetting and keep the houses clean and ensure clean drinking water to the birds.
 - The temperature of the poultry enclosures is rising. Hence, ensure ventilation during day time. Give normal feed.
- **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:** Chamoli, Champawat, Garhwal Pauri, Garhwal Tehri, Haridwar, Pithorgarh, Rudraprayag and Uttarakasi districts received rainfall during last week and no significant rainfall in the remaining districts over the State during last week.
- **Rainfall Forecast:** No significant rainfall is likely over the State during next three days.
- **Major Rabi crops:** Wheat (ear emergence), mustard, lentil, gram (seed formation), pea, rajmah (pod formation).
- **Advisory:**
 - Farmers in Almora, Dehradun, Nainital and Uttamsingh nagar districts are advised to apply irrigation to the standing crops as these districts received no significant rainfall during last week.
 - Complete weeding and intercultural operations in mustard crop.
 - Undertake weeding and intercultural operations in late sown pea, chickpea, rajmah etc.
- **Major Seasonal Crops with stage:** Sugarcane (maturity / harvesting), sugarcane (new) (planting / early vegetative), cabbage, cauliflower, garlic, tomato (vegetative), french bean (early vegetative), potato (tuber formation).
- **Crop Condition:** Good.
- **Advisory:**
 - Continue harvesting of matured crop of sugarcane and undertake ploughing for ratoon.
 - Farmers are advised to undertake weeding in early sown garlic crop for better crop growth.
 - Farmers are advised to continue transplanting of tomato, brinjal and capsicum. Those farmers who have not sown brinjal in nursery are advised continue sowing with varieties like Pant Samrat, Pant Rituraj, Pant Brinjal-4, ARU-1 etc. Sprinkle water just after sowing for better seed germination and also spray water in early sown nursery of tomato and capsicum and remove weeds.
 - Undertake harvesting of berseem at regular intervals.
 - Farmers at 5000 ft hilly areas are advised to continue for sowing of potato with varieties like Kufri Jyoti, Kufri Ashok and Kufri Anand etc.
 - 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.
 - pod borer in gram, spray Endosulphan 35 EC @ 400 ml per acre.

Punjab

- **Realised Rainfall:** Mainly dry weather prevailed over the State except Bhatinda which received light rainfall during last week.

- **Rainfall Forecast:** No significant rainfall is likely during next five days over the State.
- **Major Rabi Crops with stage:** Wheat (ear head emergence), raya, rapeseed and mustard (pod formation), potato (tuber formation).
- **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.
- Farmers are advised apply need based irrigation to wheat.
 - Undertake intercultural operations in late sown wheat, raya, taramira, lentil and chickpea.
 - Weeding operation in late sown rapeseed and mustard crops may be undertaken.
- **Major Seasonal crop with stage:** Sugarcane (early vegetative/vegetative), vegetable crops (vegetative), fruit crops
- **Crop Condition:** Good
 - **Advisory:** Continue field preparation and planting of spring sugarcane. Select recommended varieties i.e. CoJ-85, CoJ-83 CoJ-64 (early maturing), CoJ-88 CoS-8436(mid-season) and CoJ-89 and Co-1148 (late maturing variety). The seed selected for planting should be free from disease like red rot, wilt, ratoon stunting and grassy shoot. Apply irrigation to *autumn* planted crop as per need of intercrops and sugarcane.
 - Farmers are advised not to take two cuttings of oats where heavy infestation of poa grass is there. Undertake regular cuttings of barseem.
 - Farmers are advised to remove the sarkanda cover from the vegetables. After removing sarkanda, earthing up of soil should be done.
 - Farmers are advised to undertake transplanting of muskmelon, watermelon, bottle gourd and pumpkin. Before transplanting remove plastic bags.
 - Harvest the kinnow fruits. 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.
 - Undertake planting of fruit plants like citrus, guava and ber. Apply 400-800 g urea per plant to kinnow plantations as first dose. Remove dead wood in citrus before the new growth starts and apply bordeaux mixture immediately.
- **Advisory for Plant Protection:** Weather conditions are favourable for mild incidences of –
 - yellow rust in wheat, spray the crop with tilt @ 200ml in 200 litres of water per acre.
 - flag smut in wheat, plants affected with may be rogued out and burnt to reduce the inoculum potential for next year.
 - aphid in mustard, spray the crop with 40 Actara 25 WG or 400 ml of Metasystox 25 EC Rogor 30 EC/Thiodan 35 EC/ Ekalux 25 EC or 600 ml of Dursban 20 EC in 80-125 litres of water per acre or apply 4 kg Thimet 10 G (Phorate) or 13 kg Furadan 3 G followed by light irrigation.
 - Pod borer in gram, spray Endosulphan 35 EC @ 400 ml / Monocrotophas 36SL @ 200ml or Carbaril 50WP @ 400 gram with 100 liters of water per acre.
 - alternaria blight on raya, spray the crop with 250 g/acre of Blitox 50 WP or Indofil M-45 dissolved in 100 litres of water.
 - fruit fly in ber, spray 500 ml rogor 30 EC in 300 litres of water at fortnightly interval.
- **Animal Husbandry:**
 - Cracks/sore/chapped/injured teats may be treated with teat tips (Glycerin : Providine Iodine 1:4). It should be used after every milking. Do not feed green, sprouted, soiled or rotten potatoes to dairy animals. These can cause serious and fatal poisoning. Provide proper temperature under the brooder i.e. 95 °F every week up to 70 °F. Provide balanced feed and fresh water. Provide balanced ration to the birds according to their requirements. Deworm the chicks regularly.

Haryana

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Mainly dry/dry weather is likely over the State during next five days.
- **Major Rabi Crops:** Wheat (Ear head emergence), raya and mustard (pod formation).

- **Advisory:**
 - Apply the irrigation to wheat and late sown raya/mustard crop.
 - Farmers are advised to prepare field and complete sowing of summer sunflower hybrids varieties like MSFH-8, KBSH-1, KBSH-44, PAC-36, HSFH-848 and PCHS-234. Treat the seed with Bavistin 2 g or Thiram 3 g/kg seed.
 - Undertake sowing of recommended varieties of summer maize like HM-4 and HQPM-1. 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:**
 - Continue field preparation and planting of spring sugarcane. Prepare the field by adding 20 to 30 carts of cow dung manure and start the planting of sugarcane with high yielding varieties viz., COJ 64, COH 56 and COH 92. To improve germination, treat the setts before planting with 0.25% solution of Emisan or Mancozeb. Sow on flat soil in rows 60 to 75 cm apart. Apply irrigation to *autumn* planted crop as per need of intercrops and sugarcane.
 - The deciduous fruit plants like pear, grapes and phalsa may be planted before the old plants start new growth. In citrus, utmost care needs to be given to irrigation before sprouting. Loquat trees which have already set their fruits may be applied with 1-2 irrigation. Ber trees may also be watered so that fruits can develop good size. Apply one irrigation preferably after pruning to grapes.
 - 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. Farmers are advised to undertake weeding and hoeing and intercultural operations in tomato, onion and chilli. Remove the thatch from the nursery and young fruit plants used to protect from cold.
 - Farmers are advised to prepare the field and start sowing of cucurbits and brinjal.
 - Farmers are advised to prepare the field and start sowings of the cucurbits and brinjal.
 - Transplant the tomato and chilly in the field. Onion and garlic crops may be regularly irrigated and the field may be kept free from weeds by regular hoeing and weeding for the proper development of the bulbs.
- **Advisory for Plant Protection:** Weather conditions are favourable for mild incidences of –
 - yellow rust in wheat, spray the crop with Tilt @ 200ml in 200 litres of water per acre.
 - Pod borer in gram, spray Endosulphan 35 EC @ 400 ml / Monocrotophas 36SL @ 200ml or Carbaril 50WP @ 400 gram with 100 liters of water per acre.
 - alternaria blight/ downy mildew/ white rust in oil seeds, spray the crop with 250 g Blitox or Indofil M 45 in 100 litres of water.
 - aphid in mustard crop and farmers are advised to keep a watch on the aphid build up and spray the crop as weather is clear with 250 to 400 ml Metasystox 25 EC or Rogor 30EC per acre. in 400 litres water per acre in the afternoon.
- **Animal Husbandry:** Farmers are advised to mix 50 grams of iodized salt and 30 grams mineral mixture per day with animal feed to keep them healthy.

Delhi

- **Realised Rainfall:** No significant rain occurred over the State during last week.
- **Rainfall Forecast:** Mainly dry weather is likely over the State during the period.
- **Major Rabi Crops:** Wheat (ear emergence / flowering); pea and gram (pod formation); mustard (seed formation / maturity) and vegetable crops (vegetative / flowering / fruiting / harvesting).
- **Advisory:**
 - In wheat, irrigation should be applied at 20-25 days interval when wind speed is slow. Rouging is also advised. Collection of black coloured inflorescence (loose smut) and putting them in plastic bags and deep burying is advised.
 - Harvesting of the matured mustard is advised as clear sky is forecasted for the next five days. Immediate threshing after drying is advised. Attack of painted bug will be more if crop is kept in the field for long after harvesting.
 - Direct sowing of cucurbitaceous crop, ladies finger, French bean, cluster bean and summer radish is advised as present temperature is suitable for germination of seeds. Procurement of seeds should be done from a certified source.

- Farmers are advised to procure quality seeds from certified source for green gram and black gram for sowing during first week of March. Select varieties from Pusa Visal, Pusa Vaisakhi, PDM-11 and SML-32 for green gram and Pant Urd 19, Pant Urd 30, Pant Urd 35 and PDU1 for black gram. Seed treatment with *Rhizobium* culture as well as phosphorus solubilising bacteria is also advised.
- In view of clear weather, transplanting of young seedlings of tomato, chilli and cole crops may be carried out in this week.
- **Plant Protection:**
 - In present weather conditions, farmers are advised to monitor their vegetable and mustard crops against attack of aphid. To control an increasing pest population spraying of Imidacloprid @ 0.25 to 0.5 millilitre per litre of water in vegetable crops after harvesting of mature fruits and Metasystox @ 1 millilitre per litre of water in mustard crop is advised. In vegetable crops a waiting period of one week should be followed after spraying. Constant monitoring of oil seed mustard crop is advised as damage by this insect is very high.
 - Constant monitoring of early sown pea and cucurbitaceous crops against attack of powdery mildew should be done as there are high chances of attack of the disease. When symptoms appear spraying of copper oxychloride @ 2.5 grams per litre of water is advised.
 - Ploughing of mango orchard is advised to control emerging mango mealy bug nymphs. Wrapping of plastic sheets around mango trunk to prevent climbing of young mealy bugs should be done. Apply grease to seal any cracks in the polythene sheets.
 - 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. “T” shaped bird perches in and around crop field may be installed. Spraying of Endosulfan or Malathion is also advised to control pod borer population.
 - 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).
 - fruit borer in tomato, installation of bird perches in tomato crop is advised to control fruit borer. Hand picking of damaged fruit and burying are advised. Installation of pheromone traps @ 2-3 traps per acre of crop field is advised for monitoring the tomato fruit borer.
 - shoot and fruit borer in brinjal, to control collection of infested fruits and shoots and burying these are advised. If pest population is high, spraying of Spinosad 12% SC @ 1 millilitre per four litre of water is advised.
 - pod borer in pea, constant monitoring of pea against pod borer with installation of pheromone traps @ 3-4 traps per acre is advised. Spraying of Bt formulation is advised.

Uttar Pradesh

- **Realised Rainfall:** No significant rain is occurred in most of the districts of the State.
- **Rainfall Forecast:** No significant rain is likely over West and East Uttar Pradesh.
- **Major rabi crops:** Wheat (ear head formation), gram, pea, and lentil (seed maturity).
 - As there was no significant rain in most of the districts during last few weeks and there is no chance of significant rainfall during next five days, apply protective irrigation to the standing crops.
 - Undertake weeding, hoeing, irrigation as per requirement in wheat. Use poisonous food containing Zinc Phosphide to control rats.
 - Undertake harvesting of early varieties of mustard, alsin, pea and lentil.
 - Continue land preparation and sowing of summer sunflower and maize under irrigated conditions.
 - Undertake sowing of recommended varieties of moong, urd and sunflower after preparing the field and purification of seeds.
 - Weeding, hoeing and topdressing of recommended amount of Nitrogen in early sown summer maize may be undertaken after 25-30 days of sowing.
- **Major Seasonal Crop with stage:** Sugarcane (grand growth), winter sown sugarcane (early vegetative), vegetables (vegetative/fruitle), 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 cutting of fodder barseem and apply irrigation at regular interval.
 - Harvesting of early varieties of potato and turmeric may be done and weeding, hoeing and irrigation as per requirement may be done.
 - Harvesting, marketing of winter vegetable like pea may be done along with watering as per requirement.
 - Farmers are advised to stop irrigation in early varieties garlic before 20 days of harvesting and irrigation as per requirement may be applied in late sown garlic.
 - Undertake transplanting the seedlings of summer vegetable crops in the main field. Complete sowing of *zaid* ladyfinger at the earliest.
 - Weeding, hoeing and application of 30 kg Nitrogen /hectare may be undertaken in onion.
 - Apply top dressing of Nitrogen in banana and irrigation at 10-12 days interval may be applied.
- **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.
 - canker in lemon, spray the solution of Blitox 3-4 gram/litre of water.
 - fruit borer in gram spray the solution of Trichogramma card or Endosulphon 1.25 litre per hectare dissolving in necessary amount of water.
 - smut in wheat, if the earheads are affected such ear heads may be buried in ground or burn them.
 - thrips in late sown garlic, spray Methyl parathion 50 EC at recommended rate to control the pest.
 - leaf spot in onion, spray Mancozeb 2gm/litre to control the disease.

J & K

- **Realised Rainfall:** Some rain occurred in Kupwara and North Baramula districts and no significant rain occurred in remaining districts over the State during last week.
- **Rainfall Forecast:** rain/thundershowers is likely to occur at a few places over the State during next 48 hours and thereafter.
- **Major Rabi crops:** Wheat, barley, brown sarson (late vegetative), vegetables (flowering / fruiting).
- **Advisory:**
 - Due to availability of sufficient moisture in soil, apply second dose of urea in wheat & barley crop and 1st dose of urea @ 25% as top dressing in very late sown wheat crop under rainfed areas.
 - As sufficient moisture is available in soil, farmers are advised to undertake nursery sowing of tomato (Pusa Ruby & Pb. Chuhara), chilli (NP-46 A & Pusa Ruby) & brinjal (PPL, PPG, PPR & PK). Also undertake sowing of bhindi, beans and cucurbits. Apply nitrogenous fertilizer as top dressing in cabbage and cauliflower utilising available soil moisture.
 - Due to presence of sufficient moisture apply urea after cutting of berseem.
 - Farmers are advised to undertake planting of new orchards utilizing available soil moisture. Also carry out pruning of grapevine, phalsa, peach and plum crop.
- **Plant Protection:**
 - Due to prevailing condition some varieties of wheat & barley may be infested with loose smut; farmers are advised to rogue out the loose smut affected plants from wheat and barley fields in order to avoid more dispersal.
 - Due to increase in temperature, there is chance of infestation of aphid in late sown mustard crop; spray Chloropyriphos 20EC @ 0.05% or Phosphamidon @ 0.03% or Metasystox @ 0.03%, if 50-60 aphids per 10 cm terminal shoot are infested when weather remains clear.
 - To control of collar rot and root rot in gram, rogue out the affected plants and drench the affected patch of the field with thiram or captan @ 2 g / litre of water.
- **Animal Husbandry:** Protect the pregnant and milch animals from cold and feed them mineral mixture regularly.
- **Apiculture:** Farmers are advised to remove winter packing and clean bee hives. It is right time for initiating multiplication of earmark colonies showing good performance.

Rajasthan

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major Crop with stage:** wheat (flowering), gram and mustard (early maturity / maturity) vegetable crops (flowering / fruiting / harvesting).
- **Crop Condition:** Good.
- **Advisory:**
 - As dry weather prevailed during last week and is also likely to prevail for next three days, farmers are advised to apply irrigation in standing crops.
 - Stop irrigation 10 days before harvesting of potato. Dig using potato digger after drying of leaves and hardening of skin to minimise labour cost and cut injury to tubers.
 - It is right time for preparing the nursery for early summer brinjal & chilli. 500 g & 1.5 kg seeds of brinjal & chilli are required for one hectare. Treat the seeds with Thiram or Captan @ 2 g / kg seeds before sowing into nursery.
 - Farmers are also advised for sowing of summer okra. Select varieties from Pusa sawani, Pusa Makhmali, Parbhani Kranti, Arka Abhay and Arka Anamika. Use 20 kg seeds per hectare. Treat seeds with 1 g Carbendizim & 3 g Thiram per kg of seeds.
 - This is also right time for sowing of summer cucurbits. Before sowing treat the seeds with Bavistin @ 2 g per kg seeds. Soak the seeds for 24 hours in order to increase germination. Supply 100 kg N, 30 kg P₂O₅ and 40 kg K₂O per hectare. Give full quantity of P₂O₅ & K₂O and one third of Nitrogen at the time of sowing. Place the seeds in furrows clustering 2-3 seeds at one place.
 - Continue transplanting of vegetable seedlings in the main field.
- **Animal Husbandry:**
 - Deworming is recommended in livestock during this period.
- **Plant Protection:**
 - Due to cloudy weather prevailed during last week, there are chances of purple blotch disease in onion; spray 0.25% solution of Dithane M 45 at 15 days interval to manage disease.
 - There is possibility of attack of pod borer in gram; dust Melathion 5% or Methyl Parathion 2% @ 20-25 kg / ha before flowering and pod formation to control pod borer attack in gram.
 - There is possibility of attack of soft rot / black rot of cabbage; to control soft rot / black rot of cabbage, spray streptocycline @ 200 mg or copper oxychloride 2 g / litre of water.
 - There are chances of aphid attack in rose; spray 0.1% Melathion solution at 10 days interval to manage the pest.
 - Tomato & brinjal crops are likely to be affected by fruit borer. To control this pest, spray Endosulfan 35 EC or Malathion 50 EC @ 1 ml per litre of water or spray *Bacillus thuringiensis* Kastki (Dypel-8 L) @ 1 litre water with Methomil 40 SP @ 600 gm per hectare. Repeat spray after 15 days if problem persists.
 - Due to rise in temperature wheat and barley crops may be attacked by termite. Give chlorpyrifos 20 EC @ 4 litres or Endosulfan 35 EC @ 2.5 litres per hectare with irrigation. Repeat the same if needed.
 - Methi, pea, cumin and coriander are likely to be affected by powdery mildew attack. Spray Karathene @ 1 ml or Calaxin @ 1 ml per litre of water or dust sulphur @ 25 kg per hectare.
 - Early sown summer cucurbits are likely to be affected by red pumpkin beetle. Broadcast carbaryl 5% @ 20 kg/ha or spray Asiphet 75 S.P. 0.5 gram per litre water.
 - Brinjal and Tomato crops are likely to be affected with fruit borer. To control this spray Endosulfan 35 EC @ 1 ml per litre water or Asiphet 75 S.P. 0.5 gram per litre water. Repeat spray after 15 days if problem persists.

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

Bihar

- **Realised Rainfall:** There was no significant rainfall in most of the districts of the State received during last week.
- **Rainfall Forecast:** Mainly dry/dry weather is likely to occur over the State for next five days.
- **Major Rabi Crops:** Wheat (ear emergence/milking), maize (flowering), potato (maturity/harvesting), gram, pea, and lentil (pod formation/maturity), mustard (pod maturity/harvesting)

- As there was no significant rainfall in most of the districts of the State and no significant rain is likely for the next five days, the farmers are advised to apply irrigation to the standing *rabi* crops like maize and wheat.
- Farmers are advised to provide second / third irrigation in wheat for better growth of crop. Provide irrigation in wheat crop during ear emergence stage also and apply last top dressing of urea @ 88 kg / ha.
- Farmers advised to undertake harvesting of potato and tobacco.
- Prepare the field for sowing of summer sunflower, maize and transplanting of onion seedling. Lasso weedicide may be applied in the field of onion for control of weeds.
- Prepare the field and undertake sowing of spring sugarcane and fodder crops.
- **Major Seasonal Crop with stage:** Sugarcane (grand growth) and vegetables (vegetative / fruiting), mango (fruit setting).
- **Crop Condition:** Good.
- **Advisory**
 - Farmers are advised to undertake planting of spring sugarcane with recommended varieties like BO130, BO138, BO137, BO136, BO145, COP 9206 and COP 9301 etc.
 - Undertake sowing of vegetable crops like tomato, brinjal, bhindi, bitter gourd, cucumber, sponge gourd, radish and chillies.
 - Sowing of garlic may be done after purification of seeds at the seed rate of 500- 700 kg seeds/ hectare at distance 15 x 7.5 cm.
 - Undertake weeding, intercultural operations and application of fertilizers in the standing crops like sugarcane, vegetables and mentha.
 - Apply irrigation and apply top dressing of urea in already sown vegetable crops like tomato, brinjal, cauliflower and cabbage etc.
 - Apply irrigation to newly planted fruits trees and avoid irrigation during flowering stage.
- **Plant Protection:**
 - Weather conditions are favourable for mild incidences of
 - aphids in rape seed and mustard. Farmers are advised to spray Monocrotophos @ 1.0 ml / liter of water or Endosulphan @ 2.0 ml / liter of water.
 - late blight in potato, spray Dithane M-45 or Ridomil @ 2gm/liter of water for control of late blight of potato.
 - powdery mildew in peas, apply Sulfex @ 2 g / liter of water or Bavistin @ 1 g / liter of water or Karathane @ 1 g / liter of water for control of the disease.
 - stem borer and pod borer in peas, gram etc. Spray Endosulphan 35 EC @ 1.5 ml / liter of water at 15 days of intervals.
 - powdery mildew disease in mango, spray Metasystox @ 1 ml or Sulphex @ 2 g dissolved in 1 liter of water.

Jharkhand

- **Realised Rainfall:** No significant rain is occurred in most of the districts of the State.
- **Rainfall Forecast:** Mainly dry/dry weather is likely during next five days.
- **Major *Rabi* Crops:** Wheat (ear head emergence), rai, *toria*, gram, mustard (pod formation), peas (pod formation), arhar(pod formation/maturity).
- **Crop Condition:** Good.
- **Advisory:**
 - As there was no significant rainfall in most of the districts of the State and no significant rain is likely for the next five days, the farmers are advised to apply irrigation to the standing *rabi* crops.
 - Apply second irrigation at pod formation stage in mustard. During grain formation, farmers are suggested to give irrigation as per need and spray with salisylic acid @ 1 gm /10 litre of water.
 - Farmers are advised to apply second top dressing of urea in late sown wheat. Also provide fourth irrigation at the time of flowering.
 - Continue nursery sowing for summer rice with irrigation facilities. Before transplanting apply 18 kg DAP, 11 kg Urea, 14 kg MOP per acre. Continue main field preparation and transplanting with 2 to 3 seedling per hill maintaining 20 cm between row to row and 10 to 15 cm between plant to plant.
 - Undertake weeding, intercultural operations and top dressing in early sown *rabi* crops.

- Undertake field preparation and complete sowing of summer rice.
- **Major Seasonal Crop with stage:** Sugarcane (vegetative / grand growth), vegetables (vegetative).
- **Crop Condition:** Good
- **Advisory:**
 - Farmers are advised to maintain moisture level of soil in pea. If the age of plant is more than 30 to 35 days then twigging may be done to generate extra income. Twigging is only done in those fields where moisture level is sufficient and growth of crop is sufficient.
 - Give irrigation and undertake intercultural operation in tomato crops.
 - In all vegetables crops, to maximize the growth of plants, spray with NAA crop growth hormone @ 1 g / litre of water. This also prevents the dropping of flower and helps in growth of fruits too. On spraying a solution of TIBA-Tri Iodo Benzoic Acid @ 50 ppm at the stage of 3 to 4 leaves of plant at the interval of 15 to 20 days to increase the female flowers resulting in the increase of fruit production.
 - Farmers are advised to spray ammonium molybdate @ 1 g / litre of water in cauliflower to manage the deficiency of molybdenum and to maintain the quality of cauliflower. Apply required irrigation in morning. If flower discoloration is observed due to deficiency of boron, spray borax @ 5gm/litre of water.
 - Farmers are advised to apply irrigation in potato at 10 to 15 days interval. Stop irrigation 10 – 15 days before harvesting. After harvesting of matured potato, farmers are advised to go for onion crop. Select the varieties of onion from Pusa Ratnar, Pusa Red, N53, Arka Niketan, etc.
 - Farmers are advised to spray urea at 25 to 30 days after sowing and other dose at 60 days after sowing. Brinjal sown in the month of December may be applied urea only when the moisture is available in the soil. According to need irrigation may be given at the interval of 10 to 15 days.
 - Farmers are advised to undertake sowing of onion after harvesting early potato. Select the varieties from Pusa Ratnar, Pusa Red, N53 and Arka Niketan etc.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
 - aphids and blight in mustard and rai, apply metasystox (25 EC), monocrotophos @ 2 g per liter of water for aphids and Dithane M 45 @ 2.5 g / litre of water for blight.
 - pod borer and powdery mildew in early pea. To prevent the infestation of irrigate the field with thimet @ 4 kg/acre. Spray Karathane @ 1 ml / litre of water or sulfex @ 3 g / litre of water.
 - pod borer in arhar, spray with Monocrotophos 1 ml/litre of water.
 - stem borer in brinjal, cut it down and bury in soil. To prevent the plant from fruit and shoot borer spray Imidochloropid 1.0 ml / liter of water or install 12 to 15 pheromone traps / hectare.
 - white fly and leaf hopper in early sown vegetables, spray monocrotophos 40 EC @ 1.5 ml / litre of water.
 - mosaic disease in tomato, treat the roots of tomato plant by Imidachlopid 0.25%.
 - blight disease in linseed, spray Mancozeb @ 2 ml / litre of water.
 - fruit and shoot borer in brinjal, spray Imidachloropid 1.0 ml/liter of water or install 12 to 15 pheromone trap/hectare.
 - white fly, leaf hopper in early sown summer vegetables, spraying of Monocrotophos 40 EC @ 1.5 ml/litre of water may be done.

Orissa

- **Realised Rainfall:** There was no significant rainfall in most of the districts during last week over the State.
- **Rainfall Forecast:** Mainly dry/dry weather is likely over the State during next five days.
- **Major *rabi* Crops:** wheat (ear head emergence), pulses (pod formation), sunflower, groundnut (vegetative), mustard (maturity/harvesting).
- **Advisory:**
 - As there was no significant rainfall in the State during last week and no significant rainfall is likely for the next five days, apply irrigation to the *rabi* crops.
 - Undertake weeding and intercultural operations in *rabi* pulses like lentil, field pea and gram.
 - Undertake nursery sowing of summer rice and complete transplanting as late transplanting may affect the crop during summer due to moisture stress. Apply 25% N, full doses of P₂O₅ and K₂O as basal fertilizer during transplanting (Fertilizer dose-60:30:30 Kg N- P₂O₅ -K₂O/ha). To increase nitrogen use efficiency, apply nimin @ 10ml / Kg of urea. Maintain 70 hills/m² for 100 days duration rice variety and

60-65 hills/m² for 125 days variety. Apply pre-emergence herbicides like Pyrazosulfuron ethyl @ 20 g a.i. / ha or Pretilachlor @ 400 g a.i. / ha within 3-4 days of transplanting to control the weeds. In BPH endemic areas transplant the seedlings in strips of 1 m width and maintain 30 cm gap between two strips.

- 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 crops of mustard.
- Undertake sowing of summer greengram and blackgram with seed treatment of Bavistin @ 2 gm per kg of seed followed by rhizobium culture @ 200 gm per 10 kg of seed.
- **Major Seasonal Crop with stage:** Sugarcane (early vegetative), vegetables (fruiting / harvesting), onion (vegetative).
- **Crop Condition: Good**
- **Advisory:**
 - Undertake weeding, intercultural operations and application of fertilizers in vegetables.
 - Hoeing and weeding may be carried out in early planted sugarcane and apply 50 kg of Nitrogen followed by earthing up. In 45 days old ratoon crops, apply 40 kg Nitrogen followed by irrigation.
 - 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.
 - It is the right time for sowing of cucurbits, cucumber and ladies finger. Farmers are advised to undertake field preparation and undertake sowing.
 - Farmers are advised to undertake weeding in early sown groundnut and apply gypsum @ 250 kg/ha.
- **Plant protection:** Weather conditions are favourable for mild incidences of
 - downey mildew in cucurbits, spray Indophil-M-45 @ 3 ml per litre of water.
 - Eryophyid mites in coconut spray, Neemazol 4 ml per litre water at the top of the plant or root injection may be done by dipping the roots with the solution of 7.5 ml Neemazol in 7.5 ml clean water in a polythene bag by giving a slant cut to the roots.
 - thrips in groundnut, spray Dimethoate @ 400 ml or Imidachloprid @ 50 ml in 200 litre water per acre.
 - thrips in chilli, spray Imidaclopyrid @ 0.4ml/litre of water.
 - 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.
 - aphids 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, saw fly and borer in cole crops, spray Malathion @ 2 ml / litre of water.
 - late blight in potato, spray 2 kg Dithane-M-45 in 500 litres of water thoroughly.
 - blight in mustard, spray 1 kg Copper Oxychloride or 800 g Dithane-M 45 / acre in 200 litres of water to control.
 - tikka disease in groundnut, spray Saaf / Sixer @ 2 g / litre of water.
 - fruit and shoot borer in brinjal, aphids and white fly in tomato, thrips in chilli, spray Endosulfan @ 2ml / litre of water or at later stages, apply 150 g Dimilin and 300g Caldan in 200 litres of water in 1 acre to control fruit and shoot borer in brinjal.
 - fruit and shoot borer in brinjal, spray, Spintor @ 3.5ml in 15 litre of water.
 - aphids and white fly in tomato, apply Metasystox @ 2 ml / 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:** Rain occurred in Bankura, Nadia and Purulia districts during last week. No significant rain occurred in remaining districts of the State.
- **Rainfall Forecast:** Mainly dry weather is likely to prevail over the State during the period.
- **Major Crops:** *Boro* rice, vegetables, mustard.

- **Crop Stage:** Sugarcane (vegetative), wheat (milk / dough / early maturity), vegetable crops (vegetative / flowering / fruiting / harvesting), mustard (seed formation / early maturity / maturity), *boro* rice (tillering), potato (tuber formation / early maturity / maturity).
- **Crop Condition:** Good.
- **Advisory:**
 - Top dress the early transplanted *boro* rice at 6 weeks after transplanting or just before flowering @ 15 kg urea per bigha and also top dress late transplanted crops at 3 weeks after transplanting or at tillering stage @ 15 kg urea per bigha. In case of zinc deficient of soil apply zinc sulphate @ 4 kg per bigha at the time of first topdressing. At the time of topdressing it is better to keep the field dry. Mix the fertilizer thoroughly with the soil after application. After 48 hours of fertilizer application, apply irrigation to obtain better fertilizer use efficiency and maintain 4 – 5 cm water in the field.
 - Apply irrigation in wheat at milk / dough stage. Withheld irrigation as soon as the seeds start ripening.
 - Early sown mustard must be harvested as the temperature is rising.
 - Prepare well-drained sandy to heavy loam soil and start green gram sowing. The recommended varieties are TM-99-50, PDM-11, TARM-1, 2 (resistant to powdery mildew) and Samrat. The seed rate is 2.5-3 kg when sown in broadcasting and recommended fertilizer dose is 4-5 kg urea and 35-40 kg SSP / bigha.
 - Prepare fertile sandy loam soil and well drained land for watermelon cultivation. The recommended varieties are Sugar Baby and Ashi Yeamoto. Seeds should be treated with Manozeb M-45 @ 3 g / kg of seeds before sowing. Pits should be made at a distance of 120 cm x 90 cm for Sugar Baby and 150 cm x 120 cm for Asahi Yeamoto.
 - Start planting of gladiolus. Before planting the corms should be treated with Carbendazim @ 1 g / litre of water.
 - Prepare the land for sesame and start sowing seeds of improved varieties like Tilotamma, Roma etc. Adopt seed rate of 1 Kg per Bigha. Treat the seeds with Mancozeb @ 3 g per Kg of seeds.
 - Complete sowing of high yielding varieties of groundnut like A.K. 12-24, J. L.-24.
 - Start sowing the seeds of different summer vegetables such as ladies finger, spinach, various leafy vegetables etc. Sow seedlings of Brinjal and Chili in the main field.
 - As there was no significant rain during last week except in Bankura, Nadia and Purulia districts and mainly dry weather is likely to prevail, apply irrigation to wheat, mustard and pulse crops.
 - Stop irrigation to potato crop two weeks before harvesting. Start harvesting of already matured potato.
- **Plant protection:**
 - Due to fog and increased temperature, small, grayish brown hoppers were found on the buds and flowers of mango. Spray monocrotophos or methyl demeton @ 1.5 ml / litre or carbaryl WP @ 2 g / litre with diethane M-45 @ 2.5 g / litre of water, once before flowering and 1-2 times after flowering and at fruit setting stages as preventive measure.
 - Due to variation of temperature between day and night and fog, rice may be infected by blast and brown spot diseases. Spray the crop with Ediphenphos 50 EC @ 1ml / litre or Carbendazim 50 WP @ 1 g / litre or Tricyclozole 75 WP @ 0.6 g / litre of water when the above disease symptoms appear.
 - Attack of stem borer may be found in *boro* rice due to increase in temperature. Spraying alternatively triozophos 40 EC @ 1.2 ml / litre or cartap WP @ 1 g / litre or Endosulfan @ 1.5 ml / litre when 5% dead heart or one egg mass per hill was found.
 - For late sown wheat, there is a chance of attack of blight due to cloudy weather. Apply Mancozeb or Zirum (2 g per litre of water) to control it.
 - To prevent the attack of late blight in potato, spraying of Mancozeb (2 g / litre of water) and Copper oxichloride (4 g / litre of water) alternately at 10-12 days interval by completely wetting the leaves are necessary. If attacked by late blight spray the mixture of Metalaxyl 8% and Mancozeb 64% @ 1 to 1 ½ g per litre of water alternately at 12-15 days interval by completely wetting the leaves. In severe cases of attack spray Simoclanil + Mancozeb (2.5 g / litre). If not irrigated, then wait for 2-4 days and irrigate at noon time under intense sunlight.

Sikkim

- **Realised Rainfall:** No significant rain occurred 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 (milk / dough), seed potato (sowing / germination); **(b) Medium hills (1000 to 1500 m):** Large cardamom (vegetative), *rabi* vegetables (harvesting), mustard (seed maturity / harvesting), wheat (milk / dough), *rabi* potato (tuberisation); **(c) Low Hills (Below 1000 m):** Large cardamom (vegetative), *rabi* vegetables (harvesting), mustard (seed maturity / harvesting), wheat (flowering), *rabi* potato (tuberisation).
- **Crop Condition:** Good.
 - **Advisory:**
 - As dry condition is prevailing, farmers are advised to apply irrigation to wheat crop.
 - 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.
 - For replanting of old and disease effected gardens of cardamom, all old plants should be uprooted, cut into pieces and buried in the pits or burnt to avoid the spread of diseases and to keep the plantation ready for planting.
 - Harvesting of vegetables may be undertaken.
 - Undertake second weeding in *rabi* potato at 60-70 days after sowing followed by irrigation.
- **Plant protection:**
 - Chirke and Foorkey infected cardamom plants may be destroyed by uprooting and buried in the pits at regular intervals.

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

Assam

- **Realised Rainfall:** No significant rainfall occurred over the State during last week.
- **Rainfall Forecast:** Isolated rain is likely to occur over the State during the period.
- **Major *Rabi* Crops:** Wheat (milk / dough), potato (tuber formation / early maturity / maturity), pea, arhar (pod formation / early maturity / maturity) and mustard (seed formation / early maturity / maturity), vegetables (vegetative / flowering / fruiting / harvesting), *boro* rice (tillering), early *ahu* rice (nursery preparation).
- **Advisory:**
 - Seed beds are to be prepared measuring 1 m wide, 10 m in length and 30 cm apart for preparation of nurseries of early *ahu* rice. In each bed, 20-30 kg dry cow dung, 80 g urea, 80 g SSP and 40 g MOP should be incorporated. Recommended high yielding varieties should be selected for cultivation and seeds are to be treated with Indofil M-45 @ 2.5 g / kg of seeds (dry treatment) before sowing.
 - Sow seeds of Banglami, Nilajee etc. in well pulverized field under dry conditions for cultivation of direct seeded early *ahu* rice. Apply P and K @ 9 kg and 2 kg / bigha. Do not apply N as basal.
 - Apply irrigation to wheat as there will be no significant rain during next five days.
 - As there was no significant rain during last few weeks, apply irrigation to tomato, mustard, pea, vegetables etc.
 - Start harvesting of pea and arhar crops if 75-80% of pods turned yellow.
 - In view prevailing dry weather, undertake harvesting of already matured *toria*, mustard and rapeseed crops.
 - As the dry weather is likely to continue, matured potato crops may be harvested during next 4-5 days.
 - Pre sowing light irrigation is advocated due to prevailing dry condition especially in light textured soil for sowing of maize. Use hybrid seeds. Apply irrigation at knee high stage due to prevailing dry conditions in early sown crop.
 - Land preparation for summer vegetables like ladies finger, cucumber, ridge gourd, brinjal, cowpea etc. should be started during this period. Yellow Vain Mosaic Virus resistant varieties such as Parvani Kranti, Arka Anamica etc. should be selected for sowing of ladies finger. Cucumber varieties like Chinese Green, Apple Cucumber, Pusa Sanjog etc. may be sown at 120 cm x 150 cm spacing. Pre sowing irrigations essential as there is no rain for a long period.
 - This is Ideal time for sowing of late Cole crop seedlings. Some of the popular varieties of late Cole crops are Pusa Snow Ball K-1 and Snow Ball 16 for cauliflower, Drum Head for cabbage and Purple Viena for Knolkhol.

- 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).
- It is the ideal time of taking cuttings and planting of cuttings of black pepper. The cutting should have 2-3 nodes and during planting the lower node should be inside the soil. Suitable varieties are Panure 1, Corimunda Balancata etc.
- Farmers may select low lying fertile soils for sowing of recommended capsularis jute varieties like JRC-321, UPC-94 etc. Application of BHC 10% dust at the time of land preparation is necessary to protect the seeds from soil insects.
- **Major Seasonal Crop:** sugarcane (vegetative / maturity), fruit crops.
- **Crop Condition:** Good.
- **Advisory:**
 - Matured sugarcane may be harvested during this period.
 - Pits should be prepared in advance for planting of coconut in March-April. Size of the pits should be 1 m wide and 1 m deep and dug at a spacing of 7.5 m x 7.5 m. The bottom of the pits (upto 10 cm) should be filled with sand and broken bricks etc. Thereafter, upto two third depth, pits are to be filled with surface soil and dried cow dung / compost.
 - Apply irrigation to Khasi Mandarin as there is no significant rain for long period. Mulching around the base of the plant helps in reducing moisture loss.
 - 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.
- **Plant protection:**
 - As there is chance of infestation of stem borer, gall midge, leaf folder etc. in *boro* rice, apply Carbofuran 3 G to protect the crop.
 - Farmers are advised to adopt precautionary measures to prevent late blight disease in potato and tomato crops. For this purpose recommended dose of Dithane M-45 or Dithane Z-78 is to be sprayed at 15 days interval.
 - As there is chance of infestation of aphids and saw fly in mustard, apply Rogor 30 EC @ 2.5 ml / litre of water to control the pests.
 - As there is chance of attack of leaf eating caterpillars in cole crops, farmers are advised to spray Malathion 50 EC @ 1.5 ml / litre of water.
- **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:**
 - Dry paddy straw for hay making and preserve for future use. Store paddy straw by making silage.
 - 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.

Arunachal Pradesh

- **Realised Rainfall:** Rain occurred in East Siang, Upper Siang and West Siang district of the State during last week. No significant rain is occurred in most of the districts of the State.
- **Rainfall Forecast:** Rainfall is likely at a few/isolated places over the State during next five days.
- **Major *rabi* Crops:** Pea, maize, potato
- **Crop Stage:** Pea (pod formation), maize (grain formation), potato (maturity)
- **Crop Condition:** Good.
- **Advisory:**
 - As there was no significant rain in most of the districts except Upper Siang district during last week and there is chance of significant rainfall during next five days, apply need based irrigation to the standing crops.
 - Farmers are advised to undertake the following measures to safeguard the maize, pea and potato crops from frost injury in Tawang district.
 - Arrange for smoke by burning around the field using farm waste materials.
 - Undertake weeding, inter-cultural operations and top dressing of fertilizers in pea, maize and potato.

- **Major Seasonal Crop:** Vegetables (fruiting/maturity)
 - 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 like cabbage, cauliflower and broccoli be harvested which are ready for harvest.
 - 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 at 7 days interval.
 - 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. Protect the animals from cold by covering with gunny bags or clothes with supplement of high energy feed like concentrate or mineral mixture in feed in addition to green fodder.

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

Andhra Pradesh

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Isolated rainfall is likely during next 48 hrs. in coastal Andhra Pradesh and dry weather thereafter. Dry weather is likely over Telangana and Rayalaseema during next five days.
- **Major Crops:** Cotton, Sugarcane and Vegetables
- **Crop Stage:** boll development (cotton). *Rabi* crops are at grain formation 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 i.e, 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 in high altitude tribal zone are advised to apply complex fertilizers like DAP as top dressing in paddy. Spray zinc sulphate @ 2 g/litre of water to control the zinc deficiency in rice field.
 - Farmers are advised to undertake intercultural operations in *rabi* crops to keep the fields weed free.
 - Zinc deficiency is observed in Northern Telangana zone, to resolve the problem Farmers are advised to spray 2g ZnSO₄/litre of water.
 - Continue harvesting Bengalgram as the crop is at maturity stage.
- **Plant protection:** Present weather conditions are congenial for the incidence of
 - powdery mildew and thrips in high altitude tribal zone in vegetable crops. Farmers are advised to spray Tridimorph @ 1.0 ml or Dinocap @ 1.0 ml per litre of water for powdery mildew disease and Malathion or Dimethoate or Methyl demeton @ 2.0 ml per litre of water for control of thrips.
 - stem borer in rice, to control spray 5 kg Phorate/acre.
 - powdery mildew in mango orchards in Kurnool district and hopper and shooty mould in northern telangana zone. To control powdery mildew, spray Wettable Sulphur @ 2 g or Hexaconazole @ 1 ml or Tridemiphos @ 1 g per litre of water and to control mango hopper and shooty mould spray Monocrotophos @ 1.6 ml/l plus wettable Sulphur @ 3 g/litre.
 - yellow vein mosaic in rice fallow blackgram in Guntur districts. To control, remove and destroy virus affected plants. To control the whitefly vector, spray Monocrotophos @ 1.6 ml or Acephate @ 1.5 g or Dimethoate or Triazophos @ 2 ml per litre of water.
 - early shoot borer in sugarcane in South Telangana zone. To control, adopt the following IPM measures.
 - Plant the setts in deep furrows.
 - Spray Lindane @ 10 kg per acre in 2:3:4 ratio at 0, 30 and 60 days after transplantation.
 - Give irrigations at close intervals.

- In sugarcane field, at 3 days after transplantation and in ratoon crop immediately after ratooning, spread sugarcane trash @ 1.25 tonnes per acre.
 - Spray Endosulfan @ 2 ml per litre of water at 4, 6 and 9th week after transplantation.
 - Release parasitic complex *Trichogramma chelonis* @ 20,000 per acre at 30 days after transplanting, 4 times at 10 days interval.
- blast in rice in South Telangana Zone. To control spray Tricyclazole @ 0.6 g per litre of water, followed by application of urea as top dressing.
- stem borer in maize in South Telangana zone. To control, spray Endosulfan @ 2 ml per litre of water. If sufficient moisture is available, apply Carbofuran granules 3G @ 3 kg per acre in the whorls.
- shoot and capsule borer in rabi castor in South Telangana Zone. To control, spray Dimethoate or Methyl Demeton or Monocrotophos @ 2 ml per litre of water once at flowering and another spray 20 days after first spray. If severe incidence is noticed, spray Acephate @ 1 g per litre of water.
- thrips, mealy bugs and powdery mildew in grapes in Southern Telangana zone. To control mealy bugs
 - Remove and destroy the infested shoots and fruit bunches
 - Rub and destroy the mealy bugs on the bark using piece of gunny bag
 - Remove the bark and apply to the stem, Carbaryl @ 6 g + COC @ 10 g + Neem oil @ 1 ml + Sticker @ 1 ml per litre of water.
 - Spray Dichlorvas @ 2 ml or Methomyl @ 1 g per litre of water.
 To control powdery mildew
 - Spray Wettable Sulphur @ 2 g or Hexaconazole @ 1 ml or Tridemiphos @ 1 g per litre of water.

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:** Pigeonpea (maturity), Sunflower (maturity), Vegetables (Flowering/fruitletting/ harvesting), *Rabi* Sorghum (grain formation), Bengalgram (Pod filling/harvesting), Safflower (pod filling).
- **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 are advised to undertake harvesting of green gram, black gram, cow pea etc. in coastal Karnataka.
 - Farmers are advised to undertake harvesting of cotton, sorghum in north east dry zone.
 - Farmers in North dry zone 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.
 - Uproot the smut affected sorghum plants and burn them to avoid inoculum carried over to next season in soil and grains.
 - 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.
 - This is proper time to undertake sowing / transplanting of water melon, sweet gourd and ridge gourd and onion under irrigated condition.
 - Continue harvesting of Bengal gram, sorghum and safflower in north east dry zone.
 - As dry weather is likely during next five days, farmers are advised to provide irrigation to the dry land horticultural crops and other field crops depending on soil types and crop condition in Eastern dry zone.
 - Undertake sowing/transplanting of sweet gourd, ridge gourd and onion under irrigated condition in northern dry zone.
 - Farmers are advised to apply Urea 2Kg+ Muriate of Potash 2 Kg in 200 litres of water along with kaolinite spray in Nilgiris to overcome moisture stress in Tea garden.
- **Plant protection:** Present weather conditions were congenial for the incidence of
 - powdery mildew in grape, spray 1 ml Amistar dissolved in one liter of water.
 - bacterial blight disease in pomegranate, spray the crop with Streptomycin Sulphate 0.5 g. + Copper oxy-chloride 2 g. dissolved in one liter water. Then take up spraying of micro nutrients viz., 1 g. Zinc Sulphate + 1 g. Magnesium Sulphate + 1 g. Borax + 1 g. Calcium dissolved in one liter of water.

- jassids and powdery mildew disease in mango. To control spray the crop with 1 ml Monocrotophos along with 1 g. Carbandizeme dissolved in one liter of water.
- leaf miner and thrips in groundnut, to control leaf minor spray with Quinolphos (2ml/lit) and to control thrips spray with Dimethoate @3g/lit of water.
- leaf spot in Banana. Farmers may undertake spraying of DM-45@ 1.7 ml/lit of water to control it.
- aphids in Safflower crop in Raichur. For effective control of aphids spray Dimethioate 30 EC @ 1.7ml/liter of water.
- thrips in chilli and capsicum in North East Transition zone. To control spray imidacloprid @ 0.5 ml/l.
- wilt complex in chilli in Hassan district, to control drench the crop with Carbendazim @1gram litre and streptocycline @ 0.5gram per litre of water.
- Due to low temperature in the night there is chance of Tea Mosquito on cashew. So farmers are advised to take up spraying of lambda cyhalothrin @ 0.5 ml/lit of water.

Kerala

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Isolated rainfall during next two days and mainly dry weather is likely thereafter.
- **Major Rabi Crops:** Rice (flowering/grain formation)
- **Crop Condition:** Good.
- **Advisory:**
 - Farmers are advised to apply top dressing of nitrogen in puncha rice in Palakkad district.
 - Farmers of Wayanad district are advised to undertake harvesting of arecanut, pepper, coffee and cardamom. Start land preparation and planting of ginger.
 - Farmers of Thrissur district are advised to continue sowing of Puncha rice as a third crop. Select short to medium duration varieties like Jyothi, mattatriveni, harsha, gouri etc. If third crop is not taken and there is sufficient water, vegetables can be cultivated. This will help to improve the soil fertility.
 - Farmers of Wayanad district are advised to apply fertilizers to irrigated coconut palms @ 270 g urea, 400 g rock phosphate and 500 g potash per palm. Irrigate the coconut palms and provide shade to the young palms. Farmers are advised to keep vigilance against Red palm weevil, rhinoceros beetle, leaf eating caterpillar, stem bleeding and leaf rot disease.
 - This is an ideal time for planting pepper. Apply mulch and protect the plants from the scorching sun.
 - In Central zone Puncha rice is in transplanting stage. If third crop is not taken and there is sufficient water, vegetables can be cultivated. This will help to improve the soil fertility.
 - Complete harvesting of rice in Trivandrum district.
 - **Major Seasonal Crop:** Vegetables and plantation crops (coconut, arecanut, pepper and cashew).
 - Farmers in High Altitude zone are advised to cultivate crops like ginger turmeric vegetables etc. as an intercrop in irrigated coconut gardens. Stem bleeding may become more severe. Irrigate the coconut palms and provide shade to the young palms.
 - Farmers in High Altitude zone are advised to irrigate once in 3-5 days at a rate of 175 litres per palm. Protect the palms from direct sunlight by wrapping the stems with areca sheaths or white wash the exposed portion.
 - Farmers are advised to keep the field ready for dry ginger cultivation. Use disease free plating materials.
 - In Northern zone the second crop of paddy is ready for harvest. Prevailing weather conditions like clear sky and dryness are favourable for harvesting the crop and drying the produce.
 - Irrigate the coconut crop frequently depending on the soil condition to reduce the nut fall and to increase the nut setting. Mulch the basin with dry palm leaves for reducing the heat load at the root zone and for water conservation. Apply 2/3rd of the total fertilizer now to those fields where irrigation facilities are not available.
 - Farmers in northern zone are advised to give second doze of fertilizer in banana plantations which were planted during September – October. Irrigate the crop at the rate of 40-50 litres per nendran banana. Multch the crop with dries leaves.
 - This is an ideal time for planting pepper. Apply mulch and protect the plants from the scorching sun.
 - Farmers are advised to go for harvesting of black pepper in northern zone. The harvested berries are piled up in a heap to initiate browning. Irrigate the vines. Mulch the vine with dry leaves and to reduce the soil temperature and also for conserving water. Clean the basins of the pepper vines and remove the

weeds. Apply Trichoderma along with farm yard manure and Neem cake in foot rot affected plots as prophylactic measure.

- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - mealy bug infestation in vegetables and Papaya, other garden plants are also affected by mealy bug. Spray dimethoate at 0.05% to control them.
 - 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.
 - Mahali disease in arecanut. To control apply 1% Bordeaux mixture against. Provide good drainage in the garden.
 - powdery mildew and shoot borer in vegetables in High Altitude zone. Farmers are advised to apply 2-3 g wettable sulphur for controlling powdery mildew and Sevin (50%) (3 gram perlitre) to control shoot borers.
 - hoppers, white flies in cucurbits and fruit fly in bitter gourd and snake gourd in High Altitude zone. Setting of fruit traps will help to reduce the attack. In large gardens apply Carbaryl 50% (3-4 grams/litre) suspension containing jaggery at fortnight interval. Irrigate the crops once in 3-4 days.
 - rice bug in rice in problem area zone, farmers are advised to keep the bunds free of weeds and keep torch flames in the bunds during night.
 - Pseudostem weevil in banana in Kottayam district. To control apply Chlorpyrifos @ 2ml/l in leaf axils.
 - 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. Collect and destroy the pupae of stem borer from the basal region. Remove the emerging shoots from the healthy seedlings and proper sanitation by appropriate weed control.
 - Bunchy top virus in banana in High Altitude zone. Apply neem-garlic emulsion to control the vectors spreading.
 - stem bleeding, calyx mite, bud rot and red palm weevil in Coconut Apply calyxin (5ml in one liter of water) to the palm affected by stem bleeding. Apply wettable sulphur 5 g / liter of water against calyx mite. Cut and remove bud rot affected portions of coconut palm and apply 10% Bordeaux paste on cut surface. Apply Sevin (8 gm in 2 lit. of water) to the grooves of red palm weevil affected palms. Pheromon traps can also be used to destroy red palm weevil.
 - pseudostem weevil in banana in Central zone. To control apply quinalphos 0.05% or carbaryl 0.2% as drenching on leaf axils, rhizome and surrounding soil and all around the entire pseudostem. Mulch banana basins using 3.5 kg of hay or dried materials.
- **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 five days.
- **Major Rabi Crops:** Groundnut, pulses and *thaladi* rice, sugarcane, banana and vegetables.
- **Crop Stage:** panicle initiation/flowering (rice), pod development/maturity (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 Tuticorin, Virudunagar and Thirunelveli are advised to undertake harvesting of pulses, maize, sorghum, sunflower and cotton as dry weather conditions prevail during these days.
 - Monitor the leaf colour by using Leaf Colour Chart in Tuticorin, Virudunagar and Thirunelveli districts. The critical value is 3 for White Ponni and 4 for other varieties. When the leaf colour is below the critical level, apply N at 50 kg/ha, K at 50 kg/ha and zinc at 25 kg/ha. In SRI, for the rice crop at booting stage, apply N at 37.5 kg/ha and use rotary weeder.

- Undertake sowing of daincha and kolinji to reduce the pest incidences.
- Farmers in Thanjavur, Trichy, Nagappattinam and Thiruvarur are advised to undertake intercultural operations in rice fallow pulses viz., black gram and green gram. In the rice fallow black gram, spray 2% DAP + 1% KCl solution on morning or evening at flower initiation and another spray at 10 days interval.
- Farmers in Namakkal district are advised to top dress maize crop with 60 kg of urea/acre between 20 and 25 days age. Between 40 and 45 days, the crop may be top dressed with a further dose of 30 kg urea along with 15 kg of potash per acre followed by irrigation.
- 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 setting.
- 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
 - leaf folder in rice. Monitor the crop for the incidence and spray neem seed kernel extract 5%.
 - leaf spot incidence in vegetable crops. Monitor the incidence and spray carbendazim 500g/ha or spray Pseudomonas @ 200g/acre.
 - boll worms in cotton in Tuticorin. For destroying the eggs of this pest use Trichogramma egg parasite at 7.5 cc/ha are spray NPV at 250 LE/ha (1 LE is equal to 3 diseased larvae). If incidence is severe use phosalone at 2.5 l/ha are quinolphos at 2 l/ha or carbaryl at 2.5 kg/ha.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Maharashtra

- **Realised Rainfall:** Some rain occurred in Chandrapur district of the State during last week. No significant rain occurred in remaining districts of the State.
- **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, sunflower, bajra, maize.
- **Crop Stage:** *tur* (harvesting), *rabi jowar* (grain maturity / harvesting), safflower (early maturity), sunflower (seed maturity), gram (pod development / early maturity), wheat (milk / dough), mustard (pod development / maturity), linseed (seed development), vegetables (vegetative / flowering / fruiting / harvesting), and summer rice (early tillering), summer groundnut (early vegetative / vegetative), summer sunflower (sowing / germination / early vegetative), summer maize (sowing / germination), summer bajra (sowing / germination).
- **Crop Condition:** Satisfactory.
- **Advisory:**
 - Conserve moisture in the crop field at maturity stage of *kharif* crops.
 - Undertake planting of sugarcane (*suru*).
 - Complete preparatory tillage & undertake sowing of summer groundnut and summer sunflower. Select varieties from TPG 41, TG 26, TAG 24, SB 11 & ICGS 11 for summer groundnut and hybrid varieties like K.B.S.H.-1, S.S.F.H.-8 and Phule Raviraj and high yielding varieties from Modern, Bhanu and SH-56 for summer sunflower.
 - Start sowing of summer soyabean & summer maize. For sowing of soyabean select varieties from MCS-450, JS-335 or Phule Kalyani and for maize select medium duration varieties like KH-9451, Deccan-103, Ganga-11 or mixed varieties like Manjri, Kiran, Panchaganga etc.
 - Maintain 3-5 cm water level in the rice field.
 - Undertake sowing of fodder crops. Select varieties from African tall, Ganga safed, Vijay, Ganga-5 etc. for maize, Ruchira, Maldandi 35-1, Nilwa, Phule Amruta for jowar and Giant Bajra, Rajco Bajra for bajra.
 - Undertake sowing of summer ridge gourd by selecting a variety from Pusa Nasdar and Kokan Harita and also bitter gourd selecting variety from Hirvani and Phule Green Gold.
 - Apply second dose of 100 kg Nitrogen / ha with 1 kg *neem* powder for every 6 kg urea to *suru* sugarcane after 6 to 8 weeks from planting followed by irrigation.

- Apply Nitrogenous fertilizer @ 40 kg / ha for one month old rice crop in Konkan.
- Apply fertilizer dose of 330 g N + 330 g K₂O per coconut tree of above five years age while for arecanut apply 75 g N + 75 g K₂O per tree of 3 years old. Irrigate the trees after fertilizer application.
- To reduce the transpiration rate in banana, spray mixture of 800 gm Kaolin dissolved in 10 liters of water.
- Use sprinkler and drip irrigation system in summer season in order to save water.
- As there was no significant rain in most of the districts during last few weeks and there is no chance of significant rainfall during next five days, apply protective irrigation to the standing crops.
- Start harvesting of already matured *jowar* in morning hours and continue harvesting of already matured red gram.
- **Major Seasonal Crop:** Fruit crops and Sugarcane (pre-seasonal) (tillering), Sugarcane (*Suru*) (planting).
 - Undertake spraying, fertilizer application in the standing crops.
- **Plant Protection:**
 - Due to cloudy weather & rise in temperature, there is possibility of infestation of aphids and rust disease on late sown wheat. Alternate spraying of Dipenconazol @ 10 ml or Tilt @ 10 g in 10 litres water thrice at 10 days interval.
 - As there is chance of increase in maximum and minimum temperature during next five days, there is possibility of pre mature fruit drop in mango, farmers are advised to apply irrigation @ 150 to 200 liters / tree at fortnightly interval. 3 to 4 such irrigations may be applied. For better development of fruits, spray 20 ppm Naphthalic Acetic Acid.
 - Weather conditions are favourable for mild incidences of –
 - stem borer in *suru* sugarcane, for control uproot plants infested with the caterpillar, use five pheromone traps per ha or use four Phule trichocards at 10 days interval for 5 times. For chemical control, spray Chloropyriphos 20% @ 2.5 liters per 100 litres of water per ha and apply light irrigation after spraying.
 - blight in rice, spray Carbendazim @ 1 g / litre or Copper oxychloride @ 2.5 g / liter of water.
 - tikka disease in summer groundnut in Konkan, spray Carbendazim @ 1 g / liter of water at 10 days interval.
 - jassids & powdery mildew on mango blossom, spray Dimethoate 30% and Sulphur 80% @ 20 g or Carbendazim @ 10 g in 10 liters water.
- **Fishery:**
 - The growth of fishes and water in the pond may be checked periodically. Natural feed and supplementary feed like groundnut cake, rice or wheat bran may be mixed in 1:1 proportion and mixed with water and given twice a days.

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 (milk / dough), mustard (seed formation / early maturity / maturity), gram (seed formation / early maturity / maturity), potato (tuber formation / early maturity / maturity) and vegetables (vegetative / flowering / fruiting / harvesting).
- **Crop Condition:** Satisfactory.
- **Advisory:**
 - Apply irrigation to wheat at milk / dough stage as dry condition is prevailing over the State during last few weeks.
 - Prepare land and undertake sowing of green gram. Select the improved variety from K-851, Mung Gujarat-3, 4 and CO-4. The seed rate should be 25 kg / ha with spacing of 30 x 10 cm. Treat seeds with *Rhizobium* culture @ 1 packet / 8 kg seeds. At the time of sowing fertilizer dose of N and P should be applied @ 20 kg and 40 kg / ha.
 - If leaves of isabgul & cumin are dried, harvesting should be done in early morning.
 - Start sowing of cow pea and black gram. Procure seeds of Guj-1, Guj. Cowpea-4, 5 and Pusa Falguni for cow pea and T9 for black gram for summer sowing under assured irrigation. Treat seeds with

Rhizobium culture @ 1 packet / 8 kg seed. Apply 20 kg N and 40 kg P₂O₅ / ha as basal dose before sowing.

- Farmers are advised to apply irrigation to gram and mustard wherever the crops are at seed formation stage. In view of prevailing dry weather, start harvesting of already matured crops.
- This is proper time for sowing of summer vegetables like ladies finger, brinjal, chilli etc. Select varieties like Pusa Savani, Parbhani Kranti, Guj. Okra -2 and GOH-1 for ladies finger, GOB-1 and GBH-1 for brinjal and GVC-101 and GVC-111 for chilli.
- Undertake sowing of summer bajra and select varieties from GHB-526, GHB-558, GHB-538, GHB-183, GHB-215, GHB-316 and GHB-235. Adopt seed rate of 3.75 kg / ha and 45 x 15 cm spacing for sowing. Apply 40+40+0 kg / ha NPK as basal dose.
- Farmers are advised to sow Summer Sesamum variety Guj. Til-2. Apply irrigation 6 to 7 days after sowing for obtaining better and even germination.
- Farmers are also advised to apply irrigation to standing crops as dry weather is prevailing for last few weeks.
- Stop irrigation in potato two weeks before harvesting. Undertake harvesting of already matured crops.
- **Major Seasonal Crop:** Fruit crops and Sugarcane (vegetative / harvesting).
 - Pluck matured guava and papaya fruits and take them to market after proper grading.
 - Irrigate sapota tree regularly at weekly interval. Pluck matured fruits and take them to market after proper grading.
 - Carry out weeding in citrus orchard and apply fertiliser.
 - Spray 0.5% zinc sulphate or 0.2% ferrous sulphate in banana for higher yield and good quality.
- **Plant Protection:**
 - Weather conditions are favourable for mild incidences of –
 - 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.
 - powdery mildew in mango, spray Carbendazim @ 10 g or Wettable Sulphur 30 g / 10 liters of water.
 - thrips causing leaf curl in chilli, spray Triazophos 40 EC @ 10 ml or Acephate 75 SP @ 10 g / 10 litres of water at 10 to 12 days interval.
 - purple spots on leaves in onion, spray Mencozeb @ 25gm in 10 litre water solution.
- **Animal Husbandry:**
 - Make hay and silage to ensure fodder availability during ensuing summer season.
 - Keep exotic breed of cow indoors during noon time.

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 and pulses (vegetative/late 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 wheat crop 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.
 - Farmers are advised to sow summer ladyfinger, coriander and fenugreek.
 - Prepare nursery for medium and late sown cauliflower and cabbage.
- **Animal Husbandry:** Cattle should be vaccinated to save them from infectious 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-
 - powdery mildew on chickpea, spray Sulfex or soluble sulfur (3 gm) or Carbandazime (2.5 gm)/liter (use 500-600 lit. water).
 - shoot and fruit borer in brinjal, spray neem seed kernel extract (4%).
 - pod borer or plume moth in Arhar crop, spray Quinalphos or Indosulphan @ 2.0 ml per liter of water or use pheromone traps.
 - Stem borer in gram, spray Endosulphan 35 EC, 2ml per litre of water.

Chattisgarh

- **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:** Wheat (milk / dough), *boro* rice (tillering), gram (seed formation / early maturity / maturity), mustard (seed formation / early maturity / maturity).
- **Crop Condition:** Good.
- **Advisory:**
 - Wheat crop is at milk / dough stage. This stage of the crop is critical for moisture and nutrient stress. Hence, farmers are advised to irrigate the fields.
 - As dry condition is prevailing in most of the districts of the State for last few weeks and is likely to prevail for next five days, farmers are advised to apply irrigation to the standing crops.
 - In winter onion, half dose of nitrogen should be applied after intercultural operations and irrigation should be applied after fertilizer application.
 - Stop irrigation 15 days before harvesting of potato. Start harvesting of already matured crops.
 - The average temperature is now suitable for proper germination of summer vegetables like pumpkin, bitter gourd, bottle gourd, okra etc. Hence the sowing of these vegetables should be completed at the earliest.
- **Major Seasonal Crop with stage:** Sugarcane (vegetative), Autumn sugarcane (planting), vegetables (flowering / fruiting / harvesting).
- **Advisory:**
 - Intercultural operation, fertilizer application, earthing up followed by irrigation are advised in sugarcane crop at knee height stage.
 - Present weather is favourable for planting of Autumn sugarcane. As the temperature conditions are approaching towards suitable condition for proper germination of Sugarcane to be sown during the last week of February and first week of March, it is advised to prepare well pulverized field for sowing of sugarcane. Top one third portions of the cane should be used for seed purpose. Before planting sugarcane setts should be treated with hot water / hot air method.
- **Plant Protection:** Present weather conditions may be favourable for the infestation of blast in potato, powdery mildew in cucurbitaceous vegetables, purple color spot disease in onion, fruit rot in chilli and powdery mildew in mustard and pea.
 - In late sown potato crop, for control of blast disease, Dithane M-45 should be sprayed @ 0.25%.
 - In cucurbitaceous vegetables, with the increasing cold condition, if white powder (powdery mildew) is observed, then sulfex dust should be applied.
 - In onion, for control of purple color spot disease, Blitox 50 (2 g / litre) or Dithane M-45 fungicide should be applied mixed with Rogor insecticide.
 - In chillies, for control of fruit rotting, Blitox 50 should be sprayed.
 - In mustard and pea crops, for controlling powdery mildew disease, sulfex or karathane or kalixin should be sprayed @ 1g / litre of water.