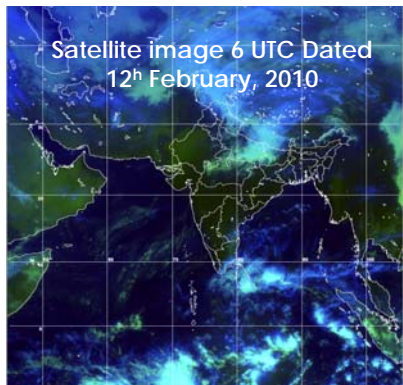




National Agromet Advisory Bulletin

Thursday, 11th February (For the period 11th to 15th February, 2010)



Satellite image 6 UTC Dated
12th February, 2010

Rainfall Forecast valid upto 1430 hours IST of 14th February, 2010

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

Major features of weather forecast (upto 1430 hours IST of 14th February, 2010).

- Scattered rain/snow would occur over Jammu & Kashmir and Himachal Pradesh during next 48 hours and decrease thereafter.
- Isolated rain/snow would occur over Uttarakhand during next 2-3 days.
- Isolated to scattered rain/thundershowers would occur over Madhya Pradesh, East Uttar Pradesh and Bihar during 2 days.
- Isolated to scattered rain/thundershowers would occur over Assam and Arunachal Pradesh.
- No significant change in maximum and minimum temperatures over northwest India during next 2-3 days.
- Dry weather conditions over remaining parts of the country.

Weather Outlook (upto 1430 hrs IST of 16th February, 2010)

- Isolated to scattered light to moderate rain/snow would occur over Jammu & Kashmir, Himachal Pradesh and Uttarakhand.
- Isolated to scattered rain/thundershower would occur over northeastern states.
- Dry weather conditions will prevail over remaining parts of the country.

Special advisories for rain / snowfall and hail storm in Northwest India

- During last week, medium to heavy rainfall received in the states of Jammu & Kashmir and Himachal Pradesh and intermittent rains in Uttarakhand and Rajasthan and scanty rainfall in Punjab and Haryana along with isolated hailstorm. Heavy snowfalls have been reported in Jammu & Kashmir and Himachal Pradesh. Receipt of rains could be beneficial to the crops like wheat, mustard and vegetables. Farmers are advised to postpone irrigation in these two States and to conserve rain water as source of water during ensuing crop season.

Advisories for cold injury in Jammu & Kashmir, Himachal Pradesh and Uttarakhand

- Farmers in Jammu & Kashmir, Himachal Pradesh and Uttarakhand 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 the remaining States

- As there was no significant rain in most of the remaining parts of the country during last week and mainly dry weather is likely to prevail 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:
 - pod borer in gram, soft rot / black rot in cabbage and aphids in cumin and coriander in Rajasthan.
 - powdery mildew and shoot borer in vegetables and tea mosquito bug and twig blight in cashew in Kerala.
 - aphids in safflower; sucking pests in chilli, tomato, brinjal and pod borer or plume moth in arhar in Madhya Pradesh.
 - saw fly in mustard, canker in lemon and pod borer in gram in Uttar Pradesh.
 - downey mildew in cabbage and cauliflower and powdery mildew in peas in Himachal Pradesh.
 - thrips in groundnut, pod borer in gram and aphids in safflower in Karnataka.
- Farmers are advised to undertake plant protection measures, if required.

Issued by

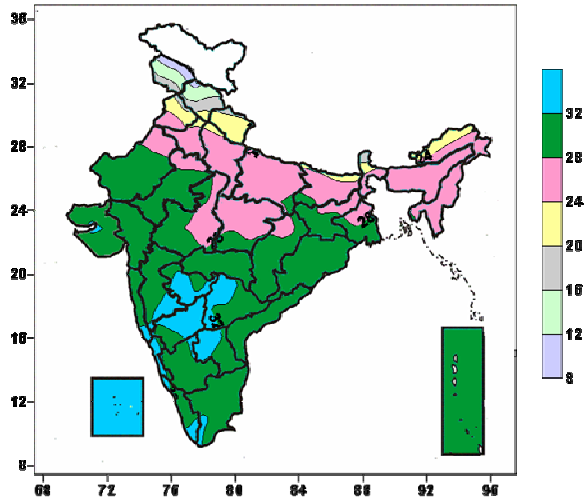
National Agrometeorological Advisory Service Centre,

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

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

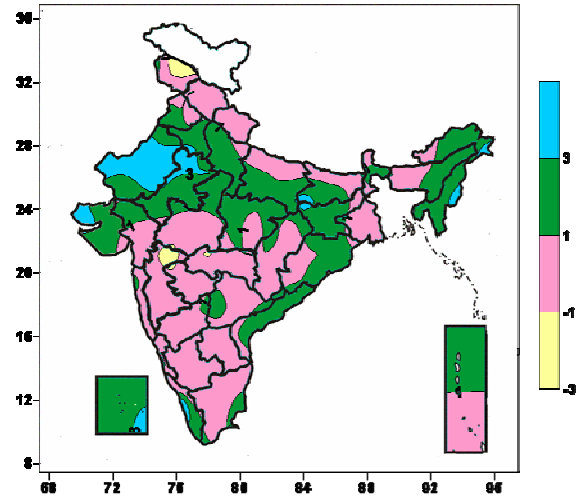
Contour maps for the week ending 10.02.10

Actual Mean Maximum Temperature (°C) in India for the week ending 10.02.10



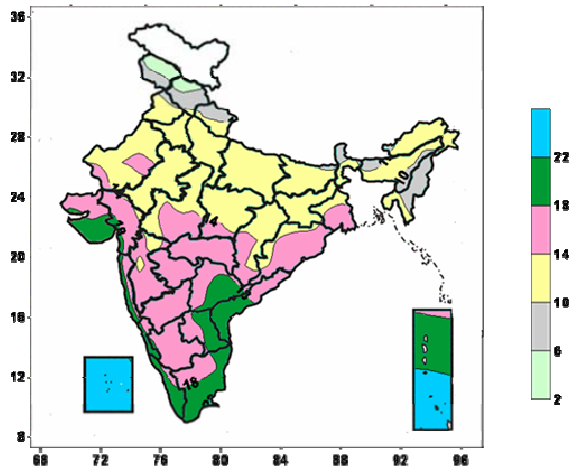
Actual Mean Maximum temperature ranged between 32°C and above over most parts of Marathwada, Coastal Karnataka, North Interior Karnataka, Lakshadweep Island, some parts of Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra, Telengana, Rayalaseema, South Interior Karnataka, Kerala, Tamil Nadu, 24 to 28°C over most parts of Haryana, Delhi, Uttar Pradesh, Bihar, Northeast India, Madhya Pradesh, some parts of Punjab, Rajasthan, Jharkhand, West Bengal, Chhattisgarh, 20 to 24°C over most parts of Uttarakhand, some parts of Punjab, Haryana, West Uttar Pradesh, Bihar, Sub-Himalayan West Bengal, Arunachal Pradesh, 16 to 20°C most parts of Sikkim, some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Uttarakhand, 12 to 16°C over some parts of Jammu & Kashmir, Himachal Pradesh, 8 to 12°C over some parts of Jammu & Kashmir, 28 to 32°C over remaining parts of the country.

Maximum Temperature (°C) Anomaly in India for the week ending 10.02.10



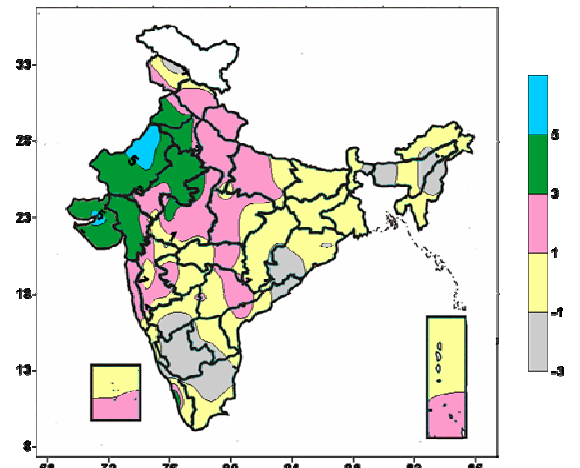
Actual Mean Maximum temperature anomaly ranged between 3°C and above over most parts of West Rajasthan, some parts of Haryana, East Rajasthan, Bihar, Jharkhand, Arunachal Pradesh, Manipur, Saurashtra, Kerala, Lakshdweep Island, 1 to 3°C over most parts of Punjab, Haryana, Delhi, Uttar Pradesh, Bihar, Jharkhand, Northeast India, East Rajasthan, Saurashtra & Kutch, East Madhya Pradesh, Orissa, Coastal Andhra Pradesh, Kerala, Andaman & Nicobar, Lakshdweep Islands, some parts of West Rajasthan, West Madhya Pradesh, Chhattisgarh, Sub-Himalayan West Bengal, Konkan, Telengana, North Interior Karnataka, Kerala, Tamil Nadu, -3 to -1°C over some parts of Jammu & Kashmir, Madhya Maharashtra, Marathwada, Vidarbha, -1 to 1°C over remaining parts of the country.

Actual Mean Minimum Temperature (°C) in India for the week ending 10.02.10

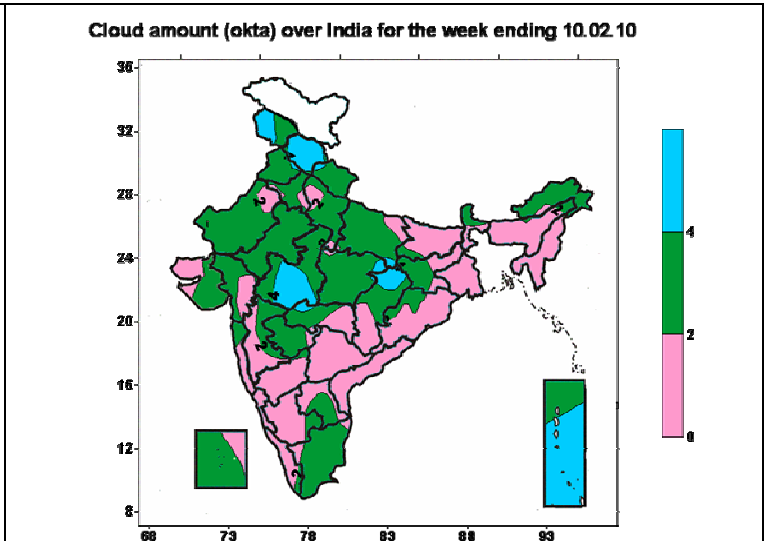
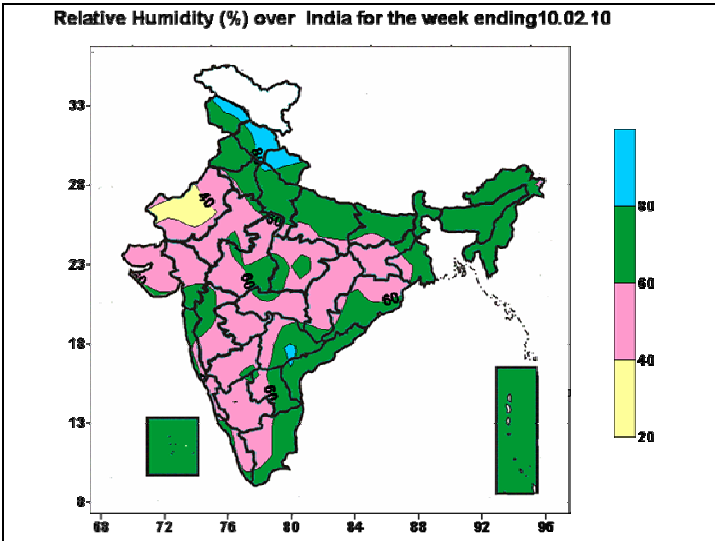


Actual Mean Minimum Temperature ranged between 22°C and above over most parts of Lakshadweep, Andaman & Nicobar Islands, 18 to 22°C over most parts of Kutch, Andhra Pradesh, Coastal Karnataka, Tamil Nadu, Kerala, Andaman & Nicobar Islands, some parts of Gujarat, Saurashtra, Konkan & Goa, 10 to 14°C over most parts of Punjab, Haryana, Delhi, Uttar Pradesh, Rajasthan, Bihar, Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Tripura, Madhya Pradesh, Chhattisgarh, some parts of Himachal Pradesh, Uttarakhand, Gujarat, Orissa, West Bengal, Mizoram, Madhya Maharashtra, 6 to 10°C over most parts of Himachal Pradesh, Uttarakhand, Sikkim, Nagaland, Manipur, Mizoram, some parts of Jammu & Kashmir, Punjab, Bihar, Arunachal Pradesh, Assam & Meghalaya, 2 to 6°C over some parts of Jammu & Kashmir, Himachal Pradesh, 14 to 18°C over remaining parts of the Country.

Minimum Temperature (°C) Anomaly in India for the week ending 10.02.10

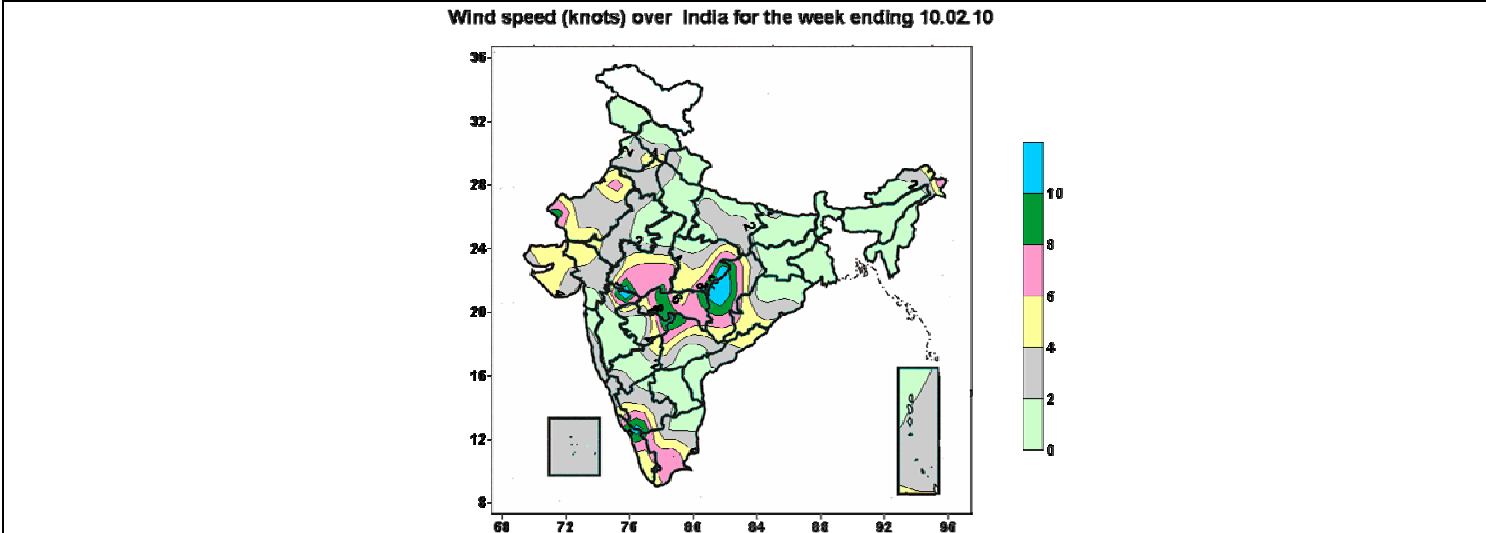


Minimum Temperature anomaly ranged between 5°C and above over some parts of West Rajasthan, Saurashtra & Kutch, 3 to 5°C over most parts of Punjab, Haryana, Rajasthan, Gujarat, Saurashtra & Kutch, some parts of West Madhya Pradesh, 1 to 3°C over most parts of Himachal Pradesh, Uttarakhand, Uttar Pradesh, Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Lakshdweep Islands, some parts of Jammu & Kashmir, Punjab, Haryana, East Rajasthan, Gujarat, Marathwada, Vidarbha, Telengana, Coastal Andhra Pradesh, North Interior Karnataka, Kerala, Andaman & Nicobar Islands, -3 to -1°C over most parts of Nagaland, North & South Interior Karnataka, Tamil Nadu, some parts of Jammu & Kashmir, Sub-Himalayan West Bengal, Assam & Meghalaya, Arunachal Pradesh, Manipur, Chhattisgarh, Orissa, Coastal Andhra Pradesh, Coastal Karnataka, Rayalaseema, -1 to 1°C over remaining parts of the Country.



Relative humidity between 80% and above over some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, West Uttar Pradesh, Telengana, 60 to 80% most parts of Jammu & Kashmir, Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh, Bihar, West Bengal, Sikkim, North East India, Orissa, Konkan & Goa, Andhra Pradesh, Tamil Nadu, Lakshdweep, Andaman & Nicobar Islands, some parts of Himachal Pradesh, East Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, Gujarat, Kutch, Madhya Maharashtra, Vidarbha, North & South Interior Karnataka, Kerala, 20 to 40% over most parts of West Rajasthan, 40 to 60% over remaining parts of the country.




Cloud amount 4 okta and above over most parts of Himachal Pradesh, West Madhya Pradesh, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Uttarakhand, East Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Vidarbha, 2 to 4 okta over most parts of Punjab, Haryana, Uttarakhand, Uttar Pradesh, Rajasthan, Sikkim, Arunachal Pradesh, Gujarat, Saurashtra & Kutch, Madhya Pradesh, Chhattisgarh, Madhya Maharashtra, Marathwada, Vidarbha, Rayalaseema, Tamil Nadu, Lakshdweep Islands, some parts of Jammu & Kashmir, Jharkhand, Assam, Orissa, Konkan, South Interior Karnataka, Kerala, Andaman & Nicobar Islands, 0 to 2 okta over remaining parts of the country.

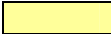

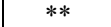


Wind speed ranged between 10 knots and above over some parts of Madhya Pradesh, Chhattisgarh, Madhya Maharashtra, 8 to 10 knots over some parts of West Rajasthan, Madhya Pradesh, Chhattisgarh, Madhya Maharashtra, Marathwada, Vidarbha, South Interior Karnataka, Telengana, Kerala, 6 to 8 knots over most parts of West Madhya Pradesh, some parts of West Rajasthan, Arunachal Pradesh, East Madhya Pradesh, Chhattisgarh, Orissa, Madhya Maharashtra, Marathwada, Vidarbha, Telengana, South Interior Karnataka, Kerala, Tamil Nadu, 4 to 6 knots over most parts of Saurashtra & Kutch, some parts of Himachal Pradesh, Punjab, Haryana, Rajasthan, Arunachal Pradesh, Gujarat, Madhya Pradesh, Chhattisgarh, Orissa, Madhya Maharashtra, Marathwada, Vidarbha, Telengana, Karnataka, Kerala, Tamil Nadu, 2 to 4 knots over most parts of Punjab, Haryana, Delhi, Rajasthan, East Uttar Pradesh, Konkan & Goa, Karnataka, Lakshdweep, Andaman & Nicobar Islands, some parts of Himachal Pradesh, Uttarakhand, West Uttar Pradesh, Bihar, Jharkhand, Arunachal Pradesh, Gujarat, Saurashtra, Madhya Pradesh, Chhattisgarh, Orissa, Madhya Maharashtra, Marathwada, Vidarbha, Andhra Pradesh, Tamil Nadu, 0 to 2 knots over remaining parts of the country.

Comparison of weekly rainfall distribution (in % dep.) in different Met. Sub-divisions of North west India during past 5 weeks

Sub-division	Cumulative Rainfall for the period									
	13 th January		20 th January		27 th January		3 rd February		10 th February	
	Normal (mm)	(%) Dep.	Normal (mm)	(%) Dep.	Normal (mm)	(%) Dep.	Normal (mm)	(%) Dep.	Normal (mm)	(%) Dep.
East Uttar Pradesh	3.0	-24	4.1	-83	5.4	-100	4.4	-100	3.8	29
West Uttar Pradesh	3.7	-25	4.3	-98	5.6	-100	4.0	-100	4.0	144
Uttarakhand	12.2	-97	11.1	-53	16.4	-100	15.4	-100	14.3	229
Haryana, Chandigarh & Delhi	3.1	-75	4.8	-99	4.7	-100	4.9	-100	3.3	215
Punjab	5.0	-91	5.5	-99	6.4	-100	8.2	-99	4.6	145
Himachal Pradesh	21.4	-96	18.7	-80	25.9	-99	30.4	-85	18.7	322
J & K	20.1	-100	18.7	-100	30.6	-100	30.7	-20	26.8	453
West Rajasthan	1.1	-88	1.0	-100	0.7	-100	0.7	-100	0.6	-91
East Rajasthan	1.7	-83	1.4	-96	0.9	-99	1.3	-100	1.0	-80

 (20% or more) excess rainfall
 (-19 to +19%) normal rainfall
 (-20 to -59%) deficient rainfall

 (-60 to -99 %) scanty rainfall
 (-100%) no rainfall
 Data not available

Zonewise Agromet Advisories

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

Himachal Pradesh

- **Realised Rainfall:** Excess rainfall occurred in all the districts of the State during last week.
- **Rainfall Forecast:** Scattered rain / snow would occur over the State during next 48 hours and decrease thereafter.
- **Major Rabi Crops:** Wheat (tillering / ear emergence), mustard, gram and lentil (pod formation) and vegetables.
- **Advisory:**
 - As there was good amount of rain during last week in all the districts of the State and rain is also likely to occur at a few places during next 48 hours, farmers are advised to postpone irrigation to the standing crops.
 - Farmers are advised to undertake the following measures to safeguard the crops from cold and frost injury.
 - Arrange for burning farm waste materials around the field to reduce the impact of low temperature.
 - It is optimum time for nursery sowing of tomato, brinjal, chillies and capsicum crops in poly house. Summer squash crop should be raised in poly tubes in the poly house so that plant 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 30-50 g.
- **Major Seasonal Crop:** Fruit crops, floral crops and Vegetables.
- **Advisory:**
 - 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.
 - 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 (3g) or quickphos (12g) 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.
 - 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.
 - Apply plant protection measures after current spells of rain.
- **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:** Almost all the districts of the State received excess rainfall during last week.
- **Rainfall Forecast:** Dry weather is likely over the State during next 24 hours and isolated rainfall is likely thereafter.
- **Major Rabi crops:** Wheat (ear head emergence), mustard, lentil, gram (flowering/seed formation), pea, rajmah (late vegetative/flowering)
- **Advisory:**
 - Farmers are advised to undertake the following measures to safeguard the crops from cold injury.
 - Arrange for burning around the field using farm waste materials to reduce the impact of low temperature.
 - Farmers are advised to top dress Urea @ one kg per Nali in wheat to boost the ear head emergence with facilities of irrigation.
 - Complete weeding and intercultural operations and top dress 1/2 kg Urea per Nali in mustard crop.

- Undertake weeding and intercultural operations in other standing crops like pea, chickpea, rajmah etc. for their better growth.
- **Major Seasonal Crop with stage:** Sugarcane (early vegetative), cabbage, cauliflower, garlic, tomato (vegetative), french bean (early vegetative), potato(vegetative/tuber formation)
- **Crop Condition:** Good
- **Advisory:**
 - Continue harvesting of matured crop of sugarcane and complete sowing of winter sugarcane.
 - Farmers are advised to undertake weeding in early sown garlic crop for better crop growth. Apply straw mulch in between rows for moisture conservation and to protect the crops from cold injury.
 - Those farmers who have not sown brinjal in nursery are advised to select among varieties like Pant Samrat, Pant Rituraj, Pant Brinjal-4, ARU-1 etc. The seed rate must be 10 g per Nail. Sprinkle water just after sowing for better seed germination.
 - Farmers are advised to sprinkle water in early nursery of tomato, onion and other vegetable crops like coriander, spinach, radish, mentha etc. during this week by sprinkler method.
 - Farmers are advised to undertake planting of potato with varieties like Kufri Jyoti, Kuf+ri Ashok & Kufri Anand etc.
 - Farmers are advised to protect the newly planted orchard from cold by providing thatches around the seedling and arrange smoking around the field.
 - Apply irrigation in onion and other vegetable crops like coriander, spinach, radish, mentha etc. during this week.
 - Undertake weeding, hoeing and mulching in cauliflower, cabbage and Shimla mirchi.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - white rust in pea, spray 0.5 % solution of Carbendazim immediately at an interval of 10 days.
 - aphids in mustard. If the aphids are seen in 10 % population, then spray 200 SL Imidachlorpid @ 3 ml per 10 litre of water.

Punjab

- **Realised Rainfall:** Almost all the districts of the State received excess rainfall during last week.
- **Rainfall Forecast:** Mainly dry weather is likely to occur over the State.
- **Major Rabi Crops with stage:** Wheat (tillering), raya, rapeseed and mustard (flowering), potato (tuber formation)
- **Advisory:** Farmers are advised apply second irrigation to wheat.
 - Undertake intercultural operations in early sown wheat, raya, taramira, lentil and chickpea.
 - To early sown raya, apply 45 kg urea per acre with first irrigation.
 - Weeding operation in timely sown rapeseed and mustard crops may be undertaken.
- **Major Seasonal crop with stage:** Sugarcane (early vegetative/vegetative), vegetable crops (vegetative)
- **Crop Condition:** Good
 - **Advisory:** Start preparation of field for spring sugarcane and planting can be done from second fortnight of this month. 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.
 - 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 sowing of early crop of muskmelon, watermelon, bottle gourd and pumpkin in poly bags. This technique is suitable for raising early crops of all the cucurbits in the kitchen gardens and for commercial cultivation of muskmelon, water melon, pumpkin, ash gourd and bottle gourd. Use seed rate of 200-500 g to raise seedlings for one acre.
 - Pruning of deciduous fruit trees like peach, plum and pear may be carried out. The fruit plants like peach, plum and ber may be planted. Old unproductive pear trees can be rejuvenated during this period.
 - Harvest the kinnow fruits as the best time for harvesting kinnow fruits starts from 15th January. For the fruits intended to be consumed after more than 10 days, individual seal packing may be done. Use high

density polyethylene (HDPE) bags for individual packing of kinnow fruits and seal the open end by heating or with rubber band after narrowing and twisting it.

- Farmers are advised to undertake field preparation and sowing of arbi and turmeric.
- **Advisory for Plant Protection:** Weather conditions are favourable for mild incidences of –
 - 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.
 - caterpillar in gram, spray 1.0 litre of Thiodan 35 EC or 100 ml Sumicidin/Fenlik/Agrofen 20 EC (Fenvalerate) or 160 ml Decis 2.8 EC or 80 ml Cymbush 25 EC in 100 litres of water.
 - To check Alternaria blight on raya pods, spray the crop with 250 g/acre of Blitox 50 WP or Indofil M-45 dissolved in 100 litres of water.
- **Animal Husbandry:** Vaccinate animals against FMD and repeat after six months or yearly as required. Deworming should be done in calves especially against ascariasis/ malap with piperazine liquid @ 4 ml/ 10 kg body weight. New born calves need special care in cold weather. They are susceptible to pneumonia and large number of them die due to this disease. Keep the animals warm by providing clean and dry bedding. Give them vitamin ‘A’ concentrate @ 1 ml daily in milk for three days and to be repeated after a month.

Haryana

- **Realised Rainfall:** Most of the districts of the State received excess rainfall during last week.
- **Rainfall Forecast:** Mainly dry weather is likely to occur over the State.
- **Major Rabi Crops:** Wheat (tillering), raya and mustard (flowering)
- **Advisory:**
 - Apply the irrigation to wheat and raya/mustard crop.
 - Farmers are advised to prepare field and complete sowing of sunflower hybrids varieties like MSFH-8, KBSH-1, KBSH-44, PAC-36, HSFH-848 and PCHS-234 by 15th February. Treat the seed with Bavistin 2 g or Thiram 3 g/kg seed.
 - Undertake sowing of recommended varieties of maize like HM-4 and HQPM-1 by first week of February. Treat the seed with Imidacloprid or Thiomethoxam @ 6 ml/kg seed to protect from shoot fly.
- **Major Seasonal crop with stage:** Sugarcane (early vegetative/vegetative), vegetable crops (vegetative)
- **Crop Condition:** Good
- **Advisory:**
 - Apply light irrigation to autumn planted sugarcane crop. Cover the soil with stubbles of harvested crop as trash mulch in ratoon crop.
 - This is suitable time for planting of evergreen fruit plants like sweet orange, mandarin, lime, lemon, guava and ber. For checking pre-harvest fruit drop, spray the trees with 10 ppm of 2, 4-D and 0.3% of Zinc sulphate. In citrus, leaf miner can be checked by spraying 500 ml of Sumicidin 20 EC or 1000 ml Ripcord 10 EC or 1250 ml Hostathion 40 EC in 500 litres of water. In grapes, spray the vines with Bavistin @ 400g/400 litres of water to control anthracnose.
 - Farmers are advised to undertake weeding and hoeing and intercultural operations in tomato, onion and chilli.
 - Start preparation of fields for spring sugarcane planting. Sugarcane planting can be done from second fortnight of this month. Apply irrigation to autumn planted crop as per need of intercrops and sugarcane.
- **Advisory for Plant Protection:** Weather conditions are favourable for mild incidences of –
 - caterpillar in gram, spray 1.0 litre of Thiodan 35 EC or 100 ml Sumicidin/Fenlik/Agrofen 20 EC (Fenvalerate) or 160 ml Decis 2.8 EC or 80 ml Cymbush 25 EC in 100 litres of water.
 - 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 hence 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 protect animals against from cold winds. Farmers are advised to give the 50grams Iodized salt and 50 to 100 grams mineral mixture daily to keep them healthy.

Delhi

- **Realised Rainfall:** Excess rain occurred over the State during last week.
- **Rainfall Forecast:** Isolated rain may occur over the State on 12th February. Mainly dry weather is likely over the State on remaining days.
- **Major Rabi Crops:** Wheat (tillering / ear emergence); pea and gram (pod formation); vegetable crops (vegetative / flowering / fruiting / harvesting).
- **Advisory:**
 - As some rain occurred during last few days over the State, farmers are advised to apply irrigation to wheat and also tomato, potato, chilli, cole crops and all other seedlings based on moisture status of the soil. This will also protect the crops against cold injury.
 - In view of clear weather transplanting of young seedlings of tomato, chilli and cole crops may be done in this week.
 - To control broad leaf weeds in wheat spraying of 2,4-D @ 0.5-0.75 kilogram active ingredients per hectare is recommended.
 - Harvesting of timely sown carrot, radish, sweet potato and turnip is advised. Interculture operations should be carried out in late sown crops.
 - Light irrigation should be given after each harvest of berseem.
 - Sowing of spinach (Jyoti), coriander (Pant Haritma) (one-time-cutting purpose), fenugreek (PEB, AM-1) may be carried out in present weather conditions. Foliar spray of 20 kg urea in 400 litre of water per acre may be done to maintain foliage health.
 - For sowing of early ladies finger crop, A-5 and Parbhani Kranti cultivars are recommended. Seed rates should be 10-15 kilogram per acre. High seed rates should be because of low germination at present temperature.
- **Plant Protection:**
 - Due to probable chance of increase in the temperature during the week there may be chances of infection of diseases in wheat. Constant monitoring of the crop against rust disease is advised. If symptoms of black, brown or yellow rust appears spraying of crops with Dithane M 45 @ 2.5 grams per litre of water is advised.
 - 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.
 - 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).
 - white rust in late sown mustard crops, removal of older leaves near surface and spraying of Sulfex is advised.
 - pod borer in pea and fruit borer in tomato, constant monitoring of pea against pod borer and tomato against fruit borer with installation of pheromone traps @ 3-4 traps per acre is advised. Spraying of Bt formulation is advised.

Uttar Pradesh

- **Realised Rainfall:** Most of the districts of the State received normal / excess rainfall during last week.
- **Rainfall Forecast:** Rainfall is likely to occur at isolated places over the State during next 24 hours and at a few places thereafter.
- **Major rabi crops:** Wheat (tillering), gram, pea, and lentil (seed maturity).
 - As there was no rainfall in most of the districts and dry weather is likely for the next five days, farmers are advised to apply irrigation to the standing *rabi* crops.

- Weeding and hoeing may be done in wheat.
- Undertake harvesting of early varieties of mustard, alsin, pea and lentil.
- Start land preparation and sowing of sunflower and maize under irrigated conditions.
- **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 first cutting of fodder barseem.
 - Harvesting of early varieties of potato and turmeric may be done and weeding, hoeing and watering as per requirement may be done.
 - Harvesting, marketing of winter vegetable may be done along with watering as per requirement.
 - Undertake transplanting the seedlings of summer vegetable crops in the main field. Complete sowing of Jayad Ladyfinger at the earliest.
 - Undertake interculturaling by ploughing in between rows and watering as per requirement in interval of 15 days may be done in banana garden and to save from frost / fog make smoke around the garden along with light watering.
 - Undertake interculturaling by ploughing in between rows and application of recommended fertilizers along with watering as per requirement may be done in mango garden and to save from frost/ fog make smoke around the garden along with light watering.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
 - sawfly in mustard, spray the solution of Endosulphon 35 EC @ 1.25 litre per hectare in 600 – 800 litre of water.
 - canker in lemon, spray the solution of Blitox 3-4 gram/litre of water.
 - fruit borer in gram spray the solution of Tricogamacard or Endosulphon 1.25 litre per hectare dissolving in necessary amount of water.
 - Kharra disease in Mango, spray the solution of soluble Sulphur 2gm/litre in water and to Control Bhunga insect, spray the solution of Monocrotophos @ 1ml/litre in water.

J & K

- **Realised Rainfall:** The State received excess rainfall during last week.
- **Rainfall Forecast:** Rain / snow fall is likely to occur at isolated places over the State during next 24 hours and at a few places there after.
- **Major Rabi crops:** Wheat, barley, brown sarson (late vegetative), vegetables (flowering/ fruiting).
- **Advisory:**
 - During last week, medium to heavy rainfall received in the state along with isolated hailstorm. Heavy snowfalls have also been reported. As the crops are at tillering/late vegetative stage, realized rainfall was beneficial to the crops. Farmers are advised to conserve the rain water and snow as source of water during summer.
 - Farmers are advised to undertake the following measures to safeguard the crops from cold injury.
 - Arrange for burning around the field using farm waste materials to reduce the impact of low temperature.
 - In orchards cover fruit plants with sarkanda or other such materials in order to protect from cold/ frost.
 - Farmers can go for nursery sowing of tomato (Pusa ruby & Pb. chuhara) chillies (NP-46A & Pusa Ruby) & brinjal (PPL, PPG, PPR & PK) during these days.
 - Undertake transplanting of tomato and onion crop in Jammu division during these days.
 - Undertake intercultural operations, application of fertilizers and pesticides in mustard, gram, field peas and other cole vegetable crops on a non rainy day.
 - Farmers can go for sowing of sunflower crop in fallow fields during this period.

- Undertake hoeing and weeding in transplanted crops like cabbage, cauliflower, kale and other standing crops on a non rainy day.
- Farmers can undertake planting of new orchards during these days.
- In areas where sowing of rabi crop is not done due to moisture deficiency farmer can go for sowing of bhindi (pusa sawani) and water melon (sugarbaby, arka Jyoti, NS2895 & local) can be done, when soil is in better conditions.
- **Plant Protection:**
 - Due to dry weather conditions, there are chances of termite incidences in wheat and barley crop. To control spray Endosulphan 35 EC @ 2.285 liters/ha or Chloropyriphos 20EC @ 4.0 liters/ha.
 - The prevailing weather condition may likely to increase the infestation of aphid in early sown mustard crop. To control spray Metasystox @ 0.03 per cent or Chloropyriphous @ 0.05 per cent & repeat the spray after 15 –20 days interval.
 - Right time for organize rat control campaign around barley and wheat field.
 - Rogue out collar affected plants from gram and root rot affected plants from pea crop.
 - Weather is congenial for infestation of late blight in potato farmers are advised to go for spray of mancozeb @ 0.25 % or copper oxychloride @ 0.3 %.
 - Spraying of chemicals may be undertaken on a non rainy day.
 - white rust & downey mildew in mustard crop, spray the crop with macozeb@0.2% or copper oxychloride 50@0.3%, when weather remain clear.
 - infestation of insects in Poplar trees in Leh region, treat the tree with petrol/kerosene oil or quinalphos @ 5ml/ltr of water or Dimethoate @5ml/ltr of water.
- **Animal Husbandry:** Due to decrease in temperature cover the poultry shed with gunny bags in order to protect the birds from cold weather. Protect the pregnant and milch animals from cold and feed them mineral mixture regularly.

Rajasthan

- **Realised Rainfall:** The State received no significant rainfall during last week.
- **Rainfall Forecast:** Dry/mainly dry weather is likely to prevail over the State.
- **Major Seasonal Crop with stage:** wheat, gram, mustard (late vegetative/flowering) vegetable crops (flowering / fruiting / harvesting)
- **Crop Condition:** Good
- **Advisory:**
 - Undertake intercultural operations in sweet gourd, cucumber, pumpkin, bitter gourd, tinda, tomato and ladies finger.
 - Sow seeds in nursery for raising seedling of autumn vegetables. Use following improved varieties for nursery sowing:
 - Tomato: Pusa Rubi, Pusa Early and Vihar.
 - Brinjal: Pusa Summer Prolific Round, Pusa Summer Prolific Long, Meghdoot, Navin and Arka Bahar,
 - Cucumber: Balam and Pusa Sahyog.
 - Smooth gourd: Chikni and Nasdar.
 - Start transplanting of vegetable seedlings in the main field.
 - Start preparation of field for the sowing of cluster bean, cowpea & early cucurbits like muskmelon, watermelon, ridge gourds, bitter gourds etc.
 - Apply irrigation and top dress nitrogen in late sown wheat crop.
 - Undertake sowing of summer Okra. Select varieties among Pusa sawani, Pusa Makhmali, Parbhani, Kranti, Ark Abhay & Arka Anamika.
- **Animal Husbandry:**
 - Vaccinate animals against FMD and BQ in consultation with local veterinarian. Arrange for curtains in poultry in Bharatpur region.
- **Plant Protection:** Weather conditions are favourable for

- aphids in mustard, spray Dimethoate 30 EC @ 1.0 l/ha or Malathion 50 EC @ 1250 ml/ha.
- leaf curl & Mosaic diseases may affect papaya crop. At the initial appearance of these disease uproot & burn the affected plants & to check further spread of disease spray Dimethoate 30 EC or Methyl demeton 25 EC @ 1.0 ml per litre water & repeat spray after an interval of 15 days.
- aphids in cumin and coriander, spray Dimethoate 30 EC or Melathion 50 EC @ 1.0 ml per litre water.
- Alternaria blight (black spot) in mustard crop in some pockets, destroy the plants infested with the disease. Spray Iprodione or Mencozeb @ 2 kg/800 litre solution. Repeat the spray in 15 days interval.
- pod borer attack in gram, dust Melathion 5% or Methyl Parathion 2% @ 20-25 kg/ha before flowering and pod formation.
- soft rot/ black rot of cabbage, spray streptomycin @ 200 mg or copper oxychloride 2 g/lit of water.
- sucking pests in floriculture crops, spray Dimethoate 30 EC @ 2 ml/litre or Imidacloprid 17.8 SL @ 0.5 ml/litre water to control.
- aphid attack in rose, spray 0.1% Melathion solution at 10 days interval to manage the pest.

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

Bihar

- **Realised Rainfall:** Most of the districts of the State received no rainfall during last week.
- **Rainfall Forecast:** Rain is likely to occur at isolated places during next 48 hours over the State and mainly dry weather will prevail after that.
- **Major Rabi Crops:** Wheat (tillering / ear emergence), maize (vegetative), potato (tuber formation / early maturity), gram, pea, and lentil (flowering / pod formation).
 - 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.
 - Farmers are advised to provide second / third irrigation in wheat for better growth of crop and also provide irrigation in wheat crop during ear emergence stage and apply last top dressing of urea @ 88 kg / ha. Apply Nitrogen @ 40 kg/ha after irrigation in December sown wheat.
 - Farmers advised to undertake dehauling for keeping the seed of potato.
 - 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.
 - Provide weeding and earthing up in *rabi* maize crop.
 - 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.
 - Farmers are advised to provide the irrigation in potato at the interval of 10 to 15 days. Stop irrigation 2 weeks before harvesting of the crop.
- **Plant Protection:**
 - There is chance of infestation 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.
 - Weather conditions are favourable for mild incidences of
 - late blight in potato, spray Dithane M-45 or Ridomil @ 2gm/liter of water for control of late blight of potato.
 - 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.
- **Major Seasonal Crop with stage:** Sugarcane (grand growth) and vegetables (vegetative / fruiting), 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 land preparation for sowing of summer vegetable like brinjal, chillies and tomato etc.
- 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 to protect from the cold weather, if the fruit trees are in flowering, do not apply irrigation to the garden.

Jharkhand

- **Realised Rainfall:** Dry weather prevailed during last week over the State.
- **Rainfall Forecast:** Rain is likely to occur at isolated places during next 48 hours over the State and mainly dry weather will prevail after that.
- **Major Rabi Crops:** Wheat (tillering / ear emergence), rai, *toria*, gram, mustard (pod formation), peas (pod formation).
- **Crop Condition:** Good.
- **Advisory:**
 - As dry weather prevailed during last week and no significant rain is likely to occur, the farmers are advised to apply irrigation to the standing *rabi* crops.
 - Apply first irrigation at the time of flowering of mustard and second irrigation at pod formation stage. During grain formation, farmers are suggested to give irrigation as per need and spray with salicylic acid @ 1 gm / 10 litre of water.
 - Undertake weeding, intercultural operations and top dressing in early sown *rabi* crops.
 - Undertake field preparation and sowing of summer rice. Farmers are advised to take up sowing up to mid February.
- **Major Seasonal Crop with stage:** Sugarcane (vegetative / grand growth), vegetables (vegetative).
- **Crop Condition:** Good
- **Advisory:**
 - 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 Iodine Benzoic Acid @ 50 ppm at the stage of 3 to 4 leaves of plant at the interval of 15 to 20 days increases 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.
 - Farmers are advised to apply irrigation in potato at 10 to 15 days interval. Stop irrigation 10 – 15 days before harvesting.
 - Farmers who have taken early potato may go for onion in fallow land after harvesting of potato. Irrigate the crop to protect the crops from cold. Good varieties of onion are Pusa Ratnar, Pusa Red, N53, 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.
 - powdery mildew in early pea, spray Karathane @ 1 ml / litre of water or sulfex 3 g / litre of water.
 - leaf folder in arhar, spray Endosulfan @ 2ml / litre of water.
 - stem borer in brinjal, cut it down and bury in soil. To prevent the plant from fruit and shoot borer spray emidochloropid 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 emydamplopid 0.25% solution before cropping.

- aphids in vegetables, spray Nemerin @ 2 ml / liter of water.
- blight disease in linseed, spray Mancogeb 2 ml / litre of water.

Orissa

- **Realised Rainfall:** There was no rainfall during last week over the State.
- **Rainfall Forecast:** Dry weather is likely to occur over the State.
- **Major *rabi* Crops:** wheat (tillering / jointing), pulses (pod formation), sunflower, groundnut (vegetative), mustard (pod formation / early maturity).
- **Advisory:**
 - As there was no rainfall in the State during last week and mainly dry weather is likely for the next five days, apply irrigation to the *rabi* crops. Apply irrigation in wheat during jointing stage.
 - Undertake weeding and intercultural operations in *rabi* pulses like lentil, field pea and gram.
 - Undertake field preparation for sowing of summer maize, groundnut and sunflower. Early sown summer sunflower crop is at 20 days, go for hoeing and weeding. Thin out seedlings keeping one healthy plant per hill and complete sowing of sunflower by the end of this week.
 - Undertake nursery sowing of summer rice and complete transplanting as late transplanting may affect the crop during summer due to moisture stress.
 - 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.
- **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.
 - This is the ideal time for planting of marigold. Undertake planting with seedlings of Ceracol variety may be planted at 30 x 30 cm spacing and fertilizer @ 40:80:80 kg N-P₂O₅- K₂O / acre may be applied at the time of land preparation.
- **Plant protection:** Weather conditions are favourable for mild incidences of
 - 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 Oxochloride 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.
 - Aphids and white fly in brinjal, 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:** Weather was mainly dry over the State during last week.
- **Rainfall Forecast:** Mainly dry weather is likely to prevail over the State.
- **Major Crops:** *Boro* rice, vegetables, mustard.

- **Crop Stage:** Sugarcane (vegetative), vegetable crops (vegetative / flowering / fruiting / harvesting), mustard (pod formation), *boro* rice (seedling / transplanting), potato (tuber formation / early maturity).
- **Crop Condition: Good**
- **Advisory:**
 - The seedlings of *boro* rice become ready for transplanting within four to five weeks (4-5 leaves stage). 100 kg of FYM or compost per bigha may be applied uniformly after first ploughing and 9 kg of urea (two splits), 54 kg of SSP and 11 kg of MOP per bigha should be incorporated into the soil after seven days of first ploughing. Two to three seedlings may be planted at 20 x 15 cm spacing and in the depth of 5 cm in the main field. The level of water is maintained at a depth of 2-3 cm during transplanting. Complete transplanting as early as possible.
 - Top dress the early transplanted *boro* rice at 3 weeks after transplanting or at the beginning of tillering stage @ 15 kg urea per bigha. In case of zinc deficient 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.
 - 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 doses is 4-5 kg urea and 35-40 kg SSP / bigha.
 - Prepare fertile sandy loam and well drained soil for sunflower cultivation. The recommended varieties are Morden, Sidhesor (80-85 cm height) of duration 80-85 days, Surya (90-95 days). Hybrid varieties are Pack-36 (104 days), M.F.S.H.-17 (104 days), Sungin – 85 (80-90 days), B.S.H.-1 (85-90 days), Surya-51, K.B.S.H. (90-95 days). 600 to 800 g of well filled plump seeds are required to cover one bigha land. For controlling seed born fungal diseases, seeds should be treated with Captan or Thirum @ 3 g per kg of seeds. The seed is drilled at a depth of 5cm by adopting a spacing of 60 cm X 30 cm for hybrid and long duration and 45 cm X 30 cm between plants in the row.
 - Undertake sowing of high yielding varieties of groundnut like A.K. 12-24, J. L.-24.
 - For vegetables like ridge gourd, bitter gourd and pumpkin, weeding should be done to loose the basal soil. Then topdress nitrogen fertilizer along with a light irrigation.
 - In fruit dropping case of chilli, brinjal and tomato, spray Planofix @ 1 ml per 4 litres of water.
 - Initiate preparation of cultivation of ladies finger, Kakrol, Amaranthus etc.
 - As there was no significant rain during last week and mainly dry weather is likely to prevail, apply irrigation to wheat, mustard and pulse crops.
 - Stop irrigation to potato crop two weeks before harvesting.
- **Plant protection:**
 - 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.
 - 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.
 - In late sown mustard, aphid infestation may be high this week as there is a possibility of rise of temperature. Apply 1.5 ml metasystox / rogor per litre of water to control the pest.
 - As in the coming four days cloudy weather may exist, root-rot may be prevalent in sunflower. Apply 1 g brasical per litre of water.
 - There is chance of attack of stem rot in brinjal, spray tricyclagel @ 0.5 gm /litre of water.
- **Fisheries:** For fish cultivation, lime should be applied @ 40 kg / bhigha in the pond.

Sikkim

- **Realised Rainfall:** The State received no significant rainfall during last week.
- **Rainfall Forecast:** Rainfall is likely to occur at isolated places during next 48 hours and mainly dry weather thereafter over the State.
- **Major crops: (a) High hills (1500 to 2000 m): Large Cardamom:** Vegetative **Rabi Vegetables:** Harvesting, **Wheat:** Flowering/Milking. **(b) Medium hills (1000 to 1500 m): Large Cardamom:** Vegetative **Rabi Vegetables:** Harvesting, **Mustard:** Seed formation/ Maturity **Wheat:** Flowering/ Milking; **(c) Low Hills (Below 1000 m): Large Cardamom:** Vegetative **Rabi Vegetables:** Harvesting, **Mustard:** Flowering/Grain Formation/ Maturity. **Wheat:** Flowering
- **Crop Condition:** Good
 - **Advisory:**
 - Harvesting of cardamom may be completed Maturity may be assessed when the capsule of the top most spike turn dark brown and when the capsule come out easily while pulling.
 - Harvesting of vegetables may be undertaken.
 - Harvesting of orange fruits should be done by tree fruit harvester or by hand plucking without damaging the trees.
- **Plant protection:**
 - Chirke and Foorkey infected cardamom plants may be destroyed by uprooting and buried in the pits at regular intervals.
 - Regular inspection may be carried out to observe caterpillar/shoot borer/shoot fly incidence, if any, and may be hand picked and destroyed mechanically.

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

Assam

- **Realised Rainfall:** Dry weather prevailed during last week.
- **Rainfall Forecast:** Isolated rain is likely to occur over the State.
- **Major Rabi Crops:** Wheat (ear emergence / flowering), potato (tuber formation / early maturity), pea, arhar (pod formation / early maturity) and mustard (pod formation / early maturity), vegetables (vegetative / flowering / fruiting / harvesting), *boro* rice (transplanting / tillering).
- **Advisory:**
 - As night temperature is low, the young seedlings of *boro* rice should be applied with irrigation water during night to protect the seedlings from low temperature and drain out the water in the next morning. Transplant the seedlings in main field at 3-4 leaf stage and complete transplanting at the earliest. While preparing main field apply fertilizer @ 18 kg Urea, 27 kg SSP, 6 kg MOP per bigha.
 - 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 the period will continue to be dry. Second Topdressing is to be done 3 days after irrigation. Apply irrigation water in early morning due to low temperature.
 - 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 of dry conditions to be continued, *toria* crop will take less time to mature. Start harvesting when the pods start drying.
 - 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.
 - Pre sowing light irrigation is advocated due to prevailing dry condition especially in light textured soil for sowing of maize. Use hybrid seeds.

- Land preparation for early 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.
- Under rainfed condition optimum time of sowing of squash is mid January to mid February. Suitable varieties are long white, pointed green, round white etc. Seed should be sown @ 10.5 Kg / bigha maintaining a spacing of 2-3 m (row to row) and 1-2 m (plant to plant). Pit size should be 15 cm x 15 cm x 15 cm. After planting the row should be covered with a thin layer of rice straw for better conservation of moisture.
- Farmers are advised to collect the high yielding varieties such as Pratap (SG-1) for green gram and Pant-U-19 for black gram. Seeds should be sown January onwards to March. 3 kg seeds / bigha are required for line sowing in the spacing of 30 cm (row to row) and 10 cm (plant to plant).
- **Major Seasonal Crop:** sugarcane (vegetative / maturity), fruit crops.
- **Crop Condition:** Good.
- **Advisory:**
 - Matured sugarcane may be harvested during this period.
 - After harvesting of Khasi mandarin is over, the plants should be neatly pruned. Diseased and dead branches, water suckers should be removed. Spray 1% Bordeaux mixture as preventive measures against multiple diseases. The crop should be irrigated as there is no rain for last few weeks. Mulching around the base of the plant helps in reducing moisture loss.
 - 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.
- **Plant protection:**
 - Monitoring of loose smut disease of wheat is advised. Infected plants are to be rouged out and burnt away from the field.
 - 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.
 - Wilt disease in lentil crop is observed in some areas and infestation may increase. Farmers are advised to protect their crop by soil drenching with Bavistin @ 1 g / 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:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Isolated rainfall is likely to occur over the State during next 24 hours and at a few places thereafter.
- **Major *rabi* Crops:** Pea, maize, potato
- **Crop Stage:** Pea (pod formation), maize (flowering), potato (tuber formation)
- **Crop Condition:** Good.
- **Advisory:**
 - Farmers are advised to undertake the following measures to safeguard the maize, pea and potato crops from frost injury in Tawang district.
 - Arrange for smoke by burning around the field using farm waste materials.
 - Undertake weeding, intercultural operations and top dressing of fertilizers in pea, maize and potato on a non rainy day.
- **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:** Dry weather is likely to prevail over the State
- **Major Crops:** Cotton, Sugarcane and Vegetables
- **Crop Stage:** boll development (cotton). Early sown *rabi* crops are at 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 ie, 35 kg urea and 15 kg MOP per acre is to be applied for cotton in Krishna, Guntur and Prakasam districts. Spraying 2% urea or 2% KNO₃ should be taken up two times at weekly intervals.
 - Farmers are advised to undertake intercultural operations in *rabi* crops to keep the fields weed free.
 - Paddy is at tillering stage in Northern Telangana zone, Zinc deficiency is observed, to resolve the problem Farmers are advised to spray 2g/l ZnSo₄.
 - Arrange for harvesting Bengalgram as the crop is at maturity stage.
- **Plant protection:** Present weather conditions are congenial for the incidence of
 - late leaf spot in groundnut crop in Anantapur and Kurnool districts and leaf miner in Kurnool district. To control, Spray Mancozeb @ 2g + Bavistin @1 g or Hexaconazole @ 2ml or Contof @ 2 ml per litre of

water. To control leaf miner, spray Imidacloprid @ 0.4 ml or Monocrotophos @ 1.6 ml or Quinolphos @ 1.5 ml/litre of water.

- powdery mildew in mango orchards in Kurnool district. To control, spray Wettable Sulphur @ 2 g or Hexaconazole @ 1 ml or Tridemiphos @ 1 g per litre of water.
- 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 Warangal district. 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.
- thrips, mealy bugs and powdery mildew in grapes in Southern Telangana zone. To control,
 - Thrips - Remove the weeds in the grape orchards
 - Remove and destroy the infested shoots
 - Spray Dimethoate or Oxydematon methyl @ 2 ml or Thiomethoxam @ 0.25 g per litre of water.
- 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.
- Powdery mildew
 - Spray Wettable Sulphur @ 2 g or Hexaconazole @ 1 ml or Tridemiphos @ 1 g per litre of water.
- Dry weather condition in Northern Telangana Zone is favourable for incidence of Tikka leaf spot. To control spray Chlorothalonil @ 2g/l.

Karnataka

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major Crops:** Wheat (flowering), Pigeonpea (maturity), Sunflower (maturity), Vegetables (Flowering/fruitletting/harvesting), *Rabi* Sorghum (flowering), Bengalgram (Pod filling), Safflower (Flower emergence).
- **Advisory:**
 - Farmers are advised to provide irrigation to rabi crops as dry weather is likely to prevail for the next five days and there was no significant rainfall during last week.
 - Farmers in Bidar are advised to undertake transplanting of brinjal seedlings in the main field.
 - Farmers in Shimoga district are advised to undertake summer planting of rice and treat the seeds with carbendazim @ 2gram/kg seeds and apply 5kg carbofuran and 50kg neem cake to nursery bed to avoid rice root knot nematode
 - Undertake sowing of groundnut and sunflower in south Transition zone. Before sowing treat the seeds of sunflower with Imidacloprid @ 5gram/kg seeds and seeds of groundnut with Trichoderma @ 4gram/kg seeds
 - Farmers in Bijapur district are advised to complete harvesting of pigeonpea, chickpea, sorghum and sunflower as early as possible. After harvesting and threshing, do not burn the crop residue, the residue can be used for making compost
 - 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.
 - Farmers of Bijapur district are advised to complete harvesting of pigeonpea, chickpea, sorghum and sunflower as early as possible. After harvesting and threshing, do not burn the crop residue, the residue can be used for making compost or vermin compost
 - Farmers of Uttar Kannada district are advised to take up the sowing of pulses and also green manure crop sun hemp to utilize residue moisture after harvesting of paddy crop, farmers can make the arrangement of seeds.

- Farmers are advised to continue sowing of groundnut and sunflower in south Transition zone. Before sowing treat the seeds of sunflower with Imidacloprid @ 5 g/kg seeds and seeds of groundnut with Trichoderma @ 4gram/kg seeds
- **Plant protection:** Present weather conditions were congenial for the incidence of
 - leaf spot in Banana. Farmers should take up spraying of DM-45@ 1.7 ml/lit of water to control it.
 - thrips in Groundnut. To control farmers are advised to spray the Dimethoate @3g/lit of water.
 - pod borer in gram; spray Profenophos or Indoxacarb @ 0.3/l or Spinosad @ 0.2 ml or Acephate @ 1 g per liter of water.
 - aphids in Safflower crop in Raichur. For effective control of aphids spray Dimethioate 30 EC @ 1.7ml/liter of water.
 - powdery mildew and jassids in mango in North Transition zone. To control spray 1.7 ml Dimethoate 30 EC plus Carbendazim 0.1 % per liter of water to control Jassids and powdery mildew of Mango.
 - wilt complex in chilli in Hassan district, to control drench the crop with Carbendazim @1gram litre and streptocycline @0.5gram per litre of water.
 - inflorescence dieback and inflorescence caterpillar in Arecanut in Shimoga district. To control, apply mancozeb @ 2gram/litre and chloropyriphos @ 2ml/litre of water.
 - aphid borer in Safflower in Gulbarga district. To control spray Monocrotophos 35 EC @ 1.0ml/liter of water.

Kerala

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Rainfall is likely to prevail at isolated places over the State.
- **Major Rabi Crops:** Rice (flowering/grain formation)
- **Crop Condition:** Good.
- **Advisory:**
 - 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 Puncta 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.
- **Major Seasonal Crop:** Vegetables and plantation crops (coconut, arecanut, pepper and cashew). Time for planting of coffee and arecanut
 - Farmers are advised to prepare the land by burning stubbles of previous crop for summer cultivation of vegetables, Treat vegetable seeds with Bavistin @ 2g/kg of seed before sowing.
 - Farmers are advised to apply FYM @ 25t/ha and urea, rajphos and MOP to the tune of 163 kg, 555 kg and 105 kg /ha, respectively, at the time of transplanting of cabbage and cauliflower,. The spacing for the same is 45 cm x 45 cm.
 - This is ideal time for planting banana. In existing crops apply mulch and start irrigation. Apply 25 g phorate or 20 g Carbofuran around the rhizome for reducing nematode population.
 - In North zone vegetables can be planted in garden lands and rice fallows for summer cultivation. For summer cultivation of vegetables, prepare the land by burning stubbles of previous crop. Treat vegetable seeds with Bavistin @ 2g/kg of seed before sowing.
 - Farmers in Thrissur district are advised to give propping to bunched rainfed banana. Priority should be given for propping for banana which faces the easterly side. Mulch banana basins using 3.5 kg of hay or dried materials Farmers are advised to undertake intercultural operations, plant protection measures, weeding, and earthing up.

- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - 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.
 - powdery mildew and shoot borer in vegetables in Wayanad district. Farmers are advised to apply 2-3 g wettable sulphur for controlling powdery mildew and Sevin (50%) (3 gram perlitre) to control shoot borers.
 - fruit fly attack in cucurbits. To control use pheromone traps.
 - 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.
- **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:** Dry weather is likely to prevail over the State.
- **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.
 - Undertake harvesting of pulse crops in Tuticorin
 - Farmers in Thanjavur, Trichy, Nagappattinam and Thiruvarur are advised to undertake intercultural operations in rice fallow pulses viz., black gram and green gram.
 - Undertake intercultural operations and application of fertilizers in thaladi rice and vegetables and sugarcane.
 - In vegetable belt area, farmers are advised to spray NAA (Growth hormone) for controlling of flower dropping and increase fruit selling.
 - To avoid the evaporative loss of soil moisture after receiving the rain, farmers are advised to go for mulching the inter row spacing with crop residues or weed biomass.
- **Plant Protection:** Weather conditions are favourable for
 - sucking pests and fruit borer in chilli in Thirunelveli due to high humidity; spray Methyl demeton @ 200 ml/acre and Chlorpyrifos @ 600 ml/acre for fruit borer..
 - High humidity and cloud cover forecasted during the coming days will promote the incidence of 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.
 - powdery mildew disease in blackgram. To control farmers are advised to undertake spraying of wettable sulphur at 1 kg per acre.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Maharashtra

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over Konkan, Madhya Maharashtra, Marathwada and Vidarbha during the period.

- **Major kharif Crops:** *tur*.
- **Major rabi Crops:** *jowar*, safflower, sunflower, linseed, gram, wheat, mustard and vegetables.
- **Major summer crops:** summer rice, groundnut.
- **Crop Stage:** *tur* (harvesting), *rabi jowar* (grain formation / early maturity), safflower (seed formation / early maturity), sunflower (seed development / early maturity), gram (pod formation / early maturity at some places), wheat (ear emergence / flowering / milk), mustard (pod formation), linseed (flowering / seed formation), vegetables and summer rice (transplanting / early tillering in South Konkan), summer groundnut (sowing / germination / early vegetative), summer sunflower (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 Manjri, Kiran, Panchaganga etc.
 - Undertake transplanting of summer rice in Konkan. Maintain 2-3 cm water level after transplanting in the 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 for bitter gourd select variety from Hirkani and Phule Green Gold.
 - Apply 34 kg Nitrogen / ha (74 kg Urea) to pre seasonal sugarcane after 12 to 16 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 trees of 3 years old. Irrigate the trees after fertilizer application.
 - As weather was dry in most of the districts during last few weeks and there is no chance of rainfall during next five days, apply protective irrigation to the standing crops.
- **Major Seasonal Crop:** Fruit crops and Sugarcane (pre-seasonal) (tillering), Sugarcane (*Suru*) (planting).
 - Undertake spraying, fertilizer application in the standing crops.
 - Start harvesting of already matured *jowar* in morning hours and continue harvesting of already matured red gram.
- **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.
- Due to change in weather there may be attack of thrips in mango. Spray Phosalon 35% @ 15 ml or Dimethoate 30% @ 10 ml / 10 liters of water.
- Weather conditions are favourable for mild incidences of –
 - *Helicoverpa* in gram, use 5 pheromone traps or nuclear polyhydrosis virus per ha. Prepare solution of 500 crushed caterpillars in water, filter it and mix in 500 litres of water and apply for one ha.
 - 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.
 - powdery mildew on mango blossom, spray water soluble Sulphur powder @ 2 g per liter of water or dust 300 mesh Sulphur powder @ 20 kg per ha.

- **Fishery:**

- Besides natural feed, use groundnut cake, rice husk or wheat husk in same proportion. Mix this feed in water for feeding two times a day.
- Sampling of fish with the small net may be done fortnightly. Feeding of the fish may be given at 6% of body weight of the fish during initial stocking period.
- Water quality analysis may be carried out at regular interval. The following parameters should be checked – date and time of sampling, water temp., dissolved oxygen, pH etc. If any uneven changes occur, necessary measures need to be taken.
- Necessary pre-stocking management may be carried out by ornamental fish farmers.

Gujarat

- **Realised Rainfall:** Dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major Rabi Crops:** Wheat, potato, mustard, gram, vegetables.
- **Crop Stage:** wheat (flowering / milk), mustard (pod formation / seed formation), gram (pod formation / seed formation), potato (tuber formation / early maturity) and vegetables (vegetative / flowering / fruiting / harvesting).
- **Crop Condition:** Crop condition is satisfactory.
- **Advisory:**
 - Apply irrigation to wheat at flowering / milk stage as dry condition is prevailing over the State during last few weeks.
 - Undertake sowing of summer groundnut at 22.5 cm x 30 cm spacing with a seed rate of 120 kg / ha and select varieties like GG-2, GG-4, GG-7, GG-20 and GG-26 for sowing. Apply 25 kg N and 50 kg P₂O₅ / ha at the time of land preparation. Treat the seeds with thirum @ 3 g / kg seeds before sowing.
 - Prepare land and undertake sowing of green gram. Procure seeds of Guj. Mung-3, 4 for summer sowing. Treat seeds with *Rhizobium* culture @ 1 packet / 8 kg seeds.
 - Start sowing of cow pea. Procure seeds of Guj. Cowpea-4, 5 and Pusa Falguni for summer sowing under assured irrigation. Treat seeds with *Rhizobium* culture @ 1 packet / 8 kg seed.
 - Farmers are advised to apply irrigation to gram and mustard as the crops are at pod formation / seed formation stage.
 - Farmers are advised to prepare main field and complete transplanting of summer rice at the earliest.
 - 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-183, GHB-215, GHB-316 and GHB-235. Adopt 45 x 15 cm spacing for sowing.
 - Farmers are also advised to apply irrigation to pigeonpea, isabgul and vegetable crops like brinjal, tomato, chilli, fenugreek and garlic as dry weather is prevailing for last few weeks.
 - Stop irrigation in potato two weeks before harvesting.
- **Major Seasonal Crop:** Fruit crops and Sugarcane (vegetative / harvesting).
 - For higher flowering in mango, spray 0.5 % urea solution.
 - Spray 0.5% zinc sulphate or 0.2% ferrous sulphate in banana for higher yield and good quality.
 - Carry out weeding in citrus orchard and apply fertiliser.
 - Cut mango malformation and apply Bordeaux paste on the cut portion.
- **Plant Protection:**
 - Due to cloudy sky during last week, there are chances of increased infestation of sucking pests in fenugreek. Spray dimethoate 30 EC @ 0.1% to manage sucking pests in the crop.
 - Due to cloudy sky during last week there are chances of blight disease in tomato. Spray 0.25% Mencozeb to manage the disease.
 - Weather conditions are favourable for mild incidences of –

- aphids, jassids and thrips in mustard, spray Methyl-o-demeton 10 ml or Dimethoate 10 ml or Phosphamidon 3 ml in 10 litres of water.
- thrips in onion and garlic, whenever the thrips population reach ETL of 15 nymphs / leaf, application of Endosulfan 35 EC @ 20 ml / 10 litres of water is recommended.
- blight in cumin, spray Mancozeb @ 25 g /10 litres of water, four times at an interval of 10 days.
- powdery mildew in mango, spray Carbendazim @ 10 g or Wettable Sulphur 30 g / 10 liters of water.
- shoot borer in brinjal, remove and destroy infested shoot. Arrange to put at least 12 to 15 pheromone traps / ha and spray Endosulphan @ 21 ml or DDVP @ 5 ml /10 litres of water.
- thrips causing leaf curl in chilly, spray Triazophos 40 EC @ 10 ml or Acephate 75 SP @ 10 g / 10 litres of water at 10 to 12 days interval.
- powdery mildew in cucurbitaceous crops, cluster bean and ladies finger, spray wettable Sulphur @ 25 g / 10 litres of water two to three times at an weekly interval.
- pod borer in gram, spray monocrotophos @ 12 ml or Endosulphan @ 20 ml in 10 litres of water.
- white rust in mustard, spray Mencozeb @ 25 g in 10 liters water twice in 10 days interval.
- mango hopper, spray Dimathoate @ 10 ml or Endhosulphan @ 20 ml per 10 liters of water.
- **Animal Husbandry:** Provide warm water to lactating animals. Keep young calves indoors during night time to avoid cold stress. Vaccinate animals for diseases in consultation with local veterinarian. Make hay to ensure fodder availability during ensuing summer season.

CENTRAL INDIA [M.P., CHHATTISGARH]

Madhya Pradesh

- **Realised Rainfall:** Most of the districts of the State received no significant rainfall except Seoni, Tikamgarh districts of East Madhya Pradesh and Betul, Dhar, Harda, Hosangabad, Indore, Sheopur Kalani districts of West Madhya Pradesh received excess rainfall during last week.
- **Rainfall Forecast:** Rainfall is likely to occur at a few places during next 24 hours and at isolated places thereafter over West Madhya Pradesh. Rainfall is likely to occur at a few places during next 48 hours and mainly dry thereafter.
- **Major Rabi Crops:** wheat, pulses, gram (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 early sown wheat crop at 21 days after sowing and give nitrogen fertilizer 1/4th recommended dose by urea as top dressing.
 - Undertake pit preparation for planting of new orchard crops.
 - Farmers are advised to continue transplanting of onion, cabbage.
 - Farmers should irrigate their berseem crop after cutting of green fodder and give nitrogenous fertilizer as per recommendation.
 - Undertake sowing of groundnut, moong, urad, summer ladyfinger, cucurbits, coriander and fenugreek.
- **Animal Husbandry:** Protect calves from cold. Cattle should be vaccinated to save them from infections diseases like Black Quarter and FMD etc. The animals should be dewormed. Take care the pregnant animals and feed them balance diet. Provide the animal's clean water and balance and nutrients rich food.
- **Plant Protection:** Weather conditions are favourable for-
 - leaf eating caterpillars in gram; spray neem seed kernal Extract (5%), use pheromone traps (4 in one acre), Use Trichoderma culture or Endosulphan 35 EC 2 ml / liter in Gram.
 - aphids in safflower; spray Roger @ 750 ml / ha for the control of. Apply split dose of nitrogen fertilizer in wheat. Irrigate Wheat crop if water is available.
 - sucking pest in chilly, tomato, brinjal, spray Dimetoate 1 ml per litre of water or Phosphomedan 3 ml per 10 litre of water.

- pod borer or plume moth in Arhar crop, spray Quinalphos or Indosulphan @ 2.0 ml per liter of water or use pheromone traps.
- termites in wheat, use chloropyriphos 20 E.C. with Irrigation water.
- Insects (worms in Gram, Spray of Neem seed kernels Extract (5%), use pheromone traps (4 in one acre) and use Trichoderma culture parasite or Endosulphan 35 EC 2 ml / liter.
- Shoot and Fruit Borer in brinjal, spray of neem seed kernel extract (4%).
- hopper in mango, spray Amidachloprid 200 SL @ 0.25 ml/l or Endosulfan 35 EC @ 1.5 ml/l in mango plantation and also stem borer in Mango, Guava, Grape fruit and Aonla place cotton plug in hole dipped in kerosene oil.
- Mahu in mustard, spray Dimethoate-30 500 gm in 500 gm of water.

Chattisgarh

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Isolated rain is likely to occur during next 48 hours and mainly dry weather is likely to prevail thereafter.
- **Major Rabi Crops:** Wheat (tillering / ear emergence / flowering), gram (pod formation / pod development), mustard (pod formation / pod development).
- **Crop Condition:** Good.
- **Advisory:**
 - Prepare main field and complete transplanting of summer rice.
 - Intercultural operations and weeding is advised in sunflower and groundnut. Fertilizer application followed by irrigation should also be done in sunflower after weeding.
 - Wheat crop is at tillering / ear emergence / flowering stage. This stage of the crop is critical for moisture and nutrient stress. Hence, farmers are advised to go for second top dressing of N wherever crops are at late tillering stage and then irrigate the fields.
 - Presently mustard and gram are at pod formation / pod development stage. Irrigation at this stage is required for proper growth of these crops. Avoid water logging in the fields. Use of sprinkler should be encouraged for irrigation.
 - Potato crop should be irrigated after earthing up. Stop irrigation 15 days before harvesting of potato.
 - Tapioca should be dug as per market demand and planting should be done for the next crop by cuttings.
 - In winter season onion, half dose of nitrogen should be applied after intercultural operations and irrigation should be applied.
 - As dry conditions are prevailing in most of the districts of the State, apply irrigation to wheat, linseed, mustard and vegetable crops.
- **Major Seasonal Crop with stage:** Sugarcane (vegetative), vegetables (flowering / fruiting / harvesting).
- **Advisory:**
 - Intercultural operation, fertilizer application, earthing up followed by irrigation is advised in sugarcane crop wherever the crop is at knee height stage.
- **Plant Protection:** Present weather conditions may be favourable for the infestation of powdery mildew and hoppers in mustard and peas, blast in potato, powdery mildew in cucurbitaceous vegetables, purple blotch disease in onion and fruit rot in chilli.
 - In mustard and pea crops on observation of powdery mildew disease, sulfex, karathane or kalixin should be sprayed @ 1g / litre of water. If in these crops, hopper attack is being observed, neem oil should be sprayed @ 5%.
 - 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 powdery mildew is being observed, then sulfex dust should be dusted. This will also control the mites.
 - In onion for control of purple blotch disease, Blitox 50 or Dithane M-45 fungicide should be applied mixed with Rogor insecticide.
 - In chillies for control of fruit rot, Blitox 50 should be sprayed.