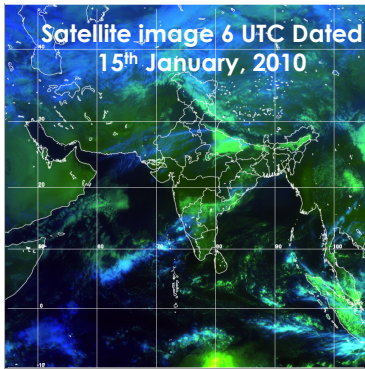




National Agromet Advisory Bulletin

Thursday, 14th January (For the period 14th to 18th January, 2010)



Rainfall Forecast valid upto 1430 hours IST of 17th January, 2010

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

Major features of weather forecast (upto 1430 hours IST of 17th January, 2010).

- Fog conditions mainly in morning hours will occur over Indo-Gangetic plains.
- Slight rise in maximum temperature over Indo-Gangetic plains from today onwards.
- Cold day conditions would abate from Punjab, Haryana, Delhi, north Rajasthan, Uttar Pradesh and Bihar during next 1-2 days. However, they may continue over isolated pockets of Assam & Meghalaya.
- Fall in minimum temperatures by 2-3°C over northwest and central India during next 3 days.
- Isolated to scattered rainfall activity over east India and Arunachal Pradesh during next 1-2 days.
- Isolated rainfall would occur over parts of peninsular India during next 2-3 days.

Weather Outlook (upto 1430 hrs IST of 19th January, 2010)

- Isolated to scattered rain/snow activity would occur over western Himalayan region and isolated rainfall over parts of south peninsular India.
- Dry weather condition will prevail over remaining parts of the country.

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

- Farmers in Jammu & Kashmir, Rajasthan, Haryana, Himachal Pradesh, West Uttar Pradesh, Delhi and Madhya Pradesh are advised to undertake the following measures to safeguard the crops from cold injury
 - Apply irrigation to the crops in the early morning to overcome adverse effects of low night temperature.
 - Arrange for burning farm waste materials around the field to reduce the impact of low temperature.
- There are chances of occurrence of frost in some pockets of North west India. Farmers are advised to spray sulphuric acid or thiourea @0.1% on frost sensitive crops.

Advisories for the remaining States

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

Advisories for pest and disease

- Due to favourable weather condition, there are chances of pest and disease incidences in the following regions:
 - aphids in floricultural crops, downy mildew in cruciferous vegetables, powdery mildew in peas and root borer in apple in Himachal Pradesh.
 - powdery mildew in cauliflower, leaf eating caterpillars in gram, aphids in safflower, pod borer in arhar and early blight in potato in Madhya Pradesh.
 - late blight in potato, aphids in mustard and rai, powdery mildew in peas and pod borer in gram in Bihar.
 - aphids in pulses, leaf eating caterpillar, diamond back moth, saw fly and borer in cabbage and cauliflower and late blight in potato in Orissa.
 - powdery mildew in vegetables and fruits crops, aphids in mustard and pod borer in gram in Rajasthan.
- Farmers are advised to undertake plant protection measures, if required.

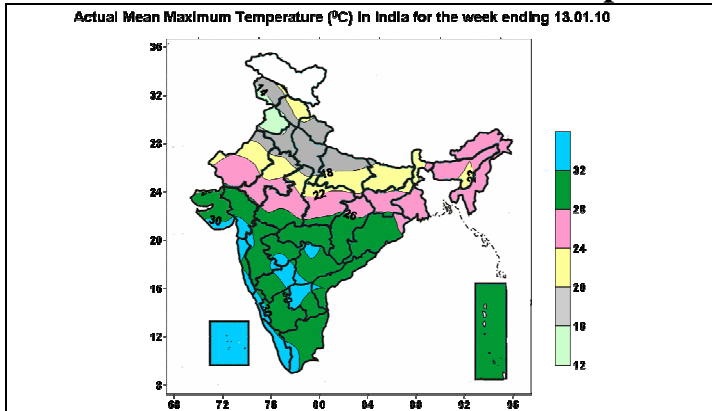
Issued by

National Agrometeorological Advisory Service Centre,

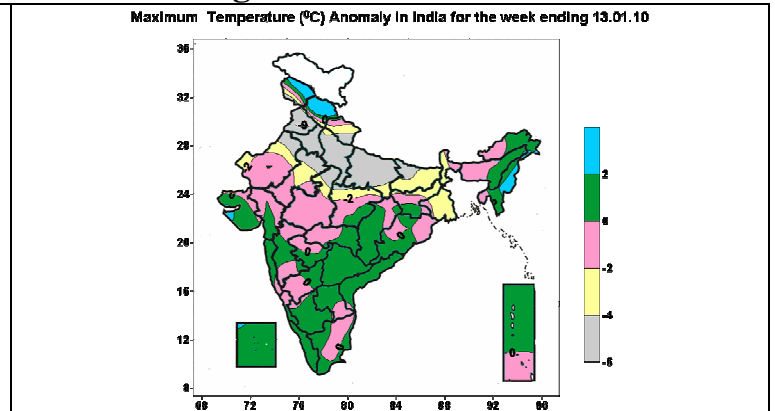
Agricultural Meteorology Division, India Meteorological Department, Shivajinagar, Pune.

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

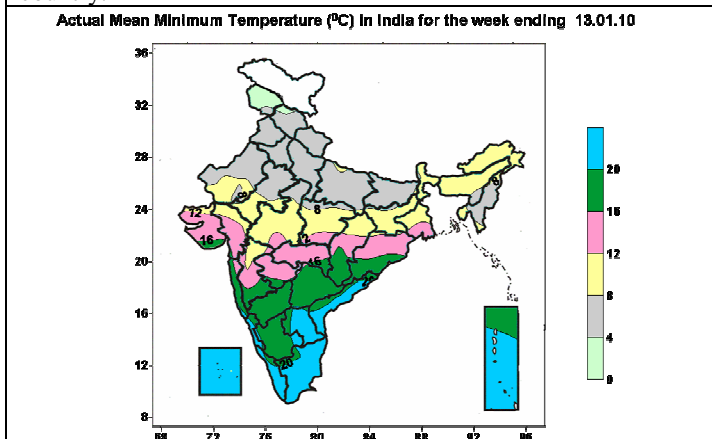
Contour maps for the week ending 13.01.10



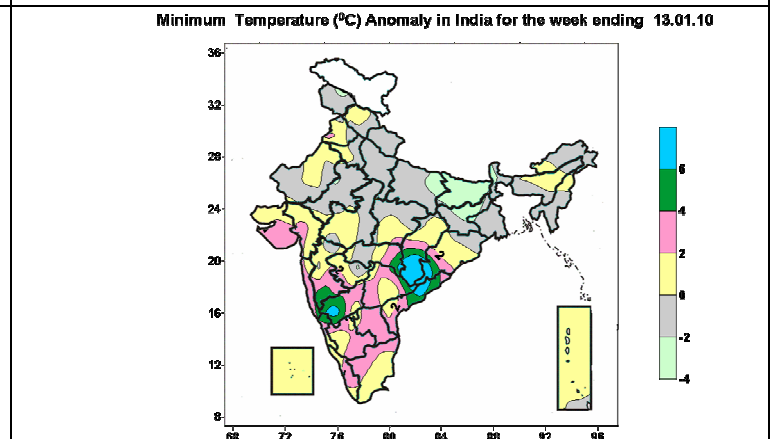
Actual Mean Maximum temperature ranged between 32°C and above over most parts of Kerala and Lakshadweep Islands, some parts of Gujarat, Saurashtra & Kutch, Konkan & Goa, Karnataka, Andhra Pradesh and Tamil Nadu 24 to 28°C most parts of South Rajasthan, North Madhya Pradesh, Jharkhand, Gangetic West Bengal and North East India, some parts of Chattisgarh, Sub Himalayan West Bengal and Orissa, 20 to 24°C over most parts of Bihar, some parts of Himachal Pradesh, East Uttar Pradesh, Rajasthan, Madhya Pradesh, Jharkhand, Sub Himalayan West Bengal and Sikkim, Assam Meghalaya, 16 to 20°C over most parts of Haryana, Delhi, West Uttar Pradesh, Uttarakhand, some part of Jammu & Kashmir, Himachal Pradesh, Rajasthan, West Madhya Pradesh, East Uttar Pradesh, Bihar, 12 to 16°C over most parts of Punjab, some parts of Jammu & Kashmir, 28 to 32°C over remaining parts of the country.



Actual Mean Maximum temperature anomaly ranged between 2°C and above over some parts of Jammu & Kashmir, Himachal Pradesh, Nagaland, Manipur, Saurashtra, 0 to 2°C over most parts of Saurashtra and Kutch, Konkan & Goa, South Interior Karnataka, Kerala, Andhra Pradesh, Lakshdweep and Andaman & Nicobar Islands, some parts of Gujarat, Madhya Maharashtra, Marathwada, Vidhrbha, East Madhya Pradesh, Jharkhand, North East India, Orissa, Tamilnadu, Coastal & North Interior Karnataka, Tamil Nadu, -4 to -2 over most parts of West Bengal and Sikkim, some parts of Jammu & Kashmir, Uttarakhand, Uttar Pradesh, Rajasthan, Madhya Pradesh, Bihar, Jharkhand, -6 to -4°C over most parts of Punjab, Haryana, Delhi, Uttar Pradesh, some parts of Uttarakhand, Rajasthan, Madhya Pradesh, Bihar, -2 to 0°C over remaining parts of the country.



Actual Mean Minimum Temperature ranged between 20°C and above over most parts of Coastal Andhra Pradesh, Rayalaseema, Kerala, Tamil Nadu, Lakshdweep, Andaman & Nicobar Islands, some parts of Goa, Coastal Karnataka, South Interior Karnataka, 16 to 20°C over most parts of Konkan & Goa, Telengana, North & South Interior Karnataka, some parts of Kutch, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Orissa, Coastal Andhra Pradesh, Rayalaseema, Coastal Karnataka, Kerala, Tamil Nadu, Andaman & Nicobar Islands, 12 to 16°C over most parts of Gujarat, Saurashtra & Kutch, Orissa, Marathwada, Vidarbha, some parts of Madhya Pradesh, Chhattisgarh, Gangetic West Bengal, Konkan, Madhya Maharashtra, 8 to 12°C over most parts of Jharkhand,

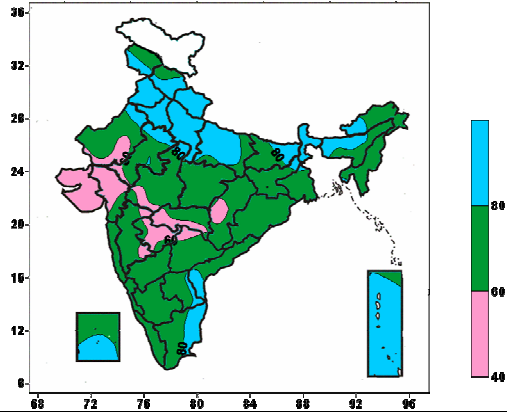


Minimum Temperature anomaly ranged between 6°C and above over some parts of Vidarbha, Chhattisgarh, Orissa, Coastal Andhra Pradesh, Telengana, North Interior Karnataka, 4 to 6°C over some parts of Goa, Madhya Maharashtra, Vidarbha, Chhattisgarh, Orissa, Coastal Andhra Pradesh, Telengana, Coastal Karnataka, North Interior Karnataka, 2 to 4°C over most parts of Kutch, Konkan, Goa, South Interior Karnataka, Rayalaseema, some parts of Punjab, Gujarat, East Madhya Pradesh, Chhattisgarh, Orissa, Madhya Maharashtra, Marathwada, Vidarbha, Coastal Karnataka, North Interior Karnataka, Coastal Andhra Pradesh, Telengana, Kerala, Tamil Nadu, 0 to 2°C over most parts of Punjab, Gujarat, Saurashtra, Coastal Tamil Nadu, Lakshdweep, Andaman & Nicobar Islands, some parts of Himachal Pradesh, Haryana, Rajasthan,

West Bengal, Sikkim, Arunachal Pradesh, Assam & Meghalaya, Tripura, South Rajasthan, Madhya Pradesh, some parts of East Uttar Pradesh, Nagaland, Mizoram, Gujarat, Saurashtra, Chhattisgarh, Orissa, Madhya Maharashtra, 0 to 4 °C over most parts of Jammu & Kashmir, some parts of Himachal Pradesh, 4 to 8°C over remaining parts of the Country.

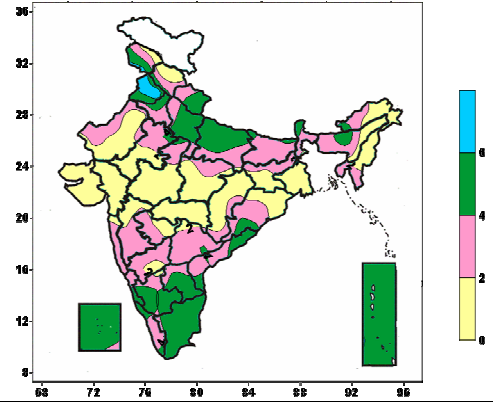
Arunachal Pradesh, Assam & Meghalaya, Nagaland, Madhya Pradesh, Chhattisgarh, Orissa, Maharashtra, Karnataka, Andhra Pradesh, Kerala, -4 to -2°C over most parts of Bihar, some parts of Jammu & Kashmir, East Uttar Pradesh, Jharkhand, West Bengal, Sikkim, -2 to 0°C over remaining parts of the Country.

Relative Humidity (%) over India for the week ending 13.01.10



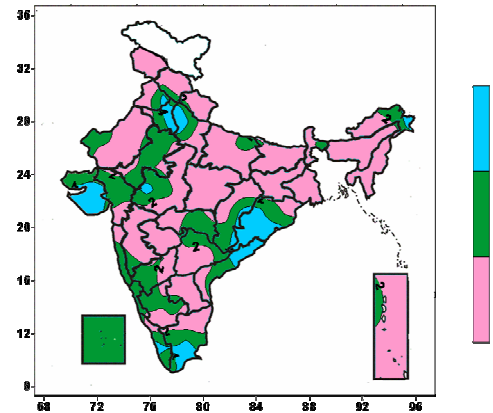
Relative humidity between 80% and above over most parts of Himachal Pradesh, Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh, Sub-Himalayan West Bengal, Sikkim, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Rajasthan, Bihar, Jharkhand, Gangetic West Bengal, Assam & Meghalaya, Arunachal Pradesh, West Madhya Pradesh, Coastal Andhra Pradesh, Rayalaseema, Tamil Nadu, Lakshdweep Islands. 40 to 60% most parts of Gujarat, Saurashtra & Kutch, Marathwada, some parts of Rajasthan, West Madhya Pradesh, Chhattisgarh, Madhya Maharashtra, Vidarbha, Telengana, 60 to 80% over remaining parts of the country.

Cloud amount (okta) over India for the week ending 13.01.10



Cloud amount 6 okta and above over some parts of Punjab, 4 to 6 okta over most parts of Uttarakhand, Uttar Pradesh, Sikkim, Rayalaseema, Coastal Karnataka, South Interior Karnataka, Tamil Nadu, Lakshdweep, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Punjab, Haryana, East Rajasthan, Bihar, Assam & Meghalaya, Arunachal Pradesh, West Madhya Pradesh, Orissa, Coastal Andhra Pradesh, Telengana, Kerala, 2 to 4 okta over most parts of Haryana, Delhi, Bihar, Sub-Himalayan West Bengal, Mizoram, Tripura, Konkan & Goa, Madhya Maharashtra, Marathwada, North Interior Karnataka, Telengana, Coastal Andhra Pradesh, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Rajasthan, Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Madhya Pradesh, Chhattisgarh, Orissa, Rayalaseema, Coastal Karnataka, South Interior Karnataka, Kerala, Lakshdweep Islands, 0 to 2 okta over remaining parts of the country.




Wind speed (knots) over India for the week ending 13.01.10

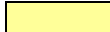




Wind speed ranged between 4 knots and above over most parts of Kutch, South Orissa, some parts of Punjab, Haryana, Delhi, West Uttar Pradesh, Arunachal Pradesh, West Madhya Pradesh, Chhattisgarh, Coastal Andhra Pradesh, Kerala, Tamil Nadu, 2 to 4 knots over most parts of East Rajasthan, Gujarat, Konkan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

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

Sub-division	Cumulative Rainfall for the period									
	16 th December		23 rd December		30 th December		6 th January		13 th January	
	Normal (mm)	(%) Dep.	Normal (mm)	(%) Dep.	Normal (mm)	(%) Dep.	Normal (mm)	(%) Dep.	Normal (mm)	(%) Dep.
A & N Islands	47.0	-63	19	-62	26.3	-88	20.3	119	20.8	94
Arunachal Pradesh	11.3	-98	4	-75	10.9	-97	7.5	-100	7.2	-100
Assam and Meghalaya	4.3	-98	1	-64	2.8	-55	2.2	-89	4.3	-100
NMMT	4.7	-100	1	-100	2.0	-100	1.8	-100	4.1	-100
SH West Bengal & Sikkim	3.9	-100	2	-73	1.9	-97	2.4	-39	4.1	-100
Gangetic West Bengal	2.5	-100	1	-86	1.9	-100	2.0	-100	3.5	-100
Orissa	2.1	-100	1	-65	1.0	-100	2.4	-100	2.3	-75
Jharkhand	1.2	-100	1	149	1.7	-100	3.2	-79	3.6	-100
Bihar	0.5	-100	1	-100	2.0	-100	2.7	-41	3.0	-100
East Uttar Pradesh	0.6	-96	1	-62	3.1	-69	3.8	-33	3.0	-24
West Uttar Pradesh	1.2	-86	1	-52	3.0	-74	4.0	-93	3.7	-25
Uttarakhand	6.3	-96	5	-100	7.9	-100	11.8	-74	12.2	-97
Haryana, Chandigarh & Delhi	1.4	-85	2	-100	2.7	-100	4.1	12	3.1	-75
Punjab	3.9	-100	4	-100	5.7	-100	5.0	-51	5.0	-91
Himachal Pradesh	10.5	20	11	-100	17.5	-100	17.2	-48	21.4	-96
J & K	20.8	-49	16	-68	37.5	-100	18.8	-54	20.1	-100
West Rajasthan	0.6	-94	**	-100	0.6	-100	0.9	-41	1.1	-88
East Rajasthan	0.9	-94	1	-84	0.5	-99	1.4	-82	1.7	-83
West M. P.	1.8	-100	2	534	1.3	-21	1.7	-92	3.0	-72
East M. P.	2.0	-100	1	506	2.3	-86	3.8	-57	5.4	-57
Gujarat region	0.8	-95	1	-100	0.1	-100	0.3	-60	0.3	-100
Saurashtra & Kutch	0.9	-100	**	-95	0.0	-100	0.4	-60	0.2	-100
Konkan and Goa	1.9	-100	1	-100	0.1	-100	0.3	-100	0.3	335
Madhya Maharashtra	2.4	-100	2	145	0.5	-64	0.6	-98	0.8	266
Marathwada	2.2	-100	1	423	1.0	57	0.7	-100	0.8	1255
Vidarbha	1.7	-100	1	156	2.3	19	2.2	-97	2.9	458
Chhattisgarh	1.6	-100	1	-87	1.0	-100	2.4	-100	2.8	-72
Coastal A. P.	9.9	-75	3	270	1.9	-99	2.3	-100	1.5	135
Telangana	1.5	-100	**	-84	0.7	159	0.7	-80	1.6	-17
Rayalseema	5.8	44	2	352	2.8	-93	1.2	-100	0.9	-47
TamilNadu & Pondicherry	16.7	140	14	203	11.1	-79	6.8	-99	8.2	15
Coastal Karnataka	5.3	-100	1	-27	1.2	1842	0.6	606	0.3	1519
N. I. Karnataka	2.2	-100	1	113	1.0	1500	0.6	38	0.4	1778
S. I. Karnataka	3.5	-72	1	20	1.8	1202	0.7	291	0.4	1148
Kerala	9.3	-88	5	20	4.2	519	3.3	-73	2.3	473
Lakshadweep	12.3	-96	9	48	9.9	730	3.6	94	9.3	31

 (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:** There was no significant rainfall in the State during last week.
- **Rainfall Forecast:** Mainly Dry weather is likely to prevail over the State.
- **Major Rabi Crops:** Wheat (crown root initiation / tillering), gram and lentil (early vegetative / vegetative) and Vegetables.
- **Advisory:**
 - Farmers are advised to undertake the following measures to safeguard the crops from cold injury.
 - Apply light and frequent irrigation to the crops in the early morning to overcome chilling injury.
 - Arrange for burning farm waste materials around the field to reduce the impact of low temperature.
 - Undertake weeding and apply irrigation in wheat, gram and lentil.
 - Undertake sowing of radish (var. Early Meno White, Japanese White, Chinese Pink and Pamp Hriday), peas (Palm Priya or Linclon) in the fields. Treat the seeds with 2.5 g Sevin or bavistin per kg of seeds before sowing of pea crop. Drench the crop with Dithane M-45 @ 2 g and Bavistin @ 1 g for the control of damping off of nursery.
 - As there was no significant rainfall in the State during last week and no significant rainfall is likely to occur, the farmers are advised to apply need based irrigation to wheat, gram, lentil and vegetable crops.
- **Major Seasonal Crop:** Fruit crops, Flower crops and Vegetables.
- **Advisory:**
 - Weather condition is conducive for cleaning and preparation of basins in the orchards.
 - Training and pruning work can be completed in tea. It is time for nursery raising of tea plants in polythene tubes. Do lopping of the tree in the tea orchards to have more sunlight.
 - 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.
 - It is time for planting the winter flowers annuals viz. calendula, aster, larkspur, dianthus, african daisy, stasis, lupines, petunia, flox, nicotiana, vanadium and torinia. Flowers can be raised in the pots, hanging pots, rocks etc. Keep the flower beds free from the weeds. Remove the apical shoot in winter annuals to have more side branches to cover the entire pot. It is time for sowing of bulbous flowers like fresia, tulips and nargis etc.
 - As there was no significant rainfall in the State during last week and no significant rainfall is likely to occur, the farmers are advised to apply need based irrigation to floricultural crops.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - Aphids in floricultural crops, spray malathion @ 0.05%.
 - downy mildew in cruciferous vegetables, for control spray ridomil MZ @ 25 g per litre of water at 15 days interval. For control of powdery mildew in peas, spray celfex @ 25 g per 10 litres of water or karathane @ 5 ml per 10 litres of water.
 - To control the root borer in apple, irrigate the basins after removing the upper soil with 10-15 liters of the solution of Chlorpyrifos 20 E.C. @ 5 ml per liter of water.
 - powdery mildew in cauliflower, spray Dithane M-45 (500 gm) or Redomil MZ (500gm) per 200 liters of water. If need arises repeat the spray after 12-15 days.
- **Animal Husbandry:**
 - For milch animals follow schedule of 1 kg feed+50 g mineral mixtures per 2 litres of milk. This schedule will maintain the reproductive ability of animals.

- Ensure cleanliness in cows having advanced pregnancy to avoid mastitis. Protect the animals from cold as temperature is expected to fall in next week.
- **Poultry:**
 - Protect the birds from cold and increase the feed by 10%. Replace the poultry houses with fresh litter to avoid wetting and keep the houses clean and ensure clean drinking water to the birds.
 - Climate is congenial for attack of Diarrhira and cocksedia. So, consult the nearby veterinarian. Put marbel (calcium) grits for calcium for layers.
- **Fisheries:**
 - It is also time to disinfect the fish tank by draining out the water and exposing the bottom floor of the tank to direct sunlight.

Uttarakhand

- **Realised Rainfall:** There was no significant rainfall in most of the districts during last week in the State.
- **Rainfall Forecast:** Mainly dry/dry weather is likely over the State.
- **Major Rabi crops:** Wheat(early vegetative), mustard, lentil, pea, chickpea, rajmash(early vegetative)
- **Advisory:**
 - As mainly dry weather conditions likely over the State during this week, farmers having irrigation facilities are advised to give second irrigation in wheat crop.
 - 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, rajmash etc. for their better growth.
- **Major Seasonal Crop with stage:** Sugarcane ratoon (planting/early vegetative), cabbage, garlic, tomato (vegetative), French bean (early vegetative).
- **Crop Condition:** Good
 - **Advisory:**
 - Farmers are advised to undertake weeding in early sown garlic crop and give irrigation for better crop growth. However, if irrigation facilities are not available, then put straw mulch in between rows for moisture conservation and to protect the crops from cold injury.
 - Continue digging of matured potato crop as per maturity of tubers as dry weather is expected.
 - Remove weeds from other standing vegetable crops and keep grass lying on the ground for conserving soil moisture. If pods of vegetable pea are ready then plug them and sent to the nearby market. Apply irrigation in crops including coriander, spinach, radish, menthe etc. under low soil moisture.
 - Apply need based irrigation to the standing vegetable crops like coriander, spinach, radish, mentha etc.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - white rust in pea is possible, 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 Emidachlorpid @ 3 ml per 10 litre of water.

Punjab

- **Realised Rainfall:** Few districts of the State received deficient / scanty rainfall during last week.
- **Rainfall Forecast:** Dry weather is likely over the State.
- **Major Rabi Crops with stage:** Wheat(early vegetative/tillering), toria (harvesting), raya, rapeseed and mustard (early vegetative/vegetative), potato(vegetative)
 - Farmers are advised to undertake the following measures to safeguard the crops from cold injury.
 - Apply light and frequent irrigation to the crops in the early morning to overcome chilling injury.

- Arrange for burning around the field using farm waste materials to reduce the impact of low temperature.
- Farmers are advised apply second irrigation to wheat sown during November and first irrigation to wheat sown during December. Apply second dose of 55 kg urea per acre to wheat before first irrigation in late sown wheat.
- Undertake intercultural operations in early sown wheat, raya, taramira, lentil and chickpea.
- To early sown raya, apply 45 kg urea per acre with first irrigation.
- Weeding operation in timely sown rape seed and mustard crops may be undertaken.
- Farmers are advised to undertake the first cutting of Barseem. Conserve the surplus maize fodder as silage at milk dough stage.
- Farmers are advised to undertake sowing transplanting of gobhi sarson, which is more profitable than direct sowing. Complete transplanting of tomato seedlings. Provide sarkanda/ kahi/ rice straw to save the plants from frost. If the growers have not properly covered young trees as well as the newly planted fruit trees with thatches or kullies made of sarkanda or farm waste materials, then they may do so without any further delay to save them from frost. The South-west side should be left open to allow sufficient sunlight. Provide sarkanda/kahi/ rice straw to save the pea plants from frost.
- Complete sowing of spring potato in the first fortnight and transplanting of onion seedling by the middle of this month.
- This is the right time for sowing of English varieties of Radish (Japanese White, white Icicle), Turnip (Golden Ball), transplanting of 4 to 6 week old seedlings of cabbage, chinese cabbage and late season cauliflower.
- Undertake transplanting of tomato.
- **Advisory for Plant Protection:** Weather conditions are favourable for mild incidences of –
 - Aphid in potato. Keep watch on aphid population as soon as it reaches 20 aphids per 100 leaves build up, the haulms should be cut down. Keep the soil wet at tuberization to minimize the scab infection.
 - powdery mildew in pea, spray the crop with Karathane @ 80 ml/acre or Suflex @ 600 g/acre.
 - aphid in sarson/ raya, spray the crop with 40 g Actara 25 WG or 400 ml of Metasystox 25 EC or Rogor 30 EC or Thiodan 35 EC or Ekalux 25 EC or 600 ml of Dursban 20 EC in 100 litres of water per acre.
- **Animal Husbandry:** Provide dry bedding to animals helps to save them from cold. Keep your animals under roof in night and in the sun during the day time. Newly born calves need special care in cold weather, since they are susceptible to pneumonia. Protect young calves from cold weather by providing dry bedding and clothing (Jhull). Fix pallis/tat/plastic cover if required in the shed. Feed well chaffed Barseem mixed with wheat straw to avoid aphara(Tympany). To save teats of animals from cracking apply desi ghee or Vaseline. Provide the curtains at windows in poultry sheds. Suitable measures like doubling of curtains should be taken to avoid cold inside the sheds. Keep the chicks warm by giving them artificial heat according to age.

Haryana

- **Realised Rainfall:** Few districts of the State received deficient / scanty rainfall during last week.
- **Rainfall Forecast:** Dry weather is likely over the State.
- **Major Rabi Crops:** Wheat(early vegetative/tillering), raya and mustard(early vegetative/vegetative)
- **Advisory:**
 - Farmers are advised to undertake the following measures to safeguard the crops from cold injury.
 - Apply light and frequent irrigation to the crops in the early morning to overcome chilling injury.
 - Arrange for burning around the field using farm waste materials to reduce the impact of low temperature.
 - Farmers are advised to undertake the following measures to safeguard the crops from cold injury.

- Apply irrigation to the crops in the early morning to overcome chilling injury.
- Arrange for burning around the field using farm waste materials to reduce the impact of low temperature.
- Apply the irrigation in timely sown raya/mustard crop.
- **Major Seasonal crop with stage:** Spring sugarcane (early vegetative/vegetative), vegetable crops (vegetative), cotton (boll formation)
- **Crop Condition:** Good
- **Advisory:**
 - Complete planting of winter sugarcane, varieties: COH 56, COH 64, COH 99, COH 119, CO 7717 and COS 8436. Apply 45 kg Urea or 80 kg Kisan Khad and 125 kg Single Super Phosphate.
 - Undertake hoeing and weeding and apply the remaining dose of nitrogen fertilizer to the sugarcane.
 - Continue sowing “desi” varieties of radish (Punjab Pasand & Punjab Safed), turnip (L-1 & 4-white) and carrot (No. 29 PC-34 and Sel. 21), pea, potato and palak (Punjab Green). Transplant fully developed seedlings (4-6 week old) of main season varieties of cauliflower. Sowing of late season varieties of cauliflower i.e. Snow-Ball-16, Pusa Snow ball 1 & Pusa Snow ball K-1 can be continued.
 - This is suitable time for planting of evergreen fruit plants like sweet orange, mandarin, lime, lemon, guava and ber. For checking pre-harvest fruit drop, spray the trees with 10 ppm of 2, 4-D and 0.3% of Zinc sulphate. In citrus, leaf miner can be checked by spraying 500 ml of Sumicidin 20 EC or 1000 ml Ripcord 10 EC or 1250 ml Hostathion 40 EC in 500 litres of water. In grapes, spray the vines with Bavistin @ 400g/400 litres of water to control anthracnose.
 - Farmers are advised to undertake weeding and hoeing in cotton and intercultural operations in tomato, onion and chilli.
- **Advisory for Plant Protection:** Weather conditions are favourable for mild incidences of –
 - Saw fly and burgada (Dholia) in younger plants of mustard, to control spray 200 ml malathion 50 EC or 400 ml endosulphan 35EC in 200 lt. of water/acre.
 - bacterial blight in guar, farmers are advised to spray the crop with 400ml blitox and 30 grams of streptocyclin in 200 liters of water per acre.
- **Animal Husbandry:** Farmers are advised to protect animals against from cold winds. Farmers are advised to give the 50grams Iodized salt and 50 to 100 grams mineral mixture daily to keep them healthy.

Delhi

- **Realised Rainfall:** The State received no significant rainfall during last week.
- **Rainfall Forecast:** Dry weather is likely over the State.
- **Major Rabi Crops:** Wheat (tillering); pea and gram (flowering / pod initiation); vegetable crops (vegetative / flowering / fruiting).
- **Advisory:**
 - Apply irrigation to late sown wheat. Application of final dose of nitrogen should be given after 3-4 days of irrigation. Application of weedicide such as Leader, Algrip or Sancor against wide leaf weeds is advised.
 - If 20-25% pod has appeared in the field of gram, application of light irrigation is advised.
 - In present weather conditions late transplanting of healthy seedlings of cabbage, cauliflower, knolkhol etc. may be carried out. Intercultural operations are recommended in the early sown crops.
 - Sowing of spinach, coriander, fenugreek may be done in present weather conditions. Foliar spray of 20 kg urea per acre may be done to maintain foliage health.
 - Frequent light irrigation is advised to protect potato from cold injury. In seed crops, nipping of terminal buds should be done in between 20-26th January to protect the crops against vector of viral diseases.

- Transplanting of onion should be done at the earliest as further delay will reduce the yield and cause severe infestation of thrips.
- Intercultural operations should be undertaken in carrot, radish, turnip and sweet potato. To protect the seed crops of carrot, radish and turnip and also mustard and tomato against cold injury, light irrigation should be applied.
- If the pea crop is in flowering stage or pods are appearing, light irrigation is highly recommended to protect the crop against the probable cold injury. Spraying of crop with 2 % urea is also advised.
- Training and pruning should be done in grape. Protect new seedlings of papaya and mango from probable cold injury by providing shade with straw or other locally available materials.
- To prepare seedlings of early cucurbitaceous crops, seedlings may be prepared in small polythene bags in poly houses. Summer chilli crop seedlings may also be prepared in polyhouse.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - pod borer in gram, installation of Pheromone trap @ 3-4 traps per acre is advised to monitor pod borer population if flowering has reached 10-15%. “T” shaped bird perches in and around crop field may be installed.
 - diamond back moth in cole crops, installation of Pheromone traps @ 3-4 traps per acre to monitor the pest population of diamond back moth is advised.
 - late blight in potato, in present weather conditions constant monitoring of crop against attack of late blight is advised. Spraying of Diethane M-45 at recommended dose is advised.
 - purple blotch disease in onion, monitoring of crop against infection of purple blotch should also be done. Need based spraying of Diethane M -45 @ 3 grams per litre of water is advised (400-500 litres/ hectare).
 - aphids in root crops, foliar spray of Metasystox @ 2 ml per litre of water is advised.
 - white rust in late sown mustard crops, removal of older leaves near surface and spraying of Sulfox is advised.

Uttar Pradesh

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

- Farmers are advised to make smoke around the mango garden along with light watering to save from frost / fog.
- Harvesting of early varieties of potato may be done and weeding, hoeing and watering as per requirement may be done.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
 - sawfly in mustard, spray the solution of Endosulphon 35 EC @ 1.25 litre per hectare in 600 – 800 litre of water.
 - mal formation disease in mango, spray the solution of Naphthalene Acetic acid @ 200 ppm or 4ml. Planofix in 9 litre of water.
 - cankers disease in lemon, spray the solution of Blitox 3-4 gram/litre of water.
 - fruit borer in tomato and brinjal, spray the solution of Carbaryl @ 2 g / litre of water.

J & K

- **Realised Rainfall:** There was no rainfall in the State during last week.
- **Rainfall Forecast:** Dry weather is likely over the State during next 48 hours and isolated rainfall there after.
- **Major Rabi crops:** Wheat, barley, brown sarson (early vegetative/vegetative) Vegetables (vegetative/flowering/ fruiting).
- **Advisory:**
 - Farmers are advised to undertake the following measures to safeguard the crops from cold injury.
 - Apply light and frequent irrigation to the crops in the early morning to overcome chilling injury.
 - Arrange for burning around the field using farm waste materials to reduce the impact of low temperature.
 - In orchards cover fruit plants with sarkanda or other such materials in order to protect from cold/frost.
 - As rainfall is not likely over the State during next 5 days, farmers are advised to apply irrigation to the standing crops.
 - Undertake intercultural operations, application of fertilizers and pesticides in mustard, gram, field peas and other cole vegetable crops..
 - Weed control application in early sown wheat crop by hand hoe or apply isoproturon @ 0.75 a.i.+2,4-D ethyl ester @500ml /ha for control of both types of weed (broad & narrow leaves), when crop is 30-35 days old.
 - Undertake top dressing of cauliflower, knoll-khol, potato, spinach, methi and garlic @ 60, 50, 20, 20, 20 and 20 kg/ha. Rouging of virus effected plants from brinjal, tomato, cauliflower and cabbage crop.
 - Harvest early variety of sweet orange. Remove the stock sprout, suckers and water sprout from budded/grafted plants.
 - Undertake hoeing and weeding in transplanted crops like cabbage, cauliflower, kale and other standing crops.
- **Plant Protection:** Weather conditions are favourable for
 - downy mildew, white rust and alternaria blight in Mustard; the lower infected maturing leaves of early crop may be clipped and destroyed by burning. Spray Ridomil MZ @ 0.2% or Mancozeb @ 0.2 % at 15 days interval.
 - maggots in field peas, apply carbofuran 15-20 kg / ha followed by light irrigation.
 - collar rot and root rot in gram, rogue out the affected plant and drench with thiram or captan @ 2g / l of water in the affected patch of the field.
 - stem rot of Berseem, withhold irrigation for a few days after each cutting and give one spray of carbendazim 50 WP @ 0.1 %.
 - cabbage butterfly and aphids and thrips in cole vegetable crops; spray Malathion @ 0.2 % to control cabbage butterfly and Metasystos @ 2 ml / litre of water to control aphids and thrips.

- **Animal Husbandry:** Due to decrease 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:** Most of the districts of the State received no rainfall during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major Seasonal Crop with stage:** vegetable crops (flowering / fruiting / harvesting)
- **Crop Condition:** Good
- **Advisory:**
 - Farmers are advised to undertake the following measures to safeguard the crops from cold injury.
 - Apply irrigation to the crops in the early morning to overcome chilling injury.
 - Arrange for burning around the field using farm waste materials to reduce the impact of low temperature.
 - To protect sensitive crops like mustard, Rajmah, potato, gram from frost attack, spray dilute sulphuric acid @ 0.1% (1 litre H₂SO₄ in 1000 litre water) or thiourea @ 500 ppm (500 gm thiourea in 1000 litre water) at flowering stage of these crops or on the day of forecast of frost or give light irrigation to these crops. Sudden drop in temperature, very low wind velocity and clear sky are indication of frost attack. As dry weather is likely over the state for the next five days, apply irrigation to mustard and other rabi crops.
 - Undertake intercultural operations in sweet gourd, cucumber, pumpkin, bitter gourd, tinda, tomato and ladies finger.
 - Sow seeds in nursery for raising seedling of autumn vegetables. Use following improved varieties for nursery sowing: Tomato: Pusa Rubi, Pusa Early and Vihar. Brinjal: Pusa Summer Prolific Round, Pusa Summer Prolific Long, Meghdoot, Navin and Arka Bahar, Cucumber: Balam and Pusa Sahyog. Smooth gourd: Chikni and Nasdar.
 - Start weeding in gram and mustard crops.
 - Right time for giving second irrigation in normal sown wheat crop at tillering stage (40-45 DAS) & first irrigation in late sown wheat at crown root initiation stage (20-23 DAS).
- **Animal Husbandry:**
 - To protect milch & infant animals from cold, cover the door of animal house and wrap jute bag around animal back. Keep litter dry everyday in Ajmer, Dausa, Tonk and Jaipur.
 - Due to fall in temperature there are chances of cold winds, protect animals by putting curtains in animal sheds. 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
 - powdery mildew in vegetables and fruits crops; spray 1% kerathane or sulphur (WP) @ 2 gm/litre of water.
 - Aphids in mustard; spray Endosulfan 35 EC 1.5 ml per litre water. Repeat spray if problem persists.
 - aphids in mustard in Alwar, Bharatpur, Dholpur, Karauli, Sawai Madhopur districts. Farmers are advised to regularly monitor the crop and destroy infested branches in the border rows of field. In case of infestation spray Dimethoate 1 litre dissolved in 800 litre water. Repeat spray if needed
 - pod borer attack in gram; dust Melathion 5% or Methyl Parathion 2% @ 20-25 kg/ha before flowering and pod formation.

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

- **Realised Rainfall:** The State received no rainfall during last week.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.
- **Major Rabi Crops:** Wheat (early vegetative/tillering), maize, gram, pea, and lentil(early vegetative/vegetative), potato(vegetative)
 - As there was no significant rainfall in most of the districts and dry weather is likely for the next five days, the farmers are advised to apply irrigation to the standing *rabi* crops.
 - Weeding and hoeing, and top dressing of recommended amount nitrogen may be done in early sown wheat and to control broad leaf weeds apply 2, 4 – D sodium salt @ 625gm/ hectare. To control Gehunsa / Jangali Jai, use Isoproturon 50% @ 1.5 kg/ hectare and apply fertilizers on the basis of soil testing and use bio fertilizers Azetobacter and P.S.B to increase the fertility of soil.
 - Undertake weeding, intercultural operation and top dressing in barley, gram, pea, and lentil.
 - Farmers are advised to provide first irrigation to wheat sown in 2nd week of December at CRI stage (21 to 25 days after sowing) and apply adequate nitrogenous fertilizer@ 40kg N/ha after first irrigation. For control of weeds spraying of Isoproturon @ 1kg a.i./ha dissolve in 700 to 800 liters of water is advised.
 - Farmers are advised to provide the 2nd irrigation to wheat sown in 1st week of November. In Oat provide irrigation and last dose of nitrogen for better growth and yield.
 - Provide irrigation, weeding and earthingup in *rabi* maize crop.
 - Prepare the field and undertake sowing of spring planted sugarcane, vegetables and fodder crops.
 - Farmers are advised to provide the irrigation in potato at the interval of 10 to 15 days to protect from cold weather.
 - Prepare the field for sowing of sunflower, maize and transplanting of onion seedling.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
 - late blight in potato, spray Indofil M-45 or Ridomil @ 2gm/liter of water for control of late blight of potato.
 - aphid in mustard and rai, apply metasystox (25 EC), Monocrotophos @ 2gm per liter of water to protect the crop.
 - powdery mildew in peas. Apply Sulfex @2gm/liter of water or Bavistin @1gm/ liter of water or Kara than 1gm /liter of water for control of the disease.
 - stem borer, pod borer in peas, gram. Spray the insecticide like Endosulphan (35EC) @1.5 ml/liter of water for control at 15 days of intervals.
- **Major Seasonal Crop with stage:** Sugarcane (grand growth) and vegetables (vegetative/fruited), mango (fruit setting).
- **Crop Condition:** Good
- **Advisory**
 - Undertake weeding, intercultural operations and application of fertilizers in the standing crops like sugarcane, vegetables and mentha.
 - Complete sowing Barseem at the earliest and undertake first cutting of fodder.
 - Sowing of garlic may be done after purification of seeds at the seed rate 500- 700 kg seeds/ hectare at distance 15 x 7.5 cm.

Jharkhand

- **Realised Rainfall:** There was no rainfall during last week in the State.
- **Rainfall Forecast:** Dry weather is likely to prevail over the State.

- **Major Rabi Crops:** Wheat(early vegetative/tillering), rai, toria, gram, peas, potato, mustard(early vegetative)
- **Crop Condition:** Good
- **Advisory:**
 - As there was no significant rainfall in most of the districts and dry weather is likely for the next five days, the farmers are advised to apply irrigation to the standing *rabi* crops.
 - Apply first irrigation in wheat crop to late sown crops at 20 to 25 days after sowing and second irrigation after 40 to 45 days after sowing. Apply second irrigation to crops sown in the month of November and third irrigation may be given at the interval of 15 to 20 days. Rest of the urea may be given before flowering.
 - Undertake weeding, intercultural operations and top dressing in early sown *rabi* crops.
- **Major Seasonal Crop with stage:** Sugarcane (vegetative/grand growth).
- **Crop Condition:** Good
- **Advisory:**
 - Undertake sowing of Cabbage varieties in Early type – Golden acre, Early drum head, Pride of India. Late type – Late drum head Cauliflower Varieties are – Early – Pant Early, Pusa katki, Pusa Dipali. Seed rate is 600 – 700 gm/hactare.
 - Farmers who seeded potato crops in early November may apply urea 50 kg /acre. Farmers are advised to give irrigation at 10 to 15 days interval. Farmers who have taken early potato may go for onion in fallow land after harvesting of potato. Irrigate the crop to protect the crops from cold.
 - At the time of flowering of mustard, apply urea 20 to 25 kg/acre. Apply first irrigation at the time of flowering and second irrigation at pod formation.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
 - aphid in mustard and rai, apply metasystox (25 EC), Monocrotophos @ 2gm per liter of water to protect the crop.
 - powdery mildew in early pea. Spray Cairathane @ 1ml/litre of water or sulfex 3gm/litre of water.
 - blight disease in tisi, spraying of mancozeb @ 2ml/litre of water is recommended.
 - leaf folder in arhar, spray Endosulfan @ 2ml/litre of water. To protect the plant from aphid spray the plant with Methyl Demeton @ 1.0 ml/litre of water.
 - tikka disease in late sown groundnut. Farmers are advised to spray Sitara @1 ml/ litre of water.

Orissa

- **Realised Rainfall:** There was no rainfall during last week in most of the districts in the State.
- **Rainfall Forecast:** Rainfall is likely at a few places during next 24 hrs. and no significant rainfall thereafter.
- **Major rabi Crops:** wheat (early vegetative/tillering), pulses, mustard, sunflower, groundnut (vegetative)
- **Advisory:**
 - As there was no rainfall in the State during last few weeks, apply irrigation to the *rabi* crops.
 - Apply first top dressing @ 50 % N of the recommended dose at CRI stage of wheat.
 - Undertake weeding, intercultural operations and application of fertilizers of *rabi* pulses like lentil, field pea and chickpea.
 - Go for weeding and hoeing in groundnut. Broadcast 100 kg Gypsum or side dress 50 Kg/ha. Irrigate the crop if required.
 - Undertake nursery sowing of summer rice and complete transplanting within January. Select varieties among Khandagiri, Lalat and Surendra etc. 10 decimal area is sufficient for nursery sowing for one acre planting.
 - **Major Seasonal Crop with stage:** Sugarcane (early vegetative), vegetables (fruiting / harvesting), onion (vegetative).

- **Crop Condition: Good**
- **Advisory:**
 - Undertake transplanting of cole crops at 3-week stage.
 - Undertake weeding, intercultural operations and application of fertilizers.
- **Plant protection:** Weather conditions are favourable for mild incidence of
 - aphid in pulses. Apply 4 ml Neem based pesticide or 2 ml Metasystox per each litre of water to control aphids.
 - leaf eating caterpillar in vegetable crops. Spray Endosulfan @ 2 ml/l to control.
 - diamond back moth, mustard saw fly and borer in cole crops, spray Malathion @ 2ml/l of water.
 - late blight in potato, spray with 2 kg Dithane-M-45 in 500 l of water thoroughly.
- **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:** Dry weather prevailed during last week in the State.
- **Rainfall Forecast:** Isolated rain is likely to occur over the State.
- **Major Crops:** *Boro* rice, vegetables, mustard.
- **Crop Stage:** Sugarcane (vegetative), vegetable crops (vegetative / flowering / fruiting), mustard (flowering / pod formation), *boro* rice (seedling).
- **Crop Condition: Good**
- **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 fog and drain out the water in the next morning. To avoid the cold injury in seed bed, drag the rope in the early morning to drop down the dew from leaf canopy.
 - As there was no significant rain during last week and mainly dry weather is likely to prevail, apply irrigation to mustard crop.
 - Prepare the main field by 3-4 times ploughing for chilli cultivation. The recommended fertilizer doses are 1.5-2 tones compost, 20 kg Urea, 40 kg SSP and 15 kg MOP per bigha as basal application. Seedlings are transplanted 50 x 50 cm from plant to plant and line to line distance. Seedlings are planted along the water line on one side of the ridges on afternoon and a light watering is given to take a quick foothold.
 - After 21 days of potato planting, 15 kg urea and 8 kg MOP per bigha should be applied as top dressing followed by earthing-up. Irrigate the field just after the earthing up and maintain the moisture level.
 - For late sown wheat, top dress Urea @ 7 kg per bigha 6 weeks after sowing. After fertilizer application, irrigate the field properly. Irrigation will be helpful to combat cold weather also.
- **Plant protection:** Weather conditions are favourable for mild incidences of –
 - brown spot in rice, if small eye shaped spot observed on seedling leaves then spray Bavistin @ 1 gm per litre of water.
 - stem rot in brinjal, spray tricyclagel @ 0.5 g /litre of water.
 - aphid in mustard in Old Alluvial Zone, apply Rogor @ 1.5 ml/litre of water.

- early and late blight disease in potato, spray the crop at afternoon with Copper oxichloride @ 4 gm/litre or Cymoxnil 8% + Mancozeb 64% @ 2.5 gm per litre of water at 7-10 days intervals.
- Black spot in onion in New Alluvial Zone, apply 2 g Mancozeb or 2 g zyrum per litre of water.
- **Fisheries:**
 - For fish cultivation, lime should be applied @ 40kg / bigha in the pond.

Sikkim

- **Realised Rainfall:** The State received no significant rainfall during last week.
- **Rainfall Forecast:** Isolated rainfall is likely over the State during next 48 hours and dry weather there after.
- **Major crops: High hills (1500 to 2000 m): Large Cardamom:** Vegetative, **Rabi Vegetables:** flowering/fruitleting/harvesting, **Wheat:** Active Tillering/Flowering; **Medium hills (1000 to 1500 m): Large Cardamom:** Vegetative, **Rabi Vegetables:** flowering/fruitleting/harvesting, **Mustard:** Flowering/Grain formation, **Wheat:** Active Tillering/ Flowering; **Low Hills (Below 1000 m): Large Cardamom:** Vegetative **Rabi Vegetables:** flowering/fruitleting/harvesting, **Mustard:** Flowering/Grain Formation. **Wheat:** Tillering
- **Crop Condition:** Good
 - **Advisory:**
 - Harvesting of cardamom may be continued in high altitude area .Maturity may be assessed when the capsule of the top most spike turn dark brown and when the capsule come out easily while pulling.
 - Undertake intercultural operations in wheat, mustard and potato to keep the field weed free.
 - Harvesting of orange fruits should be done by tree fruit harvester or by hand plucking without damaging the trees.
- **Plant protection:**
 - Chirke and Foorkey infected cardamom plants may be destroyed by uprooting and buried in the pits at regular intervals.
 - Regular inspection may be carried out to observe caterpillar/shoot borer/shoot fly incidence, if any, and may be hand picked and destroyed mechanically.

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

Assam

- **Realised Rainfall:** Dry weather prevailed during last week.
- **Rainfall Forecast:** Mainly dry weather is likely to prevail over the State.
- **Major Rabi Crops:** Wheat (crown root initiation / tillering), potato (vegetative / tuber formation), pea and mustard (vegetative / flowering / pod formation), vegetables (vegetative / flowering / fruiting).
- **Advisory:**
 - Soaking and incubation of boro rice seeds will take time due to low temperature. Sow sprouted seeds in nurseries under low plastic tunnel because of fall in temperature. As night temperature is low, the young seedlings of *boro* rice should be applied with irrigation water during night to protect the seedlings from low temperature and drain out the water in the next morning. Transplant the seedlings in main field at 3-4 leaf stage. While preparing main field apply fertilizer @ 18 kg Urea, 27 kg SSP, 6 kg MOP per bigha.
 - Apply irrigation to wheat at crown root initiation stage as the period will continue to be dry. First topdressing is to be done 3 days after irrigation.
 - Second earthing up should be done in 75-80 days old potato crop. This should be followed by adequate irrigation.
 - As there was no significant rain during last few weeks, apply irrigation to tomato, mustard, pea etc.
 - Due to prevailing dry weather arrange for Pitcher drip irrigation in coconut and areca nut for the ensuing period. Alternately after irrigation, mulch the base of the palm with dry hyacinth or with dry straw.

- 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 Knol khol.
- Land preparation for early summer vegetables like ladies finger, ridge gourd etc. should be started during this period.
- Under rainfed condition optimum time of sowing of squash is mid January to mid February. Suitable varieties are long white, pointed green, round white etc. Seed should be sown @ 10.5 Kg/bigha maintaining a spacing of 2-3 m (row to row) and 1-2 m (plant to plant). Pit size should be 45 cm x 45 cm x 45 cm. After planting the row should be covered with a thin layer of paddy 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).
- **Crop Condition:** Good
- **Advisory:**
 - Matured sugarcane may be harvested during this period.
- **Plant protection:** Weather conditions are favourable for mild incidences of –
 - blight in potato, spray Mancozeb 75% a.i.(2.5g/l) at an interval of 7 days.
 - aphid and saw fly in the rapeseed and mustard crop, spray Dimethoate 30 EC @ 2 ml / litre or Chloropyrifos 20 EC @ 2 ml / litre or Rogor 30 EC @ 1-1.5 ml /liter of water. Spraying should be done during afternoon to protect the pollinators like honeybee.
- **Fishery:** As the water level of ponds are going down, the fishery owners may arrange for partial harvesting of marketable sized fish (>700gm). Measures to be taken to prevent EUS disease through liming. To control EUS, dip treatment in 500 ppm potassium permanganate solution may be practiced.
- **Animal Husbandry:**
 - Vaccination to control the Ranikhet & Gumboro diseases of poultry may be done during this period. Artificial lighting may be provided in the poultry house to raise the temperature and to keep the house comfortable for the birds.
 - Dry paddy straw for hay making and preserve for future use.

Arunachal Pradesh

- **Realised Rainfall:** There was no rainfall in the State during last week.
- **Rainfall Forecast:** Rainfall at isolated places is likely over the State during next 48 hours and mainly dry weather thereafter.
- **Major *rabi* Crops:** Pea, maize, potato
- **Crop Stage:** Pea, maize, potato(vegetative)
- **Crop Condition:** Good.
- **Advisory:**
 - Undertake weeding, inter-cultural operations and top dressing of fertilizers in pea, maize and potato.
- **Major Seasonal Crop:** Vegetables
 - As there was no rainfall in the State during last few weeks, apply irrigation to the *rabi* crops.
 - 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.
- **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.
- **Animal Husbandry:** Vaccination and deworming from time to time for gastrointestinal parasites be done with mineral mixture supplement in feed.

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

Andhra Pradesh

- **Realised Rainfall:** Coastal Andhra Pradesh and Rayalaseema received scanty /no rainfall during last week except few districts of Telangana received excess rainfall.
- **Rainfall Forecast:** rainfall is likely at isolated/a few places over the state during next 48 hours and mainly dry weather thereafter.
- **Major Crops:** Cotton, Sugarcane and Vegetables
- **Crop Stage:** boll development (cotton). Early sown *rabi* crops are at vegetative stage.
- **Crop Condition:** Good.
- **Advisory:**
 - As there was no rainfall during last week, farmers are advised to apply irrigation to the early sown crops.
 - 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.
 - Harvesting and threshing of the paddy and ragi crops can be taken up.
 - Arrange for harvesting Bengalgram as the crop is at maturity stage.
- **Plant protection:** Present weather conditions are congenial for the incidence of
 - leaf miner and Spodoptera in *rabi* groundnut; spray Imidacloprid @ 0.4 ml or Monocrotophos @ 1.6 ml or Quinolphos @ 1.5 ml/litre of water. Spray Mancozeb @ 3 g or Hexaconazole @ 2 ml per litre of water to control Spodoptera.
 - powdery mildew in mango orchards. To control, spray Carbaryl @ 3 g + Carbendizem @ 1g per litre of water.
 - *Colletotrichum* blight in Bengalgram. To control upto some extent and also to prevent the spread of *Colletotrichum* blight, Spray Bavistin @ 1 g or Contaf or Hexaconazole @ 2 ml or Propiconazole @ 1 ml per litre of water, twice at 7-10 days interval.
 - blast in *rabi* rice nurseries. To control, spray Tricyclazole @ 0.6 g per litre of water, after noticing the disease symptoms.
 - hopper in sugarcane in Krishna district. To Control, spray Malathion @ 2 ml or Dimethoate @ 1.7 ml per litre of water, two times at 10-15 days interval.
- **Animal Husbandry:** The prevailing weather conditions are congenial for the occurrence of
 - haemorrhagic Septicemia in cattle
 - ET and sheep pox in sheep
 - ranikhet disease in poultry
 - To prevent the diseases, vaccinate the animals
 - To prevent blue tongue disease in sheep, farmers are advised to keep the sheep in sheds during night time.

Karnataka

- **Realised Rainfall:** Most of the districts received excess rainfall during last week.
- **Rainfall Forecast:** Mainly dry/dry weather is likely to prevail over the State.

- **Major Crops:** Wheat (Ear head emergence), Pigeonpea (maturity), Sunflower (maturity), Vegetables (Flowering/fruitletting), Rabi Sorghum (Ear head emergence), Bengalgram (Pod filling), Safflower (Flower emergence).
- **Advisory:**
 - Farmers are advised to provide irrigation in rabi Sorghum as the crop is in critical stage for irrigation
 - Harvesting of pigeonpea crop can be continued. Deep ploughing in black soil is advised in pigeon pea harvested fields.
 - Farmers in Bidar are advised to undertake sowing of bitter gourd in the main field. Recommended varieties are Arka Harith, Coimbatore Long can be used to get higher yields. Undertake dibbling of water melon seeds in the main field. Recommended varieties are Arka Manik and Arka Jyothi. Also undertake transplanting of brinjal seedlings in the main field.
 - Cotton picking can be done neatly to maintain the quality.
 - Harvesting/threshing of paddy can be continued in Uttara Kannada district. As per the forecast there are no chances of rainfall and the sky will be clear in the district. Hence, farmers are advised to continue the harvesting/threshing of paddy. Similarly, the arecanut growing farmers are also advised to continue the harvesting and drying of arecanut.
 - Farmers are advised to take up the sowing of pulses like black gram, green gram and also the green manure crop sun hemp to utilize residue moisture after harvest of the paddy in Paddy field for this farmers can make the arrangement of seeds.
 - Farmers are advised to undertake intercultural operations in sugarcane and vegetables to keep the fields weed free.
 - Farmers are advised to undertake transplanting of *rabi* vegetable crops like brinjal, cabbage, cauliflower, capsicum and tomato.
 - In view of prevailing low minimum temperatures, apply Dormix @ 30 ml per litre of water on pruned branches for obtaining better bud break on grapes.
- **Plant protection:** Present weather conditions were congenial for the incidence of
 - leaf eating caterpillar in Bengalgram. To control the pest, spray the crop with 4 g carbaryl or 1 ml Methyl parathion or 2 ml Chlorpyrifos dissolved in one liter of water.
 - leaf spot in Banana. Farmers should take up spraying of DM-45@ 1.7 ml/lit of water to control it.
 - thrips in Groundnut. To control farmers are advised to spray the Dimethoate @3g/lit of water.
 - pod borer in gram; spray Profenophos or Indoxacarb @ 0.3/l or Spinosad @ 0.2 ml or Acephate @ 1 g per liter of water.

Kerala

- **Realised Rainfall:** Most of the districts of the state received excess rainfall during last week.
- **Rainfall Forecast:** Mainly dry weather is likely to prevail.
- **Major Rabi Crops:** Rice (second crop at panicle initiation stage)
- **Crop Stage:** seedling/early vegetative (*mundakan* rice).
- **Crop Condition:** Good.
- **Advisory:**
 - Farmers are advised to undertake intercultural operations in rice to keep the fields weed free.
 - Farmers in Wayanad are advised to undertake harvesting of rice crop.
- **Major Seasonal Crop:** Vegetables and plantation crops (coconut, arecanut, pepper and cashew). Time for planting of coffee and arecanut
 - Farmers in Thrissur district are advised to undertake propping of banana trees to prevent the crops from high speed easterly winds.

- Farmers in Kottayam are advised to undertake transplanting of vegetable crops under irrigated conditions
- Planting of arecanut seedling can be continued in Kannur, Kasaragod, Kozhikode and Malappuram districts. Srimangla, sumangla and Mohitnagar are best suited and high yielding varieties.
- Fresh planting of banana can be continued during this period in Ernakulam.
- Farmers in Wayanad are advised to undertake harvesting of arecanut, pepper, cardamom and coffee.
- Farmers are advised to undertake intercultural operations, plant protection measures, weeding, earthing up and harvesting.
- Farmers are advised to mulch the basins of coconut palms with green / dry leaves. Mulching adds organic matter to the soil and helps to regulate the soil temperature. Apply 210 g of Urea, 350 g of super phosphate, 250 g of potash to the two months old nendran banana. Apply 210 g of Urea, 250 g of potash to the four months old nendran banana
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - leaf rot, rhinoceros beetle, red palm weevil in coconut. To control spray crowns and leaves with 1% Bordeaux mixture / 0.5 % copper oxychloride formulation / 0.4% mancozeb as a prophylactic measure against leaf rot disease. In the leaf rot affected plants, remove the rotten parts from the spear and two adjacent leaves and pour 300ml of fungicide solution at the base of the spear which can be prepared by mixing Hexaconazol 5EC 2 ml or mancozeb 3 gm in 300 ml of water. To control rhinoceros beetle leaf axil filling with 25 gm Sevidol 8G and 200gm fine may be done. To control red palm weevil pheromone trap can be used @ one trap per two ha. Spraying of 2% neem oil & garlic emulsion may be done as a prophylactic measure against eriophid mite in the crown & bunches (2nd to 7th bunches from top avoiding unpollinated inflorescence).
 - sucking pest in cowpea and bittergourd, spray the plants with neem oil emulsion. For this, dissolve 60g of bar soap on half litre of water and mix the emulsion with 1 lit of neem oil by vigorous stirring. The solution should be diluted 40 times for spraying purpose.
 - aphid, pseudo stem weevil, rhizome weevil in banana, To control the aphids which act as a vector for bunchy top disease apply 12.5 gm phorate 10G or 10gm Carbofuran 3 G /plant in leaf axil or 25gm phorate or 20gm Carbofuran / pit in soil 70 days and again 165 days after planting. For the control of pseudostem weevil and rhizome weevil adopt strict field sanitation. If the attack is severe, spray quinalphos 0.05%. Spraying /drenching may be done on the leaf axils, rhizome, surrounding soil and all around the entire pseudostem inserting the nozzle of the sprayer through the bore holes made by the larvae.
 - tea mosquito bug and anthracnose incidence in endemic area in cashew, to control spraying of Quinalphos (2 ml) and mancozeb (2g) together per litre of water.
 - Mahali / fruit rot in arecanut, spray 1% Bordeaux mixture (two to three times) to control Mahali disease.
 - stem borer in rice. Use of Tricho cards is an effective measure to keep this pest under check. (Trichogramma cards @ 2 cards per acre). In the case of severe infestation spray Quinalphos @ 300ml per acre
 - aphids and mealy bugs in vegetables. Spraying of tobacco decoction can effectively control these sucking pests. Steep 500g of tobacco waste in 4.5 litres of water for 24 hours. Dissolve 120g ordinary bar soap in 500 ml of water separately in another vessel Add the soap solution to tobacco decoction and stir well. Dilute this stock solution 6-7 times with water and use for spraying
 - Spray the pesticides on a non rainy day.

- **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:** Most of the districts received scanty/no rainfall during last week except few districts like Coimbtore, Nilgiri which received excess rainfall.
- **Rainfall Forecast:** Rainfall is likely at isolated places during next 24 hours and dry weather thereafter.
- **Major Rabi Crops:** Groundnut, pulses and *thaladi* rice, sugarcane, banana and vegetables.
- **Crop Stage:** rice (tillering), pod development (pulses), picking (cotton)
- **Crop Condition:** Good
- **Advisory:**
 - As there was no significant rainfall during last week, farmers are advised to apply need based irrigation to the crop.
 - Farmers in Thanjavur, Trichy, Nagappattinam and Thiruvarur are advised to undertake sowing of rice fallow pulses; black gram and green gram in harvested samba field. The varieties ADT 3 and 4 in Black gram and ADT 3 in Green gram are suitable rice fallow pulses in cauvery delta zone.
 - Undertake intercultural operations and application of fertilizers in thaladi rice and vegetables and sugarcane.
 - In vegetable belt area, farmers are advised to spray NAA (Growth hormone) for controlling of flower dropping and increase fruit 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
 - brown plant hopper and stem borer incidence in rice in Coimbatore. Monitor the pest load using light trap or spray neem seed kernel extract @ 5%. Also mealy bug incidence in cotton, papaya and mulberry. Look out for the incidence and spray fish oil rosin soap @ 4%
 - fruit borer in brinjal in Erode; spray Endosulfan 2 ml/ lit + Neem oil 3%.
 - leaf folder infestation in paddy in Namakkal; spray Chloropyrifos @ 2 ml/litre of water
 - powdery mildew disease in blackgram. To control farmers are advised to undertake spraying of wettable sulphur at 1 kg per acre.
 - sheath blight incidence in rice; spray carbendazim @ 250g/ha.
 - sigatoka leaf spot in banana, spray carbendazim @ 1g/lit of water

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Maharashtra

- **Realised Rainfall:** Some pockets of Solapur and Sangli districts of South Madhya Maharashtra, Osmanabad district in Marathwada and Amravati, Yeotmal, Washim, Gondia, Nagpur and Wardha districts in Vidarbha received light to moderate rainfall during last two –three days & mainly dry weather prevailed over rest of the State during last week.
- **Rainfall Forecast:** Isolated rain likely over Vidarbha & Marathwada during next 24 hours & mainly dry weather thereafter. Mainly dry weather is likely to prevail over Konkan & Madhya Maharashtra during the period.
- **Major kharif Crops:** cotton and *tur*.
- **Major rabi Crops:** *jowar*, safflower, sunflower, linseed, gram, wheat, mustard and vegetables.
- **Crop Stage:** cotton (picking in final stage), *tur* (maturity / harvesting), *rabi jowar* (flag leaf initiation / flowering / grain formation), safflower (flowering / head formation), sunflower (vegetative / floral bud

formation), gram (branching / flowering / pod formation), wheat (crown root initiation / tillering / ear head emergence), mustard (vegetative / flowering), linseed (vegetative / floral bud initiation) and vegetables.

- **Crop Condition:** Satisfactory.
- **Advisory:**
 - Conserve moisture in the crop field at maturity stage of *kharif* crops.
 - Undertake planting of sugarcane (*suru*).
 - Apply second dose of Nitrogen @ 60 kg / ha to late sown wheat after 21 days of sowing.
 - Apply second dose of Nitrogen (50 kg N / ha) to brinjal, tomato and cucurbitaceous vegetables one month after sowing in Konkan.
 - Apply protective irrigation to standing crops except in Solapur, Sangli, Amravati, Yeotmal, Washim & Gondia districts as they received moderate rain during last 2-3 days.
- **Major Seasonal Crop:** Fruit crops and Sugarcane.
 - Undertake spraying, fertilizer application in the standing crops.
 - Complete picking of fully opened cotton bolls and continue harvesting of already matured red gram.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - blight disease in onion, spray Carbendazim 0.1% or Mancozeb 0.25% or Chlorothalonil 0.25%.
 - *Helicoverpa* in gram, use 5 pheromon traps or nuclear polyhydrosis virus per ha. Prepare solution of 500 crushed caterpillar in water, filter it and mixed in 500 lit of water and apply for one ha.
 - wilt disease on gram, apply Trichoderma along with FYM.
 - powdery mildew along with round black spot & anthracnose disease in mango, for control of anthracnose, spray Copper oxychloride @ 2.5 g per litre of water. For control of powdery mildew, spray water soluble 80% sulphur powder.
 - aphids, white fly and thrips in ladies finger, spray Enidachloroprid @ 4 ml or Methyl dimeton @ 10 ml per 10 liters of water.
 - rust and blight in wheat, spray Diathane M-45 @ 2.5 g / liter of water.
 - tea mosquito and thrips in cashew, spray Endosulfan 35 EC @ 15 ml or Carbaryl 50 WP @ 20g per 10 litres of water for tea mosquito and Profenophos 50 EC @ 10 ml or lambda cyhalothrin 5 EC @ 6ml per 10 litres of water for thrips.
 - aphids in safflower, spray Dimethoate 30% @ 10 ml per 10 litres of water.

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.
- **Crop Stage:** wheat (crown root initiation / tillering), mustard (flowering / pod formation), gram (flowering / pod formation) and vegetables (vegetative / flowering / fruiting).
- **Crop Condition:** Crop condition is satisfactory.
- **Advisory:**
 - Apply irrigation during crown root initiation stage (20-25 days after sowing) and tillering stage (35-40 days after sowing) of wheat crop. Also apply 60 kg N / ha at tillering stage in presence of sufficient moisture.
 - Undertake weeding and intercultural operations in mustard crop.
 - Farmers are advised to apply irrigation to gram and mustard as the crops are at flowering / pod formation stage.
 - 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.
 - Carry out weeding and apply 25 kg / ha N as split dose to the isabgul crop at sufficient moisture condition.

- **Major Seasonal Crop:** Fruit crops and Sugarcane (vegetative).
 - Cut inflorescences of young mango plants (less than 3 years) for better vegetative growth.
 - Pluck fully matured fruits of papaya, ber, guava, pomegranate and citrus and take them to market after sorting and grading.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - sucking pest in mustard, spray 0.1% Dimethoate 30 EC to manage the sucking pests.
 - *Heliothis* in gram, spray Endosulphan @ 20 ml or Monocrotophos @ 12 ml or Chlorpyrifos @ 20 ml in 10 litres of water.
 - mealy bug / shooty mould in mango, spray 0.2% Endosulphan 35 EC to manage the pests.
 - powdery mildew in mango, spray 0.2% wettable sulphur or 0.05% dinocap solution to manage the disease.
 - Mango hopper, spray Dimethoate @ 10 ml or Endosulphan @ 20 ml per 10 litres 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.

CENTRAL INDIA [M.P., CHHATTISGARH]

Madhya Pradesh

- **Realised Rainfall:** There was no significant rainfall in the State except Bhopal, Indore, Rewa, Sidhi and Panna districts which received excess rainfall during last week.
- **Rainfall Forecast:** Mainly dry/dry weather over the State.
- **Major Rabi Crops:** wheat, pulses, gram (vegetative), sugarcane (cane development), cotton (boll development/ maturity) and vegetable crops (late vegetative)
- **Crop Condition:** Satisfactory.
- **Advisory:**
 - Farmers are advised to undertake the following measures to safeguard the crops from cold injury.
 - Apply irrigation to the crops in the early morning to overcome chilling injury.
 - Arrange for burning around the field using farm waste materials to reduce the impact of low temperature.
 - Farmers are advised to 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.
 - Also undertake sowing of coriander and fenugreek.
 - Undertake pit preparation for planting of new orchard crops.
 - Farmers are advised that suitable time for transplanting of onion.
- **Animal Husbandry:** Protect calves from cold. 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-
 - leaf eating caterpillars in gram; spray neem seed kernel Extract (5%), use pheromone traps (4 in one acre), Use Trichoderma culture or Endosulphan 35 EC 2 ml / liter in Gram.
 - aphids in safflower; spray Roger @ 750 ml / ha for the control of. Apply split dose of nitrogen fertilizer in wheat. Irrigate Wheat crop if water is available.
 - pod borer in arhar; spray Quinalphos 25 EC @ 2 ml/litre. Spray neem seed kernel extract (5%), use pheromone traps (4 in one acre).
 - aphids in safflower; spray Rouger @ 750 ml / ha for the control.
 - early blight in potato; spray Diethen M45 @ 2-3 gm/liter (use 500-600 lit. water).

Chattisgarh

- **Realised Rainfall:** Mainly dry weather prevailed over the State during last week.
- **Rainfall Forecast:** Isolated rain likely during next 24 hours & mainly dry weather thereafter.
- **Major Rabi Crops:** Wheat (crown root initiation / tillering), gram (vegetative / flowering / pod initiation), mustard (vegetative / flowering / pod formation).
- **Crop Condition:** Good.
- **Advisory:**
 - Late sown wheat crop is at crown root initiation stage. This stage of the crop is critical for moisture and nutrient stress. Hence, farmers are advised to go for first top dressing of N and then irrigate the fields. To control broad leaved weeds spray 2, 4-D Sodium salt @ 0.80 kg/ha.
 - Presently mustard and gram are at vegetative / flowering / pod formation 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.
- **Major Seasonal Crop with stage:** Sugarcane (vegetative), vegetables (flowering / fruiting / harvesting).
- **Advisory:**
 - Undertake weeding and intercultural operations in sugarcane.
- **Plant Protection:** Present weather conditions may be favourable for the infestation of *Heliothis* in gram and aphids in mustard.
 - For initial control of *Heliothis* in gram, install bamboo pegs at about 20-25 m spacing to provide sitting place for birds who eat the larvae of *Heliothes* and if necessary, spray Endosulphan or Metasystox @ 1.5 ml per litre of water. Spraying of HNPV @ 250 LE / ha is also recommended, but while using HNPV, care should be taken that spraying should be done during morning or evening hours to avoid loss of efficacy during bright sunshine hours.
 - Spraying of Endosulphan or Metasystox @ 1.5 ml per litre of water is advised to control mustard aphids, if necessary.