



National Agromet Advisory Service Bulletin

Friday 8th March 2019
(For the period 8th to 13th March 2019)



Issued by
India Meteorological Department

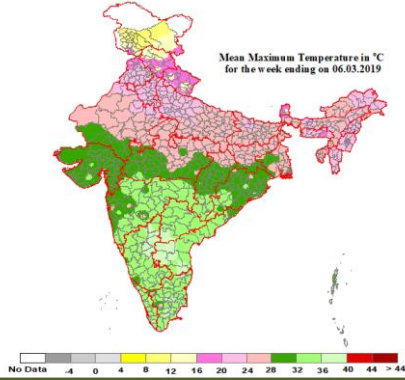
Weblink For

District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>

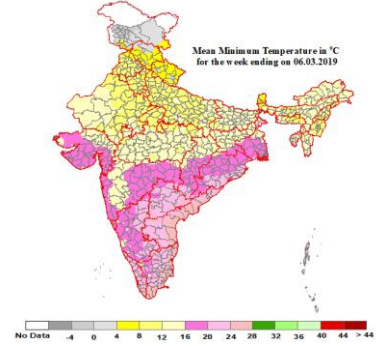
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending on 06.03.2019

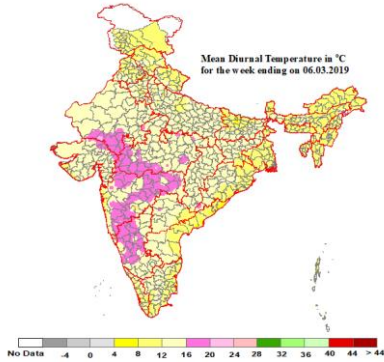
Mean Maximum Temperature (°C) for the week ending on 06.03.2019



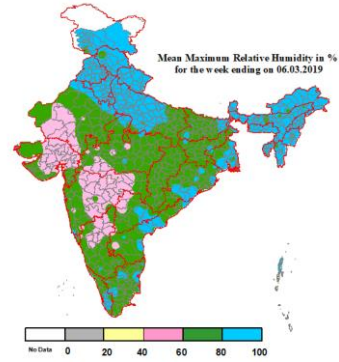
Mean Minimum Temperature (°C) for the week ending on 06.03.2019



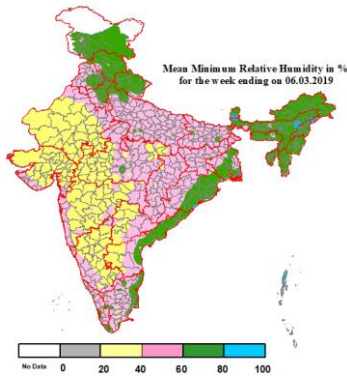
Mean Diurnal Temperature Variation (°C) for the week ending on 06.03.2019



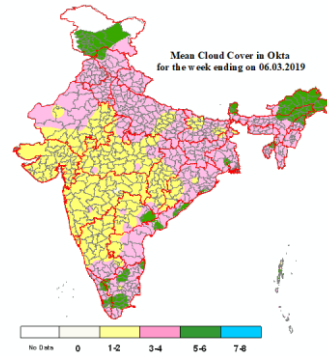
Mean Maximum Relative Humidity (%) for the week ending on 06.03.2019



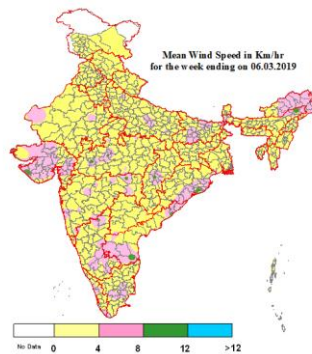
Mean Minimum Relative Humidity (%) for the week ending on 06.03.2019



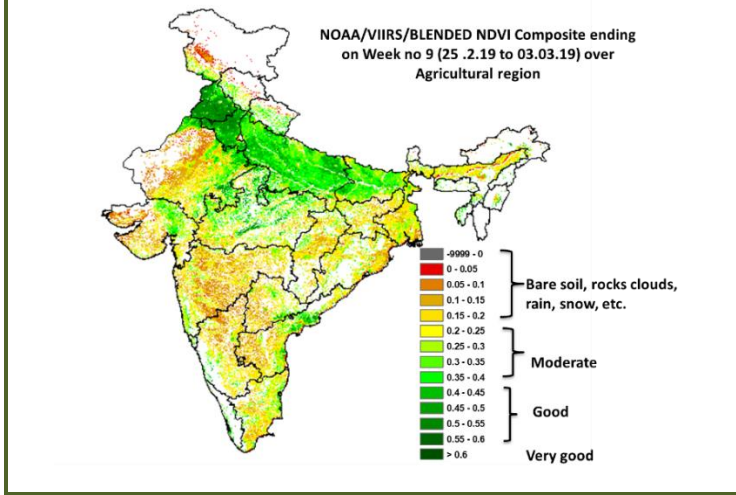
Mean Cloud Cover (okta) for the week ending on 06.03.2019



Mean Wind Speed (km/hr) for the week ending on 06.03.2019

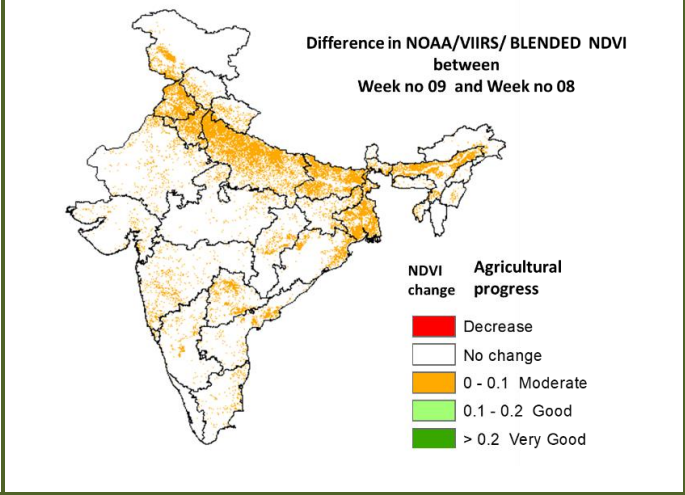


NOAA/VIIRS/BLENDED NDVI composite for the week number 09 (25.02.2019 to 03.03.2019) over Agricultural regions of India



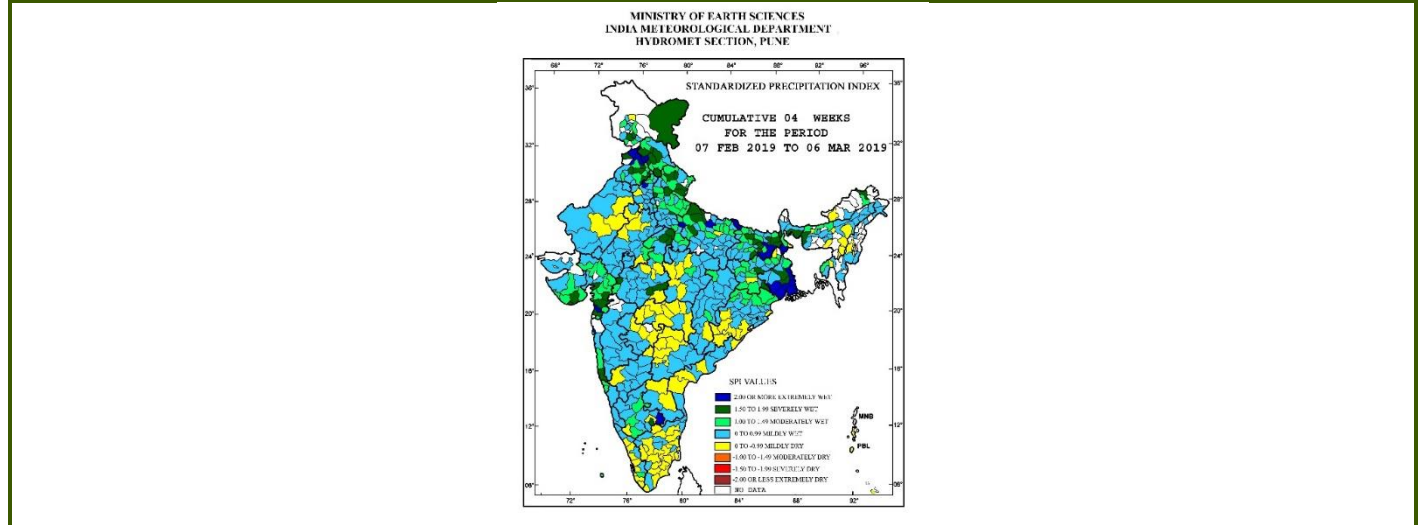
- Agriculture vigour is good at most places over Punjab, at many places over Haryana, at a few places over Uttar Pradesh & Madhya Pradesh and at isolated places over Coastal Andhra Pradesh, East Rajasthan, Bihar, Northern part of Gujarat, Konkan, Coastal Karnataka & Southern Kerala. It was moderate over rest of the country.

Difference in NOAA/VIIRS/BLENDED NDVI between week number 09 and week number 08



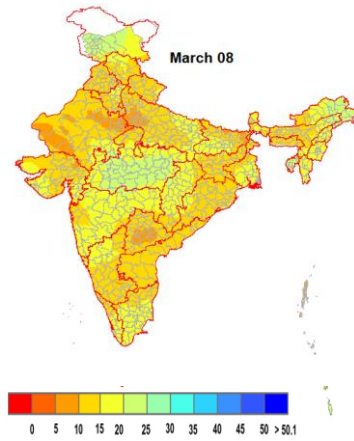
- Moderate difference in agricultural vigour was noticed at many places over Punjab & Haryana, Uttar Pradesh, Bihar & West Bengal and at a few to isolated places over rest of the country.

**Standardised Precipitation Index
Cumulative 4 weeks for the period 7th February to 6th March 2019**

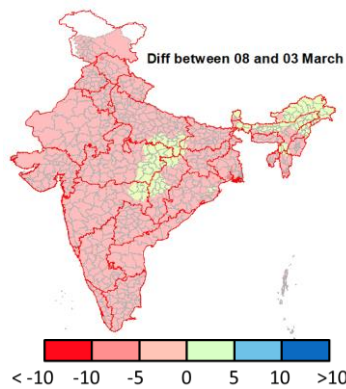
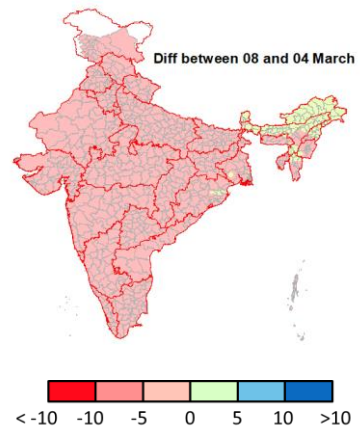
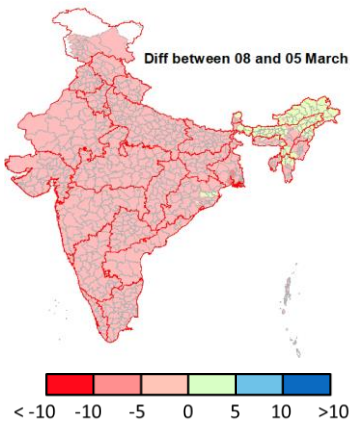
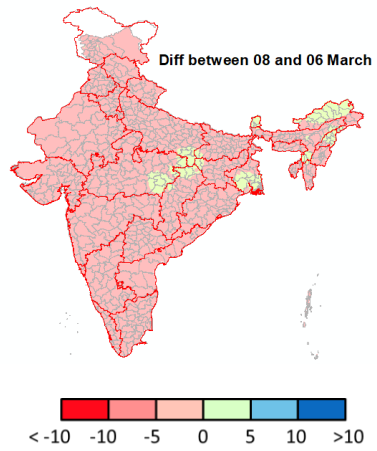
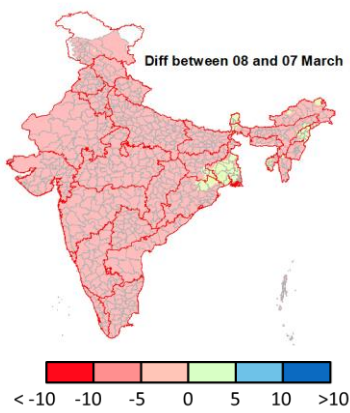


- Extremely/severely wet conditions experienced in many districts of West Bengal; Punjab; Himachal Pradesh; few districts of Bihar; Uttarakhand; Upper Siang district of Arunachal Pradesh; Dhubri district of Assam; Bokaro, East Singbhum districts of Jharkhand; Bahraich, Gonda, Kannauj, Kheri, Sitapur, Unnao, Baghpat, Bijnor, Kanshiram Nagar districts of Uttar Pradesh; Kaithal, Chandigarh districts of Haryana; Ladakh (Leh), Reasi, Ramban districts of Jammu & Kashmir; Bhind, Datia, Gwalior, Harda, Hoshangabad, Jhabua districts of Madhya Pradesh.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

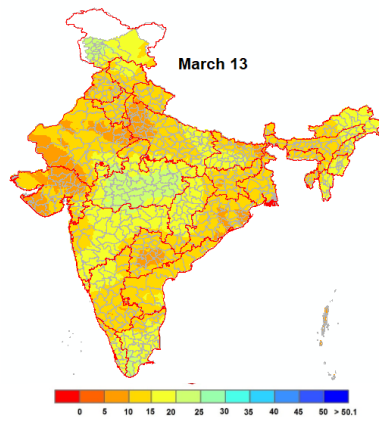
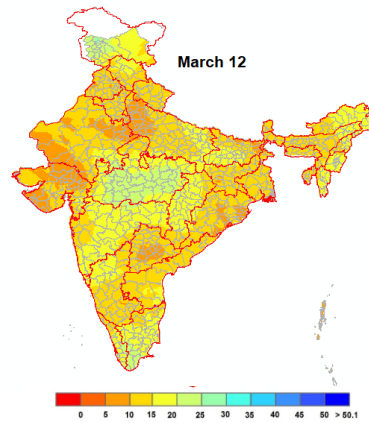
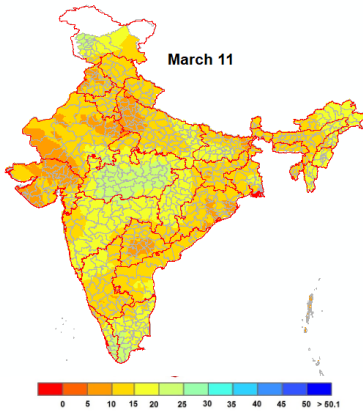
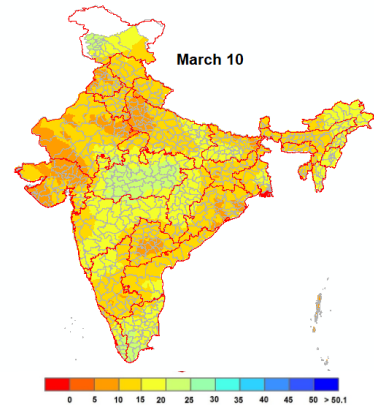
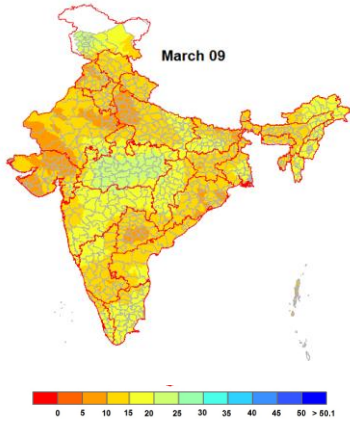
Daily Soil Moisture (mm) for 8th March 2019 (ending at 0830 IST) for 60 cm depth



Difference of Soil Moisture (mm) for 60 cm depth



**Forecasted Soil Moisture (mm) from 9th to 13th March 2019 (ending at 0830 IST)
for 60 cm depth**



Weather Forecast for next 5 days valid upto 0830 hours of 13th March 2019

- Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table below.
- No significant change in maximum & minimum temperatures likely over northwest & east India during next 2-3 days. Maximum temperatures very likely to increase gradually by 2-3°C over many parts of central & west India during next 2-3 days and no significant change likely over rest parts of the country during same period.

5 Day Rainfall Forecast (Mid-day)

8th March 2019

Met-Sub-Division	08-Mar Today	09Mar Sat	10Mar Sun	11Mar Mon	12Mar Tue
1. Andaman & Nicobar Islands	DRY	DRY	DRY	DRY	DRY
2. Arunachal Pradesh	SCT	ISOL	DRY	DRY	DRY
3. Assam & Meghalaya	ISOL	DRY	DRY	DRY	DRY
4. N. M. M. & T.	ISOL	DRY	DRY	DRY	DRY
5. S.H. West Bengal & Sikkim	DRY	DRY	DRY	DRY	DRY
6. Gangetic West Bengal	DRY	DRY	DRY	DRY	DRY
7. Odisha	DRY	DRY	DRY	DRY	DRY
8. Jharkhand	DRY	DRY	DRY	DRY	DRY
9. Bihar	DRY	DRY	DRY	DRY	DRY
10. East Uttar Pradesh	DRY	DRY	DRY	DRY	DRY
11. West Uttar Pradesh	DRY	DRY	DRY	ISOL	ISOL
12. Uttarakhand	ISOL	DRY	DRY	FWS	SCT
13. Haryana, Chd & Delhi	ISOL	DRY	DRY	SCT	ISOL
14. Punjab	ISOL	DRY	ISOL	SCT	ISOL
15. Himachal Pradesh	SCT	DRY	DRY	WS	SCT
16. Jammu & Kashmir	ISOL	ISOL	DRY	WS	SCT
17. West Rajsthan	ISOL	DRY	ISOL	ISOL	DRY
18. East Rajasthan	ISOL	DRY	DRY	ISOL	DRY
19. West Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
20. East Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
21. Gujarat Region	DRY	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	DRY	DRY	DRY	DRY
23. Konkan & Goa	DRY	DRY	DRY	DRY	DRY
24. Madhya Maharashtra	DRY	DRY	DRY	DRY	DRY
25. Marathawada	DRY	DRY	ISOL	ISOL	DRY
26. Vidharbha	DRY	DRY	DRY	ISOL	ISOL
27. Chhattisgarh	DRY	DRY	DRY	ISOL	ISOL
28. Coastal Andhra Pradesh	ISOL	ISOL	DRY	DRY	DRY
29. Telangana	DRY	DRY	ISOL	ISOL	DRY
30. Rayalaseema	ISOL	DRY	DRY	DRY	DRY
31. Tamilnadu & Puducherry	ISOL	ISOL	ISOL	DRY	DRY
32. Coastal Karnataka	DRY	DRY	DRY	DRY	DRY
33. North Interior Karnataka	ISOL	DRY	DRY	DRY	DRY
34. South Interior Karnataka	ISOL	DRY	ISOL	ISOL	DRY
35. Kerala	ISOL	ISOL	SCT	ISOL	ISOL
36. Lakshadweep	ISOL	DRY	ISOL	ISOL	DRY

% Station Reporting Rainfall

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

Weather Warning during next 5 days

- **08 March (Day 1):** Thunderstorm accompanied with hailstorm & gusty winds likely over Himachal Pradesh and Uttarakhand. Thunderstorm accompanied with lightning & gusty winds at isolated places very likely over Punjab, north Haryana, north Rajasthan, Assam & Meghalaya, Coastal Andhra Pradesh, Kerala and Interior Tamilnadu. Heat wave conditions at some parts very likely over interior Tamilnadu and at one or two places over Rayalaseema.
- **09 March (Day 2):** Thunderstorm accompanied with lightning & gusty winds at isolated places very likely over Coastal Andhra Pradesh, Kerala and interior Tamilnadu.
- **10 March (Day 3):** Thunderstorm accompanied with lightning & gusty winds at isolated places likely over Kerala.
- **11 March (Day 4):** Thunderstorm accompanied with hailstorm, lightning & gusty winds likely over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab and Haryana, Chandigarh & Delhi. Thunderstorm accompanied with lightning & gusty winds likely over north Rajasthan.
- **12 March (Day 5):** No weather warning.

Weather Outlook for subsequent 2 days from 13th to 15th March 2019

- Isolated to scattered rain/snow likely over Western Himalayan Region.
- Isolated rain/thundershowers likely over Uttar Pradesh, south peninsula, east and northeast India.
- Dry weather likely over the rest of the country.

Salient Advisories

- As thunderstorm accompanied with hailstorm, lightning & gusty winds likely over **Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi** on 11th, thunderstorm accompanied with hailstorm & gusty winds likely over **Himachal Pradesh** and **Uttarakhand** on 8th, thunderstorm accompanied with lightning & gusty winds at isolated places very likely over **Punjab, north Haryana** on 8th, over **north Rajasthan** on 8th and 11th March, use hail net for orchard crops to protect from mechanical damage and provide mechanical support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.
- As thunderstorm accompanied with lightning and gusty winds at isolated places very likely over **Coastal Andhra Pradesh, Interior Tamilnadu** on 8th and 9th, over **Kerala** from 8th to 10th March, provide mechanical support to young fruit plants, banana and staking in vegetables to prevent the crops from lodging due to strong winds. Undertake propping in sugarcane.
- As rain/snow likely at most places over **Jammu & Kashmir** and **Himachal Pradesh** on 11th, at many places over **Uttarakhand** on 11th March, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- In Middle **Gujarat**, undertake sowing of sesame. Continue harvesting of matured mustard and castor capsules. In **North Gujarat**, undertake land preparation for sowing of summer groundnut (G.G.-2 or T.G.-37), pearl millet (GHB-526 and GHB-558) and sesame (Gujarat Til 3) crops. In Central Brahmaputra Valley of Assam, continue land preparation for sowing of *Capsularis* jute and undertake harvesting of matured rapeseed-mustard at the earliest.
- In Cauvery Delta Zone of **Tamil Nadu**, as mainly dry weather condition is expected in the next five days, continue harvesting of matured *Samba/Thaladi* rice. Continue harvesting of normal sown early varieties of mustard and matured gram and lentil crops in **Chhattisgarh**. Continue harvesting of matured Sorghum, Gram, Safflower crops in clear weather in **Punjab**.

Detailed Agromet Advisories

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

- **Realised Rainfall:** Rainfall occurred in Nilgiris district of Tamil Nadu during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with lightning and gusty winds at isolated places very likely over Coastal Andhra Pradesh, Interior Tamilnadu on 8th and 9th, over Kerala from 8th to 10th March, provide mechanical support to young fruit plants, banana and staking in vegetables to prevent the crops from lodging due to strong winds.
 - As heat wave conditions very likely at some parts over interior Tamilnadu and at one or two places over Rayalaseema on 8th March, apply light and frequent irrigation to the standing crops to cope up with the excess evaporative demand due to heat wave conditions, undertake mulching with straw/polythene to conserve soil moisture.
 - **Kerala:**
 - Undertake planting of ginger turmeric vegetables as intercrop in irrigated coconut gardens. Apply mulch and protect the plants from the scorching sun. Providing adequate supply of water is essential for proper growth

in coconut. Moisture stress leads to stunted growth, immature nut fall and decreased yield. Give irrigation to palms once in a week.

- As temperature is increasing, it is desirable to bury fresh or dried coconut husk around the coconut palms to conserve soil moisture. The husk can be buried either in linear trenches taken 3 m away from the trunk between rows of palms or in circular trenches taken around the palm at a distance of 2 m from the trunk. The trenches may be of 0.5 m width and depth. The husks are to be placed in layers with concave surface facing upwards and covered with soil. The beneficial effect of husk burial will last for about 57 years. Instead of husk, coir pith can be buried @ 25 kg / palm/ year.
- In Northern Zone, warm and humid conditions can cause mahali disease in arcaenut, spray Hexaconazole (Contaf) @ 1 ml/litre of water or Bordeaux mixture 1%. Repeat after 20-25 days.
- In High Altitude Zone, this is an ideal time for planting of pepper. Also keep the fields ready for ginger plantation.
- In Central Zone, due to the increase in temperature, there are chances of incidence of sigatoka leaf spot, panama wilt and rhizome rot in banana. For managing sigatoka, remove the affected leaves and spray 0.4% Mancozeb along with sticker at intervals of 2 to 3 weeks. If disease incidence is severe, spray 0.1% Propiconazole. For the management of fusarium wilt, remove severely affected plants and drench 1% Bordeaux mixture.
- In Southern Zone, in crops like tomato, brinjal and chilli, there are chances of bacterial wilt. Affected plants should be properly rogued out and destroyed. Use disease resistant varieties for planting.
- **Andhra Pradesh:**
 - In North Coastal Andhra Pradesh, undertake sowing of summer green gram and complete planting of sugarcane as early as possible.
 - In South Coastal Andhra Pradesh weather is congenial for incidence of stem borer in Maize. Spray Monocrotophos 36 S.L@ 320 ml/ac or Clorantraniliprole @ 60 ml/ac.
 - In Rayalaseema, undertake sowing of crops such as groundnut, maize and fodder crops under micro irrigation methods.
- **Telangana:**
 - In Telangana, undertake sowing of fodder crops like sorghum, bajra and maize can be taken up for fodder with assured irrigation facilities. Fodder sorghum, bajra, maize, Pillipesara, Sunhemp and Horsegram can also be taken up in rice fallows.
 - In North Telangana, prevailing low temperatures and fog weather is congenial for the incidence of blast in rice. Spray Tricyclazole @ 0.6 g. or Isoprothiolane @ 1.5 ml per litre of water twice in 10-15 days interval.
- **Tamil Nadu:**
 - In Cauvery Delta Zone, mainly dry weather condition is expected in the next five days, harvesting of matured *Samba/Thaladi* paddy may be continued .
 - Increasing temperature with wind speed above 10 km/h may cause severe water stress in standing crops. Provide sufficient irrigation to all crops and do mulch to prevent soil moisture. All irrigated standing crops including coconut.
 - In Western Zone, due to dry and hot weather, standing *Navarai* season rice will be vulnerable to sucking pest, spray Monocrotophos 36 SL @ of 1 ml per litre of water. Irrigation should be given to all horticultural crops due to higher temperature coupled with low relative humidity.
 - In Southern Zone, the prevailing weather condition is conducive for incidence of citrus canker disease, spray of Copper Oxychloride (COC) @ 0.3% followed by 4 sprayings with Streptocyclin 100 ppm + COC @ 0.3 % at monthly intervals after pruning.
 - In High Rainfall Zone, due to the prevailing weather conditions, there are chances for increase in the severity of infection of rice stem borer, spray Chlorantraniliprole @ 0.3 ml/l or Flubendiamide @ 0.1ml / litre of water.
- **Karnataka:**
 - In North Interior Karnataka, undertake deep ploughing in crop harvested fields. Apply irrigation in summer groundnut, sugarcane, mango (mustard size) crop. Complete harvesting of early sown sorghum, safflower, chickpea and cotton crops as early as possible. Complete sowing of water melon and fodder crops.
 - In Coastal Karnataka, continue deep ploughing in harvested rice field.
 - In South Interior Karnataka, infestation of powdery mildew disease in mango orchard is noticed; spray with Wettable Sulphur @ 3gm/litre or Dynokaf @ 0.5ml/litre or Propineb @ 2gm/litre of water.
- **Animal Husbandry**
 - In Karnataka, maintain optimum room temperature in poultry house.
 - In Tamilnadu, to overcome heat stress in poultry, farmers are advised to ensure provision of adequate water, addition of electrolytes and vitamin C in the feed. Thus egg weight and production problems will be taken care off. As the wind speed will be high in late evenings, the stress developed during day will not be there in night hours.

- **Realised Rainfall:** Rainfall occurred in Changlang, East Siang, Kurung Kumey, Lohit, Lower Dibang Valley, Tawang, Upper Siang and West Siang districts of Arunachal Pradesh, Baksa, Barpeta, Chirang, Dhubri, Dibrugarh, Goalpara, Golaghat, Jorhat, Kamrup(Rural), Kokrajhar, Lakhimpur, Morigaon, Nalbari, Sibsagar and Tinsukia districts of Assam, East Garo Hills, East Khasi Hills and Ri-Bhoi districts of Meghalaya, Aizwal and Lunglei districts of Mizoram, Churachandpur and Imphal West districts of Manipur, Dimapur, Kohima, Mokokchung and Mon districts of Nagaland, all districts of Tripura except Dhalai during the week. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with lightning and gusty winds at isolated places very likely over Assam & Meghalaya on 8th March, provide mechanical support to young fruit plants, banana and staking in vegetables to prevent the crops from lodging due to strong winds.
 - **Arunachal Pradesh:**
 - Continue sowing early/local maize, early *kharif* vegetables and cowpea and harvesting of turmeric, ginger, pea and potato at the earliest.
 - **Assam:**
 - In Assam, continue land preparation and sowing of summer green and black gram and planting of banana.
 - In Lower Brahmaputra Valley of Assam, continue land/bed preparation for sowing of transplanted early *ahu* rice and land preparation/sowing of *kharif* maize. Undertake land preparation/planting of sugarcane.
 - In Barak Valley Zone of Assam, continue land preparation for sowing of *ahu* rice.
 - In North Bank Plain Zone of Assam, undertake nursery bed preparation for transplanted *ahu* rice. Undertake sowing of the seeds of directed seeded *ahu* variety like Banglami, Puthichapali, Nilajee, Hasakumra etc. and sowing should be completed as early as possible.
 - In Upper Brahmaputra Valley of Assam, continue harvesting of matured potato. Undertake nursery bed preparation for sowing of transplanted *ahu* rice.
 - In Central Brahmaputra Valley of Assam, continue land preparation for sowing of Capsularis jute and harvesting of matured pods of rapeseed-mustard at the earliest.
 - In Barak Valley Zone of Assam, spray Chlorpyrifos 20 EC against stem borer attack on rice.
 - In Lower Brahmaputra Valley of Assam, apply Chlorpyrifos 20EC at the concentration of 0.02% solution against stem borer infestation in *boro* rice.
 - In Hill Zone of Assam, spray Dithane M 45 @ 2.5 grams per litre of water against rust disease in wheat crop. In present weather condition farmers are advised for constant monitoring of pod borer in gram crop at flowering/pod formation stage. Farmers are advised to install pheromone traps @ 3-4 traps per acre for monitoring of the pest population for diamond back moth in cole crop, pod borer in pea/gram and fruit borer in tomato.
 - In Upper Brahmaputra Valley of Assam, spray Mancozeb 0.2% @ 2gm/litre or Carbendazim 0.1% @ 1gm/litre of water against blast disease in *boro* rice at reproductive stage.
 - **Meghalaya:**
 - Continue nursery raising/ transplanting of tomato and capsicum, undertake sowing of cole crops (cabbage, cauliflower, broccoli), root crop (radish, carrot) and harvesting of pea, ginger and turmeric.
 - **Manipur:**
 - Continue nursery raising of pre-*kharif* rice and undertake transplanting of 20-25 days old seedling. Undertake transplanting of 4-5 leave stage cucurbits seedlings and planting of tomato, brinjal, ginger/ turmeric. Continue harvesting of matured rapeseed/mustard/field pea/lentil, potato.
 - To control stem borer in maize, apply few granules of Carbofuran 3G at maize whorl.
 - **Mizoram:**
 - Apply Carbaryl 0.2 per cent or Malathion 0.15 per cent suspension containing sugar or jaggery @ 10 g/litre at fortnightly intervals on citrus fruits at flowering and fruit initiation stage. Spray 2% any Sulphur based fungicide to save vegetable plant (tomato, crucifer, onion, brinjal and chill) to save from powdery mildew and white rust disease attack. Undertake plant protection methods.
 - **Tripura:**
 - Continue transplanting of seedlings of summer brinjal and tomato. Undertake land preparation for sowing of cow pea, urd/green gram. Maintain 2 to 3 cm standing water in the field of *boro* rice.
 - To manage the attack of Stock rot in *rabi* maize at post silking stage, spray Mancozeb 2ml per litre of water.
 - **Nagaland:**
 - Undertake sowing of *jhum* rice, maize, land preparation for sowing of green gram, okra and nursery preparation of Naga king chilli. Undertake transplanting of seedlings of cucurbitaceous vegetables.
 - Short duration pulse crops and green manuring crops like dhaincha, sunnhemp etc. should be planted as *pre-kharif* crop in fallow paddy lowland/ terrace rice field to enhance the soil fertility.

- **Animal Husbandry**

- In Meghalaya, provide coccidiostatic like Amprolium @ 25-65 mg/kg feed once a day as a preventive measure against coccidiosis in poultry.
- In Nagaland, vaccinate chicks against Ranikhet disease on 5 days old or 5–7 days once, one drop in the eyes or nose. Chickens showing flu like symptoms should be treated with antibiotic Vendox, N-dox powder. For prevention it should be given for three days and for treatment give for 5 to 7 days. Vaccinate all newly born piglets against swine fever at the age of 3 months followed by annual booster dose. Keep floor dry to avoid skin diseases.

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

- **Realised Rainfall:** Rainfall occurred in Muzaffarpur and West Champaran districts of Bihar, Dumka district of Jharkhand, Balasore, Bhadrak, Cuttack, Khurda and Nayagarh districts of Odisha, Burdwan, East Midnapore, Howrah, Kolkata, North 24 Paraganas, South 24 Paragana and West Midnapore districts of Gangetic West Bengal and in Cooch Behar, Darjeeling, Jalpaiguri, Malda, North Sikkim and West Sikkim districts of Sub-Himalayan West Bengal and Sikkim during the week. Weather remained mainly dry/dry over the rest of the region.
- **Advisories:**
 - **Odisha:**
 - Summer paddy crop is at tillering to PI stage (four to seven week) in main field. Apply irrigation with alternate wetting and drying as hair line crack appears in field during tillering stage. Sugarcane crop is at planting to germination (two week) stage in main field. Irrigate the crop at seven days interval at germination stage. Pollination is important for fertilization and high seed yield of sunflower. Pollination can be made manually by a smooth cloth, which accelerates seed development. Keep honey bee box for proper seed development. Onion crop is at five to nine week stage. Go for hoeing, weeding and 2nd top dressing with 23kg urea at 7-8 week stage followed by irrigation. Rainfed mustard sown during October is at maturity stage. Go for harvesting, drying under sun for easy threshing and safe storage.
 - High difference in temperature between day and night favours the infestation of Blast in rice. Spray 0.6 g Tricyclazole or 1 ml Ediphosphos per litre water. Green gram and black gram crops are at pod formation to seed development (eight to eleven week) stage. For aphids and white fly, spray 60ml Imidacloprid 17.8%SL or 50ml Thiamethoxam 25%WG mixing with 200 litres of water per acre crop area and for YMV infestation, uproot and destroy the infected plants and spray Imidacloprid 50ml/acre mixing with 200 litres of water.
 - **Bihar:**
 - Maintain proper soil moisture in the rabi maize/wheat crop which is in grain forming/Milking stage. Harvest mature mustard crop. Carry out digging out potato tubers from the field which is in matured stage. Cut the upper vegetative parts of the crop for seed purpose. Stop the irrigation in the crop 15 days before of harvesting. Take up land preparation/sowing of Elephant foot yam, green gram and black gram. Continue sowing of summer maize and sunflower. Continue land preparation for sowing of summer vegetables.
 - Late sown mustard crops at flowering stage are vulnerable to the attack of Aphids. To control aphids, spray Monocrotophos @ 2 ml per litre of water or Imidachloprid @ 1 ml per litre of water. In order to control Cut worm in wheat crop, apply Carbaryl 50 WP @800 gm/acre in 700-800 litres of water. Spray Profenofos @ 1ml per litre or Imidacloprid @ 1ml per 4 litres of water to control thrips infestation in onion crop. To control stem borer in Rabi maize, apply Profenofos @ 2ml/liter of water.
 - **Jharkhand:**
 - Take up sowing of improved Pant Lobeya-2 variety of summer cowpea. Continue sowing of improved mung variety SML-688. Continue land preparation and sowing of okra (bhindi). When potato plant leaves became yellow, harvest the crop and keep the tubers in shed at a height of 1.2 to 2 ft for hardening of tuber skin.
 - To control insects and powdery mildew disease in green pea, spray of Kairathen @ 1 ml or Sulfex @ 3 ml per liter of water and to control pod borer spray neem extract insecticide @ 1.5 to 2 ml/litre of water. To control Alternaria blight in wheat crop, spray Indofil M-45 or Diathen Z-78 @ 2 gm per litre water. To control fruit borer in tomato and shoot & fruit borer in brinjal, fix pheromone traps @ 12 nos. per acre or spray Imidachlorpid @ 1 ml/litre of water.
 - **West Bengal:**
 - In Sub-Himalayan West Bengal, carry out mulching in large cardamom. Harvest mature pods of garden pea crop and mature cabbage, cauliflower and other cole crops. Stop irrigation to mustard and potato crops. Carry out operations like earthing up and weeding in ginger and turmeric fields.
 - In Gangetic West Bengal, drain out excess water from upland fields where tomato, brinjal and chilli seeds were sown. Make arrangements for draining out excess water from potato and sunflower fields. Carry out immediate harvesting of potatoes. Wash the harvested potatoes and keep them in a dry place to avoid rotting. Stop irrigation to wheat crop at its final growth stage. When groundnut crop is at the age of 35-40 DAS, spray nutrient solution Groundnut rich @ 38g/litre of water at clear weather condition for improving pod filling.

- In Sub-Himalayan West Bengal, to control mustard aphids in Lab bean, apply Ash in case of lower infestation and Thiomethoxam 0.3 SG @ 1g/3 litres of water in case of heavy infestation. For Aphid, hoppers, white fly and thrips in chilli crop, apply Imidacloprid 17.8 SL@ 1ml/5litres or Thiomethoxam @ 1g/3litres of water. For yellow mite apply Propergite 2.5 ml/litres of water.
- In Gangetic West Bengal, spray Tricyclozole 75WP@ 1g/litre of water for blast disease in Boro paddy. Spray Propiconazole (Tilt) @ 1ml/litre of water with a sticker 4-5 times (at 7 days interval) starting from 15 days after transplanting to check purple blotch disease in onion and garlic crops. Apply Imidachlorprid @ 3ml/10 litres of water for aphids and blight infestation in potato.
- **Andaman & Nicobar Islands:**
 - In Andaman Islands, do mulching around the vegetable and provide irrigation during evening.
 - In Andaman & Nicobar Islands, make basin around coconut and Areca nut tree and mulch with the coconut husk to conserve soil moisture.
- **Animal Husbandry**
 - In Bihar, pregnant animals should be fed 50-60 grams of mineral mixture every day to boost their immunity and prevent puerperal fever. All new-born animals should be vaccinated against PPR.
 - In Odisha, provide sufficient clean drinking water to cattle. Go for timely vaccination.
 - In Jharkhand, disease PPR in goat and sheep flourish due to cold weather. Vaccinate animals with PPR vaccine @ 1ml S/C. To provide protection to poultry birds against Ranikhet disease, apply 2 drop F-1 strain in nose of one day old chick. After 8 to 10 week apply R2B (Mukteshwer strain) vaccine after consultation with the veterinary doctor.
 - In West Bengal, keep the liter dry and infection free by applying dry straw and lime. Arrange more lights in the cage of new born chick. All new born animals should be dewormed and lambs/kids should be vaccinated against PPR.
 - In Andaman & Nicobar Islands, provide mineral mixture @ 0.10 gm/kg feed to the poultry birds grown under backyard condition.
- **Fisheries**
 - In Odisha, provide feed @ 2-3 % of body mass of fish. Go for false netting to get good growth of fish. To correct acidity, apply 100 kg lime and Cifax 500 ml per acre meter of water.

In West Bengal, for any bacterial disease infection, carry out dip treatment of fish in copper sulphate @ 5mg/litres of water for 1 minute. Broadcast 6-7g potassium permanganate for decimal water body during night time continuously for 7 days.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Weather remained dry over the region during the week.
- **Advisories:**
 - **Maharashtra:**
 - In South Konkan, maintain 10 cm in rice fields. In North Konkan, apply irrigation to vegetable crops and newly planted orchards like mango, cashew and sapota.
 - In Madhya Maharashtra, as dry weather is likely to prevail during next 5 days, apply mulching of grass, dried leaves, hay, straw etc. in orchards for conservation of soil moisture. Apply irrigation in vegetables and orchards. Continue harvesting of matured sorghum, wheat and chickpea. Apply irrigation in summer groundnut as per requirement of crop. Undertake gap filling in sugarcane fields.
 - In Marathwada, continue harvesting of wheat, gram and sunflower. Apply irrigation to vegetables and orchards. Apply Nitrogen @ 100 kg per ha in 45 days old sugarcane crop.
 - In West Vidarbha, complete sowing of summer greengram (Pusa Vashaki) by 15th March. Continue harvesting of matured safflower and gram. Apply irrigation to wheat, groundnut, orchards and vegetables. Also apply mulch in orchards to conserve soil moisture. In East Vidarbha, undertake gap filling after 10-12 days of sowing in groundnut. Continue harvesting of gram. Undertake intercultural operation like weeding in sesame.
 - In Konkan, to control blast in rice, spray Tricyclazole @ 10 g or Isoprothiolion @ 1 ml per litre of water.
 - **Gujarat:**
 - In Saurashtra & Kutch, undertake sowing of summer groundnut and sesame crops. Continue harvesting of matured mustard and castor capsules. Apply irrigation to wheat crop.
 - In North Gujarat, continue land preparation and undertake sowing of summer groundnut (G.G.-2 or T.G.-37), pearl millet (GHB-526, GHB-558) and sesame (Gujarat Til 3) crops. Continue harvesting of matured castor capsules, gram and cumin crops. Continue sowing of cowpea crop and undertake sowing of fodder (sorghum and maize) crops. Carry out weeding in citrus orchard and apply fertilizers.
 - In Middle Gujarat, continue land preparation and undertake sowing of sesame (Gujarat Til 2 or 3) crop. Apply irrigation to wheat (dough stage) crop. Continue harvesting of matured mustard and castor capsules.
 - In South Gujarat, as there is increase in temperature apply irrigation in vegetable and fruit crops. Undertake

harvesting of matured pigeon crop. The atmospheric conditions are favorable for unripe fruits dropping in mango orchard; for control, spray NAA @ 2g or Gebrelic acid @ 1 g + 2 kgs urea /100 litres of water solution.

- In Saurashtra & Kutch, to control mango hopper, spray Sypermithrin 25 % EC @ 1.6 ml. or Fenvalerate @ 4.5 ml adding in 10 litres of water at flowering initiation stage.
- **Animal Husbandry**
- In Gujarat, keep the animals in shade during day time.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rainfall occurred in Hoshangabad district of West Madhya Pradesh, Rajnandgaon district of Chhattisgarh during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - In East Madhya Pradesh, apply irrigation in wheat, gram and vegetables. Continue direct sowing for vegetables like pumpkin, bitter gourd, etc. Continue digging up of matured tubers of potato. Continue sowing of okra, maize (baby corn, sweet corn), moong, urad, groundnut and sunflower. In Kymore Plateau and Satpura Hill Zone, continue field preparation for sowing of summer vegetables.
 - In West Madhya Pradesh, continue nursery preparation for summer vegetables. Continue harvesting matured gram and mustard. Continue digging up of matured tubers of potato. Continue sowing of green gram and black gram. Continue sowing of cucurbitaceous crops, musk melon and water melon. Continue digging up of matured bulbs of onion and garlic. Undertake harvesting of matured wheat.
 - In Jhabua Hill Zone, for control of termite attack in wheat field, apply Chloropyrifos 20 EC @ 3.5 litre/ha with irrigation water.
 - **Chhattisgarh:**
 - Continue harvesting of timely sown early varieties of mustard and digging up of matured tubers of early and medium varieties of potato. Continue harvesting of matured gram and lentil crops. Apply irrigation in wheat and vegetables. Farmers having irrigation facility may complete the transplanting of summer rice by end of March. Undertake inter-culture, fertilizer application, earthing followed by irrigation in sugarcane crop at knee height stage. Continue sowing of spring moong. Continue sowing of leafy vegetables. Continue sowing of summer vegetables like pumpkin, bitter gourd, bottle gourd, sponge gourd, okra etc.
 - In Bastar Plateau Zone, apply irrigation in wheat. Continue sowing of summer moong, urad and sunflower. Undertake sowing of okra, cowpea and coriander. Undertake planting of summer arvi and bunda.
- **Animal Husbandry**
 - In Madhya Pradesh, keep animals in dry and shaded place and provide green fodder, fresh and clean water three times a day.
 - In Chhattisgarh, special attention should be given to milch animals with regard to feed and water looking to high temperature. Give lot of clean water to the animals and keep them in the shaded place.

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

- **Realised Rainfall:** Rain/snow occurred in all districts of Himachal Pradesh except Hamirpur, Lahaul & Spiti and Sirmaur, all districts of Jammu & Kashmir except Badgam, Bandipore, Jammu, Kargil, Kathua, Ladakh(Leh), Pulwama, Sambha and Srinagar, all districts of Uttarakhand except Garhwal Pauri, Rudraprayag, Udham Singh Nagar and Uttarkashi during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with hailstorm & gusty winds likely over Himachal Pradesh and Uttarakhand on 8th, thunderstorm accompanied with lightning & gusty winds at isolated places very likely over Punjab, north Haryana on 8th, over north Rajasthan on 8th and 11th, thunderstorm accompanied with hailstorm, lightning & gusty winds likely over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab and Haryana, Chandigarh & Delhi on 11th March, use hail net for orchard crops to protect from mechanical damage and provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.
 - As rain/snow likely at most places over Jammu & Kashmir and Himachal Pradesh on 11th, at many places over Uttarakhand on 11th March, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
 - **Jammu & Kashmir:**
 - In Sub Tropical Zone, the weather condition is favourable for yellow rust disease in late sown wheat crop. Farmers are advised to regularly monitor the crop. If noticed, apply Propaconazole (Tilt) @ 25ml in 25 litres of water/kanal conditions and repeat same after 10-15 days during clear weather. Also prevailing weather is congenial for the outbreak of Aschochyta blight and wilt diseases in Gram crop. If the disease is observed,

drench the affected spots with Bavistin @ 10ml/litre of water during clear weather.

- In Intermediate Zone, postpone irrigation, plant protection measures and application of fertilizers to the standing crops till the weather gets clear. Make necessary arrangements to drain out excess water from crops fields.
- Weather conditions are favourable for the attack of alternaria blight in mustard crop. If observed, apply Mancozeb @ 2.5 g/litre of water and Ridomil MZ @ 2.5 g/litres of water alternately as curative measure after current spells of rain.
- **Uttarakhand:**
 - In Bhabar and Tarai Zone, avoid irrigation in wheat crop as rainfall is expected. To control the late blight disease in tomato, spray Mancozeb @ 2.5g/litre of water or Copper Oxychloride @ 3g/litre of water after current spells of rain.
 - In Hill Zone, undertake nursery preparation of tomatoes, capsicum, brinjal, and cucurbitaceous crops in poly house.
 - In Sub-Humid Sub-Tropic Zone, apply second dose of nitrogen as top dressing in wheat crop in afternoon after current spells of rain. Maintain proper drainage facilities in mustard crop. Undertake harvesting of sugarcane crop after current spells of rain.
- **Himachal Pradesh:**
 - In High Hill Temperate Zone, avoid stagnation of rain water in the standing crop fields especially in wheat fields. Farmers are also advised to do the necessary arrangement of rain water drainage from the field and collect the water in farm ponds for future use.
 - In Mid-Hills Sub-Humid Zone, apply half dose of nitrogen fertilizers in onion and garlic after current spells of rain. Pea is in flowering to pod formation stage, carry out staking in pea. Undertake land preparations for sowing summer vegetables like tomato, capsicum bhindi, gaurd etc. in lower hills areas.
 - In Sub-Montane and Low Hills Sub-Tropical Zone, to control pod borer in gram crop, install Pheromone traps @ 3-4 traps per acre if flowering has reached 10- 15%. Install “T” shaped bird perches in and around crop field to control insect population.
- **Punjab, Haryana & Delhi:**
 - In Punjab, continue harvesting of matured Rabi crops like Sorghum, Gram, Safflower, Wheat during morning hours in clear weather. Considering the increasing temperature according to their needs give irrigation to fruit & vegetable crops. Protect the newly planted fruit crops from direct sunlight by providing shade net.
 - In Western Zone of Punjab, to control the powdery mildew disease & hoppers pest on mango plant, undertake the spraying of Imidacloprid 17.8 SL@ 3 ml per + Sulfer 80 wp @ 25 gm per 10 lit. of water. For integrated control of thrips and purple blotch of onion crop by undertake the spraying of Dimethoate 30 EC@ 15 ml or Lambda cyhalothrin 5 EC@ 6 ml OR Quinalphos 25 EC @ 24 ml per 10 lit. of water and rotate the spray. Also use the fungicide like Dithane M-45, 0.3% + Sticker.
 - In Haryana, continue transplanting of matured seedlings of tomato, cauliflower, & cabbage in prepared field. Monitor mustard and vegetable crops for sucking pests.
 - In Delhi, continue planting of winter sugarcane at optimum soil moisture for better seed germination. Complete transplanting of onion. Continue transplanting of cauliflower, cabbage, broccoli and tomato. Continue sowing of spinach, coriander, fenugreek. Continue preparation of seedling of early cucurbitaceous crops in small polythene bags and nursery preparation of chilli, tomato and brinjal crops in poly house. Continue sowing of lady finger(A-4, ParbaniKranti and Arkaanamika).
 - In Punjab, check aphid damage in mustard and if aphid population is above ETL, spray 40 g Actara 25 WG or 400 ml of Rogor 30 EC or 600 ml Dursban/Coroban 20 EC in 80-125 litres of water per acre. For control of late blight of potato, spray Indofil M-45/Markzeb/Kavach @ 500-700 g in 250-350 litres of water per acre on a non rainy day. Monitor the wheat crop for occurrence of yellow rust in fields. If symptoms of yellow rust are noticed, spray the crop with Nativo @ 120g or Tilt or Shine or Bumper or Stilt or Compass or Markzole @ 200 ml in 200 litres of water per acre. Undertake plant protection measures on a onon rainy day.
 - In Delhi, monitor the vegetable and mustard crops against attack of aphid. If pest population is above ETL than, spraying of Imidacloprid @ 0.25 to 0.5 ml per litre of water on a non rainy day.
- **Uttar Pradesh:**
 - In East Uttar Pradesh, apply light irrigation to standing wheat crop. Continue planting of spring sugarcane and undertake sowing of lady finger, moong and lobia as intercrop in sugarcane. Apply irrigation in onion. Continue sowing of cucurbits crops like bitter gourd, bottle gourd, cucumber, pumpkin, musk melon and water melon. Continue harvesting of rapeseed & mustard. Continue digging of matured potato.
 - In West Uttar Pradesh, continue field preparation for sowing of lady finger. Continue sowing of French bean, cluster bean, maize and urad. Continue transplanting of young seedlings of tomato, chilli and cole crops.
 - In West Uttar Pradesh, in present weather condition there are chances of attack of pod borer in gram crop. Install Pheromone trap @ 3-4 traps per acre.

- **Rajasthan:**
 - In Flood Prone Eastern Plain Zone, it is right time for sowing cucurbitaceous vegetables like melon, bottle gourd, ridge gourd, bitter gourd, pumpkin and smooth gourd etc.
 - In Sub humid and Southern Plain and Aravali Hill Zone, undertake sowing of summer okra and summer groundnut. Monitor rabi onion against termite attack, apply Chlorpyrifos 20 EC @ 4 litre per hectare with irrigation water.
 - Due to increase in temperature in coming days, water demand will increase in rabi crops. Therefore irrigate the crops as per need on the basis of critical growth stages and when crops show wilting symptoms.
 - In Southern Humid Plain Zone, to prevent Heliothis infestation in gram, spray Quinolphos 25 EC @ 1200 ml/ha or Indoxcarb @ 200 ml/ha or Emamectin Benzoate @ 100 gm/ha or Spinosad @ 73 gm/ha along with water at the time of flowering and repeat the spray if required.
- **Animal Husbandary**
 - In Uttar Pradesh, provide the mixture of Berseam with fodder as supplement to cattle. Administer Dewormis or Nematicide orally to poultry.
 - In Semi Arid Eastern Plain Zone of Rajasthan, Foot & Mouth Disease may spread in cows and buffaloes. Vaccinate the animals against FMD. If animal is affected then isolate the affected animal and wash its mouth with 0.1% potassium permanganate solution.
 - In Jammu & Kashmir, do not allow animals to leave khurli early in morning directly to open area. Protect the pregnant and milch animals from cold and feed them mineral mixture regularly. Give special care to young calves as they are more sensitive to pneumonia. Provide dry bedding during night. Use dry gunny bags as bedding material for protection against low night temperatures.
- **Floriculture**
 - Planting of carnation may be continued in well prepared fields at recommended spacing andwith FYM and fertilizers doses. Farmers are also advised to prepare their fields for theplanting of gladiolus in Himachal Pradesh.
 - In Jammu& Kashmir, Marigold fields should be kept clean and provision for drainage should be made by making proper channels.
- **Apiculture**
 - In Sub Tropical Zone of Jammu & Kashmir, shift the bee colonies near mustard field. Keep the colony under cover during night time to protect it from cold.
- **Poultry**
 - Cover the poultry sheds in Jammu & Kashmir with gunny bags in order to protect the birds from cold weather. Install electric bulbs to maintain optimum temperature.

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