



National Agromet Advisory Service Bulletin

Friday 3rd May 2019
(For the period 3rd to 8th May 2019)



Issued by
India Meteorological Department

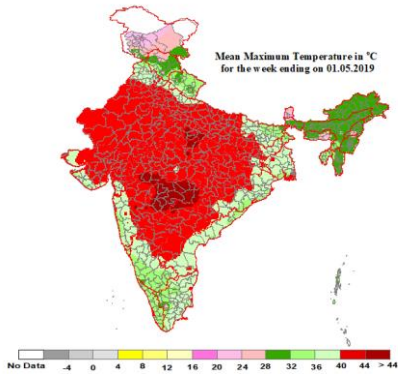
Weblink For

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

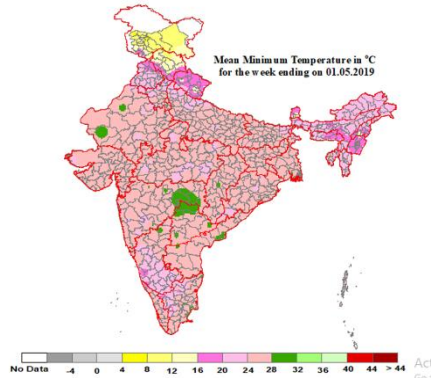
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending on 01.05.2019

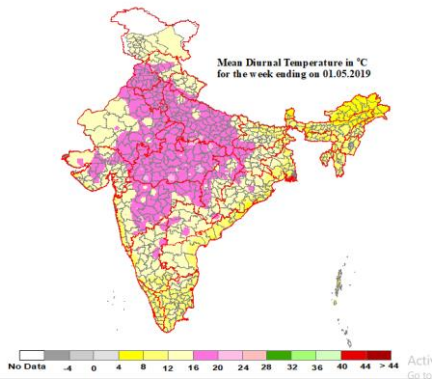
Mean Maximum Temperature (°C) for the week ending on 01.05.2019



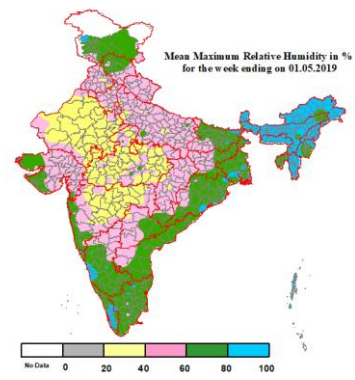
Mean Minimum Temperature (°C) for the week ending on 01.05.2019



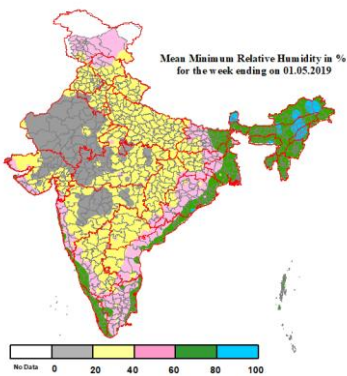
Mean Diurnal Temperature Variation (°C) for the week ending on 01.05.2019



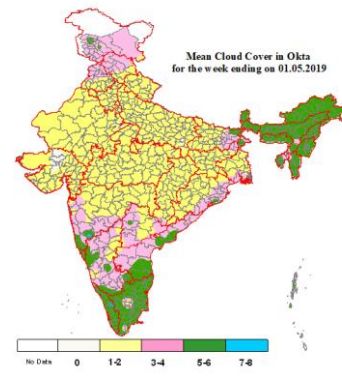
Mean Maximum Relative Humidity (%) for the week ending on 01.05.2019



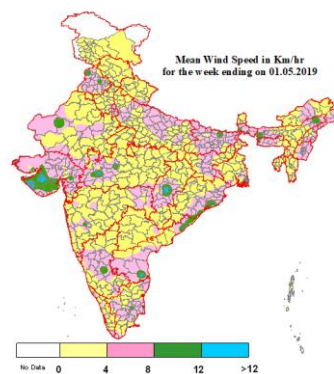
Mean Minimum Relative Humidity (%) for the week ending on 01.05.2019

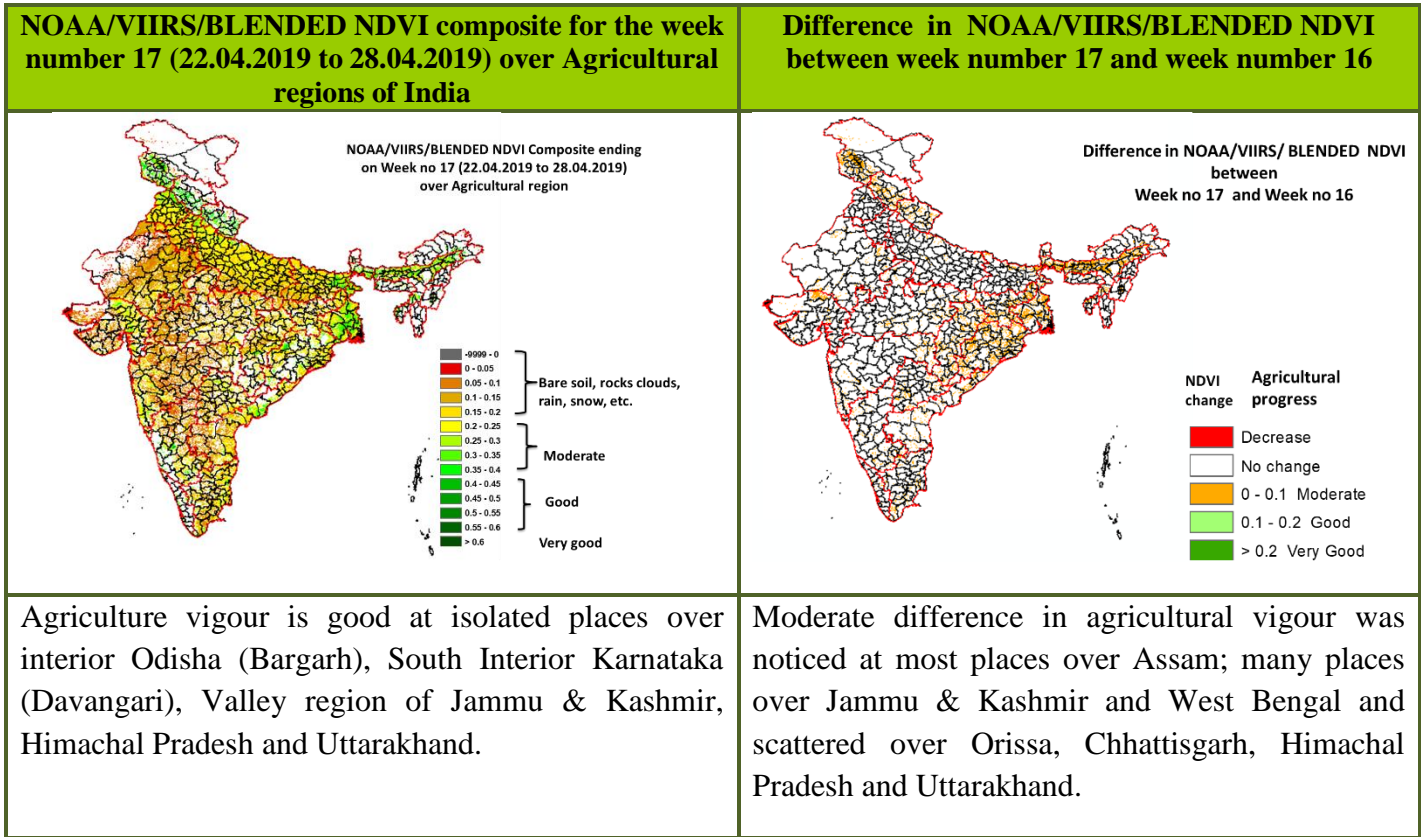


Mean Cloud Cover (okta) for the week ending on 01.05.2019

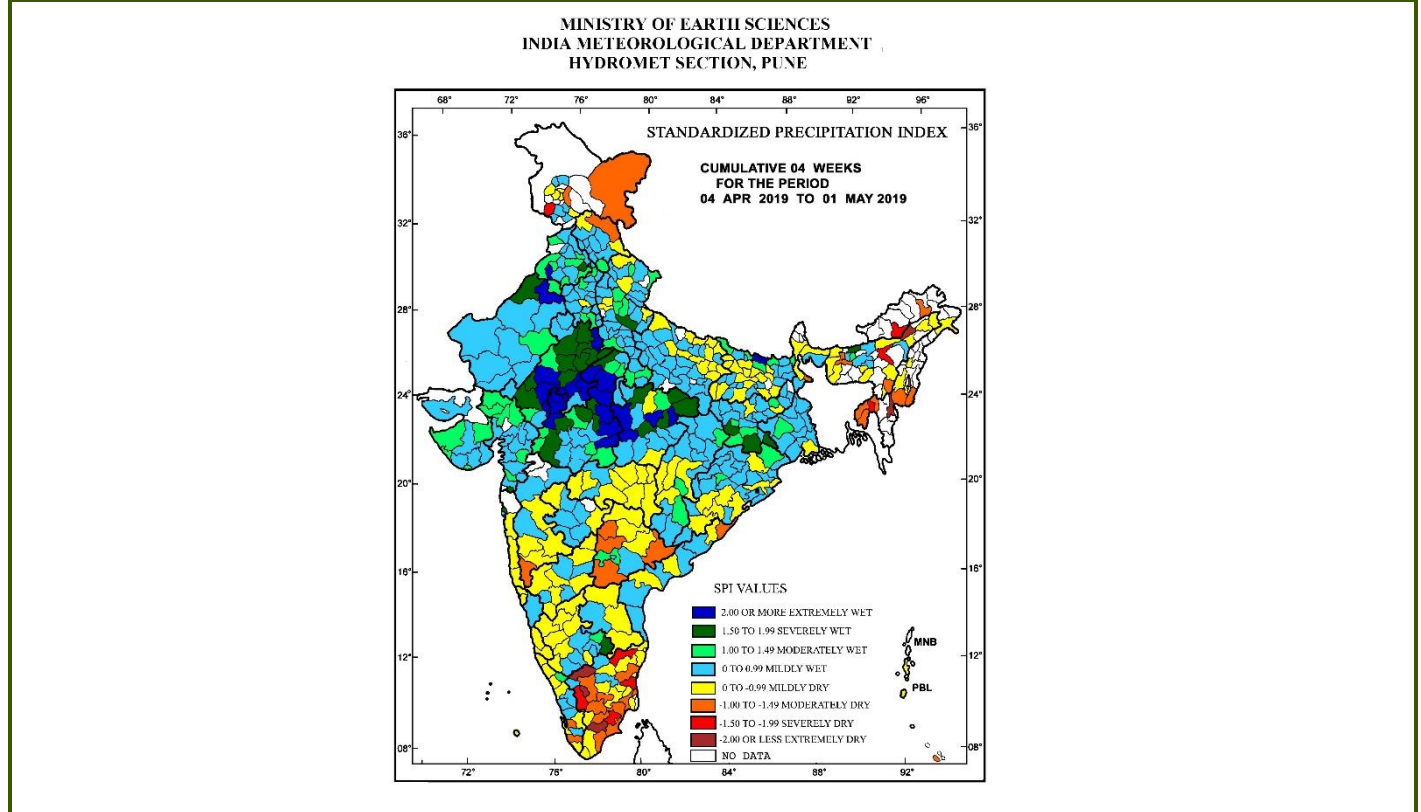


Mean Wind Speed (km/hr) for the week ending on 01.05.2019





Standardised Precipitation Index Cumulative 4 weeks for the period 4th April to 1st May 2019



- Extremely/severely wet conditions experienced in many districts of Rajasthan; few districts of Madhya Pradesh; Baksa district of Assam; Gumla, East Singhbhum, West Singhbhum, districts of Jharkhand; Madhubani district of Bihar; Badaun, district of Uttar Pradesh; Chandigarh district of Haryana; Ropar, Muktsar and Fatehgarh Sahib districts of Punjab; Kolar district of Karnataka.

- Extremely/Severely dry conditions experienced in Papumpara district of Arunachal Pradesh; Lakhimpur, Nagaon, districts of Assam; Dhalai district of Tripura; Rajouri district of Jammu & Kashmir; Coimbatore, Cuddalore, Sivaganga, Vellore, Virudhunagar, Tirupur, districts of TamilNadu & Puducherry; Chamarajanagar district of Karnataka.
- Moderately dry conditions experienced in few districts of Telangana; TamilNadu&Puducherry; East Siang district of Arunachal Pradesh; Cachar, Goalpara, Karimganj, Bongaigaon, districts of Assam; South Dinajpur district of West Bengal; Lahaul&Spiti district of Himachal Pradesh; Anantnag, Ladakh (Leh), districts of Jammu & Kashmir; Kolhapur district of Maharashtra; Srikakulam district of Andhra Pradesh; Kottayam and Kollam districts of Kerala.

Significant weather features (All india weather summary and forecast bulletin (03-05-2019 Mid-day))

The **Extremely Severe Cyclonic Storm 'FANI'** (pronounced as '**FONI**') over Northwest & Adjoining West central Bay of Bengal moved north - northeastwards with a speed of about 20 kmph in last 06 hours and lay centred at 0830 hrs IST of 3rd May, 2019 over Northwest Bay of Bengal, near Latitude 19.6°N and Longitude 85.7°E, about 25 Km south-southwest of Puri (Odisha), 90 km east-southeast of Gopalpur (Odisha), about 300 km east-northeast of Vishakhapatnam (Andhra Pradesh) and 330 km southwest of Digha (West Bengal). **Landfall Process of the system has started at 0800 hours IST and the system has crossed the coast close to Puri between 0800 to 1000 hours IST of today, the 3rd May 2019. The system is very likely to continue to move north-northeastwards and weaken gradually.**

3rd May: Gale wind speed reaching 170-180 kmph gusting to 200 kmph is very likely along & off Puri & Jagatsinghpur districts of Odisha. Gale wind speed reaching 150-160 kmph gusting 180 kmph very likely along & off remaining districts of coastal Odisha and north Andhra Pradesh. Squally wind speed reaching 40-50 kmph gusting 60 kmph is very likely along & off West Bengal coast during next 12 hours. It is very likely to become gale wind speed reaching 60-70 kmph gusting to 85 kmph from the afternoon. Sea conditions very likely to be phenomenal over northwest & adjoining west central Bay of Bengal, off north Andhra Pradesh and south Odisha coast during next 03 hours and it is very likely to become high to very high subsequently.

4th May: Gale wind, speed reaching 90-100 kmph gusting to 115 kmph very likely to prevail along & off West Bengal coast for about 12 hours and decrease thereafter. Sea conditions likely to be very rough to high over northwest Bay of Bengal, along & off Odisha and West Bengal coasts. Fishermen are advised not to venture into these areas.

Weather Forecast for next 5 days valid upto 0830 hours of 8th May 2019

Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table-1.

No significant change in maximum temperatures likely over most parts of the country during next 2-3 days.

5 Day Rainfall Forecast (Mid-day) 3rd May 2019

Met-Sub-Division	03-May Today	04May Sat	05May Sun	06May Mon	07May Tue
1. Andaman & Nicobar Islands	SCT	SCT	SCT	SCT	SCT
2. Arunachal Pradesh	WS	WS	WS	WS	FWS
3. Assam & Meghalaya	WS	WS	WS	WS	FWS
4. N. M. M. & T.	SCT	FWS	WS	WS	SCT
5. S.H. West Bengal & Sikkim	WS	WS	FWS	SCT	SCT
6. Gangetic West Bengal	WS	WS	ISOL	DRY	DRY
7. Odisha	WS	SCT	ISOL	DRY	DRY
8. Jharkhand	WS	SCT	ISOL	DRY	DRY
9. Bihar	SCT	SCT	ISOL	DRY	DRY
10. East Uttar Pradesh	FWS	ISOL	DRY	DRY	DRY
11. West Uttar Pradesh	SCT	ISOL	DRY	DRY	DRY
12. Uttarakhand	FWS	ISOL	DRY	DRY	DRY
13. Haryana, Chd & Delhi	ISOL	DRY	DRY	DRY	DRY
14. Punjab	ISOL	DRY	DRY	DRY	DRY
15. Himachal Pradesh	SCT	ISOL	DRY	DRY	DRY
16. Jammu & Kashmir	SCT	ISOL	ISOL	DRY	DRY
17. West Rajasthan	DRY	DRY	DRY	DRY	DRY
18. East Rajasthan	ISOL	DRY	DRY	DRY	DRY
19. West Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
20. East Madhya Pradesh	ISOL	DRY	DRY	DRY	DRY
21. Gujarat Region	DRY	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	DRY	DRY	DRY	DRY
23. Konkan & Goa	ISOL	ISOL	DRY	DRY	DRY
24. Madhya Maharashtra	DRY	DRY	DRY	DRY	DRY
25. Marathawada	DRY	DRY	DRY	DRY	DRY
26. Vidharbha	DRY	DRY	DRY	DRY	DRY
27. Chhattisgarh	ISOL	DRY	DRY	DRY	DRY
28. Coastal Andhra Pradesh	ISOL	DRY	DRY	DRY	ISOL
29. Telangana	DRY	DRY	DRY	DRY	DRY
30. Rayalaseema	DRY	DRY	DRY	DRY	DRY
31. Tamilnadu & Puducherry	DRY	DRY	ISOL	ISOL	ISOL
32. Coastal Karnataka	DRY	DRY	DRY	DRY	DRY
33. North Interior Karnataka	DRY	DRY	DRY	DRY	DRY
34. South Interior Karnataka	DRY	DRY	DRY	DRY	DRY
35. Kerala	ISOL	ISOL	ISOL	ISOL	ISOL
36. Lakshadweep	DRY	DRY	DRY	DRY	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

May (Day 1): ♦ Gale wind speed reaching 170-180 kmph gusting to 200 kmph is very likely along & off Puri & Jagatsinghpur districts of Odisha. Gale wind speed reaching 150-160 kmph gusting 180 kmph very likely along & off remaining districts of coastal Odisha and north Andhra Pradesh. Squally wind speed reaching 40-50 kmph gusting 60 kmph is very likely along & off West Bengal coast during next 12 hours. It is very likely to become gale wind speed reaching 60-70 kmph gusting to 85 kmph from the afternoon. Sea conditions very likely to be phenomenal over northwest & adjoining west central Bay of Bengal, off north Andhra Pradesh and south

Odisha coast during next 03 hours and it is very likely to become high to very high subsequently. Fishermen are advised not to venture into these areas.

◆ **Thunderstorm accompanied with squall (wind reaching 50-60 kmph)** very likely over East Uttar Pradesh. **Thunderstorm accompanied with squally** (wind reaching 40-50 kmph) very likely over Himachal Pradesh and Uttarakhand. **Thunderstorm & lightning accompanied with gusty wind (40-50 kmph)** at isolated places very likely over West Uttar Pradesh. **Thunderstorm & lightning accompanied with gusty wind (30-40 kmph)** at isolated places over Punjab, Haryana, Chandigarh & Delhi, East Madhya Pradesh, Chhattisgarh, Bihar and Sub-Himalayan West Bengal & Sikkim. **Duststorm/thunderstorm** accompanied with lightning & gusty wind (30-40 kmph) at isolated places very likely over East Rajasthan.

◆ **Heavy to very heavy rain at a few places with extremely heavy falls** at isolated places very likely over coastal Odisha & adjoining districts of Interior Odisha, coastal & adjoining districts of West Bengal; **heavy to very heavy rain** at isolated places very likely over North coastal Andhra Pradesh, Assam & Meghalaya; **heavy rainfall** at isolated places very likely over Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim.

◆ **Heat Wave Conditions** in isolated pockets very likely over Vidarbha, Coastal Andhra Pradesh, Rayalaseema and Tamilnadu.

04 May (Day 2): ◆ **Gale wind**, speed reaching 90-100 kmph gusting to 115 kmph very likely to prevail along & off West Bengal coast. for about 12 hours and decrease thereafter. Sea conditions likely to be very rough to high over northwest Bay of Bengal, along & off Odisha and West Bengal coasts. Fishermen are advised not to venture into these areas.

◆ Strong surface winds (speed reaching 30-40 kmph) likely to prevail over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

◆ **Heavy to very heavy rainfall and extremely heavy fall at isolated places** very likely over Assam & Meghalaya; **heavy to very heavy rain** very likely at isolated places over Odisha, Gangetic West Bengal and Arunachal Pradesh and **heavy rainfall** at isolated places very likely over Sub-Himalayan West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura.

◆ **Heat Wave Conditions** in isolated pockets very likely over Vidarbha, Coastal Andhra Pradesh, Rayalaseema and Tamilnadu.

05 May (Day 3): ◆ Strong surface winds speed reaching 30-40 kmph likely to prevail over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

◆ **Thunderstorm & lightning accompanied with gusty wind (30-40 kmph)** at isolated places over Tamilnadu & Puducherry.

◆ **Heavy to very heavy rain** very likely at isolated places over Assam & Meghalaya and Arunachal Pradesh.

◆ **Heat Wave Conditions** very likely in some parts over Vidarbha and at isolated pockets over Madhya Pradesh.

06 May (Day 4): ◆ **Heat Wave Conditions** very likely in some parts over Vidarbha and at isolated pockets over Madhya Pradesh.

07 May (Day 5): ◆ **Thunderstorm & lightning accompanied with gusty wind (30-40 kmph)** at isolated places over Tamilnadu & Puducherry.

◆ **Heat Wave Conditions** in some parts likely over Vidarbha and in isolated pockets over Madhya Pradesh.

Weather Outlook for subsequent 2 days from 8th May to 10th May 2019

◆ Isolated to scattered rainfall likely over Kerala, Tamilnadu, Coastal & South Interior Karnataka and scattered to fairly widespread over Northeast India.

◆ Dry weather likely over the rest of the country.

Salient Advisories

- **Thunderstorm accompanied with squall (wind reaching 50-60 kmph)** very likely over East Uttar Pradesh, **thunderstorm accompanied with squally** (wind reaching 40-50 kmph) very likely over Himachal Pradesh and Uttarakhand, **thunderstorm & lightning accompanied with gusty wind (40-50 kmph)** at isolated places very

likely over West Uttar Pradesh, **thunderstorm & lightning accompanied** with **gusty wind (30-40 kmph)** at isolated places very likely over Punjab, Haryana, Chandigarh & Delhi, **Duststorm/thunderstorm** accompanied with lightning & gusty wind (30-40 kmph) at isolated places very likely over East Rajasthan on 3rd May, thunderstorm & lightning accompanied with gusty wind (**wind speed reaching 30-40 kmph**) at isolated places very likely over Bihar and Sub-Himalayan West Bengal & Sikkim on 3rd May, over Tamil Nadu & Puducherry on 5th and 7th May, provide mechanical support to young fruit plants and vegetables. Undertake propping in sugarcane Uttar Pradesh, Punjab, Haryana, Odisha and Tamil Nadu. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm period.

- As rain/thundershowers likely at **most places** over Odisha, Bihar and Jharkhand on 3rd, over Gangetic West Bengal on 3rd & 4th and over Sub-Himalayan West Bengal & Sikkim from 3rd to 5th May along with **Heavy to very heavy rain at a few places with extremely heavy falls** at isolated places very likely over coastal Odisha & adjoining districts of Interior Odisha, coastal & adjoining districts of West Bengal on 3rd; **heavy rainfall** at isolated places very likely over Sub-Himalayan West Bengal & Sikkim on 3rd & 4th May, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields. Keep harvested produce at safer places.
- **Heat Wave Conditions** very likely in some parts over Vidarbha during the period, at isolated pocket over Coastal Andhra Pradesh, Rayalaseema and Tamil Nadu on 3rd & 4th, over Madhya Pradesh from 5th to 7th May, apply light and frequent irrigation to the standing crops to cope up with the excessive evaporative demand. Do soil mulching or mulching with straw/polythene to conserve soil moisture.
- Strong surface winds (speed reaching 30-40 kmph) likely to prevail over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 4th & 5th May, provide mechanical support to young fruit plants, banana and staking in vegetables to prevent the crops from lodging due to strong winds.
- As rain/thundershowers likely over most/many places over **Arunachal Pradesh and Assam & Meghalaya** during the period, over Nagaland, Manipur, Mizoram & Tripura from 4th to 7th May, along with **heavy to very heavy rainfall** at isolated places likely over Assam & Meghalaya on 3rd & 5th, **heavy to very heavy rainfall and extremely heavy fall at isolated places** very likely over Assam & Meghalaya on 4th; **heavy to very heavy rain** very likely at isolated places over Arunachal Pradesh on 4th & 5th and **heavy rainfall** at isolated places very likely over Nagaland, Manipur, Mizoram & Tripura on 4th May, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields. Keep harvested produce at safer places.
- As **heavy to very heavy rainfall** at isolated places very likely over north Coastal Andhra Pradesh on 3rd May, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- In **Odisha**, in the wake of the cyclonic storm, drain out excess water from the standing crop fields. Straighten the lodged banana, papaya plants and sugarcane crop. Drain out excess water from vegetable and ginger fields. Basal/collar rot/Stem rot may appear in vegetable crops after heavy rainfall due to cyclonic weather. Drain out excess water and go for preventive spray Metalaxyl + Mancozeb @2g/litre of water or Copper Oxchloride @2.5g/litre of water.

- In **Vidarbha**, as heat wave condition likely at some parts during the period, grazing /feeding of cattle/goats may be done during morning/ evening hours. Keep animals under shade/shed during noon hours and provide plenty of water mixed with minerals for drinking. Also Provide curtains and proper ventilation in poultry house.

Detailed Agromet Advisories

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

Realised Rainfall: Rainfall occurred in Alappuzha, Kannur, Ernakulam, Idukki, Kottayam, Pathanamthitta, Thiruvananthapuram, Wayanad districts of Kerala, Dakshina Kannada of Coastal Karnataka, Koppal district of North Interior Karnataka, Bangalore Urban, Chikaballapur, Davangere, Kodagu, Mandya, Mysuru, Tumakuru districts of South Interior Karnataka during the week. Mainly dry weather prevailed over the rest of the region.

Advisories:

- Heat Wave Conditions very likely at isolated pockets over Coastal Andhra Pradesh, Rayalaseema and Tamil Nadu on 3rd & 4th May, apply light and frequent irrigation to the standing crops to cope up with the excessive evaporative demand. Do soil mulching or mulching with straw/polythene to conserve soil moisture.

Kerala:

- In Problem Area Zone, undertake planting of coconut seedlings during May with the help of pre-monsoon rains is ideal. Propping can be followed for banana to reduce the damage due to high wind speed.
- In High Altitude Zone, leaf rust disease may become severe on coffee due to increase in relative humidity, apply fertilizers @ 85 kg urea, 150 kg rock phosphate and 66 kg potash per hectare.
- In Central Zone, attack of white fly in coconut palm had increased due to increased atmospheric temperature, spray the mixture of 2% neem oil emulsion with 20 g of biocontrol agent (Lecanicillium) on lower sides of leaves.

➤ **Andhra Pradesh:**

- As heavy to very heavy rainfall at isolated places very likely over north Coastal Andhra Pradesh on 3rd May, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- In North Coastal Andhra Pradesh, drain out excess water if any and apply urea @ 50 kg urea/ac in sugarcane after the current spells of heavy rain.
- In Scarce Rainfall Zone of Andhra Pradesh, undertake harvesting of Paddy. To control fruit drop in mango spray hexaconazole @ 1-2 ml. mixed with Planofix @ 1 ml. in 4.5 L of water
- In Rayalaseema, the present weather conditions are favourable for leaf folder and stem borer attack in paddy. To control spray Chloripyriphos @ 2.5 ml. or Cartaphydrochloride @ 2 g or Rhynoxipyr @ 0.3 ml./lt. of water.

Telangana:

- In southern Telangana, the prevailing weather conditions are congenial for incidence of sucking pests in vegetables. To control, spray Fipronil @ 2ml or Thiomethoxim @ 0.3g per litre of water.
- In Northern Telangana, continue harvesting of rice when at least 80% of the grains are matured and Sesame when 75% capsules turn yellow in a spike.

Tamil Nadu:

- Thunderstorm & lightning accompanied with gusty wind (**wind speed reaching 30-40 kmph**) at isolated places very likely over Tamil Nadu & Puducherry on 5th and 7th May, 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. Keep harvested produce at safer places.
- In High Rainfall Zone, this is the best time for preparation of land for Turmeric crop planting. Hence prepare the land by utilizing expected rain fall.
- In Western Zone, rainfall along with high wind speed may cause lodging. Hence, propping may be given to banana of more than 5 months old against lodging. Also, this is the best time for preparation of land for Turmeric planting.
- In North Western Zone, apply urea @ 43.4 kg / acre and potash @ 83.5 kg / acre as soil application by using the realised rainfall to improve the yield of tapioca under rain fed condition.
- In High Altitude Hilly Zone, to prevent collar rot disease in beans, soil drenching with copper oxy chloride 1 g/lit of water may be followed.

Karnataka

- In North Interior Karnataka, undertake harvesting of summer groundnut, rice crops and mango fruits. Apply irrigation in tomato, brinjal and chili once in 15 days in black soil and once in 8-10 days in red soils. During water stress, spray the sugarcane crop with 2.5 % of Urea or Muriate of Potash at an interval of 15-20 days.
- In South Interior Karnataka, keep inputs ready for pre-monsoon sowing; cowpea, sesame, black gram and green gram crops are recommended for the sowing during May month; use varieties ragi (Indof-9, GPU-48), cowpea (TVX-994, KBS-1), black gram (Karagav-3, T-9, Rashmi (LBG-625) for sowing during May month.

- In Coastal Karnataka, continue deep ploughing in rice field. Apply irrigation in areca nut, coconut and black pepper gardens either in furrow or drip irrigation.
- In South Interior Karnataka, give stem injection with Chloropyriphos or Dimethoate @5 ml or spray Chloropyriphos @2.5 ml per litre of water against Pseudo stem weevil in banana.
- In North Interior Karnataka, use mixture of Methyl Euginol @1 ml or Malathion @1 ml or Dichlorovas @1 ml dissolved in one litre of water as bait for fruit fly management in Mango orchards.

Animal Husbandry

- In Tamilnadu, due to the prevailing hot weather condition, there is chance for HaemorrhagicSeptecemia disease in cow. The symptoms are fever, severe diarrhoea and dysentery, respiration becomes rapid and shortly before death the mucous membranes appear cyanotic. The nasal discharge may be blood stained or purulent. To control vaccinate the animals once in a year.
- In Karnataka, leave the animals in ponds during afternoon hours or sprinkle the cold water 2-3 times a day on the body of the animal to overcome the heat. Vaccinate the animals (cow, buffalo and bullock) against foot and mouth disease (FMD vaccination), BC vaccination against Black Quarter and also vaccinate cow, buffalo and bullock against HaemorrhagicSeptcaemia. Vaccinate (ET vaccine) sheep and goats against Enterotoximia.

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

Realised Rainfall:Rainfall occurred in all districts of Arunachal Pradesh except in Anjaw, East Kameng, Upper Siang and Upper Subansari districts; except Ribhoi and West Khasi Hills of Meghalaya, except Darrang, Goalpara, KarbiAnglong, Lakhimpur, Moraigaon and Nagaon districts of Assam. Significant rainfall occurred in Tamanglong district of Manipur and Mokokchang district of Nagaland. Mainly dry weather prevailed in Mizoram.

Advisories:

- Strong surface winds (speed reaching 30-40 kmph) likely to prevail over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 4th& 5th May, provide mechanical support to young fruit plants, banana and staking in vegetables to prevent the crops from lodging due to strong winds.
- As rain/thundershowers likely over most/many places over Arunachal Pradesh and Assam & Meghalaya during the period, over Nagaland, Manipur, Mizoram & Tripura from 4th to 7th May, along with **heavy to very heavy rainfall** at isolated places likely over Assam & Meghalaya on 3rd& 5th, **Heavy to very heavy rainfall and extremely heavy fall at isolated places** very likely over Assam & Meghalaya on 4th; **heavy to very heavy rain** very likely at isolated places over Arunachal Pradesh on 4th& 5th and **heavy rainfall** at isolated places very likely over Nagaland, Manipur, Mizoram & Tripura on 4thMay, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields. Keep harvested produce at safer places.

Arunachal Pradesh:

- Continue sowing of Jhum rice, planting of ginger, turmeric, sugarcane and banana after current spellsof heavy rain. Adopt sowing of leguminous crops like cowpea, French bean, soybean etc at 2-3 rows across the slope of Jhum field at desirable intervals or ratios with rice to prevent soil erosion and conserve moisture and fertility.

Assam & Meghalaya

- In Lower Bramhaputra Valley of Assam, continue planting of ginger, papaya and sowing of maize and cow pea after current spellsof heavy rain. Continue transplanting of ahu rice. Due to favorable weather, there is chance of attack of Gundhi bug in Boro rice at milk stage. To control the pest, apply 5% Malathion dust @ 2-3 kg per bigha of land to control the pest after current spells of rain.
- In North Bank Plain Zone of Assam, continue transplanting of Ahu rice. Continue sowing of maize, planting of sugarcane and ginger/turmeric after current spellsof heavy rain.
- In Upper Bramhaputra Valley and Barak Valley Zone of Assam, continue transplanting of Ahu rice in the main field. Prevailing temperature and relative humidity, incidence of blight may be observed in the green gram and black gram crops at vegetative stage. To control this disease apply Carbendazim 0.05% @ 300-500 g in 600-700 litre of water after current spells of rain and repeat at an interval of 12-15 days.
- In Central Bramhaputra Valley of Assam, continue sowing of maize, summer pulses and summer vegetables after current spellsof heavy rain. In Hill Zone of Assam, continue transplanting of early ahu rice and nursery raising of transplanted normal ahu rice. Continue land preparation and sowing of summer green gram and black gram and planting of ginger after current spellsof heavy rain.
- In Meghalaya, after current spellsof heavy rain, farmers are advised to make raised bed of size 1m width, 15cm height for planting of ginger/ turmeric and drainage channels for draining excess rain water. Continue sowing of maize at high and mid altitude region after current spellsof heavy rain. Continue transplanting of tomato, chilli, brinjal and capsicum, land preparation for new plantation of pineapple after current spells of heavy rain by ploughing or digging followed by leveling.

Manipur, Mizoram, Tripura and Nagaland:

- In Nagaland, continue sowing of green gram, nursery preparation for chilli, sowing of Jhum rice in Longleng districts and sowing of maize after current spell of heavy rain. Install yellow sticky trap for monitoring white flies and hopper in the fields of okra crop. Undertake preparation of pits of size 3ft*3ft*3ft (1m*1m*1m) for planting of fruit trees. Pits may be filled with well dried FYM/organic manure, neem powder and lime for further planting
- In Manipur, maintain 5-7 cm water level in the field of pre-kharif rice. Continue nursery raising for sowing of kharif rice and land preparation for sowing of kharif maize, soybean/ groundnut after current spell of heavy rain. Use Methyl Eugenol as trap @ 4-10 traps/ sangam against red pumpkin beetle attack in cucurbit crops.
- In Mizoram, continue sowing of Jhum rice, green gram, black gram, cucurbitaceous crops, maize, cowpea and okra after current spell of heavy rain.
- In Tripura, continue land preparation for sowing of Jhum rice. Maintain 5cm standing water in the field of Boro rice. Weather is conducive for Fruit & Shoot Borer infestation in summer brinjal and tomato. To manage the attack, apply Cypermethrin @ 1.5ml or Flubendamid 0.5 ml per litre of water after current spells of rain.

Animal Husbandry:

- In Meghalaya, provide coccidiostatic like Amprolium @ 25-65 mg/kg feed once a day as a preventive measure against coccidiosis disease in poultry.
- In Upper Brahmaputra Valley of Assam, present weather condition is congenial for the attack of Foot and Mouth Disease in livestock. As prophylactic measure, the mouth and leg parts of healthy animals should be washed periodically with baking soda and should be timely vaccinated. Infected cows and buffaloes should be isolated and kept separately..Local veterinarian should be consulted as early as possible for proper diagnosis and immediate treatment.

Fishery:

- In Barak Valley Zone, there is chance of bacterial disease in the fishes. To control the diseases apply lime @ 6 kg per bigha of pond.
- In Tripura, to avoid bacterial disease liming should be done @10kg/kani. During this time farmers either dig new pond or maintain his new pond by re digging. After digging before rain apply FYM 2400 kg and Lime 80 kg per kani may be applied.

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

Realised Rainfall: Rainfall occurred in all districts of Andaman & Nicobar Islands; in Araria and Kishanganj districts of Bihar; in Gajapati district of Odisha and in Cooch Behar, Darjeeling, East Sikkim, Jalpaigudi, South Sikkim and West Sikkim districts of Sub-Himalayan West Bengal and Sikkim. Weather remained mainly dry over rest of the region.

Advisories:

- **Gale wind** speed reaching 170-180 kmph gusting to 200 kmph is very likely along & off Puri & Jagatsinghpur districts of Odisha. Gale wind speed reaching 150-160 kmph gusting 180 kmph very likely along & off remaining districts of coastal Odisha. Squally wind speed reaching 40-50 kmph gusting 60 kmph is very likely along & off West Bengal coast during next 12 hours. It is very likely to become gale wind speed reaching 60-70 kmph gusting to 85 kmph from the afternoon. Sea conditions very likely to be phenomenal over northwest & adjoining west central Bay of Bengal, off north Andhra Pradesh and south Odisha coast during next 03 hours and it is very likely to become high to very high subsequently on 3rd May, **Gale wind**, speed reaching 90-100 kmph gusting to 115 kmph very likely to prevail along & off West Bengal coast for about 12 hours and decrease thereafter. Sea conditions likely to be very rough to high over northwest Bay of Bengal , along & off Odisha and West Bengal coasts on 4th May. Fishermen are advised not to venture into these areas.
- As thunderstorm & lightning accompanied with gusty winds (wind speed reaching 30-40 kmph) at isolated places very likely over Bihar and Sub-Himalayan West Bengal & Sikkim on 3rd May , 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 in Odisha.
- As rain/thundershowers likely at most places over Odisha, Bihar and Jharkhand on 3rd , over Gangetic West Bengal on 3rd & 4th and over Sub-Himalayan West Bengal & Sikkim from 3rd to 5th May along with **heavy to very heavy rain at a few places with extremely heavy falls** at isolated places very likely over coastal Odisha & adjoining districts of Interior Odisha , coastal & adjoining districts of West Bengal on 3rd ; **heavy rainfall** at isolated places very likely over Sub-Himalayan West Bengal & Sikkim on 3rd & 4th May, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields. Keep harvested produce at safer places.

Odisha:

- In the wake of the Cyclonic storm, drain out excess water from the standing crop fields. Straighten the lodged banana, papaya plants and sugarcane crop. Drain out excess water from vegetable and ginger fields.
- Basal/collar rot/Stem rot will appear in vegetable crops after heavy rainfall due to cyclonic weather. Drain out excess water and go for preventive spray Metalaxyl + Mancozeb @2g/litre of water or Copper Oxychloride @2.5g/litre of water.

Bihar:

- Carry out intercultural operation in summer vegetables such as lady's finger, pumpkin, cucumber, sponge gourd and bottle gourd after the current spells of rain .
- Monitor bhindi crop for leaf hoppers. If it crosses ETL, spray Imidacloprid @ 0.5 ml per litre of water on clear days. Monitor green gram and black gram crops against sucking insect pests such as aphid, green hopper, white fly and thrips. If infestation is above ETL, spray Dimethoate 30EC @ 1.0 liter/hectare.

Jharkhand:

- Maintain proper water level in summer paddy fields. Reduce the interval between two irrigations to summer maize crop at tasselling stage. Continue sowing of improved varieties of summer cowpea, ginger, turmeric and elephant foot yam. Irrigate mango orchard at 15 days interval. Make pits for planting new orchards of mango, Guava and litchi.
- To control fruit & shoot borer in okra (bhindi), spray neem extract insecticide @ 1.5 to 2 ml / litre of water. To control Gundhi bug in summer paddy, spray Quinalphos 1.5% dust @ 10 kg/acre.

West Bengal:

- In Sub-Himalayan West Bengal, complete the pit preparation for planting of new orchards of Mandarin orange. Provide mulching to large cardamom plants. Avoid irrigation to okra crop as rainfall is expected. Carry out thinning of jute crop after current spells of rain. Continue transplanting of ginger and turmeric to main field. To control Yellow Vein Mosaic in Bhendi, Spray Imidachlorprid @ 0.2ml/liter of water at morning time. To control sucking pest in green gram, spray Acephate 25% + Fenvelerate 3% @ 1.5g/litre of water at evening hour.
- In Gangetic West Bengal, keep the harvested paddy at safer places. Harvest mature groundnut, sesamum, okra and brinjal crops after current spells of rain. For fungal attack in okra and brinjal crops due to heavy rainfall, spray Di-Ethane M-45@2.5g/liter of water.

Andaman & Nicobar Islands:

- Harvest the matured vegetables and take it to the nearby market as moderate rainfall is expected after two days.

Animal Husbandry:

- In Bihar, provide clean water to the milch animals and keep them in shaded places during the day time.
- In Jharkhand, provide plenty of fresh water to the cattle for drinking and bathing. Vaccinate cattle against FMD and HS. Considering the hot weather, give a mixture of vitamin C and anti-stress solution of cool water to poultry birds and spray cool water during noon time.
- In Odisha, do not keep cattle under or near big trees. Keep animals indoors during the cyclone period.
- In West Bengal, care for day old chicks with proper brooding, ventilation and management may reduce morbidity and mortality rate.
- In Andaman & Nicobar Islands, keep the grazing animals in shed with drinking water to avoid heat stress.

Fisheries:

- In West Bengal, for control of Ulcer disease in fish, apply 13 kg Lime per bigha fish pond. After 7 days, apply 1.3 kg bleaching powder per bigha fish pond. In order to avoid bird menace, give net covering over the fish pond.
- In Andaman & Nicobar Islands, close the bunds in fish pond and BBF to harvest rain water as good amount of rainfall is expected. Fishermen are advised not to venture into the sea for fishing.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Realised Rainfall: Weather remained dry over the region.

Advisories:

- Heat Wave Conditions very likely in some parts over Vidarbha during the period, apply light and frequent irrigation to the standing crops to cope up with the excessive evaporative demand. Do soil mulching or mulching with straw/polythene to conserve soil moisture.

Maharashtra:

- In South Konkan, provide shade for protection of newly planted saplings like mango grafts/ cashew from scorching sun, complete harvesting of rice and thresh it immediately and also continue harvesting of groundnut. Apply irrigation to newly planted orchards.
- In Madhya Maharashtra, provide shade for protection of young fruit plants from scorching sun, apply irrigation to orchards and vegetables, undertake deep ploughing in harvested fields of cotton and harvesting of groundnut. To control sap sucking pest and fruit borer in okra, spray Deltamethrin 2.8% EC @ 8 ml or Quinalphos 25 % EC @ 20 ml per 10 litres of water.
- In Marathwada, apply irrigation to sugarcane, orchards and vegetables.
- In Vidarbha, apply light and frequent irrigation to standing crops like green gram, sesame, groundnut, orchards and vegetables. Provide shade for protection of young fruit and vegetable plants from scorching sun.

Gujarat:

- In South Gujarat, due to increase in temperature, protect banana bunches with perforated plastic sheets. Spray 2 % Urea solution in guava tree for getting early production and reduce the harvest time up to 2 to 4 weeks. Undertake sowing of leafy (Fenugreek, Coriander, Green Garlic) vegetable crops. As there is increase in temperature, apply irrigation in vegetable and fruit crops.

- In North Gujarat, under higher temperature and moderately dry condition apply irrigation at 5 to 7 days interval. Apply light irrigation in groundnut (pegging), pearl millet (ear head emergence), cluster bean, green gram pea (flower initiation), cow pea (flower initiation) crops and pomegranate, sapota, lemon and papaya orchards. Continue plucking of matured vegetables/fruits (bhindi, tomato, cucumbers, water melon and muskmelon).
- In Saurashtra & Kutch, apply light irrigation in groundnut (pod formation), pearl millet (grain filling), sesame, black gram, green gram, tomato, bhindi and fruit crops in the morning or in the evening hours. Spray 20 PPM NAA and 2 % urea solution for the control of fruit break and increase the fruit size.
- In Middle Gujarat, under high temperature condition, cover papaya fruits using gunny bags and provide support to heavy fruiting plants. Apply irrigation as per requirement to fruit crops. Due to high temperature conditions, reduce interval between two irrigations. In present dry weather condition, spread plastic or fodder as mulch in vegetable crops for conserving soil moisture.
- In Saurashtra & Kutch, under present weather condition infestation of heliothis and whiteflies was observed in summer sown green gram and black gram; to control heliothis, spray Spinosad 3ml/10 liters of water and to control of whiteflies, spray Acetamiprid 20 % SP @ 5 gm and 500 ml of 5 % neem seed extract or neem seed oil 50 ml with Profenofos @20 ml or Lemdacyhelothrin @ 10 ml/10 litres of water.
- In South Gujarat, to manage infestation of white fly in chilli and brinjal crops, apply Triazophos 40 EC @ 20/10 litres of water.

Animal Husbandry

- In Gujarat, keep animals under shade/shed during noon hours. Put curtains on south-west side of poultry house and sprinkle water on curtains during noon time. Provide plenty of cold water mixed with minerals for drinking and shower the animals with cold water two to three times in a day.

CENTRAL INDIA [M.P., CHHATTISGARH]

Realised Rainfall: Weather remained dry over the region during the week.

Advisories:

- As thunderstorm & lightning accompanied with gusty winds (wind speed reaching 30-40 kmph) at isolated places very likely over East Madhya Pradesh, Chhattisgarh on 3rd May, provide mechanical support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Undertake propping in sugarcane.
- Heat Wave Conditions very likely at isolated pockets over Madhya Pradesh from 5th to 7th, apply light and frequent irrigation to the standing crops to cope up with the excessive evaporative demand. Do soil mulching or mulching with straw/polythene to conserve soil moisture.

Madhya Pradesh

- In East Madhya Pradesh, complete harvesting of wheat. In Kymore Plateau and Satpura Hill Zone, continue sowing of moong and summer vegetables and sowing of watermelon, melon, cucumber etc.
- In Vidhyan Plateau Zone, apply irrigation through thala method or drip method of irrigation to standing fruit crops of Papaya and Banana.
- In West Madhya Pradesh, in summer groundnut and maize crop, farmers are advised to spread mulch or paddy straw in between the rows so that evapo-transpiration rate can be reduced. Farmers' having irrigation facility is advised to start sowing of summer moong in fallow fields and choose the improved varieties and treat the seed with Rhizobium culture before sowing. Apply irrigation in the vegetable and orchard crops at evening time and regular monitoring the crops against insect-pest disease infestation.
- In present weather, in mango orchards, wrapping of plastic sheets around mango tree trunk should be done for preventing climbing of young (nymphs) mealy bugs. Apply grease to seal any cracks in the polythene sheets. Apply irrigation in fruit orchards at regular intervals to keep optimum moisture in the basin.

Chhattisgarh:

- In Chhattisgarh Plain Zone, apply irrigation in summer vegetables, summer maize, groundnut and sunflower as per the requirement. Farmers having drip irrigation system for vegetables and plantation crops should regulate the water discharge rate accordingly to maintain proper soil moisture around root zone. Maintain optimum water level in summer rice.
- In Bastar Plateau Zone, complete harvesting of wheat. After the harvest of wheat crop, deep ploughing should be done for sowing of green manure crops in the month of May.
- Continue sowing of sponge gourd, cucumber, ridge gourd watermelon, muskmelon and bitter gourd. In mango orchards, for control of infestation of mango hopper/sucking pests, fumigation of 10 part disel+ 1 part Imidacloprid should be carried out around the tree.

Animal Husbandry

- In Madhya Pradesh, farmers are advised to keep their animal in shade and give regularly water to them Farmer are advised to cover Animal and poultry sheds with gunny bag so that inner temperature may maintain normal. To prevent Ranikhet disease vaccinate the poultry. Provide windows for fresh air in poultry shed and animal shed. During summer, @50-60 grams salt per animal per day must be fed.
- In Chhattisgarh, special attention should be given to milch animals with regard to feed and water in view of the prevailing high temperature. Give lot of clean water to the animals and keep them in the shaded place. If possible

arrange the fogger in animal shed and sprinkling of water should be done at an interval of every four to five hours. There is a chance of attack of Heat stroke in cattle at present weather condition. Hence, farmers are requested to avail plenty of drinking water for them and do not allow them to remain in sunlight during noon hours. To keep their room cool, Jute bag may be hanged as curtain in the windows and it should be wetted time to time.

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

Realised Rainfall: Rain occurred in Kinnaur, Kullu and Lahaul and Spiti districts of Himachal Pradesh; Anantnag, Badgam, Bandipore, Baramula, Doda, Ganderbal, Kulgam, Kupwara and Srinagar districts of Jammu & Kashmir and Rudraprayag district of Uttarakhand during the week. Weather remained mainly dry/dry over rest of the region.

Advisories:

- **Thunderstorm accompanied with squall (wind reaching 50-60 kmph)** very likely over East Uttar Pradesh. **Thunderstorm accompanied with squally (wind reaching 40-50 kmph)** very likely over Himachal Pradesh and Uttarakhand. **Thunderstorm & lightning accompanied with gusty wind (40-50 kmph)** at isolated places very likely over West Uttar Pradesh. **Thunderstorm & lightning accompanied with gusty wind (30-40 kmph)** at isolated places over Punjab, Haryana, Chandigarh & Delhi, **Duststorm/thunderstorm** accompanied with lightning & gusty wind (30-40 kmph) at isolated places very likely over East Rajasthan on 3rd May, provide mechanical support to young fruit plants and vegetables. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm period.

Jammu & Kashmir:

- In Sub Tropical Zone, complete harvesting of early sown wheat and late sown pea. Carry out hoeing and weeding operations in summer pulses. As thunderstorm accompanied with squally scattered rainfall is expected during next 2 days, keep threshed pea/gram/lentil crop to safer places immediately and postpone harvesting and threshing of harvested crop till weather gets clear.
- In Intermediate Zone, continue sowing of okra and French bean. In temperate areas/higher reaches of the district, undertake sowing of maize crop after rains to utilize adequate soil moisture conditions for better germination of maize crop
- In Valley Temperate Zone, in apple, ensure orchard sanitation through destruction of pruned or diseased/infected twigs by burning. Adopt proper central drainage system. Maintain a gap of 3-4 days between insecticide and fungicide spray. Avoid mixing of fungicides, insecticide and spray suspensions. Adjuvants/Stickers may be added for better efficacy of fungicides especially during rainy days. Stickers should not be used with Dodine. Do not spray pesticides during bloom. Same systemic fungicides should not be repeated continuously in two sprays. Undertake preparation of nursery beds of rice and during night hours cover the seed beds with polyethylene sheets so as to maintain temperatures. Complete the sowing of maize and undertake harvesting of oats for green fodder purpose

Apiculture:

- In Intermediate Zone of Jammu & Kashmir, keeping in view the present weather conditions, shift the honey bee colonies towards shady conditions or place them under open straw huts. - Bees need water to dilute honey and to cool the hives during hot weather conditions and keep water trough filled with coarse gravel near the hive. Provide proper ventilation by slightly raising the brood chamber.

Himachal Pradesh:

- In High Hill Temperate Zone, carry out pruning of unwanted branches in apple trees. Undertake grafting work in apple nursery. To avoid mortality of seedlings in polyhouse due to damping off, carry out drenching of the beds with Bavistin (15-20g/10 litres of water) three weeks before sowing. Undertake sowing of peas.
- In Mid-Hills Sub-Humid Zone, apply light irrigation to vegetables, nurseries and fruit crops. Undertake grass mulching of 6 inches thickness in the basins of temperate fruit trees.

Punjab, Haryana and New Delhi

- In Punjab, undertake harvesting of wheat, pulses and oilseed as per weather and store harvested grain in safe and dry place. Continue sowing of summer moong, summer mash, bhindi, cowpea and cucurbits. Undertake transplanting of vegetables (tomato, chilli, brinjal). Continue sowing of cotton including Bt cotton or desi Cotton and planting of turmeric.
- In Western Plain Zone of Punjab, to control cabbage semi-looper, tobacco caterpillar and Bihar hairy caterpillars in sunflower, spray 200 ml of Nuvan 85 SL in 100 litres of water per acre and irrigate the crop at 8-10 days of interval.
- In Haryana, prepare the field and withhold sowing of cotton, continue transplanting of matured seedlings of tomato, cauliflower, cabbage in prepared field and undertake sowing of ladyfinger, bottle gourd, cucumber, ridge gourd and summer radish. Complete the sowing operation of green gram and black gram.

- In Delhi, continue sowing of spinach, coriander, fenugreek. Continue sowing of lady finger, green gram. Undertake field preparation for sowing of pigeonpea and cotton. Apply light irrigation to the matured onion and garlic crops one week before digging. Harvest the matured vegetables at morning and evening hours. Maintain optimum moisture level in cucurbitaceous crops by light and frequent irrigation as dry conditions may lead to poor fruiting and thus drop in yield of the crop.

Uttar Pradesh:

- In East Uttar Pradesh, complete harvesting and threshing of wheat and barley. To control grass hopper and hairy-tobacco caterpillar in sunflower, spray Phosimidan @ 250 ml in 600 litres of water. To control yellow mosaic in mung, lobia and urd, spray Metasytox or Rogor /ha @ 1 litre in 1000 litres of water. Apply 40 kg nitrogen after 30 days of sowing in maize and 30 kg Nitrogen in multi harvesting fodder crop like oat at top dressing in fodder crops. Continue harvesting and threshing of gram, wheat and barley
- In West Uttar Pradesh, continue harvesting and threshing of wheat. Prepare storage for wheat. Undertake irrigation in Maize, urad, moong, jowar and bajra. Irrigate Mango, Guava, Citrus, Ber & Papaya crops as per requirement.

Uttarakhand

- In Bhabar and Tarai Zone, continue harvesting of wheat and pulses. Undertake transplanting of brinjal, tomato and capsicum in high hills. Apply life saving irrigation to plants and make necessary arrangement for moisture conservation. Continue sowing of French beans.
- In Hill Zone, avoid water logging and spraying of chemicals in onion and garlic. Carry out mulching operation to suppress the weeds and preserve moisture. Hail net should be used to protect from hailstorm. Protect tomatoes, chilli, capsicum, brinjal, and cucurbitaceous crops from hails. Undertake staking of newly transplanted seedlings. Mulching may be done with crop residues; this will suppress the weed growth besides conserving moisture. Harvest the matured crops of wheat, barley, mustard and kept in safe place.
- In Sub-Humid Sub-Tropic Zone, harvest the mature crop of sugarcane. Avoid spray of insecticide/pesticide in vegetable crops. Pick matured vegetables timely. Transplant the nursery of chilly and avoid sowing of cucumber, lady's finger, etc.

Rajasthan:

- In Irrigated North Western Plain Zone, this is the right time of sowing of American cotton and Bt Cotton.
- In Semi Arid Eastern Plain Zone, field preparation may be started for the sowing of B.T. cotton crop.
- In Flood Prone Eastern Plain Zone, chilli crop is affected by leaf curl and mosaic disease. Uproot & burn affected plants to check the spread of disease and spray Dimethoate 30EC @ 1.0 ml per litre water. Cover the tree sapling with thatching material to protect against heat waves. However ensure proper aeration. Raise nursery for summer marigold using 700-800g/ha seed in 15 cm raised beds at 6 cm spacing in rows at 2 cm depth.
- In Arid Western Plain Zone, tomato may be affected by mosaic disease, spray Dimethoate 30 EC @ 1.0 ml per liter of water.

Floriculture:

- In Sub Tropical Zone of Himachal Pradesh, carry out cutting of flower spikes for proper development of gladiolus corms. Cover the Mother stock of Chrysanthemum with shade net. Collect the seeds of early sown marigold which is at maturity stage. Undertake flower harvesting of late sown marigold.

Apiculture:

- In Intermediate Zone of Jammu & Kashmir, inspect honey bee colonies at every fortnight interval to maintain cleanliness and to avoid mortality of honey bees due to brood and disease infestation. If there is insufficient/shortage of food in any colony, give artificial feeding of sugar/honey to the honey bee colonies. Shift honey bee colonies near the field of mustard.

Animal Husbandry:

- In Sub-Humid Sub-Tropic Zone of Uttarakhand, provide fresh drinking water to cattle. Keep the cattle in shade during day time. Add mineral mixture in dry hay for feeding to animals.

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