



National Agromet Advisory Service Bulletin

Friday 2nd February 2018
(For the period 2nd to 7th February 2018)



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India Meteorological Department

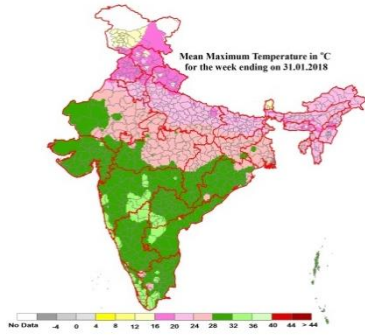
Weblink For

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

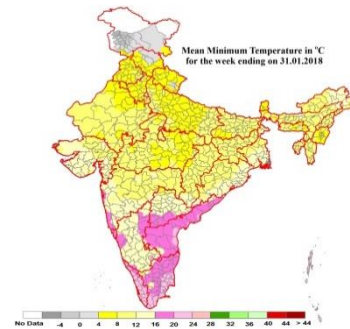
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending 31.01.2018

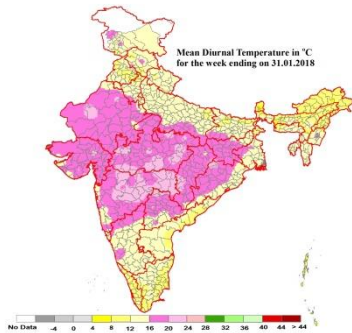
Mean Maximum Temperature (°C) for the week ending 31.01.2018



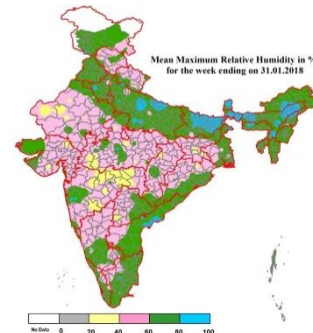
Mean Minimum Temperature (°C) for the week ending 31.01.2018



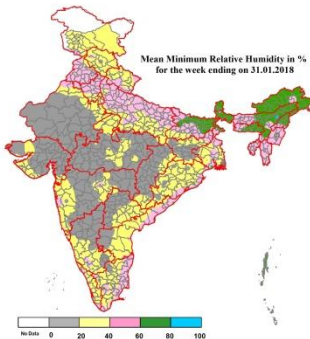
Mean Diurnal Temperature Variation (°C) for the week ending 31.01.2018



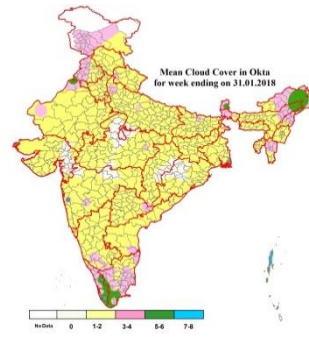
Mean Maximum Relative Humidity (%) for the week ending 31.01.2018



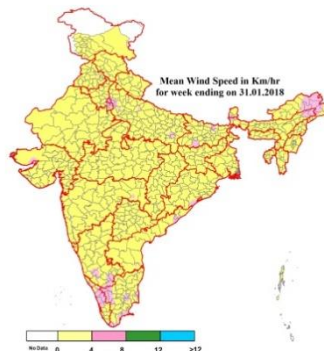
Mean Minimum Relative Humidity (%) for the week ending 31.01.2018



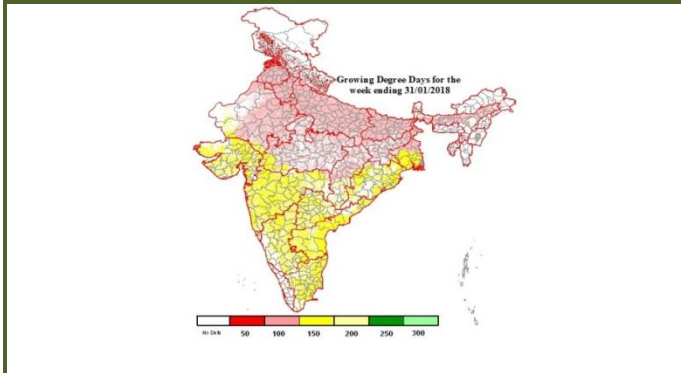
Mean Cloud Cover (okta) for the week ending 31.01.2018



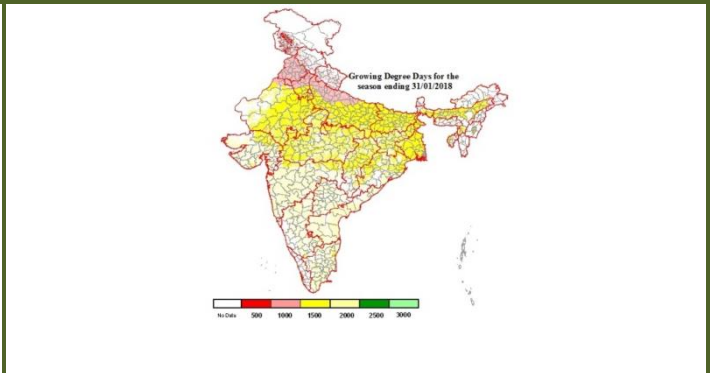
Mean Wind Speed (km/hr) for the week ending 31.01.2018



Growing Degree Days for the week ending 31.01.2018

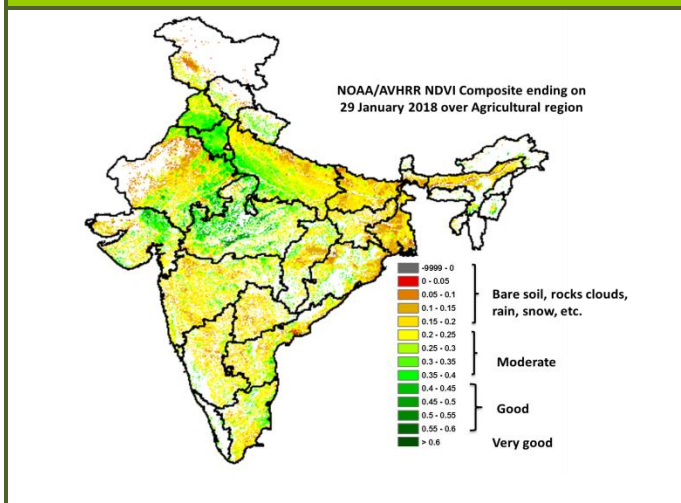


Growing Degree Days for the season ending 31.01.2018

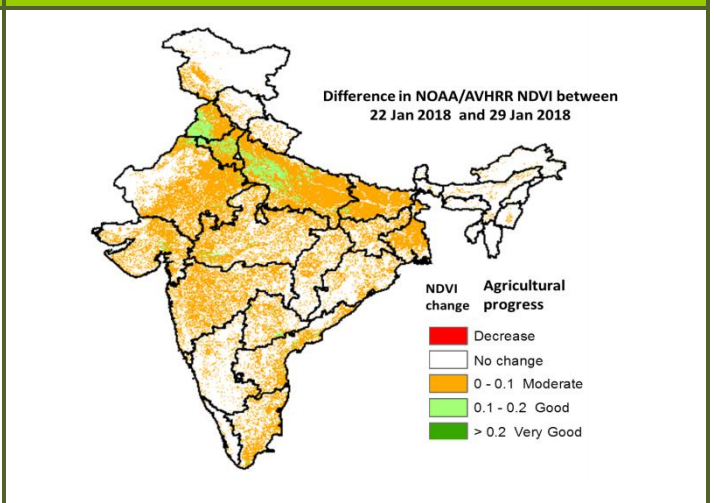


* Base temperature for *Rabi* Season is taken as 05⁰ C

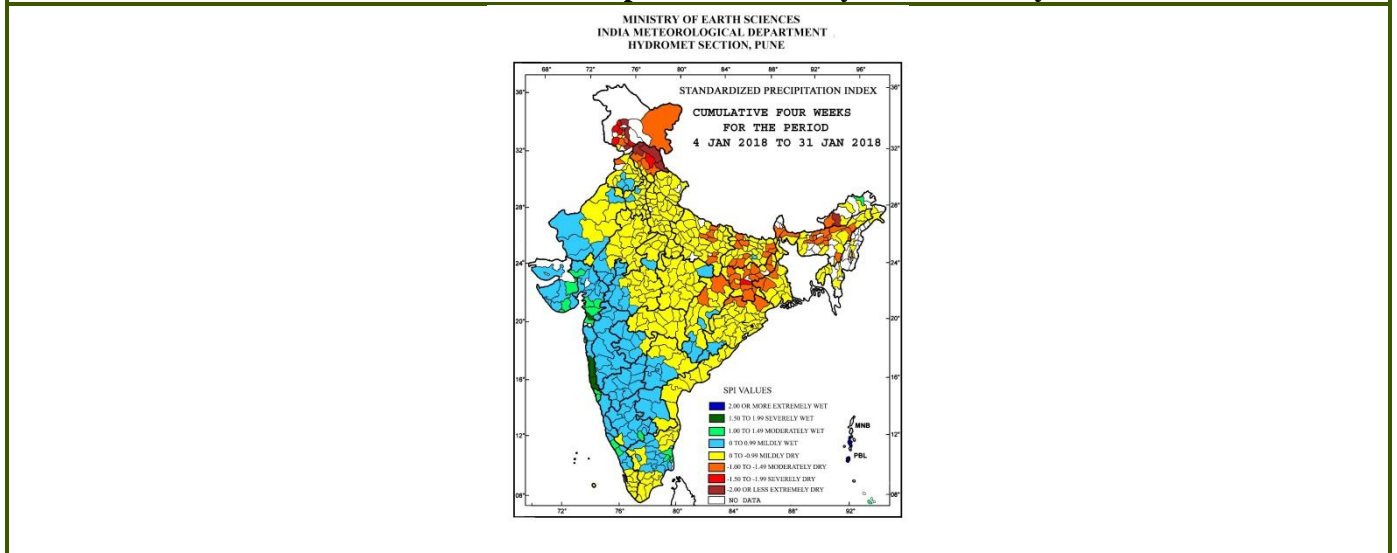
NOAA/AVHRR NDVI composite ending on 29th January 2018 over Agricultural regions of India



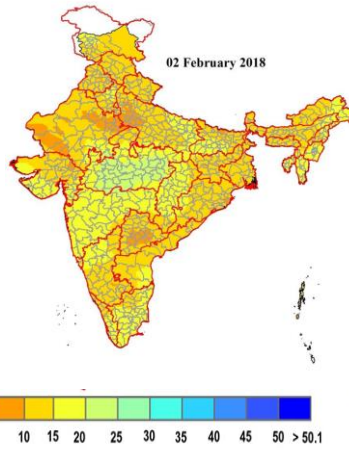
Difference in NOAA/AVHRR NDVI between 22nd and 29th January 2018



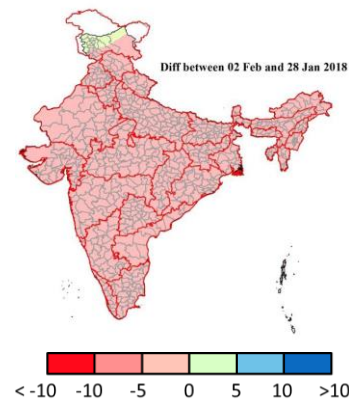
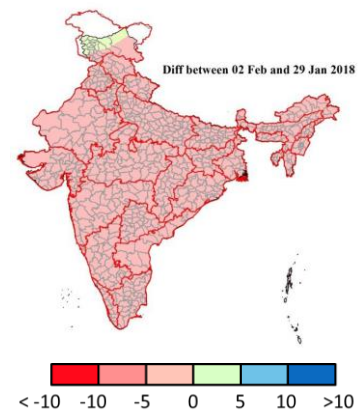
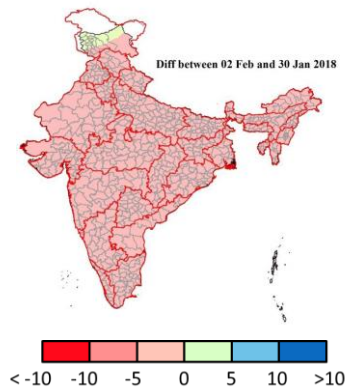
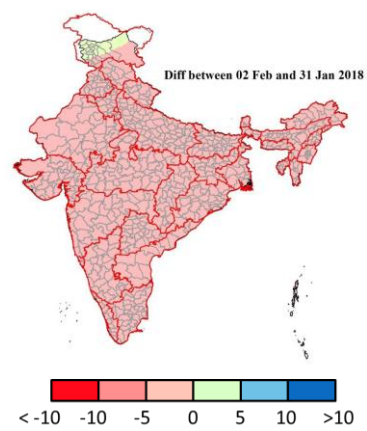
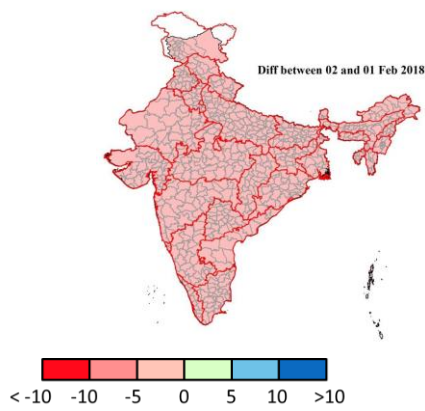
**Standardised Precipitation Index
Cumulative 4 weeks for the period 4th January to 31st January 2018**



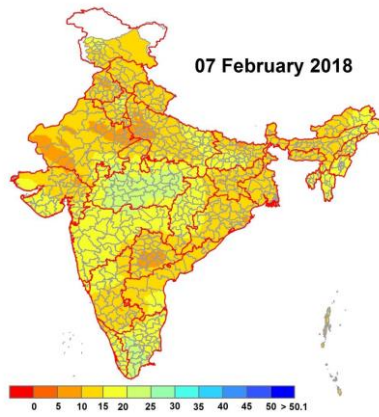
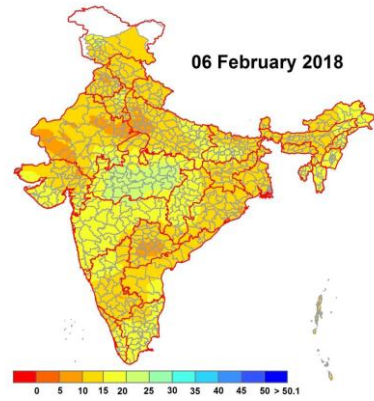
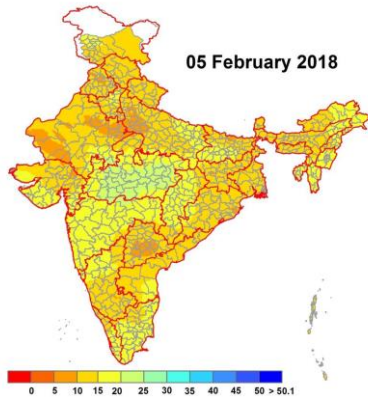
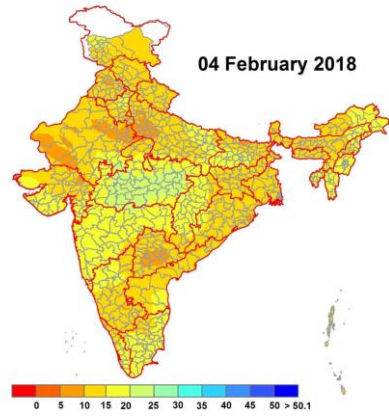
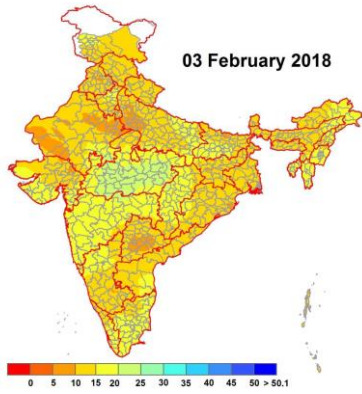
Daily Soil Moisture (mm) for 2nd February 2018 (ending at 0830 IST) for 60 cm depth



Difference of Soil Moisture (mm) for 60 cm depth



**Forecasted Soil Moisture (mm) from 3rd to 7th February 2018 (ending at 0830 IST)
for 60 cm depth**



Weather Forecast for next 5 days valid upto 0830 hours of 7th February 2018

- Meteorological subdivision wise detailed 5 days rainfall forecast is given in Table below.
- Minimum temperatures very likely to rise by 1-2°C over parts of east India during next 2-3 days.
- No significant change in minimum temperatures very likely over rest of the country during next 3-4 days.

5 Day Rainfall Forecast (Mid day) 2nd February 2018

Met-Sub-Division	02-Feb Today	03Feb Sat	04Feb Sun	05Feb Mon	06Feb Tue
1. Andaman & Nicobar Islands	ISOL	SCT	SCT	ISOL	ISOL
2. Arunachal Pradesh	SCT	SCT	SCT	ISOL	ISOL
3. Assam & Meghalaya	ISOL	ISOL	ISOL	DRY	DRY
4. N. M. M. & T.	DRY	ISOL	ISOL	DRY	DRY
5. S.H. West Bengal & Sikkim	ISOL	ISOL	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	DRY	ISOL
12. Uttarakhand	DRY	DRY	DRY	ISOL	SCT
13. Haryana, Chd & Delhi	DRY	DRY	DRY	DRY	SCT
14. Punjab	DRY	DRY	DRY	DRY	SCT
15. Himachal Pradesh	DRY	DRY	DRY	ISOL	SCT
16. Jammu & Kashmir	ISOL	ISOL	DRY	ISOL	SCT
17. West Rajsthan	DRY	DRY	DRY	DRY	ISOL
18. East Rajasthan	DRY	DRY	DRY	DRY	ISOL
19. West Madhya Pradesh	DRY	DRY	DRY	DRY	ISOL
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	ISOL
24. Madhya Maharashtra	DRY	DRY	DRY	DRY	ISOL
25. Marathawada	DRY	DRY	DRY	DRY	DRY
26. Vidharbha	DRY	DRY	DRY	DRY	DRY
27. Chhattisgarh	DRY	DRY	DRY	DRY	DRY
28. Coastal Andhra Pradesh	DRY	DRY	DRY	DRY	DRY
29. Telangana	DRY	DRY	DRY	DRY	DRY
30. Rayalaseema	DRY	DRY	DRY	DRY	ISOL
31. Tamilnadu & Puducherry	DRY	DRY	DRY	ISOL	SCT
32. Coastal Karnataka	DRY	DRY	DRY	DRY	ISOL
33. North Interior Karnataka	DRY	DRY	DRY	DRY	ISOL
34. South Interior Karnataka	DRY	DRY	DRY	DRY	SCT
35. Kerala	DRY	DRY	DRY	ISOL	SCT
36. Lakshadweep	DRY	DRY	DRY	DRY	ISOL

% 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

- **02 February (Day 1):** Dense to very dense fog very likely at isolated places over north East Uttar Pradesh, north Bihar, Sub-Himalayan West Bengal, West Assam, Meghalaya and Tripura in the morning hours.
- **03 February (Day 2):** Dense fog very likely at isolated places over north East Uttar Pradesh, north Bihar, Sub-Himalayan West Bengal in the morning hours.
- **04 February (Day 3):** No weather warning.
- **05 February (Day 4):** No weather warning.

- **06 February (Day 5):** No weather warning.

Weather Outlook for subsequent 2 days from 7th to 9th February 2018

- Rain/Snow very likely at a few places over Jammu & Kashmir, Himachal Pradesh and Uttarakhand. Isolated to scattered rain/thundershower very likely over northeastern states, East Rajasthan, Gujarat, Maharashtra, Tamilnadu, Kerala and Lakshadweep.
- Weather likely to be dry over remaining parts of the country.

Salient Advisories

- As dense to very dense/dense fog at isolated places very likely over **north Bihar** and **Sub-Himalayan West Bengal** and over north **East Uttar Pradesh** on 2nd and 3rd and over **West Assam, Meghalaya** and **Tripura** on 2nd February, monitor the standing crops for incidence/spread of pest and diseases, potato, tomato and onion crops for early/late blight disease. If symptoms are noticed, undertake plant protection measures.
- As prevailing weather conditions are favourable, continue sowing of groundnut in **Maharashtra**, undertake sowing of summer irrigated Sesamum in Western Zone of **Tamil Nadu**.
- Continue transplanting of summer rice in **Odisha, Telangana, Jharkhand** and **South Interior Karnataka**. Complete transplanting of Boro rice in **Assam**.
- As dry weather would prevail, apply irrigation to chick pea (pod formation stage) in Middle Gujarat Zone and in North West Zone of **Gujarat**, apply irrigation in wheat (milk stage). In Jhabua Hill Zone of **Madhya Pradesh**, apply 4th irrigation in wheat at milk stage. Continue harvesting of matured toria in **Jharkhand**, pigeon pea in **Royalaseema, North Interior Karnataka** and **Odisha** and picking of matured bolls of cotton and castor in south **Saurashtra** and **North Gujarat Zone**.
- In North East Alluvial Zone of **Bihar**, due to prevailing foggy weather, incidence of blight may occur in potato crops. If symptoms, appear then spray Carbendazim @ 1 g/litre of water or Dithane-M-45 @ 2 g/litre of water.

Detailed Zonewise Agromet Advisories

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

- **Realised Rainfall:** Weather remained mainly dry/dry over the region during the week.
- **Advisories:**
 - As dense to very dense/dense fog at isolated places very likely over north East Uttar Pradesh on 2nd and 3rd February, monitor the standing crops for incidence and spread of pest diseases, tomato and onion crops for early/late blight disease. If symptoms are noticed, undertake plant protection measures.
 - **Jammu & Kashmir:**
 - In Sub Tropical Zone, apply 2nd top dressing of urea in normal sown and 1st top dressing of urea in late sown wheat crop during clear weather. Prepare fields for planting of solanaceous and cucurbitaceous vegetable crops and raise cucurbits properly in the poly bags under protected structures.
 - In Cold Arid Zone, continue intercultural practices like weeding and hoeing after applying vermicompost/Farm Yard Manure in vegetables in polyhouses. Continue harvesting of Chinese cabbage, palak, pakchoi, kale, spinach and lettuce in protected structures at weekly interval.
 - In Intermediate Zone, in lower mid hills continue early nursery sowing of summer vegetables under protected structures (Poly house, Poly tunnel etc.). Continue planting of new orchards of stone fruits (Peach, Plum & Apricot), almond, walnut etc.
 - In Valley Temperate Zone, provide drainage channels in wheat, lentil, oat, pea fields wherever there is probability of water accumulation. Provide proper drainage in apple orchards. Continue mulching in vegetables.
 - **Uttarakhand:**
 - In Sub Humid Sub Tropic Zone, undertake intercultural operations in late sown wheat and barley crops at 25-30 days after sowing. Undertake harvesting of late sown toria and mustard.
 - In Hill Zone, continue intercultural operation and hand weeding in onion. Continue preparation of seedlings of vegetables like brinjal, capsicum, tomato etc. in polyhouse. Undertake harvesting of matured vegetables.

- In Bhabar and Tarai Zone, continue weeding and hoeing in sugarcane crop and apply remaining dose of nitrogen. To save the vegetable nursery from low temperature, it should be covered with plastic sheets. Undertake raising of fruit crop saplings like-apple, pear, plum, wall nut etc.
- In Bhabar and Tarai Zone, to control the late blight disease in potato and tomato, spray Mancozeb @ 2.5g/litre or Copper Oxychloride @ 3g/litre of water.
- **Himachal Pradesh:**
 - In High Hill Temperate Dry Zone, keep the poly house closed to maintain optimum temperature. Apply fertilizers and complete the preparation of beds in apple orchard.
 - In Sub-Montane and Low Hill Tropical Zone, add mulch material in space between two rows of vegetables crops for conservation of soil moisture and maintaining the soil temperature.
 - In Mid Hills Sub Humid Zone, continue transplanting of onion. Apply light irrigation in vegetables. Continue preparation of basins of fruit plants and apply recommended dose of FYM and fertilizers.
- **Punjab, Haryana & Delhi:**
 - In Central Plain Zone of Punjab, undertake sowing of spring maize and sunflower. Keep the fruit plants particularly young ones, protected from cold and provide shelter to the young fruit plants by making 'kullies' with paddy straw.
 - In Western Zone of Punjab, apply second irrigation to December sown wheat. In light textured soil, the third dose of nitrogen viz. 27 kg urea/acre may be applied after the second irrigation. Apply light irrigation in vegetables and fruit plants.
 - In Delhi, start field's preparation for sowing of early crop of ladies finger- A-4, Parbani Kranti and Arka anamika cultivars. Prepare seedling of early cucurbitaceous crops in small polythene bags in poly houses. Continue nursery preparation for vegetables like chilli, brinjal and tomato and sowing of spinach, coriander, fenugreek. Continue transplanting of onion. Continue intercultural operations in carrot, radish, turnip and sweet potato crops.
 - In Delhi, in wheat crop, if symptoms of termite attack appear, application of mixture of 20 kg sand with Chlorpyrifos 20 EC @ 2.0 litre should be done in evening hours.
 - In Undulating Plain Zone of Punjab, monitor the wheat crop for incidence of yellow rust. If symptoms are noticed, spray Native @ 120g or Tilt @ 200ml per litre of water for control.
- **Uttar Pradesh:**
 - In Varanasi district of Central Plain Zone, continue sowing of cucurbit crops. Continue harvesting of matured cabbage and cauliflower. Apply irrigation in wheat and continue intercultural operations in garlic and onion. In Kanpur district, undertake nursery sowing of vegetables like tomato and chilli. Keep inputs ready for sowing of maize and black gram.
 - In Bundelkhand Zone, undertake nursery sowing of vegetables like cabbage, cauliflower, brinjal, tomato, chilli etc. and sowing of vegetables like spinach, fenugreek, coriander and carrot. Apply irrigation in late sown wheat 40-45 DAS.
 - In Eastern Plain Zone, continue intercultural operations in vegetables and apply light irrigation during evening hours.
 - In Central Plain Zone, due to prevailing foggy weather condition, there are chances of attack of late blight in potato crop, for control, spray Indofil-M-45 / Kavach /Antracol @ 500-700 g per acre or Blitox @ 750-1000 g per acre in 250-350 litres of water.
- **Rajasthan:**
 - In Semi Arid Eastern Plain Zone, undertake raising of young saplings of bottle gourd, ridge gourd, pumpkin, bitter melon, tinda etc. in polythene bags.
 - In Sub Humid Southern Plain and Aravalli Hill Zone, apply irrigation in wheat at ear emergence stage and at milking stage in barley. In potato crop, apply urea @ 60-75 kg Nitrogen/ha after irrigation.
 - In Bikaner district of Arid Western Plain Zone, in timely sown wheat, provide 4th irrigation 80-85 days after sowing at booting stage and also provide 3rd irrigation in barley crop 85-90 days after sowing. In late sown wheat, provide the 3rd irrigation 60 to 65 days after sowing at late jointing stage.
 - In Flood Prone Eastern Plain Zone, apply 3rd irrigation in normal sown wheat at jointing stage (60-65 DAS), 2nd irrigation in late sown wheat at tillering stage (40-45 DAS).
 - In Flood Prone Eastern Plain Zone, there are chances of thrips and aphid attack in brinjal, tomato and chilli crops, spray 0.1% Malathion solution for its control.
 - In Semi Arid Eastern Plain Zone, methi, pea, cumin and coriander are likely to be affected by powdery mildew attack. Spray Karathion @ 1.0 ml or Calaxin @ 1.0 ml per litre water or dust Sulphur @ 25 kg per hectare.
 - In Arid Western Plain Zone, in gram, to prevent Heliopsis infestation, spray Quinolphos 25 EC @ 1200 ml/ha or Indoxcarb @ 200 ml/ha along with water at the time of flowering and repeat the spray if required.
- **Animal Husbandry**
 - In Jammu & Kashmir, give special care to young calves as they are more sensitive to pneumonia. Protect the pregnant and milch animals from cold and feed them mineral mixture regularly. To avoid cracking or fissuring

of teats in cold dry weather, clean the teats with warm water and apply ghee or butter after every milking. Put some bedding material like puaal etc. to keep animals warm. Provide dry bedding during night. Do not allow animals to leave khurli early in morning directly to open area. In Poultry keep the chicks warm by providing artificial light in the poultry sheds.

- In Uttarakhand, maintain optimum temperature in day and night inside the poultry farm to minimize the mortality losses. In hilly areas, heater may be used to protect the animals from cold. Rice husk should be given to the animals as a food which is the source of energy.
- **Apiculture:**
- In Jammu & Kashmir, protect bee colonies from extreme weather conditions through reduced entrance and proper packing. Maintain adequate reserves of honey and pollen in the bee colony. Stimulating feeding of sugar, syrup should be given for expansion.

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

- **Realised Rainfall:** Weather remained mainly dry/dry over the region during the week.
- **Advisories:**
 - As dense to very dense/dense fog at isolated places very likely over north Bihar and Sub-Himalayan West Bengal on 2nd and 3rd February, monitor the standing crops for incidence/spread of pest and diseases, potato, tomato and onion crops for early/late blight disease. If symptoms are noticed, undertake plant protection measures.
 - **Odisha:**
 - In Western Undulating Zone, complete transplanting of summer rice with three week old seedlings. Start land preparation for planting of sugarcane.
 - In South Eastern Ghat Zone and North Eastern Coastal Plain Zone, continue transplanting of rice.
 - In Eastern Ghat High Land Zone, continue sowing of summer green gram and black gram. Prepare the main field for transplanting and undertake transplanting at three week stage of seedling.
 - In North Eastern Coastal Plain Zone, current weather favours attack of powdery mildew in pulses. To control it, spray Sulfex @ 5g/litre of water.
 - In Western Undulating Zone, transplanted onions are at four to six week stage in main field. Thrips infestation may occur during this crop stage and in the prevailing weather condition. Spray Acephate 75% SP 400g or Imidacloprid 17.8% SL 50ml or Thiomethaxome 25% WG 60g mixing in 200litre of water per acre.
 - **Bihar:**
 - In North West Alluvial Plain Zone, as dry weather would prevail, undertake weeding in wheat crop at tillering stage and apply 2nd irrigation.
 - In South Bihar Alluvial Zone, apply irrigation in the pea crop before flowering stage and in timely sown wheat at tillering stage.
 - In North East Alluvial Zone, continue transplanting of cauliflower, cabbage, broccoli in raised bed.
 - In North East Alluvial Zone, due to prevailing foggy weather, incidence of blight may occur in potato. If symptoms appear then spray Carbendazim @ 1 gm/litre of water or Dithane-M-45 @ 2 gm/litre of water.
 - **Jharkhand:**
 - In South Eastern Plateau Zone, undertake nursery raising of summer rice. Collect the seeds of medium duration improved and hybrid rice varieties like IR 64 Drt 1, IR 64 Suklha, BVD 203, BVD 111 BVS 1, Abhishekh, KRH 2, DRRh 2, Arize Tej (Gold), US 382, CR Dhan 40 etc. Place the seed for easy germination in wet jute bag for two days before nursery raising. Before placing seeds @ 20 kg/acre treat it with Bavistin or Beam@ 2 g /kg of seed. December sown wheat crop is at maximum tillering to stem elongation stage. At this stage after intercultural operation, irrigate the crop and after 2 days of irrigation broadcast urea @ 30 kg per acre. If dead tillers are observed, spray Imidachlopride @ 1 ml per 3 iter or Acetamiprid @ 0.5 g per 8 liters of water.
 - In Central and North Eastern Plateau Zone, continue transplanting of summer rice. If irrigation facility is available, undertake sowing of maize varieties 1(Hybrid),HQPM (Hybrid) with recommended dose of fertilizer. Undertake land preparation for sowing of summer green gram.
 - In Western Plateau Zone, continue harvesting of matured toria
 - In South Eastern Plateau Zone, late sown potato is at tuber elongation and development stage. If seen infested with late blight, apply Krilaksil or Ridomil MZ chemical@ 1.5 g or Diafolatan @ 2 g per liter of water to check it from further spreading. At this stage cut worm attack on tuber is common so, spraying of Chlorpyriphos 20 EC @ 2 ml per liter of water near collar root of the plant is recommended.
 - **West Bengal:**
 - In Coastal Saline Zone, start transplanting Boro rice within 2-3 days @ 4-5 seedlings per hill. Continue sowing of sunflower varieties like variety like Modern Surya (90-95days), Pack (104days) and KBSH (90-95 days). Complete the sowing of sunflower at optimum soil moisture conditions.
 - In the Hill Zone, apply light irrigation after weeding to mandarin orange and potato crops. Carry out weeding in

potato and wheat. Continue harvesting of mature curd in cole crops. Apply light irrigation to cole, wheat and mustard crops.

- In Laterite and Red Soil Zone, carry out transplanting of rice seedlings as soon as possible. Apply light irrigation to wheat crop.
- In the Terai Zone, to avoid the cold injury in seed bed, drag the rope in the early morning to drop down the dew from leaf canopy. Irrigate the field at night and drain out in the next morning.
- In the Old Alluvial Zone, start transplanting Boro rice.
- In Laterite and Red Soil Zone, spray Mancozeb @ 2.5 - 3 ml/litre of water for blight and yellow rust in wheat crop. Spray Imidachloprid @ 1 ml/1.5 lit of water for aphids in mustard crop.
- In the Coastal Saline Zone, for aphid attack in mustard at flowering and potato vegetative stage, spray Dimethoate @ 1.5ml/liter of water or Imidachlorpid @ 3ml/5 liters of water during afternoon hours. Spray Mancozeb@2.5g/liter of water or Chlorothalonil@2g/liter of water for yellowing of tip due to morning fog in pulses at flowering stage.
- In the Hill Zone, apply acetamiprid 20% SP @ 0.2g/liter of water in the evening to control aphids.
- In the Terai Zone, for leaf spot in mustard, spray Mancozeb 75% WP @ 2.5g/lit. of water. To manage fruit fly attack, Collect and destroy fruit fly affected fruits and place Pheromone traps @ 2/bigha.
- In Old Alluvial Zone, in early transplanted Brinjal fields, start installation of sex pheromone trap @ 4-5 trap/bigha for fruit and shoot borer management at vegetative growth stage. Spray Triazophos-40 @ 1.0ml/ liter of water for pest control in mustard crop at fruit setting stage.
- **Andaman & Nicobar Islands:**
- In North and Middle Andaman, remove and burn the bhendi and chilli plants showing viral infection such as leaf curling, yellowing and mosaic.
- **Animal Husbandry**
- In Old Alluvial Zone of West Bengal, keep the animals in a covered shed area during the night. The bedding/hay in the animal shed must be changed regularly in this winter season for better health of animals.
- In the Terai Zone, vaccinate cattle and buffalo against FMD and pox. Vaccinate sheep and goat against pox virus and protect them against Contagious Caprine Pleuro Pneumonia (CCPP) during cold climate.
- In the Andaman & Nicobar Islands, provide cool drinking water with electrolyte along to poultry birds to reduce mortality as the weather is likely to be dry with low humidity.
- In South Eastern Plateau Zone, as the environment is most suitable for proliferation of ecto-parasites, ectoparasite repellents should be sprayed in the cattle shed especially in small ruminant shed. Concentrate supplement should be given to the milch animals as per their milk production. Provide mineral blocks in the shed so that animal licks and get more calcium and other minerals. Sprinkle some concentrate mixture on chopped Sorghum stover in order to increase the intake and meet the nutrient requirement of the animal.
- **Fisheries**
- In the Laterite and Red Soil Zone, apply Lime (Calcium Carbonate) in split doses in fish ponds depending on the water pH. Carry out health check-up of fish by periodical netting.
- In the Andaman & Nicobar Islands, feed the fingerlings of Indian major carp with rice bran and ground nut oil cake at 1:1 ratio at the rate of 5 % of body weight.
- In the North Central Plateau Zone of Odisha, during winter season, there is a possibility of “EUS” disease in fish. Farmers are advised to apply ‘Cifax’ @ 400 ml mixed with 40 litre of water in one acre pond area as a preventive measure. The fishes should be fed daily with oil cake bran mixture at the rate of 2-3 % of their total biomass.
- In the Old Alluvial Zone of West Bengal, apply CIFAX @ 1 liter/ha pond area, per meter water or Sukrena W.S. @ 500-1000ml /Acre pond area respectively to control Ulcer disease of fish.

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

- **Realised Rainfall:** Rainfall occurred in Changlang, Dibang Valley, Upper Siang and Upper Subansari districts of Arunachal Pradesh, Dhimaji district of Assam during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As dense to very dense fog at isolated places very likely over West Assam, Meghalaya and Tripura in the morning hours on 2nd February, monitor the standing crops for incidence/spread of pest and diseases, potato, tomato and onion crops for early/late blight disease. If symptoms are noticed, undertake plant protection measures.
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Arunachal Pradesh, continue harvesting of mature crop of ginger/turmeric taking care that the rhizome is not damaged. Undertake harvesting of potato, cabbage and cauliflower. Continue harvesting of matured citrus fruits. Cover newly emerged banana bunches with locally available sack to protect from cold/frost. Apply light

irrigation to cole crops. Undertake harvesting of matured crops in clear weather.

- In Meghalaya, continue harvesting of French bean, rajmash and cow pea crops. Provide irrigation to pea, lentil, chickpea, rapeseed and mustard crops at vegetative stage. Undertake harvesting of ripened Khasi Mandarin fruits. Undertake nursery raising of tomato and capsicum crops.
- In Lower Brahmaputra Valley Zone of Assam, complete transplanting of Boro rice seedlings in the main field. Undertake harvesting of mustard crop when 75-80% siliquae turn yellow. Undertake sowing of summer groundnut. Continue sowing of okra varieties like Pusa Sawani, Arka Anamika, Parbhdani Kranti and local cultivars. Undertake planting of Ridge gourd varieties like Pusa Nasdar and selected local varieties, viz., AAUJ-1, AAUJ-2, AAUC-3 and Sponge gourd varieties like Pusa Chikni and selected local varieties. Undertake land preparation and setts selection for sugarcane crop preferably in upland areas free from water stagnation.
- In the Hill Zone of Assam, monitor rice crop at seedling stage for the presence of thrips on leaves during morning hours. Continue transplanting of onion seedlings not more than six week old. In the Upper Brahmaputra Valley Zone, provide irrigation to Boro paddy crop at initial tillering stage to maintain 5 cm of standing water. Provide light irrigation to potato crop at tuber development stage; to onion crop at bulb formation stage and to areca nut during fruit development period. Undertake nursery sowing of coconut.
- In the Barak Valley Zone, apply irrigation every alternate day to cabbage, cauliflower and knoll khol crops at fruiting stage. Apply one irrigation in rapeseeds and mustard fields at the time of 50% flowering stage which helps to increase the productivity of the crop.
- In the Central Brahmaputra Valley Zone, maintain 5±2 cm of standing water in the field after 2-3 days of transplanting of Boro paddy up to 7-10 days before harvest. Apply second irrigation to wheat crop at ear head stage (70-75 days after sowing).
- In the North Bank Plain Zone, undertake land preparation for sowing of summer green gram and black gram from mid-February to March. To increase the productivity of rapeseeds and mustard crops, apply irrigation at 50% flowering stage. In case of already bloomed crop, keep honey bee boxes inside the field for better pollination.
- In the Lower Brahmaputra Valley Zone, spray Methyldematon 25 EC, Monocrotophos 36 WSC, Phosphamidon 100 EC should be sprayed @ 1ml/litre against aphids, cob borers, jassids, mites etc. in Rabi maize crop at reproductive stage. Spray Zineb or Mancozeb @ 0.25% (i.e., 1.25 to 1.5 kg per 500 to 600 litre of water per hectare) for leaf blight and leaf spot disease in wheat crop at heading stage. Continue spraying at an interval of 10 days till disease subsides.
- In the Barak Valley Zone, spray Chlorpyrifos 50 EC @ 2 ml per litre of water for attack of stem borer in paddy at tillering stage.
- In the North Bank Plain Zone, spray Malathion 50 EC @ 1.5 ml/litre to protect the crop from leaf eating caterpillars in cole crops at vegetative, maturity and harvesting stage. For controlling the late blight of Potato at maturity stage, spray Mancozeb 75% a.i. (2.5g/litre of water) at an interval of 12 days.
- In the Arunachal Pradesh, apply prophylactic spraying of Mancozeb @ 2 gram per 4 litres of water for blight disease in potato at vegetative stage. Spray Azadirachtin 0.15% EC @ 6ml/litre of water against leaf eating insects in pea crop at vegetative stage on a non rainy day.
- **Nagaland, Mizoram, Manipur and Tripura:**
- In Manipur, provide light irrigation to rabi maize at vegetative stage and to potato crop at vegetative to tuber formation stage. Undertake land preparation for nursery sowing of pre-kharif rice crop. Raise nursery for late cole crops. Raise cucurbits like water-melon, cucumber, sponge gourd, etc. in poly-pouch and trays under polyhouse. Tomato nurseries should be raised under low cost polyhouse as the temperature is very low in open field. Carry out land preparation for okra crop.
- In Mizoram, continue harvesting of banana, khasi mandarin, acid lime, star fruit, plum and peach. Provide irrigation to maize at tassle formation stage, to green/black gram, soybean, toria at flowering stage; French beans at vegetative stage and vegetable crops at vegetative to flowering stage.
- In Tripura, complete ransplanting of Boro rice. Plant them in square pattern to facilitate weeding. Apply irrigation and provide mulching to mustard and lentil crops. Apply light irrigation to cole crops and tomato.
- In Nagaland, provide mulching to rabi maize, toria, lentil and linseed crops at maturing stage. Give light irrigation to cabbage and cauliflower at maturing stage. Harvest ripened fruits of Khasi Mandarin.
- In Manipur, for organic control against aphids in lentil, black gram, pea, rapeseed and mustard crops, spray Azadirachtin, neem oil or Pyrethrin; spray Neem Seed Kernel Extract at 5% concentration for powdery mildew and Nimbicidin (0.3%) to control rust disease. Apply Carbaryl @ 30 ml per 15 litres of water against cut worm in potato.
- In Nagaland, spray Neem seed kernel extract at @ 5 gm per ha twice at 10 days interval for cut worm in cabbage and cauliflower at maturing stage.
- **Animal Husbandry**
- In Arunachal Pradesh, provide lukewarm food & water to cattle and pigs. De-worm animals with anti helmetic drugs (particularly Tapeworms) viz. Fento Plus @ 1 tablet per 30 kg body weight. Vaccinate pigs against swine

fever and cattle against FMD.

- In the Hill Zone of Assam, vaccinate poultry birds against Ranikhet disease. In the Central Brahmaputra Valley Zone, vaccinate poultry birds against Ranikhet disease.
- In Manipur vaccinate cattle against FMD, HS and BQ diseases.
- **Fishery**
- In the Barak Valley Zones of Assam, an extra dose of Lime @ 200 kg per ha may be applied in the fish pond to prevent the outbreak of EUS (ulcer disease).

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Weather remained dry over the region during the week.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, in transplanted rice, maintain 5 cm water level at tillering stage.
 - In Madhya Maharashtra, apply irrigation to standing crops like gram and wheat, vegetables and orchards as per requirement. Complete planting of *suru* sugarcane (varieties: Co M 86032, Co 265, M S 10001 and Co 92005). Undertake harvesting of matured gram. Continue sowing of *summer* groundnut.
 - In Marathwada, apply irrigation to standing crops like wheat and safflower, vegetables, orchards like mango, banana as per requirement. Apply irrigation to wheat crop (grain filling stage) using sprinkler irrigation method. To control wheat rust, spray Dithane 45 % @ 20 g per 10 liter of water. Complete planting of *suru* sugarcane. Before planting dip the cane seed 10 to 15 minutes in solution of Malathion 50 EC @ 300 ml + Bavistin @ 100 g + 100 litre water. Undertake sowing of okra (ladies finger) before 15th February. Use 12 – 15 kg seed per hectare.
 - In Vidarbha, apply weedicide Butachlor 50% EC @ 3.75 liter + 500 litre water per ha to 3-5 days old transplanted rice. Undertake sowing of summer seasum. Continue sowing of summer groundnut.
 - In Konkan, if attack of aphids and leaf miners is observed in vegetables, spray Dimethoate @ 1 ml per 1 litre of water at an interval of 15-20 days.
 - **Gujarat:**
 - In Bhal and Coastal Zone, apply light irrigation in fruit crops and wheat (flowering stage). Undertake harvesting of matured spikes of castor in early morning hours.
 - In South Saurashtra Zone, undertake harvesting of matured pigeon pea.
 - In North Saurashtra Zone, stop irrigation in cumin to prevent further infestation of wilt disease. Undertake harvesting of matured coriander.
 - In North Gujarat Zone, apply light irrigation in gram (pod filling stage) and wheat (milking stage). Undertake land preparation for sowing of summer crops. Undertake picking of matured cotton bolls and continue harvesting of matured spikes of castor.
 - In South Gujarat Heavy Rainfall zone, undertake transplanting of summer rice. Continue ploughing in mango and sapota orchard fields to remove weeds and to make aeration.
 - In Middle Gujarat Zone, apply irrigation to chick pea (pod formation stage). Undertake picking of matured bolls of cotton.
 - In North West Zone of Gujarat, apply light irrigation in wheat (milk stage). Undertake picking of matured cotton bolls and continue harvesting of matured spikes of castor.
 - In South Gujarat Zone, for higher flowering in mango crop spray 0.5 % urea solution.
 - In North Gujarat Zone and in North West Zone of Gujarat, under increasing temperature condition, there are chances of aphid infestation in the cumin and mustard crops; for effective control, spray Dimethoate @ 10 ml or Phosphamidon @ 3 ml/10 liters of water.
 - In North Saurashtra Zone, heavy attack of thrips is observed in garlic due to migration from harvested cotton field; for control, spray neem seed extract 5% and spray Pofenofos @ 20 ml and Lambda-Cyhalothrin @ 14 ml/10 liters of water alternatively at 10 days interval.
 - In Middle Gujarat Zone, in late sown wheat for management of stem borer infestation, spray Quinalphos 25 EC @ 20 ml/10 litres of water. Spray Mencozeb 0.2% @ 25 gram in 10 litres of water for control of blight disease in potato. There is chance of blight disease in potato crop; to control, spray Mencozeb 0.2% @ 30 g plus 25 ml of concentrated desi soap solution in 10 litres of water.
 - Due to favorable weather conditions, there are chances of infestation of sucking pests in vegetable crops in North Gujarat Zone; for control, spray Dimethoate 30 EC 0.1% to manage sucking pests.

CENTRAL INDIA [M.P., CHHATTISGARH]

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

▪ **Madhya Pradesh:**

- In Nimar Valley Zone, apply second irrigation in 75 days old chickpea crop.
- In Kymore Plateau and Satpura Hill Zone, apply light irrigation in chickpea, vegetable crops and orchards in the night.
- In Vindhya Plateau Zone, continue picking up of matured pods of pea. Apply light irrigation in vegetable crops.
- In Bundelkhand Zone, continue transplanting of onion and vegetables like chilli, tomato, brinjal and cauliflower.
- In Satpura Plateau Zone, continue field preparation for summer vegetables like pumpkin, bitter gourd, bottle gourd, okra, watermelon, muskmelon etc. Apply irrigation in wheat (flowering/heading stage), field pea, gram, safflower and sunflower crops. Undertake land preparation for sowing of spring sugarcane, groundnut and maize.
- In Central Narmada Valley Zone, apply 2nd top dressing of urea in normal sown and 1st top dressing of urea in late sown wheat crop. Continue intercultural operations in vegetables. Apply second irrigation in gram at branching stage (65-75 DAS).
- In Malwa Plateau Zone, continue transplanting of onion and intercultural operations in vegetables.
- In Jhabua Hill Zone, apply 4th irrigation in wheat at milk stage. Continue picking up of matured cotton bolls. Apply irrigation and recommended dose of fertilizers in winter vegetables. Continue digging up of matured rhizomes of ginger.
- In Gird Zone, in late sown potato there is chance of blight infestation; spray Mancozeb @1.5 kg /500 to 600 litres of water per hectare.
- In Malwa Plateau Zone, there are chances of termite attack in wheat, apply mixture of 20 kg sand with Chlorpyrifos 20 EC @ 2.0 litre in evening hours.

▪ **Chhattisgarh:**

- In North Hill Zone, continue nursery sowing of summer vegetable crops (cauliflower, cabbage, tomato, brinjal, chilli, Undertake land preparation for planting of sugarcane. Apply irrigation in wheat (heading stage), field pea, gram, lentil, linseed, safflower and sunflower.
- In Chhattisgarh Plain Zone, apply irrigation in wheat (40-45 days old) crop. Continue intercultural operations in vegetables and apply nitrogenous fertilizers. Apply irrigation in banana and papaya seedlings once a week and give support to the banana plant at the time of flowering.
- In Chhattisgarh Plain Zone, there is chance of infestation of powdery mildew disease in urad and moong crops; if observed, spray Carbendazim @1 gram/litre or Dinocap @1ml/litre of water. Spray Metasystax or Rogar insecticide @ 1 ml/litre water against yellow mosaic disease in pulses.

• **Animal Husbandry**

- In Madhya Pradesh, provide 3-4 hours light in poultry houses during night and give the food, mixed with vitamins and energy food material. Protect cattle from cold at night. Use litre in cattle shed.
- In Chhattisgarh, to protect the animals from low temperature give protein enriched diet and keep them indoor. Provide supplementary wormicide medicine in feed of poultry birds.

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

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

• **Advisories:**

▪ **Kerala:**

- In the Problem Area Zone, as mainly dry weather is expected, continue harvesting of mature nutmeg fruits. Provide irrigation to banana and coconut as per requirement. Continue harvesting of pepper when some of the berries in the spike turn red. In the rice fields, look for the presence of rice bug in the field during early ear bearing stage. When the bug is observed in large numbers apply Carbaryl 4g/ litre. Since the occurrence of bug coincides with the flowering stage, application of the insecticide may be done either before 9 am. or after 3 pm so that the fertilization of flower is not affected.
- In the Southern Zone, drain the paddy field 15 days before harvesting Mundakan rice. Cow pea and other vegetables can be raised after harvesting rice. Provide shade to small rubber plants and coconut palms.
- In the Central Zone, in coconut gardens, irrigation shall be continued with one or two irrigations per week. 50-60 litres of water should be provided per palm if drip irrigation is been giving. Conserve soil moisture by providing suitable mulches.
- In the Southern Zone, to control fruit fly in cucurbits, destroy the affected fruits and use pheromone traps. For control of fungal disease in rubber tapping panel, apply Copper oxy Chloride or Bordo mixture.

▪ **Andhra Pradesh:**

- In the Scarce Rainfall Zone, continue harvesting of red gram. Apply light irrigation to mango plants at the time of flowering.
- In the Southern Zone, the present weather conditions are favourable for bacterial leaf blight in rice at tillering

stage. Nitrogen fertilizer application should be postponed and water should be drained out from the field as a control measure. Due to dry weather prevailed in the district there is possibility of incidence of thrips attack in groundnut at flowering to pegging stage. Spray Monocrotophos @ 1.6 ml. or Imidachloprid @ 0.3 ml./litre of water to control the incidence of bud necrosis.

- In the Scarce Rainfall Zone, in the prevailing weather, BPH incidence and leaf folder in paddy is observed in some parts of district. Farmers are advised to spray Buprofezin 1.6 ml or Ethofenpros @ 2.0 ml per litre of water. For the control of leaf folder, farmers are advised to spray Chloropyriphos @ 2 ml/litre for control. Incidence of sucking pests is observed in some parts of the district in groundnut crop. Farmers are advised to spray, Dimethoate @ 2ml/litre of water or Thiomethoxam @ 40gm/acre for control.
- In the Krishna Godavari Zone, spray Carbendazim 200 g or Thiophanate Methyl 200 g or Hexaconazole 400 g or Propiconazole 200 g per acre twice at 10 days interval for powdery mildew in rice fallow pulses at seedling-vegetative stage and in rabi pulses at vegetative-flowering stage. Spray Profenophos @ 400 ml or Chlorpyriphos @ 500 ml or Monocrotophos 36 SL @ 320 ml or Chlorantriliprole @ 80 ml or Cartap Hydrochloride @ 400 g or Phlubendamide 20 WDG 50 g or 48 SC @ 80 g per acre for leaf folder in rice at the transplanting-active tillering stage.

■ **Telangana:**

- In North Telangana Zone, undertake transplanting of rice. Maintain shallow depth of water at the time of transplanting. Provide irrigation during flowering and grain filling stage in sorghum crop, two irrigations at flower initiation stage in Bengal gram crop and enough irrigation at pod development stage in groundnut crop.
- In South Telangana Zone, prevailing dry weather conditions are favorable for incidence of aphids in maize. To control, spray Dimethoate @ 2 ml or Mithyl Demetan @ 2 ml or Acephate @ 1.5 g per litre of water. In vegetable crops, spray Traizophos @ 2 ml or Acetamiprid @ 0.2 g per litre of water for white fly; Dimethoate @ 2 ml per litre of water for aphids and Acephate @ 1.5 g per litre of water or Fipronil @ 2 ml per litre of water for thrips.
- In North Telangana Zone, spray Monocrotophos @ 1.6 ml/litre or Acephate @ 1.5 g/litre or Quinalphos @ 2 ml/litre or Thiodicarb @ 1 g/litre of water for spodoptera in Bengal gram at maturity to harvesting stage. Spray Chlorothalonil @ 2 g or Pyraclostrobin @ 1g/litre of water for early blight in tomato crop. Spray Flubendamaid @ 0.3 ml / liter of water at 28 and 35 days for stem borer in tomato crop. Spray Myclobutanil @ 1 ml/ liter of water for powdery mildew in bhindi crop.

■ **Tamil Nadu:**

- In the Western Zone, considering the favourable temperature and relative humidity, planting of mid season sugarcane may be initiated. As scattered rainfall is expected on 6th and 7th February, harvesting and threshing of *Samba* rice may be completed before the rain. Considering the present weather, undertake land preparation and sowing of summer irrigated Sesamum.
- In the High Rainfall Zone, to control sigatoka leaf spot in banana, spray Propiconazole @ 1 ml + teepol 0.5 ml per litre of water.
- In the Western Zone, prevailing weather condition is favorable for hopper incidence in mango hence farmers are requested to monitor the crop and apply dusting of Malaithion 5% if required.
- In the South Zone, the prevailing weather is favorable for the pest of earhead bug in sorghum at milky stage. To control this pest, apply Carbaryl 10 D 25 kg/ha or Malathion 5 D 25 kg/ha or Neem seed kernel extract 5% on 3rd and 18th day after panicle emergence. Spray twice with Malathion 50 EC 500 ml/ha. in 500 litres of water at 10% heading and 9 days after. To control *Helicoverpa armigera* in chickpea crop, use Pheromone traps for @ 12 Nos./ha. and set up Bird perches in the field @ 50 Nos./ha.
- In the Southern Zone, thrips incidence has been noticed in chilli at flowering/fruitlet stage. The affected plants show symptoms of crinkling and upward curling of leaves and elongation of petiole. For controlling this pest spray Imidachloprid 17.8 % SL @ 3 ml/10 litres of water or Dimethoate 30 % EC @ 1.0 ml/litre of water.

■ **Karnataka:**

- In Southern Transition Zone, complete land preparation and undertake transplanting of summer rice. Undertake harvesting of matured pods of red gram. Cover the partially opened ginger rhizomes in the bed by mulches or soil in order to avoid rotting.
- In North Transition Zone, continue picking of cotton and harvesting of early sown Bengal gram. Provide supplementary irrigation to sorghum (grain filling stage), wheat (flowering) and late sown Bengal gram (flowering) crop.
- In North East Transition Zone, provide protective irrigation to wheat (flowering) crop.
- In North Dry Zone and Central Dry Zone, undertake harvesting of matured fruits of chili.
- In North East Dry Zone, continue planting of sugarcane.
- In North Transition Zone, due to low minimum temperature there is a chance of development of powdery mildew in mango; for control, spray Phosphamidon 86 WSC @ 0.5 ml with 1 g Hexaconazole 5 EC per litre of water.
- In North Dry Zone, to manage, sucking moth in pomegranate, install pheromone traps in the field; spray DDVP

@1 ml dissolved in one liter of water, during night time.

- In Hill Zone, for control of fruit rot in cocoa, remove the rotted fruits and spray with 1% Bordeaux mixture.
- In Southern Dry Zone, there is a possibility of occurrence of powdery mildew and hopper in mango; spray with Wettable Sulphur @ 3gm/litre and Rogar @1.5ml/litre respectively.
- In North Transition Zone, due to low minimum temperature forecast there is a chance of development of powdery mildew in mango; for control, spray Phosphamidon 86 WSC @0.5 ml with Hexaconazole 5 EC @1.0 g /litre of water.
- In Central Dry Zone, to manage sucking pests in safflower, spray Thiamethacom 25 WG @0.2 gram or Acephate 75 SP @1 gram or Dimethoate 30 EC @1.75 ml dissolved in one liter of water.
- **Animal Husbandry**
- In North Dry Zone of Karnataka, Vaccinate (ET vaccine) sheep and goats against Enterotoxemia.
- In the Northern Telangana Zone, vaccinate poultry birds against Ranikhet disease, cattle against FMD and Hemorrhagic Septicemia diseases and sheep/goat against sheep pox disease.
- In the Southern Zone of Tamil Nadu, vaccinate 6 weeks old chicks against Ranikhet disease.

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