



# *National Agromet Advisory Service Bulletin*



*Friday 9<sup>th</sup> February 2018*  
*(For the period 9<sup>th</sup> to 14<sup>th</sup> February 2018)*



*Issued by*  
*India Meteorological Department*

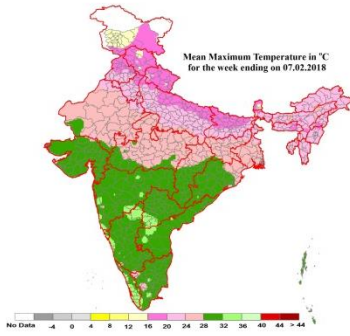
**Weblink For**

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

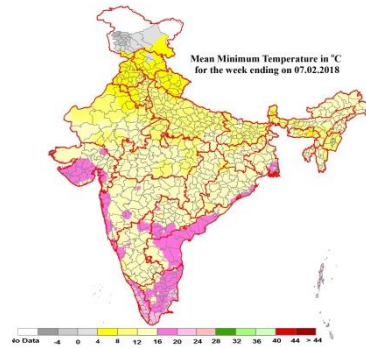
**State Composite AAS Bulletin:** <http://www.imdagrimet.gov.in/node/3544>

**Spatial distribution of weather parameters for the week ending 07.02.2018**

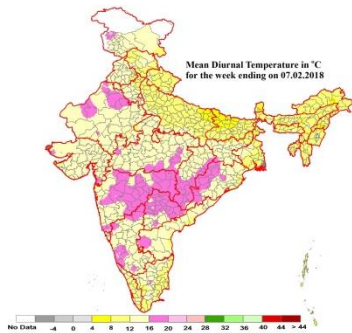
**Mean Maximum Temperature (°C) for the week ending 07.02.2018**



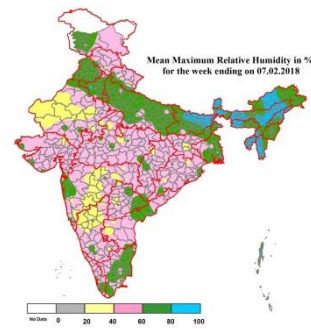
**Mean Minimum Temperature (°C) for the week ending 07.02.2018**



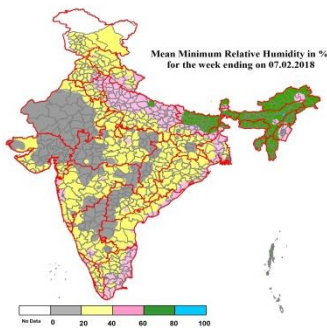
**Mean Diurnal Temperature Variation (°C) for the week ending 07.02.2018**



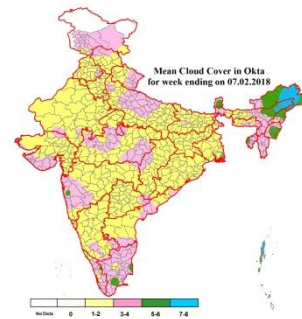
**Mean Maximum Relative Humidity (%) for the week ending 07.02.2018**



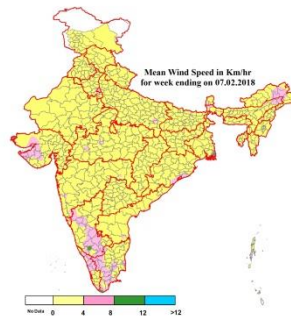
**Mean Minimum Relative Humidity (%) for the week ending 07.02.2018**



**Mean Cloud Cover (okta) for the week ending 07.02.2018**

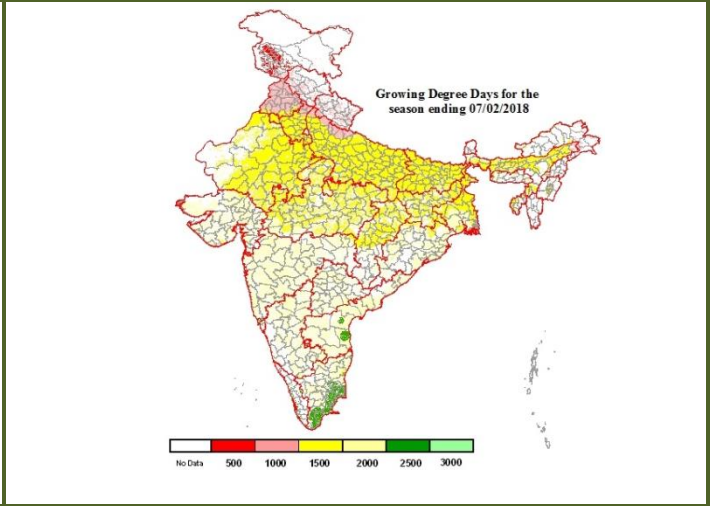
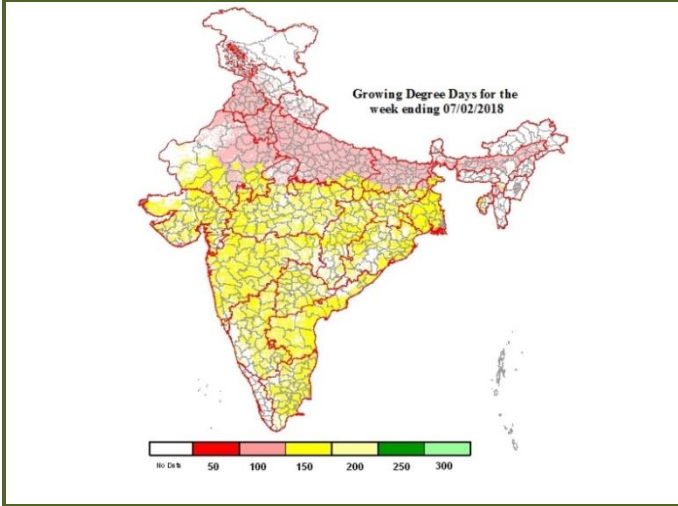


**Mean Wind Speed (km/hr) for the week ending 07.02.2018**



**Growing Degree Days for the week ending 07.02.2018**

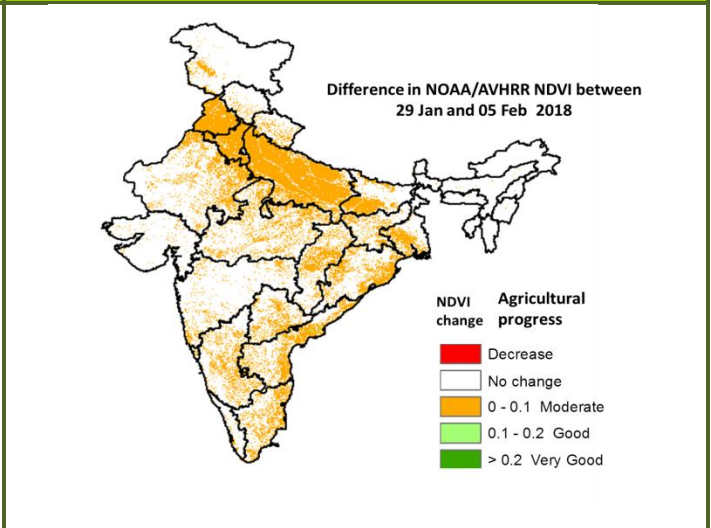
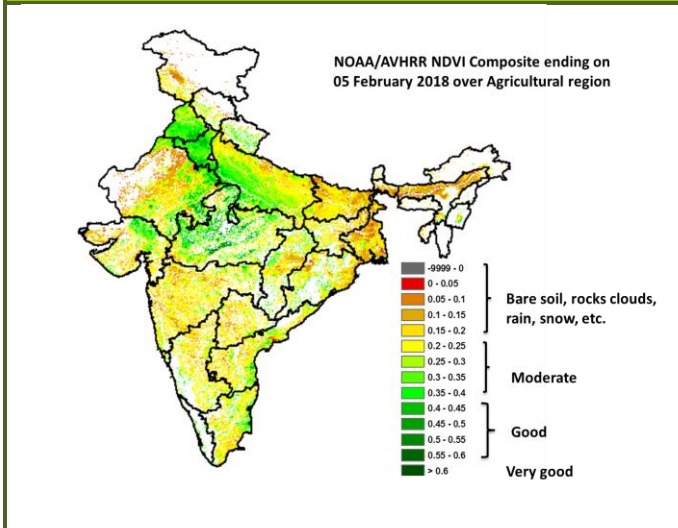
**Growing Degree Days for the season ending 07.02.2018**



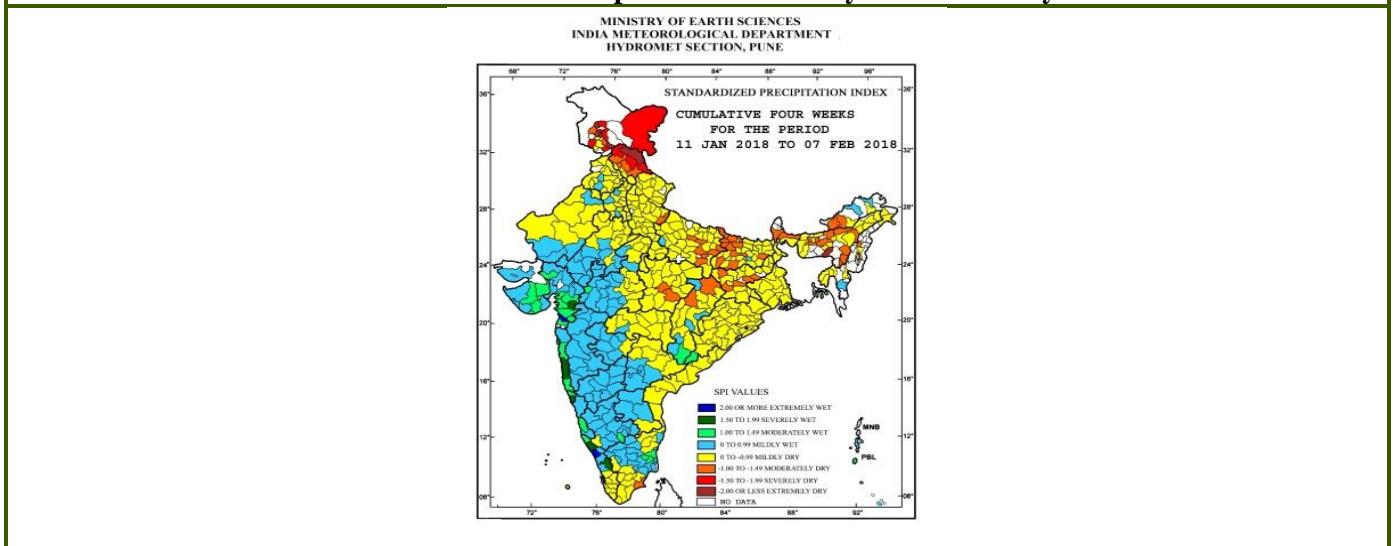
\* Base temperature for *Rabi* Season is taken as 05<sup>0</sup> C

**NOAA/AVHRR NDVI composite ending on 5<sup>th</sup> February 2018 over Agricultural regions of India**

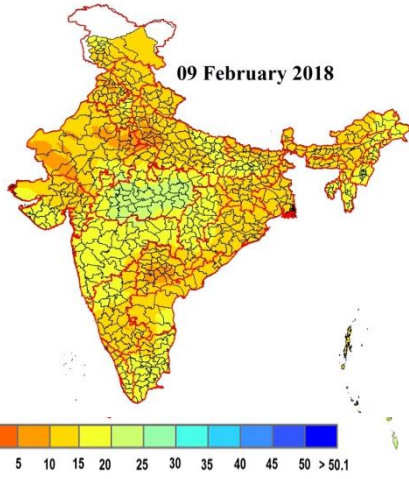
**Difference in NOAA/AVHRR NDVI between 29<sup>th</sup> January and 5<sup>th</sup> February 2018**



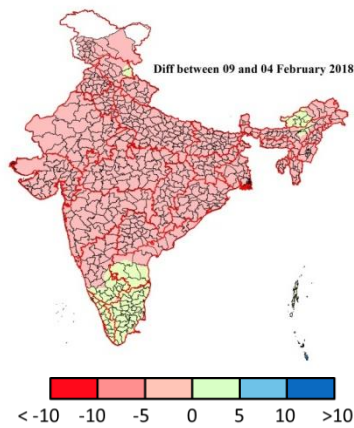
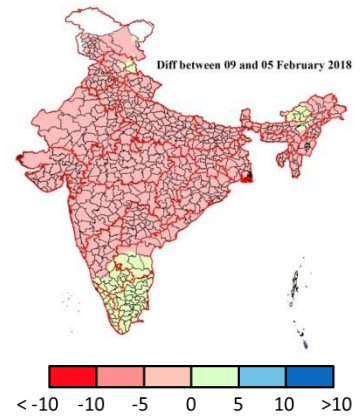
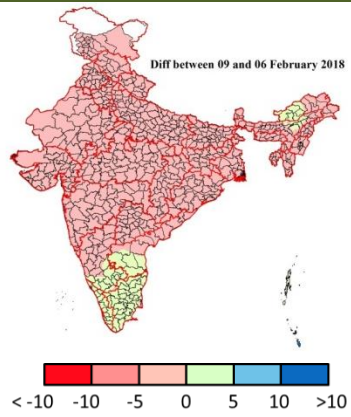
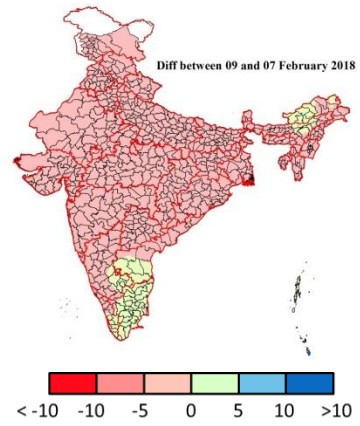
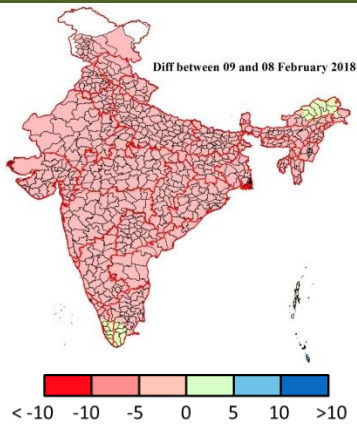
**Standardised Precipitation Index  
Cumulative 4 weeks for the period 11<sup>th</sup> January to 7<sup>th</sup> February 2018**



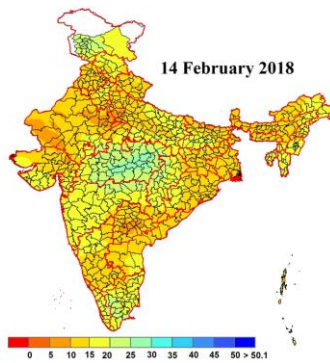
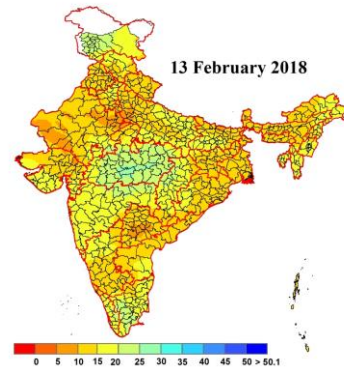
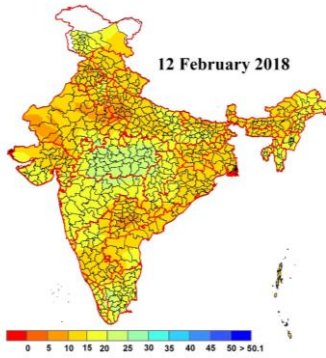
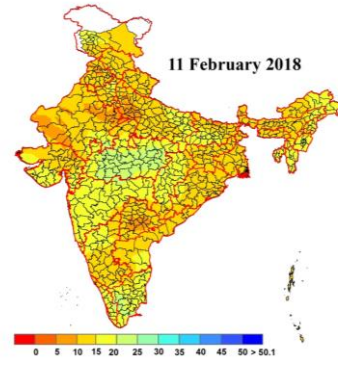
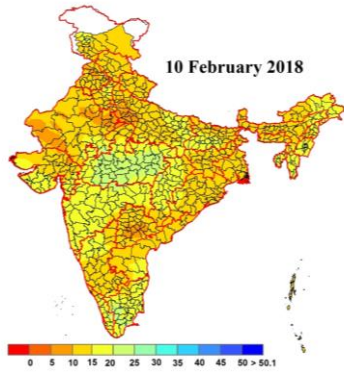
Daily Soil Moisture (mm) for 9<sup>th</sup> February 2018 (ending at 0830 IST) for 60 cm depth



Difference of Soil Moisture (mm) for 60 cm depth



**Forecasted Soil Moisture (mm) from 10<sup>th</sup> to 14<sup>th</sup> February 2018 (ending at 0830 IST)  
for 60 cm depth**



## Weather Forecast for next 5 days valid upto 0830 hours of 14<sup>th</sup> February 2018

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

### 5 Day Rainfall Forecast (Mid day) 9<sup>th</sup> February 2018

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

- **09 February (Day 1):** No weather warning.
- **10 February (Day 2):** No weather warning.
- **11 February (Day 3):** Thunderstorm accompanied with hailstorm likely over Jammu Division, Himachal

Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, East Rajasthan and Vidarbha. Thunderstorm accompanied with gusty winds likely over Telangana.

- **12 February (Day 4):** Heavy rain/snow likely at isolated places over Jammu & Kashmir and Himachal Pradesh. Thunderstorm accompanied with hailstorm likely at isolated places over Jammu Division, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Jharkhand, Interior Odisha, Madhya Maharashtra, Marathwada, Vidarbha and Madhya Pradesh. Thunderstorm accompanied with gusty winds likely over Telangana.
- **13 February (Day 5):** Thunderstorm accompanied with hailstorm likely over Jharkhand and Interior Odisha.

#### Weather Outlook for subsequent 2 days from 14<sup>th</sup> to 16<sup>th</sup> February 2018

- Rainfall activity likely to decrease substantially on 14<sup>th</sup> February.
- A fresh Western Disturbance is likely to affect north India region from 15<sup>th</sup> February.
- Weather likely to be dry over remaining parts of the country.

#### Salient Advisories

- As rain/snow would occur at most/many places over **Jammu & Kashmir** and **Himachal Pradesh** from 11<sup>th</sup> to 13<sup>th</sup>, over **Uttarakhand** on 12<sup>th</sup>, rain/thundershower would occur at most places over **Punjab** on 12<sup>th</sup>, at many places over **Uttar Pradesh, Haryana, Chandigarh & Delhi, Vidarbha** on 12<sup>th</sup>, over **East Madhya Pradesh** on 12<sup>th</sup> and 13<sup>th</sup> and over **Jharkhand** on 13<sup>th</sup> February along with heavy rain/snow likely at isolated places over **Jammu & Kashmir** and **Himachal Pradesh** on 12<sup>th</sup>, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation in Jammu & Kashmir and Himachal Pradesh. Keep harvested produce at safe places.
- As thunderstorm accompanied with hailstorm likely over **Jammu Division, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh** on 11<sup>th</sup> and 12<sup>th</sup>, over **East Rajasthan** on 11<sup>th</sup>, over **East Uttar Pradesh, Madhya Pradesh, Marathwada** and **Madhya Maharashtra** on 12<sup>th</sup>, over **Vidarbha** on 11<sup>th</sup> and 12<sup>th</sup>, over **Jharkhand** and **Interior Odisha** on 12<sup>th</sup> & 13<sup>th</sup> February, advised to use hail net for orchard crops to protect from mechanical damage. Arrange mechanical support to young fruit plants, banana and vegetables and propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
- In **Madhya Maharashtra, Marathwada** and **Vidarbha**, complete harvesting of matured *rabi* crops as early as possible. The harvested produce like rabi sorghum, gram and pigeonpea should be collected and covered by plastic sheet to protect from unseasonal rains, store the threshed crops in safe place (warehouse). Complete harvesting of matured fruits and vegetables as early as possible. Complete harvesting of matured grapes as early as possible. To protect the grapevine from rainfall/hailstorm, cover the orchard with hail net in Madhya Maharashtra and Marathwada.
- Utilising the expected rainfall, undertake transplanting of summer rice in **Jharkhand** and in Western Plain Zone of **Punjab**, undertake sowing of maize and planting of spring sugarcane.

#### 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 rain/snow would occur at most/many places over Jammu & Kashmir and Himachal Pradesh from 11<sup>th</sup> to 13<sup>th</sup>, over Uttarakhand on 12<sup>th</sup>, rain/thundershower would occur at most places over Punjab on 12<sup>th</sup>, at many places over Uttar Pradesh, Haryana, Chandigarh & Delhi on 12<sup>th</sup> February along with heavy rain/snow likely at isolated places over Jammu & Kashmir and Himachal Pradesh on 12<sup>th</sup>, avoid intercultural operation and

application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation in Jammu & Kashmir and Himachal Pradesh.

- As thunderstorm accompanied with hailstorm likely over Jammu Division, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh on 11<sup>th</sup> and 12<sup>th</sup>, over East Rajasthan on 11<sup>th</sup> and over East Uttar Pradesh on 12<sup>th</sup> February, advised to use hail net for orchard crops to protect from mechanical damage. Arrange mechanical support to young fruit plants and vegetables, propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
- **Jammu & Kashmir:**
  - In Sub Tropical Zone, postpone irrigation in wheat as rainfall is expected from 11<sup>th</sup> to 13<sup>th</sup> February. Undertake transplanting of cucurbits after receipt of rainfall. Undertake harvesting of turmeric immediately.
  - 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, as rainfall is expected, farmers are advised to postpone irrigation in vegetables and late sown wheat crop and make necessary arrangements to drain out excess water from crop field. 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. Undertake nursery bed preparation for raising of vegetables in polyhouse.
- **Uttarakhand:**
  - In Hill Zone, continue preparation of seedlings of vegetables like brinjal, capsicum, tomato etc. in polyhouse. Undertake preparation of seedlings of early cucurbitaceous crops in small polythene bags.
  - In Bhabar and Tarai Zone, continue raising of fruit crop saplings like-apple, pear, plum, wall nut etc. Undertake harvesting of sugarcane and mustard on a non rainy day.
  - In Bhabar and Tarai Zone, to control the late blight disease in potato and tomato, spray Mancozeb @ 2.5g/litre or Copper Oxchloride @ 3g/litre of water on a non rainy day.
- **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, as rainfall is expected postpone intercultural operations in radish, carrot, turnip, palak, methi carrot, broccoli, lettuce etc. Undertake field preparation for sowing of okra.
  - In Mid Hills Sub Humid Zone, as rainfall is expected postpone intercultural operations in onion and garlic. Undertake field preparation for sowing of summer vegetables.
  - In Sub-Montane and Low Hill Tropical Zone, for control of aphid in mustard crop, spray Rogar or Quinalphos @ 2.0 ml/litre of water after current spells of rain.
- **Punjab, Haryana & Delhi:**
  - In Western Plain Zone of Punjab, undertake sowing of maize and planting of spring sugarcane. Undertake harvesting of matured vegetables in clear weather. Undertake transplanting of tomato and chilli and raising of seedlings of cucurbits.
  - In Undulating Plain Zone of Punjab, undertake planting of sugarcane and sowing of spring maize.
  - 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 Delhi, continue field 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.
  - 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 on a non rainy day.
  - In Western Zone of Punjab, as per partly cloudy sky is expected in 4-5 days which favour appearance of yellow rust in wheat. Monitor the crops, as soon as the disease appears, spray the crop with Tilt or Bumper or Markzole @ 200 ml in 200 litres of water per acre on a non rainy day. Repeat the spray at 15 days interval. Observe the fields for appearance of aphids, if the population reached the economic threshold level (ETL) i.e. 5 aphids/earhead, spray the crop with 40 ml Confidor 17.8 SL or 20g Actara 25 WG in 80-100 liter of water per acre on a non rainy day.
- **Uttar Pradesh:**
  - In Varanasi district of Central Plain Zone, continue sowing of cucurbit crops. Continue harvesting of matured cabbage and cauliflower. In Kanpur district, continue nursery sowing of vegetables like tomato and chilli. Keep inputs ready for sowing of maize and black gram. Apply irrigation in wheat.



- 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, undertake planting of sugarcane utilizing the expected rainfall.
- **Rajasthan:**
- In Sub Humid Southern Plain and Aravalli Hill Zone, apply irrigation in wheat at ear emergence stage and at milk stage in barley. In potato crop, apply urea @ 60-75 kg Nitrogen/ha after irrigation. Undertake nursery preparation for summer vegetables like tomato and chilli and field preparation for sowing of summer groundnut.
- In Bikaner district of Arid Western Plain Zone, in timely sown wheat, provide 4<sup>th</sup> irrigation 80-85 days after sowing at booting stage and also provide 3<sup>rd</sup> irrigation in barley crop 85-90 days after sowing. In late sown wheat, provide the 3<sup>rd</sup> irrigation 60 to 65 days after sowing at late jointing stage.
- In Flood Prone Eastern Plain Zone, apply 3<sup>rd</sup> irrigation in normal sown wheat at jointing stage (60-65 DAS). Undertake digging of matured tubers of potato.
- 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 Heliothis infestation, spray Quinolphos 25 EC @ 1200 ml/ha or Indoxicarb @ 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 proper packing. Need based sugar feeding is recommended. Inspect colony at regular intervals.

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

- **Realised Rainfall:** Rainfall occurred in Nicobar district of Andaman & Nicobar Islands during the week and weather remained dry over rest of the region.
- **Advisories:**
  - As thunderstorm accompanied with hailstorm likely at isolated places over Jharkhand and Interior Odisha on 12<sup>th</sup> & 13<sup>th</sup> February, advised to use hail net for orchard crops to protect from mechanical damage. Arrange mechanical support to young fruit plants, banana and vegetables and propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
  - **Odisha:**
  - In North Central Plateau Zone, undertake transplanting of summer rice with 2 seedlings per hill. Maintain only a thin film of water at the time of transplanting. Keep alley ways for controlling BPH (30 cm gap after every 10 rows). Undertake land preparation for sowing of summer green gram and black gram.
  - In South Eastern Ghat 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 Central Plateau Zone, in the prevailing weather, there is chances of attack of Saw fly in Mustard. To control, Mustard Saw fly, spray Chlorpyrifos @ 4 ml/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 South Bihar Alluvial Zone, as dry weather would prevail, 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:**
  - As rain/thundershowers is likely at many places over Jharkhand on 13<sup>th</sup> February, avoid irrigation, application

of fertilizers and plant protection methods in standing crops.

- In South Eastern Plateau Zone, utilizing the expected rainfall, undertake land preparation for transplanting of summer rice. Before transplanting, seedling should be dipped in the solution of 25 ml Chlorpyrifos + 1-2 % urea ( 10 g/litre of water) prepared in 25 liter of water for 4-5 hours. For transplanting, use 21-25 days old seedling and before transplanting, puddle the soil with 3 to 5 cm of standing water.
- In Central and North Eastern Plateau Zone, continue transplanting of summer rice. If irrigation facility is available, undertake sowing of maize with recommended dose of fertilizer. Undertake land preparation for sowing of summer green gram.
- In Western Plateau Zone, continue harvesting of matured toria in clear weather and keep in safe places.
- In South Eastern Plateau Zone, Late sown mustard ( at flowering stage) crop, in the prevailing weather may cause white rust. Hence, spraying of Bordeaux mixture or copper oxychloride @ 0.25per cent solution. Timely sown mustard crop is at seed hardening stage and there is chance of Aphid attack in coming days. Hence, spraying of Methyl Demitone or roger (Dimethoate) @ 1ml per liter mixed with teepol @ 5 ml per liter is recommended. Suggestion to Spray on the crop when the infestation reaches 26-28 aphids per 10 cm of terminal shoot in 10% plants.

If the population builds up again, repeat the spray at 15-day intervals preferably in the in the afternoon hours.

#### ▪ **West Bengal:**

- In Coastal Saline Zone, complete transplanting of Boro rice in the main field. Undertake sowing of green gram.
- In the Hill Zone, continue harvesting of matured cole crops.
- In Laterite and Red Soil Zone, apply light irrigation to wheat crop at late jointing flowering stage and to potato at tuber bulking stage.
- In the Old Alluvial Zone, start transplanting Boro rice. Carry out spraying of Sulphar or Sulfex (Liquid) @ 2ml per liter of water for flower initiation in Mango and Litchi.
- In Laterite and Red Soil Zone, spray Imidachloprid @ 1 ml/1.5 litres of water for aphids in mustard crop at pod development stage.
- In the Coastal Saline Zone, to control late blight attack in sunflower crop at seedling stage, apply Diethane M-45@2.5g/litre of water.
- In the New Alluvial Zone, to protect of cauliflower, cabbage from cutworm infestation at seedling stage drench soil by Chlorpyrifos 50 EC @ 3ml/litre of water preferably at the afternoon hours and for leaf blight spray Mancozeb 75% WP @ 2.5g/litre of water.
- In the Hill Zone, apply Acetamiprid 20% SP @ 0.2g/liter of water in the evening to control aphids in mustard crop.
- In the Terai Zone, for leaf spot in mustard, spray Mancozeb 75% WP @ 2.5g/litre of water. To manage fruit fly attack in cucurbits, collect and destroy fruit fly affected fruits and place Pheromone traps @ 2/bigha.
- In Old Alluvial Zone, if yellowing of leaves is observed in lentil crop, spray Carbendazim 50% W.P @ 2 gram per litre water. Spray Triazophos-40 @ 1.0ml/ litre of water for control of pest in mustard crop at fruit setting stage.

#### ▪ **Andaman & Nicobar Islands:**

- In North and Middle Andaman, spray Imidacloprid @ 2 ml /litre and Acephate 2 g/litre alternatively once in two week to control thrips, leaf hopper and other sucking pests in vegetables at fruiting stage. Collect and destroy the affected fruits of cucurbits and spray neem oil @ 3.0 % to control fruit flies in vegetables at fruiting stage.
- In the Nicobar Islands, do line sowing of vegetable seeds in raised bed with proper drainage facility.

#### • **Animal Husbandry**

- In Odisha, clean the shed and deworm the animals. Animals should be given mineral mixture along with salt regularly and wheat grains, jaggery etc. may be provided @ 10%-20% in the daily ration to meet the energy requirement of the animals.
- In the Terai Zone of West Bengal, 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 South Eastern Plateau Zone of Jharkhand, as the environment is most suitable for proliferation of ectoparasites, 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 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 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.

- 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.

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

- **Realised Rainfall:** Rainfall occurred in East Siang district of Arunachal Pradesh during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
  - **Assam & Meghalaya, Arunachal Pradesh:**
    - In Arunachal Pradesh, continue harvesting of mature crop of ginger/turmeric on clear day taking care that the rhizome is not damaged. Undertake harvesting of potato on sunny days. Undertake harvesting of mature crop of cabbage and cauliflower. Continue harvesting of matured citrus fruits. Cover newly emerged banana bunches with locally available sack to protect from cold/frost.
    - In Meghalaya, undertake harvesting of cabbage and cauliflower at mature stage. Provide irrigation to pea, lentil, chickpea, rapeseed and mustard crops at vegetative stage and provide staking at 30th from sowing. Undertake harvesting of ripened Khasi Mandarin fruits. Undertake nursery raising/transplanting of tomato and capsicum crops.
    - In Lower Brahmaputra Valley Zone of Assam, replant dead hill in the Boro rice main field within 7-10 days of transplanting. Undertake sowing of summer groundnut. Undertake land preparation for summer green gram/black gram. Undertake harvesting of mustard crop when 75-80% siliquae turn yellow. Undertake harvesting of Niger crop when leaves die out, turn blackish in colour and the grains also turn black. Undertake harvesting of 125-135 days old Rabi groundnut crop if 75% of the pods are fully mature are ready for harvest.
    - 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, undertake land preparation for sowing of black gram and green gram. Undertake land preparation for okra, Ridge gourd and Sponge gourd.
    - 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, apply one irrigation at 7-10 days of transplanting in Boro paddy to facilitate gap filling of dead hills and maintain 5±2 cm of standing water in the field up to 7-10 days before harvest. Undertake land preparation for Summer vegetables, Capsularis jute, Summer Green gram and Black gram and sowing of Pointed gourd. Apply second irrigation to wheat crop at vegetative, 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. Replant dead hills in Boro paddy field within 7-10 days of transplanting. 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. Undertake nursery sowing of coconut.
    - In the Lower Brahmaputra Valley Zone, spray Phosphamidon 100 EC @ 0.05% (i.e., 250-300 ml per 500-600 litre of water per hectare or 33-40 ml per 65-80 litre of water per bigha) for aphids and stem borer in wheat crop at heading stage.
    - In the Hill Zone of Assam, spray Propiconazole 25 EC (Tilt 25 EC) @ 0.1 % for protection against yellow rust, powdery mildew and karnal bunt disease in wheat crop at heading stage.
    - In the Central Brahmaputra Valley Zone, apply Dimethoate 30EC or Chloropyriphos 20EC @1ml per litre of water during afternoon hours to control aphids in wheat crop at vegetative and ear head stage.
    - In the North Bank Plain Zone, spray Mancozeb 75% a.i. (2.5g/litre of water) at an interval of 12 days for controlling the late blight of Potato at maturity stage.
  - **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. 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 and undertake sowing of French bean and okra crop. Undertake harvesting of well-filled green pods of field pea, lentil and black gram(late variety).
    - In Mizoram, continue harvesting of ginger, turmeric, banana, khasi mandarin, acid lime, star fruit, plum and peach. Provide irrigation to maize at tassel formation stage, to green/black gram, soybean and toria at flowering stage; French beans at vegetative stage and vegetable crops at vegetative to flowering stage. Provide weekly irrigation to coffee at fruiting stage and and rubber at vegetative stage.

- In Tripura, undertake transplanting of the young seedlings to the main field. Apply light irrigation. Apply irrigation and provide mulching to Rabi maize crop at tasselling stage. 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.
- In Tripura, spray Monocrotophos @ 2ml per liter of water at an interval of 15 days for aphid attack in mustard and lentil crops at grain-filling stage.
- **Animal Husbandry**
- In Meghalaya, provide artificial heating to poultry birds and vaccinate them against coccidiosis and Ranikheyth diseases. Vaccinate pigs against swine fever and cattle against FMD, Haemorrhagic Septicaemia, Black Quarter.
- 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:**
    - As rain/thundershower would occur at many places over Vidarbha on 12<sup>th</sup> February, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
    - As thunderstorm accompanied with hailstorm likely over Vidarbha on 11<sup>th</sup> and 12<sup>th</sup>, over Marathwada and Madhya Maharashtra on 12<sup>th</sup> February, advised to use hail net for orchard crops to protect from mechanical damage. Arrange mechanical support to young fruit plants, banana and vegetables and propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
    - In North Konkan, in transplanted rice, maintain 5 cm water level at tillering stage. In South Konkan undertake transplanting of 30 to 35 days old rice seedlings.
    - In Madhya Maharashtra, in view of hailstorm likely at isolated places over Madhya Maharashtra, farmers are advised to complete harvesting of *rabi* crops before 12<sup>th</sup> February and keep the produce in safer place. Complete sowing of summer groundnut and vegetables before 15<sup>th</sup> February.
    - In Marathwada, complete harvesting of rabi crops as early as possible. The harvested rabi crops like rainfed rabi sorghum, gram and pigeonpea should be collected and covered by plastics sheet to protect from unseasonal rains, store the threshed crops in safe place (warehouse). Complete harvesting of matured fruits and vegetables as early as possible. Spray 15 PPM GA to control fruit drop in citrus orchard. Complete harvesting of matured grapes as early as possible. To protect the grapevine from rainfall and hailstorm, cover the orchard with hail net.
    - In Vidarbha, continue harvesting of matured gram and keep the produce in safer place. Continue sowing of summer sesame and summer groundnut on anon rainy day.
    - In Konkan, to control hoppers, white fly and aphids in chilli, brinjal and tomato, spray Dimethoate @ 15 ml per 10 litres of water. Also spray 50 % Malathion @ 20 ml per 10 litres of water to control leaf eating beetles in watermelon.
  - **Gujarat:**
    - In North Saurashtra Zone, undertake land preparation for sowing of summer groundnut, sesame; undertake sowing of sesame when minimum and maximum temperature rises to 19°C and 30°C respectively. Undertake transplanting of brinjal, sowing of cluster bean and gourds. Continue harvesting of matured coriander.
    - In South Gujarat Heavy Rainfall zone, continue transplanting of summer rice. Carry out weeding in pulses as per need and earthing up in cole crops. Ploughing in sapota orchards is recommended to remove weeds.
    - In South Saurashtra Zone, undertake harvesting of matured pigeon pea and coriander. Apply irrigation in chickpea at regular interval.
    - In South Gujarat Zone, for higher flowering in mango crop spray 0.5 % urea solution. Spraying of 2 % urea or Potassium sulphate is advised for proper growth of pods of pea crop.
    - In Middle Gujarat Zone, undertake harvesting of matured capsules of castor crop.

- In Bhal and Coastal Zone, apply light irrigation in mustard (pod development stage) and cumin in clear sky. Continue harvesting of matured spikes of castor and picking of matured bolls of cotton.
- In North Gujarat Zone, continue land preparation for sowing of summer crops. Undertake sowing of vegetable (okra, cluster bean and bottle gourd) crops. Continue picking of matured cotton bolls and harvesting of matured spikes of castor in North Gujarat Zone and North West Zone of Gujarat.
- 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 North Gujarat Zone and in North West Zone of Gujarat, under increasing temperature condition, there are chances of aphid infestation in the cumin, potato and mustard crops; for effective control, spray Dimethoate @ 10 ml or Phosphamidon @ 3 ml/10 liters 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:**
  - As rain/thundershower would occur at many places over East Madhya Pradesh on 12<sup>th</sup> and 13<sup>th</sup> February, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops.
  - As thunderstorm accompanied with hailstorm likely over Madhya Pradesh on 12<sup>th</sup> February, provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds, use hail net for orchard crops to protect from mechanical damage.
  - **Madhya Pradesh:**
    - In Nimar Valley Zone, apply 4<sup>th</sup> irrigation in wheat. Undertake sowing of green gram, black gram and groundnut.
    - In Kymore Plateau and Satpura Hill Zone, apply light irrigation in vegetable crops and orchards in the night. Apply irrigation in late sown wheat followed by urea application after rain.
    - In Vindhya Plateau Zone, undertake harvesting of early varieties of red gram. Apply light irrigation in vegetable crops.
    - In Grid Zone, undertake nursery sowing of summer vegetables. Apply irrigation in standing *rabi* crops.
    - In Bundelkhand Zone, undertake sowing of vegetables like bitter gourd, pumpkin etc.
    - In Satpura Plateau Zone, undertake sowing of 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 planting of spring sugarcane and sowing of groundnut and maize.
    - In Central Narmada Valley Zone, apply 2<sup>nd</sup> top dressing of urea in normal sown and 1<sup>st</sup> 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 4<sup>th</sup> irrigation in wheat at milk stage. Apply irrigation and recommended dose of fertilizers in winter vegetables. Undertake nursery preparation for vegetables like tomato, chilli, brinjal, cauliflower, cabbage etc. Continue digging up of matured rhizomes of ginger. Undertake harvesting of matured mustard and gram.
    - In Satpura Plateau Zone, for control of purple blotch of onion, spray Saaf fungicide @ 2 g per litre of water on a non rainy day.
    - 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 planting of sugarcane. Apply irrigation in wheat (heading stage), field pea, gram, lentil, linseed, safflower and sunflower. Undertake harvesting of matured mustard crop when siliqua turns into bright yellow colour and dry the harvested crop in sun for 2-3 days before threshing.
    - In Chhattisgarh Plain Zone, apply irrigation in wheat (40-45 days old) crop and in groundnut.
    - In Bastar Plateau Zone, for control of powdery mildew disease in pea crop broadcast Sulphur (200 mes) dust @ 25 - 30 kg/ha on a non rainy day.
    - In Chhattisgarh Plain Zone, there are chances of mustard aphid outbreak for its control spray Dimethoate 30 EC @ 1000 ml/hectare on a non rainy day.
- **Animal Husbandry**
  - In Madhya Pradesh, provide mineral mixture and fresh and clean water to birds. Vaccinate the poultry birds to prevent Ranikhet disease. Get all the animals vaccinated against foot and mouth disease (FMD).

- In Chhattisgarh, feed the cattle with dried fodder chaff cutting mixed with legume fodder such as Berseem, Lucerne etc.

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

- **Realised Rainfall:** Weather remained mainly dry/dry over the region during the week.
- **Advisories:**
  - As thunderstorm accompanied gusty winds very likely at isolated places over Telangana on 11<sup>th</sup> and 12<sup>th</sup> February, provide support to banana, young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds.
  - **Kerala:**
    - In the Problem Area Zone, continue harvesting of mature nutmeg fruits. Continue harvesting of pepper when some of the berries in the spike turn red. Provide irrigation to banana and coconut as per requirement.
    - In the Central Zone, undertake harvesting of ginger, turmeric, pepper etc.
    - In the Southern Zone, undertake harvesting of Mundakan rice. Cow pea and other vegetables can be raised after harvesting rice. Provide shade to small rubber plants. Apply irrigation to banana, coconut and vegetable crops.
    - In the Problem Area Zone, look for the presence of rice bug in the rice fields during early ear bearing stage. If the bug is observed in large numbers, apply Carbaryl 4g/ litre of water. 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 Central Zone, apply 2% neem oil-garlic soap emulsion for control of aphids in vegetables.
    - In the Southern Zone, to control leaf eating caterpillar in cool season vegetables, spray any neem based pesticide. For control of fungal disease in rubber tapping panel, apply Copper oxy Chloride or Bordeaux mixture. Apply lime on the stem of 2- 3 year old plants.
    - In the Northern Zone, apply Azadiractin 3000ppm stock after diluting in water @ 3ml/litre for rice bug in paddy at grain filling stage. For better result, add and stir one to two ml of Malathion 50EC per litre of the diluted Azadiractin solution before applying. Carry out spraying in the evening hours, immediately after sunset.
  - **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 North Coastal Zone, complete the sowing of sesame crop as early as possible. Undertake planting of sugarcane after sett treatment with Propiconazole @ 1.0 ml/litre for 15 minutes before planting.
    - In the Krishna Godavari Zone, spray Tricyclozole @ 120 g or Isoprothiolin/Kasugamycin 50 EC @ 400 ml per acre for leaf blast in Rabi rice at active tillering stage.
    - In the Southern Zone, the present weather conditions are favourable for stem borer attack in paddy. To control, spray Chlorpyrifos @ 2.5 g or Acephate @ 1.5 g per litre of water. 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 Chlorpyrifos @ 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 Mancozeb @ 500 g or Hexaconazole @ 400 ml per acre at 30-35 DAS followed by application of Propiconazole @ 200 g per acre at 50-55 DAS for Corynospora leaf spot in rabi pulses at flowering – pod development stage and in rice fallow pulses at vegetative-flowering stage. Spray Profenophos @ 400 ml or Chlorpyrifos @ 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.
    - In the North Coastal Zone, spray Dimethoate @ 2.0 ml/litre for sucking pest; Chlorpyrifos @ 2.5 ml/litre + Dichlorvos @ 1.0 ml/litre for Maruca pod borer and Carbandezam @ 1 gm/ litre or Kerathane @ 2 ml/ litre for Powdery mildew in rice fallow pulses at pod development stage.
  - **Telangana:**
    - In North Telangana Zone, maintain shallow depth of water at the time of transplanting. Provide irrigation during flowering and grain filling stage in sorghum crop and enough irrigation at pegging to pod development stage in groundnut crop. Undertake sowing of sesame crop up to mid-February.
    - In South Telangana Zone, prevailing dry weather conditions are favorable for incidence of aphids in maize. To control, spray Chlorpyrifos @ 2 ml or Acephate @ 1.5 g per litre of water. Incidence of Diamond Back Moth is noticed in Cabbage and Cauliflower. To control, spray Acephate @ 1.5 g or Spinosad @ 0.3 ml per litre of water before 15 days of harvesting of the crop.

- In North Telangana Zone, spray Tricyclazole @ 0.6 g or Isoprothiolane @ 1.5 ml or Kasugamycin @ 2.5 ml per litre. Spray Chlorothalonil @ 2 g or Pyraclostrobin @ 1g/litre of water for early blight in tomato crop. Spray Flubendamide @ 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, moderate rainfall is expected during this week. Increasing wind speed associated with rainfall may cause lodging in Banana of above 5 months. Provide adequate support. Postpone irrigation to already irrigated plants. Considering the favourable temperature and relative humidity, planting of mid season sugarcane may be initiated.
- In the High Rainfall Zone, as heavy rainy weather is expected in the coming days, strengthening the basins for horticulture crops, coconut, fruit trees and tree spices may be taken up for better harvesting of rains.
- In the Cauvery Delta Zone, rice varieties ADT 43 and ADT 45 are suitable for summer paddy cultivation.
- In the North Eastern Zone, to control blast disease in rice, spray Carbendazim 50 WP or Tricyclozole 75 WP or Metominostrobin 20 SC or Azoxystrobin 25 SC @ 1 gram or 1 ml per litre of water. To control the incidence of sucking pest in the vegetable crops, spray neem seed kernel extract 5 %.
- In the North Western Zone, incidence of termite is observed in tapioca field due to the drought condition. Farmers are advised to do soil application of neem cake @200 kg/acre or soil drenching at the base of the affected plants with Chlorpyrifos @ 2ml/liter of water.
- In the High Rainfall Zone, spray Chlorantraniliprole 18.5 SC @ 0.3ml/litre if leaf folder infestation is noticed in rice. Prevailing weather condition is favorable for hopper incidence in mango hence farmers are requested to monitor the crop and apply dusting of Malathion 5% if required.
- In the Southern Zone, there are chances for Light rain to heavy rain during the next 5 days, farmers are advised to postpone the spraying and fertilizer application work, and plan to harvest the rainwater, at least to manage the ground water level and the soil moisture condition of your field.
- In the South Zone, prevailing weather condition may favour Leafhopper incidence in cotton at boll bursting stage. To control spray Imidacloprid 200 SL 100 ml/ha or Fipronil 5% SC 1500-2000 ml/ha. For Cotton aphid attack at boll bursting stage, spray Dimethoate 30 EC 500ml/ha or Acetamiprid 20% SP 50 g/ha.
- In the Southern Zone, to control Semilooper in Bengal Gram, collect and destroy larvae and adults to the extent possible. Install pheromone traps at a distance of 50 m @ 5 traps/ha, install Bird perches @ 50/ha and set light traps @1 light trap/5 acre to kill moth population. Spray Quinalphos 25 EC @ 1000 ml/ha.
- **Karnataka:**
- In Southern Dry Zone, undertake nursery bed preparation for sowing of ragi (KMR-304, 301, Indof -9, GPU-28) and for rice (MTU-1000,1001,KRH-4,IR-64 varieties). Due to cold weather condition there is stunted growth in tomato, brinjal, chili crops; to overcome, application of 10-20% more than recommended dose of Nitrogen and Potash fertilizers is recommended.
- In Southern Transition Zone, continue transplanting of summer rice and harvesting of matured sugarcane and 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 (grain filling) and late sown Bengal gram crop.
- In North East Transition Zone, provide protective irrigation to sorghum crop.
- In North Dry Zone and Central Dry Zone, continue harvesting of matured fruits of chili.
- In North East Dry Zone, continue planting of sugarcane.
- In Southern dry Zone, there is a possibility of occurrence of powdery mildew and hoppers in mango crop; for control, spray wettable Sulphur @3gm/litre and Rogar @ 1.5ml/litere of water respectively.
- In Eastern Dry Zone, spray Lamda Cyhalothrin 5EC @ 0.5 ml/ litre of water or Sulphur dust (SULTAF) 80 W @ 3g/litre of water against the powdery mildew disease in mango crop.
- 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 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 Eastern Dry Zone of Karnataka, maintain the optimum room temperature in sericulture, poultry and dairy unit.

- 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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