



# *National Agromet Advisory Service Bulletin*

*Friday 1<sup>st</sup> March 2019*  
*(For the period 1<sup>st</sup> to 6<sup>th</sup> March 2019)*



*Issued by*  
*India Meteorological Department*

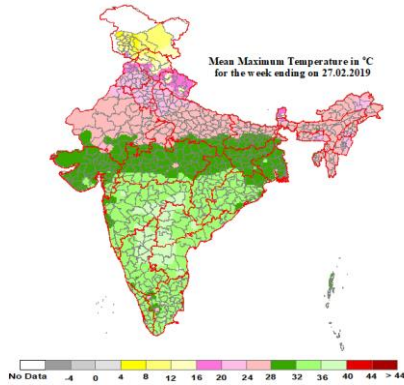
**Weblink For**

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

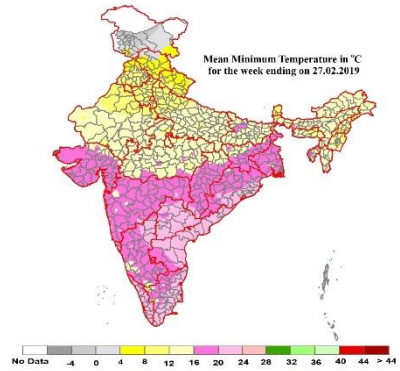
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

**Spatial distribution of weather parameters for the week ending on 27.02.2019**

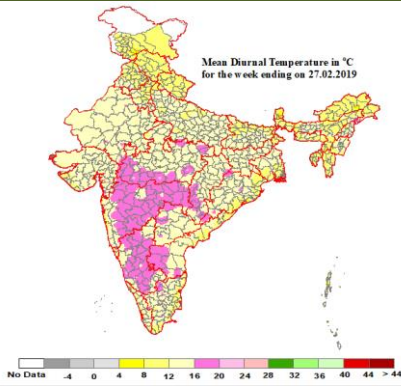
**Mean Maximum Temperature (°C) for the week ending on 27.02.2019**



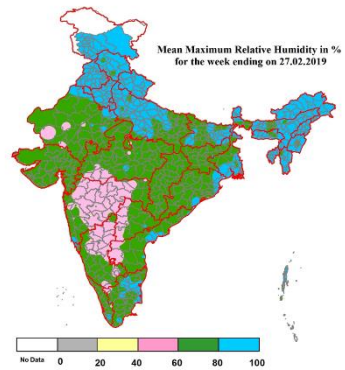
**Mean Minimum Temperature (°C) for the week ending on 27.02.2019**



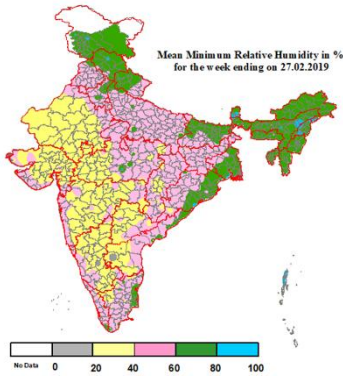
**Mean Diurnal Temperature Variation (°C) for the week ending on 27.02.2019**



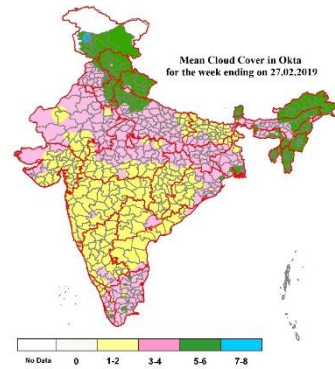
**Mean Maximum Relative Humidity (%) for the week ending on 27.02.2019**



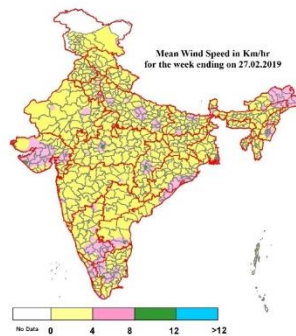
**Mean Minimum Relative Humidity (%) for the week ending on 27.02.2019**



**Mean Cloud Cover (okta) for the week ending on 27.02.2019**

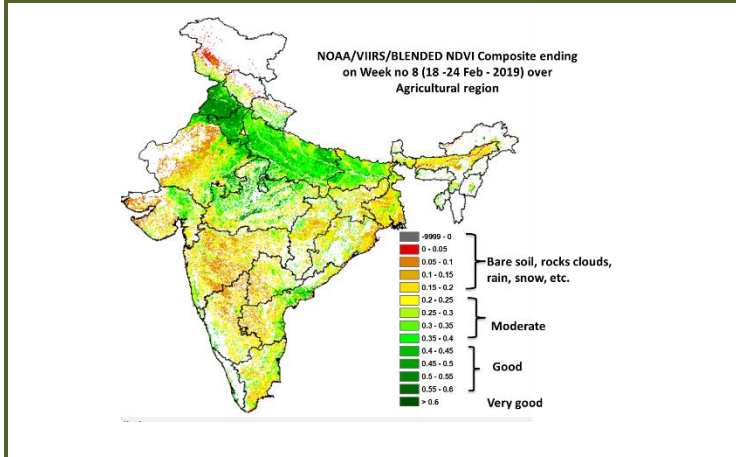


**Mean Wind Speed (km/hr) for the week ending on 27.02.2019**



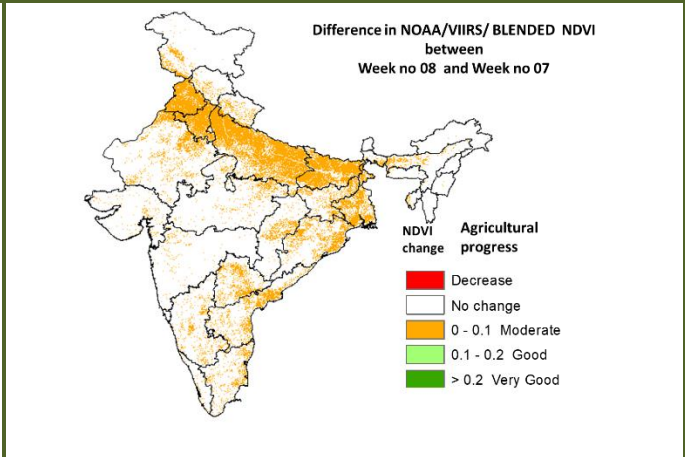


**NOAA/VIIRS BLENDED NDVI composite for the week number 08 (18 - 24 February) over Agricultural regions of India**



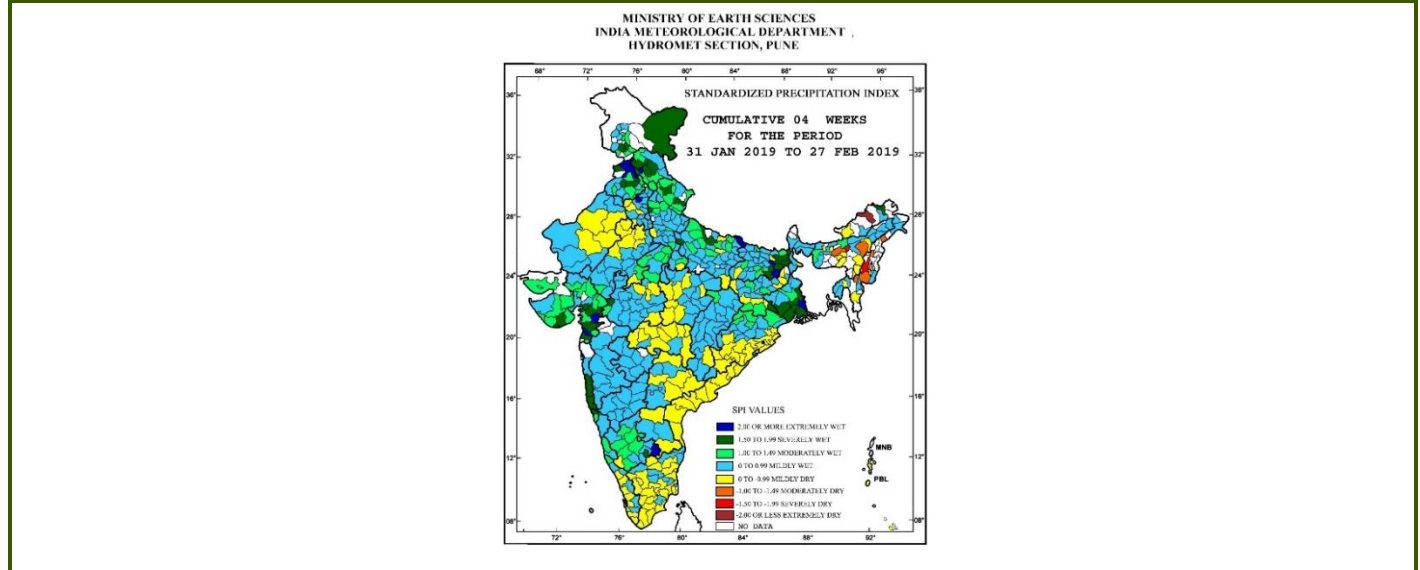
- Agriculture vigour is good at many places over Punjab, Haryana & Uttar Pradesh; at a few places over Madhya Pradesh, North Coastal Andhra Pradesh & East Rajasthan; at isolated places over Bihar, Northern part of Gujarat, South Coastal Andhra Pradesh, Konkan, Coastal Karnataka, South Kerala & Telangana.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

**Difference in NOAA/VIIRS/BLENDED NDVI between week number 08 and week number 07**



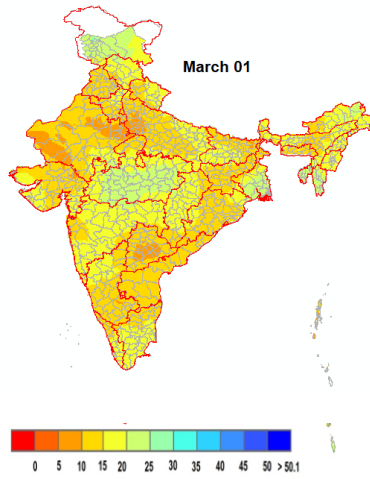
- Moderate difference in agricultural vigour was noticed at most places over Punjab & Haryana; at many places over Uttar Pradesh, Bihar & West Bengal and at a few to isolated places over rest of the country.

**Standardised Precipitation Index Cumulative 4 weeks for the period 31<sup>st</sup> January to 27<sup>th</sup> February 2019**

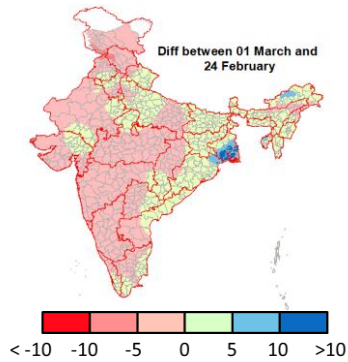
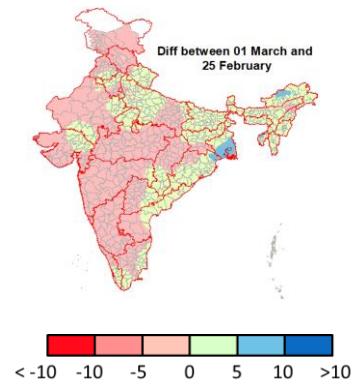
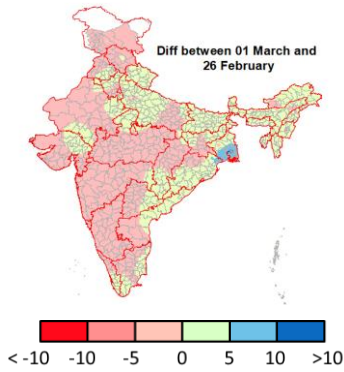
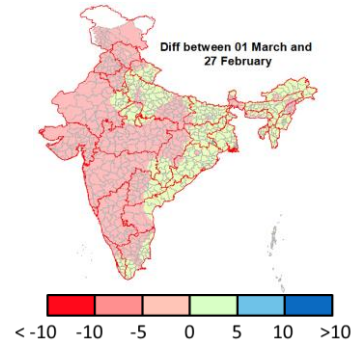
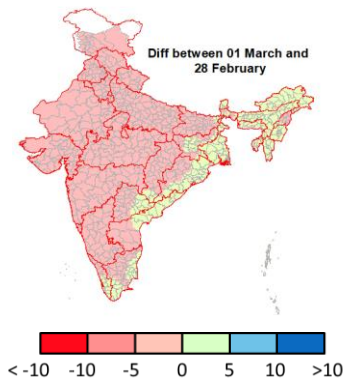


- Extremely/severely wet conditions experienced at a few districts of West Bengal; Bihar; Punjab; Himachal Pradesh; Upper Siang district of Arunachal Pradesh; East Singbhum district of Jharkhand; Bahraich, Gonda, Kannauj, Baghpat districts of Uttar Pradesh; Almora, Garhwal Tehri districts of Uttarakhand; Kaithal district of Haryana; Ladakh (Leh), Reasi, Ramban districts of Jammu & Kashmir; Jhabua district of Madhya Pradesh; Bangalore Urban, Kolar districts of Karnataka.
- Extremely/Severely dry conditions experienced in Upper Subansiri district of Arunachal Pradesh; Morigaon, districts of Assam; Tamenglong district of Manipur.
- Moderately dry conditions experienced in Kamrup, Karbi Anglong districts of Assam; Kolasib district of Mizoram; Churachandpur district of Manipur; Mon district of Nagaland.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

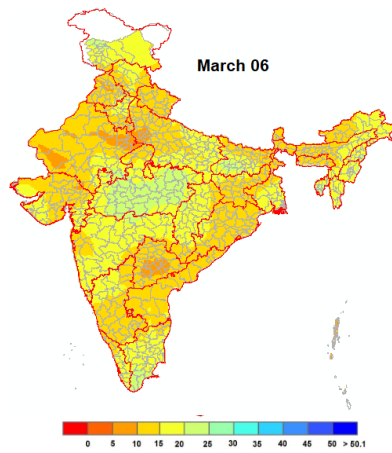
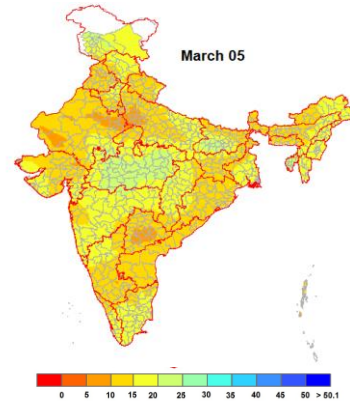
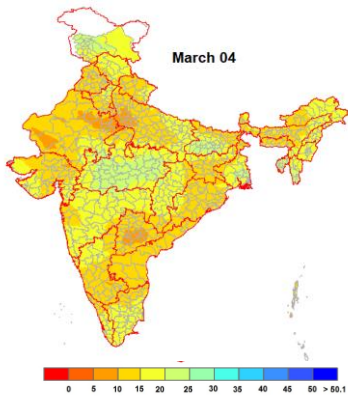
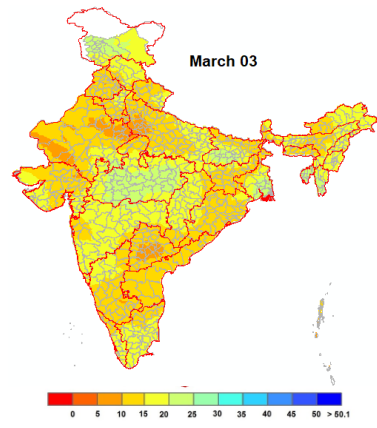
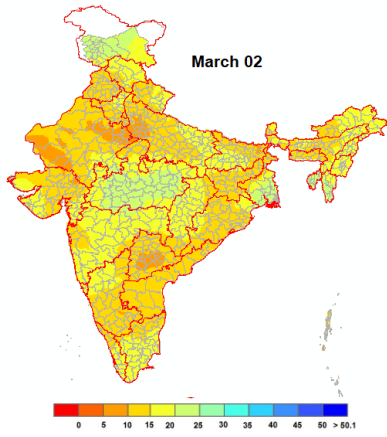
**Daily Soil Moisture (mm) for 1<sup>st</sup> March 2019 (ending at 0830 IST) for 60 cm depth**



**Difference of Soil Moisture (mm) for 60 cm depth**



**Forecasted Soil Moisture (mm) from 2<sup>nd</sup> to 6<sup>th</sup> March 2019 (ending at 0830 IST)  
for 60 cm depth**



**Weather Forecast for next 5 days valid upto 0830 hours of 6<sup>th</sup> March 2019**

- Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table below.
- Maximum temperatures are likely continue to remain above normal by 2-4°C over northwest & east India during next 2-3 days; by 2-3°C over central and west India during next 24 hours and no significant change thereafter.

**5 Day Rainfall Forecast (Mid-day)**

**1<sup>st</sup> March 2019**

Met-Sub-Division	01-Mar Today	02Mar Sat	03Mar Sun	04Mar Mon	05Mar Tue
1. Andaman & Nicobar Islands	DRY	ISOL	ISOL	DRY	DRY
2. Arunachal Pradesh	SCT	ISOL	ISOL	SCT	FWS
3. Assam & Meghalaya	ISOL	DRY	DRY	ISOL	SCT
4. N. M. M. & T.	ISOL	DRY	DRY	ISOL	FWS
5. S.H. West Bengal & Sikkim	ISOL	DRY	ISOL	ISOL	SCT
6. Gangetic West Bengal	DRY	DRY	DRY	FWS	FWS
7. Odisha	ISOL	DRY	ISOL	ISOL	ISOL
8. Jharkhand	DRY	DRY	ISOL	SCT	SCT
9. Bihar	DRY	DRY	DRY	ISOL	ISOL
10. East Uttar Pradesh	DRY	ISOL	ISOL	ISOL	DRY
11. West Uttar Pradesh	DRY	SCT	SCT	ISOL	DRY
12. Uttarakhand	DRY	FWS	WS	FWS	SCT
13. Haryana, Chd & Delhi	DRY	FWS	SCT	ISOL	DRY
14. Punjab	ISOL	WS	SCT	ISOL	DRY
15. Himachal Pradesh	ISOL	WS	WS	SCT	ISOL
16. Jammu & Kashmir	SCT	WS	WS	SCT	ISOL
17. West Rajsthan	ISOL	SCT	ISOL	DRY	DRY
18. East Rajasthan	DRY	ISOL	ISOL	DRY	DRY
19. West Madhya Pradesh	DRY	ISOL	ISOL	DRY	DRY
20. East Madhya Pradesh	DRY	DRY	ISOL	ISOL	DRY
21. Gujarat Region	DRY	DRY	ISOL	DRY	DRY
22. Saurashtra & Kutch	DRY	ISOL	ISOL	DRY	DRY
23. Konkan & Goa	DRY	DRY	DRY	DRY	DRY
24. Madhya Maharashtra	DRY	ISOL	DRY	DRY	DRY
25. Marathawada	DRY	ISOL	DRY	DRY	DRY
26. Vidharbha	DRY	ISOL	ISOL	DRY	DRY
27. Chhattisgarh	DRY	DRY	ISOL	ISOL	DRY
28. Coastal Andhra Pradesh	ISOL	ISOL	DRY	DRY	DRY
29. Telangana	ISOL	DRY	DRY	DRY	DRY
30. Rayalaseema	ISOL	DRY	DRY	DRY	DRY
31. Tamilnadu & Puducherry	ISOL	ISOL	DRY	DRY	DRY
32. Coastal Karnataka	DRY	DRY	DRY	DRY	DRY
33. North Interior Karnataka	DRY	DRY	DRY	DRY	DRY
34. South Interior Karnataka	ISOL	ISOL	DRY	DRY	DRY
35. Kerala	ISOL	ISOL	ISOL	ISOL	ISOL
36. Lakshadweep	DRY	DRY	DRY	DRY	DRY

**% Station Reporting Rainfall**

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

### **Weather Warning during next 5 days**

- **01 March (Day 1):** Thunderstorm accompanied with lightning & gusty winds at isolated places very likely over Tamilnadu, & Puducherry, Kerala, Coastal Andhra Pradesh, West Madhya Pradesh and Jammu & Kashmir. Cold day conditions very likely at isolated places over Punjab. Squally winds speed reaching 40- 50 kmph very likely to prevail over North Arabian Sea. Fishermen are advised not to venture into this area.
- **02 March (Day 2):** Thunderstorm accompanied with hailstorm & lightning at isolated places very likely over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh and north Rajasthan. Thunderstorm accompanied with lightning & gusty winds at isolated places very likely over Tamilnadu, & Puducherry, West Madhya Pradesh and Vidharbha. Heavy rain/snow at isolated places likely over Jammu & Kashmir and Himachal Pradesh. Squally winds speed reaching 40- 50 kmph very likely to prevail over North Arabian Sea. Fishermen are advised not to venture into this area.
- **03 March (Day 3):** Thunderstorm accompanied with Hailstorm & lightning at isolated places very likely over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh and north Rajasthan. Thunderstorm accompanied with lightning & gusty winds at isolated places very likely over Kerala, East Madhya Pradesh and Vidharbha.
- **04 March (Day 4):** Thunderstorm accompanied with Hailstorm & lightning at isolated places likely over Gangetic West Bengal. Thunderstorm accompanied with lightning & gusty winds at isolated places likely over Gangetic West Bengal, Bihar, Jharkhand and Odisha. Heavy rain at isolated places likely over Gangetic West Bengal.
- **05 March (Day 5):** Thunderstorm accompanied with Hailstorm & lightning at isolated places likely over West Bengal & Sikkim. Thunderstorm accompanied with lightning & gusty winds at isolated places likely over West Bengal & Sikkim, Bihar, Jharkhand and Odisha. Thundersquall accompanied with lightning & gusty winds at isolated places likely over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

### **Weather Outlook for subsequent 2 days from 6<sup>th</sup> to 8<sup>th</sup> March 2019**

- Scattered to fairly widespread rain/snow likely over Western Himalayan Region; isolated rain/thundershowers over plains of northwest, central and south Peninsular India.
- Scattered to fairly widespread rain/thundershowers likely over east and northeast India.
- Dry weather likely over rest of the country.



### Salient Advisories

- As squally winds speed reaching 40- 50 kmph very likely to prevail over **North Arabian Sea** on 1<sup>st</sup> and 2<sup>nd</sup> March, fishermen are advised not to venture into this area.
- As thunderstorm accompanied with hailstorm & lightning at isolated places very likely over **Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh** and **north Rajasthan** on 2<sup>nd</sup> and 3<sup>rd</sup>, over **Gangetic West Bengal** on 4<sup>th</sup>, over **West Bengal & Sikkim** on 5<sup>th</sup> March, use hail net for orchard crops to protect from mechanical damage and provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.
- As thunderstorm accompanied with lightning and gusty winds at isolated places very likely over **Jammu & Kashmir** on 2<sup>nd</sup>, over **Gangetic West Bengal** on 4<sup>th</sup>, over **Bihar, Jharkhand** and **Odisha** on 4<sup>th</sup> and 5<sup>th</sup>, over **West Bengal & Sikkim** on 5<sup>th</sup> March, over **Tamilnadu, & Puducherry** on 1<sup>st</sup> and 2<sup>nd</sup>, over **Coastal Andhra Pradesh** on 1<sup>st</sup>, over **Kerala** on 1<sup>st</sup> and 3<sup>rd</sup>, over **Vidarbha** on 2<sup>nd</sup> and 3<sup>rd</sup>, over **West Madhya Pradesh** on 1<sup>st</sup> and 2<sup>nd</sup>, over **East Madhya Pradesh** on 3<sup>rd</sup> March, over **Assam & Meghalaya** and **Nagaland, Manipur, Mizoram & Tripura** on 5<sup>th</sup> March, provide mechanical support to banana, young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.
- As rain/snow likely at most places over **Jammu & Kashmir** and **Himachal Pradesh** on 2<sup>nd</sup> and 3<sup>rd</sup>, at most/many places over **Uttarakhand** from 2<sup>nd</sup> to 4<sup>th</sup>, rain/thundershowers likely at most places over **Punjab** on 2<sup>nd</sup> and at many places over **Haryana, Chandigarh** and **Delhi** on 2<sup>nd</sup>, along with heavy rain/snow at isolated places over Jammu & Kashmir and Himachal Pradesh on 4<sup>th</sup> March, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crops in Jammu & Kashmir and Himachal Pradesh.
- As rain/thundershowers is likely at many places over **Arunachal Pradesh** and **Nagaland, Manipur, Mizoram & Tripura** on 5<sup>th</sup> March, over **Gangetic West Bengal** on 4<sup>th</sup> and 5<sup>th</sup>, along with heavy rain at isolated places over Gangetic West Bengal on 4<sup>th</sup> March, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- In Middle **Gujarat**, undertake land preparation for sowing of sesame and keep inputs ready. Continue harvesting of matured mustard and castor capsules. In **North Gujarat**, undertake land preparation for sowing of summer groundnut (G.G.-2 or T.G.-37), pearl millet (GHB-526 and GHB-558) and sesame (Gujarat Til 3) crops.
- In Cauvery Delta Zone of **Tamil Nadu**, as mainly dry weather condition is expected in the next five days, harvesting of matured Samba/Thaladi paddy can be taken up. Undertake harvesting of matured Sorghum, Gram, Safflower crops in clear weather in **Punjab**.

### Detailed Agromet Advisories

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

- **Realised Rainfall:** Weather remained mainly dry/dry over the region during the week.
- **Advisories:**
  - As thunderstorm accompanied with lightning and gusty winds at isolated places very likely over Tamilnadu & Puducherry on 1<sup>st</sup> and 2<sup>nd</sup>, over Coastal Andhra Pradesh on 1<sup>st</sup>, over Kerala on 1<sup>st</sup> and 3<sup>rd</sup> March, provide mechanical support to young fruit plants, banana and staking in vegetables to prevent the crops from lodging due to strong winds.
  - **Kerala:**
    - Undertake planting of ginger turmeric vegetables as intercrop in irrigated coconut gardens. Apply mulch and protect the plants from the scorching sun. Providing adequate supply of water is essential for proper growth in



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

- In High Altitude Zone, this is an ideal time for planting of pepper. Also keep the fields ready for ginger plantation.
- In Central Zone, due to the increase in temperature, there are chances of incidence of sigatoka leaf spot, panama wilt and rhizome rot in banana. For managing sigatoka, remove the affected leaves and spray 0.4% Mancozeb along with sticker at intervals of 2 to 3 weeks. If disease incidence is severe, spray 0.1% Propiconazole. For the management of fusarium wilt, remove severely affected plants and drench 1% Bordeaux mixture.
- In Southern Zone, the regions where transplanting is undertaken in rice during virippu, green manuring crops like dhaincha can be sown now which can be incorporated into the soil at its flowering stage. It increases the organic matter content of the soil.
- As there is an increase in atmospheric temperature, attack of sucking pests like aphids, mealy bugs, thrips etc. is expected in vegetables. To control these sucking pests, Thiamethoxam 25 WG @ 2 gram/ 10 litre of water can be sprayed or spray neem garlic emulsion by mixing 20 ml neem oil, 20 gram garlic and 5 gram bar soap in one litre of water.
- **Andhra Pradesh:**
  - In North Coastal Andhra Pradesh, weather is congenial for incidence of rice blight on rice. Spray Hexaconazole @ 2.0 g. or Propiconazole @ 1.0 ml per litre of water.
  - In South Coastal Andhra Pradesh weather is congenial for incidence Leaf Webber on Sesamum To control the pest infestation spray monocrotophos @ 320 ml or Quinalphos @ 400 ml per acre.
  - In Rayalaseema, due to increasing day temperatures there is possibility of occurrence of Leaf folder in groundnut. To control leaf folder spray Qinalphos @ 2 ml/Chloripyriphos @ 2 ml/Novaluran @ 1 ml/litre of water.
- **Telangana:**
  - In Telangana, prevailing weather conditions are congenial for the incidence of stem borer in rice. If noticed control it by spray Cartap Hydrochloride @ 2 g or Chlorantriliprole @ 0.4 ml per litre of water.
  - In Telangana, prevailing dry weather conditions are congenial for incidence of wilt in Bengalgram. Remove infected plants and drench the soil with copper oxy chloride @ 3 g per litre of water around the infected plants.
- **Tamil Nadu:**
  - In Cauvery Delta Zone, mainly dry weather condition is expected in the next five days, harvesting of matured *Samba/Thaladi* paddy can be taken up.
  - In Coastal Zone, to control blast in rice, spray Carbendazim 50 WP or Tricyclozole 75 WP or Metominostrobin 20 SC or Azoxystrobin 25 SC @ one gram or one ml in one litre of water.
  - Due to increasing temperature, irrigation may be continued to all crops according soil moisture status and do mulch to prevent soil moisture. Due to rising temperature, sucking pest may appear in transplanted Navarai season rice. To control, spray Phosphamidon 40SL @ 600 ml/ha.
  - Due to the prevailing weather condition the incidence of fruit borer is expected in Bhendi. The symptom of damages are, terminal shoots wither and droop, shedding of buds and flowers, bore hole in fruits and deformed fruits, spray BT. Kurstaki @ 60ml per 100 litre of water per acre.
  - In High Rainfall Zone, due to the prevailing weather conditions, there are chances for increase in the severity of infection of rice stem borer, spray Chlorantriliprole 0.3 ml/l or Flubendiamide 0.1ml / litre of water.
- **Karnataka:**
  - In Coastal Karnataka, continue deep ploughing in harvested rice field. Apply irrigation in the arecanut, coconut and black pepper gardens either in furrows or by drip irrigation.
  - In North Interior Karnataka, apply irrigation in summer groundnut, sugarcane, mango (mustard size) crop. Complete harvesting of early sown sorghum, safflower, chick pea crops and cabbage as early as possible. Continue sowing of water melon and fodder crops.
  - In South Interior Karnataka, apply irrigation in mango (marble size) orchards. Continue transplanting of rice seedlings. Most of the rice growing soil is deficit of Zinc; apply Zinc Sulphate @ 8kg /acre. Continue harvesting of matured ginger, turmeric and pepper.
  - In North Interior Karnataka, due to increase in temperature incidence of powdery mildew is noticed in mango crop; spray Hexaconazole 5EC @ 1 ml/litre of water. For management of Brown plant hopper in rice, spray Chloropyriphos 20 EC @ 2.0 ml or Monocrotophos 36SL @1.5 ml dissolved in one liter of water.
- **Animal Husbandry**
  - In Karnataka, maintain proper ventilation for free circulation of air in the sheds. Keep the cattle shed clean.
  - In Southern Zone of Tamil Nadu, due to the prevailing weather condition, cattle may be affected with tiredness; hence the cattle rearers are advised to feed their calf with 30 gms of mineral mixture per day. Also, de-worm your calf in regular schedule with the support of nearby veterinarian.

- **Realised Rainfall:** Rainfall occurred in Changlang, East Siang, Kurung Kumey, Lohit, Upper Siang and West Siang districts of Arunachal Pradesh, Chirang and Tinsukia districts of Assam, Aizwal and Champhai districts of Mizoram, all districts of Tripura during the week. Weather remained mainly dry over rest of the region.
- **Advisories:**
  - As rain/thundershowers is likely at many places over Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura on 5<sup>th</sup> March, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
  - As thunderstorm accompanied with lightning and gusty winds at isolated places very likely over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 5<sup>th</sup> March, provide mechanical support to young fruit plants, banana and staking in vegetables to prevent the crops from lodging due to strong winds.
  - **Arunachal Pradesh:**
    - Continue sowing early/local maize, early *kharif* vegetables and cowpea and harvesting of turmeric, ginger, pea and potato at the earliest.
  - **Assam:**
    - In Assam, continue sowing of summer vegetables (cucumber, okra, ridge gourd and sponge gourd). Maintain around 5 cm of standing water in the field of *boro* rice 2-3 days after transplanting to 7-10 days before harvesting. Also continue land preparation and sowing of summer green and black gram and planting of banana.
    - In Lower Brahmaputra Valley of Assam, undertake land/ bed preparation for sowing of transplanted early *ahu* rice and land preparation/ sowing of *kharif* maize.
    - In Barak Valley Zone of Assam, undertake land preparation for sowing of *ahu* rice.
    - In North Bank Plain Zone of Assam, undertake ploughing the main field for transplanted *ahu* rice to conserve moisture. Undertake field preparation and sowing of the seeds of directed seeded *ahu* variety like Banglami, Puthichapali, Nilajee, Hasakumra etc.
    - In Upper Brahmaputra Valley of Assam, continue harvesting of matured potato and *rabi* pulses. Undertake land preparation/ planting of sugarcane and land preparation for sowing of maize.
    - In Central Brahmaputra Valley of Assam, undertake gap filling of dead hills at 7-10 days of transplanting. Maintain 5±2 cm of standing water in the field. Continue land preparation for sowing of Capsularis jute and harvesting of matured pods of rapeseed-mustard at the earliest.
    - In Barak Valley Zone of Assam, spray Chlorpyrifos 20 EC against stem borer attack on rice on a non rainy day.
    - In Lower Brahmaputra Valley of Assam, apply Chloropyrifos 20EC at the concentration of 0.02% solution against stem borer infestation in *boro* rice.
    - In Hill Zone of Assam, spray Dithane M 45 @ 2.5 grams per litre of water against rust disease in wheat crop when sky remains clear. In present weather condition farmers are advised for constant monitoring of pod borer in gram crop at flowering/pod formation stage. Farmers are advised to install pheromone traps @ 3-4 traps per acre for monitoring of the pest population for diamond back moth in Cole crop, pod borer in pea/ gram and fruit borer in tomato.
  - **Meghalaya:**
    - Continue nursery raising/ transplanting of tomato and capsicum and harvesting of cole crops (cabbage, cauliflower, broccoli), root crop (radish, carrot), pea, ginger and turmeric.
  - **Manipur:**
    - Continue nursery raising of pre-*kharif* rice and undertake transplanting of 20-25 days old seedling. Continue harvesting of matured rapeseed/mustard/field pea/lentil, potato.
    - To control stem borer in maize, apply few granules of Carbofuran 3G at maize whorl on a non rainy day.
  - **Mizoram:**
    - Apply Carbaryl 0.2 per cent or Malathion 0.15 per cent suspension containing sugar or jaggery @10 g/litre at fortnightly intervals on citrus fruits at flowering and fruit initiation stage. Spray 2% any Sulphur based fungicide to save vegetable plant (tomato, crucifer, onion, brinjal and chill) to save from powdery mildew and white rust disease attack. Undertake plant protection methods on a non rainy day.
  - **Tripura:**
    - Complete harvesting of *rabi* legumes (mustard, lentil etc.), potato, cole crops and tomato. Continue transplanting of seedlings of summer brinjal and tomato. Maintain 2 to 3 cm standing water in the field of *boro* rice.
    - Maintain optimum moisture in the field of *rabi* maize through irrigation at tasseling stage as this stage is sensitive to the moisture. Mulching is essential to hold the moisture in the field. To manage the attack of Stock rot in *rabi* maize at post silking stage, spray Mancozeb 2ml per litre of water on a non rainy day.
  - **Nagaland:**
    - Continue harvesting of matured pods of toria/mustard on a non rainy day.
    - Continue harvesting of cabbage/ winter vegetables timely as it may split if not harvested in time. Continue preparation of seedlings of cucurbitaceous vegetable.

- **Animal Husbandry**

- In Assam, vaccinate poultry against ranikhet disease during this period.
- In Barak Valley Zone of Assam, during this time, goat may be attack by Blister disease. which is generally viral disease that affect any age group of goat. The disease may be seen particularly in the facial/nasal area. To protect from the disease wash with Potassium per manganate (PP) and consult nearby Veterinary Dispensary for anti biotic cream and further treatment.

- **Fishery**

- In Barak Valley Zone of Assam, during this period fishes may be infected by fungal and bacterial disease. To overcome this, treated the infectious fishes with Potassium Permanganent (2 mg/100ml of water) or common salt (3 gm/100 ml of water).

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

- **Realised Rainfall:** Rainfall occurred in East Singbhum and West Singbhum districts in Jharkhand; in Balasore, Deogarh, Jharsuguda, Keonjhar, Mayurbhanj and Sundargarh districts of Odisha; in all districts of Gangetic West Bengal except Birbhum, Murshidabad and Purulia and in North Sikkim district of Sub-Himalayan West Bengal and Sikkim. Weather remained mainly dry/dry over the rest of the region during the week.
- **Advisories:**
  - As thunderstorm accompanied with hail storm and lightning at isolated places very likely over Gangetic West Bengal on 4<sup>th</sup>, over West Bengal & Sikkim on 5<sup>th</sup>, thunderstorm accompanied with lightning & gusty winds at isolated places likely over Gangetic West Bengal on 4<sup>th</sup>, over Bihar, Jharkhand and Odisha on 4<sup>th</sup> and 5<sup>th</sup>, over West Bengal & Sikkim on 5<sup>th</sup> March, use hail net for orchard crops to protect from mechanical damage. Provide mechanical support to banana, young fruit plants, staking in vegetables and propping in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.
  - **Odisha:**
    - Prepare the field for planting sugarcane. Irrigate sugarcane crop field after planting and continue irrigation at 7 days interval for better germination as dry weather is prevailing. Ragi seedlings at three week stage. Transplant the seedlings in lines at 20 cm apart and 10 cm between plants and irrigate the crop depending upon the soil moisture content. Rainfed mustard sown during October is at maturity stage. Go for harvesting, drying under sun for easy threshing and safe storage. Flowering has started in mango, considering the increasing rate of bright sunshine hours and dry weather; provide irrigation to mango orchards at an interval of 15 days for more fruiting. Onion crop is at five to nine week stage. Go for hoeing, weeding and 2nd top dressing with 23kg urea at 7-8 week stage followed by irrigation.
    - Green gram and black gram crops are at pod formation to seed development (eight to eleven week) stage. For aphids and white fly, spray 60ml Imidacloprid 17.8%SL or 50ml Thiamethoxam 25%WG mixing with 200 litres of water per acre crop area and for YMV infestation, uproot and destroy the infected plants and spray Imidacloprid 50ml/acre mixing with 200 litres of water. To keep watch on the stem borer infestation in summer paddy, fix 5 nos. of pheromone traps per acre crop area in the field. If dead heart damage is more than 5% , spray Chlorantraniliprole 18.5 S.C. 80ml per acre @ 0.4ml/litre of water or Cartraphydrochoride 50% S.P. 400g per acre @ 2g/litre of water.
  - **Bihar:**
    - In view of the expected rainfall, postpone irrigation to the timely sown wheat crop which is at flowering stage. Take up land preparation for sowing of summer vegetables. For healthy and good yield, apply of 1520 tonnes FYM during land preparation. Postpone digging out potato tubers from the field which is in matured stage. Avoid irrigation to gram crop at flowering stage. Carry out intercultural operation in vegetable crops. Continuesowing of summer maize, sunflower and summer vegetable such as okra, pumpkin, cucumber, sponge gourd ridge guard, bitter guard, etc.
    - For monitoring of the pod borer in the gram crop, farmers are advised to install Pheromone trap @ 3-4 traps per acre, if flowering has reached 10-15%. "T" shaped bird perches in and around crop field to be installed for controlling insect population. Late sown mustard Crops at flowering stage are vulnerable of the attack of Aphids. To control the aphids, spray Monocrotophos @ 2 ml per litre of water or Imidachloprid @ 1 ml per litre of water. In order to control Cut worm in wheat crop, apply Carbaryl 50 WP @800 gm/acre in 700-800 litres of water.
  - **Jharkhand:**
    - Maintain optimum water level in the paddy field. Broadcast Blue Green algae @ 4 kg per acre after 15 days of transplanting to curtail urea consumption. Prepare field for vegetables like long gourd, round gourd, bitter guard, sponge gourd, cucumber, water melon and musk melon. Continue sowing of improved mung variety SML-688. Avoid irrigation to gram crops. Irrigate wheat field as per the status of soil moisture. When potato plant leaves became yellow, harvest the crop and keep the tubers in shed at a hight of 1.2 to 2 ft for hardening of tuber skin. Carry out land preparation and sowing of okra (bhindi).

- To control Alternaria blight in wheat crop, spray Indofil M-45 or Diathen Z-78 @ 2 gm per litre water. To control fruit borer in tomato and shoot & fruit borer in brinjal, fix pheromone traps @ 12 nos, per acre or spray Imidachlorpid @ 1 ml/litre of water on a non rainy day. Mealy bugs are common in papaya, guava, mango, litchi and other flower plants. To control the insects, at first wet the soil near the root zone of the plant with Chlorpyrifos @ 4 ml per litre of water and also spray it on plant @ 2 ml per litre of water on a non rainy day. Do not pluck the fruits within 15 days of spraying.
- **West Bengal:**
  - As rain/thundershowers is likely at many places over Gangetic West Bengal on 4<sup>th</sup> and 5<sup>th</sup>, along with heavy rain at isolated places on 4<sup>th</sup> March, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
  - In Sub-Himalayan West Bengal, carry out mulching in large cardamom. Harvest mature pods of garden pea crop and mature cabbage, cauliflower and other cole crops. Stop irrigation to mustard and potato crops. Carry out weeding in potato and garden pea crops. Carry out operations like earthing up, weeding and draining out of excess water in ginger and turmeric fields.
  - In Gangetic West Bengal, do not irrigate Boro paddy and wheat fields. Make arrangements for draining out excess water from potato and sunflower fields. Take up land preparation/sowing of mung and okra. Carry out weeding in the groundnut field.
  - In Sub-Himalayan West Bengal, to control mustard aphids, spray Dinoteforun 20% S G @ 0.5gram/liter of water and for alternaria blight of mustard, spray Mancozeb @ 2.5g/liter of water or Iprodione @ 1g/liter of water. For the management of sucking pest in vegetables crops spray Dadecei @ 1.5g/litre of water with sticker @ 0.5ml/litre of water. For wheat plants with yellowish patches on leaves, spray Tebuconazole @ 1ml/litre of water. Undertake plant protection measures on a non rainy day.
  - In Gangetic West Bengal, spray Tricyclozole 75WP@ 1g/litre of water for blast disease in Boro paddy. Apply Ridomil@2g/litre of water at late afternoon to prevent powdery mildew in pointed gourd. For late blight in potato at tuber bulking stage, apply Mancozeb @ 2.5g/litre of water at an interval of 5-7 days. Undertake plant protection measures after current spells of rain.
- **Andaman & Nicobar Islands:**
  - In Andaman Islands, mulch around the vegetable plants with straw to avoid moisture stress and irrigate the crops during evening hours. Dry the harvested rice to 8-10 % moisture level and store it for using during next cropping season.
  - In Nicobar Islands, make basin around the coconut tree and apply Vermicompost @ 10 kg per tree.
- **Animal Husbandry**
  - In Bihar, cattle should be fed according to their milk production and extra 1kg concentrate should be given to pregnant animal. All new-born animals should be vaccinated against PPR.
  - In Odisha, cover sheds to protect animals from cold. Provide sufficient clean drinking water to them. Go for timely vaccination. Poultry birds are prone to respiratory infection and CRD (Chronic Respiratory Diseases). Provide them comfortable warm housing and good ventilation.
  - In Jharkhand, disease PPR in goat and sheep flourish due to cold weather. Vaccinate animals with PPR vaccine @ 1ml S/C. To provide protection to poultry birds against Ranikhet disease, apply 2 drop F-1 strain in nose of one day old chick. After 8 to 10 week apply R2B (Mukteshwer strain) vaccine after consultation with the veterinary doctor.
  - In West Bengal, keep the liter dry and infection free by applying dry straw and lime. Arrange more lights in the cage of new born chick. All new born animals should be dewormed and lambs/kids should be vaccinated against PPR.
  - In Andaman & Nicobar Islands, provide sufficient cool drinking water to the grazing animals as the weather is dry with low humidity.
- **Fisheries**
  - In Odisha, provide feed @ 2-3 % of body mass of fish. Go for false netting to get good growth of fish. To correct acidity, apply 100 kg lime and cifax 500 ml per acre meter of water.
  - In Jharkhand, add cow dung and lime in the pond as natural foods for fishes and alternative feeds may also be used like Rice Bran and Mustard cake (each of 5 kg per day per acre area of pond).

In West Bengal, for any bacterial disease infection, carry out dip treatment of fish in copper sulphate @ 5mg/litres of water for 1 minute.

#### WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Weather remained dry over the region during the week.
- **Advisories:**
  - As squally winds speed reaching 40- 50 kmph very likely to prevail over North Arabian Sea on 1<sup>st</sup> and 2<sup>nd</sup> March, fishermen are advised not to venture into this area.



▪ **Maharashtra:**

- As thunderstorm accompanied with lightning and gusty winds at isolated places very likely over Vidarbha on 2<sup>nd</sup> and 3<sup>rd</sup> March, provide mechanical support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.
- In North Konkan, apply irrigation in groundnut, vegetables and orchards. Continue harvesting of black pepper. As dry weather is prevailing, provide irrigation to sapota orchard at 8-10 days interval. Apply irrigation to alphonso mango @ 150 to 200 litre of water at fortnightly 3 to 4 times to reduce fruit drop. Also use straw mulch to reduce evaporation. Provide support to newly planted mango graft.
- In Madhya Maharashtra, continue harvesting of matured sorghum, wheat and chickpea. Apply irrigation to summer groundnut. Continue transplanting of summer tomato if seedlings are ready for transplanting. Stop irrigation to rangada onion 3 weeks before harvesting. In sugarcane, apply third dose of fertilizer i.e. 34 kg Nitrogen (74 kg Urea) 12 to 16 weeks after planting. Undertake planting of brinjal.
- In Marathwada, apply irrigation to vegetables. continue harvesting of chickpea, wheat and safflower. Keep harvested produce in safer places.
- In West Vidarbha, continue harvesting of matured safflower and gram. Keep harvested produce at a safer places. Apply irrigation to wheat, orchards and vegetables. In East Vidarbha, carry out weeding in sesame after two weeks of sowing and repeat after 30 to 35 days to keep the crop weed free. Continue harvesting of mustard. Continue sowing of okra.
- In Konkan, to control leaf folder in rice, spray Monocrotophos @ 12 ml per 10 litres of water.
- In Vidarbha, to control whitefly, aphids/jassids in sunflower, spray Imidacloprid 17.8 % @ 2 ml/10 litres of water.

▪ **Gujarat:**

- In Middle Gujarat, undertake land preparation for sowing of sesame and keep inputs ready. Continue harvesting of matured mustard and castor capsules.
- In North Gujarat, undertake land preparation for sowing of summer groundnut (G.G.-2 or T.G.-37), pearl millet (GHB-526 and GHB-558) and sesame (Gujarat Til 3) crops and keep inputs ready. Continue sowing of summer vegetables (okra, cluster bean and bottle gourd) crops and transplanting of brinjal seedlings. Undertake harvesting of matured mustard and castor capsules.
- In South Gujarat, continue transplanting of rice and sowing of pulses crops. Spread plastic or fodder on the soil in vegetable crops for maintaining moisture. The atmospheric conditions are favorable for unripe fruits dropping in mango orchard; for control, spray NAA @ 2g or Gebrellic acid @ 1 g + 2 kgs urea /100 litres of water solution.
- In Saurashtra & Kutch, continue land preparation and undertake sowing of summer groundnut and sesame crops. Undertake harvesting of matured mustard and castor capsules. Continue transplanting of brinjal crop.
- In North Gujarat, there is a chance of blight disease in the tomato crop; spray 0.25% Mencozeb @ 30 g in 10 litres of water with 10 gram desi soap solution to manage the disease.

**CENTRAL INDIA [M.P., CHHATTISGARH]**

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

• **Advisories:**

▪ **Madhya Pradesh:**

- As thunderstorm accompanied with lightning and gusty winds at isolated places very likely over West Madhya Pradesh on 1<sup>st</sup> and 2<sup>nd</sup>, over East Madhya Pradesh on 3<sup>rd</sup> March, provide mechanical support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.
- In East Madhya Pradesh, apply irrigation in wheat, gram and vegetables. Continue direct sowing for vegetables like pumpkin, bitter gourd, etc. Undertake digging up of matured tubers of potato. Undertake sowing of okra. Undertake sowing of maize (baby corn, sweet corn), moong, urad, groundnut and sunflower in first week of March. In Kymore Plateau and Satpura Hill Zone, continue field preparation for sowing of summer vegetables.
- In West Madhya Pradesh, apply irrigation in wheat and vegetables. Continue harvesting of matured pods of green pea. Undertake nursery preparation for summer vegetables. Undertake harvesting matured gram and mustard. Undertake digging up of matured tubers of potato. In Malwa Plateau Zone, undertake sowing of green gram and black gram.
- In Jhabua Hill Zone, continue harvesting of green chilli, okra, beans, cucurbits and fenugreek. Undertake transplanting of tomato, chilli, brinjal, etc. Continue sowing of cucurbitaceous crops, musk melon and water melon. Undertake digging up of matured bulbs of onion and garlic.
- In Jhabua Hill Zone, for control of termite attack in wheat field, apply Chloropyrifos 20 EC @ 3.5 litre/ha with irrigation water.

▪ **Chhattisgarh:**

- Continue harvesting of timely sown early varieties of mustard and digging up of matured tubers of early and medium varieties of potato. Undertake harvesting of matured gram and lentil crops. Apply irrigation in wheat

and vegetables. Farmers having irrigation facility may complete the transplanting of summer rice by end of March. Continue planting of spring sugarcane. Continue sowing of spring moong. Continue sowing of leafy vegetables. Continue sowing of summer vegetables like pumpkin, bitter gourd, bottle gourd, sponge gourd, okra etc.

- In Bastar Plateau Zone, continue planting of sugarcane. Apply irrigation in wheat. Continue sowing of summer moong and urad. Undertake sowing of summer sunflower.
- In Bastar Plateau Zone, for the control alternaria disease in mustard, apply Propiconazole @ 1ml or Mencozeb @ 3g/litre of water.
- **Animal Husbandry**
- In Madhya Pradesh, keep animals in dry and shaded place and provide green fodder, fresh and clean water three times a day.
- In Chhattisgarh, provide concentrate feed to cattle mixed with dry and green fodder and ensure for feeding enriched diet having protein, carbohydrate, fat, vitamins etc.

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

- **Realised Rainfall:** Rain/snow occurred in all districts of Himachal Pradesh except Sirmour and solan, all districts of Jammu & Kashmir except Bagam, Ganderbal, Poonch and Srinagar, in Bageshwar, Chamoli, Garhwal Tehri, Pithoragarh, Rudraprayag and Uttarkashi districts of Uttarakhand; Rainfall occurred in Katihal district of Haryana, Amritsar, Baramula, Gurdaspur, Nawashahar and Taram Taran districts of Punjab, Kashiram nagar district of West Uttar Pradesh during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
  - As thunderstorm accompanied with hailstorm & lightning at isolated places very likely over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh and north Rajasthan on 2<sup>nd</sup> and 3<sup>rd</sup>, thunderstorm accompanied with lightning & gusty winds at isolated places very likely over Jammu & Kashmir on 2<sup>nd</sup> March, use hail net for orchard crops to protect from mechanical damage and provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.
  - As rain/snow likely at most places over Jammu & Kashmir and Himachal Pradesh on 2<sup>nd</sup> and 3<sup>rd</sup>, at most/many places over Uttarakhand from 2<sup>nd</sup> to 4<sup>th</sup>, rain/thundershowers likely at most places over Punjab on 2<sup>nd</sup> and at many places over Haryana, Chandigarh and Delhi on 2<sup>nd</sup>, along with heavy rain/snow at isolated places over Jammu & Kashmir and Himachal Pradesh on 4<sup>th</sup> March, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crops in Jammu & Kashmir and Himachal Pradesh.
  - **Jammu & Kashmir:**
    - In Sub Tropical Zone, the weather condition is favourable for yellow rust disease in late sown wheat crop. Farmers are advised to regularly monitor the crop. If noticed, apply Propaconazole (Tilt) @ 25ml in 25 litres of water/kanal conditions and repeat same after 10-15 days during clear weather. Also prevailing weather is congenial for the outbreak of Aschochyta blight and wilt diseases in Gram crop. If the disease is observed, drench the affected spots with Bavistin @ 10ml/litre of water during clear weather.
    - In Valley Temperate Zone, provide adequate drainage channels in the fields wherever there is possibility of water accumulation.
    - In Intermediate Zone, postpone irrigation, plant protection measures and application of fertilizers to the standing crops till the weather gets clear. Make necessary arrangements to drain out excess water from crops fields
    - Weather conditions are favourable for the attack of alternaria blight in mustard crop. If observed, apply Mancozeb @ 2.5 g/litre of water and Ridomil MZ @ 2.5 g/litres of water alternately as curative measure after current spells of rain.
  - **Uttarakhand:**
    - In Bhabar and Tarai Zone, avoid irrigation in wheat crop as rainfall is expected. To control the late blight disease in tomato, spray Mancozeb @ 2.5g/litre of water or Copper Oxochloride @ 3g/litre of water after current spells of rain.
    - In Hill Zone, undertake nursery preparation of tomatoes, capsicum, brinjal, and cucurbitaceous crops in poly house.
    - In Sub-Humid Sub-Tropic Zone, apply second dose of nitrogen as top dressing in wheat crop in afternoon after current spells of rain. Maintain proper drainage facilities in mustard crop. Undertake harvesting of sugarcane crop after current spells of rain.
  - **Himachal Pradesh:**
    - In High Hill Temperate Zone, avoid stagnation of rain water in the standing crop fields especially in wheat fields. Farmers are also advised to do the necessary arrangement of rain water drainage from the field and collect the water in farm ponds for future use.

- In Mid-Hills Sub-Humid Zone, apply half dose of nitrogen fertilizers in onion and garlic after current spells of rain. Pea is in flowering to pod formation stage, carry out staking in pea. Undertake land preparations for sowing summer vegetables like tomato, capsicum bhindi, gourd etc. in lower hills areas.
- In Sub-Montane and Low Hills Sub-Tropical Zone, to control pod borer in gram crop, install Pheromone traps @ 3-4 traps per acre if flowering has reached 10- 15%. Install “T” shaped bird perches in and around crop field to control insect population.
- **Punjab, Haryana & Delhi:**
- In Punjab, undertake harvesting of matured Rabi crops like Sorghum, Gram, Safflower, Wheat during morning hours in clear weather. Considering the increasing temperature according to their needs give irrigation to fruit & vegetable crops. Protect the newly planted fruit crops from direct sunlight by providing shade net.
- In Western Zone of Punjab, to control the powdery mildew disease & hoppers pest on mango plant, undertake the spraying of Imidacloprid 17.8 SL@ 3 ml per + Sulfer 80 wp @ 25 gm per 10 lit. of water. For integrated control of thrips and purple blotch of onion crop by undertake the spraying of Dimethoate 30 EC@ 15 ml or Lambda cyhalothrin 5 EC@ 6 ml OR Quinalphos 25 EC @ 24 ml per 10 lit. of water and rotate the spray. Also use the fungicide like Dithane M-45, 0.3% + Sticker.
- In Haryana, continue transplanting of matured seedlings of tomato, cauliflower, & cabbage in prepared field. Monitor mustard and vegetable crops for sucking pests. Possibility of variable weather and light rain withhold the spray of weedicides/fungicide/irrigation and others agricultural operations in wheat, gram, mustard, vegetables and fruits.
- In Delhi, continue planting of winter sugarcane at optimum soil moisture for better seed germination. Complete transplanting of onion. Continue transplanting of cauliflower, cabbage, broccoli and tomato. Continue sowing of spinach, coriander, fenugreek. Continue preparation of seedling of early cucurbitaceous crops in small polythene bags in poly houses. Undertake nursery preparation of chilli, tomato and brinjal crops in poly house. Undertake sowing of lady finger(A-4, Parbani Kranti and Arka anamika).
- In Punjab, check aphid damage in mustard and if aphid population is above ETL, spray 40 g Actara 25 WG or 400 ml of Rogor 30 EC or 600 ml Dursban/Coroban 20 EC in 80-125 litres of water per acre. For control of late blight of potato, spray Indofil M-45/Markzeb/Kavach @ 500-700 g in 250-350 litres of water per acre after current spells of rain. Monitor the wheat crop for occurrence of yellow rust in fields. If symptoms of yellow rust are noticed, spray the crop with Nativo @ 120g or Tilt or Shine or Bumper or Stilt or Compass or Markzole @ 200 ml in 200 litres of water per acre.
- In Delhi, monitor the vegetable and mustard crops against attack of aphid. If pest population is above ETL than, spraying of Imidacloprid @ 0.25 to 0.5 ml per litre of water.
- **Uttar Pradesh:**
- In East Uttar Pradesh, continue sowing of okra and cucurbits crops like bitter gourd, bottle gourd, cucumber, pimpkin, musk melon and water melon.Undertake land preparation for cultivation of summer season moong. Continue harvesting of rapeseed & mustard. Undertake digging of matured potato.
- In West Uttar Pradesh, undertake field preparation for sowing of lady finger. Sowing of French bean, cluster bean. Undertake sowing of maize and urad. Undertake transplanting of young seedlings of tomato, chilli and cole crops.
- In East Uttar Pradesh, spray Carbaryl @ 2 gm dissolved in 1 liter water for control of fruit borer infestation on tomato and brinjal.
- In West Uttar Pradesh, if symptoms of brown or black rust of the wheat crop appears, spray crops with Dithane M- 45 @ 2.5 grams or Carbendazim 1.0 gm or Propiconazole 1.0 gm per litre of water may be given on a non rainy day. For monitoring of the pod borer in the gram crop, farmers are advised to install Pheromone trap @ 3-4 traps per acre, if flowering has reached 30-40%. “T” shaped bird perches in and around crop field to be installed for controlling insect population.
- **Rajasthan:**
- In Semi Arid Eastern Plain Zone, undertake sowing of Zaid Green gram, Zaid groundnut, Okra, Zaid sorghum (fodder), Zaid Pearl millet (fodder) & early summer cucurbits like bottle gourd, round guard, bitter guard, water melon and musk melon.
- In Sub humid and Southern Plain and Aravali Hill Zone, Sowing should be done of summer okra. Also maturity period of mustard crop about February and March. Generally when leaf falls and siliqua turns yellowish in color then harvest the crop.
- Due to increase in temperature in coming days increase the water demand of the rabi crops. Therefore irrigate the crops as and when crops show wilting symptoms and as per need on the basis of critical growth stages.
- Weather is favourable for aphid infestation in mustard, Heliothis infestation in gram and blight infection in cumin. Therefore, regularly watch fields, to diagnose insect pest & disease infestation. In gram, to prevent Heliothis infestation, spray Quinalphos 25 EC @ 1200 ml/ha or Indoxcarb @ 200 ml/ha or Emamectin benzoate @ 100 gm/ha or Spinosad @ 73 gm/ha along with water at the time of flowering and repeat the spray if required.

- In Southern Humid Plain Zone, apply irrigation in wheat at the ear emergence stage. Maize crop may be irrigated with top dressing of nitrogen at tasselling stage.
- In wheat crop 40-50 day after sowing yellowing of leaves starts appearing which may be symptoms of deficiency of zinc. For control of the above spray of zinc sulphate (commercial grade) 1.5 kg and 750 gm calcium hydroxide in 100-125 litre water per bigha in the affected field.
- **Animal Husbandary**
- In Uttar Pradesh, provide the mixture of Berseam with fodder as supplement to cattle. Administer Dewormis or Nematicide orally to poultry.
- In Jammu & Kashmir, do not allow animals to leave khurli early in morning directly to open area. Protect the pregnant and milch animals from cold and feed them mineral mixture regularly. Give special care to young calves as they are more sensitive to pneumonia. Provide dry bedding during night. Use dry gunny bags as bedding material for protection against low night temperatures.
- Floriculture:
- Planting of carnation may be continued in well prepared fields at recommended spacing and with FYM and fertilizers doses. Farmers are also advised to prepare their fields for the planting of gladiolus in Himachal Pradesh.
- In Jammu & Kashmir, Marigold fields should be kept clean and provision for drainage should be made by making proper channels.
- Apiculture
- In Sub Tropical Zone of Jammu & Kashmir, shift the bee colonies near mustard field. Keep the colony under cover during night time to protect it from cold.
- Poultry
- Cover the poultry sheds in Jammu & Kashmir with gunny bags in order to protect the birds from cold weather. Install electric bulbs to maintain optimum temperature.

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