



National Agromet Advisory Service Bulletin

Thursday 1st March 2018
(For the period 1st to 6th March 2018)



Issued by
India Meteorological Department

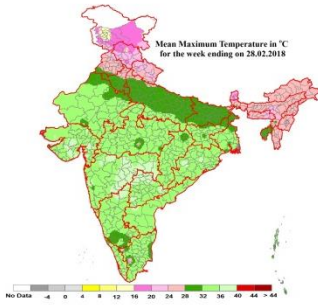
Weblink For

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

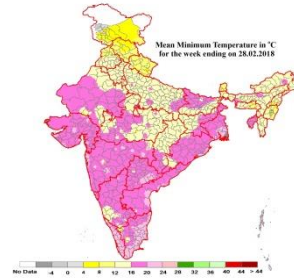
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending 28.02.2018

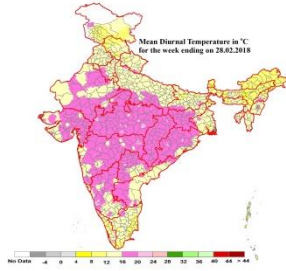
Mean Maximum Temperature (°C) for the week ending 28.02.2018



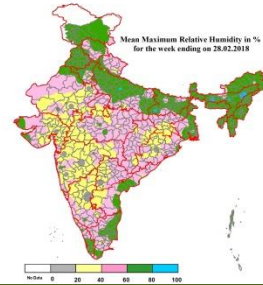
Mean Minimum Temperature (°C) for the week ending 28.02.2018



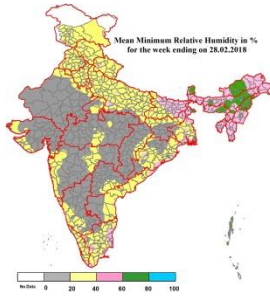
Mean Diurnal Temperature Variation (°C) for the week ending 28.02.2018



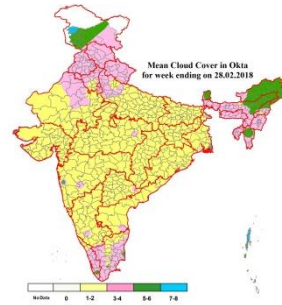
Mean Maximum Relative Humidity (%) for the week ending 28.02.2018



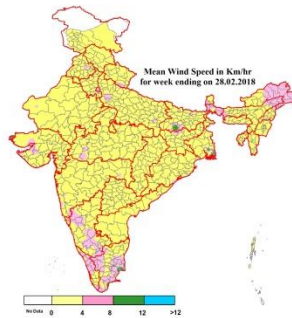
Mean Minimum Relative Humidity (%) for the week ending 28.02.2018



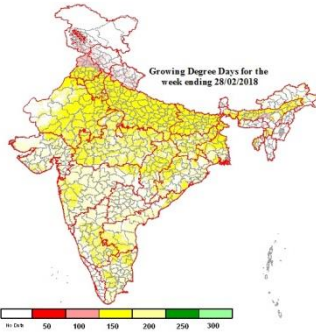
Mean Cloud Cover (okta) for the week ending 28.02.2018



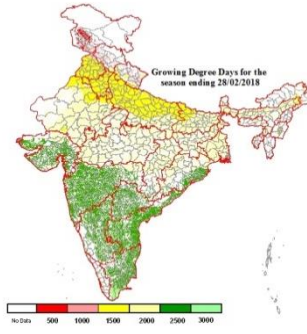
Mean Wind Speed (km/hr) for the week ending 28.02.2018



Growing Degree Days for the week ending 28.02.2018

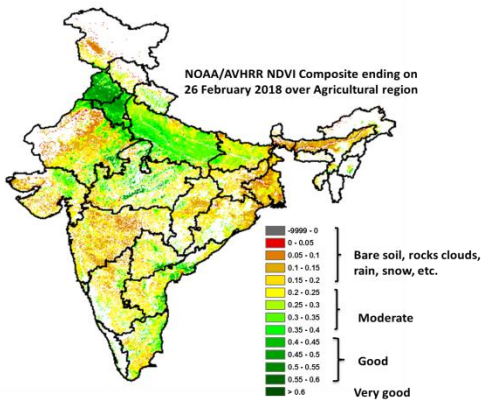


Growing Degree Days for the season ending 28.02.2018

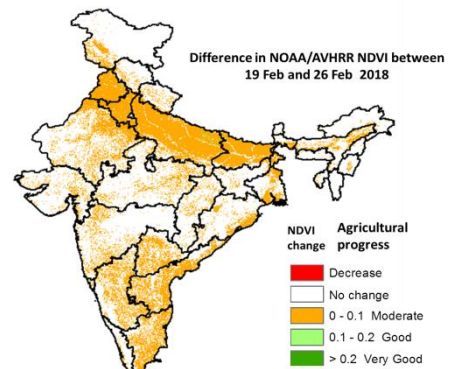


* Base temperature for *Rabi* Season is taken as 05⁰ C

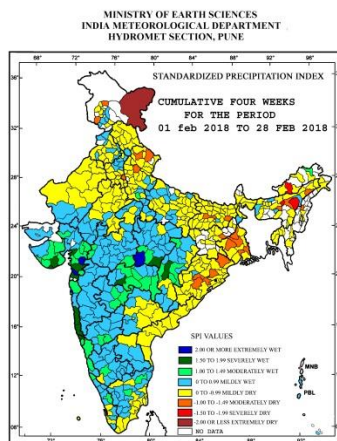
NOAA/AVHRR NDVI composite ending on 26th February 2018 over Agricultural regions of India



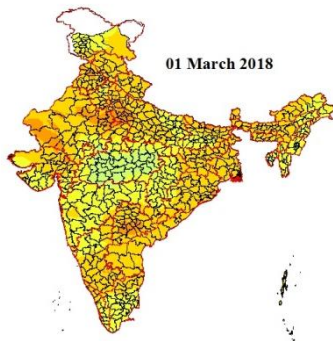
Difference in NOAA/AVHRR NDVI between 19th and 26th February 2018



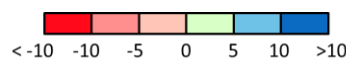
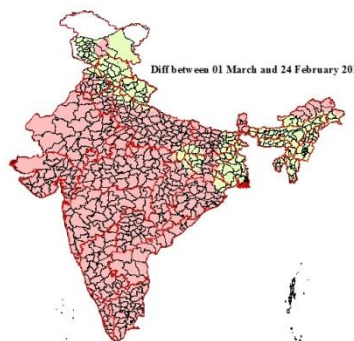
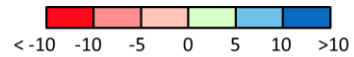
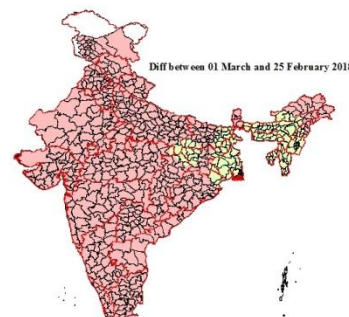
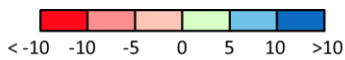
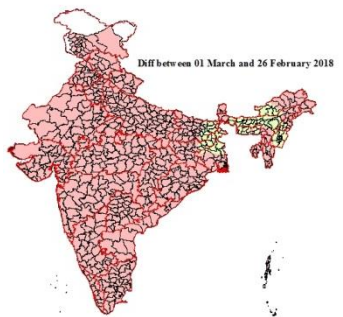
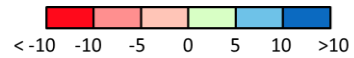
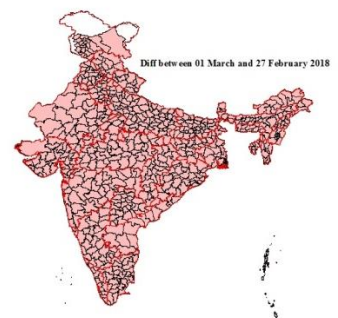
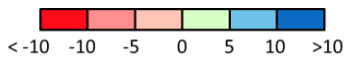
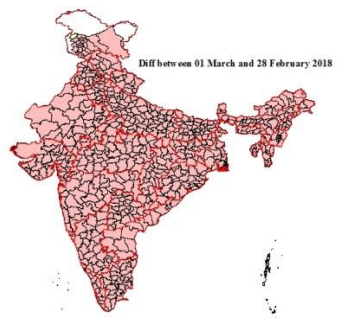
**Standardised Precipitation Index
Cumulative 4 weeks for the period 1st to 28th February 2018**



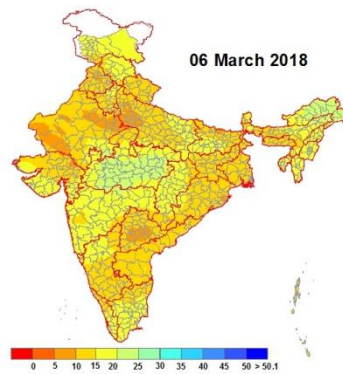
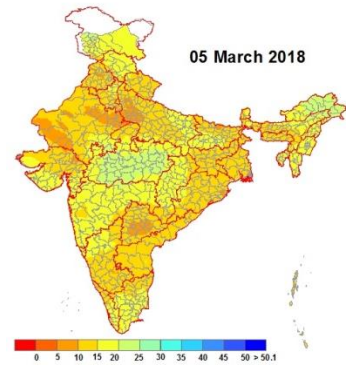
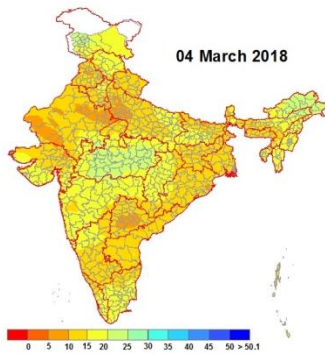
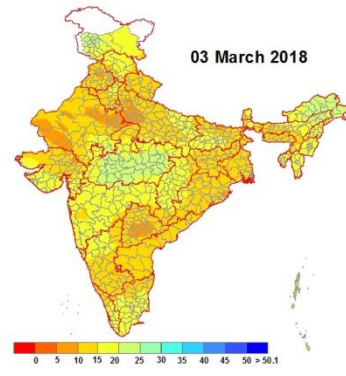
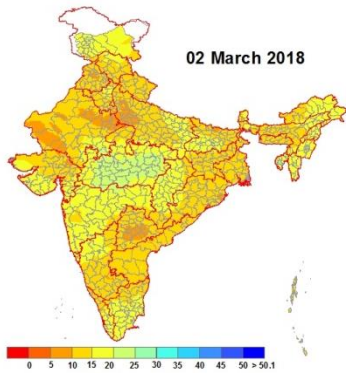
Daily Soil Moisture (mm) for 1st March 2018 (ending at 0830 IST) for 60 cm depth



Difference of Soil Moisture (mm) for 60 cm depth



**Forecasted Soil Moisture (mm) from 2nd to 6th March 2018 (ending at 0830 IST)
for 60 cm depth**



Weather Forecast for next 5 days valid upto 0830 hours of 6th March 2018

- Meteorological subdivision wise detailed 5 days rainfall forecast is given in Table below.
- No significant change is very likely in maximum & minimum temperatures over plains of northwest India during 48 hours and fall in maximum temperatures by 2-4°C thereafter.
- Maximum temperatures likely to continue above normal by 2-3°C over parts of West and East India during next 3 days and no significant change in temperatures over rest parts of the country during the same period.

5 Day Rainfall Forecast (Mid day) 1st March 2018

Met-Sub-Division	01-Mar Today	02Mar Fri	03Mar Sat	04Mar Sun	05Mar Mon
1. Andaman & Nicobar Islands	DRY	DRY	DRY	DRY	DRY
2. Arunachal Pradesh	ISOL	FWS	WS	ISOL	SCT
3. Assam & Meghalaya	ISOL	SCT	SCT	ISOL	ISOL
4. N. M. M. & T.	ISOL	ISOL	ISOL	DRY	ISOL
5. S.H. West Bengal & Sikkim	SCT	SCT	ISOL	ISOL	ISOL
6. Gangetic West Bengal	DRY	DRY	DRY	DRY	ISOL
7. Odisha	DRY	DRY	DRY	DRY	ISOL
8. Jharkhand	DRY	DRY	DRY	DRY	ISOL
9. Bihar	DRY	DRY	DRY	DRY	ISOL
10. East Uttar Pradesh	DRY	DRY	DRY	DRY	ISOL
11. West Uttar Pradesh	DRY	DRY	DRY	ISOL	ISOL
12. Uttarakhand	ISOL	SCT	SCT	FWS	ISOL
13. Haryana, Chd & Delhi	ISOL	DRY	DRY	ISOL	DRY
14. Punjab	ISOL	ISOL	ISOL	ISOL	DRY
15. Himachal Pradesh	SCT	FWS	FWS	WS	ISOL
16. Jammu & Kashmir	FWS	WS	SCT	FWS	ISOL
17. West Rajasthan	DRY	DRY	ISOL	ISOL	DRY
18. East Rajasthan	DRY	DRY	DRY	ISOL	DRY
19. West Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
20. East Madhya Pradesh	DRY	DRY	DRY	DRY	ISOL
21. Gujarat Region	DRY	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	DRY	DRY	DRY	DRY
23. Konkan & Goa	DRY	DRY	DRY	DRY	DRY
24. Madhya Maharashtra	DRY	DRY	DRY	DRY	DRY
25. Marathwada	DRY	DRY	DRY	DRY	DRY
26. Vidharbha	DRY	DRY	DRY	DRY	DRY
27. Chhattisgarh	DRY	DRY	DRY	DRY	ISOL
28. Coastal Andhra Pradesh	DRY	DRY	DRY	DRY	DRY
29. Telangana	DRY	DRY	DRY	DRY	DRY
30. Rayalaseema	DRY	DRY	DRY	DRY	DRY
31. Tamilnadu & Puducherry	ISOL	DRY	DRY	DRY	DRY
32. Coastal Karnataka	DRY	DRY	DRY	DRY	DRY
33. North Interior Karnataka	DRY	DRY	DRY	DRY	DRY
34. South Interior Karnataka	DRY	DRY	DRY	DRY	DRY
35. Kerala	ISOL	DRY	DRY	DRY	DRY
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 hail very likely at isolated places over Sub-Himalayan West Bengal & Sikkim.
- **02 March (Day 2):** Heavy Rain very likely at isolated places over Arunachal Pradesh. Thunderstorm accompanied with hail very likely at isolated places over Sub-Himalayan west Bengal & Sikkim, Arunachal Pradesh and Assam & Meghalaya.
- **03 March (Day 3):** Heavy Rain very likely at isolated places over Arunachal Pradesh. Thunderstorm accompanied with hail very likely at isolated places over Jammu division of Jammu & Kashmir, Punjab,

Arunachal Pradesh, Mizoram, Tripura and Assam & Meghalaya.

- **04 March (Day 4):** Thunderstorm accompanied with hail very likely at isolated places over Jammu division of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Haryana, Punjab, West Uttar Pradesh and north Rajasthan.
- **05 March (Day 5):** No weather warning.

Weather Outlook for subsequent 2 days from 6th to 8th March 2018

- Scattered to fairly widespread rainfall activity likely over northeastern states.
- Rainfall/snowfall at isolated places likely over Western Himalayan region and rainfall activity at isolated places over central and extreme south peninsular India.
- Weather likely to be dry over remaining parts of the country.

Salient Advisories

- As thunderstorm accompanied with hailstorm likely at isolated places over **Sub-Himalayan West Bengal & Sikkim** on 1st and 2nd March, over **Assam & Meghalaya** and **Arunachal Pradesh** on 2nd and 3rd, over **Mizoram** and **Tripura** on 3rd, over **Jammu division** of Jammu & Kashmir and **Punjab** on 3rd and 4th, over **Himachal Pradesh, Uttarakhand, Haryana, West Uttar Pradesh** and **north Rajasthan** on 4th March, it is advised to use hail net for orchard crops to protect from mechanical damage. Provide 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.
- As rain/snow would occur at most/many places over **Jammu & Kashmir** on 1st, 2nd and 4th, over **Himachal Pradesh** from 2nd to 4th and at many places over **Uttarakhand** on 4th March, rain/thundershower would occur at most/many places over **Arunachal Pradesh** along with heavy rain at isolated places on 2nd and 3rd March, 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 Arunachal Pradesh.
- In **Madhya Maharashtra**, as dry weather would continue to prevail, apply irrigation to summer groundnut. Apply irrigation to sugarcane and undertake mulching with sugarcane trash to reduce water stress in crop. Complete harvesting of matured *rabi* crops like wheat and jowar etc. In North Hill Zone of **Chhattisgarh**, apply irrigation in wheat at milk to dough stage. Continue planting of sugarcane. Continue harvesting of matured mustard, potato, gram and lentil crops.
- Due to the prevailing weather, monitor the wheat crop for incidence of yellow rust in Undulating Plain Zone of **Punjab**. If symptoms are noticed, spray Native @ 120g or Tilt @ 200ml per litre of water for control.

Detailed Zonewise Agromet Advisories

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

- **Realised Rainfall:** Rain/snow occurred at Anantnag, Baramula, Doda, Ganderbal, Kulgam, Kupwara and Ramban districts of Jammu and Kashmir, Uttarkashi district of Uttarakhand, Chamba and Kullu districts of Himachal Pradesh during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with hailstorm likely at isolated places over Jammu division of Jammu & Kashmir and Punjab on 3rd and 4th, over Himachal Pradesh, Uttarakhand, Haryana, West Uttar Pradesh and north Rajasthan on 4th March, it is advised to use hail net for orchard crops to protect from mechanical damage. Provide 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.
 - As rain/snow would occur at most/many places over Jammu & Kashmir on 1st, 2nd and 4th, over Himachal Pradesh from 2nd to 4th and at many places over Uttarakhand on 4th March, avoid irrigation, intercultural

operation and application of plant protection measures and fertilizers to the standing crops.

■ **Jammu & Kashmir:**

- In Sub Tropical Zone, avoid irrigation in standing crops as rainfall is expected during next 3 days. Continue transplanting of cucurbits, tomato, brinjal and chilli. Continue direct sowing of bottle gourd, bitter gourd and pumpkin.
- Continue early nursery sowing of summer vegetables like tomato, brinjal, chilli, capsicum under protected structures (Poly house, Poly tunnel etc.) in Intermediate Zone in lower mid hills. Continue preparation of seedling of cucurbits in poly bags.
- Continue nursery bed preparation for raising of vegetables and sowing of cucurbits in polybags inside polyhouse. Provide proper drainage in apple orchards.
- In Sub Tropical Zone, there are chances of outbreak of aphids in late sown mustard crop, spray Imidacloprid @ 0.3 ml/litre of water or (Dimethoate) rogor 30 EC @ 1ml/litre of water after current spells of rain.

■ **Uttarakhand:**

- In Bhabar and Tarai Zone, continue planting of sugarcane. In mid and high hills, seeds of brinjal, tomato, capsicum and chilli should be sown in the nursery. Undertake harvesting of matured mustard during clear weather.
- In Sub Humid Sub Tropic Zone, continue transplanting of onion and tomato.
- In Hill Zone, as there is possibility of rainfall, avoid irrigation in wheat, barley and lentil crops. Continue preparation of seedlings of vegetables like brinjal, capsicum, tomato etc. in polyhouse. Continue preparation of seedlings of early cucurbitaceous crops in small polythene bags.
- In Bhabar and Tarai Zone, there are chances of leaf spot disease in cole crops, spray Mancozeb @ 2.5 g/litre of water on a non rainy day.

■ **Himachal Pradesh:**

- In Sub-Montane and Low Hill SubTropical Zone, continue nursery preparation of summer vegetables. Continue preparation of seedlings of cucurbits in polythene bags. Undertake sowing of okra, coriander, radish and turnip. Undertake sowing of sunflower in low and mid-hill areas.
- In Mid Hills Sub Humid Zone, continue field preparation for nursery sowing of vegetables like tomato, capsicum and sowing of bhindi, gourd etc. Undertake weeding in coriander on non rainy days.
- In High Hill Temperate Dry Zone, undertake pruning of unwanted branches on apple trees and apply Boudreaux paint on wounds after current spells of rain.
- 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, apply irrigation in wheat at flowering stage. Continue sowing of maize and planting of spring sugarcane. Continue transplanting of brinjal, capsicum and chilli, muskmelon, water-melon, bottle-gourd, pumpkin etc.
- In Undulating Plain Zone of Punjab, continue planting of sugarcane and sowing of spring maize. Continue transplanting of chilli and tomato and raising of cucurbit seedlings.
- In Central Plain Zone of Punjab, continue sowing of spring maize. Undertake sowing of cucurbits, okra and cowpea and transplanting of brinjal, chilli and tomato. Apply irrigation in wheat.
- In Delhi, continue sowing of early crop of ladies finger- A-4, Parbani, Kranti and Arka anamika cultivars. Continue sowing of French bean, cluster bean, summer radish. Continue transplanting of young seedlings of tomato, chilli and cucurbits crops. Undertake sowing of green gram and black gram.
- In Undulating Plain Zone of Punjab, monitor the wheat crop for incidence of yellow rust. If symptoms are noticed, spray Native @ 120g or Tilt @ 200ml per litre of water for control.

■ **Uttar Pradesh:**

- In Allahabad, Fatehpur districts of Central Plain Zone, continue land preparation and sowing of summer moong and select high yielding varieties viz. k-851 and JM-721. Continue sowing of okra, bitter gourd and bottle gourd.
- In Eastern Plain Zone, undertake planting of sugarcane. Apply irrigation in wheat as per requirement.
- In Varanasi district of Central Plain Zone, undertake intercultural operations in cucurbit crops. Continue harvesting of matured mustard and digging up of matured tubers of potato. Continue planting of spring sugarcane. Undertake sowing of green gram. In Kanpur district, continue nursery sowing of vegetables like tomato and chilli. Continue sowing of maize and black gram. Apply irrigation in wheat as per requirement. Continue sowing of okra and cucurbits.
- In Bundelkhand Zone, continue nursery sowing of vegetables like cabbage, cauliflower, brinjal, tomato, chilli etc. and sowing of vegetables like spinach, fenugreek, coriander and carrot.

■ **Rajasthan:**

- In Arid Western Plain Zone, apply irrigation in wheat at grain filling stage. Undertake sowing of water melon and musk melon. Undertake transplanting of brinjal and tomato.

- In Sub Humid Southern Plain and Aravalli Hill Zone, apply irrigation in wheat at milk stage. Undertake transplanting of vegetables like tomato, chilli and cole crops. Continue sowing of okra and cucurbits. Undertake sowing of green gram and black gram. Continue harvesting of matured mustard.
- In Semi Arid Eastern Plain Zone, continue sowing of Zaid green gram, Zaid groundnut, okra, Zaid sorghum (fodder), Zaid Pearl millet (fodder) & early summer cucurbits like bottle gourd, round gourd, bitter gourd, water melon and musk melon.
- In Irrigated North Western Plain Zone, continue planting of sugarcane. Apply irrigation in wheat at milk stage and in gram at pod formation stage.
- In Bikaner district of Arid Western Plain Zone, in timely sown wheat, provide 5th irrigation at milk stage and also provide 3rd irrigation in barley crop 85-90 days after sowing. In late sown wheat, provide the 4th irrigation at flowering stage.
- In Flood Prone Eastern Plain Zone, continue digging of matured tubers of potato. Apply irrigation in wheat. Continue harvesting of matured mustard.
- In Flood Prone Eastern Plain Zone, spray 0.1% Malathion solution to manage the thrips and aphid attack in brinjal, tomato and chilli crops.
- **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. Put some bedding material like puaal etc. to keep animals warm. Provide dry bedding during night.
- In Western Zone of Punjab, give special care to new born calves as day temperature is rising. Deworming should be done in calves regularly.
- **Apiculture:**
- In Jammu & Kashmir, 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, North Sikkim district of Sikkim during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with hailstorm likely at isolated places over Sub-Himalayan West Bengal & Sikkim on 1st and 2nd March, it is advised to use hail net for orchard crops to protect from mechanical damage. Arrange mechanical support to young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
 - **Odisha:**
 - In Western Undulating Zone, undertake weeding in summer rice at 4week stage and apply urea 35kg for medium duration and 25kg urea for short duration rice per acre. Increased temperature may favour the egg laying of stem borer in rice in the main field. To attract the butterflies, place 4 Pheromon Traps/acre, collect the adults and destroy them by burning or by burying them under soil. Also spray Chlorantraniliprole 18.5SC 80ml per acre @ 0.4ml/litre of water.
 - In Mid Central Table Land Zone, it is the optimum weather for sesame sowing. Grow improved varieties like - Uma, Kalika, Nirmala, Prachi and Usha, Use 2 to 2.5 kg seeds/acre. Go for line sowing at a spacing of 25-30 X 10 cm.
 - In Mid Central Table Land Zone, as mainly dry weather would prevail, continue harvesting of matured crop of green gram and black gram. Rising temperature along with cloudy weather favours the aphid infestation. To control, spray Neem oil 500 ppm @ 5ml/litre of water.
 - In Eastern Ghat High Land Zone, maize crop is at silking stage. Irrigate the maize crop to meet the crop requirement due to increased temperature and never allow water stagnation for more than 6 hours in the field. Now it is optimum time for sowing of summer cow pea. Grow the following improved varieties of cowpea such as bush type- Pusa Phalguni, Pusa Komal and runner type- American long, and Banarasi long. In the prevailing weather, undertake planting of papaya. The mustard crop is at (twelve to fourteen week) seed formation to harvesting stage. Mustard saw fly attack occurs at siliqua and seed formation stage. Spray Triazophos or Profenophos 2ml/lit of water for control.
 - **Bihar:**
 - In South Bihar Alluvial Zone, undertake sowing of summer sunflower, maize, green gram and til crops. Composite varieties of sunflower such as Mordan, Surya, CO-1 and Pairadevik and DRSF-108 and hybrid varieties such as BSH-1, KBSH-1, MSFH-1, MSFH-8, MSFH-17 and KBSH-44 are recommended. As dry weather would prevail, farmers are advised to provide irrigation and nitrogenous fertilizers (108 kg urea/ha) in rabi maize, which is in knee height/ tassel/silking stage. Keeping in view of increasing temperature, farmers are advised to provide irrigation in standing vegetables such as brinjal, tomato, chilli, pea and cabbage. If brinjal and tomato crops are affected from shoot and fruit borer, spray Spinosad 48 EC @ 1 ml/4 litres of water.

- In North West Alluvial Plain Zone, farmers should take care of maintaining proper moisture in the field before sowing of summer crops. Proper soil moisture at the time of sowing would ensure good germination of seeds. If necessary, light irrigation may be given to maintain moisture. Continue the sowing of summer maize varieties such as Suwan, Deoki, Ganga 11, Shaktiman-1, 2, 3, 4 & 5. Farmers are advised to treat seeds with Thiram and Captaf @ 2.5 gm per kilogram of seeds. Farmers are advised to harvest early sown mustard, which is in maturity stage. Regular monitoring is advised for infestation of aphid in late sown mustard crop.
- In North East Alluvial Zone, continue sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd ridge guard and bitter guard. Keeping in view of increasing temperature, farmers are advised to provide irrigation in standing vegetables such as brinjal, tomato, chilli, pea and cabbage.
- **Jharkhand:**
 - In Central and North Eastern Plateau Zone, irrigate the wheat crop in ear head initiation, milk/ dough stages according to the texture and moisture holding capacity. If irrigation facility is available, undertake sowing of maize with recommended dose of fertilizer. Continue sowing of summer green gram.
 - In South Eastern Plateau Zone, December sown wheat crop is at flowering stage and is very critical stage. Therefore, according to the moisture status of the soil, apply irrigation because increasing trend in temperature and wind speed are expected in coming days. Because of prevailing high wind speed and high temperature, which also favours the movement of loose smut spores hence, there is a chance of spread of disease (loose smut) in a more speedy way. Hence if symptoms are noticed try to remove and bury the affected plants very carefully inside the soil. In November month sown crop at soft dough stage, apply last irrigation and avoid flooding, otherwise crop will lodge because of high wind seed at this time.
 - In South Eastern Plateau Zone, lentil crops sown in the mid of November is at flowering to pod formation stage and present weather is very conducive for the occurrence of wilt disease. Hence, spraying of Carbendazim @ 1 g per lt. of water twice at weekly interval is suggested.
- **West Bengal:**
 - In Coastal Saline Zone, continue sowing of green gram. Start harvesting mustard if siliqua is found dry and mature.
 - In the New Alluvial Zone, undertake land preparation and sowing of green gram and black gram. Undertake sowing of French bean, cluster bean and summer radish.
 - In the Hill Zone, carry out land preparation for maize, ginger and turmeric cultivation.
 - In the Terai Zone, continue transplanting of 3-4 leafed Boro paddy seedlings. Provide mulching to cucurbit crops.
 - In Laterite and Red Soil Zone, apply light irrigation to wheat crop at dough stage and to potato at tuber bulking stage. Carry out hand weeding in rice crop.
 - In the Old Alluvial Zone, install of sex pheromone trap @ 1trap/bigha for monitoring of rice stem borer in Boro rice at tillering stage. Undertake sowing of maize and amaranthus. Carry out land preparation for mungbean crop.
 - In the Terai Zone, apply Flubenamide 39.35% SC @ 4 ml/tank to control sucking pest in chilli crop at vegetative stage. For leaf blight in cabbage and cauliflower, spray Carbendazim + Mancozeb @ 2 g/litre of water on a non rainy day.
 - In Old Alluvial Zone, to control sucking pests in solanaceous and cucurbitaceous vegetables spray Chlothianidine 50WDG @ 1 gram/10 litres of water with sticker @ 0.5ml/litre water.
 - In the Coastal Saline Zone, spray Trycyclozole @ 5-6g/10 litres of water for blast disease and brown spot attack due to high day temperature, humidity and dense morning fog. Apply Triazofos @ 1.5ml/litre of water for Leaf eating caterpillargreen gram and sunflower at vegetative stage.
- **Andaman & Nicobar Islands:**
 - In Andaman Islands, apply potash (KCL) @ 5 g/litre as foliar spray during vegetative stage if there is moisture stress in pulses,.
 - In the Nicobar Islands, provide mulching with dry grass in the inter space of vegetables to avoid moisture stress.
- **Animal Husbandry**
 - In Mid Central Table Land Zone of Odisha, as temperature has started increasing, provide sufficient clean drinking water to the cattle. Provide gunny bag covering outside the cowshed and sprinkle water. □ Avoid grazing of animals during the noon hours.
 - In the Old Alluvial Zone of West Bengal, vaccinate goat against pox virus and PPR.
 - In the Andaman & Nicobar Islands, provide cool, clean water and shade to chicks to protect from heat..
- **Fisheries**
 - In the Andaman Islands, feed the fingerlings of Indian major carp with rice bran and ground nut oil cake at 1:1 ratio at the rate of 3-5 % of body weight.
 - In the Old Alluvial Zone of West Bengal, apply fish feed (mixture of rice bran and mustard oil cake in 1:1 ratio) @ 2-3% of total fish stock in the pond daily.
 - In Mid Central Table Land Zone of Odisha, start harvesting the fish from those ponds where it is not possible to

maintain minimum 3-4 ft depth of water. Increase the feed as the intake will be more with increase in temperature.

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

- **Realised Rainfall:** Rainfall occurred in Changlang, Lohit and Tirap districts of Arunachal Pradesh, Chirang, N.C. Hills and Tinsukia districts of Assam, East Garo Hills district of Meghalaya, North Tripura district of Tripura during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershower would occur at most/many places over Arunachal Pradesh along with heavy rain at isolated places on 2nd and 3rd March, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
 - As thunderstorm accompanied with hailstorm likely at isolated places over Assam & Meghalaya and Arunachal Pradesh on 2nd and 3rd, over Mizoram and Tripura on 3rd March, advised to use hail net for orchard crops to protect from mechanical damage. Arrange mechanical support to banana, young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Arunachal Pradesh, undertake harvesting of mature crop of ginger/turmeric after current spells of rain.
 - In Meghalaya, continue harvesting of cabbage and cauliflower at mature stage. Provide irrigation to pea, lentil and chickpea crops at vegetative/flowering stage and to rapeseed and mustard crops at flowering/pod formation stage. Continue nursery raising/transplanting of tomato and capsicum crops.
 - In Lower Brahmaputra Valley Zone of Assam, undertake harvesting of mature potato crop as early as possible. Maintain 5 cm depth of water in Boro paddy fields one day after disappearance of ponded water. Undertake sowing of okra.
 - In the Hill Zone of Assam, undertake land preparation and sowing of okra and green/black gram. Provide support of bamboo sticks to tomato and chilli plants at fruiting stage.
 - In the Upper Brahmaputra Valley Zone, undertake sowing of summer black gram/green gram, Ridge gourd and Sponge gourd. Undertake land preparation for maize, and pointed gourd. Carry out denecking (breaking of stem) at least 10-15 days ahead of harvesting of onion crop. If already done, go for harvesting when 70% plant start dying.
 - In the Barak Valley Zone, continue land preparation for okra, ridge gourd and sponge gourd.
 - In the Central Brahmaputra Valley Zone, postpone irrigation in Boro paddy. Undertake land preparation for summer vegetables, Capsularis jute, summer green gram and black gram. Undertake sowing of pointed gourd.
 - In the North Bank Plain Zone, undertake land preparation for direct-seeded Ahu rice. Collect the seeds of varieties like Banglami, Rangadoria, Ahu joha, Rasi etc. Undertake sowing during March-April. Undertake land preparation for sowing of summer green gram and black gram from mid-February to March. Undertake land preparation for ridge gourd, cucumber, bitter melon, okra etc.
 - In the Hill Zone of Assam, spray Mencozeb 0.2% @ 2g/litre of water for control of blast disease in Boro paddy crop at maximum tillering stage on a non rainy day.
 - 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) against Aphid and Stem borer infestation in wheat crop at heading stage on a non rainy day.
 - In the Barak Valley Zone, to control the attack of stem borer @ tillering stage in rice field, spray Chlorpyrifos 50 EC @ 2 ml per litre of water on a non rainy day. In green gram and black gram there may be chances of attack by Aphid and Hairy caterpillar in the field. To protect from the attack, spray Dimethoate 30 EC @ 2 ml per litre of water on a non rainy day.
 - In the Central Brahmaputra Valley Zone, apply spray Mencozeb 0.2% @ 2g/litre or Carbendazim 0.1% @ 1gm/litre of water on a clear day for control of blast disease in Boro paddy at maximum tillering stage on a non rainy day.
 - **Nagaland, Mizoram, Manipur and Tripura:**
 - In Manipur, undertake harvesting of mature mustard, rapeseed, field pea, lentil and black gram(late variety). Use mulching materials like paddy straw to protect young cucurbit plants from cold. Undertake sowing of French bean and okra crop. Carry out transplanting of cucurbit seedlings at 4 leaf stage.
 - In Mizoram, continue harvesting of ginger, turmeric, early cole crops, brinjal, tomato and chilli. Harvest mature cobs of maize and potato in clear weather.
 - In Tripura, continue transplanting of the young seedlings of summer brinjal and tomato to the main field. Harvest mustard and lentil crops in the morning to reduce loss due to shattering.
 - In Nagaland, carry out land preparation for summer maize and green gram. Harvest toria, vegetables, cabbage, cauliflower, Rabi maize and ripened fruits of Khasi Mandarin.
 - In Manipur, spray Cypermethrin or Fenvelerate (0.01%) followed by Carbyl (0.1%) at an interval of one week for control of leaf hopper in mango.

- **Animal Husbandry**

- In Manipur, vaccinate poultry birds against coccidiosis and Ranikhet diseases. Vaccinate pigs against swine fever and cattle against FMD, Haemorrhagic Septicaemia, Black Quarter.
- In the North Bank Plain Zone, vaccinate poultry birds against Ranikhet disease.
- In the Lower Brahmaputra Valley Zone, provide de-worming medicines to the livestock.
- In Arunachal Pradesh, protect day-old chicks from cold with 100W bulb @ one bulb per 20 chicks.

- **Fishery**

- In the Upper Brahmaputra Valley Zone, drain the water from the pond; dry up for 15-20 days and remove the upper layer of the bottom soil, then plough it and add lime. After 7-15 days of application of lime, add cow-dung and mix it properly. Add fertilizer 7-15 days after addition of cow-dung.
- In the Barak Valley Zone, culture pabda @ 4500 numbers per bigha along with IMC @ 1000 numbers per bigha for better profitability from the fish pond.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

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

- **Advisories:**

- **Maharashtra:**

- In North Konkan, maintain 8-10 cm water level in summer rice after 10 days of panicle initiation. Due to increasing rate of evaporation, irrigate the groundnut crop at an interval of 10-12 days. Undertake intercultural operations like weeding, hoeing and earthing up in 30 days old sunflower. In view of expected dry weather, apply 80-100 litres of water per mango tree at 7 days interval as per the availability of water. Also undertake mulching with grass in mango orchards to avoid moisture loss in lateritic soil. Undertake harvesting of cowpea, kulthi and wal crops during morning hours and dry the pods in sun. In South Konkan, in view of dry weather, apply straw mulch or polythene mulch to water melon crop. Also if wilting is observed in crop, undertake drenching of Carbendazim @ 1 g per litre of water per vine.
- In Madhya Maharashtra, as dry weather would continue to prevail, apply irrigation to summer groundnut. Apply irrigation to sugarcane and undertake mulching with sugarcane trash to reduce water stress in the crop. Also apply second dose of Nitrogen @ 100 kg N (Urea 217 kg) after completion of 6 to 8 days of planting. Complete harvesting of matured *rabi* crops like wheat, safflower, jowar, vegetables etc. Undertake harvesting of sunflower.
- In Marathwada, complete harvesting of matured sorghum, wheat (sown in the month of October) and safflower.
- In Vidarbha, undertake harvesting of early sown matured wheat. Apply irrigation in vegetables and orchards. Continue sowing of leafy vegetables like fenugreek, spinach and coriander as per availability of water. Maintain 2-3 cm water level in transplanted rice fields. Undertake intercultural operation like weeding and after weeding apply 2nd dose of Nitrogen 40 kg/ha to one month old of transplanted crop. Complete sowing of summer sesame (Variety-NT-11). Undertake intercultural operation like hand weeding 30 days after sowing. Apply irrigation to groundnut crop at an interval 10-12 days.
- In Madhya Maharashtra, to control leaf folder and leaf miner in summer groundnut, spray carbaryl powder 50% @ 40 g or Quinolphos 25% @ 20 ml per 10 liters of water. For control of leaf eating caterpillars, spray chlorpyrifos @ 20 ml per 10 liters of water.

- **Gujarat:**

- In South Gujarat Zone, as there is an increase in temperature, provide irrigation to vegetable and fruit crops. Spread plastic or fodder on the soil for maintaining moisture in vegetable crop fields. Spray NAA @ 2g or Gebrellic acid 1 g + 2 kgs Urea /100 liters of water solution against dropping of unripe fruits in mango orchard.
- In South Gujarat Heavy Rainfall zone, complete transplanting of summer rice.
- In North Gujarat Zone, continue land preparation for sowing of groundnut, pearl millet and sesame. Continue harvesting of matured mustard, castor and sowing of vegetable crops (okra, cluster bean and bottle gourd) and summer fodder crops (sorghum and maize). Carry out weeding in citrus orchard.
- In Middle Gujarat Zone, continue land preparation for sowing of summer groundnut and sesame. Continue harvesting of matured mustard and capsules of castor crops. Apply irrigation to vegetable crops.
- In Bhal and Coastal Zone, continue harvesting of matured spikes of castor. Continue harvesting and threshing of *rabi* crops (wheat, chick pea etc.). Complete the sowing of okra, cluster bean and cowpea for summer season vegetables.
- In South Saurashtra Zone, continue sowing of summer groundnut, sesame. Complete harvesting of matured wheat, coriander, cumin and chickpea. Apply irrigation to onion and garlic at bulb development stage.
- In North West Zone, continue land preparation for sowing of groundnut, pearl millet and sesame. Continue sowing of okra, cluster bean and cowpea. Continue harvesting of matured mustard and matured spikes of castor. Carry out weeding in citrus orchard.
- In North Saurashtra Zone, continue sowing of groundnut and sesame. Undertake nursery raising for tomato

crop. Continue transplanting of brinjal, sowing of cluster bean, gourds and watermelon. Complete harvesting of chickpea and cumin.

- In South Gujarat Zone, in mango orchard dust the 2% Methyl Parathion powder around the tree for effective control of mealy bug.
- **Animal Husbandry**
- In Gujarat, for milch animals, regularly follow schedule of 1 kg feed + 50 g mineral mixture per 2 liters of milk yield. Feed animals with a mixture of green grass + hay + minerals + dry feed.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Weather remained dry over the region during the week.
- **Advisories:**
 - **Madhya Pradesh:**
 - In Nimar Valley Zone, apply 4th irrigation in wheat at 80-85 DAS. Continue sowing of green gram, black gram and groundnut.
 - In Vindhya Plateau Zone, continue harvesting of matured gram and wheat. Continue sowing of cucurbits. Undertake field preparation for sowing of okra and planting of sugarcane.
 - In Kymore Plateau and Satpura Hill Zone, apply irrigation in late sown wheat followed by urea application.
 - In Grid Zone, continue nursery sowing of summer vegetables. Continue harvesting of matured toria and mustard. Continue sowing of okra and cucurbits.
 - In Bundelkhand Zone, continue harvesting of mature crops like pea, chickpea, lentil, linseed and mustard. Continue sowing of vegetables like bitter gourd, pumpkin, okra, bottle gourd, watermelon, muskmelon etc.
 - In Satpura Plateau Zone, complete planting of spring sugarcane. Continue sowing of groundnut and maize. Continue harvesting of matured oilseeds, pulses and wheat. Continue preparation of seedlings of cucurbits in polythene bags.
 - In Central Narmada Valley Zone, apply 2nd top dressing of urea in normal sown and 1st top dressing of urea in late sown wheat crop. Continue intercultural operations in vegetables.
 - In Malwa Plateau Zone, continue sowing of cucurbits, chilli, tomato and brinjal crops in the nursery. Continue transplanting of onion and intercultural operations in vegetables. Continue field preparation for sowing of green gram and black gram.
 - In Jhabua Hill Zone, continue harvesting of matured semi irrigated wheat. Continue field preparation for transplanting of vegetables like tomato, chilli, brinjal, okra and cluster bean. Continue 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.
 - In Malwa Plateau Zone, there are chances of attack of thrips in onion, spray Imidacloprid @ 0.5 ml per litre of water with sticky material (Tipol 1.0 g/litre).
 - **Chhattisgarh:**
 - In North Hill Zone, apply irrigation in wheat at milk to dough stage. Continue planting of sugarcane. Continue harvesting of matured mustard, potato, gram and lentil crops. Undertake sowing of summer moong. Undertake sowing of pumkin, cucumber, sponge gourd etc.
 - In Chhattisgarh Plain Zone, apply irrigation *rabi* crops. Continue sowing of green gram and groundnut. Undertake sowing of cucurbits in polythene bags. Undertake sowing of leafy vegetables and land preparation for summer vegetables.
 - In Bastar Plateau Zone, for the control of white rust in mustard crop spray Mencozeb + Metalaxyl @ 2.5g/litre of water.
- **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 dry over the region during the week.
- **Advisories:**
 - **Kerala:**
 - In the Problem Area Zone, rain is not expected, for summer rice under limited resources of water, apply irrigation to paddy at reproductive stage can be practiced to the advantage of saving substantial quality of irrigation water without any significant reduction in yield. Continue harvesting of mature nutmeg fruits. Undertake preparation for planting of new cuttings of pepper. Provide shade to vegetables seedlings.

- In the Central Zone, undertake planting of pepper vines in nursery beds for rooting. Carry out lasnd preparation for Punja cultivation. Transplant seedlings at 4-5 leaf stage.
- In the Southern Zone, provide shade to small rubber and coconut plants.
- In the Problem Area Zone, apply diluted cow-dung slurry, biogas slurry, cow's urine, vermi wash etc to vegetables @ 8-10 days interval. In case of sucking pests apply neem oil emulsion @ 65 ml/litre of water in cow pea and 25ml/litre of water in cucurbits.
- In the Central Zone, due to the increase in temperature, there is attack of insects such as aphids, white flies, hoppers, etc. in vegetables. This results in stunted growth. To control, apply 5 gms of Verticillium or Metarhizium in 1 litre of water and add neem cake as manure. Neem based insecticides can also be applied.
- In the Southern Zone, apply Bordeaux mixture on the bark of rubber plants which is tapped in this year. Apply lime on the stem of 2- 3 year old plants
- In the Northern Zone, apply Azadiractin 3000 ppm stock after diluting in water @ 3ml/litre for rice bug in paddy at gain filling stage. For better result, add and stir one to two ml of Malathion 50 EC per litre of the diluted Azadiractin solution before applying. Carry out spraying in the evening hours, immediately after sunset.
- **Andhra Pradesh:**
 - In the North Coastal Zone, continue planting of sugarcane after sett treatment with Propiconazol @ 1.0 ml/litre for 15 minutes before planting.
 - In the Krishna Godavari Zone, carry out harvesting of chick pea, Green gram and black gram cops. Harvesting should be done during morning hours to avoid shattering of pods. Maintain 5cm water from PI to grain hardening stage in paddy crop. Crop should not face water stress at panicle initiation, flowering and milk stages.
 - In the Scarce Rainfall Zone, for the control of leaf folder in paddy, farmers are advised to spray Chlorpyrifos @ 2 ml/litre for control. For control of leaf folder in groundnut, spray Chlorpyrifos @ 500 ml (or) Flubendamide 40 ml (or) Monocrotophos 320 ml per 200 litres of water.
 - In the Krishna Godavari Zone, spray Tricyclozole @ 120 g or Isoprothiolin @ 300 ml or Kasugamycin @ 400 ml per acre for leaf blast in rice at active PI - flowering stage.
 - In the Southern Zone, to control tikka leaf spot at pod stage in Rabi groundnut, spray Mancozeb @ 2g + Carbendigem @ 1 g (or) Hexaconazole @ 2 ml per litre of water. Repeat the spray after 15 days depending upon the intensity of the disease.
 - In the North Coastal Zone, spray Chlorpyrifos @ 2.5 ml/litre of water for stem borer; Isoprothiolane @ 1.5 ml/litre of water for blast disease and Hexaconazole @ 2.0 ml/litre of water for sheath blight in Rabi paddy at tillering stage. Spray Carbendazim @ 1 g/litre of water in ragi crop at tillering stage.
- **Telangana:**
 - In North Telangana Zone, maintain shallow depth of water (2-3 cm) during tillering stage of paddy crop. Follow alternate wetting and drying (AWD) method of irrigation. Give irrigation to Maize crop at sensitive stages like before flowering, flowering & milking. Provide irrigation during flowering and grain filling stages in sorghum crop and provide enough irrigation at pegging to pod development stage in groundnut crop.
 - In South Telangana Zone, prevailing dry weather conditions are favorable for incidence of aphids in maize. To control, spray 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 for leaf blast in paddy at tillering to maximum tillering stage. Spray Chlorothalonil @ 2 g or Pyraclostrobin @ 1g/litre of water for early blight in tomato crop. Spray Flubendamide @ 0.3 ml/litre of water at 28 and 35 days for stem borer in tomato crop. Spray Myclobutanil @ 1 ml/litre of water for powdery mildew in bhindi crop.
- **Tamil Nadu:**
 - In the High Rainfall Zone, undertake harvesting of mature paddy crop. Undertake sowing of pulses in the harvested paddy fields. Provide irrigation and mulching to banana plants. Provide support to banana plants to prevent lodging. Speed up harvesting of cloves.
 - In the North Eastern Zone, seeds of rice fallow pulses may be treated with Trichoderma viride @ 4g/kg of seed and with 3 packets (600 g/ha) of Rhizobial culture CRU-7 and 3 packets (600g/ha) of Phosphobacteria using rice kanji as binder and shade dry the seeds before sowing. To prevent grain discoloration in rice, spray two gram of Carbendazim + Thiram + Mancozeb (1:1:1) mixture in one litre of water at 50% flowering stage or spray NSKE 5%.
 - In the Western Zone, provide adequate support to 5 months old banana and sugarcane. Provide3 irrigation to maize crop at 45 to 60 days after sowing to improve yield.
 - In the Southern Zone, prevailing weather condition the occurrence of Fruit Borer in Guava. To manage, collect and destroy damaged fruits, carry out weeding, use light trap @ 1/ha to monitor the activity of adults and spray the insecticides like Malathion 50 EC 0.1g/litre two rounds, one at flower formation and next at fruit set.
 - In the South Zone, to control Cotton aphids at boll bursting stage, spray Dimethoate 30 EC 500ml/ha or

Acetamiprid 20% SP 50 g/ha. To control Cotton mealy bug spray Dimethoate or Profenophos 2 ml/litre of water.

▪ **Karnataka:**

- In North East Dry Zone, under irrigation facility, undertake sowing of Bt cotton. Apply irrigation to watermelon and rice crops. Complete harvesting of wheat, safflower and sorghum.
 - In Southern Dry Zone, undertake transplanting of rice. Use Zinc sulphate @ 8kg/acre to overcome Zinc deficiency in rice field.
 - In Hill Zone, undertake harvesting of completely ripened bunches of pepper.
 - In North Dry Zone, apply irrigation to sugarcane crop by drip irrigation. Continue harvesting of matured fruits of chili.
 - In Eastern Dry Zone, dropping of fruits in mango trees was noticed. To manage this provide adequate quantity of irrigation water (go for drip irrigation where ever it is possible).
 - In North East Transition Zone, continue new planting of improved sugarcane variety Co-86032.
 - In Southern Transition Zone, continue transplanting of summer rice. Use 8 to 10 month old disease free setts for planting of sugarcane. Continue harvesting of matured rhizomes of turmeric and ginger.
 - In North East Transition Zone, incidence of leaf hopper has been noticed in some of the mango growing belts; for its effective management, application of Thiamethaxom 25WG @ 0.5 g per litre of water is recommended.
 - In North East Dry Zone, due to increase in temperature infestation of powdery mildew is noticed in mango crop; for control, spray Difenconazole @ 1 ml/litre of water. In some areas, infestation of leaf spot was noticed in groundnut; for control, spray Hexaconazole @ 1ml or Carbendazim @ 1g/litre of water.
 - In Central Dry Zone, to manage leaf and fruit spot disease in pomegranate, spray the crop with Chlorothonil @2 ml dissolved in one liter of water.
 - In Hill Zone of Karnataka, for control of mites in coconut, spray water soluble Sulphur @ 5g/litre of water or spray a mixture of neem oil (20 ml) + garlic solution @ 20 g + soap powder solution @ 5 g per litre of water to the coconut flower and fruit bunch.
 - In North Transition Zone, for control of powdery mildew in mango; spray Phosphamidon 86 WSC @ 0.5 ml with Hexaconazole 5 EC @1 g per litre of water.
- **Animal Husbandry**
- 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, provide half quantity of greens and straw in the morning and half in the evening after milking. Feed cow with mixture of young foliage and dry grass with hay. Give silage after the end of milking. Give concentrate feed in the morning and evening with equal distribution.
 - In North East Transition Zone, deworm new born animals and vaccinate against PPR disease.

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