



National Agromet Advisory Service Bulletin

Friday 9th March 2018
(For the period 9th to 14th March 2018)



Issued by
India Meteorological Department

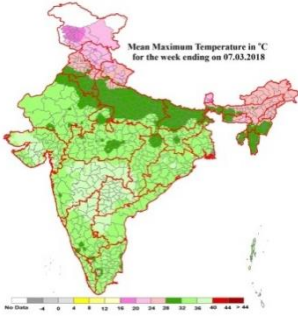
Weblink For

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

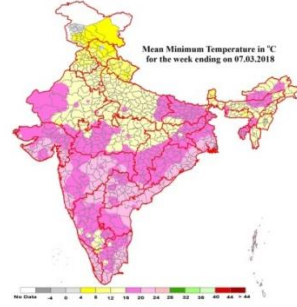
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending 07.03.2018

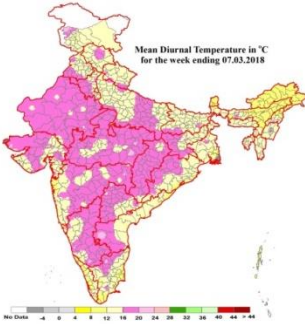
Mean Maximum Temperature (°C) for the week ending 07.03.2018



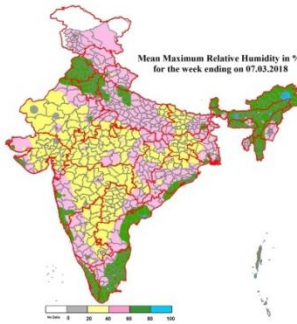
Mean Minimum Temperature (°C) for the week ending 07.03.2018



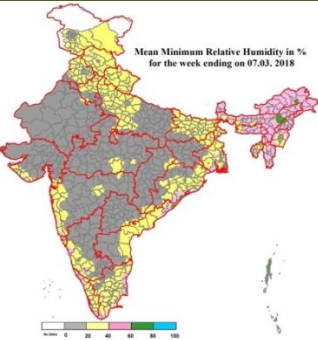
Mean Diurnal Temperature Variation (°C) for the week ending 07.03.2018



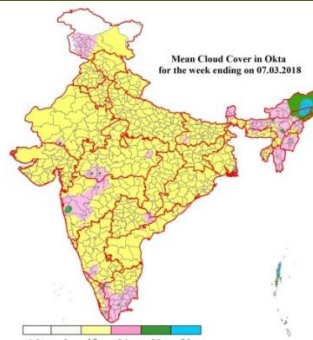
Mean Maximum Relative Humidity (%) for the week ending 07.03.2018



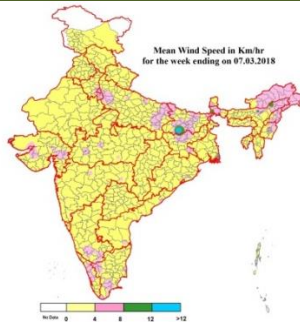
Mean Minimum Relative Humidity (%) for the week ending 07.03.2018



Mean Cloud Cover (okta) for the week ending 07.03.2018

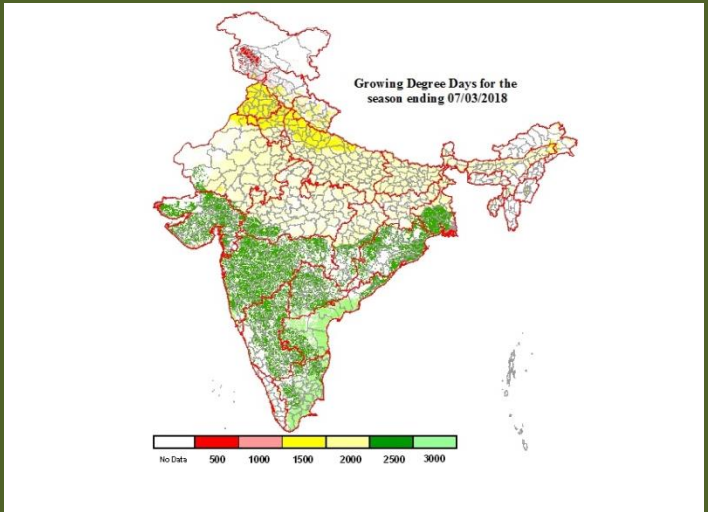
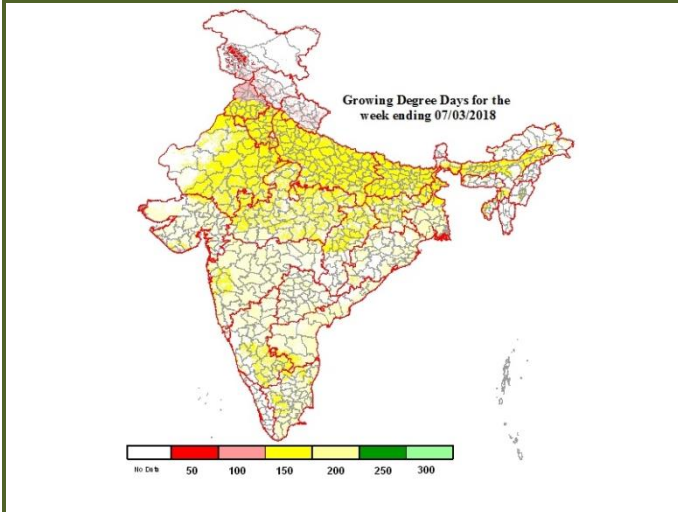


Mean Wind Speed (km/hr) for the week ending 07.03.2018



**Growing Degree Days for the week ending
07.03.2018**

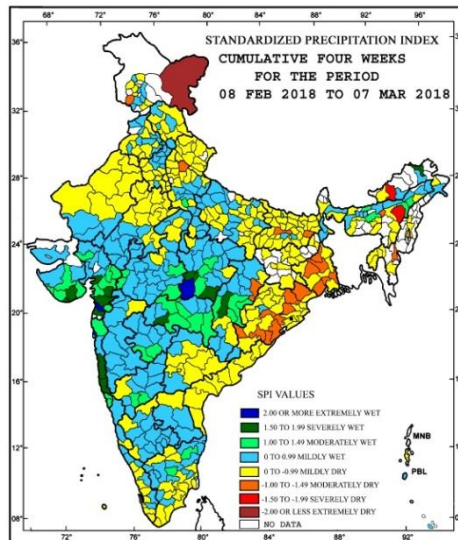
**Growing Degree Days for the season ending
07.03.2018**



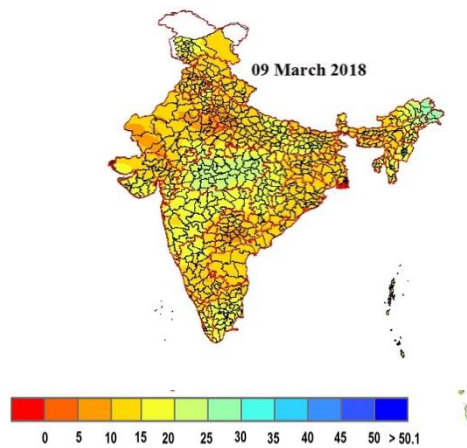
* Base temperature for *Rabi* Season is taken as 05⁰ C

**Standardised Precipitation Index
Cumulative 4 weeks for the period 8th February to 7th March 2018**

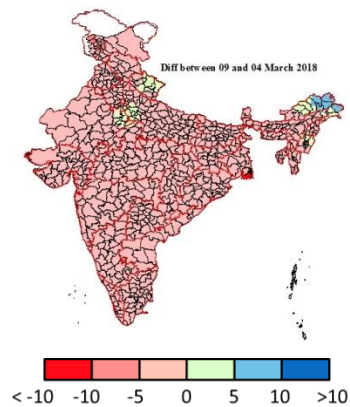
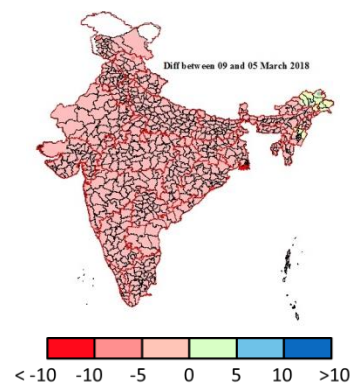
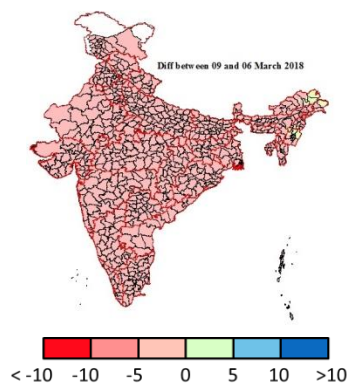
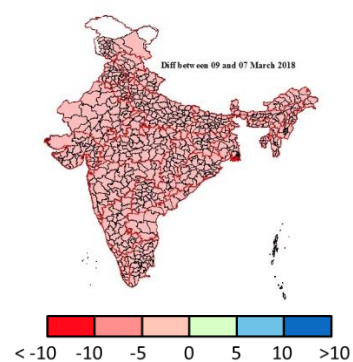
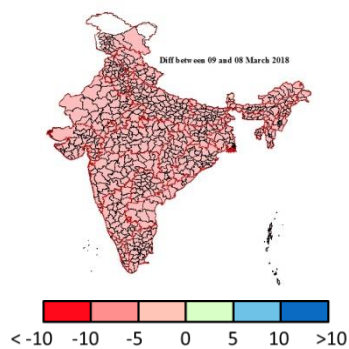
MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE



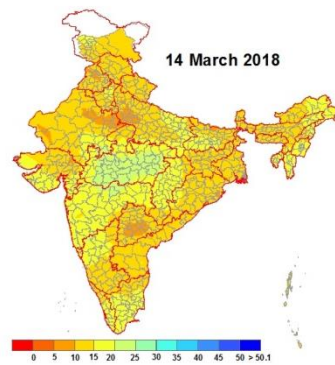
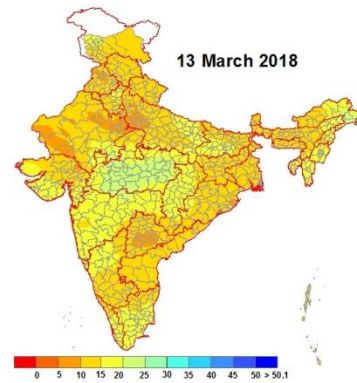
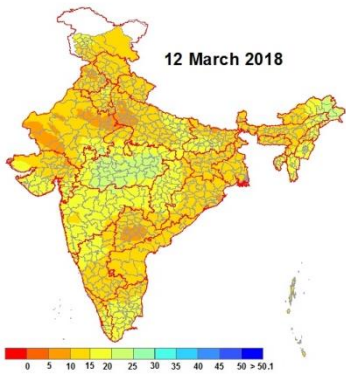
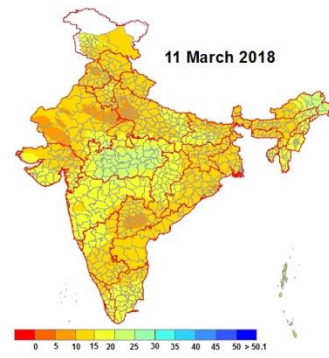
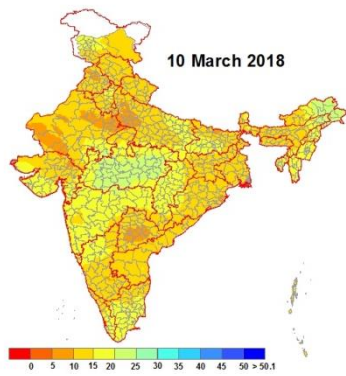
Daily Soil Moisture (mm) for 9th March 2018 (ending at 0830 IST) for 60 cm depth



Difference of Soil Moisture (mm) for 60 cm depth



**Forecasted Soil Moisture (mm) from 10th to 14th March 2018 (ending at 0830 IST)
for 60 cm depth**



Weather Forecast for next 5 days valid upto 0830 hours of 14th March 2018

- Meteorological subdivision wise detailed 5 days rainfall forecast is given in Table below.
- Maximum temperatures very likely to rise by 1-2°C over plains of northwest India during next 72 hours.
- No significant change in Maximum & Minimum temperatures over rest parts of the country during next 3-4 days.

5 Day Rainfall Forecast (Mid day) 9th March 2018

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

% Station Reporting Rainfall

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

Weather Warning during next 5 days

- **09 March (Day 1):** Winds speed reaching 30-40 kmph likely to occur occasionally over Gulf of Mannar and Comorin area. Fishermen are advised to be cautious while venture into the sea over these area.
- **10 March (Day 2):** Winds speed reaching 30-40 kmph likely to occur occasionally over Gulf of Mannar and Comorin area. Fishermen are advised to be cautious while venture into the sea over these area.
- **11 March (Day 3):** No weather warning.
- **12 March (Day 4):** Thundersquall with hail likely at isolated places over Jammu division of Jammu & Kashmir. Thunderstorm accompanied with gusty winds likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

- **13 March (Day 5):** Thundersquall with hail likely at isolated places over Jammu division of Jammu & Kashmir and Himachal Pradesh. Thunderstorm accompanied with gusty winds likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

Weather Outlook for subsequent 2 days from 14th to 16th March 2018

- Fairly wide spread to wide spread rain/snow likely over Western Himalayan region.
- Scattered to fairly wide spread precipitation likely over Northeast India and scattered rain/thundershower mover south peninsular India.
- Isolated rain/thundershower are likely over eastern parts of India.
- Weather likely to be dry over remaining parts of the country.

Salient Advisories

- Winds speed reaching 30-40 kmph likely to occur occasionally over **Gulf of Mannar** and **Comorin** area on 9th and 10th March. Fishermen are advised to be cautious while venturing into the sea over these area.
- As thundersquall with hail likely at isolated places over **Jammu division** of Jammu & Kashmir on 12th and 13th and over **Himachal Pradesh** on 13th March, it is advised to use hail net for orchard crops to protect from mechanical damage. Provide support to young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
- As rain/snow would occur at most places over **Jammu & Kashmir** on 13th March, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- As thunderstorm accompanied with gusty winds likely at isolated places over **Assam & Meghalaya** and **Nagaland, Manipur, Mizoram & Tripura** on 12th and 13th March, provide support to banana, young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
- In view of the prevailing high temperature, in **North Konkan**, maintain 8-10 cm water level in summer rice at panicle initiation stage. Due to increasing rate of evaporation, irrigate the groundnut crop at an interval of 10-12 days. Undertake intercultural operations like weeding, hoeing, earthing up in 30 days old sunflower and also irrigate the crop. 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. In South Konkan, due to temperature variation there is possibility of immature fruit drop in mango, apply irrigation for alphonso mango @ 150 to 200 litre of water at fortnightly interval.
- Utilizing the expected rainfall, in North Eastern Zone of **Tamil nadu**, undertake sowing of rice fallow pulses. Continue sowing of summer green gram in Gangetic West Bengal, Chhattisgarh, Gujarat and Punjab.

Detailed Zonewise Agromet Advisories

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

- **Realised Rainfall:** Rain/snow occurred at Anantnag, Bandipore, Baramula, Doda, Ganderbal, Kulgam, Kupwara, Ramban and Shopian districts of Jammu and Kashmir, Chamoli 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 thundersquall with hail likely at isolated places over Jammu division of Jammu & Kashmir on 12th and 13th and over Himachal Pradesh on 13th March, it is advised to use hail net for orchard crops to protect from mechanical damage. Provide support to young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
 - As rain/snow would occur at most places over Jammu & Kashmir on 13th March, avoid irrigation, intercultural

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

▪ **Jammu & Kashmir:**

- Undertake preparation of trenches and polyhouses for raising seedlings of vegetables in Cold Arid Zone. Undertake sowing of cucurbit seeds in poly bags for early nursery raising inside polyhouses.
- In Sub Tropical Zone, continue transplanting of cucurbits, tomato, brinjal and chilli. Continue direct sowing of bottle gourd, bitter gourd and pumpkin. Undertake digging up of matured tubers of potato as early as possible.
- Continue early nursery sowing of summer vegetables like tomato, brinjal, chilli, capsicum under protected structures (Poly house, Poly tunnel etc.) in Intermediate Zone. Continue preparation of seedling of cucurbits in poly bags. Continue planting of orchards.
- Continue nursery bed preparation for raising of vegetables and sowing of cucurbits in polybags inside polyhouse in Valley Temperate Zone.
- There are chances of attack of yellow rust and leaf spot in wheat in Sub Tropical Zone, if observed apply Propiconazole (Tilt) @ 0.1% 2-3 sprays on a non rainy day and repeat at 15 days interval.

▪ **Uttarakhand:**

- Complete planting of sugarcane by 15th March in Bhabar and Tarai Zone. In mid and high hills, undertake nursery sowing of brinjal, tomato, capsicum and chilli should be sown in the nursery. Undertake sowing of barnyard millet and French bean.
- In Sub Humid Sub Tropic Zone, continue transplanting of onion and tomato.
- Continue preparation of seedlings of early cucurbits in small polythene bags in Hill Zone. Undertake transplanting of vegetables like tomato, chilli etc.
- In Bhabar and Tarai Zone, there are chances of leaf spot disease in cole crops, spray Mancozeb @ 2.5 g/litre of water.

▪ **Himachal Pradesh:**

- Continue nursery preparation of summer vegetables, raising of seedlings of cucurbits in polythene bags and sowing of okra, coriander, radish and turnip in Sub-Montane and Low Hill SubTropical Zone. Undertake sowing of sunflower in low and mid-hill areas.
- Undertake nursery sowing of vegetables like chilli, tomato, capsicum and sowing of bhindi, gourd etc. in Mid Hills Sub Humid Zone.
- In High Hill Temperate Dry Zone, undertake pruning of unwanted branches on apple trees and apply Boudreaux paint on wounds. Clean the polyhouse and prepare beds for nursery of vegetables.
- For control of aphid in mustard crop, spray Rogar or Quinalphos @ 2.0 ml/litre of water in Sub-Montane and Low Hill Tropical Zone.

▪ **Punjab, Haryana & Delhi:**

- Apply irrigation in wheat at dough stage in Western Zone of Punjab. Undertake sowing of okra and cucurbits. Undertake transplanting of chilli.
- 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. Undertake sowing of summer moong and mash.
- 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.
- Continue sowing of spring maize in Central Plain Zone of Punjab. Continue sowing of cucurbits, okra and cowpea and transplanting of brinjal, chilli and tomato. Apply irrigation in wheat at grain filling stage.
- In Delhi, continue sowing of French bean, cluster bean, summer radish. Continue sowing of green gram and black gram. Apply irrigation in wheat at milk stage. Undertake harvesting of matured mustard.
- 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.
- Constant monitoring of timely sown onion crop against attack of thrips should be done in Delhi. Spray Imidacloprid @ 0.5 ml per litre of water with sticky material (Tipol 1.0 g/litre) for effective control.

▪ **Uttar Pradesh:**

- Continue planting of sugarcane in Eastern Plain Zone. Undertake sowing of okra and cucurbits.
- In Varanasi district of Central Plain Zone, continue intercultural operations in cucurbit crops. Undertake harvesting of matured barley. Continue planting of spring sugarcane. Undertake sowing of okra. In Kanpur district, undertake transplanting of vegetables like tomato and chilli. Continue sowing of maize and black gram. Apply irrigation in wheat at milk stage. Complete sowing of okra and cucurbits.

▪ **Rajasthan:**

- Undertake harvesting of matured mustard and cumin in Jodhpur district of Arid Western Plain Zone. Apply irrigation in vegetables.
- In Sub Humid Southern Plain and Aravalli Hill Zone, apply irrigation in wheat from dough to maturity stage. Continue transplanting of vegetables like tomato, chilli and cole crops. Continue harvesting of matured mustard. Undertake sowing of guar and cowpea.

- 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 apply irrigation at dough stage and in late sowing wheat at milk stage. Undertake harvesting of matured mustard.
- Undertake sowing cucurbitaceous vegetables like melon, bottle gourd, ridge gourd, bitter gourd, pumpkin and smooth gourd etc. and nursery raising of brinjal and chilli in Flood Prone Eastern Plain Zone. Continue digging of matured tubers of potato. Continue harvesting of matured mustard.
- In gram, to prevent *Heliothis* infestation, spray Quinolphos 25 EC @ 1200 ml/ha or Indoxycarb @ 200 ml/ha along with water at the time of flowering and repeat the spray if required in Arid Western Plain Zone.
- Early sown summer cucurbits are likely to be affected by red pumpkin beetle. Broadcast Carbaryl 5% @ 20 kg/ha or spray Asiphet 75 S.P. @ 0.5 g/litre of water in Semi Arid Eastern Plain Zone.
- **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 in bee colony. Inspect colony at regular intervals.

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

- **Realised Rainfall:** Rainfall occurred in Jalpaiguri, East Sikkim and North Sikkim districts of Sub-Himalayan West Bengal & Sikkim during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Odisha:**
 - As mainly dry weather would prevail during next three days, undertake harvesting of matured mustard in Western Undulating Zone. Increased temperature may favour the egg laying of stem borer in rice fields at active/late tillering stages. 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 West Central Table Land Zone, undertake sowing of sesame. Early sown summer sunflower is at 25 days. Go for hoeing and weeding. Apply 3 kg N to improved varieties and 6 kg to hybrid ones. Thin out plants, keeping one healthy plant per hill.
 - 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/litre of water for control.
 - **Bihar:**
 - Complete sowing of summer sunflower, maize, green gram and til crops in South Bihar Alluvial Zone. As dry weather would prevail, farmers are advised to provide irrigation and nitrogenous fertilizers in late sown wheat crop which are at flowering or milk stage. Apply 65 kg ha⁻¹ urea fertilizer after 3-5 days from irrigation. 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, maintain 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 g 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 vegetables such as brinjal, tomato, chilli, pea and cabbage.

■ **Jharkhand:**

- Farmers having atleast 1 or 2 irrigation facility may proceed for mung cultivation in Western Plateau Zone after harvesting of rabi crops. Select improved variety of mung S.M.L.- 668 and sow the seed rate @ 12 kg per acre. Before sowing, seed must be treated with Rhizobium culture. If ear head affected with loose smut disease (in which ear head appears black and does not bear any grain) and the weed Phalaris minor (Genhu ka mama) appears in the wheat field, destroy them carefully after hand picking and burning.
- 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. Harvest mature crop of mustard.
- In the Terai Zone, continue transplanting of *Boro* paddy seedlings. Provide mulching to cucurbit crops.
- In Laterite and Red Soil Zone, apply light irrigation to wheat crop at dough stage. Carry out hand weeding in rice crop.
- In the Old Alluvial Zone, ensure 5cm standing water in the *Boro* rice fields. Undertake sowing of maize and amaranthus. Carry out land preparation for mungbean crop.
- In the Terai Zone, apply Flubnamide 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. Install sex pheromone trap @ 1trap/bigha for monitoring of rice stem borer in *Boro* rice at tillering stage.
- In the Coastal Saline Zone, spray Trycyclozole @ 5-6g/10 litres of water for blast disease in *Boro* paddy at tillering stage.
- In the Old Alluvial Zone, install of sex pheromone trap @ 1trap/bigha for monitoring of rice stem borer in *Boro* rice at tillering stage.

■ **Andaman & Nicobar Islands:**

- In Andaman Islands, mulch around the coconut and arecanut tree with fallen leaves and crop residue to conserve soil moisture.
- In the Nicobar Islands, clear the crown of coconut tree and remove the old bunches to avoid the attack of rhinoceros beetles.

● **Animal Husbandry**

- Keeping in view of increasing temperature, in South Bihar Alluvial Zone, farmers are advised to vaccinate the animals to protect from foot and mouth disease, bovine ephemeral fever (aadhaya). Give clean drinking water and keep them in shed and airy places. Vaccinate the poultry to protect from ranikhet, gambora(IBD) and fowl pox diseases.
- 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.

● **Fisheries**

- In the Andaman Islands, harvest the well grown fishes to reduce the population in the pond as water level is expected to go down due to dry period.
- In the Coastal Saline Zone, apply Potassium Permanganate Solution and Lime in pond water if death of carp takes place due to red wound at the tail.
- 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, East Siang, Lohit, Papumpare, Tawang, Tirap, Upper Siang and West Siang districts of Arunachal Pradesh, Baksa, Barpeta, Bongaigaon, Chirang, Dibrugarh, Golaghat, Jorhat, Kamrup Rural, Lakhimpur, Nalbari, Sibsagar, Sonitpur, Tinsukia and Udalgiri districts of Assam during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with gusty winds likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 12th and 13th March, provide 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 on a clear day. Undertake harvesting of toria, mustard, cabbage, cauliflower and pineapple. Avoid harvesting potatoes and sowing of summer vegetables under present weather conditions.
 - 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, maintain 5 cm depth of water in Boro paddy fields. Undertake sowing of okra. Undertake sowing of Early Ahu rice (direct seeded) with dwarf varieties such as Luit, Kapilee, IR-36, Kalinga 3 etc. and tall varieties such as Baghlami, Rangadoria, Ahujaha, Kolamanik etc. Undertake transplanting of chilli seedlings.
 - In the Hill Zone of Assam, undertake land preparation and sowing of okra and green/black gram. Undertake transplanting of young seedlings of cucurbits, tomato and chilli.
 - In the Upper Brahmaputra Valley Zone, continue sowing of summer black/green gram and maize in the main field. Undertake land preparation for ginger and banana. Complete the sowing of seeds of Ahu rice in nursery beds within this week.
 - In the Barak Valley Zone, continue land preparation/sowing of okra, ridge gourd and sponge gourd. Undertake sowing of Ahu rice (direct seeded) in this month as weather is favourable.
 - 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 this month. Undertake land preparation for sowing of summer green gram and black gram. Undertake land preparation for ridge gourd, cucumber, bitter gourd, okra etc. Undertake nursery raising of coconuts.
 - 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.
 - In the Barak Valley Zone, to control the attack thrips in chilli crop, spray Rogor or Dimethoate @ 1.5 ml per litre of water.
 - **Nagaland, Mizoram, Manipur and Tripura:**
 - In Manipur, undertake harvesting of cabbage, cauliflower and broccoli. Undertake nursery raising of chilli and brinjal and transplanting of tomato and capsicum. Apply light irrigation to pea, chickpea lentil, mustard and rapeseed at flowering/pod formation 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.
 - In Nagaland, carry out land preparation for summer maize and green gram. Undertake sowing of summer vegetables like okra, pumpkin, ridge gourd, ash gourd and spine gourd. Harvest linseed, ginger and turmeric.
 - 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. Provide protection to poultry birds against cold.
 - In the Lower Brahmaputra Valley Zone, provide de-worming medicines to the livestock.
 - In Arunachal Pradesh, protect day-old chicks from cold with the help of lighting.
 - **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 view of the prevailing high temperature, 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, earthing up in 30 days old sunflower. Also irrigate the crop. 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. In South Konkan, continue harvesting of pulse crops early in morning or late in evening and dry it for 3 to 4 days in sunlight. Due to temperature variation there is possibility of immature mango fruit drop, apply irrigation for alphonso mango @ 150 to 200 litre of water at fortnight interval.
 - In Madhya Maharashtra, complete harvesting of matured rabi crops (wheat and jowar), vegetables and fruits. Continue sowing of summer moong.
 - In Marathwada, continue harvesting and threshing of mature wheat and chickpea crop. Apply Nitrogen @ 60 kg/ha to 30 days old maize crop. Apply irrigation and undertake mulching in Ambe bahar citrus, pomegranate and sapota orchards. Apply irrigation and undertake intercultural operation like weeding in summer vegetable crops.
 - In Vidarbha, keep the harvested produce of vegetables and fruits in safer place. Continue harvesting of early sown matured wheat during morning hours. Undertake top dressing of Nitrogen fertilizer @ 30 kg per hectare in summer sunflower followed by weeding and hoeing. Maintain 2-3 cm water level in transplanted rice fields. Undertake intercultural operation like weeding in one month old transplanted crop. After weeding apply 2nd dose of Nitrogen @ 40 kg/ha. Apply irrigation to groundnut crop at an interval 10-12 days.
 - **Gujarat:**
 - In South Saurashtra Zone, complete sowing of green gram, black gram and sesame. Complete harvesting of matured wheat, coriander, cumin chickpea and picking of matured clusters of castor crop.
 - In North Saurashtra Zone, undertake sowing of green gram and black gram. Complete sowing of cluster bean, gourds and watermelon. Continue transplanting of brinjal.
 - In North Gujarat Zone and North West Zone of Gujarat, undertake land preparation for sowing of green gram and cowpea; undertake sowing of groundnut, sesame and pearl millet crops. Continue sowing of vegetable crops (okra, cluster bean and bottle gourd) and transplanting of brinjal seedlings. Carry out weeding in citrus orchard.
 - In Middle Gujarat Zone, continue land preparation for sowing of summer groundnut and sesame. Continue harvesting of matured wheat, mustard and capsules of castor crops. Apply irrigation to vegetable crops at an interval of 3 to 4 days.
 - In Bhal and Coastal Zone, undertake sowing of green gram, cowpea and pearl millet crops. Complete the sowing of summer season vegetables (okra, cluster bean and cowpea).
 - In South Gujarat Heavy Rainfall zone, complete transplanting of summer rice.
 - In South Gujarat Zone, in mango orchard dust the 2% Methyl Parathion powder around the tree for effective control of mealy bug.
 - In North Saurashtra Zone, thrips infestation above ETL is observed in groundnut; for control, spray 500 ml of 5 % neem seed extract or neem seed oil 50 ml with Profenofos @20 ml or Imidacloprid 30.5 SC @3 ml or Lemda Cyheloثرin @10 ml 10 litres of water.
- **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:**
 - Complete sowing of green gram and black gram in Nimar Valley Zone. In Vindhya Plateau Zone, continue harvesting of matured gram and wheat. Continue sowing of cucurbits. Undertake sowing of okra and planting of sugarcane.
 - Apply irrigation in wheat at milk stage in Kymore Plateau and Satpura Hill Zone. Undertake harvesting matured lentil, alsin and sunflower.
 - In Grid Zone, undertake digging up of matured tubers if potato. Continue sowing of okra and cucurbits.
 - Continue sowing of vegetables like bitter gourd, pumpkin, okra, bottle gourd, watermelon, muskmelon etc. in

Bundelkhand Zone.

- In Satpura Plateau Zone, continue sowing of groundnut and maize. Continue harvesting of matured oilseeds, pulses and wheat and keep the harvested produce at safe place. Continue preparation of seedlings of cucurbits in polythene bags.
- Apply irrigation in wheat at dough stage. Continue intercultural operations in vegetables. Complete sowing of green gram and black gram in Central Narmada Valley Zone.
- In Malwa Plateau Zone, continue sowing of cucurbits, chilli, tomato and brinjal crops in the nursery. Undertake sowing of green gram and black gram. Undertake transplanting of young seedlings of tomato, chilli and cole crops. Apply irrigation in wheat at milk stage.
- In Jhabua Hill Zone, continue harvesting of matured wheat, gram and mustard. Undertake transplanting of vegetables like tomato, chilli, brinjal, okra and cluster bean.
- In Satpura Plateau Zone, for control of purple blotch of onion, spray Saaf fungicide @ 2 g per litre of water.
- **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. Continue sowing of summer moong. Continue sowing of pumkin, cucumber, sponge gourd etc. Complete the transplanting of summer rice by end of March.
- Continue sowing of green gram and groundnut in Chhattisgarh Plain Zone. Continue sowing of cucurbits in polythene bags. Continue sowing of leafy vegetables and land preparation for summer vegetables. Undertake harvesting of lathyrus, mustard and toria crops followed by threshing.
- Complete sowing of cowpea and sesame by second week of March in Bastar Plateau Zone. Undertake planting of summer arvi and bunda.
- **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:**
- As winds speed reaching 30-40 kmph likely to occur occasionally over Gulf of Mannar and Comorin area on 9th and 10th March. Fishermen are advised to be cautious while venturing into the sea over these area.
- **Kerala:**
- In the Problem Area Zone, continue harvesting of mature nutmeg fruits. Undertake preparation for planting of new cuttings of pepper. Provide shade to vegetables seedlings. Irrigate vegetable gardens twice a day.
- In the Central Zone, carry out land preparation for *Puncha* rice cultivation. Transplant seedlings at 4-5 leaf stage.
- 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, there is a chance of thrips on vegetables. Spray Oberon 0.6 ml/ litre of water.
- In the Northern Zone, apply Azadiractin 3000 ppm stock after diluting in water @ 3ml/litre for rice bug in paddy at grain filling stage. For better result, add and stir one to two ml of Malathion 50 EC per litre of the diluted Azadiractin solution before applying. Carry out spraying in the evening hours, immediately after sunset.
- In the Southern Zone, cut and burn all severely affected banana leaves and spray 1% Bordeaux mixture after the initial appearance of symptoms of Sigatoka disease in 5 months old banana plants. Keep vigil against stem borer and leaf folder in paddy crop. Use Trichogramma cards @ 2 cards per acre as efficient control measure for the leaf folder. If the attack is more, apply Quinalphos (Ekalux 25EC) @ 750 ml per ha.
- **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, undertake sowing of summer pulses like Green gram and black gram crops. 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 Chloropyriphos @ 2 ml/litre for control. For control of leaf folder in groundnut, spray Chloropyriphos @ 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 neck blast in rice at PI - flowering stage.
- In the Southern Zone, to control tikka leaf spot at pod stage in Rabi groundnut, spray Hexaconazole @ 2 ml per

litre of water. The present weather conditions are favourable for Leaf folder and stem borer in paddy. To control spray Chlorpyrifos @ 2.5 ml or Acephate @ 1.5 g or Flubendiamide @ 2 ml per litre of water.

- 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. At the time of boot leaf to flowering stage, maintain 5 cm depth of water. Follow alternate wetting and drying (AWD) method of irrigation. Give irrigation to maize crop at silking stage, flowering/grain filling stages in sorghum crop and 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 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 Acephate 75 SP @ 1.5 g or Chlorantraniliprole @ 0.3 ml or Flubendiamide 20WDG @ 0.25 g or Flubendiamide 480 SC @ 0.1 ml/l of water leaf folder 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 Flubendiamide @ 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:**

- Utilizing the expected rainfall, in the North Eastern Zone, undertake sowing of rice fallow pulses, the seeds 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 High Rainfall Zone, undertake harvesting of mature paddy crop in clear weather. Undertake sowing of pulses in the harvested paddy fields. Provide support to banana plants to prevent lodging. Speed up harvesting of cloves.
- In the Western Zone, provide adequate support to 5 months old banana and sugarcane.
- In the Southern Zone, due to prevailing hot weather condition there is incidence of Bacterial wilt in Tomato. To manage this avoid damage to seedling while transplanting and apply bleaching powder @ 10kg/ha. Keeping the crop rotations, viz., cowpea-maize-cabbage, okra-cowpea-maize, maize- cowpea-maize and finger millet-egg plant are reported effective in reducing bacterial wilt of tomato.
- 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.
- In the North Western Zone, occurrence of termite incidence is observed in tapioca crops due to prevailing dry weather. To control this insect, carry out soil drenching with Chlorpyrifos @ 2ml/litre of water near to the crops.

- **Karnataka:**

- In North East Dry Zone, under irrigation facility, continue sowing of Bt cotton. Apply irrigation to groundnut and mango (marble size fruits) crops. Complete harvesting of wheat, safflower and sorghum.
- 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 Southern Dry Zone, apply irrigation to coffee plantation area through well/borewell/tanks or irrigate through rainguns or sprinkler irrigation as blossom shower to get good berry setting.
- In Hill Zone, continue sowing of green gram and black gram. Continue harvesting of completely ripened bunches of pepper.
- In Southern Transition Zone, use 8 to 10 month old disease free setts for planting of sugarcane. Continue harvesting of matured rhizomes of turmeric and ginger.
- In North Dry Zone, complete harvesting of matured fruits of chili.
- In Southern Dry Zone, infestation of powdery mildew disease is noticed mango orchard; for control, spray Wettable Sulphur @ 3gm/litre or Dinocof @ 0.5ml/litre or Propineb @ 2gm/litre of water. To manage hoppers in mango spray Confidor @ 0.3 ml/ litre of water or Melathian 50 E.C @ 2 ml / litre of water.
- 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 Chlorothalonil @ 2

ml dissolved in one liter 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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