

23rd March - World Meteorological Day
'Weather-ready, climate-smart'



National Agromet Advisory Service Bulletin

Friday 23rd March 2018
(For the period 23rd to 28th March 2018)



Issued by
India Meteorological Department

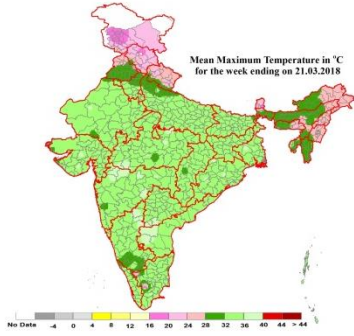
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District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>

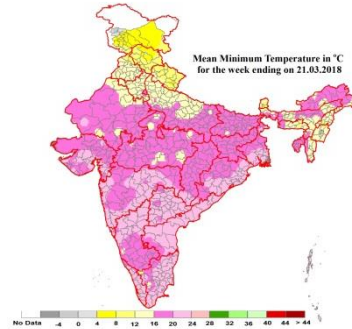
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending 21.03.2018

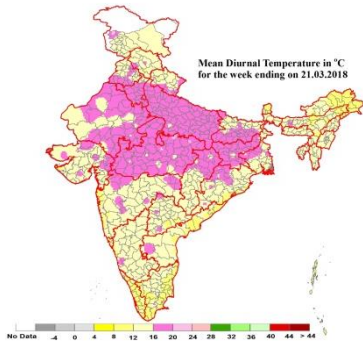
Mean Maximum Temperature (°C) for the week ending 21.03.2018



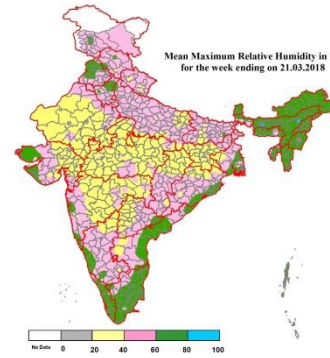
Mean Minimum Temperature (°C) for the week ending 21.03.2018



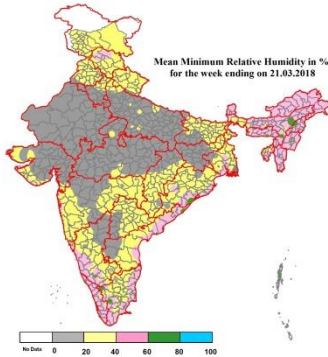
Mean Diurnal Temperature Variation (°C) for the week ending 21.03.2018



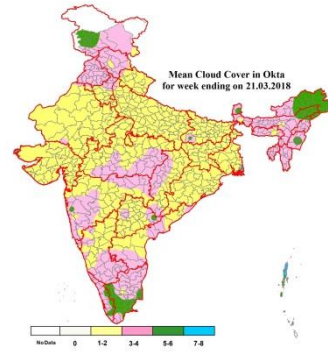
Mean Maximum Relative Humidity (%) for the week ending 21.03.2018



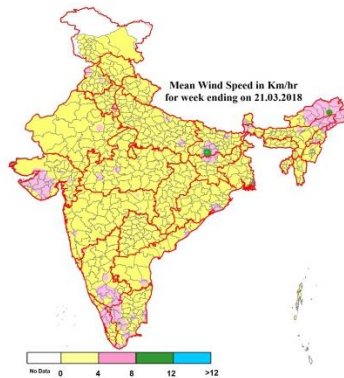
Mean Minimum Relative Humidity (%) for the week ending 21.03.2018



Mean Cloud Cover (okta) for the week ending 21.03.2018

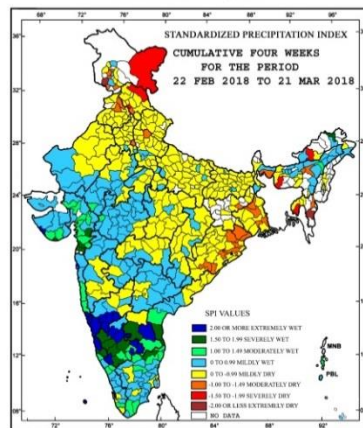


Mean Wind Speed (km/hr) for the week ending 21.03.2018

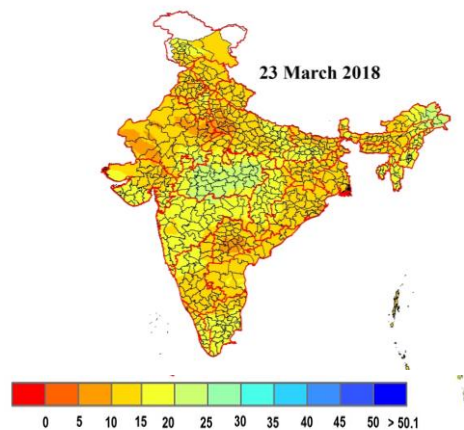


Standardised Precipitation Index Cumulative 4 weeks for the period 22nd February to 21st March 2018

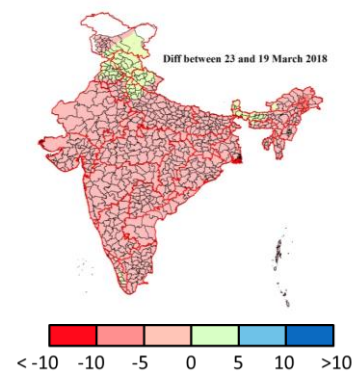
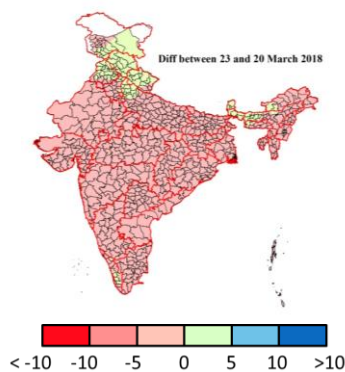
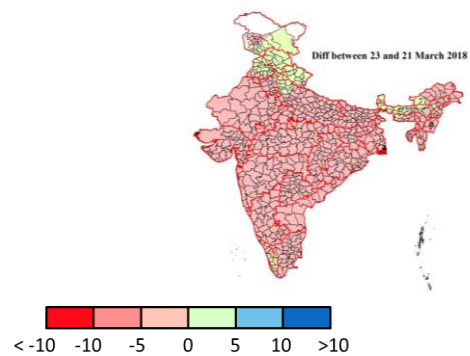
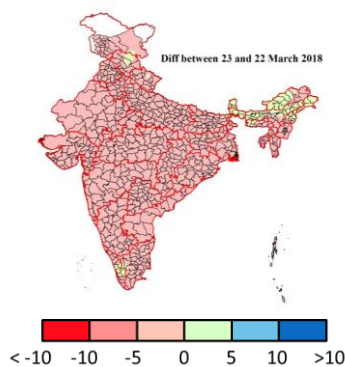
MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE

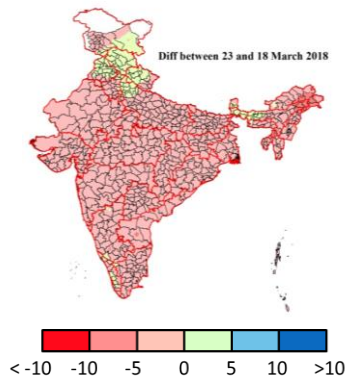


Daily Soil Moisture (mm) for 23rd March 2018 (ending at 0830 IST) for 60 cm depth

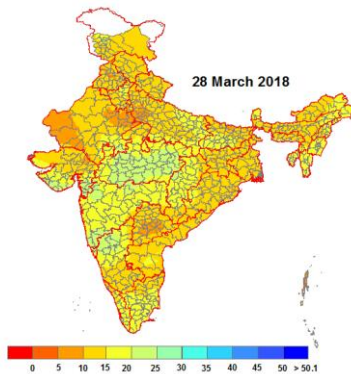
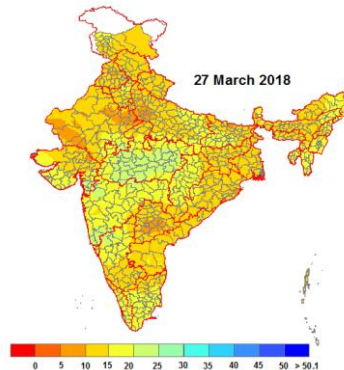
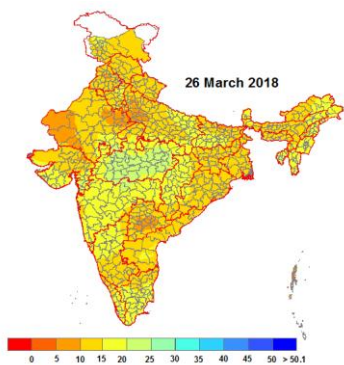
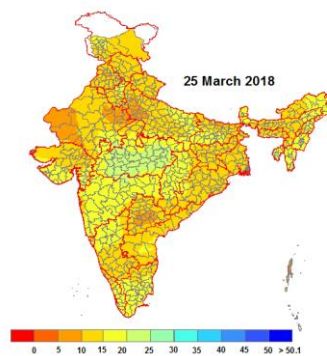
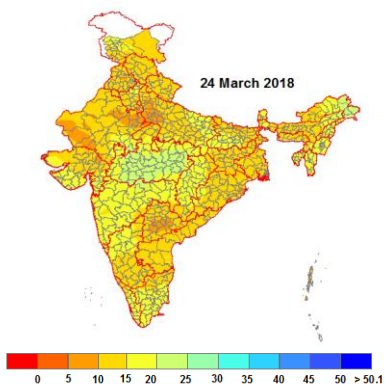


Difference of Soil Moisture (mm) for 60 cm depth





**Forecasted Soil Moisture (mm) from 24th to 28th March 2018 (ending at 0830 IST)
for 60 cm depth**



Weather Forecast for next 5 days valid upto 0830 hours of 28th March 2018

- Meteorological subdivision wise detailed 5 days rainfall forecast is given in Table below.
- Maximum temperatures very likely to rise by 2-3°C over parts of Central India during next 3-4 days and over northwest & interior parts of peninsular India after 24 hours.
- No significant change in maximum and minimum temperatures likely over rest of the country during next 3days.

5 Day Rainfall Forecast (Mid day) 23rd March 2018

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

- **23 March (Day 1):** Thunderstorm accompanied with squall very likely at isolated places over West Bengal, Assam & Meghalaya, Tripura, Mizoram and Odisha. Thunderstorm accompanied with gusty winds very likely at isolated places over interior Tamilnadu and Kerala.

- **24 March (Day 2):** No Weather Warning.
- **25 March (Day 3):** No Weather Warning.
- **26 March (Day 4):** Thunderstorm accompanied with gusty winds very likely at isolated places over south coastal Tamilnadu and Assam & Meghalaya.
- **27 March (Day 5):** Thunderstorm accompanied with gusty winds very likely at isolated places over Assam & Meghalaya, Mizoram & Tripura.

Weather Outlook for subsequent 2 days from 28th to 30th March 2018

- Isolated precipitation likely over Western Himalayan region.
- Isolated rain/thundershowers likely over south Peninsula and Islands.
- Scattered to fairly widespread rain/thundershowers likely over northeast India.
- Weather is likely to be dry over the remaining parts of the country.
- Maximum temperatures are likely to rise by 2-3°C over west, central & adjoining peninsular India.

Salient Advisories

- As thunderstorm accompanied with squall very likely at isolated places over **West Bengal, Odisha, Assam & Meghalaya, Tripura and Mizoram** on 23rd March, thunderstorm accompanied with gusty winds very likely at isolated places over **interior Tamilnadu and Kerala** on 23rd, over **south coastal Tamilnadu** on 26th, over **Assam & Meghalaya** on 26th and 27th, over **Mizoram & Tripura** on 27th March, provide support to banana, young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.
- As rain/thundershowers would occur at most/many places over **Arunachal Pradesh** on 23rd, 26th and 27th, at many places over **Assam & Meghalaya** on 23rd March, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- In **Arunachal Pradesh**, in view of realized and expected rainfall, avoid sowing of summer vegetables. Utilizing the realized and expected rainfall continue sowing of *Ahu* and *Bau* rice in Assam. Continue sowing of summer green gram in **Gangetic West Bengal, Chhattisgarh and Punjab**. Continue sowing of cowpea in **Rajasthan and Gujarat**.
- As dry weather would prevail undertake harvesting of matured wheat in **Rajasthan** and continue harvesting of wheat and gram in Nimar Valley Zone and Jhabua Hill Zone of **Madhya Pradesh**.
- In Hill Zone and Lower Brahmaputra Valley Zone of **Assam**, vaccinate cattle against FMD, HS and BQ diseases.

Detailed Zonewise Agromet Advisories

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

- **Realised Rainfall:** Rain/snow occurred in Anantnag, Bandipore, Baramula, Doda, Ganderbal, Kulgam, Kupwara, Pulwama, Ramban and Reasi district of Jammu and Kashmir during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Jammu & Kashmir:**
 - Continue preparation of trenches and polyhouses for raising seedlings of vegetables in Cold Arid Zone. Continue sowing of cucurbit seeds in poly bags for early nursery raising inside polyhouses. Undertake training and pruning in orchards.
 - In Sub Tropical Zone, continue transplanting of cucurbits, tomato, brinjal and chilli. Continue direct sowing of okra, bottle gourd, bitter gourd and pumpkin. Continue digging up of matured tubers of potato. Apply irrigation in wheat from milk to dough stage. Undertake harvesting of mustard crop.
 - In Intermediate Zone, undertake transplanting of cucurbits and vegetables. Continue planting of orchards.
 - Continue sowing of seeds of tomato, brinjal, chilli, capsicum, knol khol, kale in hot beds as well as in raised

beds under open conditions in Valley Temperate Zone. Seedlings of vegetables prepared under protected conditions may be transplanted.

- 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 and repeat at 15 days interval.
- **Uttarakhand:**
- In mid and high hills of Bhabar and Tarai Zone, continue nursery sowing of brinjal, tomato, capsicum and chilli. Continue sowing of barnyard millet and French bean. Undertake transplanting of brinjal, chilli and capsicum in valley.
- Continue sowing of French bean and okra in Hill Zone. Undertake transplanting of brinjal, tomato, capsicum 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:**
- In Sub-Montane and Low Hill SubTropical Zone, continue sowing of sunflower in low and mid-hill areas. Continue sowing of green gram and black gram. Continue sowing of spinach, coriander and fenugreek. Continue nursery preparation of summer vegetables, raising of seedlings of cucurbits in polythene bags in poly house.
- Continue nursery sowing of vegetables like chilli, tomato, capsicum and sowing of bhindi, gourd etc. in Mid Hills Sub Humid Zone. Undertake transplanting of coloured capsicum, tomato, khira etc. in the green houses.
- In High Hill Temperate Dry Zone, clean the polyhouse and prepare beds for nursery of vegetables. Complete the grafting work in apple nursery.
- For control of downy mildew in garlic, spray Diathane M 45 2.5 g or Bavistine 1 g per 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. Continue sowing of okra and cucurbits. Continue transplanting of chilli. Undertake harvesting of late sown mustard.
- In Western Plain Zone of Punjab, continue sowing of maize and planting of spring sugarcane. Continue transplanting chilli. Continue sowing of summer moong and mash. Continue harvesting of matured mustard. Undertake nursery sowing of onion.
- In Undulating Plain Zone of Punjab, continue planting of sugarcane. Continue transplanting of chilli and tomato. Undertake transplanting of cucurbits. Continue sowing of summer Mash and moong.
- 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 Western Zone of Haryana, undertake harvesting of late sown mustard. Continue sowing of green gram, black gram and planting of sugarcane. Continue sowing of lady's finger, bottle gourd, cucumber, ridge gourd and summer radish.
- In Eastern Zone of Haryana, apply irrigation in wheat at milk stage. Continue planting of spring sugarcane.
- In Delhi, continue sowing of French bean, cluster bean, summer radish. Continue sowing of green gram and black gram. Apply irrigation in wheat at grain filling stage. Undertake transplanting of young seedlings of brinjal, chilli in flat beds and direct sowing of cucurbits in Hill channel method.
- 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:**
- In Allahabad district of Central Plain Zone, continue harvesting of matured mustard. Continue sowing of green gram and black gram. Apply irrigation in okra, Lobia and Rajma according to the need and apply 50 kg urea/ha in standing crops.
- Continue sowing of okra and cucurbits in Eastern Plain Zone. Complete harvesting of matured mustard and pea. Continue sowing of green gram and black gram. Undertake harvesting of matured gram and redgram.
- In Varanasi district of Central Plain Zone, continue intercultural operations in cucurbit crops. Continue harvesting of matured barley. Continue planting of spring sugarcane. Continue sowing of okra. In Kanpur district, undertake sowing of green gram. Continue transplanting of vegetables like tomato and chilli. Complete sowing of maize and black gram. Apply irrigation in wheat at milk stage. Undertake harvesting of matured gram.
- **Rajasthan:**
- Continue harvesting of matured mustard and cumin in Jodhpur district of Arid Western Plain Zone. Apply irrigation in vegetables. Undertake harvesting of wheat and gram.
- In Sub Humid Southern Plain and Aravalli Hill Zone, undertake harvesting of matured wheat. Continue sowing of guar and cowpea. Apply irrigation in summer groundnut at flowering stage.
- 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. Apply irrigation in orchards and also apply recommended dose of fertilizers and manures along with irrigation water. Undertake direct sowing of cucurbits.

- Continue 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. Undertake harvesting of matured wheat.
- In Semi Arid Eastern Plain Zone, undertake harvesting of wheat and barley.
- In Sub Humid Southern Plain and Aravalli Hill Zone, in cucurbitaceous crops, if attack of red pumpkin beetle is found, spray Diclorvos 76 EC (DDVP) @ 1 g per litre of water.
- **Animal Husbandry**
- In Jammu & Kashmir, maintain proper hygienic conditions within the sheds. Avoid excessive milk feeding to new born calves.
- In Western Zone of Punjab, give special care to new born calves as day temperature is rising. Deworming should be done in calves regularly. Vaccinate animals against FMD.
- **Apiculture:**
- In Jammu & Kashmir, shift the bee colonies near the late sown mustard crop.

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

- **Realised Rainfall:** Rainfall occurred in North Sikkim district of Sub-Himalayan West Bengal & Sikkim during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with squall very likely at isolated places over West Bengal and Odisha on 23rd 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.
 - **Odisha:**
 - In North Eastern Ghat Zone, undertake sowing of summer cowpea. In North Central Plateau Zone, complete transplanting of rice.
 - Undertake harvesting of matured groundnut in Western Undulating Zone. The rice crop is at (five to eight week) active tillering to PI stage in main field. Alternate wetting and drying of land is advisable during tillering phase and keep standing water upto 5cm during PI satge.
 - In Northeastern Coastal Plain Zone, in rice maintain water depth upto the base of the crop followed by weeding when the crop is around 3-4 leaf stage. Undertake harvesting of late sown mustard and rapeseed.
 - In West Central Table Land Zone, early sown summer sunflower is at 25 days. Go for hoeing and weeding. Complete sowing of summer pulses. Maintain water depth upto the base of the rice crop followed by weeding when the crop is around 3-4 leaf stage.
 - In Eastern Ghat High Land Zone, 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. Continue planting of sugarcane. Undertake harvesting onion, cabbage and cauliflower.
 - In Northeastern Coastal Plain Zone, due to rise in temperature, fruit & shoot borer attack in brinjal will aggravate. To control it spray Neem oil 300 ppm @ 5ml/litre of water at initial stages. At later stages spray Thiodicard @ 300g/acre.
 - **Bihar:**
 - In South Bihar Alluvial Zone, continue sowing of green gram and black gram. Provide irrigation and nitrogenous fertilizers (108 kg urea/ha) in *rabi* maize, at tassel/silking stage. Apply last irrigation in late sown wheat at milk stage and in vegetables.
 - In North West Alluvial Plain Zone, continue the sowing of summer maize varieties such as Suwan, Deoki, Ganga 11, Shaktiman-1, 2, 3, 4 & 5. Farmers are advised to harvest early sown mustard, which is in maturity stage. Undertake sowing of elephant foot yam, green gram and black gram. Undertake sowing of vegetables like lady's finger, pumpkin, cucumber, sponge gourd etc.
 - 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:**
 - In South Eastern Plateau Zone, undertake harvesting of matured chickpea, lentil, pigeonpea and mustard. Apply irrigation in wheat at dough stage. Undertake intercultural operations in summer rice.
 - In Central and North eastern Plateau Zone, apply irrigation in gram at pod filling stage. Undertake sowing of okra. Undertake weeding in green gram.
 - In Western Plateau Zone continue sowing of summer moong. Maintain the water level in transplanted rice and broadcast urea after 25-30 days of transplanting. Apply irrigation in wheat at milk to grain filling stage.

▪ **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 sowing of green gram and black gram. Undertake sowing of French bean, cluster bean and summer radish.
- In the Hill Zone, undertake planting of healthy rhizomes of ginger and turmeric. Ensure proper drainage in the field. Harvest mature crop of mustard. Avoid irrigation to potato crop as rainfall is expected.
- In the Coastal Saline Zone, apply irrigation at 15 days interval to mango at tender fruit stage.
- In the Terai Zone, keep 3-5 cm of water level in Boro paddy field. Provide mulching to cucurbit crops.
- In the Laterite and Red Soil Zone, apply light irrigation to wheat crop at dough stage. Carry out hand weeding in rice crop and keep 2 cm water level.
- In the Old Alluvial Zone, continue sowing of summer green gram in a land with good drainage facility. Carry out harvesting of lentil.
- In the Terai Zone apply Imidachloropid @1ml/5lit. of water or thiomethoxam @1g/3 litres of water for white fly in chilli crop at vegetative stage. Install pheromone traps @ 2 per bigha for management of fruit fly in cucurbits.
- In Old Alluvial Zone, spray Acetamiprid @ 1 gram / 5 litres of water or apply Forate 10G @ 4 kg/bigha to control rice gall midge in Boro paddy at tillering stage. Spray Chloropyrifos @ 2ml/liter of water at 10 days interval for management of cutworms in cucurbit and vegetable crops at vegetative stage.
- In the Coastal Saline Zone, spray Triazophos@1.2ml/liter of water or Propenophos@1.5ml/liter of water for stem borer in Boro paddy at panicle initiation stage. Spray Endosulfan @ 1.5 ml per liter of water for caterpillar attack in Mung bean crop at vegetative stage.
- In the Laterite and Red Soil Zone, apply Melathion 50 EC @ 1 ml per litre of water for fruit fly at vegetative stage in pointed gourd. Spray Chlorpyrifos 20% EC @ 1.5 ml per litre of water at clear weather conditions for aphid attack in groundnut crop at vegetative stage.

▪ **Andaman & Nicobar Islands:**

- In Andaman Islands, transplant late season vegetables on raised beds with grass mulching.
- In the Nicobar Islands, make basin around the coconut tree to harvest rain water.
- In Andaman Islands, spray neem seed kernel extract @ 5 % to control white fly for the management of yellow vein mosaic disease in bhendi and repeat after 15 to 20 days interval.

• **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 Andaman & Nicobar Islands, provide vitamin-C and electrolyte along with cool drinking water to the poultry birds to prevent heat stress.

• **Fisheries**

- 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.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Arunachal Pradesh except Dibang Valley and East Kameng, in Cachar, Dhemaji, Dibrugarh, Hailakandi, Karbi Anglong, Karimganj, Lakhimpur, N C Hills, Sibsagar and Tinsukia districts of Assam, East Khasi Hills district of Meghalaya and Imphal West and Thoubal districts of Manipur during the week. Weather remained mainly dry/dry over rest of the region.

• **Advisories:**

- As rain/thundershowers would occur at most/many places over Arunachal Pradesh on 23rd, 26th and 27th, at many places over Assam & Meghalaya on 23rd March, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- As thunderstorm accompanied with squall very likely at isolated places over Assam & Meghalaya, Tripura and Mizoram on 23rd, thunderstorm accompanied with gusty winds very likely at isolated places over Assam & Meghalaya on 26th and 27th, over Mizoram & Tripura on 27th 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, continue harvesting of cabbage, cauliflower, ginger, turmeric, potato, toria, mustard and pineapple after current spells of rain. Avoid sowing of summer vegetables. Carry out land preparation for Jhum rice.
- In Meghalaya, continue sowing of cucurbits like cucumber, pumpkin, bottle gourd, ash gourd, squash, etc.

Continue nursery raising of chilli and brinjal crops.

- In Lower Brahmaputra Valley Zone of Assam, undertake land preparation for summer sesamum crop. Avoid a irrigation to Boro rice at active tillering stage as rainfall is expected during next 5 days. Undertake sowing of okra and summer gourd vegetables. Continue 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. Continue sowing of maize. Protect mature Rabi maize from birds by using shiny, coloured strips. Continue planting of sugarcane.
- In the Hill Zone of Assam, continue sowing of okra and hybrid varieties such as Ganga 5, Hi starch and composite variety like NLD, Dhawal, Naviot, Diara etc. of maize. Seed treatment should be done with Carbendazim @ 2 g/Kg or Captan(@ 2.5 – 3.0 g/kg. Continue 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.
- In the Barak Valley Zone, continue land preparation/sowing of okra, ridge gourd and sponge gourd. Continue sowing of Ahu rice (direct seeded) as light rainfall is expected.
- In the North Bank Plain Zone, continue land preparation/sowing of Bau rice (varieties Maguri, Panikekua, Amona, Negheri etc.). Continue sowing of okra (varieties Pusa Sawani, Arka Anamika, Parbhdani Kranti etc.). Undertake land preparation/sowing of direct seeded Ahu rice (varieties Banglami, Rangadoria, Ahu joha, Rasi etc.). Undertake sowing of Varieties of Ridge gourd like Pusa Nasdar, AAUJ-1, AAUJ-2, AAUC-3 and sponge gourd like Pusa Chikni.
- In Meghalaya, spray Nimbicedine @ 5ml/litre of water to control pests in tomato & capsicum at vegetative stage on a non rainy day.
- In the Lower Brahmaputra Valley Zone, spray Dimethoate or Dimecron or Dichlorvos @ 1 ml/litre of water for fruit borer in lentil crop at maturity stage on a non rainy day.
- In the Barak Valley Zone, to control the attack thrips in chilli crop, spray Rogor or Dimethoate @ 1.5 ml per litre of water on a non rainy day.
- In the North Bank Plain Zone, spray of Chloropyriphos 20EC @ 1ml/litre of water against potato tuber moth in standing potato crop on a non rainy day.
- **Nagaland, Mizoram, Manipur and Tripura:**
- In Manipur, for broadcasting, transplant the seedlings of pre-kharif rice immediately (not later than 2 days) after uprooting to avoid transplanting shocks. After 3-4 days of transplanting water level of 5-8 cm may be maintained. Carry out harvesting of pea, chickpea lentil, mustard and rapeseed. Harvest potato crop after 10-15 days after haulm cutting. Undertake land preparation for planting tree bean, lime, lemon and banana. Undertake land preparation and sowing of French bean and bhindi. Undertake planting of ginger, turmeric and cucurbits.
- In Nagaland, prepare nursery bed for brinjal. Monitor maize crop for dead hearts at two-leaf stage. Carry out timely removal and destruction of dead hearts.
- In Manipur, in chilli and capsicum nursery, spray Carbendazim + Mancozeb (Sixer) @ 2 g per litre of water to control the fungal attack on a non rainy day.
- 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.
- **Animal Husbandry**
- In the Hill Zone and Lower Brahmaputra Valley Zone of Assam, vaccinate cattle against FMD, HS and BQ.
- In Manipur and Meghalaya, vaccinate poultry birds against coccidiosis and Ranikhet diseases. Vaccinate pigs against FMD & swine fever and cattle against FMD, Hemorrhagic Septicemia, Black Quarter.
- In the North Bank Plain Zone, vaccinate poultry birds against Ranikhet disease.
- In the Lower Brahmaputra Valley Zone, to control anemia in 4 and 14 days piglet, give 'Imferon' injection after consulting local veterinary doctor. Vaccinate domestic live stocks like cattle, goat & pigs against the Foot and mouth disease.
- In Arunachal Pradesh, protect day-old chicks from cold with the help of lighting.
- **Fishery**
- In the Hill Zone of Assam, 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, for better profitability from the fish pond it is advisable to fish rearing culture silver berb (China Puthi) @ 15 % with Silver Carp 20%, Catla 15% , Rohu 15%, Grass Carp 10%, Mrigal 20% and common Carp 5%.
- In Meghalaya, feed common carp brooders with protein rich diet for proper maturation of eggs.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Weather remained mainly dry/dry over the region during the week.
- **Advisories:**
 - **Maharashtra:**
 - In North Konkan, maintain 8-10 cm water level in summer rice. Undertake the harvesting of 80 to 85% matured mangoes in morning and evening hours. Keep the harvested fruits in shade to prevent spongy tissue disease and to protect from heat. In South Konkan, maintain water level in rice field upto level 5 cm. Apply 1st dose of urea @ 55 kg/ha, before application of urea weeding should be carried out. Harvest matured pulse crop early in morning or late in evening and dry it for 3 to 4 days in sunlight.
 - In Madhya Maharashtra, in view of rise in temperature, use drip irrigation to the vegetable crops in shadenet for better yield in less water application. In orchards, to reduce evaporation, undertake irrigation and mulching. If the temperature is around 35-40°C, spray Potassium Nitrate or Muret of Potash @ 500 g per 100 liters of water to reduce rate of evapotranspiration.
 - In Marathwada, apply irrigation to groundnut, vegetables and orchards. Undertake mulching and irrigation in *Ambe bahar* pomegranate orchard, to avoid fruit dropping due to water stress condition. Spray wettable sulphur @ 2 g per liter of water and 1 % potassium nitrate in mango orchard. Undertake harvesting of matured grapes. After harvesting, apply Bordeaux paste in grape orchard.
 - In Vidarbha, 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 vegetables crops and orchards. Irrigate groundnut at an interval of 10-12 days (vegetative stage), also undertake gap filling in the crop.
 - In Madhya Maharashtra, for control of thrips in cucumber, bottle gourd, bitter gourd, ridge gourd, brinjal, tomato, watermelon, muskmelon, spray the crop with 4% neem extract.
 - **Gujarat:**
 - In North Saurashtra Zone, apply irrigation in groundnut (flowering stage) and mango crops. Complete sowing of green gram and black gram.
 - In South Saurashtra Zone, carry out weeding and intercultural operations in timely sown groundnut, green gram, black gram and sesame. Apply irrigation in sesame, green gram, black gram and groundnut at regular interval.
 - In North Gujarat Zone, continue sowing of green gram, cowpea, sesame and vegetable crops (okra, cluster bean etc). Carry out intercultural operations in groundnut crop. Undertake harvesting of matured fennel and papaya fruits. Apply irrigation in pearl millet crop.
 - In Bhal and Coastal Zone, complete sowing of green gram, cow pea, pearl millet and vegetable crops (lady's finger, cluster bean, cow pea, bitter gourd, bottle gourd, small gourd etc.) in time.
 - In Middle Gujarat Zone, continue sowing of pearl millet and green gram. Carry out intercultural operations in timely sown groundnut and vegetable crops.
 - In North West Zone of Gujarat, carry out weeding and intercultural operations in timely sown groundnut. Apply irrigation in groundnut (18-20 DAS) and pearl millet crops. Continue sowing of green gram and vegetable crops (okra, cluster bean and cowpea) and transplanting of brinjal seedlings.
 - In South Gujarat Zone, apply irrigation in vegetable and fruit crops.
 - In North Saurashtra Zone, thrips infestation above ETL is observed in all vegetable crops; 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 Lamda Cyheloثرin @10 ml 10 litres of water.
- **Animal Husbandry**
 - In Gujarat, keep animals under shade during noon hours and avoid feeding between 11 to 15 hrs. Make arrangement of curtains for poultry house.
 - In Konkan, in view of expected rise in temperature, protect poultry birds from heat by hanging curtains outside the poultry shed and sprinkling it with water. Also apply layer of grass or gunny bags on the roof of poultry shed and sprinkle water on it. Provide fresh and cool drinking water for the poultry birds and chicks.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Weather remained dry over the region during the week.
- **Advisories:**
 - **Madhya Pradesh:**
 - Continue harvesting of gram and wheat in Nimar Valley Zone. Continue sowing of okra. In Grid Zone, continue sowing of green gram.
 - In Vindhya Plateau Zone, continue sowing of cucurbits. Continue sowing of okra and planting of sugarcane. Undertake sowing of green gram and black gram. Undertake harvesting of matured wheat and gram.
 - Apply irrigation in wheat at milk stage in Kymore Plateau and Satpura Hill Zone. Continue harvesting matured lentil, alsin and sunflower. Continue sowing of cucurbits and land preparation for sowing of summer moong and

urad.

- Undertake intercultural operations in vegetables and apply irrigation in Bundelkhand Zone. Continue sowing of summer moong.
- In Satpura Plateau Zone, undertake mulching in summer groundnut and maize to reduce evapotranspiration rate. Apply irrigation in vegetables.
- Apply irrigation in wheat at dough stage. Continue intercultural operations in vegetables in Central Narmada Valley Zone.
- In Malwa Plateau Zone, apply irrigation in wheat. Continue sowing of cucurbits, chilli, tomato and brinjal crops in the nursery. Continue sowing of green gram and black gram. Continue transplanting of young seedlings of tomato, chilli and cole crops.
- In Jhabua Hill Zone, continue harvesting of matured wheat and gram. Apply irrigation and recommended dose of fertilizers in summer vegetables. Continue sowing of green gram and black gram.
- In Satpura Plateau Zone, there are chances of powdery mildew attack in mango at flowering/fruit setting stage, which causes poor fruit setting and later on fruit dropping. Spray Carbendizim (Bavistin) @ 1.5g or Sulphex @ 3.0g per litre of water.
- **Chhattisgarh:**
 - In North Hill Zone, continue harvesting of matured potato, gram and lentil crops. Apply irrigation in summer rice, sugarcane, wheat (milk to dough stage) and summer vegetable crops as per soil moisture condition. Continue sowing of pumpkin, 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. Complete planting of sugarcane. Undertake top dressing of Nitrogen in summer rice at tillering stage.
 - In Bastar Plateau Zone, continue planting of summer arvi and bunda. Continue intercultural operations in vegetables. Undertake sowing of coriander crop in sunken bed.
 - In Chhattisgarh Plain Zone, if cucurbitaceous vegetables are affected by red pumpkin beetle, spray Savin @ 2 gram/litre of water at root zone in morning time.
- **Animal Husbandry**
 - In Madhya Pradesh, provide mineral mixture and fresh and clean water to birds. Vaccinate the poultry birds to prevent Ranikhet disease. Cattle should be kept in shade and provide clean and fresh water two times a day.
 - 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:** Rainfall occurred in Dakshin Kannada, Udupi, Dharwad, Gadag, Haveri, Bangalore Urban, Chikballapur, Chikkamagaluru, Chitradurg, Davangere, Hassan, Kodugu, Kolar, Mandya, Mysuru, Ramanagara and Tumkuru districts of Karnataka, Ernakulam, Idukki, Kasargod, Kollam, Kottayam, Kozhikode, Palakkad, Pathanamthitta and Wayanad districts of Kerala, Nellore, Chittoor and Cuddapah districts of Andhra Pradesh, Coimbatore, Krishnagiri, Nilgiris, Salem, Shivganga, Theni, Tirunelveli, Thiruvannamalai, Vellore and Puducherry districts of Tamil Nadu & Puducherry during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with gusty winds very likely at isolated places over interior Tamilnadu and Kerala on 23rd, over south coastal Tamilnadu on 26th 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.
 - **Kerala:**
 - In the Problem Area Zone, continue harvesting of mature nutmeg fruits. Continue preparation for planting of new cuttings of pepper. Provide shade to vegetables seedlings.
 - In the Northern Zone, provide mulching in coconut basins. Harvest mature mangoes before ripening.
 - In the Central Zone, carry out land preparation for ginger.
 - In the Southern Zone, undertake land preparation/planting of ginger after the receipt of showers. Apply lime on the trunks in young rubber trees.
 - In the Central Zone, for leaf folder attack in rice crop at tillering stage use Trichogramma cards (2CC per one acre). Cut the cards in to small pieces and fix in different regions of the field. If the attack is severe, spray Quinalphos @ 2ml per one liter of water. For management of fruit fly in vegetables like snake gourd and bitter gourd, remove and destroy affected and decayed fruits. Use special pheromone traps like luce lure (60 nos/Acre) or Thulasi/fruit traps. If the attack is not reduced, spray mixture of Malathion 2 ml per one litre of water + jaggery 10 g at flowering and fruit initiation stage.
 - In the Northern Zone, spray Flubendiamide @ 1.5 ml in 10 litres of water for 2-3 times at weekly interval for fruit and shoot borer in okra at flowering and fruit setting stage.
 - In the Southern Zone, cut and burn all severely affected banana leaves and spray Tilt @ 1 ml per litre of water for Sigatoka disease in banana. To control powdery mildew in bittergourd, spray Dinocap @ 1 ml or

Trichoderma Viridae @ 2 g per litre of water. To control viral disease in rice crop at tillering stage, remove the affected plants. Spray Rogor 1.5ml or Imidachlorpid @3ml per litre of water.

- In the Problem Area Zone, for sucking pests, apply Neem oil emulsion @ 65 ml/ litre of water in cow pea and @ 25ml/ litre of water in cucurbits.
- **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, 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. Carry out harvesting of rice fallow pulses when pods turn black and hard. Harvesting should be done during morning hours to avoid shattering of pods.
- In the Scarce Rainfall Zone, for the control of leaf folder/stem borer in paddy, farmers are advised to spray Chloropyrifos @ 2 ml/litre for control. For control of sucking pest like thrips in castor, spray Acepahte @ 1.5 g per litre 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. Spray Monocrotophos @ 320 ml or Dimethoate @ 400 ml/acre for sucking pests in green/black gram (at vegetative stage) and groundnut crop (at vegetative peg formation stage).
- In the Southern Zone, to control tikka leaf spot at pod maturity stage in Rabi groundnut, spray Hexaconazole @ 2 ml per litre of water. The present weather conditions are favourable for stem rot in paddy at flowering and milking stage. To control, drain out the water from the field; dry the field for 1 to 2 days and spray Hexaconazole @ 400 ml. or Propiconazole @ 200 ml./acre per litre of water.
- In the North Coastal Zone, spray Chlorpyrifos @ 2.5 ml/litre of water for stem borer in Rabi paddy at panicle initiation stage. Spray Carbendazim @ 1 g/litre of water for blast disease in ragi crop at grain development stage. Spray Dimethoate @ 2 ml per litre of water for sucking pest in maize at cob development stage.
- **Telangana:**
- In North Telangana Zone, give irrigation to maize crop at before flowering, flowering & milking stages; to sesamum crop immediately after sowing and during flowering stage.
- In South Telangana Zone, prevailing dry weather conditions are favorable for incidence of aphids in maize. To control, spray Dimethoate @ 2 ml or Mithyl Demetan @ 2 ml or Acephate @ 1.5 g per litre of water. For Incidence of Blast in rice, spray Tricyclazole @ 0.6 g or Isoprothiolane @ 1.5 ml or Kasugamycin @ 2.5 ml per litre of water twice in 10-15 days interval. For Panicle mite in rice, spray Spiromesifen @ 1.0 ml and Propiconazole @ 1.0 ml per liter of water.
- In North Telangana Zone, spray Monocrotophos @ 1.6 ml/ litre of water for whorl maggot 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 Flubendamaid @ 0.3 ml/litre of water at 28 and 35 days for fruit borer in tomato crop. Spray Myclobutanil @ 1 ml/litre of water for powdery mildew in bhindi crop.
- **Tamil Nadu:**
- In the Cauvery Delta Zone, carry out harvesting of Thaladi paddy as dry weather is expected.
- In the North Eastern Zone, spray 2 g Carbendazim + Thiram + Mancozeb (1:1:1) mixture in one litre of water or spray NSKE 5% at 50% flowering stage to prevent grain discolouration in rice. To control gall midge in rice, spray Chlorpyrifos 20% EC 1250 ml/ha or Fipronil 5% EC 1000-1500 g/ha or Thiamethoxam 25% WG 100 g/ha.
- In the Western Zone, utilizing expected rainfall, prepare irrigated fallow land for sowing cumbu during first week of April.
- In the Southern Zone, due to prevailing weather conditions, incidence of Inflorescence midge occurs in Mango. Remove and destroy affected flowers and tender shoots and spray Dimethoate 30 EC 6 g or Methyl Demeton 25 EC 5 g per litre of water.
- In the Cauvery Delta Zone, spray Wettable sulphur @ 600g/acre in 200 litres of water for powdery mildew incidence and Indoxacarb 15.8% SC 133 ml/acre in 200 litres of water for Spotted pod borer incidence in the rice fallow pulses fields.
- In the High Rainfall Zone, to control sigatoka leaf spot in banana, spray Propiconazole 1 ml + Teepol 0.5 ml per litre of water.
- In the South Zone, to control fruit rot and die back incidence in chilli, spray Copper Oxychloride 0.25% and Zineb 0.15%. For cut worms (Helicoverpa armigera) incidence in chilli crop, spray Indoxacarb 14.5 % SC @ 6.5 ml/10 litres. Prevailing weather condition is favorable for rice earhead bug at tillering to harvesting stage. To control spray Malathion 50 EC @ 500 ml/ha twice.
- In the North Western Zone, to alleviate zinc and iron deficiency in the existing tapioca crop, apply three foliar sprays of Zinc Sulfate 0.5% (5g/litres of water) and Iron Sulfate 1% (10g/litres of water) solution.
- **Karnataka:**
- In Eastern Dry Zone, for soil moisture conservation in mango orchard, weeding and crop residues mulching is

recommended.

- In North East Transition Zone, undertake earthing up in one month old sugarcane crop.
- In Southern Dry Zone, continue ploughing or passing the cultivator in the areas where rainfall is received. Apply irrigation in coffee plantation through well/borewell/tanks or irrigate through rainguns or sprinkler irrigation as blossom shower to get good berry setting. Undertake growing of green manure crop insitu and incorporate in the soil, wherever the farmers are intending to take up rice and sugarcane in *kharif* season.
- In North Transition Zone, undertake the harvesting of late sown sorghum, wheat and Bengal gram crops. Sundry the harvested produce affected due to rains in last week.
- In Central Dry Zone, apply irrigation in horticulture crops as per need.
- In North Dry Zone, undertake ploughing of land and incorporate the crop residue in the soil to facilitate insitu conservation of water during the pre-monsoon rains and to conserve the soil.
- In Hill Zone, undertake harvesting of completely ripened bunch of pepper. Undertake deep ploughing in harvested rice field, so that the soil pathogens will die and in turn it will help to reduce pest incidence for the next rice crop.
- In Coastal Zone, apply irrigation in groundnut as per need. Install 12 Pheromone traps/hectare to monitor shoot and fruit borer in Brinajl crop field.
- In Central Dry Zone, to control sucking pests, thrips and powdery mildew in mango, spray the crop with Carbaryl @ 4 g + Bavistin @ 1g /litre of water.
- In North East Dry Zone, due to increase in day temperature incidence of leaf spot was noticed in groundnut; for control, spray Hexaconazole @ 1ml/litre or Carbendazim @1g/litre of water.
- In Hill Zone, there is chance of incidence of button dropping, inflorescence dieback in arecanut; for control, spray Carbendezim @ 1 g/litre or Mancozeb @ 2 g/litre of water.
- In Southern Transition Zone, spray Trycycloazole @ 0.6 g/litre or Carbendezim 1g/litre of water against blast disease in rice crop.
- **Animal Husbandry**
- In the South Telangana Zone, vaccinate sheep against ET and cattle against FMD and Hemorrhagic Septicemia diseases.
- 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, undertake cultivation of green fodder crops (maize, bajra and jowar) in order to overcome the moisture stress in milch animals during summer. In North Dry Zone of Karnataka, apply 4-6 inch thick hay thatch as a roofing material. Water can be used for spraying the floor and roof of shelter periodically during hot hours. Allow animals for grazing early in morning or late in the evening.

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