



# *National Agromet Advisory Service Bulletin*

*Friday 27<sup>th</sup> April 2018*

*(For the period 27<sup>th</sup> April to 2<sup>nd</sup> May 2018)*



*Issued by*

*India Meteorological Department*

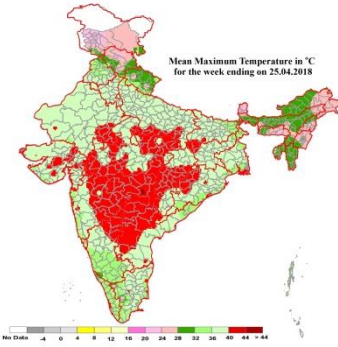
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District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>

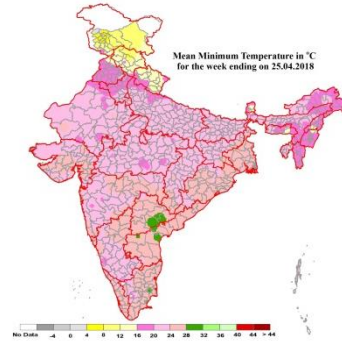
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

**Spatial distribution of weather parameters for the week ending 25.04.2018**

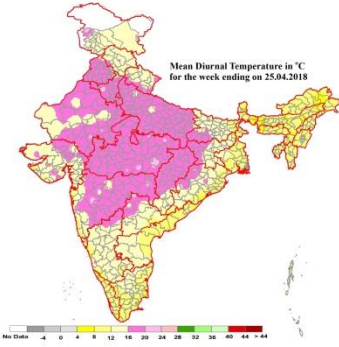
**Mean Maximum Temperature (°C) for the week ending 25.04.2018**



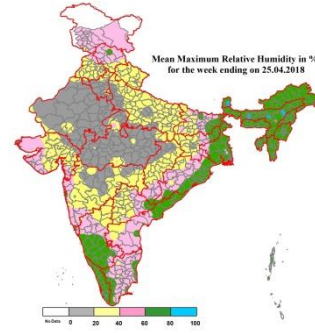
**Mean Minimum Temperature (°C) for the week ending 25.04.2018**



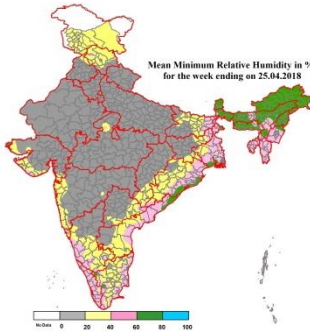
**Mean Diurnal Temperature Variation (°C) for the week ending 25.04.2018**



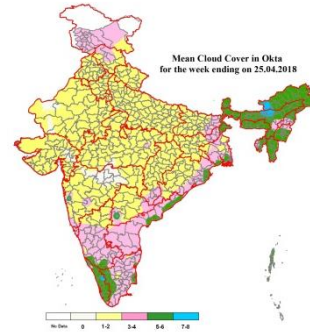
**Mean Maximum Relative Humidity (%) for the week ending 25.04.2018**



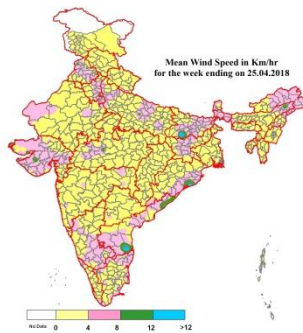
**Mean Minimum Relative Humidity (%) for the week ending 25.04.2018**



**Mean Cloud Cover (okta) for the week ending 25.04.2018**

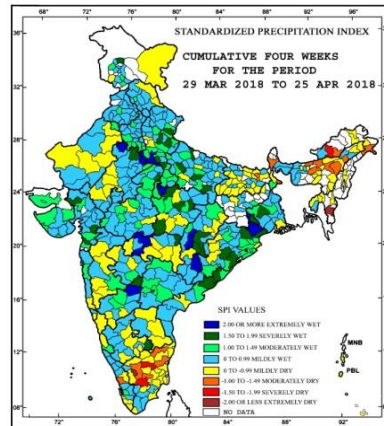


**Mean Wind Speed (km/hr) for the week ending 25.04.2018**



## Standardised Precipitation Index Cumulative 4 weeks for the period 29<sup>th</sup> March to 25<sup>th</sup> April 2018

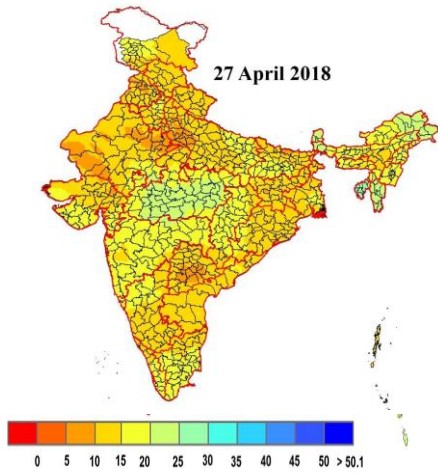
MINISTRY OF EARTH SCIENCES  
INDIA METEOROLOGICAL DEPARTMENT  
HYDROMET SECTION, PUNE



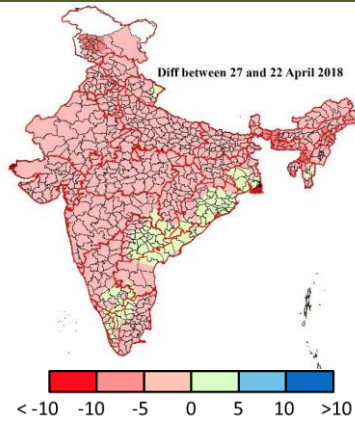
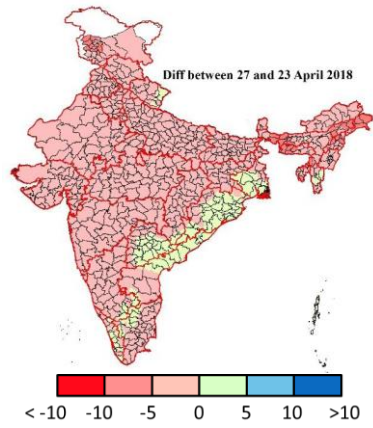
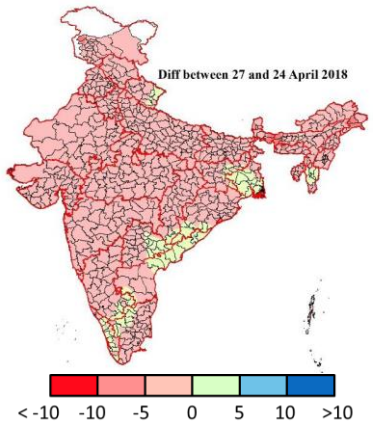
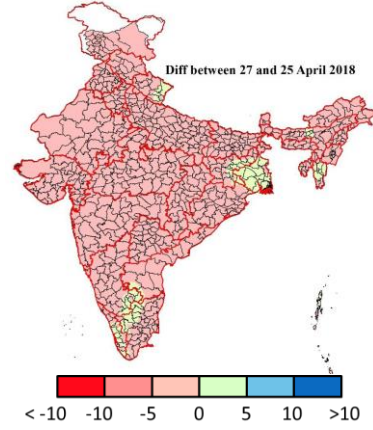
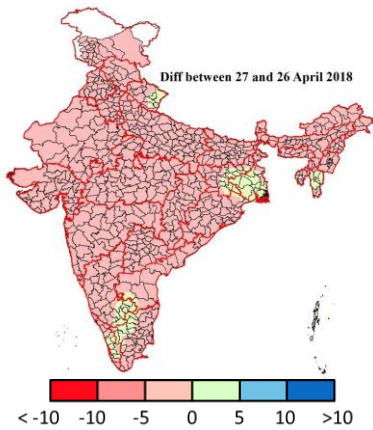
- Extremely/severely wet conditions experienced in Bankura district of West Bengal; Balasore, Ganjam, Keonjhar, Mayurbhanj, Kandhamal districts of Odisha; East Singhbhum, Seraikela-Kharsawan districts of Jharkhand; Bhaerachal, Mirzapur, Pratapgarh, Unnao, Agra, Bareilly, Etawah, Firozabad, Mahamaya Nagar, Moradabad districts of Uttar Pradesh; Nainital district of Uttarakhand; Alwar, Bharatpur, Jhunjhunu districts of Rajasthan; Datia, Chhatarpur, Chhindwara, Katni, Shahdol, Tikamgarh districts of Madhya Pradesh; Narmada, Navsari, Patan districts of Gujarat Region; Mumbai Suburban district of Konkan & Goa; Amraoti, Gondia, Washim districts of Maharashtra; Bastar, Dhamtari, Durg, Raipur districts of Chhattisgarh; Vishakhapatnam, Vizianagaram districts of Andhra Pradesh; Hyderabad district of Telangana; Bidar, Gulbarga, Kolar districts of Karnataka.
- Extremely/Severely dry conditions experienced in East Kameng district of Arunachal Pradesh; Lunglei district of Mizoram; Dindigul, Salem, Tirupur districts of Tamil Nadu & Puducherry.
- Moderately dry conditions experienced in few districts of Arunachal Pradesh; Assam; Darjeeling, South Dinajpur districts of West Bengal; Madhepura district of Bihar; Erode, Karur, Vellore, Viluppuram districts of Tamil Nadu & Puducherry; Thrissur district of Kerala.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.



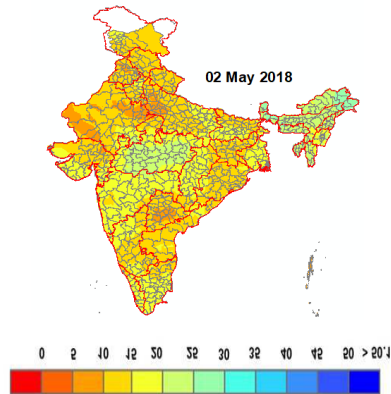
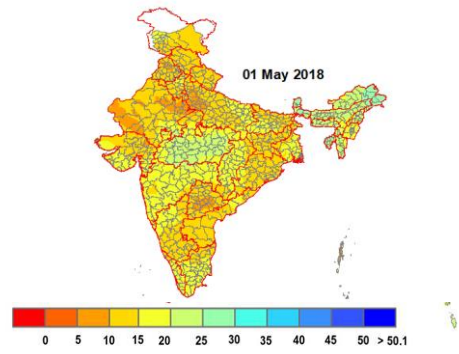
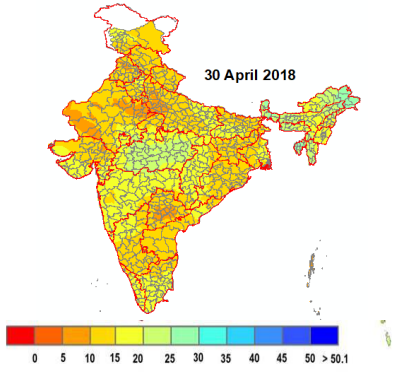
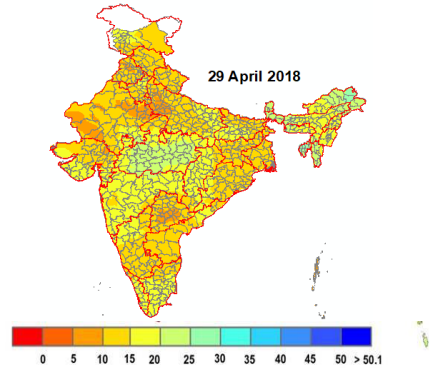
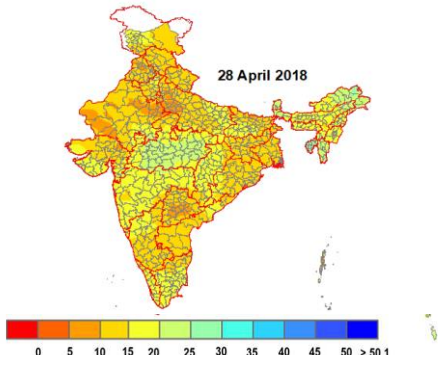
**Daily Soil Moisture (mm) for 27<sup>th</sup> April 2018 (ending at 0830 IST) for 60 cm depth**



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



**Forecasted Soil Moisture (mm) from 28<sup>th</sup> April to 2<sup>nd</sup> May 2018 (ending at 0830 IST)  
for 60 cm depth**



## Weather Forecast for next 5 days valid upto 0830 hours of 2<sup>nd</sup> May 2018

- Meteorological subdivision wise detailed 5 days rainfall forecast is given in Table below.
- Maximum temperatures are very likely to fall by 2-3°C over parts of northwest India during next 2-3 days.
- No significant change in maximum temperatures over rest of the country during next 48 hours and rise by 2-3°C thereafter.
- A low pressure area is likely to develop over south Andaman Sea and neighbourhood around 29<sup>th</sup> April.

### 5 Day Rainfall Forecast (Mid day) 27th April 2018

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

- **27 April (Day 1):** Thunderstorm accompanied with squall and hail very likely at isolated places over Sub-Himalayan West Bengal & Sikkim. Thunderstorm accompanied with squall very likely at isolated places over Uttarakhand, Jharkhand, Gangetic West Bengal, Arunachal Pradesh and Assam & Meghalaya. Thunderstorm

accompanied with gusty winds very likely at isolated places over East Uttar Pradesh, Bihar, Odisha, Nagaland, Manipur, Mizoram & Tripura, Telangana and South Interior Karnataka. Duststorm/thunderstorm very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and West Uttar Pradesh. Heat wave conditions very likely to prevail some places over Himachal Pradesh; in one or two pockets over Jammu & Kashmir, Uttar Pradesh, Rajasthan and Vidarbha. Heavy rain very likely at isolated places over Andaman & Nicobar Islands, Tamilnadu & Puducherry and Kerala.

- **28 April (Day 2):** Thunderstorm accompanied with squall very likely at isolated places over Uttarakhand, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura. Thunderstorm accompanied with gusty winds very likely at isolated places over East Uttar Pradesh, Bihar, Jharkhand, West Bengal & Sikkim, Odisha, South Interior Karnataka, Tamilnadu & Puducherry and Kerala. Duststorm/thunderstorm very likely at isolated places over West Uttar Pradesh. Heat wave conditions very likely to prevail in some places over Rajasthan; in one or two pockets over Vidarbha. Heavy rain very likely at isolated places over Andaman & Nicobar Islands.
- **29 April (Day 3):** Thunderstorm accompanied with squall very likely at isolated places over Gangetic West Bengal. Thunderstorm accompanied with gusty winds very likely at isolated places over East Uttar Pradesh, Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim and Odisha. Heat wave conditions very likely to prevail in some places over Rajasthan and Vidarbha; in one or two pockets over West Madhya Pradesh. Heavy rain very likely at isolated places over Andaman & Nicobar Islands, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **30 April (Day 4):** Thunderstorm accompanied with squall likely at isolated places over Bihar, Jharkhand and Gangetic West Bengal. Heat wave conditions likely to prevail some places over Rajasthan, East Madhya Pradesh and Vidarbha; in one or two pockets over West Madhya Pradesh. Heavy rain likely at isolated places over West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **01 May (Day 5):** Thunderstorm accompanied with squall likely at isolated places over Bihar and Jharkhand. Heat wave conditions likely to prevail some places over Rajasthan, East Madhya Pradesh and Vidarbha; in one or two pockets over West Madhya Pradesh. Heavy rain likely at isolated places over West Bengal & Sikkim and Assam & Meghalaya.

#### Weather Outlook for subsequent 2 days from 2<sup>nd</sup> to 4<sup>th</sup> May 2018

- Fairly widespread to widespread rain/thundershowers likely over Western Himalayan region, adjoining plains of north India, East India and northeast India. Isolated heavy rainfall also likely over these regions.
- Isolated to Scattered rain/thundershowers likely over Andaman & Nicobar Islands and south peninsular India.
- Dry weather likely over remaining parts of the country.

#### Salient Advisories

- As thunderstorm accompanied with squall very likely at isolated places over **Uttarakhand** on 27<sup>th</sup>, over **Arunachal Pradesh** on 27<sup>th</sup>, over **Assam & Meghalaya** on 27<sup>th</sup> and 28<sup>th</sup>, over **Nagaland, Manipur, Mizoram & Tripura** on 28<sup>th</sup> April, over **Jharkhand** on 27<sup>th</sup>, 30<sup>th</sup> and 1<sup>st</sup> May, over **Gangetic West Bengal** on 27<sup>th</sup> and 30<sup>th</sup> and over **Bihar** on 30<sup>th</sup> April and 1<sup>st</sup> May; thunderstorm accompanied with gusty winds likely at isolated places over **East Uttar Pradesh** from 27<sup>th</sup> to 29<sup>th</sup> April, over **Odisha** on 27<sup>th</sup> to 29<sup>th</sup>, over **West Bengal & Sikkim, Bihar** and **Jharkhand** on 28<sup>th</sup> and 29<sup>th</sup> April, over **Nagaland, Manipur, Mizoram & Tripura** on 27<sup>th</sup> April, over **Telangana** on 27<sup>th</sup>, over **South Interior Karnataka** on 27<sup>th</sup> and 28<sup>th</sup>, over **Tamilnadu & Puducherry** and **Kerala** on 28<sup>th</sup> April, provide support to young fruit plants, banana and vegetables and propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
- As duststorm/thunderstorm very likely at isolated places over **Punjab, Haryana, Chandigarh & Delhi** on 27<sup>th</sup> and over **West Uttar Pradesh** on 27<sup>th</sup> and 28<sup>th</sup> April, provide support to young fruit plants and vegetables and propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
- As heat wave conditions very likely to prevail in some places over **Himachal Pradesh**; in one or two pockets



over **Jammu & Kashmir, Uttar Pradesh** and **Rajasthan** on 27<sup>th</sup>, in some places over **Rajasthan** from 28<sup>th</sup> April to 1<sup>st</sup> May, in one or two pockets over **West Madhya Pradesh** on 29<sup>th</sup> and 30<sup>th</sup> April and 1<sup>st</sup> May, in some places over **East Madhya Pradesh** on 30<sup>th</sup> April and 1<sup>st</sup> May and in one or two pockets over **Vidarbha** on 27<sup>th</sup> and 28<sup>th</sup> April, in some places over **Vidarbha** on 29<sup>th</sup>, 30<sup>th</sup> April and 1<sup>st</sup> May, apply light and frequent irrigation to the standing crops to cope up with the excess evaporative demand due to heat wave conditions, undertake mulching in crop fields with straw/polythene to conserve soil moisture.

- As rain/thundershowers very likely at most places over **Assam & Meghalaya** from 29<sup>th</sup> to 1<sup>st</sup> May, at many/most places over **Sub-Himalayan West Bengal & Sikkim** during the period, over **Arunachal Pradesh** and **Nagaland, Manipur, Mizoram & Tripura** at many places over **Gangetic West Bengal** from 29<sup>th</sup> to 1<sup>st</sup> May and over **Andaman & Nicobar Islands** from 27<sup>th</sup> to 30<sup>th</sup> April, along with heavy rain very likely at isolated places over Andaman & Nicobar Islands from 27<sup>th</sup> to 29<sup>th</sup>, over West Bengal & Sikkim on 30<sup>th</sup> April & 1<sup>st</sup> May, over Assam & Meghalaya from 29<sup>th</sup> to 1<sup>st</sup>, over Nagaland, Manipur, Mizoram & Tripura on 29<sup>th</sup> and 30<sup>th</sup> April, over Tamilnadu & Puducherry and Kerala on 27<sup>th</sup> April, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested produces at safer places.
- In **Jammu & Kashmir, Uttar Pradesh, Rajasthan** and **Madhya Pradesh**, in view of the heat wave conditions, grazing /feeding of cattle/goats may be done during morning/evening hours. Keep animals under shade/shed during noon hours and provide plenty of water mixed with minerals for drinking. Also provide balanced feed & adopt vaccination schedule. In poultry house, make arrangement of curtains and proper ventilation.

#### *Detailed Zonewise Agromet Advisories*

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

- **Realised Rainfall:** Rainfall occurred in Anantnag, Badgam, Bandipore, Baramulla, Doda, Ganderbal, Kulgam, Kupwara, Ramban and Srinagar districts of Jammu & Kashmir, Chamba, Kullu and Lahaul & Spiti districts of Himachal Pradesh 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 Uttarakhand on 27<sup>th</sup>, thunderstorm accompanied with gusty winds likely at isolated places over East Uttar Pradesh from 27<sup>th</sup> to 29<sup>th</sup> April, provide support to young fruit plants and vegetables and propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
  - As duststorm/thunderstorm very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi on 27<sup>th</sup> and over West Uttar Pradesh on 27<sup>th</sup> and 28<sup>th</sup> April, provide support to young fruit plants and vegetables and propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
  - As heat wave conditions very likely to prevail in some places over Himachal Pradesh; in one or two pockets over Jammu & Kashmir, Uttar Pradesh and Rajasthan on 27<sup>th</sup>, in some places over Rajasthan from 28<sup>th</sup> April to 1<sup>st</sup> May, apply light and frequent irrigation to the standing crops to cope up with the excess evaporative demand due to heat wave conditions, undertake mulching with straw/polythene to conserve soil moisture.
    - **Jammu & Kashmir:**
      - In Sub Tropical Zone, undertake sowing of moong and mash. Continue harvesting and threshing of wheat, mustard and lentil crops.
      - In Intermediate Zone, continue sowing of maize, okra and French bean. Complete transplanting of cucurbits and vegetables. Undertake harvesting of matured mustard.
      - Continue transplanting of tomato, brinjal, chilli, sweet pepper in well prepared land in Valley Temperate Zone. Undertake nursery bed preparation for rice. Undertake sowing of maize and *kharif* pulses.
      - Undertake nursery sowing of vegetables in trenches and polyhouses in Cold Arid Zone. Continue sowing of



cucurbit seeds in poly bags for early nursery raising inside polyhouses.

▪ **Uttarakhand:**

- In Sub Humid Sub Tropic Zone, undertake harvesting of matured wheat. Apply irrigation in summer moong and urad. Undertake intercultural operations in spring sugarcane.
- In Bhabar and Tarai Zone, undertake sowing of turmeric, ginger and arbi. Undertake harvesting of wheat and pulses.
- In Hill Zone, continue harvesting of matured mustard and barley. Undertake transplanting of seedlings of tomato, capsicum, brinjal, chilli etc.

▪ **Himachal Pradesh:**

- In Sub-Montane and Low Hill Sub Tropical Zone, undertake harvesting of matured wheat. Complete sowing of green gram and mash. Continue sowing of spinach, coriander and fenugreek. Continue nursery preparation of summer vegetables, raising of seedlings of cucurbits in polythene bags in poly house.
- In Mid Hills Sub Humid Zone, continue transplanting of summer vegetables like tomato, capsicum, gourd, chilli etc. in the well prepared fields and sowing of bhindi, arvi etc. In lower area apply 2<sup>nd</sup> dose of nitrogen in tomato, capsicum, gourd, chilli etc.
- In High Hill Temperate Dry Zone, sowing of peas may be done by using 250 kg seed/ha. Remove the grass from apple trees and prepare the basin.
- In Mid Hills Sub Humid Zone, spray Mancozeb @ 600g/200 litres of water in apple orchards to control the apple scab diseases.

▪ **Punjab, Haryana & Delhi:**

- In Western Zone of Punjab, continue sowing of Bt. cotton and desi cotton. Complete harvesting of wheat. Apply irrigation in vegetables and orchards.
- In Western Plain Zone of Punjab, continue transplanting of chilli. Continue harvesting of matured wheat. Continue land preparation for sowing of cotton. Apply irrigation in sunflower and sugarcane. Undertake harvesting of matured vegetables.
- In Undulating Plain Zone of Punjab, complete harvesting of wheat and linseed. Continue transplanting of cucurbits. Apply irrigation in sugarcane, vegetables, orchards and pulses. Undertake harvesting of matured vegetables.
- In Central Plain Zone of Punjab, complete harvesting of wheat. Undertake weeding and hoeing in moong.
- In Sub-Montane Undulating Zone, undertake harvesting of matured vegetables. Apply straw mulch in between sugarcane crop rows at the rate of 20-25 quintal per acre to reduce soil temperature and conserve soil moisture.
- In Western Zone of Haryana, continue harvesting of wheat and barley. Undertake land preparation and sowing of cotton. Apply irrigation in sugarcane, orchard and vegetable crops.
- In Delhi, undertake field preparation for sowing of pigeonpea and cotton. Undertake harvesting of matured vegetables. Apply light irrigation in the mature onion and garlic crops one week before digging.
- In Delhi, to control shoot and fruit borer in brinjal and tomato crops, infested fruits and shoots should be collected and buried inside the soil. If pest population is high, spray Spinosad 48 EC @ 1 ml/4 litres of water.

▪ **Uttar Pradesh:**

- In Eastern Plain Zone, undertake deep ploughing in vacant fields. Apply irrigation in vegetables.
- In Western Plain Zone, undertake deep ploughing of vacant fields. Undertake harvesting of matured vegetables. Undertake field preparation for sowing of pigeonpea and cotton.
- In Varanasi district of Central Plain Zone, continue intercultural operations in cucurbit crops and sugarcane. Continue harvesting of matured barley and wheat. Continue sowing of okra. In Kanpur, apply irrigation in moong and urad. Undertake harvesting of matured vegetables.

▪ **Rajasthan:**

- In Sub Humid Southern Plain and Aravalli Hill Zone, complete harvesting of matured wheat and barley. Apply irrigation in summer groundnut and vegetables.
- In Irrigated North Western Plain Zone, apply irrigation in sugarcane and moong. Continue sowing of cotton.
- In Bikaner district of Arid Western Plain Zone, undertake deep ploughing in medium to heavy texture soils so that residues of weeds, insects and pathogens (fungus, bacteria etc.) can be destroyed. In Jodhpur district continue land preparation for sowing of cotton.
- In Flood Prone Eastern Plain Zone, apply light and frequent irrigation in vegetable and fruit crops. Continue deep ploughing of field to destroy soil borne pests.
- In Semi Arid Eastern Plain Zone, undertake field preparation for sowing of cotton. Apply 25 ton FYM per hectare. Arrange seed like -RG-8 (170-180 days, Desi cotton), Bikaneri nerma (190-200 days, American cotton) & RST-9 (190-200 days, American cotton).
- In Flood Prone Eastern Plain Zone, for leaf curl and mosaic disease affected chilli crop, uproot & burn affected plants to check the spread of disease and spray Dimethoate 30 EC @ 1.0 ml per litre water.

• **Animal Husbandry**

- In Jammu & Kashmir, add calcium supplement in the diet of dairy animals and heifers especially fed rice

straw these days to prevent calcium deficiency and intestinal blockage. Sheeps and goats need to be vaccinated against Sheep and Goat pox.

- In Punjab, keep the animals under sheds during noon time and provide fresh drinking water to save the animals from summer heat and stress.
- In Rajasthan, take care of domestic animals, keep them in shades during peak time and make arrangement for plenty of drinking water.
- **Apiculture:**
- In Jammu & Kashmir, shift the honey bee colonies towards shady conditions or place them under open straw huts. Provide proper ventilation by slightly raising the brood chamber.

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

- **Realised Rainfall:** Rainfall occurred Dhenkanal, Ganjam and Kandhamal districts of Odisha, Bankura, East Sikkim, Jalpaiguri, North Sikkim, South Sikkim and West Sikkim districts 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 and hail very likely at isolated places over Sub Himalayan West Bengal & Sikkim on 27<sup>th</sup> April, 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 thunderstorm accompanied with squall very likely at isolated places over Jharkhand on 27<sup>th</sup>, 30<sup>th</sup> and 1<sup>st</sup> May, over Gangetic West Bengal on 27<sup>th</sup> and 30<sup>th</sup> and over Bihar on 30<sup>th</sup> and 1<sup>st</sup> May, thunderstorm accompanied with gusty winds very likely at isolated places over Odisha on 27<sup>th</sup> to 29<sup>th</sup>, over West Bengal & Sikkim, Bihar and Jharkhand on 28<sup>th</sup> and 29<sup>th</sup> April, it is advised to provide support to young fruit plants, banana and vegetables and propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
  - As rain/thundershowers very likely at many/most places over Sub-Himalayan West Bengal & Sikkim during the period, at many places over Gangetic West Bengal from 29<sup>th</sup> to 1<sup>st</sup> May and over Andaman & Nicobar islands from 27<sup>th</sup> to 30<sup>th</sup> April along with heavy rain very likely at isolated places over Andaman & Nicobar Islands from 27<sup>th</sup> to 29<sup>th</sup> and over West Bengal & Sikkim on 30<sup>th</sup> April & 1<sup>st</sup> May, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested produces at safer places.
  - **Odisha:**
  - In Eastern Ghat High Land Zone, maintain standing water up to 5cm summer rice crop at PI stage. During fruiting stage of mango, spray Naphthalene Acetic Acid (NAA) 40 mg to decrease fruit dropping. Increased temperature may favour the egg laying of stem borer in rice in the main field. To attract the butterflies, place 4 Pheromone Traps/acre, collect the adults and destroy them by burning or by burying them under soil
  - In Eastern Ghat High Land Zone, continue summer ploughing utilising the realised rainfall. Undertake transplanting of vegetables during late afternoon hours to avoid high temperature. Undertake harvesting of ginger & turmeric.
  - In West Central Table Land Zone, due to increase in temperature, there are chances of stem borer attack in paddy, apply Friponil/Triaqzophos @ 2 ml/liter of water if pest population is beyond ETL of the pest. Prevailing temperature favours thrips infestation in groundnut. Spray 400 ml Dimethoate or 50 ml Imidachloprid in 200 litre water per acre. Spray 2 ml Chloropyriphos in 1 litre water for controlling white ant attack.
  - 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. Continue harvesting of late sown mustard and rapeseed. High diurnal temperature range may favour the infestation of blast in main field. Farmers are recommended to spray Tricyclazole @ 1 g/litre of water. Present weather is conducive for the infestation of alternaria blight in tomato. Farmers are advised to spray 3 g Dithane-M-45 (Mancozeb) in 1 litre water.
  - **Bihar:**
  - In South Bihar Alluvial Zone, apply irrigation at regular intervals around mango trees to prevent fruit drop and application of Acephate @ 0.5 gm mixed with Planofix @ 1.0 ml per 4 litres of water. In view of mainly dry weather conditions, provide irrigation in standing maize, onion and vegetables crops as per requirement.
  - In North West Alluvial Plain Zone, continue sowing of summer maize varieties such as Suwan, Deoki, Ganga 11, Shaktiman-1, 2, 3, 4. Continue sowing of 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 gourd and bitter gourd.

- **Jharkhand:**
  - In Western Plateau Zone, undertake intercultural operations in summer moong. Maintain optimum water level in transplanted rice fields. Undertake planting of ginger and elephant foot yam.
  - In South Eastern Plateau Zone, continue sowing of summer green gram to utilize available soil moisture. Select improved variety SML- 668 at a seed rate of 12 kg per acre. Before sowing, seed must be treated with Rhizobium culture. Inter-cultural operation may be done to conserve moisture for a longer period in crop. Farmers having assured irrigation may undertake nursery sowing/transplanting of vegetables like cauliflower, cabbage, brinjal, chilli etc.
  - In the prevailing weather, there is a chance of attack of leaf spot disease in cabbage and cauliflower in Western Plateau Zone. To control the disease, spray fungicide Blitox-50 @ 3 g per litre of water. Spray bio-insecticide like Halt, Delfin or Biolep @ 1.5 g/litre of water in brinjal and bhindi against fruit borer and in Cauliflower and Cabbage against white fly insect.
- **West Bengal:**
  - In the New Alluvial Zone, prepare land for planting jute. Carry out harvesting of mature tomato, onion and garlic crops in clear weather.
  - In the Hill Zone, complete planting of healthy rhizomes of ginger and turmeric during the first fortnight of May. Carry out harvesting of wheat crop as early as possible. Ensure proper drainage in the maize field. Carry out transplanting of round chilli in the raised beds and provide proper drainage.
  - In the Coastal saline Zone, continue harvesting of mature sunflower heads after current spells of rain.
  - In the Laterite and Red Soil Zone, carry out harvesting of mature Boro rice.
  - In the Terai Zone, maintain 3-4 cm of water level in Boro paddy field.
  - In Old Alluvial Zone, use sex pheromone trap @ 4 trap/ bigha for fruit fly control in pointed gourd crop.
  - In the Coastal Saline Zone, to control shoot and fruit borer in chilli, brinjal and okra crops, collect the affected fruits and bury them into the soil. If infestation is found high, spray Spinosad 48EC @ 1ml per litre of water after current spells of rain.
- **Andaman & Nicobar Islands:**
  - In Andaman & Nicobar Islands, make basin around the coconut and Arecanut plants.
- **Animal Husbandry**
  - 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 Western Plateau Zone of Jharkhand, high day temperature favours the attack of Heat stroke in cattle. Hence, farmers are requested to provide plenty of drinking water for them and do not allow them to remain in sunlight during intense heat (during noon). If heat stroke symptoms are noticed, immediate action should be taken like bathing of the animals with cold water, ice cube may be placed on their head and nose and in extreme case the medicine Avil must be injected (10 ml. in adult, 5 ml. in calf and 2 ml. in goat).
  - In Andaman & Nicobar Islands, keep the day old chicks inside the shelter and keep the floor of poultry shed dry.
- **Fisheries**
  - In the Old Alluvial Zone of West Bengal, apply lime @ 30-40 kg/bigha in the pond bottom area.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Arunachal Pradesh except Dibang Valley, East Kameng and Tirap, all districts of Assam except Baksa and N. C. Hills, all districts of Meghalaya, Aizawl district of Mizoram, Imphal East, Imphal West and Senapati districts of Manipur, Kephire, Kohima, Mon and Phek districts of Nagaland and Dhalai, South Tripura and West Tripura districts of Tripura during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
  - As rain/thundershowers would occur at most places over Assam & Meghalaya from 29<sup>th</sup> to 1<sup>st</sup>, at many places over Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura from 29<sup>th</sup> April to 1<sup>st</sup> May, along with heavy rain very likely at isolated places over Assam & Meghalaya from 29<sup>th</sup> to 1<sup>st</sup> and over Nagaland, Manipur, Mizoram & Tripura on 29<sup>th</sup> and 30<sup>th</sup> April, 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 Arunachal Pradesh on 27<sup>th</sup> and Assam & Meghalaya on 27<sup>th</sup> and 28<sup>th</sup>, over Nagaland, Manipur, Mizoram & Tripura on 28<sup>th</sup> April, thunderstorm accompanied with gusty winds very likely at isolated places over Nagaland, Manipur, Mizoram & Tripura on 27<sup>th</sup> April, 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 transplanting of seedlings of summer vegetables to main field from nursery.

Continu transplanting Boro rice seedlings. Continue sowing of leguminous crops like cowpea, French bean, soybean, etc. at 2-3 rows across the slope of Jhum field at desirable intervals or ratios with rice to prevent soil erosion and conserve moisture and fertility. Undertake sowing of large cardamom in primary nursery bed. Continue harvesting of ginger, turmeric, potato, cabbage and cauliflower in clear weather.

- In Meghalaya, continue sowing of cucurbits like cucumber, pumpkin, bottle gourd, ash gourd, squash, French bean and cowpea. Continue land preparation and sowing of maize varieties Vijay Composite, DA 61A, RCM 75, 76, Vivek Hybrid 25, Vivek QPM-1, etc. Continue land preparation and sowing of French bean and cowpea. Continue transplanting of chilli and brinjal crops.
- In Lower Brahmaputra Valley Zone of Assam, continue land preparation and sowing of Bao rice varieties like Kekua Bao, Negheri Bao, Maguri, Panikekua, Panindra, Padmanath, etc. Continue planting of banana, cucunmber and colocasia.
- In Upper Brahmaputra Valley Zone, continue planting of ginger, banana and papaya. Provide drainage to maize crop.
- In the Hill Zone of Assam, undertake transplanting of tall traditional varieties of Normal Ahu rice in April-May. Continue direct sowing of vegetables like French bean, amaranthus, vegetable lobia, lady finger, bottle gourd, cucumber, ridge gourd and summer radish.
- In the Barak Valley Zone, continue planting of banana suckers and lemon.
- In the Central Brahmaputra Valley Zone, postpone irrigation to Boro rice. Undertake planting of papaya and spring sugarcane. Undertake land preparation and sowing of jute. Continue nursery raising and planting of coconut.
- In the North Bank Plain Zone, continue land preparation/sowing of Bau rice (varieties Maguri, Panikekua, Amona, Negheri etc.). Continue land preparation/sowing of direct seeded Ahu rice (varieties Banglami, Rangadoria, Ahu joha, Rasi etc.). Continue sowing of maize varieties like HYV (Ganga-5; High Starch etc) or composite maize (NLD, Dhawal, Naviot etc). Continue sowing of Varieties of Ridge gourd like Pusa Nasdar, AAUJ-1, AAUJ-2, AAUC-3 and sponge gourd like Pusa Chikni. Continue planting of HYV ginger (Nadia, Karkai, Maran, Jorhat, chaina etc.), turmeric (Shillong type, CL-24, PTS-38, PCT-13, VK-145, etc.). Continue planting of banana varieties like Jahaji (dwarf variety) and Chenichampa, Malbhog, Barjahaji (medium tall variety).
- In the Barak Valley Zone, to control the attack thrips in chilli crop, spray Rogor or Dimethoate @ 1.5 ml per litre of water. Gandhi bug attack may be seen in Boro rice at milky stage. For effective control of the pest, apply 5% Malathoin dust @ 20 kg per ha of land after current spells of rain.
- In the Hill Zone, spray Carbendazim @ 1.0 gram per litre for incidences of powdery mildew disease in cucurbitaceous crops and late pea after current spells of rain.
- **Nagaland, Mizoram, Manipur and Tripura:**
  - In Manipur, continue land preparation for sowing of colocasia, soybean, groundnut, kharif maize, black gram and red gram. Maintain optimum water depth of 5-8cm in the rice field. Drain out excess water that is accumulated due to rain. Undertake sowing of bhindi. Undertake harvesting of mature onion and tomato in clear weather.
  - In Tripura, maintain 5 cm of water in the Boro rice field. Avoid stagnation of water in jhum rice, maize, cowpea, urad and green gram fields.
  - In Nagaland, continue sowing of summer vegetables, ginger and turmeric.
  - In Mizoram, continue harvesting potato and harvesting of mature fruits of capsicum, brinjal and chilli in clear weather. Continue sowing of rice (Jhum), maize (Jhum), ginger, turmeric, cowpea and okra crops.
  - In Manipur, spray Dichlorovos 36 EC @ 0.5 ml/litre of water or Cypermethrin @ 2ml/litre of water for thrips/leaf minor in onion crop during bulb formation stage after current spells of rain.
  - In Tripura, weather is conducive for fruit & shoot borer in summer brinjal and tomato. To manage the attack, spray Cypermethrin @ 1.5 ml or Flubendiamide @ 0.5 ml per liter of water after current spells of rain.
- **Animal Husbandry**
  - In Arunachal Pradesh, vaccinate cattle, mithun and pigs against FMD.
  - In the Hill Zone and Lower Brahmaputra Valley Zone of Assam, vaccinate cattle against FMD, HS and BQ.
  - In the North Bank Plain Zone, vaccinate poultry birds against Ranikhet disease.
  - In the Lower Brahmaputra Valley Zone, give 'Imferon' injection after consulting local veterinary doctor to control anemia in 4 to 14 days old piglets.
  - In Manipur and Meghalaya, vaccinate poultry birds against coccidiosis and Ranikhet diseases. Vaccinate pigs against FMD & swine fever and cattle/sheep/goat against FMD, Hemorrhagic Septicemia, Black Quarter.
  - In Tripura, undertake de-worming calves in consultation with veterinary practitioner.
- **Fishery**
  - In the Hill Zone of Assam, prepare the pond for new batch of fishes. 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, there may be chances of bacterial disease to the fishes. Apply lime @ 6 kg per bigha of land to control such diseases.
- In the Lower Brahmaputra Valley Zone, Carry out release of new batches of fishes in ponds. Select healthy, diseases free breeds of fishes from good sources after consulting with fishery officials. Before releasing, the fingerlings should be treated with Potassium permanganate (@ 3-5%). Raise the height of embankment of the ponds and apply nets on all sides. This will prevent the fishes to escape from the ponds during flood.
- In Meghalaya, feed common carp brooders with protein rich diet for proper maturation of eggs.

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

- **Realised Rainfall:** Weather remained dry over the region during the week.
- **Advisories:**
  - **Maharashtra:**
    - As heat wave conditions very likely in one or two pockets over Vidarbha on 27<sup>th</sup> and 28<sup>th</sup> April, in some places on 29<sup>th</sup>, 30<sup>th</sup> April and 1<sup>st</sup> May, apply light and frequent irrigation to the standing crops to cope up with the excess evaporative demand due to heat wave conditions, undertake mulching with straw/polythene to conserve soil moisture.
    - In South Konkan, continue harvesting of rice. Undertake nursery bed preparation for rice in harvested fields. Continue harvesting of matured groundnut. Dry harvested pods in sunshine for 3 to 4 days. Continue harvesting mangoes. Keep the harvested fruits in shade to prevent spongy tissue disease and from heat. In North Konkan, maintain 5 cm water level in rice field.
    - In Madhya Maharashtra, continue harvesting of matured groundnut. Due to rise in temperature, to control immature fruit drop of mango, apply irrigation to mango orchards at an interval of 10 to 15 days. Undertake harvesting of fully matured cashew nuts. Clean the nuts and dry under sunlight and store at protected place. Apply light irrigation to orchards and vegetables. Apply irrigation during evening hours. Also apply mulch to preserve soil moisture.
    - In Marathwada, continue harvesting of matured groundnut. Apply irrigation by drip irrigation method to sugarcane during early morning or evening hours. Apply irrigation to summer maize, vegetables and mango orchard. Also apply mulch to preserve soil moisture.
    - In Vidarbha, apply irrigation at an interval of 6 to 8 days to vegetables. Also apply mulch to conserve soil moisture. Apply irrigation to rice fields at interval of 5-6 days to maintain water level 5 cm.
    - In Konkan, if incidence of aphids and thrips in vegetable crops viz., brinjal, tomato, cabbage, chilli, knol khol etc., is noticed, spray Malathion @ 20 ml or Dimethoate @ 12 ml per 10 liter of water.
  - **Gujarat:**
    - In South Gujarat Heavy Rainfall Zone, undertake sowing of cluster bean, cowpea, vegetable crops (Amaranths, Fenugreek, coriander, Indian spinach) and planting of cloves for green garlic. Operate foggers once or twice between 12.00 noon to 2.30 pm for not more than 1 minute, if temperature inside poly house exceeds 30 °C. Apply irrigation in mango orchard.
    - In North Saurashtra Zone, as maximum temperature likely to increase by 1-2 °C, apply light and frequent irrigation by drip system to vegetable and sesame crops. Apply irrigation in mango orchard as per need,
    - In South Saurashtra Zone, apply irrigation in sesame, green gram, black gram, groundnut at regular intervals. Undertake weeding in vegetable crops. Complete harvesting of matured onion bulbs and keep bulbs at well aerated place.
    - In North Gujarat Zone and North West Zone of Gujarat, apply light irrigation in groundnut, regular irrigation in pearl millet (tillering stage), cluster bean and in green gram, cowpea crops at 9-10 days interval. Cover papaya fruits with gunny bags to protect from high temperature condition. Regularly pluck matured vegetables and fruits (bhindi, tomato, cucumber, water melon and muskmelon).
    - In Middle Gujarat Zone, carry out intercultural operations in bajra, rice and legume crops. Apply irrigation in pearl millet and vegetable crops as per need. Continue harvesting of matured fruits of papaya.
    - In Bhal and Coastal Zone, apply irrigation in bajra, green gram crops, pomegranate, sapota, lemon orchards. Cover papaya fruits using gunny bags. Pluck matured fruits of pomegranate, sapota, lemon and papaya.
    - In North Saurashtra Zone, in present weather conditions severe attack of thrips has been reported in chili; spray Triazophos 40 EC @ 10 ml or Acephate 75 SP @ 10 g or Fipronil 5 SC @ 20 ml /10 litre of water after fruit picking. Apply Neem based insecticide.
    - In Middle Gujarat Zone, there is initial stage of incidence of white fly in sesame and cluster bean; for control, spray Verticillium Lecanii powder @ 40 gm in 10 liters of water.
    - In South Saurashtra Zone, for the control of leaf webber in fruit leafy vegetable, sowing of trap crop (castor and galgota) around the vegetable crops is suggested.
- **Animal Husbandry**
  - In Gujarat, put curtains on south-west side of poultry house and sprinkle water on curtains during noon time. Keep animals under shade during noon hours and provide clean drinking water.

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

- **Realised Rainfall:** Weather remained mainly dry/dry over the region during the week.
- **Advisories:**
  - **Madhya Pradesh:**
    - As heat wave conditions very likely in one or two pockets over West Madhya Pradesh on 29<sup>th</sup> and 30<sup>th</sup> April and 1<sup>st</sup> May, in some places over East Madhya Pradesh on 30<sup>th</sup> April and 1<sup>st</sup> May, apply light and frequent irrigation to the standing crops to cope up with the excess evaporative demand due to heat wave conditions, undertake mulching with straw/polythene to conserve soil moisture.
    - In Jhabua Hill Zone, apply irrigation in green gram, black gram Continue picking of matured okra, brinjal, green chilli, fenugreek, spinach and cucurbitaceous crops. Undertake digging up of matured bulbs of onion.
    - In Grid Zone, continue harvesting of matured wheat. Undertake intercultural operations in cucurbits and apply irrigation.
    - In Vindhya Plateau Zone, apply irrigation in green gram and black gram. Undertake harvesting of matured vegetables.
    - In Satpura Plateau Zone, maintain optimum moisture level in cucurbitaceous crops by applying light and frequent irrigation. Undertake mulching (plastic) to reduce evapotranspiration rate. Apply irrigation in sugarcane, vegetables and orchards. Continue harvesting of wheat. Food grains should be sundried well before storage.
    - Continue harvesting of wheat crop and intercultural operations in vegetables in Central Narmada Valley Zone. Continue sowing of green gram and black gram.
    - In Kymore Plateau and Satpura Hill Zone, apply irrigation in summer moong, urad and cucurbits.
    - In Bundelkhand Zone, continue digging of pits for plantation of new orchards. Undertake seed bed preparation for sowing of *kharif* onion.
    - In Malwa Plateau Zone, complete sowing of green gram and black gram. Continue transplanting of young seedlings of tomato, chilli and cole crops. Undertake intercultural operations in vegetables.
    - In Jhabua Hill Zone, for control of sucking pest in moong & urad spray Thiomithaxim @ 0.3 gm/litre of water.
  - **Chhattisgarh:**
    - In North Hill Zone, apply irrigation in summer moong, rice, sugarcane, vegetables and fruit (mango, Litchi) crops as per soil moisture condition. Dig out the tubers of onion and garlic from the fields. To conserve soil moisture farmers are advised for deep summer ploughing in their vacant fields. Keep inputs ready for *kharif* rice.
    - In Bastar Plateau Zone, complete harvesting of matured *rabi* crops. Undertake deep ploughing of the fields.
    - In Chhattisgarh Plain Zone, apply irrigation in rice, groundnut and vegetable crops to maintain proper soil-moisture. Undertake harvesting of matured vegetables. Undertake planting of papaya seedling in polybags.
- **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, poultry farmers are advised to cover their poultry house with mat and keep it wet so that inner temperature may be kept normal. Provide plenty of drinking water to cattle. Buffaloes should be kept in water-filled pond for at least half an hour every day.

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

- **Realised Rainfall:** Rainfall occurred in Dakshin Kannada, Chikkamagaluru, Hassan, Kodagu and Ramanagara districts of Karnataka; all districts of Kerala except Kasargod, Palakkad, Thiruvananthapuram and Thrissur; Nilgiris, district of Tamilnadu and East Godavari, Vishakhapattanam and Vizianagaram districts of Andhra Pradesh 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 Telangana on 27<sup>th</sup>, over South Interior Karnataka on 27<sup>th</sup> and 28<sup>th</sup>, over Tamilnadu & Puducherry and Kerala on 28<sup>th</sup> April, provide support to banana, young fruit plants and vegetables to avoid lodging. Undertake propping in sugarcane.
  - As heavy rain very likely at isolated places over Tamilnadu & Puducherry and Kerala on 27<sup>th</sup> April, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
  - **Kerala:**
    - In the Problem Area Zone, provide shade to pepper and vegetable crops. Continue planting of coconut seedlings.
    - In the High Altitude Zone, undertake planting of vegetables like bhindi, bitter gourd, Amaranthus, etc.
    - In the Northern Zone, protect black pepper plants from direct sunlight.

- In the Central Zone, undertake planting of bitter gourd and amaranthus if irrigation facility is available.
- In the Southern Zone, carry out harvesting of paddy crop. Undertake planting of 2-3 month old banana sauckers. Undertake planting of three budded setts of sugarcane in trenches at a spacing of 90 cm between rows. Do not start tapping before the rubber plants until young leaves get mature.
- In the Problem Area Zone, for severe infestation of sucking pests like mites, jassids and white fly in Chilli and Brinjal, spray Thiamethoxam 25 WG @ 0.25g or Diafenthiuron 50 WP @ 1.2 g/litre of water. To control downy mildew in cucurbits, spray combination fungicide Cymoxanil + Mancozeb @ 2g/litre of water on a non rainy day.
- In the Southern Zone, spray Pseudomonas Fluorescens @ 2.5 kg/ha to eliminate rice bugs from rice fields at grain filling stage. To control fruit fly in cucurbits, cover the fruits with paper or poly bags, destroy the affected fruits and, use pheromone traps.
- In the Central Zone, for rice bug at milky stage in the paddy crop, apply neem based pesticides @ 3 ml per one liter of water either before 9 am or after 3 pm on a non rainy day. Due to the changing weather pattern, there is a chance of sigatoka disease in banana. Spray Pseudomonas 10- 20g per 1 liter of water. In case of severe attack apply SAAF @ 2 g in 1 liter of water.
- In the High Altitude Zone, spray 2.0 g Pseudomonas in one litre of water at weekly intervals as a prophylactic measure to control blast and sheath rot diseases in rice at panicle in initiation stage on a non rainy day.
- **Andhra Pradesh:**
  - In the Krishna Godavari Zone, maintain 5cm water from grain hardening to maturity stage in paddy crop. Continue harvesting sorghum and rice-fallow maize crops.
  - In the North Coastal Zone, spray Propiconazole @ 1.0 ml/litre of water for whip smut and Chloropyriphos @ 2.5 ml/ litre of water for early shoot borer in sugarcane crop at formative stage. Carry out clipping of infested twigs and fruits of brinjal at flowering and fruiting stage followed by spraying of neem oil @ 50 ml litre of water.
  - In the Scarce Rainfall Zone, for the control of leaf folder/stem borer in paddy, spray Chloropyriphos @ 2.5 ml/litre of water. For the control of fruit fly in mango orchards, farmers are advised to hang plastic plates containing 2ml/litre of Methyl Uginol mixed with 3.0g of Carbofuran granules. Incidence of chilli midge is observed in some parts of the district. For control, farmers are advised to spray Triazophos 2ml/litre of water.
  - In the Krishna Godavari Zone, spray Monocrotophos @ 320 ml or Dimethoate @ 400 ml/acre for sucking pests in green gram, black gram, groundnut and sesame crops.
  - In the Southern Zone, to control fruit fly in mango, erect pheromone traps or IIHR traps @ 8-10/acre at 3-6 feet from ground level.
- **Telangana:**
  - In North Telangana Zone, continue harvesting of groundnut and sesame crops when 70-80% leaves and stems turn yellow.
  - In South Telangana Zone, prevailing dry weather conditions are favorable for the incidence of fruit fly in mango. To trap the flies in the container, hang the plastic containers with mixture of Methyl Eugenol @ 2 ml + Carbofuran 3G @ 3g per litre of water in the orchard. To control sucking pests in vegetables, spray Dimethoate @ 2 ml or Acephate @ 1.5 g per litre of water.
  - In North Telangana Zone, to control white fly in green gram and black gram, spray Monocrotophos @ 1.6 ml or Triazophos @ 1.5 ml or Acetamiprid @ 0.2 g per litre of water. For aphid attack in green gram and black gram, spray Dimethoate @ 2.0 ml or Monocrotophos @ 1.6ml or Acephate @ 1.5 g per litre of water.
- **Tamil Nadu:**
  - In the Cauvery Delta Zone, continue harvesting of rice fallow black gram. Carry out sowing of black gram in chitrai pattam under summer irrigated conditions.
  - In the South Zone, undertake harvesting of rice when about 80% panicles have 80 % ripened spikelets and their upper portion is straw coloured.
  - In the North Western Zone, to prevent heat stress in tomato crop during summer months, undertake sowing agathi or chithagathi or castor seed in ridges and around the tomato field at 5 – 6 feet spacing.
  - In the Western Zone, provide staking to five months or older banana plants. Irrigate coconut and banana plantations according to the soil moisture.
  - In the high rainfall zone, provide support to runner shoots of pepper to coil them on and to protect them from spreading on the ground by. Provide support to banana plants.
  - In the North Eastern Zone, to control the incidence of sucking pest in the vegetable crops, spray 5 % Neem seed kernel extract.
  - In the Southern Zone, due to prevailing weather condition there is incense of Fruit sucking moth in Acid lime. Keep the field clean without weed. Bait with fermented molasses plus Malathion 50 EC at the rate of 1 ml/litre of water. Wrap fruits with polythene bags punctured at the bottom. Apply smoke and set up light traps or food lures (pieces of citrus fruits).
  - In the South Zone, prevailing weather condition is favorable for stem weevil incidence in banana plants. Spray

Monocrotophos 36 WSC @1 ml per litre of water.

▪ **Karnataka:**

- In Eastern Dry Zone, keep the inputs ready for sowing of cowpea (TVX-944, KBC-1), sesamum (Navile-1, T-7), field bean (HA 1, 2, 3, 4), green gram (PS-16, PDM-84,178) and black gram (Karagao-3, T-9, Rashmi (LBG-625)) and groundnut (TMV-2, JL-24, KCG-6).
  - In Southern Transition Zone, continue deep ploughing in the fields where rain is received. Undertake sowing of ginger and turmeric.
  - In Southern Dry Zone, undertake land preparation and keep inputs ready for sowing of ragi (Indof-9, GPU-48), cowpea (TVX-994, KBS-1), black gram (Karagav-3, T-9, Rashmi (LBG-625)).
  - In North East Transition Zone, undertake weeding in sugarcane crop.
  - In North Dry Zone, continue pruning in grapes. Undertake ploughing and incorporate the crop residue in the soil. This facilitates in situ conservation of water during the pre-monsoon rains.
  - In Central Dry Zone, undertake land preparation wherever rain is received. Undertake mulching wherever possible.
  - In Coastal Zone, undertake harvesting of matured groundnut.
  - In North Transition Zone, continue ploughing in harvested field to reduce the pest and weed incidence in next season. Continue harvesting of fully matured fruits of sapota, chikku and matured chili.
  - In Hill Zone, continue 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 Southern Dry Zone, to manage stem borer in rice, spray Manocrotophose @ 1 gm/ litre of water or Chlorophose @ 0.6 gm/litre of water on a non-rainy day. About 250-300 litres of spaying solution is required for one acre.
  - In North East Transition Zone, to manage tomato serpentine leaf miner infestation use neem based insecticide such as NSKE 5% @50 ml dissolved in 1 litre of water or spray Dimethoate @1.7 ml per liter of water
  - In Hill Zone, for control of hoppers in mango, spray Melathion @ 2 ml/liter of water or Monocrotophos @ 1.25 ml/liter of water.
- **Animal Husbandry**
- In the South Telangana Zone, prevailing weather conditions are congenial for the occurrence of Sheep pox in sheep and goat, Foot and mouth disease in cattle and Buffaloes. To prevent the diseases, vaccinate the animals. In poultry, prevailing weather conditions are congenial for the occurrence of Ranikhet disease in poultry. To prevent the diseases, vaccinate the birds. To protect the poultry birds from high temperature, arrange fans and foggers in sheds, cover the sheds with paddy straw and arrange sprinklers. Feed with wet mash to increase the feed intake and provide cool water for drinking.
  - In the Northern Zone of Kerala, keep hygiene in cattle shed and surroundings to control summer mastitis in cattle. Boost the immunity of cattle by supplementing feeds with vitamins and minerals containing health tonics. Provide medication under the supervision of a Veterinary doctor.
  - In Karnataka, leave the buffaloes in ponds during afternoon hours or sprinkle the cold water 2-3 times a day on the body of the animal to overcome the heat. Apply 4-6 inch thick hay thatch as a roofing material. Spray water on the floor and roof of shelter periodically during peak hot hours to reduce the heat load on animals.

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