



# *National Agromet Advisory Service Bulletin*

*Friday 13<sup>th</sup> April 2018*  
*(For the period 13<sup>th</sup> to 18<sup>th</sup> April 2018)*



*Issued by*  
*India Meteorological Department*

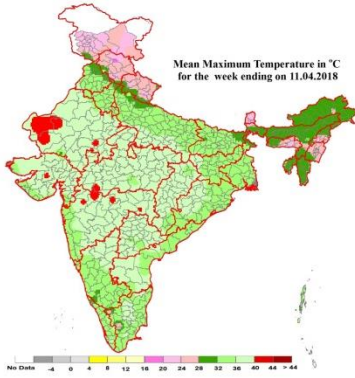
**Weblink For**

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

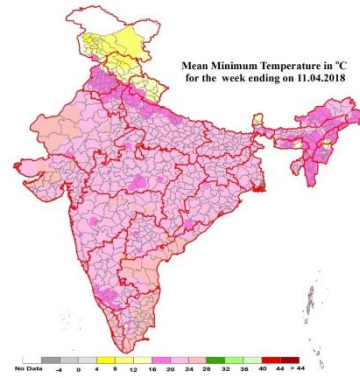
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

**Spatial distribution of weather parameters for the week ending 11.04.2018**

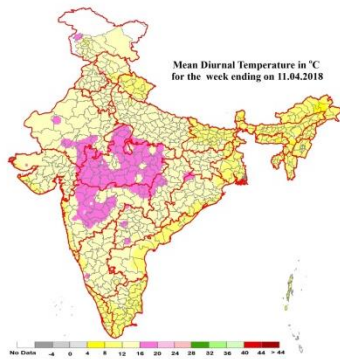
**Mean Maximum Temperature (°C) for the week ending 11.04.2018**



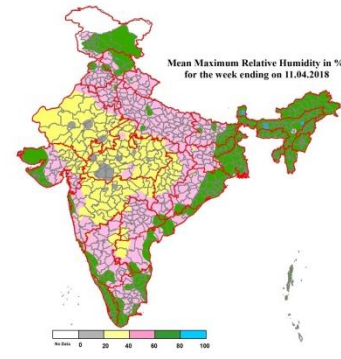
**Mean Minimum Temperature (°C) for the week ending 11.04.2018**



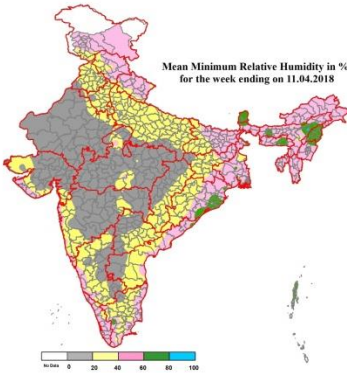
**Mean Diurnal Temperature Variation (°C) for the week ending 11.04.2018**



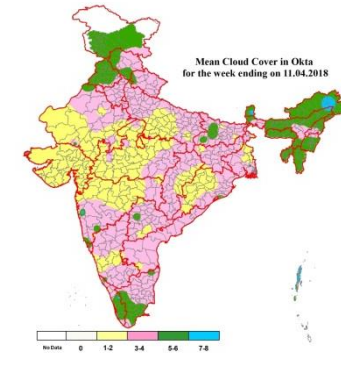
**Mean Maximum Relative Humidity (%) for the week ending 11.04.2018**



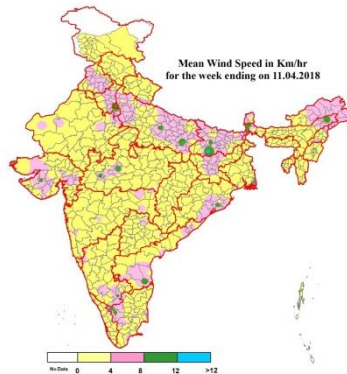
**Mean Minimum Relative Humidity (%) for the week ending 11.04.2018**



**Mean Cloud Cover (okta) for the week ending 11.04.2018**



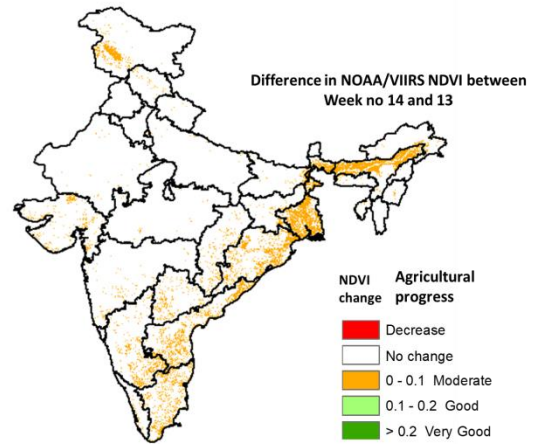
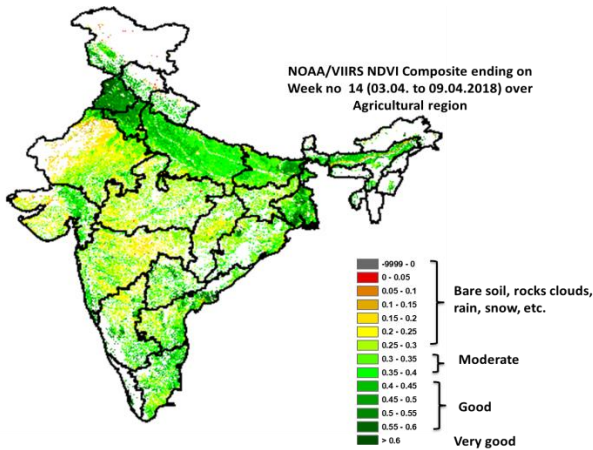
**Mean Wind Speed (km/hr) for the week ending 11.04.2018**





**NOAA/VIIRS NDVI composite ending on 9<sup>th</sup> April 2018 over Agricultural regions of India**

**Difference in NOAA/VIIRS NDVI between 2<sup>nd</sup> April and 9<sup>th</sup> April 2018**

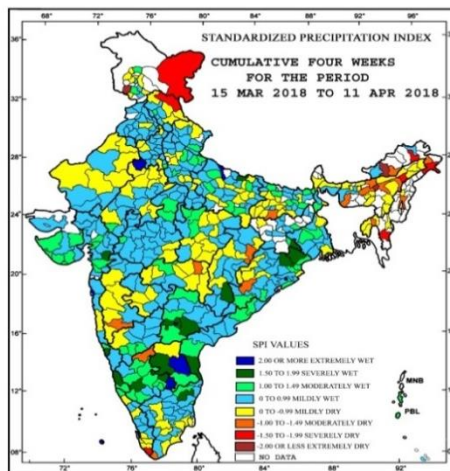


Agriculture vigour is good to moderate over Indo-gangetic plains, East coast and western coast of Maharashtra, some parts of Gujarat, interior parts of Tamil Nadu, Coastal Andhra Pradesh and Telangana. Rest of the country shows moderate progress of NDVI.

Moderate progress of agricultural vigour was observed over Eastern part and Arunachal Pradesh of the country.

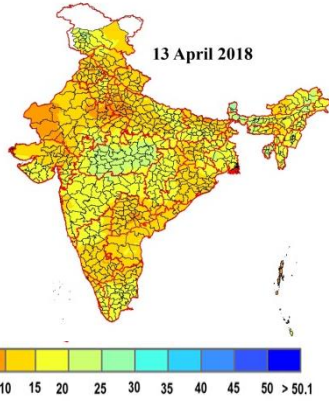
**Standardised Precipitation Index  
Cumulative 4 weeks for the period 15<sup>th</sup> March to 11<sup>th</sup> April 2018**

MINISTRY OF EARTH SCIENCES  
INDIA METEOROLOGICAL DEPARTMENT  
HYDROMET SECTION, PUNE

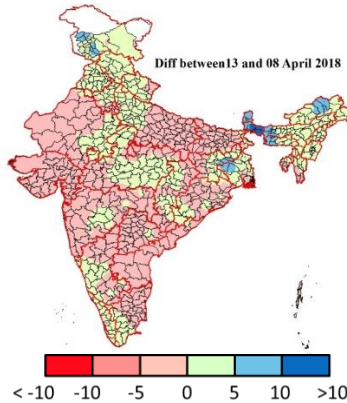
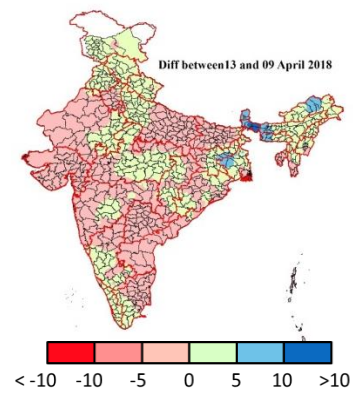
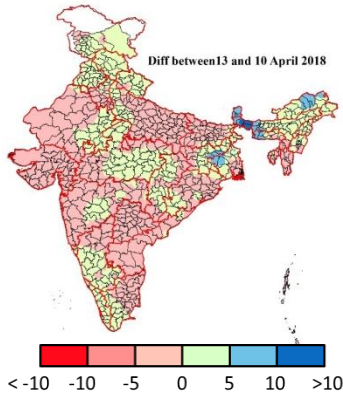
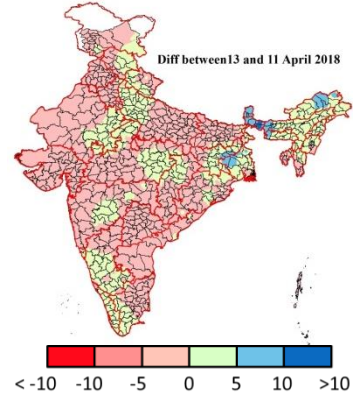
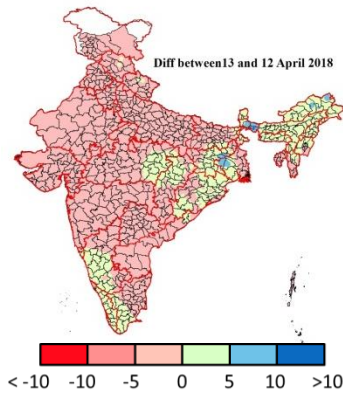


- Extremely/severely wet conditions experienced in few districts of Konkan & Goa; Telangana; Keonjhar, Mayurbhanj districts of Odisha; East Singhbhum district of Jharkhand; Bhaerach, Siddharth Nagar districts of Uttar Pradesh; Jhunjhunu district of Rajasthan; Narmada district of Gujarat Region; Bastar district of Chhattisgarh; Nellore, Cuddapah districts of Andhra Pradesh; Tiruvannamalai district of TamilNadu & Puducherry; Udupi, Hassan, Kolar, Chickballapur districts of Karnataka; Lakshadweep district of Lakshadweep.
- Extremely/Severely dry conditions experienced in few districts of Arunachal Pradesh; Jorhat, Morigaon districts of Assam; Lahaul & Spiti district of Himachal Pradesh; Ladakh (Leh), Rajouri districts of Jammu & Kashmir; Trivandrum district of Kerala.
- Moderately dry conditions experienced in few districts of Arunachal Pradesh; Kamrup, Nagaon, Golaghat, Udalguri districts of Assam; West Garo Hills district of Meghalaya; Dhalai district of Tripura; Kalahandi district of Odisha; Gaya district of Bihar; Sangli, Bhandara districts of Maharashtra; Raigarh district of Chhattisgarh; Kanyakumari district of Tamil Nadu & Puducherry; Bellary district of Karnataka.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

**Daily Soil Moisture (mm) for 13<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 14<sup>th</sup> to 18<sup>th</sup> April 2018 (ending at 0830 IST)  
for 60 cm depth**



## Weather Forecast for next 5 days valid upto 0830 hours of 18<sup>th</sup> April 2018

- Meteorological subdivision wise detailed 5 days rainfall forecast is given in Table below.
- Maximum temperatures are likely to rise by 2-3°C over West and Northwest India during next 2-3 days.
- No significant change in maximum temperatures likely over Central and East India during next 48 hours and rise by 2-3°C thereafter.
- No significant change in maximum temperatures likely over rest of the country during next 3 days.

### 5 Day Rainfall Forecast (Mid day) 13<sup>th</sup> April 2018

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

#### % Station Reporting Rainfall

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

### Weather Warning during next 5 days

- **13 April (Day 1):** Heavy rain very likely at isolated places over Assam & Meghalaya, Arunachal Pradesh, Kerala and Tamilnadu. Thunderstorm accompanied with squall very likely at isolated places over Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura, Kerala and



Tamilnadu.Thunderstorm accompanied with gusty winds very likely at isolated places over Jharkhand, Gangetic West Bengal, Odisha, Coastal & South Interior Karnataka, Coastal Andhra Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh. Squally weather with wind speed occasionally reaching 40-50 kmph very likely to prevail over Comorin Maldives area. Fishermen are advised not to venture into these areas.

- **14 April (Day 2):** Heavy rain very likely at isolated places over Kerala.Thunderstorm accompanied with squall very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura Kerala and Lakshadweep.Thunderstorm accompanied with gusty winds very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Odisha, Coastal & South Interior Karnataka, Coastal Andhra Pradesh, Rayalaseema and Tamilnadu.Squally weather with wind speed occasionally reaching 40-50 kmph very likely to prevail over Maldives, Lakshadweep area. Fishermen are advised not to venture into these areas.
- **15 April (Day 3):** Thunderstorm accompanied with squall very likely at isolated places over Assam & Meghalaya.Thunderstorm accompanied with gusty winds very likely at isolated places over Odisha and North Interior Karnataka.
- **16 April (Day 4):** Thunderstorm accompanied with squall and Hail likely at isolated places over Jammu & Kashmir and Himachal Pradesh.Thunderstorm accompanied with squall likely at isolated places over Uttarakhand.Thunderstorm accompanied with gusty winds likely at isolated places over North Interior Karnataka.
- **17 April (Day 5):** No weather warning.

#### **Weather Outlook for subsequent 2 days from 18<sup>th</sup> to 20<sup>th</sup> April 2018**

- Scattered to fairly widespread rain/thundershower likely over Western Himalayan region and fairly widespread to widespread over northeast India.
- Isolated to scattered precipitation likely over south peninsula.
- Dry weather likely over remaining parts of the country.

#### **Salient Advisories**

- As squally weather with wind speed occasionally reaching 40-50 kmph very likely to prevail over **Comorin Maldives** area on 13<sup>th</sup> April and over **Maldives Lakshadweep** area on 14<sup>th</sup> April, fishermen are advised not to venture into these areas.
- As thunderstorm accompanied with squall and hail likely at isolated places over **Jammu & Kashmir** and **Himachal Pradesh** on 16<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 and propping up in sugarcane 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 **Uttarakhand** on 16<sup>th</sup>, over **Sub Himalayan West Bengal & Sikkim** on 13<sup>th</sup>, over **Nagaland, Manipur, Mizoram & Tripura** on 13<sup>th</sup> and 14<sup>th</sup>, over **Assam & Meghalaya** from 13<sup>th</sup> to 15<sup>th</sup>, over **Kerala** on 13<sup>th</sup> and 14<sup>th</sup>, over **Tamilnadu** on 13<sup>th</sup> April, thunderstorm accompanied with gusty winds very likely at isolated places over **Jharkhand** and **Gangetic West Bengal** on 13<sup>th</sup>, over **Sub-Himalayan West Bengal & Sikkim** on 14<sup>th</sup>, over **Odisha** from 13<sup>th</sup> to 15<sup>th</sup> April and over **East Madhya Pradesh, Chhattisgarh** and **Vidarbha** on 13<sup>th</sup>, over **Coastal & South Interior Karnataka, Coastal Andhra Pradesh** on 13<sup>th</sup> and 14<sup>th</sup>, over **Rayalaseema** and **Tamil nadu** on 14<sup>th</sup>, over **North Interior Karnataka** on 15<sup>th</sup> and 16<sup>th</sup> April, provide support to banana, young fruit plants and vegetables and propping up in sugarcane to avoid the crops from lodging due to strong winds. Keep harvested crops at safer places.
- As rain/snow likely at many places over **Jammu & Kashmir** on 16<sup>th</sup> April, rain/thundershowers likely at most/many places over **Arunachal Pradesh** on 13<sup>th</sup> and 17<sup>th</sup>, at many places over **Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura** on 13<sup>th</sup> and 17<sup>th</sup> and over **Sub-Himalayan West Bengal & Sikkim** on 13<sup>th</sup>, 16<sup>th</sup> & 17<sup>th</sup> April along with heavy rain very likely at isolated places over Assam &

Meghalaya and Arunachal Pradesh on 13<sup>th</sup> April, rain/thundershowers likely at many places over **Kerala** and **South Interior Karnataka** on 13<sup>th</sup> and 14<sup>th</sup> and over **Coastal Karnataka** on 14<sup>th</sup>, along with heavy rain very likely at isolated places over Kerala on 13<sup>th</sup> and 14<sup>th</sup>, over Tamil Nadu on 13<sup>th</sup> April, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested crops at safer places.

- 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**.
- In **Vidarbha**, under the prevailing mainly dry weather conditions, apply irrigation to summer crops (groundnut, sesame, greengram etc) at 6 to 8 days interval. To reduce fruit drop in orange and sweet orange due to prevailing high temperature, spray Potassium Nitrate (10 g/liter of water) on pea sized fruits of mandarin orange (ambia bahar) and spray of NAA @ 2 g + Urea 1 kg per 100 liters of water in sweet orange.

### *Detailed Zonewise Agromet Advisories*

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

- **Realised Rainfall:** Rainfall occurred in all districts of Jammu & Kashmir except Kargil, Kathua and Ladakh(Leh), all districts of Himachal Pradesh except Kinnaur and Lahaul & Spiti, all districts of Uttarakhand except Champawat, Dehradun, Garwhal Tehri, Garwhal Pauri, Haridwar, Udham Singh Nagar and Uttar Kashi, in Chandigarh district of Haryana, Moga and Ropar districts of Punjab, Bahraich, Gorakhpur, Sharawasti districts of East Uttar Pradesh, Barielly and Moradabad districts of West Uttar Pradesh, Jhunjhunu district of East Rajasthan during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
  - As thunderstorm accompanied with squall and hail likely at isolated places over Jammu & Kashmir and Himachal Pradesh on 16<sup>th</sup>, thunderstorm accompanied with squall very likely at isolated places over Uttarakhand on 16<sup>th</sup> April, it is advised to use hail net for orchard crops in Jammu & Kashmir and Himachal Pradesh to protect from mechanical damage. 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 rain/snow likely at many places over Jammu & Kashmir on 16<sup>th</sup> April, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested crops at safer places.
  - **Jammu & Kashmir:**
    - In Sub Tropical Zone, undertake land preparation for sowing of moong and mash.
    - In Intermediate Zone, continue transplanting of cucurbits and vegetables. Continue planting of orchards.
    - Continue sowing of seeds of vegetables in open nursery and in poly house in Valley Temperate Zone. Continue sowing of cucurbit seeds in polybags for early nursery raising inside polyhouse. Seedlings of vegetables prepared under protected conditions may be transplanted.
    - 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. Continue training and pruning in orchards.
  - **Uttarakhand:**
    - In Sub Humid Sub Tropic Zone, continue harvesting of matured crop of barley, pea, gram, lentil, mustard and linseed, etc. in clear weather. Continue sowing of urad and moong in clear weather. Undertake harvesting of chilli and brinjal.
    - In mid and high hills of Bhabar and Tarai Zone, continue sowing of barnyard millet and French bean. Continue transplanting of brinjal, chilli and capsicum in valley. Undertake plucking of green pods of pea.
    - Continue sowing of French bean and okra in Hill Zone. Continue transplanting of brinjal, tomato, capsicum etc.
  - **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.

- 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 after current spells of rain in Sub-Montane and Low Hill Tropical Zone.
- **Punjab, Haryana & Delhi:**
  - Continue sowing of okra and cucurbits in Western Plain Zone of Punjab. Continue transplanting of chilli. Undertake harvesting of matured wheat in clear weather. Complete sowing of summer moong and mash. Complete harvesting of matured mustard. Undertake land preparation for sowing of cotton (recommended varieties viz. F2228, LH 2108 & LH 2076 or Bt hybrids like RCH 650 BG II, NCS 855 BG II and Ankur 3028 BG II or non-Bt hybrids- LHH 144).
  - In Undulating Plain Zone of Punjab, continue planting of sugarcane. Continue transplanting of cucurbits. Complete 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.
  - In Western Zone of Haryana, continue 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, continue planting of spring sugarcane.
  - In Delhi, in present weather condition, harvesting of timely sown wheat crop is advised. Farmers are advised to start sowing of green gram. Variety: - Pusa Visal, Pusa Ratna, Pusa 5931, Pusa Baisakhi, PDM-11, SML-32, SML-668, Samrat. Undertake direct sowing of french bean, amaranthus, vegetable lobia, lady finger, bottle gourd, cucumber, ridge gourd and summer radish.
- **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. Continue 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:**
  - 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 at 45 days after sowing. Undertake planting of cotton.
  - In Bikaner district of Arid Western Plain Zone, undertake harvesting of late sown wheat.
  - In Flood Prone Eastern Plain Zone, continue harvesting of matured wheat. Undertake deep ploughing of field to destroy soil borne pests.
  - In Semi Arid Eastern Plain Zone, continue harvesting of wheat and barley.
  - 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 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.
  - In Rajasthan, infection like TPR and Pox in sheep and goats and CRD and Ranikhet in poultry birds may occur due to present weather conditions, undertake proper vaccination of livestock and poultry.
- **Apiculture:**
  - In Jammu & Kashmir, for protection against ants, put the legs of apiary into water so that ants could not attack the apiary.

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

- **Realised Rainfall:** Rainfall occurred in Araria and Begusarai districts of Bihar; Bokaro, Deoghar, Dhanbad, East Singhbhum, Pakur and Saraikela districts of Jharkhand. Balasore, Bhadrak, Cuttack, Dhenkanal, Gajapati,

Jagatsingpur, Jajpur, Kandhamal, Keonjhar, Khurda, Koraput, Malkangiri, Mayurbhanj and Rayagada districts of Odisha, Bankura, Burdwan, Hooghly, Kolkata, Nadia, North 24 Paraganas, Purulia and West Medinapur districts of Gangetic West Bengal, all districts of Sub-Himalayan West Bengal & Sikkim except North Dinajpur, South Dinajpur and West Sikkim and all districts of Andaman & Nicobar Islands 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 Sub Himalayan West Bengal & Sikkim on 13<sup>th</sup>, thunderstorm accompanied with gusty winds very likely at isolated places over Jharkhand and Gangetic West Bengal on 13<sup>th</sup>, over Sub Himalayan West Bengal & Sikkim on 14<sup>th</sup> and over Odisha from 13<sup>th</sup> to 15<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.
- **Odisha:**
  - Continue harvesting of matured crops of green gram and black gram during clear weather in Mid Central Table Land Zone. In North Eastern Ghat Zone, continue sowing of summer cowpea.
  - In West Central Table Land Zone, due to increase in temperature, there are chances of stem borer attack in paddy, apply Friponil /Triazophos @ 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 Eastern Ghat High Land Zone, summer rice crop is at late tillering to PI stage in main field. Alternate wetting and drying of land is advisable during tillering phase and keep standing water up to 5cm during 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 Pheromon Traps/acre, collect the adults and destroy them by burning or by burying them under soil.
  - 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.
  - In West Central Table Land Zone, early sown summer sunflower is at 25 days, undertake hoeing and weeding.
  - 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, farmers are advised to harvest and thresh matured lentil, wheat and lathyrus crops. At present most of the mango fruits are at pea stage, it is advised to apply irrigation 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 no rainfall forecast in this week, farmers are advised to provide irrigation in standing maize, onion and vegetables crops. In all these crops, make the fields weed free and after irrigation, apply urea.
  - In North West Alluvial Plain Zone, continue the 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, complete harvesting of wheat crop and keep it at safer places. Undertake intercultural operations in summer moong. Maintain the water level in transplanted rice and broadcast urea after 25-30 days of transplanting. Irrigate the fruit bearing trees of mango and litchi at regular interval. Spray Planofix @ 5 ml per 10 litre of water to check dropping of tiny fruits in litchi plant.
  - In South Eastern Plateau Zone, continue harvesting of matured lentil, pigeon pea and lathyrus in weather. Keep it at safe places. Continue intercultural operations in summer rice.
  - In Central and North eastern Plateau Zone, continue sowing of okra. Undertake weeding in green gram.
- **West Bengal:**
  - As rain/thundershowers would occur at many places over Sub-Himalayan West Bengal & Sikkim on 13<sup>th</sup>, 16<sup>th</sup> & 17<sup>th</sup> April, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested mustard and lentil crops at safer places.
  - In the New Alluvial Zone, prepare seed bed for planting jute. Undertake sowing of green gram.
  - In the Hill Zone, continue planting of healthy rhizomes of ginger and turmeric. Ensure proper drainage in the wheat field and avoid irrigation to maize crop at seedling stage as rainfall is expected. Carry out transplanting of round chilli in the raised beds and provide proper drainage.
  - In the Coastal saline Zone, undertake immediate harvesting of early transplanted Boro paddy @ 80% of maturity to avoid shattering due to Norwesters.

- In the Terai Zone, keep 345 cm of water level in Boro paddy field. Do not irrigate rice field as light rainfall has been forecast. Undertake sowing of jute.
- In the Old Alluvial Zone, undertake planting of turmeric rhizomes.
- In the New Alluvial Zone, to prevent thrips in onion crop, spray Imidachlorpid @ 0.5ml/ litre of water.
- In Old Alluvial Zone, to control rice Stem borer at tillering stage, install pheromone traps @ 5traps/bigha for trapping adult moth of rice stem borer.
- In the Coastal Saline Zone, to prevent BPH attack in late transplanted Boro paddy, stop irrigation; stir plants at every 6th row for better penetration of sunlight and spray Imidachlorpid @ 3ml/10 litres water at the base of plants.
- **Andaman & Nicobar Islands:**
- In Andaman Islands, make pit around coconut and Arecanut trees and fill the pits with top soil and FYM. To control fruit borer in brinjal, clip the infested top portion of the branches and collect the infected fallen fruits and destroy it by burning. .
- **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, Poultry birds should be provided with di-calcium phosphate or grit with feed for continuation of egg production and growth.
- **Fisheries**
- In the Old Alluvial Zone of West Bengal, for dry pond or new pond, cultivate the bottom of the pond with Dhaincha seed @ 1-1.5 kg /bigha area for 30-45 days and remove aquatic weed from pond body.

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

- **Realised Rainfall:** Rainfall occurred in East Siang, Kurung Kumey, Lower Dibang Valley, Papumpare, Tirap, Upper Siang, Upper Subanseri, West Kameng and West Siang districts of Arunachal Pradesh, in Baksa, Barpeta, Cachar, Chirang, Dhubri, Goalpara, Goalghat, Hailakandi, Karimganj, Kokrajhar, Nalbari, Sonitpur and Tinsukia districts of Assam, East Garo Hills, East Khasi Hills and West Khasi Hills districts of Meghalaya. Aizawl district of Mizoram, Imphal East and Imphal West districts of Manipur, Mon and Phek districts of Nagaland and North Tripura, 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/many places over Arunachal Pradesh on 13<sup>th</sup> and 17<sup>th</sup>, at many places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 13<sup>th</sup> and 17<sup>th</sup>, along with heavy rain very likely at isolated places over Assam & Meghalaya and Arunachal Pradesh on 13<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 Nagaland, Manipur, Mizoram & Tripura on 13<sup>th</sup> and 14<sup>th</sup>, over Assam & Meghalaya on from 13<sup>th</sup> to 15<sup>th</sup>, provide support to banana, young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
  - **Assam & Meghalaya, Arunachal Pradesh:**
  - In Arunachal Pradesh, undertake transplanting of healthy seedlings of summer vegetables to main field from nursery. Undertake harvesting of potato, cabbage and cauliflower. Adopt 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.
  - In Meghalaya, continue sowing of cucurbits like cucumber, pumpkin, bottle gourd, ash gourd, squash, French bean and cowpea. Undertake transplanting of chilli and brinjal crops after. Carry out harvesting of mustard/ rapeseed and pea/chickpea/lentil at the earliest as there is a chance of rain in 3-4 days.
  - In Lower Brahmaputra Valley Zone of Assam, undertake land preparation and sowing of Bao rice varieties like Kekua Bao, Negheri Bao, Maguri, Panikekua, Panindra, Padmanath, etc. Continue planting of sugarcane, pineapple, citrus plants, ginger and turmeric. Avoid irrigation to Ahu rice crop as rain is expected in the next 2 days.
  - In Upper Brahmaputra Valley Zone, complete the sowing of Bao rice (deep water) seeds (varieties - Maguri, Panikekua, Amona, Negheri etc.) in the main field. Undertake planting of ginger, banana and papaya. Provide



drainage to maize, green gram and black gram crops.

- In the Hill Zone of Assam, carry out harvesting of mature maize cobs and mature onion crop on non rainy days. 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. Carry out harvesting of mature crop of onion and maize.
- In the Barak Valley Zone, continue planting of banana suckers. Undertake planting of lemon.
- In the Central Brahmaputra Valley Zone, in view of rainfall is forecast for the next 5 days, postpone harvesting of mature wheat/Rabi pulses and land preparation/sowing of Jute for next 5 days. Continue land preparation and sowing of Bao rice (varieties - Maguri, Kekua Bao, Negheri Bao, Tara Bao etc.). Undertake 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 sowing of okra (varieties Pusa Sawani, ArkaAnamika, Parbhdani Kranti etc.). Continue land preparation/sowing of direct seeded Ahu rice (varieties Banglami, Rangadoria, Ahu joha, Rasi 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 land preparation for summer pulses like green gram and black gram.
- In the Barak Valley Zone, to control the attack thrips in chilli crop, spray Rogor or Dimethoate @ 1.5 ml per litre of water after current spells of rain.
- **Nagaland, Mizoram, Manipur and Tripura:**
- In Manipur, provide drainage to rabi maize and cucurbit crops. Carry out land preparation for sowing of soybean, groundnut, black gram and red gram.
- In Nagaland, provide irrigation to brinjal crop. Undertake sowing of summer vegetables, ginger and turmeric.
- 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.
- 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 Tripura, continue transplanting of Jhum rice seedlings in the main field. Avoid stagnation of water in cowpea, urad and green gram fields.
- **Animal Husbandry**
- In the Hill Zone and Lower Brahmaputra Valley Zone of Assam, vaccinate cattle against FMD, HS and BQ.
- In Nagaland 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.
- In the North Bank Plain Zone, vaccinate poultry birds against Ranikhet disease.
- In the Lower and Central Brahmaputra Valley Zones, to control anemia in 4 and 14 days piglet, give 'Imferon' injection after consulting local veterinary doctor.
- **Fishery**
- In the Hill Zone and Lower Brahmaputra Valley 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, for better profitability from the fish pond it is advisable to fish rearing culture silver barb (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:**
  - As thunderstorm accompanied with gusty wind very likely at isolated places over Vidarbha on 13<sup>th</sup> April, provide support to banana, papaya, young fruit plants and vegetables to avoid lodging. Undertake propping up in sugarcane.
  - In Konkan, continue harvesting of early maturing rice varieties. Undertake harvesting of matured groundnut. If required apply light irrigation before harvesting. Dry the harvested pods in sunshine for 3 to 4 days. Continue 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. Transport of harvested fruits should be done preferably during night hours. In view of prevailing high temperature, apply 80-100 litres of water per

tree at 7 days interval. Mulch with grass to avoid the water loss in mango orchards in lateritic soil.

- In Madhya Maharashtra, undertake harvesting of matured groundnut. Undertake harvesting of matured cashew nuts. Clean the nuts and store after drying in sunlight. Due to prevailing weather conditions premature fruit dropping may occur in mango, apply irrigation to mango trees at an interval of 10 to 15 days. Apply irrigation to summer crops, vegetables and fruit crops as per requirement. Reduce interval between two irrigation and irrigation should be given during evening hours. Continue earthing up in preseasonal sugarcane and apply Nitrogen @ 136 kg (Urea 295 kg), Phosphorus @ 85Kg (Single Super Phosphate 531 kg) and Potash @ 85 kg (142 kg Murate of Potash).
  - In Marathwada, in view of prevailing dry weather, apply irrigation to summer maize, vegetables and mango orchard. To reduce loss of water by transpiration in maize crop, spray Kaolin @ 6 g per liter of water. Undertake harvesting of matured vegetable during early in morning or in evening hours. Continue April pruning in grape orchard.
  - In Vidarbha, under the prevailing weather condition, apply irrigation to summer crops (groundnut, sesame, greengram etc) at 6 to 8 days interval. To reduce fruit drop in orange and sweet orange due to prevailing high temperature, spray Potassium Nitrate (10 g/liter of water) on pea sized fruits of mandarin orange (ambia bahar) and spray of NAA @ 2 g + Urea 1 kg per 100 liters of water in sweet orange. Spray may be repeated after 15 days. Apply frequent adequate irrigation coupled with mulch in orange orchards. Maintain optimum water level (upto 5 cm) in transplanted rice field. Apply irrigation to summer moong at interval of 6-9 days and sesame at interval of 6-8 days.
  - In Madhya Maharashtra, for control of mango hoppers spray Lambda Cyhalothrin 5 % E.C @ 6 ml per 10 litre of water.
  - **Gujarat:**
  - In Middle Gujarat Zone, decrease the interval between two irrigations in pearl millet and vegetable crops. Carry out intercultural operations in pearl millet, rice, green gram, cowpea and guar crops. Continue harvesting of matured fruits of papaya.
  - In Bhal and Coastal Zone, carryout harvesting of matured onion bolls and keep bolls at well aerated place. Cover papaya fruits using gunny bags and provide support to heavy fruiting plants. Apply irrigation in pomegranate, sapota, lemon and papaya orchards; pluck matured fruits regularly.
  - In South Gujarat Heavy Rainfall Zone, maintain water level of 2-3 cm in transplanted rice field. Undertake weeding in groundnut, rice, sugarcane and pulse crops. Continue planting of Elephant foot yam and Greater Yam.
  - In North West Zone of Gujarat, carry out weeding and intercultural operations in timely sown pearl millet, cluster bean and vegetable crops to conserve soil moisture.
  - In North Gujarat Zone, carry out intercultural operations in groundnut, pearl millet, green gram, cowpea and vegetable crops. Apply irrigation in standing crops at regular intervals.
  - In South Saurashtra Zone, carry out intercultural operations in timely sown groundnut, green gram, black gram, sesame and sugarcane crops. Apply irrigation in sesame, green gram, black gram, groundnut at regular intervals and in vegetable crops at the flowering and fruiting stage.
  - In North Saurashtra Zone, apply irrigation in mango orchard.
  - In North Gujarat Zone and North West Zone of Gujarat, forecasted weather condition is favorable for transition of leaf curl disease and sucking pest like mites and thrips; leaf curl disease is transmitted through the whitefly; to control it, spray Emidachloprid 17.8% S.L. @ 2.8 ml or Methylo-Dematone 25% E.C. @ 10 ml/10 litre of water. For control of mites and thrips, spray Carbofuran 3% granular @ 30 kg/ha.
  - In North Saurashtra Zone, under present weather condition infestation of thrips and whiteflies is observed in green gram and black gram; to control, spray Acetamiprid 20 % SP@ 5.0 gm and 500 ml of 5 % neem seed extract or neem seed oil 50 ml with Profenofos @20 ml or Lemda Cyhelothrin @10 ml/10 litres of water.
- 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:** Rainfall occurred in Bastar, Dhamtari and Sukuma districts of Chhattisgarh during the week. Weather remained mainly dry/dry over the region during the week.
- **Advisories:**
  - As thunderstorm accompanied with gusty wind very likely at isolated places over East Madhya Pradesh and Chhattisgarh on 13<sup>th</sup> April, provide support to banana, papaya, young fruit plants and vegetables to avoid lodging. Undertake propping up in sugarcane.
  - **Madhya Pradesh:**
  - In Jhabua Hill Zone, apply irrigation in green gram, black gram and summer vegetables. Stop irrigation in mature crop of garlic crop and timely dig out the bulbs. Continue picking of matured okra, brinjal, green

chilli, fenugreek, spinach and cucurbitaceous crops.

- In Nimar Valley Zone, continue sowing of okra. In Grid Zone, continue sowing of green gram.
- In Vindhya Plateau Zone, apply irrigation in green gram and black gram.
- 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 vegetables. Undertake harvesting of wheat.
- Undertake harvesting of wheat crop. Continue intercultural operations in vegetables in Central Narmada Valley Zone. Continue sowing of green gram and black gram.
- Undertake harvesting of matured wheat in Kymore Plateau and Satpura Hill Zone. Continue sowing of cucurbits and undertake sowing of summer moong and urad.
- Apply irrigation vegetables and orchards in Bundelkhand Zone.
- In Malwa Plateau Zone, undertake harvesting of matured 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.
- **Chhattisgarh:**
  - In North Hill Zone, apply irrigation in summer rice, sugarcane, vegetable and fruit (mango, Litchi) crops as per soil moisture condition. Continue sowing of pumpkin, cucumber, sponge gourd etc. Dig out the tubers of onion and garlic from the fields.
  - In Bastar Plateau Zone, complete harvesting of matured *rabi* crops. Continue sowing of sweet corn (NS- 680 or Suger-75) crop; continue sowing of coriander crop in sunken bed and planting of summer arvi and bunda.
  - In Chhattisgarh Plain Zone, apply irrigation in vegetable crops. Complete harvesting of matured *rabi* crops viz. gram, mustard, wheat etc. Complete sowing of green gram. Undertake sowing of lady's finger, ridge gourd, sponge gourd, watermelon etc.
- **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, there is a chance of attack of heat stroke in cattle due to present weather condition; provide plenty of drinking water.

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

- **Realised Rainfall:** Rainfall occurred in Kalaburgi district of Karnataka; Ernakulam, Idukki, Kasargod, Kollam and Kottayam districts of Kerala, Theni and Tirunelveli districts of Tamilnadu; Vizianagaram district of Andhra Pradesh and Hyderabad, Medak and Rangareddy districts of Telangana during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
  - As rain/thundershowers would occur at many places over Kerala and South Interior Karnataka on 13<sup>th</sup> and 14<sup>th</sup> and over Coastal Karnataka on 14<sup>th</sup>, along with heavy rain very likely at isolated places over Kerala on 13<sup>th</sup> and 14<sup>th</sup>, over Tamil Nadu on 13<sup>th</sup> April, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
  - As thunderstorm accompanied with gusty wind very likely at isolated places over Coastal & South Interior Karnataka, Coastal Andhra Pradesh on 13<sup>th</sup> and 14<sup>th</sup>, over Rayalaseema and Tamil nadu on 14<sup>th</sup>, over North Interior Karnataka on 15<sup>th</sup> and 16<sup>th</sup>; thunderstorm accompanied with squall very likely at isolated places over Kerala on 13<sup>th</sup> and 14<sup>th</sup>, over Tamilnadu on 13<sup>th</sup> April, provide support to banana, young fruit plants and vegetables to avoid lodging. Undertake propping in sugarcane.
  - As squally weather with wind speed occasionally reaching 40-50kmph very likely to prevail over Comorin Maldives area on 13<sup>th</sup> and over Maldives Lakshadweep area on 14<sup>th</sup> April, fishermen are advised not to venture into these areas.
  - **Kerala:**
    - In the Problem Area Zone, transport rice grains to storehouses after harvesting as rain is expected. Provide shade to pepper and vegetable crops. Irrigate banana plants @ 10-15 litres of water per plant twice a week. Undertake planting of coconut seedlings.
    - In the Central Zone, continue land preparation for ginger and turmeric.
    - In the Southern Zone, provide shade to young rubber plants Do not start tapping before the young leaves get mature. Apply lime on the trunks in young rubber trees. Undertake land preparation for rice fallow pulses.
    - In the Central Zone, for stem borer attack in rice crop at panicle emergence stage, use 2 CC Trichogramma cards @ 10 pieces in different corners of the field. If the attack is severe, spray Flubendamide @ 2ml per one liter of water. There is chance of mosaic in bitter gourd. Cut and destroy the infected plants. To control the vector of mosaic spray Dimethoate (Roger) 1.5 ml per litre of water after current spells of rain.
    - In the Northern Zone, spray Flubendamide @ 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, spray *Pseudomonas Fluorescens* @ 2.5 kg/ha to eliminate rice bugs from rice fields. Apply Indofil M.45 @ 2g per litre of water against downy mildew in cucurbits after current spells of rain.
- 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 after current spells of rain.
- **Andhra Pradesh:**
  - In the North Coastal Zone, harvest sugarcane crop to ground level. Ratoon immediately after harvesting.
  - In the Southern Zone, undertake sowing of groundnut crop after seed treatment with Imidachloprid 600 F.S. @ 2 ml + 4 ml water per kg of seeds.
  - 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. Drain excess water from sorghum and rice-fallow maize fields before harvesting the crops.
  - In the North Coastal Zone, Spray Propiconazole @ 1.0 ml/litre for whip smut and Chloripyriphos @ 2.5 ml. / litre for early shoot borer in sugarcane crop at formative stage.
  - In the Scarce Rainfall Zone, for the control of leaf folder/stem borer in paddy, spray Chloropyriphos @ 2.5 ml/litre for control. 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.
  - In the Krishna Godavari Zone, spray Monocrotophos @ 320 ml or Dimethoate @ 400 ml/acre for aphids, jassids and thrips in sesame crop at vegetative 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). Spray Tricyclozole @ 120 g or Isoprothiolin @ 300 ml or Kasugamycin @ 400 ml per acre for neck blast in rice at PI - flowering stage.
  - In the Southern Zone, the present weather conditions are favourable for leaf folder and stem borer in paddy. Spray Cartap Hydrochloride @ 1.5 g per litre of water or Rinoxypyr @ 0.3 ml per litre of water.
- **Telangana:**
  - In North Telangana Zone, give irrigation to maize crop at before flowering, flowering & milk stages; to sesamum crop immediately after sowing and during flowering stage.
  - 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 Imidachloprid @ 0.3 ml or Thiomethaxam @ 0.3 g per litre of water.
  - In North Telangana Zone, to control cut worm in paddy, irrigate paddy field and spray Dichlrovos @ 1 ml + Chlorpyriphos @ 2.5 ml per litre of water in the evening hours. Spray Acephate @ 1.5 g or Dimethoate @ 2.0 ml per liter of water for leaf folder in groundnut crop.
- **Tamil Nadu:**
  - In the Cauvery Delta Zone, carry out harvesting of rice fallow black gram. Carry out sowing of black gram in chitrai pattam under summer irrigated conditions. Provide irrigation to sesame, sugarcane and rice fallow cotton crops.
  - In the high rainfall zone, store harvested banana in protected places as rain is expected. Provide proper drainage to prevent stagnation of rain water in agriculture and horticulture crop fields. Undertake planting of pepper rooted cuttings if there is sufficient soil moisture.
  - 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 Chlorpyriphos 20% EC 1250 ml/ha or Fipronil 5% EC 1000-1500 g/ha or Thiamethoxam 25% WG 100 g/ha.
  - In the Western Zone, considering the prevailing weather, ploughing may be done for planting turmeric. After ploughing the field apply FYM @ 12.5 tons per hectare.
  - In the Southern Zone, in the prevailing weather the leaf miner incidence is observed in groundnut. If the pest crosses ETL level, spray neem seed kernel extract 500ml.
  - In the Cauvery Delta Zone, spray Imidachloprid @ 40ml/acre or Dimethoate 250 ml/acre in 200 litres of water for leaf hopper incidence in the rice fallow cotton fields.
  - In the Western Zone, prevailing weather condition is conducive for the meelly bug attack in tapioca and papaya. Spray neem oil 2% or neem seed kernel extract @ 5% or Profenophos @ 2ml per liter of water.
  - 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, prevailing weather condition is favourable for leaf folder incidence in paddy at milking stage. Spray Phosalon 35 EC 1500 ml / ha or Phosphamidon 40 SL 1250 ml/ha.
- **Karnataka:**
  - In North Dry Zone, if there is shortage of water, apply irrigation in sugarcane in alternate furrows and alternate furrows alternatively. To manage dropping of small mango fruits, spray of 0.25 ml Planofix dissolved in one liter of water is recommended.

- In Eastern Dry Zone, procure seeds of cowpea, sesamum, field bean etc. for pre-monsoon season sowing. For soil moisture conservation in mango orchard, weeding and crop residue mulching is recommended.
- In North Transition Zone, continue ploughing in harvested field to reduce the pest and weed incidence in next season. Undertake harvesting of fully matured fruits of sapota, chikku and matured chilli. Protect the harvested produce (sorghum, wheat, Bengal gram) from unseasonal rains.
- In North East Transition Zone, undertake earthing-up in sugarcane crop in order to protect the crop from early shoot borer infestation.
- In Southern Transition Zone, undertake deep ploughing in the fields where rain is received. Continue land preparation for sowing of ginger and turmeric.
- In Southern Dry Zone, maintain optimum water level in rice field.
- In Central Dry Zone, apply irrigation in horticulture crops as per need.
- In Coastal Zone, apply irrigation in horticultural crops (coconut, mango, arecanut, banana, cashew etc.) once in 5-7 days. Install 12 Pheromone traps/hha in brinajl and okra crop fields to monitor shoot and fruit borer pests.
- 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 blast disease in rice, spray Carbendazim @ 1gm/ litre of water or Tricyclozoal @ 0.6 gm/litre of water on a non-rainy day; about 250-300 litre of spaying solution is required for one acre.
- In North Dry Zone, to manage Downey mildew in grapes, spray Azoxysprobin @1 ml dissolved in one liter of water on a non-rainy day.
- 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 on a non-rainy day.
- In Hill Zone, for control of infestation of fruit rot in cocoa, remove the rotten fruits and spray 1% Bordeaux mixture on a non-rainy day.
- **Animal Husbandry**
- In the South Telangana Zone, vaccinate sheep against ET and cattle against FMD and Hemorrhagic Septicemia diseases.
- 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 the Cauvery Delta Zone of Tamil Nadu, increase the quantum of amino acids, vitamins and mineral content of cattle feed so as to compensate the less quantity of feed consumed by cattle in summer.
- Spray/sprinkle water directly on the body of cattles for 1-5 minutes at an interval of 30 minutes during the hot sunny period of the day.
- In the Western Zone, vaccinate poultry birds against Ranikhet disease.
- In the South Zone of Tamilnadu, vaccinate cattle against FMD.
- 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 Karnataka, 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. Maintain proper ventilation for free circulation of air in the sheds. Provide clean drinking water to animals. Prepare silage and use silage during summer season when there is shortage of green fodder. Take up the cultivation of green fodder crops (maize, bajra and jowar).

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