



# *National Agromet Advisory Service Bulletin*

*Friday 01<sup>st</sup> May 2020*  
*(For the period 01<sup>st</sup> to 05<sup>th</sup> May 2020)*



*Issued by*  
***India Meteorological Department***

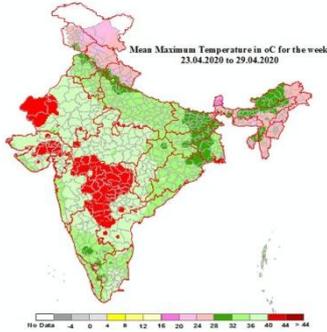
**Weblink For**

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

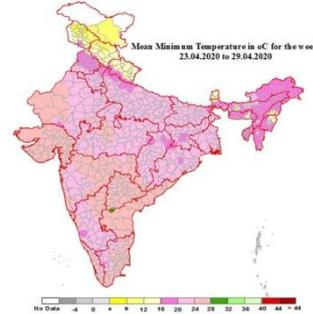
**State Composite AAS Bulletin:** <http://www.imdagrimet.gov.in/node/3544>

## spatial distribution of weather parameters for the week ending on 29.04.2020

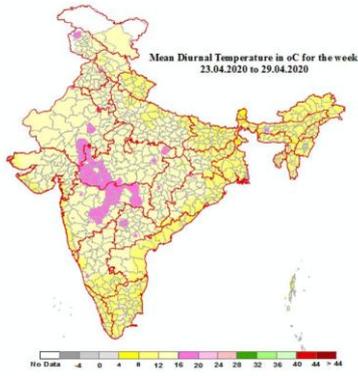
**Mean Maximum Temperature (°C) for the week ending on 29.04.2020**



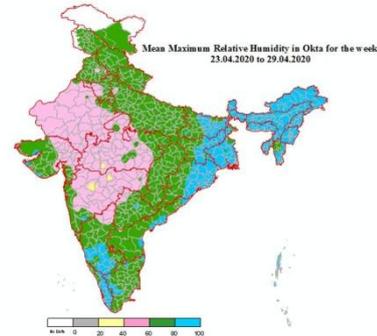
**Mean Minimum Temperature (°C) for the week ending on 29.04.2020**



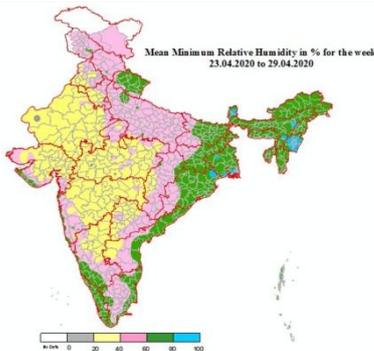
**Mean Diurnal Temperature Variation (°C) for the week ending on 29.04.2020**



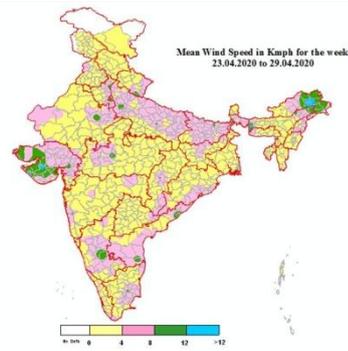
**Mean Maximum Relative Humidity (%) for the week ending on 29.04.2020**



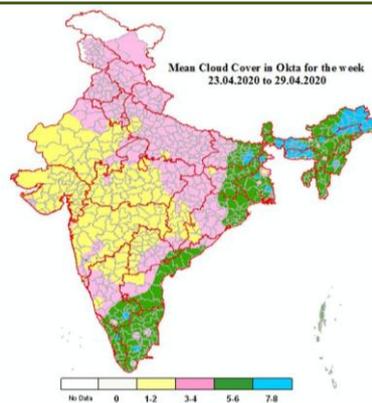
**Mean Minimum Relative Humidity (%) for the week ending on 29.04.2020**



**Mean Wind Speed (km/hr) for the week ending on 29.04.2020**

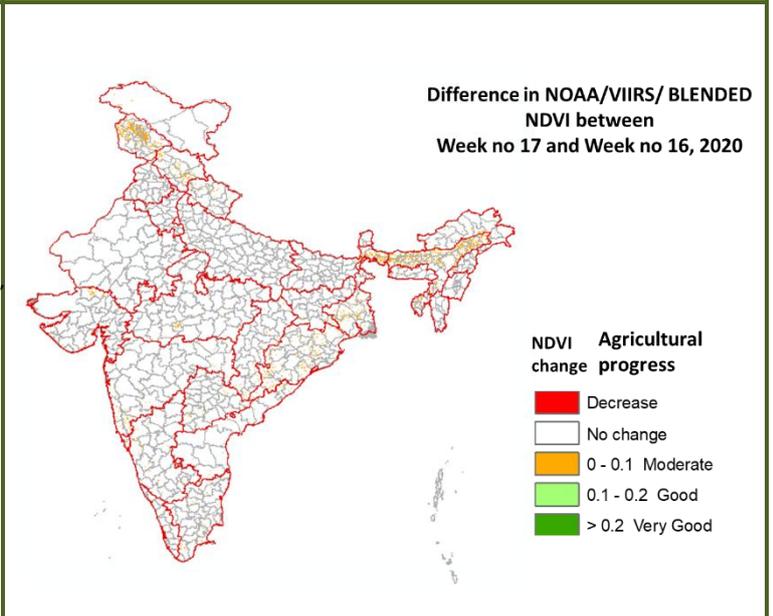
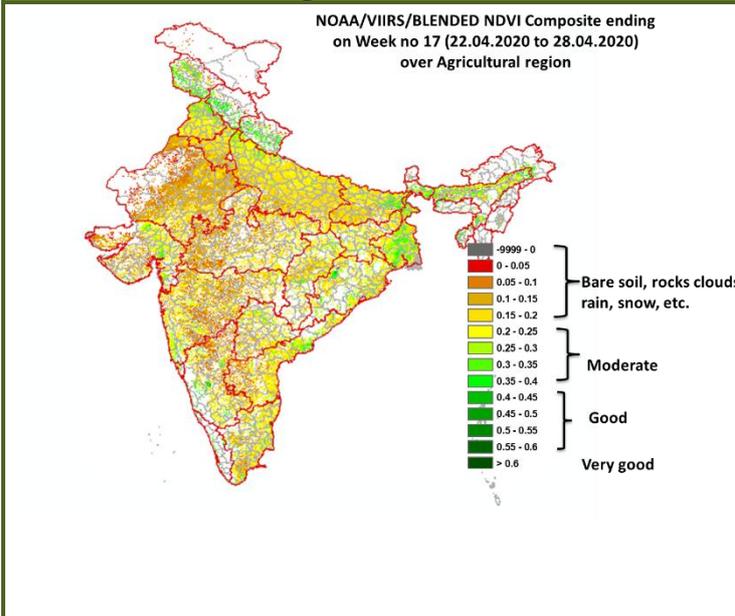


**Mean Cloud Cover (okta) for the week ending on 29.04.2020**



**NOAA/VIIRS/BLENDED NDVI composite for the week number 17 (22.04.2020 to 28.04.2020) over Agricultural regions of India**

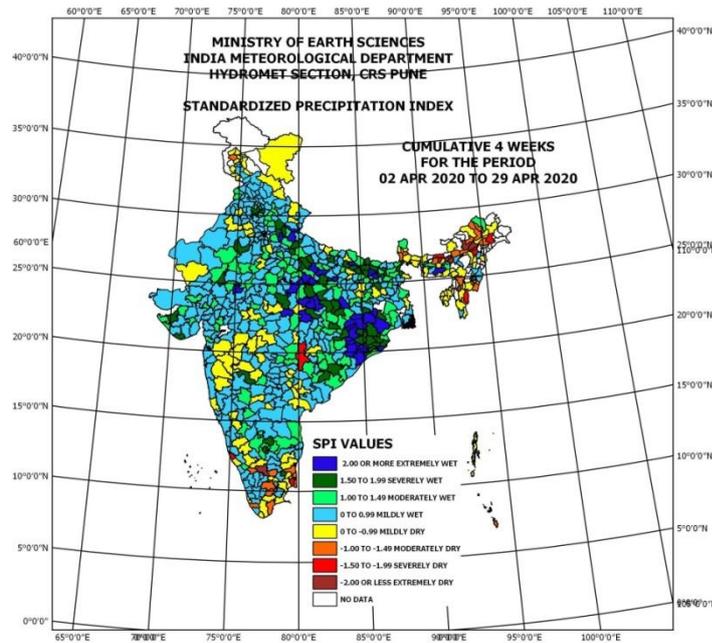
**Difference in NOAA/VIIRS/BLENDED NDVI between week number 17, 2020 and week number 16, 2020**



Agricultural vigour was good at isolated places of Valley region of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Bargarh district of Odisha, Coastal Karnataka, South Interior Karnataka and Kerala. Rest of the country NDVI could not be captured as *rabi* crops have been harvested and *zaid* crops are under sowing.

Moderate difference in agricultural vigour was observed over many places of Valley region of Jammu & Kashmir & North eastern states and at few /isolated over rest of the country.

## Standardised Precipitation Index Cumulative 4 weeks for the period 02<sup>nd</sup> April to 29<sup>th</sup> April 2020



- Extremely/Severely wet conditions exist in Begusarai, Darbhanga, Gopalganj, Jamui, Khagaria, Madhepura, Muzaffarpur, Samastipur, Saran, Sitamarhi, Siwan, Vaishali districts of Bihar; Jamnagar, Gir Somnath districts of Gujarat; Ambala district of Haryana; Bangalore Urban, Chickballapur districts of Karnataka; Neemuch, Chhatarpur, Dindori, Katni, Mandla, Narsinghpur, Sagar, Satna, Shahdol, Sidhi, Umari districts of West Madhya Pradesh; Osmanabad district of Maharashtra; West Khasi Hills districts of Meghalaya; Angul, Bargarh, Boudhgarh, Cuttack, Deogarh, Dhenkanal, Ganjam, Jagatsinghpur, Jajpur, Jharsuguda, Kendrapara, Keonjhar, Khurda, Koraput, Malkangiri, Mayurbhanj, Nayagarh, Kandhamal, Sambalpur, Sonapur, Sundargarh districts of Orissa; Patiala districts of Punjab; Sikar, Rajsamand districts of Rajasthan; Perambalur districts of Tamilnadu; Dadara & Nagar Haveli districts of Union Territory; Allahabad, Banda, Basti, Deoria, Farrukhabad, Kanpur City, Lucknow, Pratapgarh, Rae Bareilly, Unnao, Varanasi, Sahuji Maharaj Nagar, Sant Ravidas Nagar, Bareilly, Bijnor, Jyotiba Phule Nagar, Moradabad, Shahjahanpur, Sambhal districts of Uttar Pradesh; North Dinajpur district of West Bengal; East Singbhum, West Singbhum, Simdega, Seraikela-Khar, Khunti districts of Jharkhand; Udhampur district of Uttarakhand; Janjgir, Koriya, Surguja, Balrampur, Surajpur districts of Chhatisgarh.
- Extremely/Severely dry conditions exist in Papumpara districts of Arunachal Pradesh Darrang, Lakhimpur, Jorhat, Nalbari, Morigaon, Tinsukia, Baksa districts of Assam Kasargod districts of Kerala Gadchiroli districts of Maharashtra Champhai, Kolasib districts of Mizoram Erode, Tiruvarur districts of Tamilnadu.
- Moderately wet to moderately dry conditions were experienced in remaining districts in the country.

## Weather Forecast for next 5 days valid upto 0830 hours of 06<sup>th</sup> May, 2020

- ◆ Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table-below.
- ◆ Maximum Temperature is the range of 41-43°C likely to prevail over Rayalseema, Telengana and North Interior Karnataka during next 2-3 days.
- ◆ No significant change in maximum temperatures likely over major parts of the country during next 2- 3 days.

### 5 Day Rainfall Forecast (MID-DAY)

01<sup>st</sup> May 2020

Met-Sub-Division	01-May Today	02May Sat	03May Sun	04May Mon	05May Tue
1. Andaman & Nicobar Islands	FWS	WS	WS	WS	WS
2. Arunachal Pradesh	SCT	SCT	SCT	FWS	FWS
3. Assam & Meghalaya	SCT	SCT	FWS	FWS	FWS
4. N. M. M. & T.	FWS	FWS	FWS	FWS	FWS
5. S.H. West Bengal & Sikkim	WS	FWS	FWS	WS	WS
6. Gangetic West Bengal	FWS	FWS	SCT	FWS	FWS
7. Odisha	SCT	ISOL	ISOL	SCT	FWS
8. Jharkhand	ISOL	SCT	SCT	FWS	FWS
9. Bihar	FWS	ISOL	ISOL	SCT	FWS
10. East Uttar Pradesh	ISOL	ISOL	SCT	SCT	FWS
11. West Uttar Pradesh	ISOL	ISOL	SCT	FWS	FWS
12. Uttarakhand	ISOL	SCT	FWS	FWS	FWS
13. Haryana, Chd & Delhi	ISOL	ISOL	SCT	FWS	FWS
14. Punjab	ISOL	ISOL	SCT	FWS	FWS
15. Himachal Pradesh	ISOL	SCT	SCT	FWS	FWS
16. J & K and Ladakh	SCT	SCT	FWS	FWS	WS
17. West Rajsthan	ISOL	ISOL	ISOL	SCT	ISOL
18. East Rajasthan	ISOL	ISOL	ISOL	SCT	SCT
19. West Madhya Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
20. East Madhya Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
21. Gujarat Region	DRY	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	ISOL	ISOL	ISOL	DRY	DRY
23. Konkan & Goa	ISOL	ISOL	DRY	DRY	DRY
24. Madhya Maharashtra	ISOL	ISOL	DRY	DRY	DRY
25. Marathawada	ISOL	DRY	DRY	DRY	DRY
26. Vidharbha	ISOL	ISOL	DRY	DRY	DRY
27. Chhattisgarh	ISOL	ISOL	ISOL	ISOL	ISOL
28. Coastal A. P. & Yanam	ISOL	ISOL	ISOL	ISOL	ISOL
29. Telangana	ISOL	ISOL	ISOL	ISOL	ISOL
30. Rayalaseema	ISOL	ISOL	ISOL	ISOL	ISOL
31. T.N.,Puducherry & Karaikal	ISOL	ISOL	ISOL	ISOL	ISOL
32. Coastal Karnataka	SCT	SCT	SCT	SCT	SCT
33. North Interior Karnataka	SCT	SCT	ISOL	ISOL	ISOL
34. South Interior Karnataka	SCT	SCT	ISOL	SCT	SCT
35. Kerala & Mahe	SCT	SCT	SCT	SCT	SCT
36. Lakshadweep	SCT	SCT	FWS	FWS	SCT

#### % Station Reporting Rainfall

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

## Weather Warning during next five days:

- 01 May (Day 1):** ♦ **Thunderstorm accompanied with lightning & squall** (speed 50-60 kmph) very likely at isolated places over Bihar; **with lightning & gusty winds** (speed reaching 40-50 kmph) at isolated places over Odisha; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Uttarkhand, Rajasthan, Vidarbha, West Bengal & Sikkim, Assam & Meghalaya, Madhya Maharashtra, Telangana, South Interior Karnataka, Tamilnadu, Puducherry & Karaikal and Kerala & Mahe and **with lightning** at isolated places over Punjab, Madhya Pradesh, Chhattisgarh, Jharkhand, Marathwada, Saurashtra & Kutch, Konkan & Goa, Rayalseema, Coastal & North Interior Karnataka and Nagaland, Manipur, Mizoram & Tripura.
- ♦ **Duststorm/thunderstorm** accompanied gusty winds (speed reaching 30-40 kmph) very likely at isolated places over Uttar Pradesh **with hail** at isolated placed over East Uttar Pradesh.
  - ♦ **Heavy rainfall** very likely isolated places over Coastal & South Interior Karnataka, Tamilnadu, Puducherry & Karaikal and Kerala & Mahe.
  - ♦ **Squally winds**, speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail over southeast Bay of Bengal. **Sea condition** will be rough to very rough over north Sumatra coast, south Andaman Sea and adjoining southeast Bay of Bengal. The fishermen are advised not to venture into these areas.
- 02 May (Day 2):** ♦ **Thunderstorm accompanied with lightning & squall** (speed exceeding 60 kmph) very likely at isolated places over Nagaland, Manipur, Mizoram & Tripura; **with lightning, hail & gusty winds** (speed reaching 30-40 kmph) at isolated places over Uttarakhand & Odisha; **with lightning & gusty winds**(speed reaching 30-40 kmph) at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, East Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, West Bengal & Sikkim, Assam & Meghalaya, South Interior Karnataka and Kerala & Mahe and **with lightning** at isolated places over Punjab, Haryana, Chandigarh & Delhi, Bihar, Madhya Maharashtra, Saurashtra & Kutch, Konkan & Goa, Coastal , Telangana and Coastal & North Interior Karnataka.
- ♦ **Duststorm/thunderstorm** accompanied with gusty winds (speed reaching 30-40 kmph) very likely at isolated places over Uttar Pradesh and Rajasthan.
  - ♦ **Heavy rainfall** very likely at isolated places over Nicobar Islands.
  - ♦ **Squally winds**, speed reaching 40-50 kmph gusting to 65 kmph is likely to prevail over southeast Bay of Bengal and south Andaman Sea. **Sea condition** will be rough to very rough over southeast Bay of Bengal and south Andaman Sea. The fishermen are advised not to venture into these areas.
- 03 May (Day 3):** ♦ **Thunderstorm accompanied with lightning, hail & gusty winds** (speed reaching 30-40 kmph) likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi and Madhya Pradesh; **with lightning & gusty winds** (speed reaching 40-50 kmph) at isolated places over Andaman & Nicobar Islands; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Chhattisgarh, East Uttar Pradesh, Jharkhand, West Bengal and Sikkim, Assam & Meghalaya, and Nagaland, Manipur, Mizoram & Tripura and **with lightning** at isolated places over Bihar, Odisha, Coastal Andhra Pradesh & Yanam, Coastal & South Interior Karnataka, Lakshadweep and Kerala & Mahe.
- ♦ **Duststorm/thunderstorm** accompanied **with hail** & gusty winds (speed reaching 30-40 kmph) likely at isolated places over West Uttar Pradesh and Rajasthan.
  - ♦ **Heavy rainfall** likely at isolated places over Nicobar Islands.
  - ♦ **Squally winds**, speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail over Andaman Sea and adjoining southeast Bay of Bengal. **Sea condition** will be rough to very rough over Andaman Sea and adjoining southeast Bay of Bengal. The fishermen are advised not to venture into these areas.
- 04 May (Day 4):** ♦ **Thunderstorm accompanied with lightning & squall** (speed reaching 50-60 kmph) very likely at isolated places over Bihar, Jharkhand and Gangetic West Bengal; **with lightning, hail &**

**gusty winds** (speed reaching 30-40 kmph) likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi and Uttar Pradesh; **with lightning & gusty winds** (speed reaching 40-50 kmph) at isolated places over Sub Himalayan West Bengal & Sikkim, West Madhya Pradesh and Andaman & Nicobar Islands; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over East Madhya Pradesh, Chhattisgarh, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Telengana, Rayalseema and Tamilnadu, Puducherry & Karaikal and **with lightning** at isolated places over Coastal Andhra Pradesh & Yanam, Coastal & South Interior Karnataka, Lakshadweep and Kerala & Mahe.

- ♦ **Duststorm/thunderstorm** accompanied **with hail** & gusty winds (speed reaching 30-40 kmph) likely at isolated places over Rajasthan.
- ♦ **Heavy to very heavy rainfall** likely at isolated places over Andaman & Nicobar Islands and **heavy rainfall** at isolated places over Jharkhand, Gangetic West Bengal, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ♦ **Squally winds**, speed reaching 45-55 kmph gusting to 65 kmph is likely to prevail over south Andaman Sea and adjoining southeast Bay of Bengal. **Sea condition** will be rough to very rough over south Andaman Sea and adjoining southeast Bay of Bengal. The fishermen are advised not to venture into these areas.

**05 May (Day 5): ♦ Thunderstorm accompanied with lightning, hail & gusty winds** (speed reaching 30-40 kmph) likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Himachal Pradesh, Uttarakhand, Haryana, Chandigarh & Delhi, Uttar Pradesh and Odisha; **with lightning & gusty winds** (speed reaching 40-50 kmph) at isolated places over Jharkhand, West Bengal & Sikkim and Andaman & Nicobar Islands; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Rajasthan, Madhya Pradesh, Chhattisgarh, Bihar, Telengana, Rayalseema, Tamilnadu, Puducherry & Karaikal, Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura and **with lightning** at isolated places over Punjab, Coastal Andhra Pradesh & Yanam, Coastal & South Interior Karnataka and Kerala & Mahe.

- ♦ **Heavy to very heavy rainfall** likely at isolated places over Andaman & Nicobar Islands and **heavy rainfall** at isolated places over Jharkhand, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ♦ **Squally winds**, speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail over south Andaman Sea and adjoining southeast Bay of Bengal. **Sea condition** will be rough to very rough over south Andaman Sea and adjoining southeast Bay of Bengal. The fishermen are advised not to venture into these areas.

#### **Weather Outlook for subsequent 2 days from 06<sup>th</sup> May to 08<sup>th</sup> May, 2020**

- Fairly widespread to widespread rain/thundershowers likely over Northeast & adjoining Eastern India, Western Himalayan Region & plains of Northwest India with isolated heavy rainfall activity over these regions.
- Scattered to fairly widespread rain/thundershowers activity likely over Kerala and Lakshadweep Islands. Isolated to scattered rain/thundershowers likely over remaining parts of Peninsular India and Bay Islands.
- Dry weather likely to prevail over the rest of the country.

➤ **Advisory for Desert Locust:**

In Arid Western Plain Zone of Rajasthan, where there is attack of desert locust in Bikaner and Jaisalmer districts, apply Chloropyriphos (50%) @ 1 ml/litre or (20%) @ 2.5 ml/litre of water in standing crops.

- **As Thunderstorm accompanied with lightning & squall** (speed 50-60 kmph) very likely at isolated places over Bihar on 1<sup>st</sup> and 4<sup>th</sup> and over Jharkhand and Gangetic West Bengal on 4<sup>th</sup> with (speed exceeding 60 kmph) very likely at isolated places over Nagaland, Manipur, Mizoram & Tripura on 2<sup>nd</sup>; **with lightning, hail & gusty winds** (speed reaching 30-40 kmph) likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Himachal Pradesh, Uttarakhand, Haryana, Chandigarh & Delhi from 3<sup>rd</sup> to 5<sup>th</sup>; over Madhya Pradesh on 3<sup>rd</sup>, over Punjab on 3<sup>rd</sup> & 4<sup>th</sup>; over Uttar Pradesh on 4<sup>th</sup> & 5<sup>th</sup> and over Odisha on 5<sup>th</sup>; with **Duststorm/thunderstorm** accompanied gusty winds (speed reaching 30-40 kmph) **with hail** very likely at isolated places over East Uttar Pradesh on 1<sup>st</sup>, over West Uttar Pradesh on 3<sup>rd</sup> and over Rajasthan on 3<sup>rd</sup> & 4<sup>th</sup>; **with Duststorm/thunderstorm** accompanied with gusty winds (speed reaching 30-40 kmph) very likely at isolated places over Uttar Pradesh on 1<sup>st</sup> & 2<sup>nd</sup> and Rajasthan on 2<sup>nd</sup>, **with lightning & gusty winds** (speed reaching 40-50 kmph) at isolated places over Odisha on 1<sup>st</sup>, over Andaman & Nicobar Islands on 3<sup>rd</sup> to 5<sup>th</sup>, over Sub Himalayan West Bengal & Sikkim, West Madhya Pradesh on 4<sup>th</sup> and over Jharkhand and West Bengal & Sikkim on 5<sup>th</sup>; with **lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Uttarakhand, Rajasthan and Madhya Maharashtra on 1<sup>st</sup>, over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Vidarbha, South Interior Karnataka and Kerala & Mahe on 1<sup>st</sup> & 2<sup>nd</sup>, over West Bengal & Sikkim from 1<sup>st</sup> to 3<sup>rd</sup>, over Assam & Meghalaya from 1<sup>st</sup> to 5<sup>th</sup>, over Telangana and Tamilnadu, Puducherry & Karaikal on 1<sup>st</sup>, 4<sup>th</sup> & 5<sup>th</sup>, over Jharkhand on 2<sup>nd</sup> & 3<sup>rd</sup>, over Chhattisgarh from 2<sup>nd</sup> to 5<sup>th</sup>, over East Madhya Pradesh on 2<sup>nd</sup> & 4<sup>th</sup>, over East Uttar Pradesh on 3<sup>rd</sup>, over Nagaland, Manipur, Mizoram & Tripura from 3<sup>rd</sup> to 5<sup>th</sup>, over Odisha on 4<sup>th</sup>, over Arunachal Pradesh and Rayalseema on 4<sup>th</sup> & 5<sup>th</sup> and over Rajasthan, Madhya Pradesh and Bihar on 5<sup>th</sup>; with **lightning** at isolated places over Madhya Pradesh, Chhattisgarh, Jharkhand, Marathwada, Rayalaseema and Nagaland, Manipur, Mizoram & Tripura on 1<sup>st</sup>, over Saurashtra & Kutch, Konkan & Goa and North Interior Karnataka on 1<sup>st</sup> & 2<sup>nd</sup>, over Punjab on 1<sup>st</sup>, 2<sup>nd</sup> & 5<sup>th</sup>, over Coastal Karnataka from 1<sup>st</sup> to 5<sup>th</sup>, over Haryana, Chandigarh & Delhi, Bihar, Madhya Maharashtra and Telangana on 2<sup>nd</sup>, over Coastal Andhra Pradesh from 2<sup>nd</sup> to 5<sup>th</sup>, over Bihar and Odisha on 3<sup>rd</sup>, over Lakshadweep on 3<sup>rd</sup> & 4<sup>th</sup> and over South Interior Karnataka and Kerala & Mahe from 3<sup>rd</sup> to 5<sup>th</sup>, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Provide hailnet for orchard crops to protect from mechanical damage. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm.
- **As rain/thundershowers likely at most places** over Sub-Himalayan West Bengal & Sikkim on 1<sup>st</sup>, 4<sup>th</sup> & 5<sup>th</sup>, over Andaman & Nicobar Islands from 2<sup>nd</sup> to 5<sup>th</sup> and over Jammu Kashmir & Ladakh on 5<sup>th</sup>; **at many places** over Andaman & Nicobar Islands on 1<sup>st</sup>, over Nagaland, Manipur, Mizora, & Tripura (NMMT) from 1<sup>st</sup> to 5<sup>th</sup>, over Gangetic West Bengal on 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup> & 5<sup>th</sup>, over Bihar on 1<sup>st</sup> & 5<sup>th</sup>, over Uttarakhand and Assam & Meghalaya on 3<sup>rd</sup> to 5<sup>th</sup>, over Lakshadweep and Jammu Kashmir & Ladakh on 3<sup>rd</sup> and 4<sup>th</sup>, over Arunachal Pradesh, Jharkhand, West Uttar Pradesh, Punjab, Haryana Chandigarh & Delhi and Himachal Pradesh on 4<sup>th</sup> & 5<sup>th</sup> and over Odisha and East Uttar Pradesh on 5<sup>th</sup>; along with **Heavy rainfall** very likely isolated places over Coastal & South Interior Karnataka, Tamilnadu, Puducherry & Karaikal and Kerala & Mahe on 1<sup>st</sup>, over Nicobar Islands on 2<sup>nd</sup> & 3<sup>rd</sup>, over Gangetic West Bengal on 4<sup>th</sup> and over Jharkhand, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 4<sup>th</sup> & 5<sup>th</sup> with **Heavy to very heavy** rainfall likely at isolated places over Andaman & Nicobar Islands on 4<sup>th</sup> & 5<sup>th</sup>, arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables. Avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.

**Undertake the following operations:**

- sowing of groundnut in Rayalaseema.
- sowing of ragi, corn, soybean, sesame, green gram, black gram crops in South Interior Karnataka.
- transplanting of early *Ahu* rice and sowing of *Bao* rice in North Bank Plain Zone of Assam.
- sowing of ginger and elephant foot yam in Jharkhand.
- sowing of maize and transplanting of chilli on ridges or raised beds in Valley Temperate Zone of Jammu & Kashmir.
- sowing of cabbage and cauliflower seeds in nursery beds and land preparation for sowing of potato in High Hill Temperate Dry Zone of Himachal Pradesh.
- sowing of Bt cotton or *desi* cotton in Western Zone and Central Plain Zone of Punjab.
- sowing of green gram, maize and lobia in East Uttar Pradesh.

## Detailed Agromet Advisories

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

**Realised Rainfall:** Significant rain fall occurred in East Godavari, Krishna, Nellore, Srikakulam, Visakhapatnam, Vizainagaram, Ananthapur, Chittoor and Cuddapah districts of Andhra Pradesh; Warangal Rural & Warangal Urban districts of Telangana; in all the districts of Kerala except in Alappuzha, Idukki, Kasaragod, Kollam and Mahe; in Chennai, Coimbatore, Dharmapuri, Kanchipuram, Kanyakumari, Krishnagiri, Perambalur, Puducherry, Salem, Sivaganga, Tirupur and Tiruvallur districts of Tamilnadu; in Dakshina Kannada district of Coastal Karnataka and in all districts of South Interior Karnataka except Ballari, Chitradurga, Davangere and Shivamogga districts.

- **Advisories: As Thunderstorm accompanied with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over South Interior Karnataka and Kerala & Mahe on 1<sup>st</sup> & 2<sup>nd</sup>, over Telangana and Tamilnadu, Puducherry & Karaikal on 1<sup>st</sup>, 4<sup>th</sup> & 5<sup>th</sup> and over Rayalseema on 4<sup>th</sup> & 5<sup>th</sup>; with **lightning** at isolated places over Rayalaseema on 1<sup>st</sup>, over North Interior Karnataka on 1<sup>st</sup> & 2<sup>nd</sup>, over over Coastal Karnataka from 1<sup>st</sup> to 5<sup>th</sup>, over Telangana on 2<sup>nd</sup>, over Coastal Andhra Pradesh from 2<sup>nd</sup> to 5<sup>th</sup>, over Lakshadweep on 3<sup>rd</sup> & 4<sup>th</sup> and over South Interior Karnataka and Kerala & Mahe from 3<sup>rd</sup> to 5<sup>th</sup>, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Provide hailnet for orchard crops to protect from mechanical damage. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at many places over Lakshadweep on 3<sup>rd</sup> and 4<sup>th</sup> along with **Heavy rainfall** very likely isolated places over Coastal & South Interior Karnataka, Tamilnadu, Puducherry & Karaikal and Kerala & Mahe on 1<sup>st</sup>, arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables. Avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.

#### Kerala

- In Southern Zone, weather is congenial for root knot nematode in vegetables, stunted plant growth and yellowing of leaves; apply neem cake @500 g/plant in basin one week prior to planting.
- In High Altitude Zone, weather is congenial for blast and sheath rot diseases in rice; apply 2.5 kg Pseudomonas mixed with 50 kg cowdung for one hectare and avoid excess usage of nitrogen fertilizers.
- In Central Zone, prepare land for ginger and turmeric. To avoid foot rot in ginger, soak the suckers in 0.3% Mancozeb/Pseudomonas solution for 30 minutes. Addition of pseudomonas culture to the soil at the time of planting of vegetables will help to reduce fungal diseases.

#### Andhra Pradesh

- In North Coastal Andhra Pradesh, undertake harvesting rice and maize.
- In Scarce Rainfall Zone, undertake harvesting of rice and maize.
- In Rayalaseem, undertake sowing of groundnut with assured irrigation by treating seeds with Imidachloprid 600 F.S @ 2 ml. + 4 ml water per kg of seed for control of sucking pest.
- In Krishna Godavari Zone, continue harvesting of maize, bajra, jowar and pulses. Clean the harvested produce for removing crop and farm waste; avoid under drying/ over drying of the produce.

#### Telangana

- In Telangana, prevailing weather is conducive for incidence of hoppers, mealy bugs and scale insects in mango; to control, spray Dimethoate @ 2 ml per liter of water. To avoid fruit drop in mango, spray 1% urea (10 g urea per liter of water) or Planofix @ 1 ml per 4.5 liters of water.
- In Southern Telangana, prevailing weather is congenial for incidence of shoot and fruit borer in brinjal; to control, install pheromone traps to monitor the fruit and shoot borer; clip the infested shoots and destroy them; spray Profenophos @ 2 ml or Emamectin Benzoate @ 0.4 g per litre of water. If incidence of

Spodoptera is noticed in vegetable crops, spray Novaluron @ 1.25 ml per litre of water.

### Tamil Nadu

- In Western Zone, by utilizing anticipated rainfall, undertake sowing of irrigated sorghum and Cumbu in ploughed area followed by irrigation based on soil moisture. Also undertake land preparation of turmeric crop plantation.
- In Southern Zone, weather is congenial for root knot nematodes and reniform nematodes in vegetables; apply neem cake @400kg/ha and intercrop with marigold and also apply *Purpureocillium lilacinum* @ 2.5kg/ha mixed with 100 kg FYM.
- In North Western Zone, to control root rot disease in cotton, drench the soil with Carbendazim @ 1 g per litre or Trifloxystrobin + Tebuconazole @ 0.75 g per litre at the base of the diseased plant as well as around the healthy plant.
- In Karaikal, weather is congenial for stem borer in rice; spray Cartap Hydrochloride 50 % SP @ 1000g/ha or Phosphamidon 40% SL @ 1250 ml/ha.

### Karnataka

- In North Interior Karnataka, apply irrigation to sugarcane crop in alternate rows or by drip irrigation. Install four pheromone traps/acre in mango orchard for fruit fly monitoring. To manage branch cutting and fruit borer in brinjal, remove the infested branches along with the larva and burn; subsequently, spray the crop with Carbaryl @ 4 g or Melathion @ 2 ml or Quinolphos @ 2 ml dissolved in one liter of water; repeat the spray at 15 days interval.
- In South Interior Karnataka, continue sowing of ragi, corn, soybean, sesame, green gram, black gram crops. Due to high day temperature between 35 – 36° C, dropping of fruits in mango trees is noticed; to manage, provide adequate quantity of irrigation water to mango trees.
- In Coastal Karnataka, continue harvesting of ripened cashew fruits. For control of mites in coconut, spray water soluble Sulphur @ 5gm/litre of water or spray a mixture of neem oil (20 ml) + garlic solution (20 gm) + soap powder solution ( 5 gm) / litre of water to the coconut flower and fruit bunch. Before flowering and after fruit setting in mango orchards, spray Imidachloprid @ 0.5ml /liter of water.

### Animal Husbandry

- In Karnataka, maintain the ambient room temperature in the poultry house. Add electrolytes (KCl, NaCl and NaCO<sub>3</sub>) in feed and water.

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

**Realised Rainfall:** Rainfall occurred in all districts of Meghalaya and Tripura; in all districts of Arunachal Pradesh except Lower Subansari; in all districts of Assam except Baksa, Bongaigaon, Darrang, Morigaon, Sonitpur, Sibsagar and Udalgiri; in Aizwal, Lawngtlai, Lunglei and Saiha districts of Mizoram; in Bishnupur, Churachandpur, Imphal East, Senapati and Ukhrul districts of Manipur and in Dimapur, Kohima, Phek, Tuensang and Wokha districts of Nagaland. Weather remained dry/mainly dry over rest of the region.

- **Advisories: As Thunderstorm accompanied with lightning & squall** with (speed exceeding 60 kmph) very likely at isolated places over Nagaland, Manipur, Mizoram & Tripura on 2<sup>nd</sup>; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Assam & Meghalaya from 1<sup>st</sup> to 5<sup>th</sup>, over Nagaland, Manipur, Mizoram & Tripura from 3<sup>rd</sup> to 5<sup>th</sup> and over Arunachal Pradesh on 4<sup>th</sup> & 5<sup>th</sup>; with **lightning** at isolated places over Nagaland, Manipur, Mizoram & Tripura on 1<sup>st</sup>, provide mechanical support to banana, young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at **many places** over Nagaland, Manipur, Mizora, & Tripura (NMMT) from 1<sup>st</sup> to 5<sup>th</sup>, over Assam & Meghalaya on 3<sup>rd</sup> to 5<sup>th</sup>, over Arunachal Pradesh on 4<sup>th</sup> & 5<sup>th</sup>; along with **Heavy rainfall** very likely isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 4<sup>th</sup> & 5<sup>th</sup>, arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables. Avoid irrigation, intercultural operation and

application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.

### **Arunachal Pradesh**

- In Arunachal Pradesh, continue sowing of maize and rice; nursery sowing of vegetables and planting of ginger. Direct seed sowing of *Jhum* rice may be done immediately. Ensure proper drainage in the field of standing crops. Spray Alphamethrin 10 % EC @ 2ml or neem oil 5 ml/litre water (0.5%) against Fall-Armyworm (FAW) in maize crop or destroy the infected plant or plant parts by deep burying in the soil.

### **Assam & Meghalaya**

- In Hill Zone of Assam, continue land preparation/sowing of summer vegetables, green gram and black gram and planting of ginger and banana. Continue land preparation / transplanting of *Ahu* rice. To control the fall army worm attack in maize crop at vegetative/ early flowering stage, spray Emamectin Benzoate 5 SG @ 0.4g/litre or Spinosad 15 SC @ 0.3 ml/litre or Chlorantraniliprole 18.5 SC @ 0.4 ml/ litre.
- In Upper Brahmaputra Valley Zone, undertake planting of the pre-germinated setts of sugarcane in the main field. Complete the planting of rhizomes of ginger by the end of this month. Spray Chlorpyrifos 20EC or Quinalphos 25EC (@ 1 ml per litre of water against the infestation of stem borers, hoppers etc. in *Ahu* rice. Spray Malathion 50EC @ 1 to 1.5 ml per litre of water against caterpillar and aphid infestations in cowpea. Provide mechanical support to banana, citrus, papaya, etc. plantations to protect them from strong winds.
- In Lower Brahmaputra Valley Zone, complete sowing of jute and planting of banana. Continue transplanting of *Ahu* rice. Undertake gap filling after 7 to 10 days after transplanting.
- In Barak Valley Zone, due to favorable weather, there is chance of attack of caseworm in the *Boro* rice field; drain out the excess water from the infested rice plot to control the initial infestation; if 1-2 cases/hill is observed, spray Quinalphos 25EC @ 1 ml/litre. Prevailing weather conditions favours the egg laying capacity of yellow stem borer (YSB); spray Chlorpyrifos 20EC @ 1 ml per liter of water during fair weather.
- In Central Brahmaputra Valley Zone, continue sowing of *Olitorius* jute and summer vegetables like lady's finger, bottleguard, pumpkin, ridgeguard, cucumber, etc. Complete planting of ginger and turmeric. Apply 5% Malathion dust @ 2-3 kg per bigha of land against attack of rice bug in milky/ dough stage of *Boro* rice.
- In North Bank Plain Zone, complete transplanting of early *Ahu* rice and sowing of *Bao* rice. Continue sowing of maize. Due to increase in temperature and relative humidity, the weather condition is favourable for the attack of blast disease in *Ahu* rice. Spray Mencozeb (Dithene M-45) @ 2g/litre or Carbendazime (Dirosol) @ 1g/litre of water on dry weather for controlling the blast disease.
- In Meghalaya, continue transplanting of 1 month old seedlings of cucurbits, brinjal, chilli, tomato and capsicum; irrigate immediately. Continue sowing of maize. Provide shade and protect the newly grafted plants of *Khasi* Mandarin.

### **Manipur, Mizoram, Tripura and Nagaland**

- In Manipur, continue sowing of soybean, *kharif* maize and groundnut and planting of ginger. Undertake nursery plot preparation for raising *kharif* rice nursery. Maintain 5-8 cm water level at Pre-*kharif* rice field. Drain out excess water if accumulated due to rains.
- In Mizoram, make channels around the field of maize, black gram and vegetable crops to drain out excess water. Undertake harvesting of matured cobs of maize. Undertake sowing of *Jhum* rice. Intercropping of leguminous crops (cowpea /soybean) at 2-3 rows across the slope in *Jhum* field at desirable interval with rice is advocated. Spray Dithane M 45 @ 1 gm/litre against sheath blight attack in maize crop.
- In Tripura, undertake sowing seeds for direct seeded *Aus* rice and sowing of maize. Maintain good drainage and improve channels to drain out rain water in the field of *Boro* rice.
- In Nagaland, continue sowing of *Jhum* rice and planting of ginger. If in maize crop elongated papery windows of all sizes are seen spread all over the leaves in a few adjacent plants, the crop might have been infested with FAW; spray 5% neem seed kernel emulsion (NSKE) or Azadirachtin 1500 ppm @ 5ml/litre of water during clear weather.

### **Animal Husbandry**

- In Northeastern region, before the onset of monsoon, immunize the farm cattle against FMD (Foot & Mouth Disease), HS (Hemorrhagic Septicemia) and BQ (Black Quarter) diseases after consultation with local

veterinary doctor. Vaccinate pig against Swine Fever.

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

- **Realised Rainfall:** Significant rainfall occurred in Araria, Begusari, East Champaran, Gopalganj, Jamui, Khagaria, Kishanganj, Lakhisarai, Monghyr, Muzaffarpur, Nalanda, Patna, Purnea, Samastipur, Saran, Siwan, Supaul and Vaishali districts of Bihar; in all districts of Jharkhand except Chatra, Deogarh, Garhwa, Giridih, Koderma, Lohardagga, Palamu and Sahebganj; in all districts of Odisha; in North & Middle Andaman and Nicobar districts of Andaman & Nicobar Islands; in all districts of Gangetic West Bengal Except Kolkata, Nadia and south 24 Paraganas and in all districts of Sub-Himalayan West Bengal & Sikkim except East Sikkim, South Dinajpur and West Sikkim. Weather remained dry/mainly dry over the rest of the region.
- **Advisories: As Thunderstorm accompanied with lightning & squall** (speed 50-60 kmph) very likely at isolated places over Bihar on 1<sup>st</sup> and 4<sup>th</sup> and over Jharkhand and Gangetic West Bengal on 4<sup>th</sup>; **with lightning, hail & gusty winds** (speed reaching 30-40 kmph) likely at isolated places over Odisha on 5<sup>th</sup>; **with lightning & gusty winds** (speed reaching 40-50 kmph) at isolated places over Odisha on 1<sup>st</sup>, over Andaman & Nicobar Islands on 3<sup>rd</sup> to 5<sup>th</sup>, over Sub Himalayan West Bengal & Sikkim on 4<sup>th</sup> and over Jharkhand and West Bengal & Sikkim on 5<sup>th</sup>; with **lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over West Bengal & Sikkim from 1<sup>st</sup> to 3<sup>rd</sup>, over Jharkhand on 2<sup>nd</sup> & 3<sup>rd</sup>, over Odisha on 4<sup>th</sup> and over Bihar on 5<sup>th</sup>; with **lightning** at isolated places over Jharkhand on 1<sup>st</sup> and over Bihar and Odisha on 3<sup>rd</sup>, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Provide hailnet for orchard crops to protect from mechanical damage. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at **most places** over Sub-Himalayan West Bengal & Sikkim on 1<sup>st</sup>, 4<sup>th</sup> & 5<sup>th</sup>, over Andaman & Nicobar Islands from 2<sup>nd</sup> to 5<sup>th</sup>; **at many places** over Andaman & Nicobar Islands on 1<sup>st</sup>, over Gangetic West Bengal on 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup> & 5<sup>th</sup>, over Bihar on 1<sup>st</sup> & 5<sup>th</sup>, over Jharkhand on 4<sup>th</sup> & 5<sup>th</sup> and over Odisha on 5<sup>th</sup>; along with **Heavy rainfall** very likely isolated places over Nicobar Islands on 2<sup>nd</sup> & 3<sup>rd</sup>, over Gangetic West Bengal on 4<sup>th</sup> and over Jharkhand, on 4<sup>th</sup> & 5<sup>th</sup> with **Heavy to very heavy** rainfall likely at isolated places over Andaman & Nicobar Islands on 4<sup>th</sup> & 5<sup>th</sup>, arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables. Avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.

### Odisha

- Undertake summer ploughing and sowing of Jute utilizing recent rains. Undertake sowing of baby corn and yam in the months of May-June. Continue planting of ginger rhizomes having 2-3 eyes. Transplanted rice crop is at milking to maturity stage; avoid stagnation of water in the field; harvest matured crop during clear weather and store it in a safer place. Carry out harvesting of groundnut crop during clear weather, when plant turns yellow and leaves start drying; in case no rain, apply light irrigation 2-3 days before harvesting; after harvest, dry the pods to reduce the moisture to 8-9 % before storing. Continue harvesting of onion crop during clear weather when the leaves turn yellow. In case of yellowing of leaves in green gram, spray Thiamethoxam @ 1g in 4 litres of water.

### Bihar

- Prepare field for summer rice. Continue sowing of summer green gram. Postpone harvesting and threshing of wheat crop if there is a possibility of rainfall. Postpone irrigation to maize crop if some amount of rainfall is received; drain out excess water from the field. If outbreak of mealy bug in mango orchards is noticed, spray Dimethoate 30EC @ 1.5 ml per liter of water during clear sky. To control shoot and fruit borer in brinjal crop, collect infested fruits and shoots and bury them; if pest population is high, spray Spinosad 48 EC @ 1 ml per 4 litres of water when sky is clear.

### Jharkhand

- Continue sowing of ginger and elephant foot yam. Provide support to cucurbitaceous vegetables for

vigorous growth and also for preventing leaves from coming in contact with soil. Keep 5 cm water level in summer paddy field during PI to flowering stage; to control blast disease, spray Carbendazim 50 WP @ 1 g/litre of water; to control gundhi bug, apply Quinalphos 1.5% dust @ 10 kg/acre on a clear day. To control shoot and fruit borer in brinjal and tomato crops, collect and bury the infested fruits and shoots; spray NSKE 5% 2ml/litre of water. or spray Imidachloprid 1ml or Quinolphos 25 EC @ 1ml per litre of water.

### West Bengal

- In Sub-Himalayan West Bengal, carry out intercultural operations like weeding and earthing up in maize crop; drain out excess water from the field. Continue land preparation for turmeric cultivation. Maintain proper drainage channels in ginger field and avoid waterlogging. Drain out excess water from rice and jute fields. To control gundhi bug in *Boro* paddy, spray neem seed kernel extract solution @ 50 ml/litre of water twice-first during flowering and 2<sup>nd</sup>, a week later; if population increases, spray Carbaryl 50 WP @ 2 g/ litre of water.
- In Gangetic West Bengal, complete harvesting of early and late transplanted paddy at the earliest and transfer it to safe place immediately. Carry out plucking of matured pods of green gram in the morning hours. Carry out harvesting of mature fruits of pointed gourd, bitter gourd, okra, cucumber, etc.

### Andaman & Nicobar Islands

- Harvest all the matured vegetables and take the produce to the local market. Clean the crown portion of coconut and keep the garden clean before onset of monsoon.

### Animal Husbandry

- Make arrangement of sufficient clean drinking water for the livestock at different locations; do not allow animals to graze in open field during the peak temperature period; feed the animals with green forages on regular basis. Feed the poultry birds with well-balanced feed fortified with minerals, vitamins and amino acid supplements to keep them nourished and healthy.

### Fishery

- In Andaman & Nicobar Islands, prepare the nursery pond by cleaning wild fishes for the next fish breeding season

## WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

**Realised Rainfall:** Weather remained dry/mainly dry over the region.

- **Advisories:** As **Thunderstorm accompanied with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Madhya Maharashtra on 1<sup>st</sup> and over Vidarbha on 1<sup>st</sup> & 2<sup>nd</sup>; with **lightning** at isolated places over Marathwada on 1<sup>st</sup>, over Saurashtra & Kutch and Konkan & Goa on 1<sup>st</sup> & 2<sup>nd</sup>, over Madhya Maharashtra on 2<sup>nd</sup>, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm.

### Maharashtra

- In Konkan, continue harvesting of matured rice, groundnut, pineapple and mango. Keep the harvested produce in safer place. To control powdery mildew in mangoes, spray Thiophenate methyl + Carbendazim 1% @ 1 g per 1 liter water during clear weather. Continue harvesting of matured rice, groundnut, cashew and mango. Keep the harvested produce in safer place. Farmers are advised to vaccinate poultry birds for ranikhet disease.
- In Madhya Maharashtra, undertake harvesting of matured garlic and onion. To control leaf spot (tikka) in groundnut, spray Bavistin @ 10 g per litre of water during clear weather.
- In Marathwada, to control ambia bahar fruit dropping, spray Gibberellic acid @ 1.5 g + Urea @ 1 Kg per 100 liters of water in ambia bahar citrus orchard during clear weather. To control stem borer in sugarcane, spray Chlorantraniliprole 18 % @ 3 ml or Chlorpyrifos 20% EC @ 30 ml per 10 liters of water during clear weather.
- In Vidarbha, for better productivity of sesame, undertake foliar spray 2% DAP (200 g DAP +10 liters water) at flowering to capsule development stage of the crop. To control fruit borer in tomato, spray Quinalphos 25 EC @ 20 ml per 10 liters of water. Apply irrigation to groundnut, sesame, green gram, orchards and vegetables. To control thrips in sunflower, spray Imidacloprid 17.8 % @ 2 ml in 10 liters of water.

## Gujarat:

- In Middle Gujarat, apply irrigation in green gram and cowpea at flower initiation stage and in banana, papaya at fruit development stage. Carry out intercultural operations and earthing up in pearl millet crop.
- In Saurashtra and Kutch, apply light and frequent irrigation to sesame, groundnut, vegetables crops and lemon, mango orchards. Under present weather condition, infestation of heliothis and white flies is observed in green gram and black gram; to control heliothis, spray Spinosad @ 3 ml/10liters of water; spray Acetamiprid 20 % SP@ 5 gm and 500 ml of 5 % neem seed extract or neem seed oil 50 ml / 10 liters of water to control white flies.
- In North Gujarat, under higher temperature and moderately dry condition, keep 5 to 7 days interval of irrigation in groundnut crop. Do not carry out weeding and inter cultural operations during pegging stage in groundnut. Apply light and frequent irrigation in green gram, cowpea, pearl millet crops and mango gardens. Pluck bhindi, tomato and cucumbers regularly.
- In South Gujarat, apply irrigation to sugarcane, okra crops and mango orchards. Drenching of Carbendazim 10g/10 litre of water for management of wilt disease in chilli and brinjal is advised.

## Animal Husbandry

- In Gujarat, provide plenty of water mixed with minerals. Also provide balanced feed & adopt vaccination schedule. Make arrangement of curtains and proper ventilation in poultry house.

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

**Realised Rainfall:** Significant rainfall occurred in Anuppur, Dindori, Katni, Shahdol and Umaria districts of Madhya Pradesh and in Balrampur, Bastar, Bilaspur, Dantewada, Jashpurnagar, Kondagaon, Korba, Sukma, Surajpur and Surguja districts of Chhattisgarh. Weather remained dry/mostly dry over the rest of the region.

- **Advisories: As Thunderstorm accompanied with lightning, hail & gusty winds** (speed reaching 30-40 kmph) likely at isolated places over Madhya Pradesh on 3<sup>rd</sup>; with **lightning & gusty winds** (speed reaching 40-50 kmph) at isolated places over West Madhya Pradesh on 4<sup>th</sup>; with **lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over over Chhattisgarh from 2<sup>nd</sup> to 5<sup>th</sup>, over East Madhya Pradesh on 2<sup>nd</sup> & 4<sup>th</sup>, and over Madhya Pradesh on 5<sup>th</sup>; with **lightning** at isolated places over Madhya Pradesh and Chhattisgarh, on 1<sup>st</sup>, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Provide hailnet for orchard crops to protect from mechanical damage. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm.

## Madhya Pradesh

- In Keymore Plateau Zone, harvest the matured wheat crop and keep it in a safe place. Undertake sowing of summer mung. Carry out field preparation and sowing of summer vegetables.
- In Jhabua Hills Zone, apply irrigation to summer green gram and black gram crops at 7-10 days interval. Irrigate fruited mango orchard at 10 days interval. Cut the leaves of matured onion crop and let it dry in the field for one week; dig onion crop when properly dried and store in a safe place. Carry out picking of tomato, cauliflower, brinjal, spinach, fenugreek, carrot, cabbage, chilli, etc.
- In the Nimar valley Zone, do not burn the residual waste of wheat crop as it would kill the beneficial bacteria in soil as well as destroy the soil structure. Carry out deep ploughing of fields after harvesting of rabi crops so that eggs, pupating stages of insects and weed seeds are destroyed. To increase production and save water, use drip irrigation for vegetable crops.
- In Vindhya Plateau Zone, carry out digging of matured onion and garlic bulbs and store them in a safer place. Harvest matured fruits of bottle guard, sponge guard, water melon, musk melon, pumpkin, cucumber, etc.; apply irrigation to vegetable crops at regular intervals. To control various borers in green gram, black gram and cucurbitaceous crops, spray Profenophos 50 EC @ 1500 ml / ha in 600-700 litres of water; apply dusting of Methyl Parathion 2% dust @ 25 kg/ha is for control of caterpillar.
- In Bundelkhand Zone, carry out summer ploughing of the bare field; it destroys the seeds of weeds, spores of diseases and eggs of insect and also modifies the physical properties of soil. To control fruit borer in brinjal crop, spray Quinalphos 25 EC @ 2.0 ml per litre of water under clear sky condition. There is a possibility of attack of red pumpkin and fruit fly in cucurbit crops; spray Triazophas 40 EC @ 2.0 ml per litre of water in

clear sky condition.

- In Gird Zone, apply need-based irrigation to vegetable crops in morning/evening hours. Irrigate fruit bearing mango trees. To control leaf curl in chilli and tomato, spray Dimethoate @ 750 ml per hectare in 500-600 litres of water.

### Chhattisgarh

- In the Chhattisgarh Plain Zone, apply irrigation to vegetable crops at 3-4 days interval considering the rise in temperature. Carry out planting of bottle gourd, water melon and musk melon. Undertake planting of papaya.
- In Northern Hill Zone, summer rice is at tillering stage, apply top dressing of Nitrogen. Carry out threshing of harvested Rabi crops and keep healthy seeds aside for sowing next year. Apply need-based irrigation and carry out intercultural operation in tomato, brinjal, chilli, okra and other vegetable crops; increase the frequency of irrigation as per environmental temperature. As temperature is increasing, dig out onion and garlic tubers from the fields.
- In Bastar Plateau Zone, wheat crop is in maturity stage; harvest the crop, dry it up to 12% moisture content and store along with dried neem leaves. Give irrigation at regular intervals to watermelon crop and apply foliar spray of boron. Spray Chloropyrifos @ 1.5 ml /litre of water to control stem borer in summer rice. For the control of shoot and fruit borer in lady finger and cowpea crops, apply Chlorophyriphos 1-1.5 ml per litre of water.

### Animal Husbandry

- Vaccinate cattle against FMD and HS diseases, Goats against PPR disease and poultry against Ranikhet disease. Keep animals in shade and provide them clean drinking water mixed with 50-60 g salt.

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

**Realised Rainfall** : Significant rainfall occurred in Mandi district of Himachal Pradesh and in all the districts of Uttarakhand except Almora, Chamoli and Garhwal Pauri; in all the districts of East Rajasthan except Banswara, Baran, Dungarpur, Jhalawar, Karauli and Sirohi; in West Rajasthan except Barmer, Bikaner, Hanumangarh, Jalore and Jodhpur; in Patiala district of Punjab; Ambala district of Haryana; in all the districts of East Uttar Pradesh except Ballia, Balrampur, Gorakhpur, Kaushambi, Kushi nagar, Maharajganj, Sant Kabirnagar, Shrawasti and also in all the districts of West Uttar Pradesh except Baghpat, GBNagar, Ghaziabad, Lalitpur, Mathura and East Delhi.

- **Advisories: As Thunderstorm accompanied with lightning, hail & gusty winds** (speed reaching 30-40 kmph) likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Himachal Pradesh, Uttarakhand, Haryana, Chandigarh & Delhi from 3<sup>rd</sup> to 5<sup>th</sup>; over Punjab on 3<sup>rd</sup> & 4<sup>th</sup> and over Uttar Pradesh on 4<sup>th</sup> & 5<sup>th</sup>; with **Duststorm/thunderstorm** accompanied gusty winds (speed reaching 30-40 kmph) **with hail** very likely at isolated places over East Uttar Pradesh on 1<sup>st</sup>, over West Uttar Pradesh on 3<sup>rd</sup> and over Rajasthan on 3<sup>rd</sup> & 4<sup>th</sup>; **with Duststorm/thunderstorm** accompanied with gusty winds (speed reaching 30-40 kmph) very likely at isolated places over Uttar Pradesh on 1<sup>st</sup> & 2<sup>nd</sup> and Rajasthan on 2<sup>nd</sup>, **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Uttarakhand and Rajasthan on 1<sup>st</sup>, over Jammu & Kashmir, Ladakh, Gilgit-Baltistan and Muzaffarabad on 1<sup>st</sup> & 2<sup>nd</sup>, over East Uttar Pradesh on 3<sup>rd</sup>, over Rajasthan on 5<sup>th</sup>; with **lightning** at isolated places over Punjab on 1<sup>st</sup>, 2<sup>nd</sup> & 5<sup>th</sup>, over Haryana, Chandigarh & Delhi on 2<sup>nd</sup>, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Provide hailnet for orchard crops to protect from mechanical damage. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely **at most places** over Jammu Kashmir & Ladakh on 5<sup>th</sup> and **at many places** over Uttarakhand on 3<sup>rd</sup> to 5<sup>th</sup>, over Jammu Kashmir & Ladakh on 3<sup>rd</sup> and 4<sup>th</sup>, over West Uttar Pradesh, Punjab, Haryana Chandigarh & Delhi and Himachal Pradesh on 4<sup>th</sup> & 5<sup>th</sup> and over East Uttar Pradesh on 5<sup>th</sup>, arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables. Avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop

immediately and store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.

### **Jammu & Kashmir**

- In Valley Temperate Zone, undertake sowing of maize. Continue transplanting of chillies on ridges or raised beds. Continue preparation of rice nursery. In order to follow COVID 19 advisories, it is advisable that the nurseries be prepared within farmers premises if possible. Instead of community based nurseries it is advised that individual farmers prepare their own separate nurseries to maintain social distancing on nursery fields.
- In Intermediate Zone, continue harvesting of mustard. Continue harvesting of rabi pulses like chick pea and pea. Undertake sowing of maize. Continue sowing of okra. Undertake sowing of turmeric and French beans.
- In Sub-Tropical Zone, continue harvesting of wheat. Undertake threshing of mustard crop and store it in safe place. Carry out hoeing and weeding operations in green gram. Continue harvesting of *Rabi* pulses like gram, pea and lentil. Undertake land preparation for sowing of ginger and turmeric.
- In Cold Arid Zone, undertake planting of potato. Undertake sowing of leafy vegetables. Provide plastic mulching in vegetables to conserve soil moisture.

### **Himachal Pradesh**

- In Sub Montane and Low Hills Sub Tropical Zone, do deep ploughing of fields after harvesting of Rabi crops. It helps in destroying the eggs and pupating stages of insects and weed seeds. Continue sowing of fodder maize, cowpeas and soybean. Undertake weeding in green gram. Undertake sowing of okra, peas, French beans, spinach, radish, turnip and carrot. Undertake transplanting of cabbage, cauliflower and broccoli. Continue sowing of potato.
- In High Hill Temperate Dry Zone, continue sowing of cabbage and cauliflower seeds in nursery beds. Undertake land preparation for sowing of potato.
- In Mid Hills Sub Humid Zone, carry out hoeing and weeding operations in pea.

### **Punjab, Haryana, Delhi**

- In Western Zone of Punjab, monitor the crop fields for infestation of disease/insect-pest and keep the harvested material at safe places. Undertake harvesting on a dry and clear day only. Undertake sowing of Bt cotton or desi cotton during this month. Postpone irrigation to tomato crop. Prevailing weather is favourable for early blight of tomato, spray Indofil M-45 @ 600 gm in 200 litre of water per acre to protect tomato from late blight on a clear day. To control of purple blotch in onion, spray the crop with 300g of Caviet or 600g of Indofil M-45 mixed with 200 ml of Triton or linseed oil in 200 litres of water per acre as soon as first symptom of purple blotch appears; repeat application at 10 days interval.
- In Undulating Plain Zone of Punjab, plan harvesting of mature crops as per weather and store already harvested crop in safe place. Avoid irrigation and fertilizer application in maize, Bengal gram and vegetables. Remove excess rainwater from nursery area of mango and litchi. Avoid irrigation in sugarcane during this period. Spray the crop with 350 ml of Dursban/Lethal/Massban/Goldban 20 EC (chlorpyrifos) in 400 litres of water per acre with manually operated sprayer to control sap sucking pest black bug on a clear day.
- In Wester Plain Zone of Punjab, undertake the sowing of desi cotton. Undertake planting of turmeric. To control cabbage semi-looper, tobacco caterpillar and Bihar hairy caterpillars, spray 200 ml of Nuvan 85 SL in 100 litres of water per acre. Irrigate the crop at 8-10 days interval.
- In Central Plain Zone of Punjab, undertake sowing of Bt cotton or *desi* cotton. Due to shortage of labour for rice transplanting, farmers are advised to bring more area under direct seeding of rice. Prevailing weather is favourable for early blight of tomato; spray Indofil M-45 @ 600 gm in 200 litres of water per acre on a clear day.
- In Western Zone of Haryana, keep the watch of changing weather during harvesting and threshing of matured crops. Maintain social distancing during wheat harvesting add threshing, and other agricultural operations. Undertake sowing of sorghum, maize and lobia as a fodder crop. Carry out field preparation for cotton crop as per the weather. Apply light irrigation in planted vegetable crops and fruits plants as per requirement. Possibility of day slightly high temperature, carry out harvesting of mature vegetables at morning and evening hours and keep harvested crops in shadow.
- In Eastern Zone of Haryana, undertake sowing of fodder crop (bajra). Carry out field preparation for sowing of pigeonpea and cotton in this week. To control shoot and fruit borer in tomato crop, collect and bury the infested fruits and shoots; install pheromone traps @ 2-3 traps per acre; if pest population is high, spray

Spinosad 48 EC @ 1 ml /4 litres of water when sky is clear. Monitor lady finger crop against attack of mite; spray Ethion @ 1.5-2 ml/litre of water. Incidences of powdery mildew disease in cucurbitaceous crops may occur at present temperature; spray Carbendazim @ 1.0 gram per litre of water when sky is clear. Monitor constantly timely sown onion crop against attack of thrips.

- In Delhi, maintain social distancing during harvesting and other agricultural operation in all crops. Apply light irrigation as per requirement in all vegetable and standing crops during morning hours or in the evening hours. Undertake sowing of green gram, cluster bean, senai, gwar etc during this week. Keeping in view of high temperature, harvest mature vegetables at morning and evening hours and keep harvested crops in shadow. Undertake field preparation for sowing of pigeonpea and cotton. Monitor lady finger crop against attack of mite; if population is high, spray Ethion @ 1.5-2 ml/litre of water when sky is clear. Maintain optimum moisture level in cucurbitaceous crops by application of light and frequent irrigation as dry conditions may lead to poor pollination and drop in yield.

## **Uttar Pradesh:**

### **East Uttar Pradesh**

- In East Uttar Pradesh, undertake sun drying of food grains like wheat, mustard, Bengal gram and chick pea before storage. Continue sowing of green gram, maize and lobia. Apply irrigation and carry out intercultural operations in bottle gourd and bitter gourd as per requirement. To control shoot and fruit borer in brinjal crop, infested fruits and shoots should be collected and buried inside the soil; spray Spinosad 48 EC @ 1 ml /4 litres of water when sky is clear. Undertake nursery preparation of tomato and sowing of okra/lady's finger and cucumber. Avoid spraying of any herbicide in sugarcane field for this week. To prevent mango fruits from falling, sprinkle the tree with a 2 % solution of urea.

### **West Uttar Pradesh**

- In West Uttar Pradesh, continue sowing of maize, green gram, bajra, sorghum, lobia and black gram. Harvest chickpea crop, separate seeds from straw and keep grains in a safe area. Undertake direct sowing of French bean, Amaranthus, lobia, lady finger, bottle gourd, cucumber, ridge gourd and summer radish as present temperature is suitable for germination of seeds. Undertake sowing of turmeric. . To prevent mango fruit fall, spray Naphthalene Acetic acid @ 20 mg / liter of water or Planofix 5 mg / 10 liters of water when the sky is clear. There is a possibility of an outbreak of thrips / green moth in *urd* and *moong* crops, spray Dimethoate 30% EC at the rate of 1.0 liter / ha dissolved in 600-700 liters of water when the sky is clear. There is a possibility of outbreak of leaf-eating insect in okra / cowpea crops; spray imidacloprid 17.8% SL 1.5 liters / hectare @ 600-700 liters of water when the sky is clear

### **Uttarakhand**

- In Sub Humid Sub Tropic Zone, undertake threshing of wheat crop on a clear sunny day after drying the crop in sunlight. In mango plants, use wind breaks in south-east direction, as there is forecast of high wind velocity, so that the flowers and small fruits of mango can be saved from falling.
- In Hill Zone, carry out weeding and hoeing operations after 25 to 30 days of sowing of barnyard millet. Postpone irrigation and spraying of chemicals in tomato. Provide staking to tomato saplings with ropes or branches. Continue sowing of ginger and turmeric.
- In Bhabar and Tarai Zone, postpone irrigation to maize crop. Keep the harvested lentil crop in a safe place. Continue sowing of French bean. Undertake transplanting of brinjal.

### **Rajasthan**

- In Arid Western Plain Zone, undertake land preparation for sowing of cotton.
- In Irrigated North Western Plain Zone, undertake land preparation of cotton. Harvest chick pea crop.
- In Transitional Plain Zone of Inland Drainage, weather is congenial for shoot and fruit borer in brinjal and tomato crops; collect the infested fruits and shoots and bury them inside the soil; if pest population is high, spray Spinosad 48 EC @ 1 ml /4 litres of water.
- In Semi Arid Eastern Plain Zone, undertake land preparation for sowing of cotton. For fruit drop in citrus fruits, spray Planofix hormone @ 1.0 ml per 5 litre water.
- In Sub Humid Southern Plain and Aravali Hill Zone, undertake land preparation for cotton.

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