



# *National Agromet Advisory Service Bulletin*

*Friday 03<sup>rd</sup> July 2020*  
*(For the period 03<sup>rd</sup> to 07<sup>th</sup> July 2020)*



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

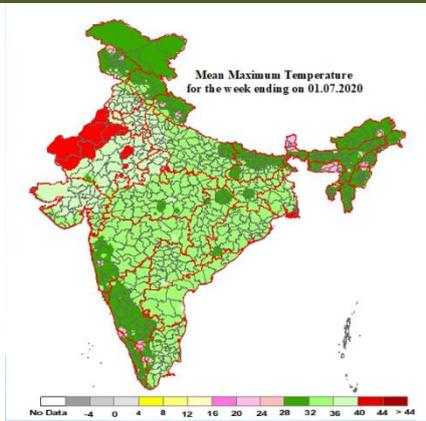
**Weblink For**

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

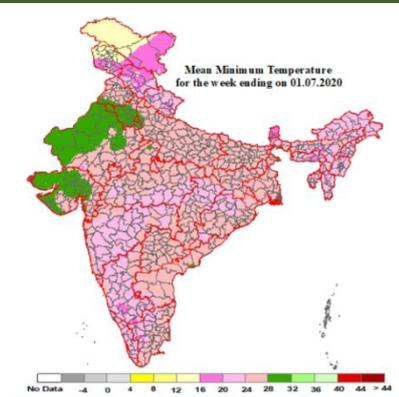
**State Composite AAS Bulletin:** <http://www.imdagrimet.gov.in/node/3544>

## spatial distribution of weather parameters for the week ending on 01.07.2020

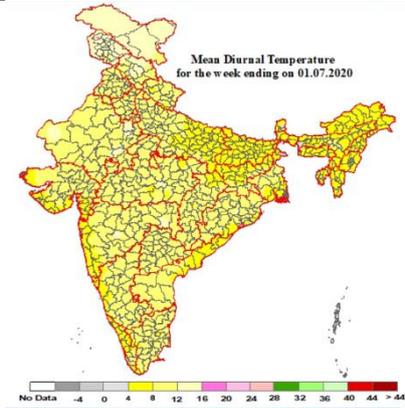
**Mean Maximum Temperature (°C) for the week ending on 01.07.2020**



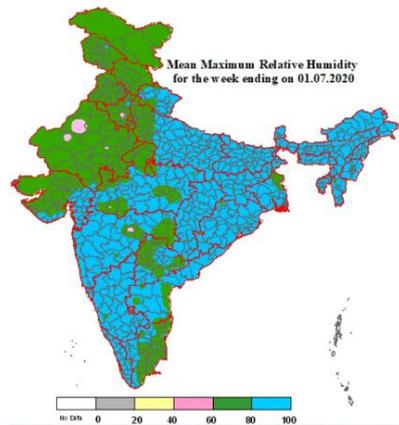
**Mean Minimum Temperature (°C) for the week ending on 01.07.2020**



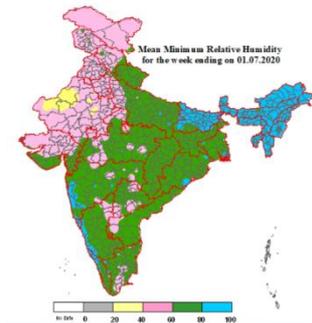
**Mean Diurnal Temperature Variation (°C) for the week ending on 01.07.2020**



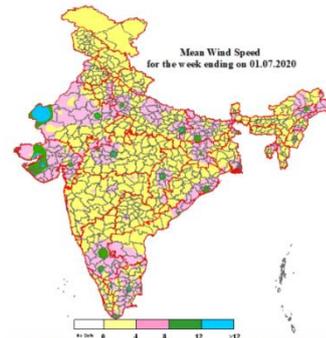
**Mean Maximum Relative Humidity (%) for the week ending on 01.07.2020**



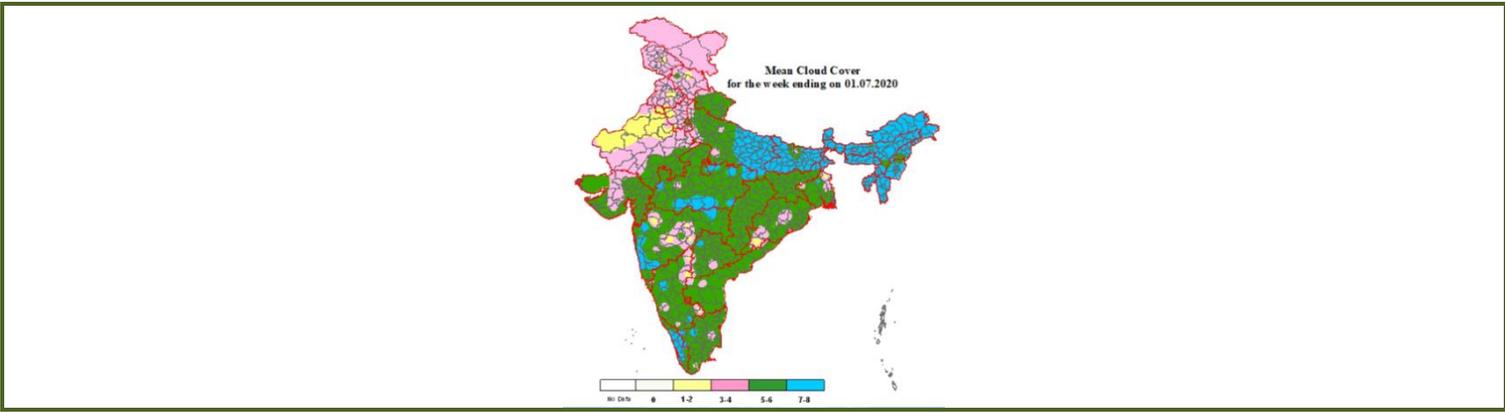
**Mean Minimum Relative Humidity (%) for the week ending on 01.07.2020**



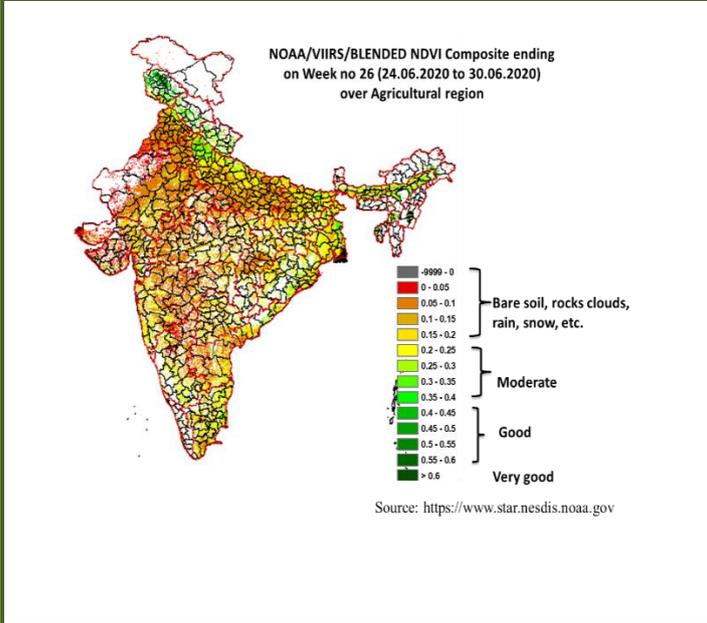
**Mean Wind Speed (km/hr) for the week ending on 01.07.2020**



**Mean Cloud Cover (okta) for the week ending on 01.07.2020**

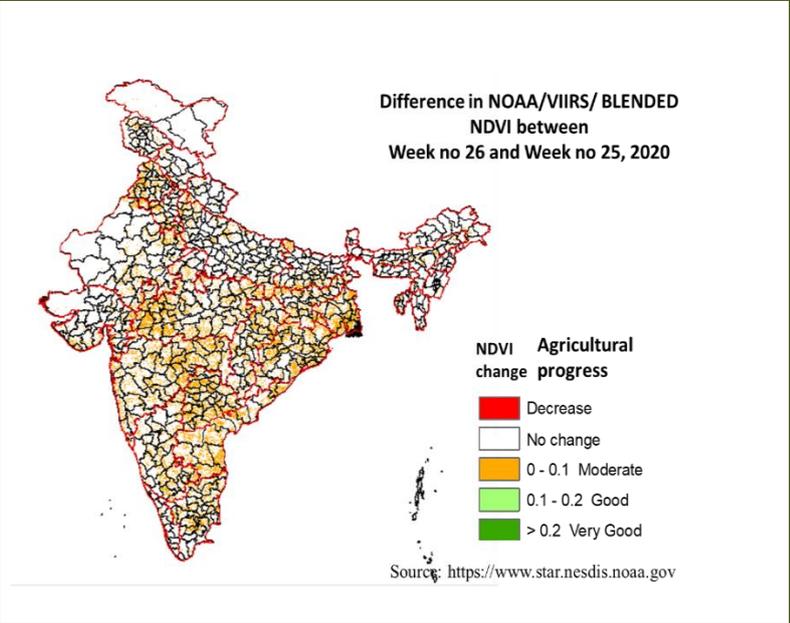


**NOAA/VIIRS/BLENDED NDVI composite for the week number 26(24.06.2020 to 30.06.2020) over Agricultural regions of India**



Agricultural vigour was good at many places of Jammu & Kashmir ; at a few palces of Himachal Pradesh and at isolated places of Uttarakhand& North Eastern states. Rest of the country NDVI could not be captured due to cloud cover as well as land preparation / sowing for khariff season is under progress

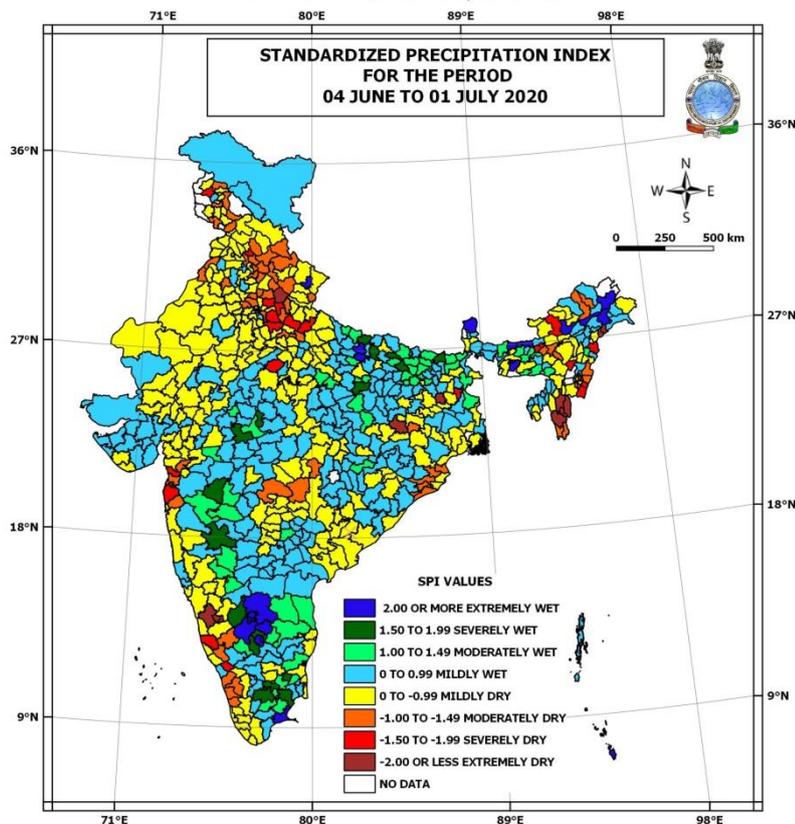
**Difference in NOAA/VIIRS/BLENDED NDVI between week number 26, 2020 and week number 25, 2020**



Good difference in agricultural vigour was observed over isolated places of Telangana, Jammu & Kashmir, Gangetic West Bengal, North Eastern States, Odisha, South Interior Karnataka, Kerala, East Vidarbha, Himachal Pradesh, Uttarakhand and Northern part of Chattisgarh

## Standardised Precipitation Index Cumulative 4 weeks for the period 4<sup>th</sup> June to 1<sup>st</sup> July 2020

**MINISTRY OF EARTH SCIENCES  
INDIA METEOROLOGICAL DEPARTMENT  
HYDROMET SECTION, CRS PUNE**



- Extremely/ Severely wet conditions exist in Anantapur district of Andhra Pradesh; Lower Dibang Valley, Papumpara districts of Arunachal Pradesh; Tinsukia, Dhemaji, Baksa, Chirang districts of Assam; Gopalganj, Saran, Supaul districts of Bihar; Bangalore Rural, Bangalore Urban, Chitradurga, Tumkur, Ramanagara, Chickballapur districts of Karnataka; Bhopal, Dewas districts of West Madhya Pradesh; Sholapur, Aurangabad district of Maharashtra; East Garo Hills district of Meghalaya; Dindigul, Karur, Perambalur, Pudukkottai, Ramanathapuram districts of Tamilnadu; Ambedkar Nagar, Basti, Gorakhpur, Mirzapur, Siddharth Nagar districts of Uttar Pradesh; Nicobar district of Andaman & Nicobar Islands; North Sikkim district of Sikkim; Bageshwar district of Uttarakhand.
- Extremely/Severely dry conditions exist in East Kameng, Tirap districts of Arunachal Pradesh; Darrang district of Assam; Navsari district of Gujarat; Bilaspur district of Himachal Pradesh; Baramula district of Jammu; Dakshin Kannada, Shimoga districts of Karnataka; Wynad district of Kerala; Gwalior district of West Madhya Pradesh; Palghar district of Maharashtra; Chandel, Imphal East districts of Manipur; Aizwal, Champhai, Lunglei, Serchhip districts of Mizoram; Tuensang, Paren districts of Nagaland; Daman districts of Union Territory; Aligarh, Bijnor, Badaun, Bulandshahar, Jyotiba Phule Nagar, Meerut, Shahjahanpur, Shamli districts of Uttar Pradesh; Deoghar, Gumla, Pakur districts of Jharkhand; West Delhi district of Delhi.
- 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 08<sup>th</sup> July, 2020

- ◆ Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table-1.
- ◆ Maximum temperatures is very likely to rise by 1-2 °C over plains of northwest India during next 2 days. No significant change in temperatures very likely over most parts of the country during next 3-4 days.

Met-Sub-Division	03-Jul Today	04Jul Sat	05Jul Sun	06Jul Mon	07Jul Tue
1. Andaman & Nicobar Islands	FWS	FWS	FWS	FWS	FWS
2. Arunachal Pradesh	WS	FWS	FWS	FWS	FWS
3. Assam & Meghalaya	WS	WS	WS	WS	WS
4. N. M. M. & T.	WS	WS	WS	WS	WS
5. S.H. West Bengal & Sikkim	WS	WS	WS	WS	WS
6. Gangetic West Bengal	FWS	FWS	FWS	FWS	FWS
7. Odisha	FWS	FWS	WS	FWS	FWS
8. Jharkhand	FWS	WS	WS	WS	WS
9. Bihar	WS	FWS	FWS	FWS	FWS
10. East Uttar Pradesh	FWS	FWS	WS	WS	WS
11. West Uttar Pradesh	SCT	FWS	FWS	WS	WS
12. Uttarakhand	FWS	WS	WS	WS	WS
13. Haryana, Chd & Delhi	ISOL	SCT	FWS	WS	WS
14. Punjab	ISOL	SCT	FWS	FWS	FWS
15. Himachal Pradesh	ISOL	SCT	FWS	FWS	FWS
16. J & K and Ladakh	ISOL	ISOL	SCT	SCT	SCT
17. West Rajasthan	ISOL	ISOL	SCT	SCT	SCT
18. East Rajasthan	ISOL	SCT	FWS	FWS	FWS
19. West Madhya Pradesh	FWS	FWS	FWS	FWS	FWS
20. East Madhya Pradesh	FWS	WS	WS	WS	WS
21. Gujarat Region	SCT	WS	WS	WS	WS
22. Saurashtra & Kutch	SCT	WS	WS	WS	WS
23. Konkan & Goa	WS	WS	WS	WS	WS
24. Madhya Maharashtra	WS	WS	FWS	FWS	FWS
25. Marathwada	FWS	FWS	SCT	SCT	SCT
26. Vidharbha	FWS	WS	WS	WS	WS
27. Chhattisgarh	FWS	FWS	WS	WS	FWS
28. Coastal A. P. & Yanam	FWS	FWS	SCT	SCT	SCT
29. Telangana	FWS	FWS	SCT	SCT	SCT
30. Rayalaseema	FWS	SCT	ISOL	ISOL	ISOL
31. T.N., Puducherry & Karaikal	ISOL	ISOL	ISOL	ISOL	ISOL
32. Coastal Karnataka	WS	WS	WS	WS	WS
33. North Interior Karnataka	FWS	SCT	SCT	SCT	FWS
34. South Interior Karnataka	FWS	FWS	SCT	SCT	SCT
35. Kerala & Mahe	WS	FWS	FWS	FWS	FWS
36. Lakshadweep	WS	FWS	FWS	FWS	FWS

### % 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 five days:

#### 03 July (Day 1):

- ◆ **Heavy to very heavy rainfall** at a few places **with extremely heavy falls** at isolated places very likely over Andhra Pradesh and Konkan & Goa; **heavy to very heavy rainfall with extremely heavy falls** at isolated places over Sub-Himalayan West Bengal & Sikkim and Madhya Maharashtra; **heavy to very heavy rainfall** at isolated places over East Madhya Pradesh, Bihar, Assam & Meghalaya, Coastal Andhra Pradesh & Yanam and

Coastal Karnataka and **heavy rainfall** at isolated places over Uttarakhand, East Uttar Pradesh, West Madhya Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, Odisha, Andaman & Nicobar Islands, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Gujarat region, Marathwada, Telangana, Rayalseema, North Interior Karnataka and Kerala & Mahe.

◆ **Heat wave conditions** very likely in isolated pockets over West Rajasthan.

◆ **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over East Rajasthan; **with lightning** at a few places over East Uttar Pradesh and at isolated places over Uttarakhand, West Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat state, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.

◆ **Strong Wind** (speed reaching 50-60 kmph) very likely over Southwest, Westcentral & Eastcentral Arabian Sea and Maharashtra coast and (speed reaching 40-50 kmph) very likely over Central Bay of Bengal. **Squally Weather** (speed reaching 40-50 kmph) likely over Southeast Arabian Sea and along & off Karnataka-Kerala coasts and Lakshadweep. Fishermen are advised not to venture into sea over these areas.

#### 04 July (Day 2):

◆ **Heavy to very heavy rainfall with extremely heavy falls** at isolated places over Gujarat region, Madhya Maharashtra and Konkan & Goa; **heavy to very heavy rainfall** at isolated places over Uttarakhand, East Uttar Pradesh, East Madhya Pradesh, Saurashtra & Kutch, Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya and **heavy rainfall** at isolated places over West Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Odisha, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Coastal Karnataka and Kerala & Mahe.

◆ **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and East Rajasthan; **with lightning** at a few places over East Uttar Pradesh and at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, West Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, West Bengal & Sikkim, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Rayalseema, Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.

◆ **Thunderstorm/Duststorm accompanied with lightning & gusty winds (speed 40-50 kmph)** very likely at isolated places over West Rajasthan.

◆ **Strong Wind** (speed reaching 50-60 kmph) very likely over Southwest, Westcentral & Eastcentral Arabian Sea and Maharashtra coast and (speed reaching 40-50 kmph) very likely over Central Bay of Bengal. Fishermen are advised not to venture into sea over these areas.

#### 05 July (Day 3):

◆ **Heavy to very heavy rainfall with extremely heavy falls** at isolated places over Gujarat region; **heavy to very heavy rainfall** at isolated places over Uttarakhand, Saurashtra & Kutch, East Uttar Pradesh, Chhattisgarh, Odisha and Konkan & Goa and **heavy rainfall** at isolated places over Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha, West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Coastal Andhra Pradesh & Yanam and Coastal Karnataka.

◆ **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and East Rajasthan; **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Bihar and West Bengal & Sikkim.

◆ **Thunderstorm/Duststorm accompanied with lightning & gusty winds (speed 40-50 kmph)** very likely at isolated places over West Rajasthan.

◆ **Strong Wind** (speed reaching 50-60 kmph) very likely over Southwest, Westcentral & Eastcentral Arabian Sea and (speed reaching 40-50 kmph) very likely over North Arabian Sea, south Gujarat-Maharashtra coasts.

Fishermen are advised not to venture into sea over these areas.

**06 July (Day 4):**

- ◆ **Heavy to very heavy rainfall** at isolated places over Vidarbha, Chhattisgarh, Gujarat State and Konkan & Goa and **heavy rainfall** at isolated places over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, West Rajasthan, Madhya Pradesh, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat state, Madhya Maharashtra and Coastal Karnataka.
- ◆ **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and West Rajasthan and **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Uttar Pradesh, East Rajasthan, Bihar and Gangetic West Bengal.
- ◆ **Strong Wind** (speed reaching 50-60 kmph) very likely over Southwest, Westcentral & Eastcentral Arabian Sea and (speed reaching 40-50 kmph) very likely over North Arabian Sea, south Gujarat-Maharashtra coasts. Fishermen are advised not to venture into sea over these areas.

**07 July (Day 5):**

- ◆ **Heavy to very heavy rainfall** at isolated places over Gujarat region and **heavy rainfall** at isolated places over Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Saurashtra & Kutch, Konkan & Goa and Coastal Karnataka.
- ◆ **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and West Rajasthan and **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Uttar Pradesh, East Rajasthan, Bihar and Gangetic West Bengal.
- ◆ **Strong Wind** (speed reaching 50-60 kmph) very likely over Southwest & Westcentral Arabian Sea and north Gujarat coast and (speed reaching 40-50 kmph) very likely over Eastcentral Arabian Sea. Fishermen are advised not to venture into sea over these areas.

**Weather Outlook for subsequent 2 days from 08<sup>th</sup> to 10<sup>th</sup> July, 2020**

- ◆ Fairly widespread to widespread rain/thundershowers with isolated heavy falls likely along West Coast, Northeast India and plains of Northwest India.
- ◆ Scattered to fairly widespread rainfall/thundershowers with isolated intense falls likely over central India and adjoining East India. Isolated to scattered rainfall/thundershowers likely over remaining parts of the country.

- **Strong Wind** (wind speed reaching 50-60 kmph) very likely over Southwest & Westcentral Arabian Sea during the period and (wind speed reaching 40-50 kmph) very likely over north Arabian Sea and along & off Gujarat coast on 28<sup>th</sup> & 29<sup>th</sup> and likely over Southwest & West-central Arabian Sea on 30<sup>th</sup> with **Squally Weather** (wind speed reaching 40-50 kmph) very likely over north Andaman Sea, Southeast & East-central Arabian Sea and along & off Lakshadweep areas and Kerala-Karnataka coasts on 26<sup>th</sup> & 27<sup>th</sup>, very likely over north Andaman Sea on 28<sup>th</sup> and likely over north Andaman Sea on 29<sup>th</sup> & 30<sup>th</sup>, fishermen are advised not to venture into sea over these areas.

#### Salient advisories

- **There is a possibility of attack of desert locust in the crop fields in West Uttar Pradesh; monitor the crops**, to control, adopt mechanical measures like making loud noise by beating drums, burning crackers, etc. during morning hours. For chemical control, spray Diflubenzuron 25% WP 10 g or **Chlorpyrifos 20% EC @ 2.4ml or Deltamethrin 2.8% EC @ 1 ml in litres of water**.
- **Strong Wind (speed reaching 50-60 kmph)** very likely over Southwest, Westcentral & Eastcentral Arabian Sea and Maharashtra coast and (speed reaching 40-50 kmph) very likely over Central Bay of Bengal on 4<sup>th</sup> July, **Strong Wind (speed reaching 50-60 kmph)** very likely over Southwest, Westcentral & Eastcentral Arabian Sea and (speed reaching 40-50 kmph) very likely over North Arabian Sea, south Gujarat-Maharashtra coasts on 5<sup>th</sup> & 6<sup>th</sup>, **Strong Wind (speed reaching 50-60 kmph)** very likely over Southwest & Westcentral Arabian Sea and north Gujarat coast and (speed reaching 40-50 kmph) very likely over Eastcentral Arabian Sea on 7<sup>th</sup> July, Fishermen are advised not to venture into sea over these areas.
- **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and East Rajasthan; **with lightning** at a few places over East Uttar Pradesh and at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, West Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, West Bengal & Sikkim, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Rayalseema, Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep on 4<sup>th</sup>, **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and East Rajasthan; **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Bihar and West Bengal & Sikkim on 5<sup>th</sup> & 6<sup>th</sup>, **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and West Rajasthan and with lightning at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Uttar Pradesh, East Rajasthan, Bihar and Gangetic West Bengal on 7<sup>th</sup> July, **thunderstorm/Duststorm accompanied with lightning & gusty winds (speed 40-50 kmph)** very likely at isolated places over West Rajasthan on 4<sup>th</sup> & 5<sup>th</sup> July, provide mechanical support to 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/ dust storm.
- As **rain/thundershowers** likely at **most/many places** over Gujarat and West Uttar Pradesh from 4<sup>th</sup> to 7<sup>th</sup>, over Konkan & Goa, Madhya Maharashtra, Vidarbha, Uttarakhand, East Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, Odisha, West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura Coastal Karnataka and Kerala during the period along with **Heavy to very heavy rainfall with extremely heavy falls** at isolated places over Gujarat region, Madhya Maharashtra and Konkan & Goa; **heavy to very heavy rainfall** at isolated places over Uttarakhand, East Uttar Pradesh, East Madhya Pradesh, Saurashtra & Kutch, Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya and **heavy rainfall** at isolated places over West Uttar Pradesh, West Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Odisha, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Coastal Karnataka and Kerala & Mahe on 4<sup>th</sup>, **Heavy to very heavy rainfall with extremely heavy falls** at isolated places over Gujarat region; **heavy to very heavy rainfall** at isolated places over Uttarakhand, Saurashtra & Kutch, East Uttar Pradesh, Chhattisgarh, Odisha and Konkan & Goa and **heavy rainfall** at isolated places over Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, Madhya Pradesh, Vidarbha, West Bengal &

Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Coastal Andhra Pradesh & Yanam and Coastal Karnataka on 5<sup>th</sup>, **Heavy to very heavy rainfall** at isolated places over Vidarbha, Chhattisgarh, Gujarat State and Konkan & Goa and **heavy rainfall** at isolated places over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, West Rajasthan, Madhya Pradesh, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat state, Madhya Maharashtra and Coastal Karnataka on 6<sup>th</sup>. **Heavy to very heavy rainfall** at isolated places over Gujarat region and **heavy rainfall** at isolated places over Uttarakhand, East Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Saurashtra & Kutch, Konkan & Goa and Coastal Karnataka on 7<sup>th</sup> **July**, 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:**

- new planting of arecanut and black pepper in Coastal Karnataka and nursery preparation of rice in North Interior Karnataka, continue sowing of maize, groundnut, cowpea, green gram, black gram, horse gram, field bean, ragi and vegetable crops in South Interior Karnataka
- planting of coconut seedlings in North Zone of Kerala.
- nursery sowing of long duration rice in Srikakulam district of Andhra Pradesh.
- sowing of red gram, cotton, jowar, soybean, green gram, etc. in Telangana.
- sowing of pigeon pea and sesame in Lower Brahmaputra Valley Zone of Assam.
- field preparation for nursery sowing of rice in Odisha.
- land preparation for pigeon pea and sowing of sesame and kharif vegetables in Bihar
- land preparation for transplanting kharif rice in Sub-Himalayan West Bengal.
- preparation of rice nursery in Bundelkhand and Kymore Plateau Zones of Madhya Pradesh.
- sowing/transplanting of rice using SRI or biasi method in Chhattisgarh.
- transplanting of rice, tomato, capsicum and chilli seedlings in Jammu & Kashmir.
- land preparation for transplanting of rice seedlings in Sub Montane and Low Hills Sub Tropical Zone of Himachal Pradesh.
- transplanting of rice seedlings in Punjab.
- field preparation for sowing of guar, bajra, maize, cluster bean, pulse crops in Western Zone of Haryana.
- transplanting of kharif onion, early cauliflower and cabbage as well as sowing of loki, torai, pumpkin, khira in West Uttar Pradesh.
- transplanting of rice seedlings and sowing of cabbage, cauliflower, broccoli and knolkhol in Bhabar & Tarai Zone of Uttarakhand.
- transplanting of 21-25 days old rice seedlings and sowing of kharif crops like soybean, groundnut, green gram and black gram in Maharashtra.

### ***Detailed Agromet Advisories***

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

**Realised Rainfall:** Significant rainfall occurred in Guntur & Nellore districts of Coastal Andhra Pradesh, Rayalaseema, Adilabad Hyderabad, JogulambaGadwal, Kamareddy, Karimnagar, M. Malkajiri, Mahabubabad,

Mahabubnagar, Mancherial, Nagarkurnool, Nalgonda, Peddapalle, RanjannaSircilla, Rangareddy, Sangareddy, Siddipet, Suryapet, Vikarabad and Wanaparthy districts of Telangana; in all districts of Coastal Karnataka, in Kalaburgidistrict of North Interior Karnataka and in Chikkamagaluru, Kodagu and Shivamoggadistricts of South Interior Karnataka. Weather remained mainly dry over rest of the districts of Karnataka.

#### **Advisories:**

- **Thunderstorm accompanied with lightning** very likely at **isolated places** over Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep on 4<sup>th</sup> July, 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.
- As **rain/thundershowers** likely at **most places** over Kerala & Mahe Lakshadweep and Coastal Karnataka during the period and over South Interior Karnataka on 4<sup>th</sup> & 5<sup>th</sup> July, along with **heavy rainfall** at isolated places over Coastal Andhra Pradesh & Yanam, Telangana, Coastal Karnataka and Kerala & Mahe on 4<sup>th</sup>, over Coastal Andhra Pradesh & Yanam on 5<sup>th</sup> and over Coastal Karnataka from 5<sup>th</sup> to 7<sup>th</sup> July, arrange for adequate drainage to avoid water stagnation in the crop fields. Avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.

#### **Karnataka**

- In Coastal Karnataka, undertake new planting of arecanut and black pepper and sowing of maize, drill sowing of rice and cotton dibbling. Continue sowing of ginger and turmeric.
- In North Interior Karnataka, continue sowing of soybean, maize, cotton, red gram, green gram crops under sufficient moisture condition. Continue nursery preparation of rice. Open conservation furrow after every 8<sup>th</sup> row in bunch groundnut for moisture conservation. To manage sucking pests in green gram, spray 0.25 gram Acetamaprid or 0.25 ml Flonicamide or 0.2 gram Thiomethoxam dissolved in one liter of water.
- In South Interior Karnataka, under sufficient moisture condition, continue sowing of maize, groundnut, cowpea, green gram, black gram, horse gram, field bean, ragi and vegetable crops, nursery preparation of rice and planting of mango, banana, sapota & guava. Undertake transplanting of rice where seedlings are ready.

#### **Kerala**

- In High Altitude Zone, attack of fruit fly will be severe in bitter gourd and snake gourd. Setting of fruit traps will help to reduce the attack.
- In Northern Zone, this is suitable for planting of coconut seedlings.
- In Central Zone, there is a chance of pseudo stem weevil attack in banana. As a precaution, apply 50 g neem cake powder in leaf axils.
- In Southern Zone, incidence of alternaria leaf spot is common in chilli recently. In order to control the disease, spray pseudomonas @ 20 gram/ litre. During severe infections, spray SAAF @ 3 gram/ litre to the plant.

#### **Andhra Pradesh**

- In Visakhapatnam district, go for inter cropping with Redgram + Maize(1:2) and Redgram + green gram/ balckgram/ groundnut/ Finger millet (1:7). Continue sowing of sorghum, bajra, groundnut, maize, redgram, ragi and maize and planting of rainfed sugarcane.
- In Vizainagaram district, to prevent the incidence of fungal diseases, go for seed treatment by soaking 1 kg seed in Carbendazim solution (3g Carbendazim in one litre of water) for direct sown rice before sowing. For raising nursery, go for seed treatment with Carbendazim @ 1g/kg of seed.
- In Ananthpur district utilizing the rainfall undertake sowing of rainfed crops like Groundnut, Redgram, Castor, Sorghum and Bajra.

- In East Godavari district, undertake sowing of sama and korra (small millets).
- In West Godavari district, sow green gram and black gram from June 15th to July 15th with recommended seed rate of 15-16 Kg/ha with a spacing of 30 x 10 cm.
- In Chittoor district, July 1st fortnight is the optimum time for rainfed groundnut sowing. Farmers who are taking up Kharif groundnut should select varieties like Narayani, Dharani, K-9, ICGV-9114 and varieties like Grishma, Dheeraj, Nityaharitha, K-6 where availability of water is there and should go for seed treatment with Mancozeb 3 g/kg or Tebukonazole @ 1 g/kg of seed. Also undertake nursery sowing of small millets(raggi) and sowing of korra.
- In Nellore district present weather conditions are favourable for early leaf spot in groundnut. To control spray Chlorothalonil @ 2 gms (or) Mancozeb @ 2.0 gms (or) Tebuconazole @ 1 ml/litre of water.

### **Telangana**

- In Northern Telangana, take up sowing of rainfed crop like cotton, soybean, Redgram, Greengram etc only after receiving 50-60 mm in light soils and 60-75 mm in heavy soils or the soil should be wet up to 15-20 cm. Take up the nurseries using Telangana Sona 15th July onwards. Do not sow cotton and soybean in light soils under rainfed conditions. Undertake Paddy nurseries Medium and short duration varieties till July 15<sup>th</sup>. Undertake sowing of Soybean till July 1st week.
- In Southern Telangana By utilizing the already received and forecasted rainfall for next five days farmers are advised to take up sowing of Redgram, Cotton, Jowar, Soybean, Greengram etc., as rainfed crops. • Farmers are advised to raise rice nurseries of medium duration varieties wherever sufficient water is available. • Sow the paddy nurseries of Telangana Sona (RNR 15048) rice from 10th July to 25th July. • Do not sow Cotton and Soybean in light soils under rainfed conditions. • Sow the Greengram, Soybean after seed treatment with Carbendazim @ 2.5 g and Carbosulfan @ 30 g per kg of seed. • Take-up sowing of Redgram + Cotton (1:4 or 1:6) ratio and Redgram + Jowar (1:4) ratio and Redgram + Soybean (1:7) ratio as intercrop

### **Tamil Nadu**

- In Cauvery Delta Zone, to control the thrips damage in rice nursery, apply Thiamethxam 25WG @ 40g/ acre.
- In Southern Zone, prevailing weather condition is suitable for the application of fertilizers to Pepper Crop. Apply 10 kg of Farm Yard Mannure + 50 gm Azospirillum + 50 gm Phospho bacteria + 200 gm VAM per plant. The manures and fertilizers are applied around the vine at a distance of 30 cm from the base and incorporated into the soil.
- In South Zone, prevailing weather condition is conducive for incidence of Stem borer in paddy, spray Azadirachtin 0.03% @ 1000 ml/ha (or) Carbofuran% 3 G @ 25 kg/ha (or) Chlorantraniliprole 18.5% SC 150 ml/ha.
- In North Western Zone, disease resistant potato variety kufrigirdhari may be chosen for planting to avoid disease incidence.

### **Animal Husbandry**

- In Karnataka, foot & mouth disease in cow, buffalo, bullock, sheep and goat can be managed through vaccination.

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

**Realised Rainfall:** Rainfall occurred in all districts of Assam & Meghalaya and Tripura; all districts except East Kameng, Lower Subansari and Tirap districts of Arunachal Pradesh; Aizwal, Kolasib, Lawngtlai, Mamit, Saiha and Serchhip districts of Mizoram; Bishnupur, Imphal West, Senapati, Tamenglong, and Ukhrul districts of Manipur; Dimapur, Kohima, Mokokchung, Mon, Paren, Phek, Tuensang and

Zunheboto districts of Nagaland. **Advisories:**

- **Thunderstorm accompanied with lightning** very likely at a **few places** over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 4<sup>th</sup> July, 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/dust storm.
- As **rain/thundershowers** likely at **most/many places** over Arunachal Pradesh, Assam & Meghalaya, Nagaland Manipur Mizoram & Tripura during the period along with **heavy rainfall** at isolated places over Assam & Meghalaya on 5<sup>th</sup> to 7<sup>th</sup>, over Nagaland, Manipur, Mizoram & Tripura from 4<sup>th</sup> to 7<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. Keep the cattle under shed during heavy rainfall.

### **Arunachal Pradesh**

- In Arunachal Pradesh, continue field preparation for sowing/transplanting of rice. Current weather condition of high humidity and temperature is very much favorable for leaf Blast in Paddy. Regular monitoring of nursery and main field is highly recommended. Keep the periphery clean and weed free to avoid disease and insect harboring. Spray Azadirachtin @ 6ml/litre of water preferably during clear/dry days or use proper stickers against leaf eating insects attack in lady's finger crop. Undertake harvesting of matured cobs of maize. Current weather condition is very much favorable for soft-rot disease in ginger. As precaution, avoid water stagnation around the farm.

### **Assam & Meghalaya**

- In Hill Zone of Assam, continue planting of ginger, papaya, pineapple and banana and sowing of fodder crops (bajra, sorgum maize, lobia). Continue sowing of cotton, pigeon pea and nursery sowing of cauliflower. Spray Phosphamidon @ 400-500 ml/ ha in 800 litres of water against stem borer infestation in sugarcane when sky remains clear. Continue nursery sowing high yielding varieties of *Sali* rice.
- In Lower Brahmaputra Valley Zone, undertake nursery sowing of *Sali* rice in flood affected area; continue main field preparation for transplanting. Complete sowing of soybean at the earliest. Continue sowing of pigeon pea and sesame. To have a better quality fibre of *Capsularis* jute, it is advocated to harvest at pre-flowering stage (120 days after sowing). Undertake harvesting of early and timely sown *Capsularis* jute at the earliest and kept in the field in standing position for 3-4 days before retting for proper defoliation.
- In Upper Brahmaputra Valley Zone, continue sowing of *Sali* rice in the nursery beds and main field preparation for transplanting of *Sali* rice seedlings. Make provisions for draining out the excess water from the ginger and turmeric orchards to protect the crop from rhizome rot disease. Continue sowing of sesame.
- In Barak Valley Zone, continue main field preparation for transplanting of *Sali* rice. Undertake harvesting of mature *Ahu* rice immediately and keep in a safe places.
- In Central Brahmaputra Valley Zone, in flood affected areas, don't go for long duration paddy varieties for sowing in flood affected areas as because sowing time already over for these varieties. If water does not recede up to mid July, then undertake sowing of short duration varieties up to last part of July. Direct sowing of very short duration varieties (90 to 100 days duration) up to 8-10 September in case of flood up to August. Continue transplanting of long duration *Sali* paddy variety at the end of July. For facilitate easy puddling and transplanting, farmers should arrange to inundate field by construction of new bunds or repairing of old bunds. Carry out land preparation/sowing of Arhar. Undertake harvesting matured cobs of maize. Undertake harvesting and retting of *Capsularis* jute preferably at pre-flowering stage (120 days after sowing) to get better quality fibre.
- In North Bank Plain Zone, in flood affected areas, undertake sowing of mid duration paddy variety (135-140 days duration) in first week of July. If flood water does not recede within this week, then go for sowing

short duration varieties up to last week of July. For higher production undertake transplanting of long duration *Sali* paddy variety and complete transplanting within July. For facilitate easy puddling and transplanting, farmers should arrange to inundate their field by construction of new bunds or repairing of old bunds. Undertake stripping and propping operation in sugarcane crop i.e. mechanical support to the crop so that strong wind cannot damage the crop from lodging. To control red rot disease of sugarcane water stagnation in the field should be avoided and rouging of the affected plants should be practiced. Undertake harvesting of matured cobs of maize at the earliest.

- In Meghalaya, continue nursery sowing of *Sali* rice and main field preparation for transplanting of *Sali* rice. Ensure proper drainage system in the ginger/turmeric and vegetable crop field. Spray Azadirachtin 1500 ppm @ 5ml/ litre of water inside the whorls against Fall Army Worm incidence in maize when weather is clear. Avoid stagnation of rain water at the base to prevent rotting of ginger rhizome. Spraying *Trichoderma Arzianum* @ 10ml/litre of water or spray neem oil @ 2ml/litre of water is a preventive measure against soft rot in turmeric and ginger.

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

- In Manipur, undertake main field preparation and transplanting of *kharif* rice; Drainout water nearly 15 days before harvesting *pre-kharif* rice. To control Fall Army worm in maize, manual destruction of egg masses and caterpillars may be done. Pheromone traps @ 4/ha for monitoring and 10/ ha for mass trapping of adult insects may be done. Spray Emamectin Benzoate 5% SG @6/15 litre water if infestation is above ETL. Spray Dichlorovos 76% EC @ 1ml/ litre of water if hairy caterpillar infestation in soybean/ groundnut is above ETL after current spell rain.
- In Mizoram, undertake repairing of the bunds of main field for maintaining the proper water level (10-15 cm) in the rice field. Undertake transplanting of low land rice seedlings. Farmers are advised not to transplant huge area of land in same rice variety. Farmers should not pluck out the whole seedling stock in sowing time; at least 20% of the seedling must keep as contingency measure. Undertake gap filling in groundnut and turmeric. Undertake planting of banana.
- In Tripura, complete nursery raising of *Aman* rice and sowing of groundnut in upland and medium upland. Complete main field preparation for transplanting of *Aman* rice and undertake transplanting of *Aman* rice. Spray Validamycin 3 L @ 2.5 ml or Hexaconazole 5 EC @ 2.0 ml or Thifluzamide 24 SC @ 0.75 ml or Propiconazole 25 EC @ 1 ml per litre of water against attack of stem borer in *Jhum* rice due to substantial decrease in sunshine hours with occasional rain if attack is above ETL.
- In Nagaland, complete nursery sowing of rice. Undertake main field preparation and transplanting of 21-28 day's old seedling in the main field. Continue sowing of soybean and groundnut. Apply extracts from neem seed or leaves against Fall Army Worm in maize.

### **Animal Husbandry**

- In Tripura, to protect the poultry from Coccidiosis disease, litter should be kept dry and hygienic, clean water should be provided to the birds, balanced diet with sufficient minerals may be provided. The disease is contagious; hence the infected birds may kept in isolation. Poultry shed must be cleaned periodically if possible with phenyl solution.

### **Fishery**

- In Upper Brahmaputra Valley Zone of Assam, as water has already started to accumulate in the ponds, go for stocking with fingerlings or carried over seeds of 15 cm size @ 5000 per hectare of water surface area.
- In Central Brahmaputra Valley Zone of Assam, apply cow dung at the rate of 500 gm per sq m. at least 15 days prior to releasing fingerlings into the tanks. Farmers may release fish prawn in the ponds during this period.

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

**Realised Rainfall:** Significant rainfall occurred in all districts of Andaman & Nicobar Islands, in all districts of Bihar; in all district of Jharkhand except Deoghar, Khunti, Pakur, Ramgarh, Ranchi, Sahebganj, Saraikela and West Singhbhum; in all districts of Odisha except Bhadrak, Jajpur, Jharsuguda, Malkangiri, Nawarangpur, Puri, Rayagada and Sonepur and in all districts of West Bengal & Sikkim. Weather remained dry/mostly dry over the rest of the region.

- **Advisories:Thunderstorm accompanied with lightning** very likely at a **few places** over Odisha, Bihar and West Bengal & Sikkim on 4<sup>th</sup>, at isolated places over Bihar from 5<sup>th</sup> to 7<sup>th</sup> and West Bengal & Sikkim on 5<sup>th</sup>, over Gangetic West Bengal on 6<sup>th</sup> & 7<sup>th</sup> July, 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/dust storm.
- As **rain/thundershowers** likely at **most/many places** over Odisha, Bihar, Jharkhand, West Bengal & Sikkim, Andaman & Nicobar Islands during the period along with **heavy to very heavy rainfall** at isolated places over Sub-Himalayan West Bengal & Sikkim on 4<sup>th</sup> and over Odisha on 5<sup>th</sup>, **heavy rainfall** at isolated places over Odisha, Bihar, Jharkhand on 4<sup>th</sup>, over Jharkhand and over Andaman & Nicobar Islands on 6<sup>th</sup> July, 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. Keep the cattle under shed during heavy rainfall.

### Odisha

- In North Eastern Ghat Zone, undertake nursery sowing of kharif transplanted rice for medium land and low land. Undertake sowing of arhar, groundnut, ragi and planting of turmeric, ginger.
- In North Central Plateau Zone, raise nursery for transplanted kharif rice in 400 sq. meter area for one-acre land; prepare 3 feet wide, 6 inch raised bed with suitable length; keep 1 feet distance between two beds for irrigation and drainage purpose; 40 baskets of FYM, 12 kg SSP and 2 kg MoP is required for 400 sq. meter of nursery area. This is optimum time for sowing maize and groundnut. Undertake sowing of arhar.
- In Eastern Ghat High Land Zone, undertake sowing of rice seeds in nursery bed as there is a probability of moderate rainfall in the coming days; before sowing, treat seeds with Mancozeb @ 2.5g/kg or Bavistin 50WP @ 2g/kg of seeds to protect the crop from blast, sheath blight, brown spot, sheath rot, etc. Also, start ploughing the main field for rice as sufficient moisture is available due to rain during previous days. Undertake sowing of maize and ragi and planting of ginger and yam

### Bihar

- In North West Alluvial Plain Zone, complete nursery sowing of paddy; weeding is advised in 10-15 days old paddy nursery. Undertake sowing of pigeon pea in upland areas; apply 20kg/ha Nitrogen, 45kg/ha Phosphorus and 20 kg/ha Potash and 20 kg sulphur/ha during land preparation; keep seed rate @ 18-20 kg/ha; treat seeds with Thiram/Captan @ 2.5gm/kg of seeds. Undertake sowing of sesame and sunflower after seed treatment with Thiram @ 2gm/kg of seeds.
- In South Bihar Alluvial Zone, undertake sowing of certified seeds of medium duration kharif rice with seed treatment of Bavistin @ 2g/kg and seed rate @ 20kg/ha. Prepare land and procure certified seeds of kharif maize. Undertake sowing of groundnut.

### Jharkhand

- In Central and North Eastern Plateau Zone, for transplanting in one-hectare area, prepare nursery bed for rice crop in 1000 sq m area by ploughing the field 3-4 times; apply 10 quintals FYM at the time of field

preparation; apply 2.2 kg urea, 6.25 kg SSP, 1.6 kg MoP per 100 sq m area; before sowing, treat seeds with Carbendazim @ 2g per kg seeds. Complete the sowing of maize with ridge and furrow method. Undertake sowing of pigeon pea, groundnut, sesame, finger millet and cow pea.

- In South Eastern Plateau Zone, taking advantage of rainfall received during previous days, start land preparation and simultaneous sowing of direct seeded upland rice. Carry out land preparation for sowing maize, groundnut, pigeon pea, urad, moong and finger millet.

## **West Bengal**

### **Sub-Himalayan West Bengal:**

- In Hill Zone, carry out preparation of main field for transplanting kharif rice. Undertake field preparation for sowing of soybean. Carry out harvesting of matured early/timely-sown maize crop.
- In Old Alluvial Zone, transplant healthy seedlings in the main field; mud seedbed seedlings become ready in 3-4 weeks and dry seedbed seedlings become ready in 5-6 weeks (3-4 leafed); planting older seedlings causes various problems and low yields; also, pluck the tips of the seedlings before transplanting to reduce the incidence of pests and diseases.

### **Gangetic West Bengal:**

- In Coastal Saline Zone, complete nursery sowing of Aman paddy as early as possible; apply urea in the seed bed; prepare main field by ploughing and mixing dhaincha plant with soil. Apply SAF @ 2g/litre of water to control rotting at the base of flower in okra and pumpkin crops at flowering and fruiting stages. Apply Bavistin @ 1g/litre of water to manage phomopsis in brinjal crop at fruiting stage.
- In Undulating Red and Laterite Soil Zone, complete nursery bed preparation for the sowing of Aman rice; hand weeding is advised in 10-12 days nursery; Carry out preparation of the main field; clean the bunds of the main fields to conserve the rainwater.
- In New Alluvial Zone, keep the nursery bed submerged in a shallow layer of water when rice seedlings are about 2 cm high; keep the seedbed weed-free; apply organic manure, Phosphate, Boron & Zinc; apply fungicide Hexaconazole 1ml per litre of water; carry out transplanting of 25-30 days old seedlings. Undertake sowing of cucurbits.

## **Andaman & Nicobar Islands**

- Strengthen the rice field bunds to store water for main field preparation and use trap to capture the adult rodent in rice nursery. Avoid stagnation of water in low lying vegetable fields; clean the drainage channel to remove excess water. Harvest the mature banana and provide support to the fruit bearing banana tree as wind speed may rise to 39 km/h. Clean the crown of coconut tree to avoid the attack of Rhinoceros beetle in coconut field.

## **Animal Husbandry**

- In Jharkhand, carry out vaccination against H.S & B.Q in cow, buffalow, swine, goat and sheep. Treat diarrhoea due to indigestion of green grass with Neblon powder and Sulpha bolus in consultation with local veterinarian. Give medicated bath to cattle with Deltamethrin or Alfa Cypermethrin @ 2ml/litre of water on sunny days to control ectoparasite.
  - In A&N Islands, keep the day-old chicks inside the shelter and keep the floor of poultry shed dry.

## **Fishery**

- In West Bengal, drain out excess water and keep the pond water clean; use Terramycin tablets to control bacterial diseases.

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

**Realised Rainfall:** Rainfall occurred in all districts of Maharashtra except Gadchiroli, Chandrapur, Gondia; in Devbhoomi Dwarka, GirSomnath, Junagadh, Kutch and Porbandar districts of Saurashtra & Kutch. Weather

remained mainly dry over remaining districts of Gujarat.

#### Advisories:

- As **rain/thundershowers** likely at **most/many** places over Gujarat from 4<sup>th</sup> to 7<sup>th</sup>, over Konkan&Goa, Madhya Maharashtra, Vidarbha, during the period along with **Heavy to very heavy rainfall with extremely heavy falls** at isolated places over Gujarat region, Madhya Maharashtra and Konkan & Goa; **heavy to very heavy rainfall** at isolated places over Saurashtra & Kutch **on 4<sup>th</sup>**, **Heavy to very heavy rainfall with extremely heavy falls** at isolated places over Gujarat region; **heavy to very heavy rainfall** at isolated places over Saurashtra & Kutch and Konkan & Goa and **heavy rainfall** at isolated places over Vidarbha, Madhya Maharashtra, **on 5<sup>th</sup>**, **Heavy to very heavy rainfall** at isolated places over Vidarbha, Gujarat State and Konkan & Goa and **heavy rainfall** at isolated places over Gujarat state, Madhya Maharashtra **on 6<sup>th</sup>**. **Heavy to very heavy rainfall** at isolated places over Gujarat region and **heavy rainfall** at isolated places over Vidarbha, Saurashtra & Kutch, Konkan & Goa **on 7<sup>th</sup> July**, 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.

#### Maharashtra

- In Konkan, arrange adequate drainage facilities in orchards, standing crops and vegetable fields. Complete transplanting of 21-25 days old rice seedlings. Maintain 2-5 cm water level in the fields. Undertake stone grafting programme in the mango nurseries. Arrange adequate drainage facilities in orchards, standing crops and vegetable fields. Continue finger millet (30 days old) seedlings.
- In Madhya Maharashtra, undertake transplanting of 21-25 days old rice seedlings and finger millet (30 days old) seedlings. Continue sowing of *kharif* crops like cotton, soybean, jowar, groundnut, black gram and green gram and pigeon pea. Undertake land preparation for sowing of *adsali* sugarcane (varieties : CO-86032, CO-M-0265). Undertake intercultural operation like hoeing in 20 to 25 days old green/ black gram in early sown standing crops like cotton, pigeon pea, soybean.
- In Marathwada, continue sowing of kharif crops like soybean, groundnut, green gram and black gram. Undertake intercultural operation like hoeing in early sown crops like soybean, jowar and maize. Wait for sowing in (Marathwada (Beed district: Dharur taluka, Hingoli district: Vasmat taluka, Jalna district: Jalna taluka, Nanded district: Deglur and Kinwat talukas, Osmanabad district : Osmanabad, Lohara, Paranda, Tuljapur, Umarga talukas and Parbhani district : Gangakhed taluka) till receipt of sufficient rainfall.
- In East Vidharbha, undertake transplanting of 21-25 days old rice seedlings, continue sowing of kharif crops like cotton, pigeon pea, green gram and black gram. Farmers are advised to wait for sowing in West Vidarbha (Akola district: Akola, Balapur, Akot, Murtijapur and Patur talukas; Amravati district: Dharni and Chandur Railway talukas; Yeotmal district: Darwha, Maregaon, Ner, Ralegaon, Umardhed , Yavatmal and Zarijamni talukas;) till receipt of sufficient rainfall.

#### Gujarat

- In North Gujarat, carry out land preparation for sowing of pearl millet, green gram groundnut, maize, pigeon pea, cowpea, sesame, hybrid cotton and B.T. cotton; undertake sowing after receipt of sufficient rainfall. Prepare nursery for vegetable crops like chilli, tomato, brinjal, etc. Sowing of cotton, pigeon pea, castor and sesame as an intercrop with groundnut is suggested to reduce crop loss due to uneven weather and erratic rainfall. Harvest matured fruits of mango, papaya, sapota, lemon, pomegranate. Continue new plantation of horticultural crops.
- In Middle Gujarat, undertake sowing of soybean after receipt of sufficient rainfall and planting of banana. Continue sowing of Bt. cotton where irrigation facility is available. Carry out thinning and gap filling within 10 to 15 days of sowing to maintain plant population. Continue nursery preparation for rice and vegetable (chili, brinjal and tomato) crops. For Iron deficiency or Chlorosis in young rice seedlings, maintain sufficient soil moisture and depending on the intensity of chlorosis, spray % water soluble

Ferrous Sulphate solution.

- In South Gujarat, undertake planting of banana. To overcome Iron deficiency in rice seedlings, spraying of Ferrous Sulphate @ 0.5 % with 0.25% lime solution is recommended. Carry out sowing of pigeon and cotton with receipt of sufficient rainfall. Rice seedlings of age of 21 days and above should be used for transplanting; transplant 2-3 seedlings per hill. Arrange for proper drainage facility.
- In Saurashtra and Kutch, wherever sufficient rainfall for sowing received, undertake sowing of groundnut, cotton, sesame, pearl millet, green gram, black gram and cowpea, Adopt intercrop like sesame, groundnut, soybean, pulses and maize in cotton crop for risk management under rainfed & partial irrigation. Sowing of pigeon pea may be taken in July end. Undertake land preparation for transplanting of tomato, chilli, brinjal and early cauliflower. Continue sowing of cucurbits, ladyfinger, cluster bean, kidney bean, cowpea, tur, Amaranthus, fodder maize and fodder sorghum.

#### **Animal Husbandry**

- In Gujarat, spray phenyl in the animal shed to avoid flies and mosquitos.

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

**Realised Rainfall:** Rainfall occurred in all districts of Madhya Pradesh except Anupur, Narsingpur, Burhanpur, Gwalior, Harda, Mandsaur and Neemuch districts, in all districts of Chhattisgarh except Bastar, Bijapur, Janjgir, Kabirdham, Kanker, Kondagaon, Rajnandagaon, Sukuma and Surguja districts.

- **Advisories: Thunderstorm accompanied with lightning** very likely at **isolated places** over Madhya Pradesh, Chhattisgarh on 4<sup>th</sup> July, 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/dust storm.
- As **rain/thundershowers** likely at **most/many places** over Madhya Pradesh, Chhattisgarh during the period along with **heavy/heavy to heavy rainfall** at isolated places over Chhattisgarh, Madhya Pradesh on 4<sup>th</sup> & 5<sup>th</sup> July, 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. Keep the cattle under shed during heavy rainfall.

#### **Madhya Pradesh**

- In Jhabua Hills Zone, continue sowing of maize, black gram and soybean crops. Seed treated with 2.0 gm thiamin + 1.0 gm Carbendazim per kg of seed after that treated with rhizobium culture & PSB culture @ 5.0 gm/ kg seed each before sowing of crop. Prepare field for cultivation of rainy season vegetables in raised furrow and poly-mulching method.
- In the Nimar Valley Zone, continue sowing of maize crop; procure good quality seeds from certified sources; keep the seed rate at 20 kg/ha. In case of early yellowing and drying of cotton plant, apply drenching of Carbendazim @ 1gm/litre of water.
- In Kymore Plateau Zone, continue sowing of short/medium duration varieties of soybean and early maturing/medium term pigeon pea.
- In Bundelkhand Zone, continue planting of ginger and colocasia crops; select improved varieties and treat the seeds with fungicide before sowing. Continue nursery sowing of tomato, chilli, brinjal, etc. Carry out digging of pits for establishing new orchards.

#### **Chhattisgarh**

- In Chhattisgarh Plain Zone, farmers must complete the sowing of kharif crops like rice, Soybean, arhar, sesamum, maize, urad, moong and groundnut etc. The sowing should be done in lines. Seed treatment should be done before sowing. Granular fertilizers should be applied in line sowing. Undertake transplanting of rice. At the

time of transplanting, 2-3 seedlings should be transplanted per hill. The spacings should be maintained 15 cms x 10 cms (early vars) and should be 20 cms x 10 cms (for medium to late duration vars)

- In Northern Hill Zone, continue sowing of kharif crops like pigeon pea, soybean, maize, groundnut, etc. Carry out intercultural operation in tomato, brinjal, chilli, okra and other vegetable crops.
- In Bastar Plateau Zone, undertake transplanting of rice using SRI or biasi method. Continue sowing of maize up to the first fortnight of July. Carry out planting of tuber crops like colocasia, jimikand, ginger and turmeric by the end of June. Prepare vegetable nursery on a 15cm high raised bed; sow the seeds after seed treatment against rotting diseases; provide thin net around the nursery as a protection against vector diseases. Continue sowing of minor millet (Kodo) and finger millet.

#### **Animal Husbandry**

- In Madhya Pradesh, carry out vaccination of animals against the Black Quarter, Anthrax and other disease as per advice of animal experts. Vaccinate poultry birds to prevent Ranikhet disease (first F-1 in age of 7 days & second R2B in age of 8 week). Provide 50 gm mineral mixture per animal for supplement the nutrient requirement and green fodder 25 kg/cattle/day and concentrate mixture as per their requirement.

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

**Realised Rainfall** :Significant rainfall occurred in Kangra district of Himachal Pradesh; Kathua and Udhampur districts of Jammu & Kashmir and in Almora, Bageshwar, Pithorgarh and Udham Singh Nagar districts of Uttarakhand; in all districts except Chandauli, Farrukhabad and Gazipur districts of East UP; in Auraiya, Bareilly, Firozabad, Hamirpur, Jhansi, Kanshiramnagar, Lalitpur, Mahoba, Saharanpur, districts of West UP; in Faridabad districts of Haryana, Bhatinda, Fathegarh Saheb and Nawashahar districts of Punjab; Banswara, Baran, Bharatpur, Bhilwara, Dholpur, Jhalawar, Kota in East Rajasthan.

#### **Advisories**

- **There is a possibility of attack of desert locust in the crop fields in West Uttar Pradesh;** to control, adopt mechanical measures like making loud noise by beating drums, burning crackers, etc. during morning hours. For chemical control, spray Diflubenzuron 25% WP 10 g or **Chlorpyrifos 20% EC @ 2.4ml or Deltamethrin 2.8% EC @ 1 ml in litres of water.**
- **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and East Rajasthan; **with lightning** at a few places over East Uttar Pradesh and at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, West Uttar Pradesh on 4<sup>th</sup>, **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and East Rajasthan; **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Uttar Pradesh on 5<sup>th</sup> & 6<sup>th</sup>, **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and West Rajasthan and with lightning at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Uttar Pradesh, East Rajasthan, on 7<sup>th</sup> July, **thunderstorm/Duststorm accompanied with lightning & gusty winds (speed 40-50 kmph)** very likely at isolated places over West Rajasthan on 4<sup>th</sup> & 5<sup>th</sup> July, provide mechanical support to 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/ dust storm.
- **As rain/thundershowers likely at most/many places** over West Uttar Pradesh from 4<sup>th</sup> to 7<sup>th</sup>, over East Uttar Pradesh and Uttarakhand during the period, over Punjab, Haryana from 5<sup>th</sup> to 7<sup>th</sup> along with **heavy to very heavy rainfall** at isolated places over Uttarakhand, East Uttar Pradesh on 4<sup>th</sup> and **heavy rainfall** at

isolated places over Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh on 5<sup>th</sup>, heavy rainfall at isolated places over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, West Rajasthan on 6<sup>th</sup>, over Uttarakhand, East Uttar Pradesh on 7<sup>th</sup> July, 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 Cold Arid Zone, carry out weeding in barley and wheat and maintain proper soil moisture. Undertake land preparation for sowing of maize. Apply irrigation to vegetables. Undertake transplanting of capsicum under polyhouse.
- In Intermediate Zone, continue transplanting of rice. Undertake sowing of maize. Undertake land preparation for sowing of kharif pulses. Carry out intercultural operations like hoeing and weeding in tomato, brinjal and chilli.
- In Valley Temperate Zone, carry out hand weeding in rice, 18 to 20 days after transplanting. Carry out weeding in 25-30 days old kharif pulses. Undertake land preparation for fresh plantation of saffron. Maintain optimum soil moisture in vegetable crops at flowering stage.
- In Sub-Tropical Zone, continue sowing of maize. Continue transplanting of tomato, capsicum and chilli seedlings. Continue sowing of okra.

### **Himachal Pradesh**

- In Mild Hills Sub Humid Zone, to control premature leaf fall or on observation of alternaria spots on apple; spray Metiram and Paclostrobin @300g/200 litres of water.
- In High Hill Temperate Dry Zone, carry out weeding in potato. To control cutworms in cauliflower and cabbage, spray 1500 ml Chloropyrifos 20 EC or 750 ml Cypermethrin 10 EC in 750 litres of water per hectare on plants and on the ground surface. To control leaf miner and thrips in pea, spray 75ml Cypermethrin (7 EC) or 50ml Dichlorvos (Nuvan 76 EC) in 100 litres of water on the crops at any time when insects are visible.
- In Mid Hills Sub Humid Zone, to control the fruit rot disease in tomato, blight & fruit rot in capsicum; spray Diethane M-45 or Mass M-45 (250 g/100 L) OR Blitox/ Masstox-50 (300g/100 L) at the interval of 7-10 days. In cole crops and in maize, apply recommended dose of FYM and Nitrogen fertilizers. Carry out weeding and hoeing repeatedly as and when weather becomes clear. Undertake transplanting of tomato seedlings. To control the black rot disease in apple, spray Propineb or Zineb @ 600 g / 200 litres of water.
- In Sub Montane and Low Hills Sub Tropical Zone, continue land preparation for transplanting of rice seedlings. Continue sowing of fodder crops like maize, cowpeas and soybean in irrigated areas.

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

- In Western Zone of Punjab, continue transplanting of rice in the main field. Undertake sowing of okra varieties Punjab Suhawani and Punjab-8 which are tolerant to yellow vein mosaic virus. Regularly monitor cotton crop for infestation of whitefly; if population reaches 6 whiteflies per leaf in the upper canopy, spray with 80g Ulala 50 WG (flonicamid) or 200g Polo in 125-150 litres of water/acre before 10 AM on a clear day. Spray Proclaim 5 SG @80g or Coragen 18.5 SC @ 80ml in 100-125 litres of water per acre to control fruit and shoot borer in brinjal. Brinjal mite may also be checked by spraying 300 ml Omite 57 EC in 100-150 litres of water per acre.
- In Western Plain Zone of Punjab, undertake transplanting of paddy crop, if sufficient water is available. Monitor the leaf curl infected cotton plants. Regularly inspect the cotton field for white fly infestation and keep the fields free from Kanghibuti (Sida sp.) and Peelibuti (Abutilon sp.) which act as collateral hosts of leaf curl virus. Make necessary interculture operation in the cotton fields to keep the field free from weeds. Keep the maize field free from weeds. Avoid rain water to stand in the main crop as it is

highly sensitive to standing water and promotes bacterial stalk rot.

- In Undulating Plain Zone of Punjab, complete sowing of unpuddled direct-seeded basmati using PAU recommended varieties like Pusa Basmati 1121 & Pusa Basmati 1509 by this period. Complete transplanting of paddy by this week and keep standing water for 15 days in the field. Complete sowing of kharif maize by this week.
- In Central Plain Zone of Punjab, complete the sowing of direct seeded basmati rice as soon as possible during the period. Undertake transplanting of Punjab Basmati -5, Punjab Basmati -4, Punjab Basmati 3, Punjab Basmati 2, Pusa basmati 1637, Pusa basmati 1718, Pusa Basmati 1121 during the period. Undertake sowing of okra and cucurbits such as cucumber, bottle gourd, sponge gourd, pumpkin, etc. To control maize borer, spray 30ml Coragen 18.5 SC in 60 litres of water per acre.
- In Western Zone of Haryana, undertake sowing of bajra, guar pigeon pea and vegetables. Apply irrigation in early sown bajra crop.
- In Eastern Zone of Haryana, maintain social distancing during agricultural operations. Monitor rice nurseries constantly against attack of bakanae disease; spray Carbendazim @ 2.0 gram per litre of water. Prepare fields for maize crop. This is suitable time to grow fodder sorghum, cucurbits etc. Irrigate okra as per requirement of the crop. In present weather conditions, rouging of viral infested crop should be done in chilli. Infected plants should be uprooted and buried in the soil. After rouging, spraying of Imidacloprid @ 0.3 ml per litre of water is advised to control the vector.
- In Delhi, maintain social distancing during picking of vegetables and other agricultural operations. Monitor constantly paddy nurseries against attack of bakanae disease; spray Carbendazim @ 2.0 gram per litre of water. Undertake transplanting of 20-25 days old paddy seedling in prepared fields and sowing of maize and soybean, short duration varieties of pigeonpea (Pusa 991, Pusa 992, Pusa 2001, Pusa 2002) in this week.

#### **Uttar Pradesh:**

- **In East Uttar Pradesh**, continue transplanting of rice nursery in main fields. Continue sowing of pigeon pea, green gram and black gram and Maize. Farmers are advised to give top dressing of urea in their spring sugarcane as proper moisture is available in soil & tying them to avoid lodging for fast growing sugarcane. Transplanting of brinjal, chilli and early cauliflower are advised for those farmers whose seedlings are ready. Harvest mature crop of mango from 8-10 cm long stalk from tip in morning or evening time.
- **In West Uttar Pradesh**, undertake transplanting of 20-25 days old paddy seedlings. Prepare field for transplanting of kharif onion, early cauliflower and cabbage. For prevention of thrips and mealybugs fall army moth in sugarcane crop, spray 800 ml of Quinalfos 25 EC or 750 ml of Profenophos 40% + Cypermethrin 4% in 625 liters of water per hectare on clear days. Do intercultural operation from time to time in Sugarcane field. Undertake sowing of maize and groundnut. Prepare nursery for nursery crops for vegetables sown in kharif, such as brinjal, chili, tomato and early cauliflower, etc

#### **Uttarakhand**

- In Bhabar and Tarai Zone, continue transplanting of rice seedlings. Drain out excess water from tomato fields. Continue nursery sowing of cabbage, cauliflower, broccoli and knolkhol. Undertake plucking of early varieties of apples.
- In Sub Humid Sub Tropic Zone, continue transplanting of rice. Undertake land preparation for sowing of maize. Maintain optimum soil moisture in sugarcane field.
- In Hill Zone, Continue transplanting of brinjal, tomato, capsicum and chilli. Carry out gap filling 10 days after transplanting of rice.

#### **Rajasthan**

- In Flood Prone Eastern Plain Zone, make necessary field preparation for timely sowing of kharif crops. Prepare field by deep ploughing. Procure certified and good quality seed, fertilizers, agro-chemicals and other inputs in advance.

- In Hyper arid partial irrigated zone, prepare for sowing of groundnut in the month of June.
- In Transitional Plain Zone of Inland Drainage, undertake sowing of bajra.
- In Semi Arid Eastern Plain one, for the sowing of kharif crops like pearl millet, sorghum, maize & cluster bean etc. arrange seed, fertilizers & chemicals in advance so that timely sowing of these crops can be done at the onset of monsoon.
- In Arid Western Plain Zone, for the control of sucking insects in cotton crop, spray Dimethoate 30 EC @ 1.0 liter per hectare.
- In Irrigated North Western Plain Zone, on appearance of early stem borer and root borer in sugarcane crop, use Furodon dust 3% @ 6 kg per bigha or Phorate 10% @ 4 kg per bigha in sugarcane crop. Repeat the spray after 40 to 50 days.
- In Sub Humid Southern Plain and Aravali Hill Zone, undertake sowing of maize.

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