



National Agromet Advisory Service Bulletin

Friday 08th May 2020
(For the period 08th to 12th May 2020)



Issued by
India Meteorological Department

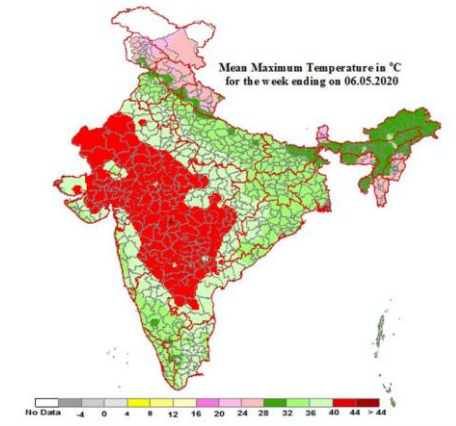
Weblink For

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

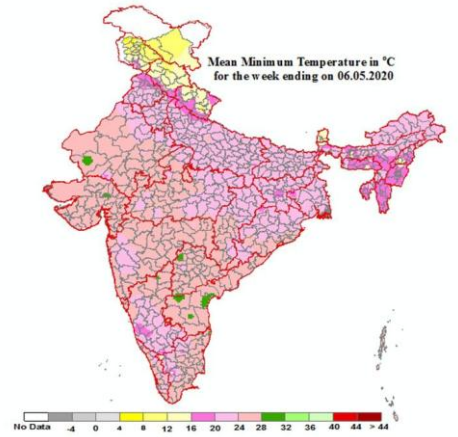
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

spatial distribution of weather parameters for the week ending on 06.05.2020

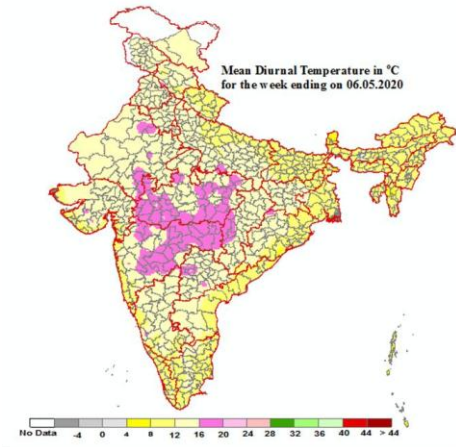
Mean Maximum Temperature (°C) for the week ending on 06.05.2020



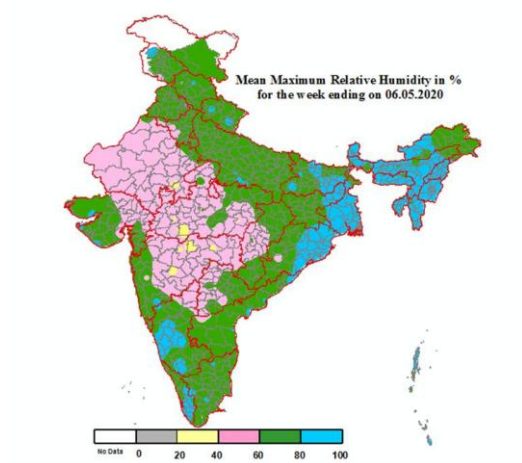
Mean Minimum Temperature (°C) for the week ending on 06.05.2020



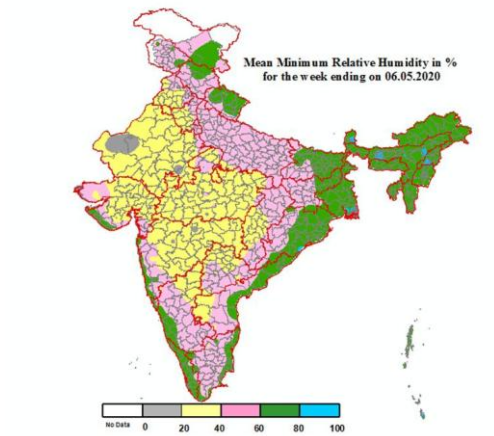
Mean Diurnal Temperature Variation (°C) for the week ending on 06.05.2020



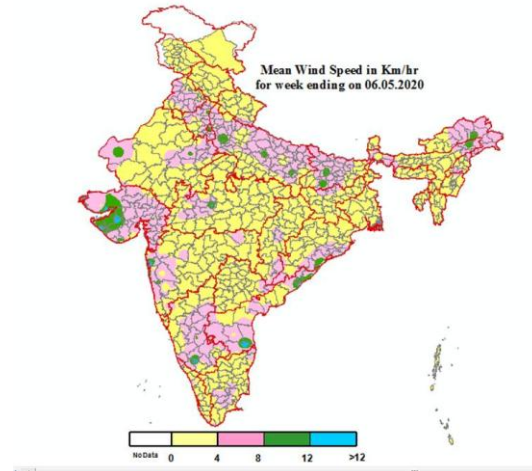
Mean Maximum Relative Humidity (%) for the week ending on 06.05.2020



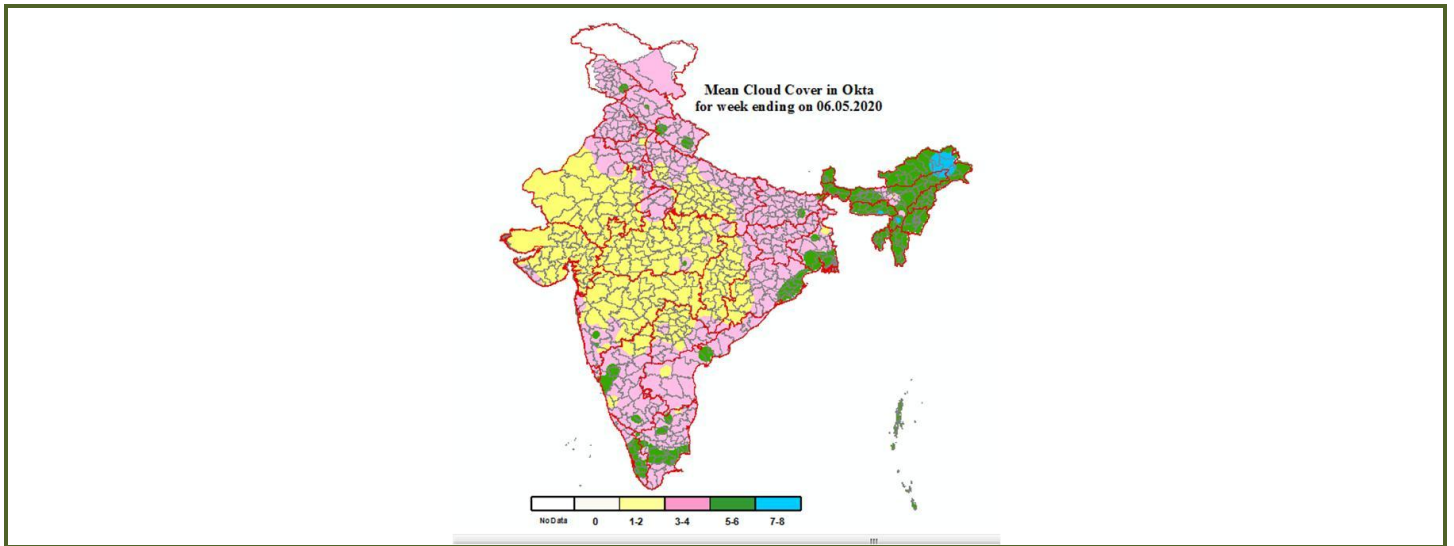
Mean Minimum Relative Humidity (%) for the week ending on 06.05.2020



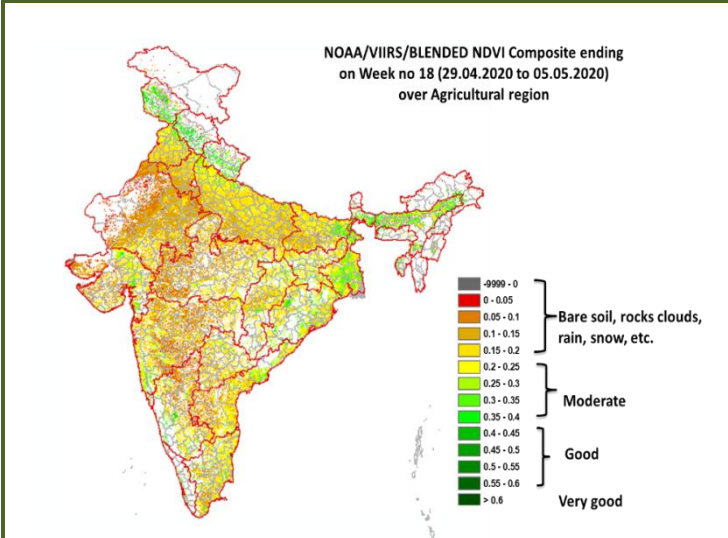
Mean Wind Speed (km/hr) for the week ending on 06.05.2020



Mean Cloud Cover (okta) for the week ending on 06.05.2020

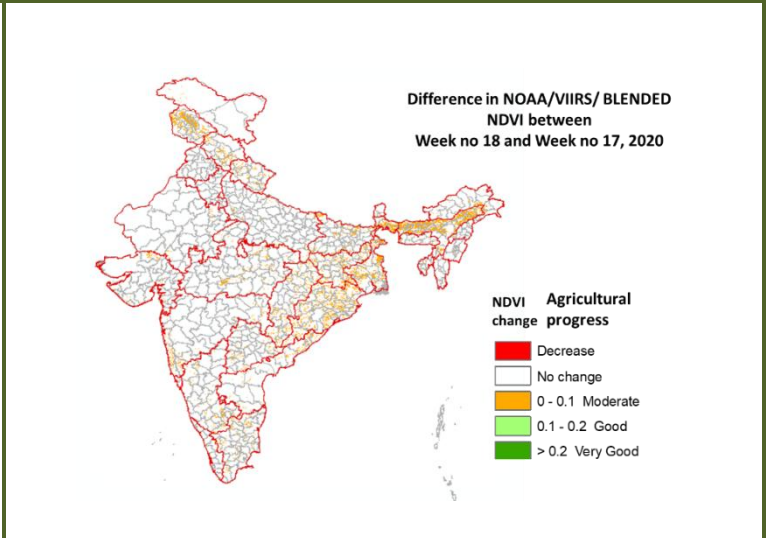


NOAA/VIIRS/BLENDED NDVI composite for the week number 18 (29.04.2020 to 05.05.2020) over Agricultural regions of India



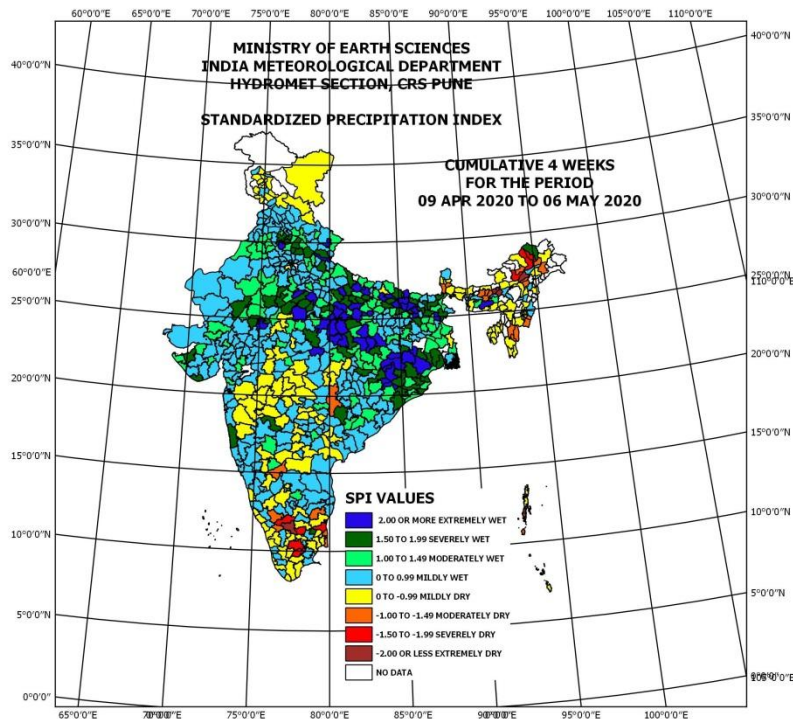
Agricultural vigour was good at few places of Valley region of Jammu & Kashmir; isolated places of Himachal Pradesh, Uttarakhand, North Eastern states, Coastal Karnataka & South Interior Karnataka. Rest of the country NDVI could not be captured as *rabi* crops have been harvested and *zaid* crops are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

Difference in NOAA/VIIRS/BLENDED NDVI between week number 18, 2020 and week number 17, 2020



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 09th April to 06th May 2020



- Extremely/Severely wet conditions exist in Upper Siang district of Arunachal Pradesh; Begusarai, Bhagalpur, East Champaran, Darbhanga, Gopalganj, Jamui, Khagaria, Kishanganj, Lakhisarai, Madhepura, Muzaffarpur, Patna, Purnea, Samastipur, Saran, Sitamarhi, Siwan, Vaishali districts of Bihar; Jamnagar, Gir Somnath district of Gujarat; Ambala, Kurukshetra, Kaithal districts of Haryana; Bhind, Datia, Gwalior, Morena, Neemuch, Sheopur, Shivpuri, Chhatarpur, Dindori, Katni, Narsinghpur, Panna, Rewa, Sagar, Satna, Shahdol, Umaria, Singrauli districts of West Madhya Pradesh; Ratnagiri, Osmanabad districts of Maharashtra; West Khasi Hills districts of Meghalaya; Angul, Bargarh, Bhadrak, Boudhgarh, Cuttack, Deogarh, Ganjam, Jagatsinghpur, Jajpur, Jharsuguda, Keonjhar, Mayurbhanj, Nayagarh, Sambalpur, Sonapur, Sundargarh districts of Orissa; Patiala district of Punjab; Pali, Chittorgarh, Sawai Madhopur, Tonk, Dholpur, Dausa districts of Rajasthan; Perambalur district of Tamilnadu; Dadara & Nagar Haveli districts of Union Territory; Allahabad, Ambedkar Nagar, Bahraich, Ballia, Banda, Barabanki, Basti, Deoria, Fatehpur, Gonda, Lucknow, Pratapgarh, Rae Bareilly, Sultanpur, Unnao, Varanasi, Sahuji Maharaj Nagar, Sant Ravidas Nagar, Amethi, Bareilly, Bijnor, Hamirpur, Muzaffarnagar, Saharanpur districts of Uttar Pradesh; Malda, East Midnapore, West Midnapore districts of West Bengal; Koderma, Sahibganj, East Singhbhum, West Singhbhum, Simdega, Seraikela-Khar, Khunti districts of Jharkhand; Nainital, Udham Singh Nagar, Bageshwar districts of Uttarakhand; Koriya, Surguja, Bijapur, Baloda Bazaar, Balrampur, Surajpur districts of Chhatisgarh.
- Extremely/Severely dry conditions exist in Papumpara, West Siang districts of Arunachal Pradesh; Darrang, Lakhimpur, Morigaon districts of Assam; Chamarajanagar district of Karnataka; Cuddalore, Dindigul, Erode, Madurai, Namakkal 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 13th May, 2020

- ◆ Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table-1.
- ◆ Slight rise in maximum Temperatures very likely over Northwest India during next 24 hours, over Central India during next 2 days and gradual fall thereafter.
- ◆ Maximum Temperatures likely to remain between 41-44°C over some parts of Rajasthan, Gujarat, Madhya Maharashtra, Marathwada, Telangana, Rayalaseema and North Interior Karnataka during next 2-3 days.
- ◆ No significant change in maximum temperatures likely over rest parts of the country during next 2-3 days.

5 Day Rainfall Forecast (MID-DAY)

08th May 2020

Met-Sub-Division	08-May Today	09May Sat	10May Sun	11May Mon	12May Tue
1. Andaman & Nicobar Islands	WS	FWS	FWS	FWS	SCT
2. Arunachal Pradesh	FWS	SCT	SCT	SCT	FWS
3. Assam & Meghalaya	FWS	SCT	SCT	FWS	FWS
4. N. M. M. & T.	FWS	SCT	SCT	FWS	FWS
5. S.H. West Bengal & Sikkim	SCT	SCT	SCT	FWS	FWS
6. Gangetic West Bengal	ISOL	FWS	FWS	SCT	SCT
7. Odisha	ISOL	SCT	FWS	SCT	SCT
8. Jharkhand	ISOL	ISOL	SCT	SCT	FWS
9. Bihar	ISOL	ISOL	ISOL	SCT	SCT
10. East Uttar Pradesh	DRY	DRY	ISOL	ISOL	ISOL
11. West Uttar Pradesh	DRY	DRY	ISOL	ISOL	ISOL
12. Uttarakhand	DRY	ISOL	SCT	SCT	SCT
13. Haryana, Chd & Delhi	DRY	ISOL	SCT	ISOL	ISOL
14. Punjab	DRY	ISOL	SCT	ISOL	ISOL
15. Himachal Pradesh	DRY	ISOL	SCT	SCT	SCT
16. J & K and Ladakh	ISOL	SCT	SCT	ISOL	ISOL
17. West Rajasthan	DRY	DRY	ISOL	ISOL	ISOL
18. East Rajasthan	DRY	ISOL	ISOL	ISOL	ISOL
19. West Madhya Pradesh	DRY	ISOL	SCT	ISOL	ISOL
20. East Madhya Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
21. Gujarat Region	DRY	DRY	ISOL	ISOL	DRY
22. Saurashtra & Kutch	DRY	DRY	DRY	DRY	DRY
23. Konkan & Goa	DRY	DRY	ISOL	ISOL	ISOL
24. Madhya Maharashtra	ISOL	ISOL	SCT	ISOL	ISOL
25. Marathawada	ISOL	ISOL	SCT	ISOL	ISOL
26. Vidharbha	ISOL	ISOL	SCT	ISOL	ISOL
27. Chhattisgarh	ISOL	ISOL	SCT	SCT	SCT
28. Coastal A. P. & Yanam	ISOL	ISOL	ISOL	ISOL	ISOL
29. Telangana	ISOL	ISOL	SCT	ISOL	ISOL
30. Rayalaseema	ISOL	ISOL	ISOL	ISOL	ISOL
31. T.N.,Puducherry & Karaikal	ISOL	ISOL	ISOL	ISOL	ISOL
32. Coastal Karnataka	SCT	SCT	ISOL	SCT	FWS
33. North Interior Karnataka	ISOL	ISOL	SCT	ISOL	SCT
34. South Interior Karnataka	SCT	ISOL	ISOL	ISOL	SCT
35. Kerala & Mahe	FWS	SCT	SCT	FWS	FWS
36. Lakshadweep	WS	SCT	SCT	SCT	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:

08 May (Day 1): ♦ **Thunderstorm accompanied with lightning, hail & gusty winds** (speed reaching 30-40 kmph) very likely at isolated places over Assam & Meghalaya, Arunachal Pradesh and Telangana; **with lightning & squall** (speed reaching 50-60 kmph) at isolated places over Andaman & Nicobar Islands; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Jharkhand, Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura, Rayalaseema, South Interior Karnataka, Tamilnadu, Puducherry & Karaikal, Lakshadweep and Kerala & Mahe and **with lightning** at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Odisha, Madhya Maharashtra, Marathawada, Coastal Andhra Pradesh & Yanam and Coastal & North Interior Karnataka.

♦ **Heavy rainfall** very likely at isolated places over Andaman & Nicobar Islands and Lakshadweep.

♦ In association with occasional thundersqualls, wind speed reaching 40-50 kmph very likely over south Andaman Sea & north Sumatra coast and Lakshadweep-Maldives area. Fishermen are advised not to venture into these areas.

09 May (Day 2): ♦ **Thunderstorm accompanied with lightning, hail & gusty winds** (speed reaching 30-40 kmph) very likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad; **with lightning & squall** (speed reaching 50-60 kmph) at isolated places over Gangetic West Bengal and Andaman & Nicobar Islands; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over East Rajasthan, Vidarbha, Odisha, Jharkhand, Nagaland, Manipur, Mizoram & Tripura, Assam & Meghalaya, Madhya Maharashtra, Marathawada, Telangana, Lakshadweep and Kerala & Mahe and **with lightning** at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, East Madhya Pradesh, Chhattisgarh, Arunachal Pradesh, Rayalaseema, Coastal Andhra Pradesh & Yanam, Karnataka and Tamilnadu, Puducherry & Karaikal.

♦ In association with occasional thundersqualls, wind speed reaching 40-50 kmph very likely over south Andaman Sea & north Sumatra coast. Fishermen are advised not to venture into these areas.

10 May (Day 3): ♦ **Thunderstorm accompanied with lightning, hail & gusty winds** (speed reaching 30-40 kmph) very likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Himachal Pradesh, Uttarakhand, East Rajasthan, East Uttar Pradesh, Madhya Pradesh, Telangana and Chhattisgarh; **with lightning & squall** (speed reaching 50-60 kmph) at isolated places over Gangetic West Bengal; **with lightning & gusty winds** (speed reaching 40-50 kmph) at isolated places over Jharkhand and Odisha; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, Vidarbha, Bihar, Madhya Maharashtra, Marathawada, Coastal Andhra Pradesh & Yanam, Rayalaseema, North Interior Karnataka, Lakshadweep and Kerala & Mahe and **with lightning** at isolated places over West Rajasthan, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Coastal & South Interior Karnataka and Tamilnadu, Puducherry & Karaikal.

♦ **Duststorm** very likely at isolated places over Rajasthan.

♦ **Heavy rainfall** very likely at isolated places over Odisha and Coastal Andhra Pradesh.

11 May (Day 4): ♦ **Thunderstorm accompanied with lightning, hail & gusty winds** (speed reaching 30-40 kmph) likely at isolated places over Himachal Pradesh, Uttarakhand, East Rajasthan, East Uttar Pradesh and Chhattisgarh; **with lightning, hail & squall** (speed reaching 50-60 kmph) at isolated places over Jharkhand; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, East Madhya Pradesh, Vidarbha, Bihar, West Bengal & Sikkim, Odisha, Telangana, South Interior Karnataka, Lakshadweep and Kerala & Mahe and **with lightning** at isolated places over West Madhya Pradesh, West Rajasthan, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathawada, Coastal Andhra Pradesh & Yanam, Rayalaseema, Coastal & North Interior Karnataka and Tamilnadu, Puducherry & Karaikal.

♦ **Duststorm** likely at isolated places over Rajasthan.

♦ **Heavy rainfall** likely at isolated places over Assam & Meghalaya and Kerala & Mahe.

12 May (Day 5): ♦ Thunderstorm accompanied with lightning, hail & gusty winds (speed reaching 30-40 kmph) likely at isolated places over Uttarakhand, East Uttar Pradesh and Chhattisgarh; **with lightning, hail & squall** (speed reaching 50-60 kmph) at isolated places over Jharkhand; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Haryana, Chandigarh & Delhi, Rajasthan, East Madhya Pradesh, Vidarbha, Bihar, West Bengal & Sikkim, Odisha, Arunachal Pradesh, Assam & Meghalaya, Telangana, Karnataka, Lakshadweep and Kerala & Mahe and **with lightning** at isolated places over Punjab, West Madhya Pradesh, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathawada, Coastal Andhra Pradesh & Yanam, Rayalaseema and Tamilnadu, Puducherry & Karaikal.

♦ **Heavy rainfall** likely at isolated places over Assam & Meghalaya, South Interior Karnataka and Kerala & Mahe.

Weather Outlook for subsequent 2 days from 13th May to 15th May, 2020

♦ Fairly widespread to widespread rain/ thundershowers likely over Northeast India; Scattered to fairly widespread rain/ thundershowers over East India and south peninsular India and isolated to scattered over Northwest & adjoining Central India and Islands. Heavy rainfall at isolated places is also likely over Northeast and adjoining East India.

♦ Mainly dry weather likely to prevail over the remaining parts of the country.

Salient advisories

➤ **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.

- **Thunderstorm accompanied with lightning, hail & gusty winds** (speed reaching 30-40 kmph) very likely at isolated places over Assam & Meghalaya and Arunachal Pradesh on 8th, over Telangana on 8th & 10th, over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad on 9th & 10th, over Madhya Pradesh on 10th, over Himachal Pradesh and East Rajasthan on 10th & 11th and over Uttarakhand, East Uttar Pradesh and Chhattisgarh from 10th to 12th; **with lightning, hail & squall** (speed reaching 50-60 kmph) at isolated places over Jharkhand on 11th & 12th; **with lightning & squall** (speed reaching 50-60 kmph) at isolated places over Andaman & Nicobar Islands on 8th & 9th, over Gangetic West Bengal on 9th & 10th and over Jharkhand on 11th & 12th; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Jharkhand, Gangetic West Bengal and Tamilnadu, Puducherry & Karaikal on 8th, over Nagaland, Manipur, Mizoram & Tripura on 8th & 9th, over Lakshadweep from 8th to 11th, over Kerala & Mahe from 8th to 12th, over Rayalaseema on 8th & 10th, over South Interior Karnataka on 8th & 11th, over East Rajasthan and Jharkhand on 9th, over Madhya Maharashtra and Marathwada on 9th & 10th, over Vidarbha from 9th to 12th, over Odisha and Telangana on 9th, 11th & 12th, over Assam & Meghalaya on 9th & 12th, over Coastal Andhra Pradesh & Yanam and North Interior Karnataka on 10th, over Punjab and West Uttar Pradesh on 10th & 11th, over Bihar, Haryana, Chandigarh & Delhi from 10th to 12th, over East Madhya Pradesh and West Bengal & Sikkim on 11th & 12th and over Rajasthan, Arunachal Pradesh and Karnataka on 12th; **with lightning** at isolated places over Vidarbha and Odisha on 8th, over East Madhya Pradesh and Chhattisgarh on 8th & 9th, over Coastal Andhra Pradesh & Yanam on 8th, 9th, 11th & 12th, over Coastal & North Interior Karnataka on 8th & 11th, over Madhya Maharashtra and Marathawada on 8th, 11th & 12th, over Himachal Pradesh, Uttarakhand, Haryana, Chandigarh & Delhi, Karnataka and Arunachal Pradesh on 9th, over Tamilnadu, Puducherry & Karaikal from 9th to 12th, over Rayalaseema on 9th, 11th & 12th, over Konkan & Goa and Coastal & South Interior Karnataka on 10th, over West Rajasthan and Assam & Meghalaya on 10th & 11th, over Nagaland, Manipur, Mizoram & Tripura from 10th to 12th and over West Madhya Pradesh on 11th & 12th; along with **Duststorm** very likely at isolated places over Rajasthan on 10th & 11th; 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/duststorm.
- As **rain/thundershowers** likely **at most places** over Lakshadweep and Andaman & Nicobar Islands on 8th; **at many places** over Kerala & Mahe, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura (NMMT) on 8th, 11th & 12, over Arunachal Pradesh on 8th & 12th, over Gangetic West Bengal on 9th & 10th, over Andaman & Nicobar Islands from 9th to 11th, over Odisha on 10th, over Sub-Himalayan West Bengal & Sikkim on 11th & 12th and over Jharkhand, Coastal Karnataka and Lakshadweep on 12th; along with **Heavy rainfall** very likely at isolated places over Andaman & Nicobar Islands and Lakshadweep on 8th, over Odisha and Coastal Andhra Pradesh on 10th, over Assam & Meghalaya and Kerala & Mahe on 11th & 12th and over South Interior Karnataka on 12th, 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:**
- nursery preparation for paddy in Southern Zone of Kerala.
 - sowing of summer pulses like black gram in Cauvery Delta Zone and sowing of sorghum and cumbu in

Western Zone of Tamil Nadu.

- sowing of cowpea, horse gram, field bean, green gram, black gram, *ragi*, corn, soybean and sesame as well as land preparation for sowing of ginger and turmeric in South Interior Karnataka.
- nursery preparation for WRC rice and planting of sugarcane in Arunachal Pradesh.
- transplanting of one month old seedlings of cucurbits, brinjal, chilli, tomato and capsicum; sowing of maize in Meghalaya.
- land preparation for ginger and turmeric in Bihar.
- land preparation for sowing seeds of bitter gourd, bottle gourd and snake gourd in up-land of Andaman & Nicobar Islands.
- seed bed preparation for sowing of kharif onion in Bundelkhand Zone of Madhya Pradesh.
- sowing of colocasia, turmeric & ginger in Bastar Plateau Zone of Chhattisgarh.
- planting of potato and sowing of leafy vegetables in Cold Arid Zone of Jammu & Kashmir.
- sowing of okra, peas, French beans, spinach, radish, turnip and carrot as well as transplanting of cabbage, cauliflower and broccoli in High Hill Temperate Dry Zone of Himachal Pradesh.
- field preparation for sowing of pigeon pea and cotton in the Eastern Zone of Haryana and Delhi.
- sowing of dhaincha, *guar*, cowpea and *moong* in West Uttar Pradesh.

Detailed Agromet Advisories

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

Realised Rainfall: Significant rainfall occurred in all the districts of Kerala except Alappuzha, Ernakulam, Malappuram, Palakkad and Thrissur; in East Godavari, Srikakulam, Visakhapatnam and Vizainagaram district of Andhra Pradesh; in Dharmapuri, Kanyakumari and Virudhunagar districts of Tamilnadu and Yanam district of Pondicherry; in Dakshina Kannada, Uttara Kannada districts of Coastal Karnataka, in Dharwad, Gadag, Haveri, Koppal districts of North Interior Karnataka and Chikkamagaluru, Chitradurga, Hassan, Kodagu, Mandya and Shivamogga districts of South Interior Karnataka.

- **Advisories: Thunderstorm accompanied with lightning, hail & gusty winds** (speed reaching 30-40 kmph) very likely at isolated places over Telangana on 8th & 10th, **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Tamilnadu, Puducherry & Karaikal on 8th, over Kerala & Mahe from 8th to 12th, over Rayalaseema on 8th & 10th, over South Interior Karnataka on 8th & 11th, over Telangana on 9th, 11th & 12th, over Coastal Andhra Pradesh & Yanam and North Interior Karnataka on 10th and over Karnataka on 12th; **with lightning** at isolated places over Coastal Andhra Pradesh & Yanam on 8th, 9th, 11th & 12th, over Coastal & North Interior Karnataka on 8th & 11th, over Karnataka on 9th, over Tamilnadu, Puducherry & Karaikal from 9th to 12th, over Rayalaseema on 9th, 11th & 12th and over Coastal & South Interior Karnataka on 10th, 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/duststorm.
- As **rain/thundershowers** likely **at most places** over Lakshadweep on 8th; **at many places** over Kerala & Mahe, on 8th, 11th & 12, over Arunachal Pradesh on 8th & 12th and over Lakshadweep on 12th; along with **Heavy rainfall** very likely at isolated places over Lakshadweep on 8th, over Kerala & Mahe on 11th & 12th and over South Interior Karnataka on 12th, 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 Problem Area Zone, weather is congenial Rhinoceros beetle in coconut, after cleaning crown, place 4 number of naphthaleneballs at the inner most leaf axils.
- In Central Zone, prepare land for ginger and turmeric. Weather is congenial for sigatoka disease in banana; as a precaution, spray *Pseudomonas* @ 20 g per litre of water.
- In Southern Zone, infested nuts and leaves turn yellow and finally dry up; remove and destroy all dried up inflorescence and unproductive buttons; apply neem oil garlic emulsion on infected bunches.
- In Southern Zone, undertake nursery preparation for paddy; select good quality healthy seeds for sowing; dress seeds with *P. fluorescens* @ 10g/kg of seeds before sowing or with Carbendazim 2 g/kg seeds.

Andhra Pradesh

- In North Coastal Andhra Pradesh, continue harvesting rice and maize. Undertake summer ploughing in vacant fields by utilizing ensuing rainfall. By this a lot of pests, harmful bacteria spores, fungal microbes and weed seeds will die due to exposure to heat of summer.
- In Scarce Rainfall Zone, continue harvesting of rice and maize.
- In Rayalaseem, in the summer groundnut crop which is at vegetative stage, there is possibility of thrips incidence due to increased temperature. To control, spray Monocrotophos @ 1.6 ml or Imidachloprid @ 0.3 ml./litre of water.
- In Krishna Godavari Zone, complete 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 SouthernTelangana, weather is congenial for incidence of thrips and mites in chilli. To control, spray Diafenthiuron @ 1.5 g or Chlorfenapyr @ 2 ml per litre of water.
- In NorthernTelangana, prevailing weather conditions are favourable for leaf blight in tomato crop. To control, spary Redomil @2 g per litre of water.

Tamil Nadu

- In Cauvery Delta Zone, undertake irrigated summer pulse cultivation. Suitable varieties in Black gram are ADT 5, VBN 5, VBN 6, VBN 8 and in green gram is VBN 2 and VBN 3.
- In Western Zone, by utilizing anticipated rainfall, sowing sorghum and Cumbu may be taken in the ploughed area followed by irrigation, based on soil moisture. Carry out propping sugarcane crop.
- In Southern Zone, due to the prevailing weather condition, there is incense of jassids in bhendi; spray Imidacloprid 200 SL @ 100 ml/ha with spray fluid 500 litres/ha.
- In High Rainfall Zone, to prevent wilting disease in pepper plantation, apply 25 g of *Trichoderma viride* and 25 g *Pseudomonas fluorescens* along with 500 g neem cake per wine.

Karnataka

- In North Interior Karnataka, undertake ploughing in the fields immediately after harvesting the wheat, sorghum, chickpea crops. Weather is congenial for taking up pruning in grapes. Dip the lemon fruit size watermelon into 20 ppm (20 mg in 1 litre water) Gibberellic acid to increase size and quality of the fruit.
- In Coastal Karnataka, transfer the strong and better areca nut seedlings from primary seed bed to secondary seed bed. Continue harvesting of cashew. Provide light irrigation followed by application of Muriate of Potash @ 175 gram per arecanut plant.
- In South Interior Karnataka, continue sowing of cowpea, horse gram, field bean, green gram, black gram, ragi, corn, soybean and sesame crops. Undertake land preparation for sowing of ginger and turmeric. Fruit

rot disease is noticed in Tomato; to manage, spray Indophil-M-45 @ 3gm/litre of water.

Animal Husbandry

- In Karnataka, it is advised to leave the buffaloes in ponds during afternoon hours or sprinkle cold water 2-3 times a day on the body of the animals to overcome the heat stress.

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

Realised Rainfall: Rainfall occurred in all districts of Tripura; in East Kameng, Lower Dibang Valley, Tawang, Upper Siang and West Kameng districts of Arunachal Pradesh; in Baksa, Barpeta, Cachar, Chirang, Dhemaji, Dhubri, Dibrugarh, Goalpara, Hailakandi, Jorhat, Karimganj, N.C. Hills, Nowgaon, Nalbari, Sonitpur, Sibsagar, Tinsukia and Udalgiri districts of Assam; in Lunglei and Saiha districts of Mizoram; in Bishnupur, Churachandpur, Imphal East, Imphal West, Thoubal and Ukhrul districts of Manipur and in Kephire, Kohima, Mokochung, Paren, Phek, Tuensang and Zunheboto districts of Nagaland.

- **Advisories: Thunderstorm accompanied with lightning, hail & gusty winds** (speed reaching 30-40 kmph) very likely at isolated places over Assam & Meghalaya and Arunachal Pradesh on 8th; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Nagaland, Manipur, Mizoram & Tripura on 8th & 9th and over Assam & Meghalaya on 9th & 12th; **with lightning** at isolated places over Arunachal Pradesh on 9th, over Assam & Meghalaya on 10th & 11th and over Nagaland, Manipur, Mizoram & Tripura from 10th to 12th, 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/duststorm.
- As **rain/thundershowers** likely **at many places** over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura (NMMT) on 8th, 11th & 12, over Arunachal Pradesh on 8th & 12th, along with **Heavy rainfall** very likely at isolated places over Assam & Meghalaya on 11th & 12th, 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, undertake nursery preparation for WRC rice and planting of sugarcane.
- **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.
- In Hill Zone and Lower Brahmaputra Valley Zone of Assam, apply 5% Malathion dust @ 20 kg per ha of land to control gandhi bug insect attack in the *Boro* rice at milky stage.
- In Upper Brahmaputra Valley Zone, continue planting of the pre-germinated setts of sugarcane in the main field. Spray Quinalphos 25EC or Monocrotophos 40EC or Chlorpyrifos 20EC at a recommended dose of 1 ml per litre of water to control ear-cutting caterpillar in *Boro* rice at reproductive stage.
- In Lower Brahmaputra Valley Zone, continue transplanting of *Ahu* rice; carry out gap filling 7 to 10 days after transplanting. 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 of water.
- In Barak Valley Zone, due to favorable weather, there is chance of attack of bacterial leaf blight (BLB) in *Boro* rice field; to control, apply 1 kg Potash fertilizer per bigha of land or stop top dressing of nitrogenous fertilizer.
- In Central Brahmaputra Valley Zone, continue sowing of *Olitorius* jute. Undertake sowing of *Bao* rice. Carry out harvesting of 70-80% matured pods of summer green gram and black gram. Spray Streptocyclin 1g per litre of water mainly in fair weather against attack of stem borer in milky/ dough stage of *Boro* rice.

- In North Bank Plain Zone, complete sowing of *Bao* rice. Continue sowing of cow pea. In ginger and turmeric field first mulching should be done after planting and to be repeated at 40 days after planting with suitable mulching material like paddy husk and saw dust. To control rhizome (soft) rot disease in ginger, excess rainwater should easily drain out from the field and the affected areas should be drenched with 0.3% Mancozeb 75 WP or Captan.
- 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 recent rains.
- In Mizoram, make channels around the field of black gram and vegetable crops to drain out excess water. Continue 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 homemade Tuibur solution (Tuibur 50% and water 50%) against fall army worm in maize crop.
- In Tripura, maintain water level 5 cm in the field of *Boro* rice. To manage the attack of gandhi bug in *Boro* rice, apply Imidacloprid 2 ml per litre of water.
- In Nagaland, continue sowing of *Jhum* rice and planting of ginger. Intercropping of maize should be done with suitable pulse crops (eg. maize + pigeon pea/black gram/green gram). Mulch the beds of ginger with green leaves/organic wastes as it is essential to prevent soil splashing and erosion of soil due to heavy rains. It also adds organic matter to the soil and checks weed emergence.

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, Banka, Begusari, Bhagalpur, Bhojpur, Darbhanga, East Champaran, Jamui, Katihar, Khagaria, Kishanganj, Lakhisarai, Madhepura, Madhubani, Monghyr, Muzaffarpur, Patna, Purnea, Samastipur, Saran, Sheikpura, Sitamarhi, Siwan, Supaul, Vaishali and West Champaran districts of Bihar; in Deoghar, Dumka, East Singhbhum, Giridih, Godda, Hazaribagh, Jamtara, Koderma, Latehar, Pakur, Ramgarh, Sahebganj, Simdega and West Singhbhum districts of Jharkhand; in all districts of Odisha except Boudh, Deogarh, Kandhamal, Koraput, Nawapara, Nayagarh, Puri, Rayagada and Sambalpur; in Nicobar district of Andaman & Nicobar Islands; in all districts of Gangetic West Bengal Except Nadia and in all districts of Sub-Himalayan West Bengal & Sikkim except North Dinajpur and West Sikkim. Weather remained dry/mainly dry over the rest of the region.

- **Advisories: Thunderstorm accompanied with lightning, hail & squall** (speed reaching 50-60 kmph) at isolated places over Jharkhand on 11th & 12th; **with lightning & squall** (speed reaching 50-60 kmph) at isolated places over Andaman & Nicobar Islands on 8th & 9th, over Gangetic West Bengal on 9th & 10th and over Jharkhand on 11th & 12th; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Jharkhand and Gangetic West Bengal on 8th, over Jharkhand on 9th, over Odisha on 9th, 11th & 12th, over Bihar from 10th to 12th and over West Bengal & Sikkim on 11th & 12th; **with lightning** at isolated places over Odisha on 8th, 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/duststorm.
- As **rain/thundershowers** likely **at most places** over Andaman & Nicobar Islands on 8th; **at many places**

over Gangetic West Bengal on 9th & 10th, over Andaman & Nicobar Islands from 9th to 11th, over Odisha on 10th, over Sub-Himalayan West Bengal & Sikkim on 11th & 12th and over Jharkhand on 12th; along with **Heavy rainfall** very likely at isolated places over Andaman & Nicobar Islands on 8th and over Odisha on 10th, 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

- Carry out summer ploughing utilizing the recent rains; high temperature is favourable for applying Glyphosate herbicide on a dry day to control weeds in the fallow field. Carry out harvesting of matured summer rice, ground nut and summer green gram crops. Late planted pulses crop is at flowering to pod development stage; apply irrigation depending upon the soil moisture content. For white fly in bhindi crop, spray Thiamethoxam @ 5g/15 litres of water; for thrips in chilli crop, spray Acetamiprid @ 1g/litre of water and for fruit & shoot borer in brinjal carry out soil application of Cartap Hydrochloride @ 25kg/ha (10kg/ac).

Bihar

- Carry out land preparation for ginger and turmeric; apply 25-30 tonnes of cow dung per hectare land; start sowing from 15th May. Carry out weeding and apply irrigation to summer vegetables. Carry out weeding in late sown green gram and black gram crops; monitor crop for hairy caterpillar; spray Methyl Parathion 50EC @ 2.0ml or Chlorpyrifos 20 EC @ 2.5ml per litre of water in case of severe infestation.

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 50WP @ 1g/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 1 ml or Quinolophos 25 EC @ 1 ml per litre of water.

West Bengal

- In Sub-Himalayan West Bengal, carry out weeding and earthing up in maize crop; drain out excess water from the field. Continue planting of turmeric. Do mulching in ginger field to conserve moisture and control weeds. Drain out excess water from rice and jute fields. To control gundhi bug in *Boro* paddy crop, spray Chlorpyrifos @ 2 ml/ litre of water. To control indigo caterpillar in jute crop, spray Chlorpyrifos 20 EC @ 2ml per litre of water; repeat application after 8-10 days, if required.
- In Gangetic West Bengal, complete harvesting of early and late transplanted paddy at the earliest and transfer it to safe place immediately. Carry out deep summer ploughing in harvested *Boro* paddy field; collect seeds of dhaincha and carry out sowing @ 3-4kg/bigha. Drain out excess water from ground nut field. Use pheromone traps for fly attack in fruit orchards; bend the branches of guava at ground level for better fruiting; to prevent fruit drop in mango, spray 15ppm NAA.

Andaman & Nicobar Islands

- Carry out land shaping activity, as the soil condition is conducive. Prepare up-land for sowing of seeds of bitter gourd, bottle gourd and snake gourd. Make basin around nutmeg and black pepper planted in upland area and harvest rainwater. Clean the coconut and arecanut garden and burn the waste to reduce pest attack.

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 West Bengal, cultivate Dhaincha @ 1.5 kg/bigha; after 30-45 days, mix it with soil and prepare pond.

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

- **Advisories: Thunderstorm accompanied with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over Madhya Maharashtra and Marathwada on 9th & 10th and over Vidarbha from 9th to 12th; **with lightning** at isolated places over Vidarbha on 8th, over Madhya Maharashtra and Marathwada on 8th, 11th & 12th and over Konkan & Goa on 10th, 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/duststorm.

Maharashtra

- In Konkan, to minimize evapotranspiration, apply mulch to plantation crops like coconut and arecanut in Ratnagiri, Raigad, Thane and Palghar districts. Continue harvesting of matured rice, groundnut, cashew and mango in Sindhudurg, Ratnagiri, Raigad, Thane and Palghar districts. Keep the harvested produce in safer place. To control anthracnose in mango, spray Carbendazim 1% @ 1 g per 1 litre water in Sindhudurg district.
- In Madhya Maharashtra, apply irrigation to summer groundnut, banana plantations, mango orchards and vegetable crops. To control aphids in sunflower, spray Dimethoate 30 EC @ 10 ml per 10 litres of water. Undertake harvesting of matured summer groundnut and mango. If sufficient irrigation facilities not available for sugarcane crop, spray 2% Murate of Potash and 2% Urea at 60, 120 and 180 days after planting the crop.
- In Marathwada, apply irrigation to sugarcane and vegetables. Also apply mulch in orchards. Continue harvesting of summer groundnut, turmeric and mangoes. To control stem borer in sugarcane, spray Chlorpyrifos 20% EC @ 30 ml per 10 litres of water.
- In Vidarbha, undertake harvesting of matured rice, summer groundnut, sesame and green gram. Undertake harvesting of matured mangoes. Keep the harvested fruits in shade to prevent spongy tissue disease and heat. Apply irrigation vegetables and orchards. To control fruit rot in chilli, spray Azoxystrobin 23 SC @ 10 ml per 10 litres of water. To control tikka (leaf spot) in groundnut, spray Propiconazole 25% EC @ 10 ml per 10 litres of water.

Gujarat

- In South Gujarat, undertake nursery preparation for rice. Apply irrigation to sugarcane, okra crops and mango orchards. Undertake harvesting of okra. Spray Mancozab @ 30g/10 litres of water to manage leafspot in sweet corn.
- In Middle Gujarat, apply irrigation in pearl millet, green gram and cowpea crops and in banana, papaya orchards. Decrease interval between two irrigations. Protect the papaya fruits using gunny bags under high temperature condition.
- In Saurashtra and Kutch, carry out intercultural operations in cluster bean. Apply light and frequent irrigation to sesame, groundnut, vegetables crops and lemon, mango orchards. Due to high temperature, mites infestation in lemon orchard is observed. To control, spray Propargite 57 % EC @ 10/10 litres of water.
- In North Gujarat, under higher temperature and moderately dry condition, keep 5 to 7 days interval of irrigation in groundnut crop. To control thrips attack in sesame spray neem oil 50 ml and profenofos 50 % EC @ 20 ml/10 litres of water.

Animal Husbandry

- In Gujarat, feed animals with a mixture of green and dry grass.

CENTRAL INDIA [M.P., CHHATTISGARH]

Realised Rainfall: Significant rainfall occurred in Panna, Shivpuri, Singrouli and Umaria districts of Madhya Pradesh and in Balrampur, Kondagaon, Koriya and Surajpur districts of Chhattisgarh. Weather remained dry/mostly dry over the rest of the region.

- **Advisories: Thunderstorm accompanied with lightning, hail & gusty winds** (speed reaching 30-40 kmph) very likely at isolated places over Madhya Pradesh on 10th and over Chhattisgarh from 10th to 12th; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over East Madhya Pradesh on 11th & 12th; **with lightning** at isolated places over over East Madhya Pradesh and Chhattisgarh on 8th & 9th and over West Madhya Pradesh on 11th & 12th , 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/duststorm.

Madhya Pradesh

- 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, continue digging of matured onion and garlic bulbs and store them in a safer place. Continue harvesting of 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 caterpillars.
- In Bundelkhand Zone, undertake seed bed preparation for sowing of kharif onion during this week. Spray N.A.A. @ 10-15 gram per litre of water in cucurbitaceous crops to increase flowering and improve yield. Carry out digging of pits for establishing new orchards. Apply irrigation to moong crop; monitor crop against attack of yellow mosaic; if noticed, spray Imidacloprid @ 0.5 ml per litre of water.
- In Central Narmada Valley Zone, do not burn the residual waste of wheat crop as it would kill the beneficial bacteria in soil. Apply irrigation to summer green gram and black gram crops at 7-10 days interval. To control of fruit drop in mango, spray Planofix @ 5 ml per pump. In present weather conditions, carry out rouging of viral infested chilli crop; uproot and bury the infected crop; after rouging, spray Imidacloprid @ 0.3 ml per litre of water.

Chhattisgarh

- 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, complete sowing of colocasia, turmeric & ginger by the end of this month. During flowering in mango, spray NSKE @ 5 ml per litre of water; when the size of mango fruits attain pea size, spray Imidacloprid @ 0.5 ml per litre of water. If yellowing in lady finger is noticed during early stage, remove the plants and burn them; for severe infestation, spray Dimethoate 30 E.C. @ 1.5 ml per litre of water in morning or evening hours.

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. Hang wet jute bags in and around animal and poultry sheds to maintain room temperature.

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

Realised Rainfall : Significant rainfall occurred in Lahaul & Spiti and Sirmaur districts of Himachal Pradesh;

Anantnag, Badgam, Doda, Ganderbal, Kupwara, Poonch and Srinagar districts of Jammu & Kashmir; in all the districts of Uttarakhand except Champawat, Dehradun, Garhwal Pauri, Garhwal Tehri and Udham Singh Nagar; in Ambala and Yamunanagar districts of Haryana; in Barnala district of Punjab; in Ambedkarnagar, Bahraich, Ballia, Balrampur, Banda, Barabanki, Basti, Chitrakoot, Deoria, Faizabad, Gazipur, Gonda, Gorakhpur, Kheri, Lucknow, Pratapgarh and Sultanpur districts of East Uttar Pradesh and in Jalaun district of West UP. Weather remained dry over rest of the region.

- **Advisories: Thunderstorm accompanied with lightning, hail & gusty winds** (speed reaching 30-40 kmph) very likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad on 9th & 10th, over Himachal Pradesh and East Rajasthan on 10th & 11th and over Uttarakhand, East Uttar Pradesh from 10th to 12th; **with lightning & gusty winds** (speed reaching 30-40 kmph) at isolated places over East Rajasthan on 9th, over Punjab and West Uttar Pradesh on 10th & 11th, over Haryana, Chandigarh & Delhi from 10th to 12th and over Rajasthan on 12th; **with lightning** at isolated places over Himachal Pradesh, Uttarakhand, Haryana, Chandigarh & Delhi on 9th, over West Rajasthan on 10th & 11th; along with **Duststorm** very likely at isolated places over Rajasthan on 10th & 11th; 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/duststorm.

Jammu & Kashmir

- In Valley Temperate Zone, avoid water stagnation in the fields of oil seeds and pulses. Complete sowing of maize. Continue rice nursery preparation. 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. Carry out weeding operation in vegetables.
- In Intermediate Zone, undertake harvesting of wheat. Store the harvested mustard and rabi pulses in safer place. Continue sowing of maize. Continue sowing of turmeric and French bean.
- In Sub-Tropical Zone, undertake threshing of wheat. Undertake threshing of mustard crop and store it in safe place. Continue harvesting of Rabi pulses like gram, pea and lentil. Continue land preparation for sowing of ginger and turmeric.
- In Cold Arid Zone, Complete planting of potato. Continue sowing of leafy vegetables. Provide plastic mulching in vegetables to conserve soil moisture.

Himachal Pradesh

- In Sub Montane and Low Hills Sub Tropical Zone, continue sowing of fodder maize, cowpeas and soybean. Carry out weeding in green gram. Continue sowing of okra, peas, French beans, spinach, radish, turnip and carrot. Continue transplanting of cabbage, cauliflower and broccoli. Continue sowing of potato. Carry out intercultural operations in sunflower. Apply mulch in ginger and turmeric.
- In High Hill Temperate Dry Zone, continue sowing of cabbage and cauliflower seeds in nursery beds. Spray Mancozeb or Indofil M-45 (25g/10 litres of water) and Carbendazim or Bavistin (10g/10 litres of water) solution in cabbage, cauliflower nursery to protect it from root rot. Undertake land preparation for sowing of potato.
- In Mid Hills Sub Humid Zone, carry out hoeing and weeding operations in tomato, capsicum and brinjal. To control the blight disease in tomato, first spray Redomil MZ @ 2.5 gm and then spray Copper Oxchloride @ 3gm / litre of water after 10-12 days.

Punjab, Haryana, Delhi

- In Western Zone of Punjab, complete harvesting of crop in dry period and keep the harvested material at safe places. Harvesting of fruits of peach, plum, phalsa and mature bunches of perlette grapes may be undertaken and marketed after proper grading and packing. Fruit and shoot borer of brinjal may be controlled

by spraying Proclaim 5 SG @80g or Coragen 18.5 SC @ 80ml in 100-125 litres of water per acre. Brinjal mite may also be checked by spraying 300 ml Omite 57 EC in 100-150 litres of water per acre

- In Undulating Plain Zone of Punjab, plan harvesting of matured rabi crops as per weather and store already harvested crop in safe place. Plan irrigation in sugarcane as per weather and 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 and direct the spray into the leaf-whorl for most effective control. Control damage of Bihar hairy caterpillar and gram caterpillar in barseem seed crop using recommended pesticides.
- In Western Plain Zone of Punjab, complete the sowing of desi cotton in the first fortnight of this month. Due to prevailing hot weather conditions, apply irrigations at 8 to 10 days interval in sugarcane. Conserve soil moisture in field by spreading mulch in between cane rows; use rice straw/ wheat straw/ rice husk as mulch.
- In Central Plain Zone of Punjab, undertake sowing of Bt cotton or desi cotton. Apply frequent irrigations in peach, pear, litchi, plum and light irrigations for citrus and mango. 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, withhold sowing of cotton crop. Keep changing weather in mind before harvesting and threshing of matured wheat and barley crops. Farmers are advised to carry the Tirpal/Covered material during transportation of threshed wheat/mustard to grain market to avoid the wetting of grains. Manage the straw/ *Bhusa* of wheat crop at the earliest. Keep the *bhusa* in protected & dry area/place to avoid the spreading in the field. Maintain social distancing during wheat harvesting, threshing and other agricultural operations.
- In Eastern Zone of Haryana, maintain social distancing during harvesting and other agricultural operation in all crops . Keeping weather in mind, undertake harvesting of wheat crop. Undertake sowing of green gram and fodder crop (bajra). Carry out field preparation for sowing of pigeon pea 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.
- 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 evening hours. Undertake sowing of green gram, cluster bean, senai, gwar etc during this week. Keeping in view the high temperature, harvest mature vegetables at morning and evening hours and keep harvested crops in shadow. Undertake field preparation for sowing of pigenpea 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:

- In East Uttar Pradesh, keep the harvested crop or straw at protected place. Undertake sun drying of food grains like wheat, mustard, bengal gram and chick pea before storage. Undertake sowing of tomato, brinjal or other cucurbitaceous family vegetables like cucumber, etc. Continue sowing of green gram, maize and lobia. Apply irrigation and carry out intercultural operations in bottle gourd and bitter gourd as per requirement and for control Red beetle, fruit fry, spray Imidachloropid @ 1 ml/litre of water. Avoid any chemical spraying on mango.
- In West Uttar Pradesh, dry the wheat thoroughly in the sun before storing it and store in dry and clean place. Undertake weeding of maize. There is a possibility of outbreak of stem borer in the maize crop; spray Quinalphos 25% EC 2.0 litre / ha or Dimethoate 30% EC 1.0 litre / ha @ in 700-800 litres of water when sky is clear. Apply irrigation to sugarcane. To protect the sugarcane crop from borer and termites, sprinkle 5 litres of Chloropyrifus 20 EC medicine in 1250 litres of water. Undertake sowing of sanai, dhaincha, guar, cowpea and moong. Apply bio pesticides like neem oil, jeevamrit and neemastra to control of pest and diseases in vegetable crops. 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 litre / ha dissolved in 600-700 litres 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 litres / hectare @ 600-700 litres of water when sky is clear. Undertake planting of mango, litchi and guava.

Uttarakhand

- In Sub Humid Sub Tropic Zone, undertake threshing of wheat crop on a clear sunny day after drying the crop in sunlight. Undertake planting of sugarcane. Undertake sowing of jowar. To protect brinjal from attack of shoot borer and fruit borer insects, dispose off the infected fruits and spray Spinosad 48 EC @ 1 ml per 4 litres of water during clear weather conditions.
- In Hill Zone, undertake nursery preparation for sowing of rice. Carry out weeding and hoeing operation in tomato. Carry out staking of tomato saplings by ropes or branches. Continue sowing of ginger and turmeric. Carry out earthing up in potato crop. Use dry grass as mulch between rows of potato crop for moisture conservation.
- In Bhabar and Tarai Zone, undertake deep ploughing and bunding of field after threshing of wheat crop. Undertake transplanting of brinjal.

Rajasthan

- In Hyper arid Partial irrigated zone, for sowing of cotton, use varieties of R S - 2013, R S - 810, R S T - 9, R S - 875, BikaneriNarma and Maru Vikas (4 kg seed per ha) of American cotton and RG-8, RG-18, RDH-9, HD-23, RG-542 of deshi cotton with 12kg seed per ha.
- In Arid Western Plain Zone, to control fruit borer attack in brinjal crop, spray Quinalphos @1 ml per litre of water.
- In Irrigated North Western Plain Zone, to control termites in sugarcane, apply Imidacloprid (17.8 SL) @ 125 ml or Chloropyriphos (20 EC) 1.25 litre per bigha with irrigation water.
- In Transitional Plain Zone of Inland Drainage, to control shoot and fruit borer in brinjal and tomato crops, infested fruits and shoots should be collected and buried inside the soil; spray Spinosad 48 EC @ 1 ml /4 litres of water.
- In Semi Arid Eastern Plain Zone, undertake nursery raising for planting papaya; use 250 gm seeds for raising plants for one hectare. Honey dew, Coorg Honey dew, Pusa delicious, PusaNanaha and CO-2 are improved varieties of papaya.

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