



National Agromet Advisory Service Bulletin

Friday 21st August 2020

(For the period 21st to 25th August 2020)



Issued by

India Meteorological Department

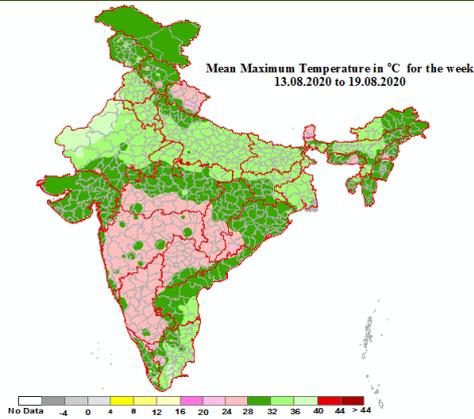
Weblink For

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

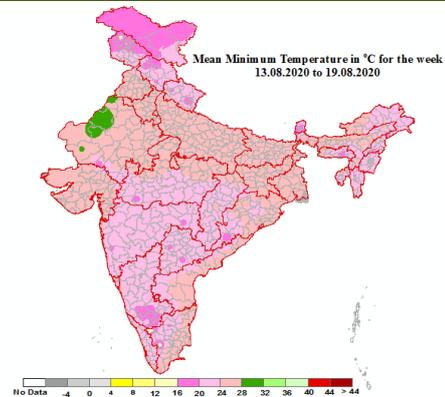
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

spatial distribution of weather parameters for the week ending on 19.08.2020

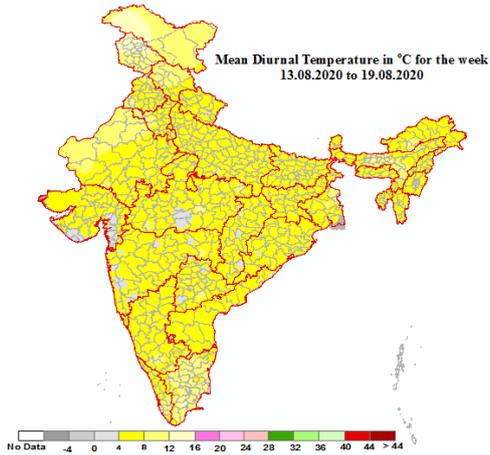
Mean Maximum Temperature (°C) for the week ending on 19.08.2020



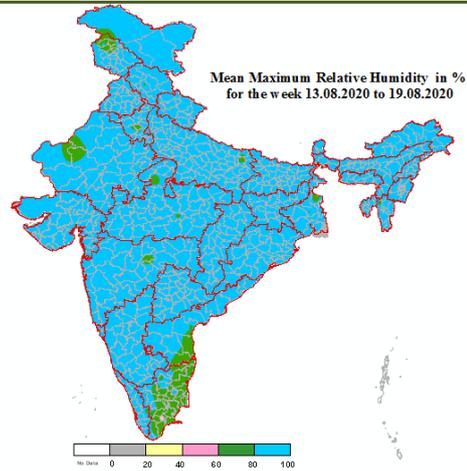
Mean Minimum Temperature (°C) for the week ending on 19.08.2020



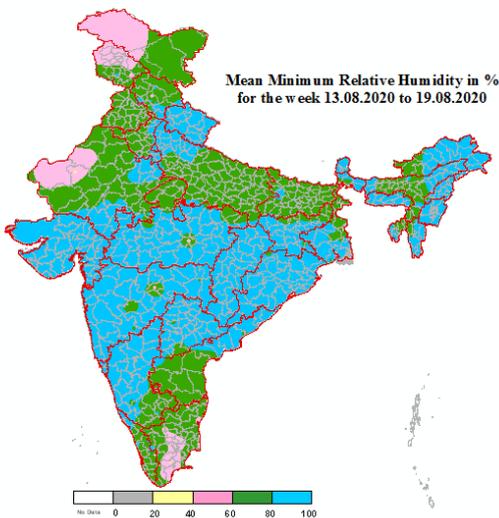
Mean Diurnal Temperature Variation (°C) for the week ending on 19.08.2020



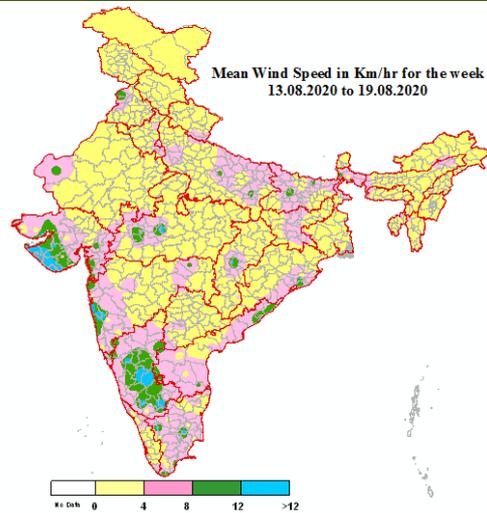
Mean Maximum Relative Humidity (%) for the week ending on 19.08.2020



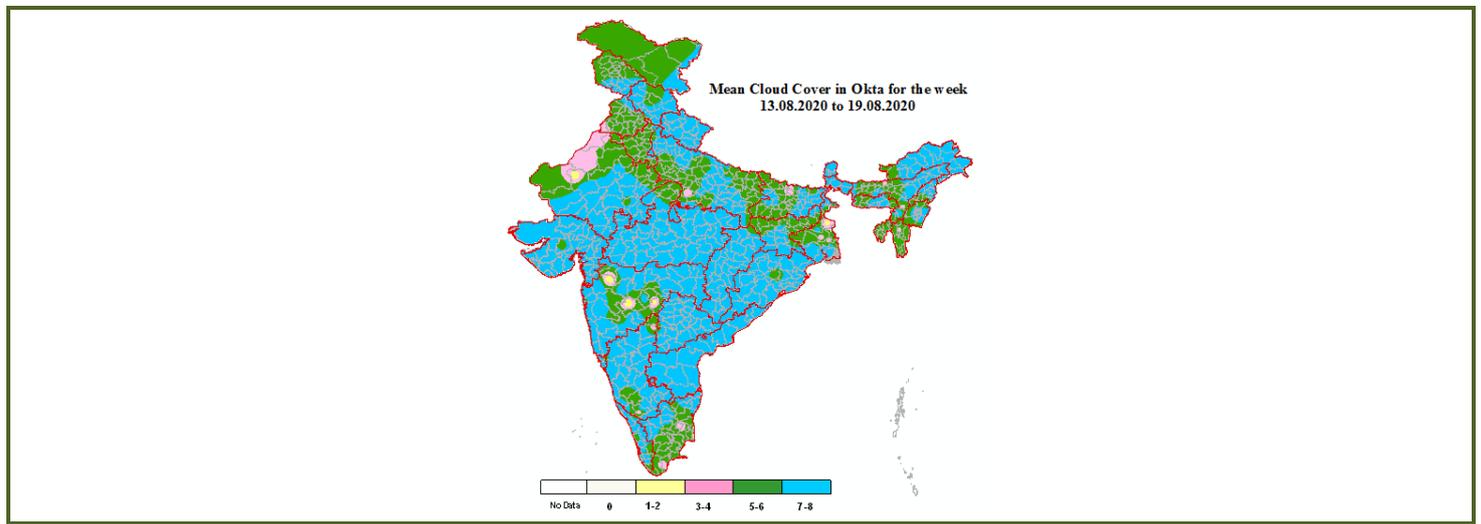
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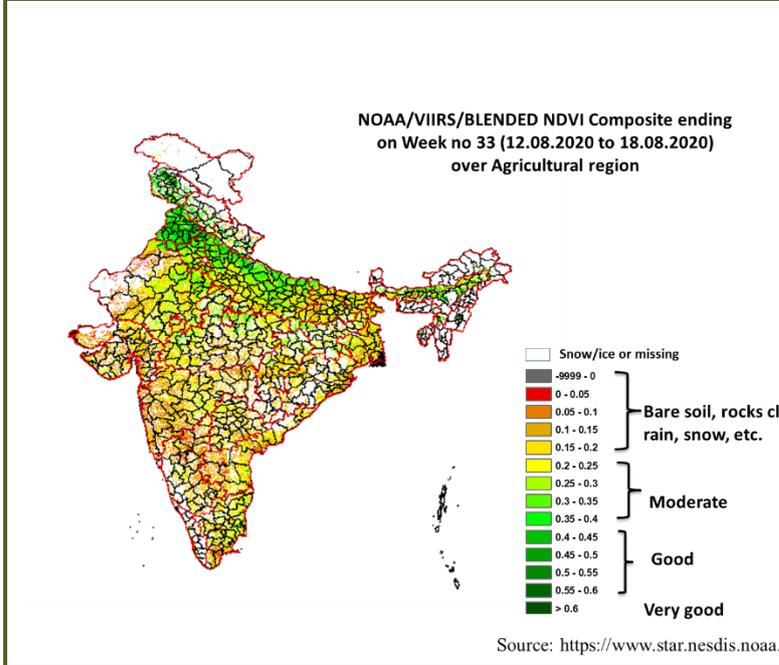
Mean Wind Speed (km/hr) for the week ending on 19.08.2020



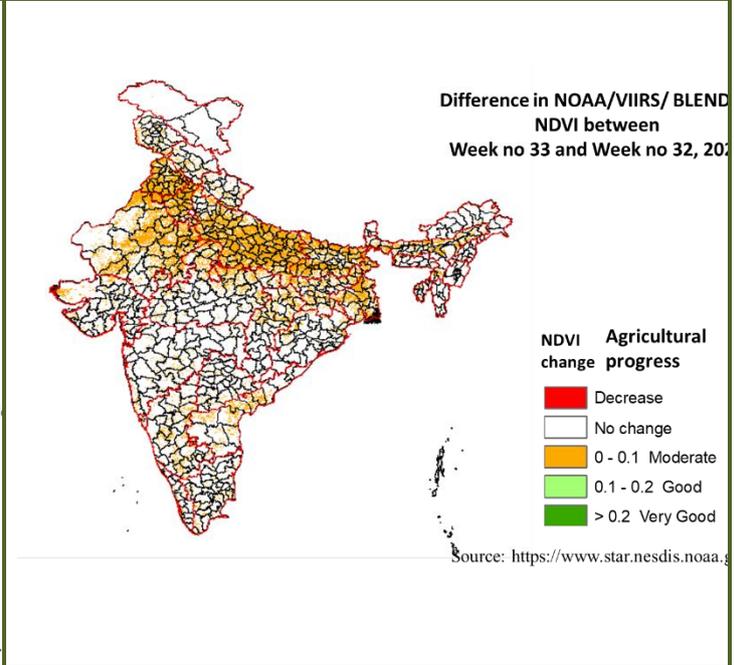
Mean Cloud Cover (okta) for the week ending on 19.08.2020



NOAA/VIIRS/BLENDED NDVI composite for the week number 33 (12.08.2020 to 18.08.2020) over Agricultural regions of India



Difference in NOAA/VIIRS/BLENDED NDVI between week number 33 and week number 32, 2020

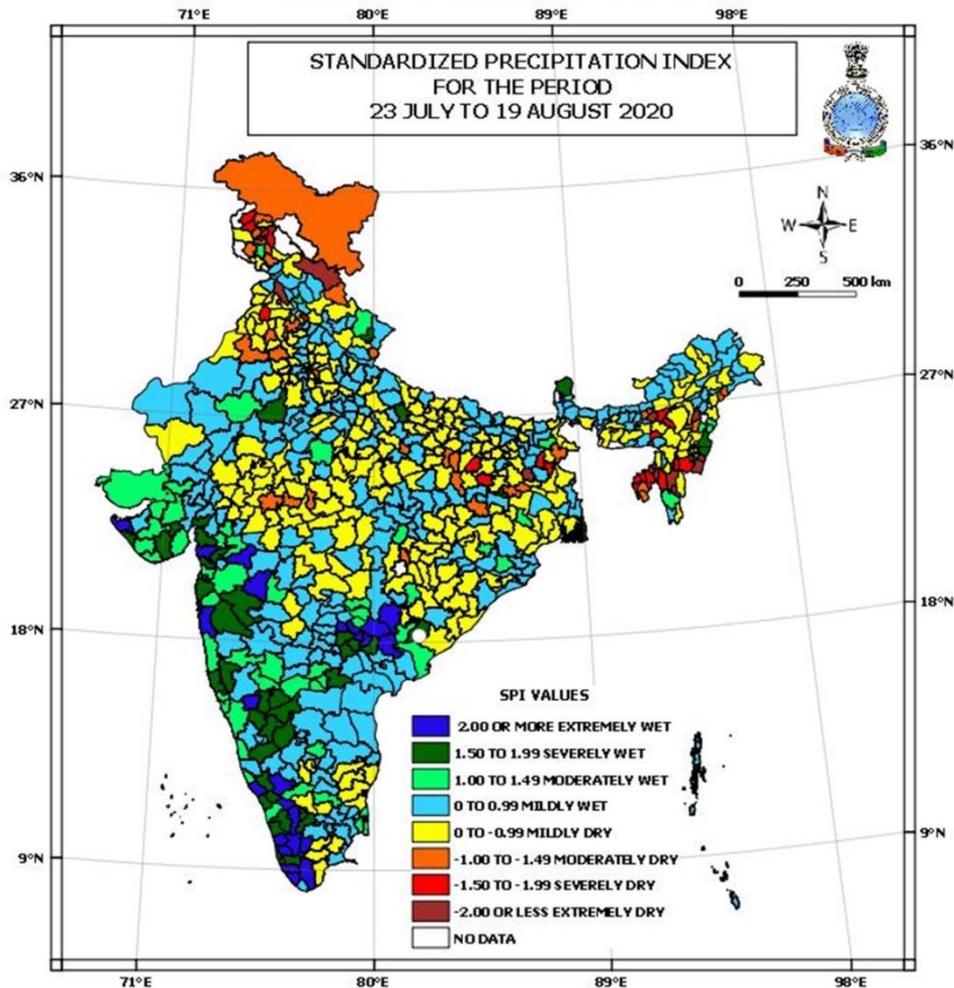


Agricultural vigour was good at many places of Jammu & Kashmir (UT) & Punjab; few pockets of Himachal Pradesh, Uttarakhand, Northern part of Haryana, Uttar Pradesh & North Eastern States and at isolated pockets of Sikkim, Jharkhand, West Madhya Pradesh and Kerala.

Good difference in agricultural vigour was observed over isolated pockets of Jammu & Kashmir (UT), Himachal Pradesh, Uttarakhand, Uttar Pradesh, Sikkim, Meghalaya, Jharkhand, Gangetic West Bengal, North Chattisgarh, Northern part of Madhya Pradesh adjoining Uttar Pradesh, East Rajasthan, Interior Karnataka, Kerala and Goa.

**Standardised Precipitation Index
for the period 23rd July to 19th August 2020**

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



- Extremely/ Severely wet conditions exist in Broach, Surat, Anand, Navsari, Tapi, Amreli, Porbandar, Botad, Devbhumi Dwarka districts of Gujarat; Dharwad, Gadag, Haveri, Koppal, Bellary, Chikmagalur, Chitradurga, Davangere, Kodagu, Mysore districts of Karnataka; Alapuzha, Cannur, Ernakulam, Kottayam, Kozhikode, Palakkad, Kollam, Thrissur, Trivandrum, Idukki, Pathanamthitta, Wynad districts of Kerala; Mumbai City, Raigad, Sindhudurg, Mumbai Suburban, Palghar, Ahmednagar, Dhule, Kolhapur, Pune, Aurangabad districts of Maharashtra; Ukhrul district of Manipur; Malkangiri district of Odisha; Jaipur district of Rajasthan; Coimbatore, Nilgiri, Theni, Tirunelveli, Tirupur districts of Tamilnadu; Diu, Karaikal districts of Union Territory; Barabanki district of Uttar Pradesh; Lakshadweep district of Andaman & Nicobar Islands; North Sikkim, South Sikkim districts of Sikkim; Ramgarh district of Jharkhand; Bageshwar district of Uttarakhand; Bijapur district of Chhatisgarh; Karimnagar, Warangal, B.Kothagudem, Jangaon, J. Bhupalpally, Mahabubabad, Nagarkurnool, Rajanna Sircilla, Siddipet, Warangal_Urban, Y.Bhuvanagiri, Mulugu districts of Telangana.
- Extremely/Severely dry conditions exist in Nagaon, Morigaon districts of Assam; Aurangabad district of Bihar; Panchkula district of Haryana; Lahaul & Spiti district of Himachal Pradesh; Anantnag, Baramula, Kupwara, Pulwama, Shopian districts of Jammu & Kashmir (UT); Chandel, Churachandpur districts of Manipur; Jaintia Hills district of Meghalaya; Aizwal, Mamit, Serchhip districts of Mizoram; Wokha district of Nagaland; Hoshiarpur, Moga districts of Punjab; North Tripura, Dhalai, West Tripura districts of Tripura; Chatra, Deoghar, Godda, Pakur districts of Jharkhand.
- Moderately wet to moderately dry conditions were experienced in remaining districts of the country.

Weather Forecast for next 5 days valid upto 0830 hours of 26th August, 2020

- ◆ Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table-1.
- ◆ No significant change in temperatures very likely over most parts of the country during next 3-4 days.

5 Day Rainfall Forecast (MID-DAY)

21-August-2020

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

% 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:

21 August (Day 1): ◆ **Heavy to very heavy rainfall** at a few places **with extremely heavy falls** at isolated places very likely over West Madhya Pradesh; **heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places over East Rajasthan, East Madhya Pradesh, Madhya Maharashtra, Vidarbha and Gujarat region; **heavy to very heavy rainfall** at isolated places over Saurashtra & Kutch and

Konkan & Goa and **heavy rainfall** at isolated places over West Rajasthan, Odisha, Chhattisgarh, West Bengal & Sikkim, Coastal & South Interior Karnataka and Telangana.

♦ **Moderate thunderstorm accompanied with lightning** at isolated places very likely over south Rajasthan, East Uttar Pradesh and Coastal Andhra Pradesh & Yanam.

♦ **Strong Wind** (speed reaching 50-60 kmph) very likely over Southwest & adjoining Westcentral Arabian Sea. **Squally Weather** (wind speed reaching 45-55 kmph) over south Gujarat-north Maharashtra coasts and along & off north Andhra Pradesh-Odisha-West Bengal coasts. Fishermen are advised not to venture into these area.

22 August (Day 2): ♦ **Heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places very likely over East Rajasthan, West Madhya Pradesh, Madhya Maharashtra and Gujarat region; **heavy to very heavy rainfall** at isolated places over West Rajasthan, Saurashtra & Kutch and Konkan & Goa and **heavy rainfall** at isolated places over East Madhya Pradesh, Vidarbha, Gangetic West Bengal and Odisha.

♦ **Moderate thunderstorm accompanied with lightning** at isolated places very likely over south Rajasthan, Tamilnadu, Puducherry & Karaikal and Coastal Andhra Pradesh & Yanam.

♦ **Strong Wind** (speed reaching 50-60 kmph) very likely over Southwest & adjoining Westcentral Arabian Sea. **Squally Weather** (wind speed reaching 45-55 kmph) over North & Eastcentral Arabian sea along & off south Gujarat-north Maharashtra coasts. Fishermen are advised not to venture into these area.

23 August (Day 3): ♦ **Heavy to very heavy rainfall** at a few places **with extremely heavy falls** at isolated places very likely over Saurashtra & Kutch; **heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places over Rajasthan and Gujarat region; **heavy to very heavy rainfall** at isolated places over Madhya Maharashtra, Odisha and Konkan & Goa and **heavy rainfall** at isolated places over East Uttar Pradesh, Tamilnadu, Puducherry & Karaikal, West Madhya Pradesh, Gangetic West Bengal, Jharkhand, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

♦ **Moderate thunderstorm accompanied with lightning** at isolated places very likely over south Rajasthan, Tamilnadu, Puducherry & Karaikal, Rayalaseema and Coastal Andhra Pradesh & Yanam.

♦ **Strong Wind** (speed reaching 50-60 kmph) likely over Southwest & adjoining Westcentral Arabian Sea. **Squally Weather** (wind speed reaching 45-55 kmph) over North & Eastcentral Arabian sea along & off south Gujarat-north Maharashtra coasts. Fishermen are advised not to venture into these area.

24 August (Day 4): ♦ **Heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places likely over Saurashtra & Kutch; **heavy to very heavy rainfall** at isolated places over West Rajasthan, Gujarat region, Gangetic West Bengal and Odisha and **heavy rainfall** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad (UTs), Himachal Pradesh, Uttarakhand, East Uttar Pradesh, East Rajasthan, Tamilnadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Konkan & Goa, Madhya Maharashtra, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Jharkhand, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

♦ **Moderate thunderstorm accompanied with lightning** at isolated places likely over East Madhya Pradesh, Vidarbha, Chhattisgarh, Kerala & Mahe, Tamilnadu, Puducherry & Karaikal, Rayalaseema and Coastal Andhra Pradesh & Yanam.

♦ **Strong Wind** (speed reaching 50-60 kmph) likely over Southwest & adjoining Westcentral Arabian Sea. **Squally Weather** (wind speed reaching 45-55 kmph) over North Arabian sea along & off south Gujarat-north Maharashtra coasts and along & off Odisha-West Bengal coasts. Fishermen are advised not to venture into these area.

25 August (Day 5): ♦ **Heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places likely over Odisha; **heavy to very heavy rainfall** at isolated places over Gujarat region, Gangetic West Bengal and Jharkhand and **heavy rainfall** at isolated places over Jammu & Kashmir, Ladakh,

Gilgit-Baltistan, Muzaffarabad (UTs), Himachal Pradesh, Uttarakhand, West Rajasthan, Tamilnadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Konkan & Goa, Saurashtra & Kutch, Chhattisgarh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

♦ **Moderate thunderstorm accompanied with lightning** at isolated places likely over East Madhya Pradesh, Vidarbha, Chhattisgarh, Kerala & Mahe, Tamilnadu, Puducherry & Karaikal, Rayalaseema and Coastal Andhra Pradesh & Yanam.

♦ **Strong Wind** (speed reaching 50-60 kmph) likely over Southwest & adjoining Westcentral Arabian Sea. **Squally Weather** (wind speed reaching 45-55 kmph) over North Arabian sea along & off south Gujarat-north Maharashtra coasts and along & off Odisha-West Bengal coasts. Fishermen are advised not to venture into these area.

Weather Outlook for subsequent 2 days from 26th to 28th August, 2020

♦ Fairly widespread to widespread rainfall/thundershowers likely over Maharashtra-Goa & Karnataka coasts, Gujarat State, Rajasthan and Madhya Pradesh; Scattered to fairly widespread rainfall/thundershowers likely over Northeast and adjoining East India. Under the uninfluenced of likely Low Pressure Area formation, Isolated heavy to very heavy falls are likely over south Uttar Pradesh, Odisha, Chhattisgarh, East Madhya Pradesh, East Rajasthan and Gujarat State.

♦ Isolated to scattered rainfall/thundershowers likely over south peninsular India and Western Himalayan region.

Salient advisories

- **Strong Wind** (speed reaching 50-60 kmph) very likely over Southwest & adjoining Westcentral Arabian Sea. **Squally Weather** (wind speed reaching 45-55 kmph) over North & Eastcentral Arabian sea along & off south Gujarat-north Maharashtra coasts on 22nd & 23rd, **Strong Wind** (speed reaching 50-60 kmph) likely over Southwest & adjoining Westcentral Arabian Sea, **Squally Weather** (wind speed reaching 45-55 kmph) over North Arabian sea along & off south Gujarat-north Maharashtra coasts and along & off Odisha-West Bengal coasts on 24th & 25th August. Fishermen are advised not to venture into these area.
- **Moderate thunderstorm accompanied with lightning** at isolated places very likely over south Rajasthan on 22nd & 23rd, over Tamilnadu, Puducherry & Karaikal and Coastal Andhra Pradesh & Yanam from 22nd to 25th, over Rayalaseema on 23rd & 24th, over East Madhya Pradesh, Vidarbha, Chhattisgarh, Kerala & Mahe on 24th & 25th August, 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. Farmers are advised to avoid standing in the open or working in the field during thunderstorm period. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at **most/many places** over Assam & Meghalaya, West Bengal & Sikkim, Odisha, Jharkhand, East Uttar Pradesh, Uttarakhand, East Rajasthan, Madhya Pradesh, Chhattisgarh, Gujarat, Konkan & Goa, Madhya Maharashtra, Vidarbha, Telangana, Coastal Andhra Pradesh & Yanam and Coastal Karnataka during the period, over Nagaland, Manipur, Mizoram & Tripura, Bihar, South Interior Karnataka and Kerala from 23rd to 25th **along with Heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places very likely over East Rajasthan, West Madhya Pradesh, Madhya Maharashtra and Gujarat region; **heavy to very heavy rainfall** at isolated places over West Rajasthan, Saurashtra & Kutch and Konkan & Goa and **heavy rainfall** at isolated places over East Madhya Pradesh, Vidarbha, Gangetic West Bengal and Odisha on 22nd, **Heavy to very heavy rainfall** at a few places **with extremely heavy falls** at isolated places very likely over Saurashtra & Kutch; **heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places over Rajasthan and Gujarat region; **heavy to very heavy rainfall** at isolated places over Madhya Maharashtra, Odisha and Konkan & Goa and **heavy rainfall** at isolated places over East Uttar Pradesh, Tamilnadu, Puducherry & Karaikal, West Madhya Pradesh, Gangetic West Bengal, Jharkhand, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 23rd, **Heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places likely over Saurashtra & Kutch; **heavy to very heavy rainfall** at isolated places over West Rajasthan, Gujarat region, Gangetic West Bengal and Odisha and **heavy rainfall** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad (UTs), Himachal Pradesh, Uttarakhand, East Uttar Pradesh, East Rajasthan, Tamilnadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Konkan & Goa, Madhya Maharashtra, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Jharkhand, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 24th, **Heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places likely over Odisha; **heavy to very heavy rainfall** at isolated places over Gujarat region, Gangetic West Bengal and Jharkhand and **heavy rainfall** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad (UTs), Himachal Pradesh, Uttarakhand, West Rajasthan, Tamilnadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Konkan & Goa, Saurashtra & Kutch, Chhattisgarh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 25th August, avoid irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables.
- In Lower Brahmaputra Valley Zone of **Assam**, farmers of flood affected areas are advised to continue

transplanting of seedlings of short duration HYV *Sali* rice varieties viz. Luit, Kapilee, Dishang etc. up to 1st week of September. Undertake replanting of dead hills within 7-10 days of transplanting of *Sali* rice with seedling of same age.

- In Western Plain Zone of **Punjab**, weather is congenial for attack of stem borers in rice. If more than 5% dead hearts appears in the field, spray 20 ml Fame 480 SC or 170 g Mortar 75 SG or 350 ml of Marktriazoo /Sutathion 40 EC or one litre of Chlorpyriphos 20 EC in 100 litres of water per acre. Also prevailing weather is highly favourable for development and multiplication of white fly population in cotton, apply Polo 50 WP @ 200g/acre or Obren 240 SC @ 200ml/acre or Triazophos 40 EC @ 600 ml /acre in 100 litres of water with manually operated knapsack sprayer and in 50 litres of water with shoulder mounted power sprayer or tractor mounted sprayer.

Detailed Agromet Advisories

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

Realised Rainfall: Significant rainfall occurred in all the districts of the region except Nellore, Prakasam, Sirkakulam, Vizianagram districts of Coastal Andhra Pradesh and Anantapur, Chittoor and Cuddapah districts of Rayalseema; in the districts of Kannur, Kasaragod, Kozhikode, Mahe, Malappuram, Palakkad, Thrissur, Wayanad in Kerala; Nilgiris in Tamilnadu; in all districts of Coastal Karnataka, in all districts except Ballari, Dharwad and Kalaburgi districts of North Interior Karnataka, in Chikaballapura, Davengere, Hassan, Ramanagara and Tumakuru districts of South Interior Karnataka;

- **Advisories: As Moderate thunderstorm accompanied with lightning** at isolated places very likely over Tamilnadu, Puducherry & Karaikal and Coastal Andhra Pradesh & Yanam from 22nd to 25th , over Rayalaseema on 23rd& 24th, over Kerala & Mahe on 24th& 25th August, 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. Farmers are advised to avoid standing in the open or working in the field during thunderstorm period. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at **most/many places** over Telangana, Coastal Andhra Pradesh & Yanam and Coastal Karnataka during the period, over South Interior Karnataka and Kerala from 23rd to 25th **along with heavy rainfall** at isolated places over Tamilnadu, Puducherry & Karaikal on 23rd&24th, over Coastal Andhra Pradesh & Yanam on 24th & 25th August, avoid irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables.

Karnataka

- In Coastal Karnataka, arrange for proper drainage in ginger, turmeric, maize and cotton fields. For the control of tube rot in pineapple, treat the tubers with Copper Oxychloride @3 gm/litre of water and then take up the planting.
- In North Interior Karnataka, complete transplanting of rice. Continue harvesting of matured green gram under clear weather. In shallow black and red sandy soils, undertake sowing of pearl millet, sunflower, castor, Desi cotton, minor millets, sunflower + castor and fodder crops. Undertake intercultural operations

in maize crop. Carry out nipping in pigeon pea for enhancing branching and improving yield. Undertake sowing of radish as intercrop (2:1) for controlling fruit borer in tomato crop. Open conservation furrows after every 8th row in Bunch groundnut for moisture conservation. Incidence of leaf and sheath blight disease is noticed in maize in Raichur and Kalaburgi districts; spray Carbendazim @ 1g/litre of water in clear weather.

- In South Interior Karnataka, undertake transplanting of ginger. Complete transplanting of rice and ragi. Provide proper drainage facility in coffee, arecanut, black pepper plantation, ginger and turmeric fields in Chikaballapur and Ramnagara districts. Complete sowing of maize, Foxtail Millet, Little Millet and Kodo millet, jowar, cowpea, red gram, green gram, black gram, horse gram, field bean crops. Undertake residue mulch in Bengaluru Rural district by using the residues of weeds, gliricidia and other green manure crops.

Kerala

- In High Altitude Zone, farmers are advised to provide propping to standing banana crop and to take necessary phyto-sanitary measures to manage capsule rot (Azhukal disease) in Cardamom and spray 1% Bordeaux mixture (500-1000 ml/plant).
- In Problem Areas Zone, in water logged paddy fields, spray Urea on leaves. Dilute 500g gram new Urea in 10 litre of water.
- In Northern Zone, weather is congenial for leaf folder attack in paddy, spray Coragen @3ml/10 litre of water is also advised.
- In Central Zone, during rainy season, to avoid the spreading of soft rot in ginger, apply mixture of 20 gram Pseudomonas in one litre of water or apply a mixture of 25 gram bleaching powder and 250 gram lime in to the basin.
- In Southern Zone, weather is congenial for bacterial leaf blight in paddy, apply bleaching powder @5 kg/hectare or spray the supernatant cow dung slurry to the crop. Also Streptocyclin @6gram/ 25 litre water can also be applied.

Andhra Pradesh

- In Visakhapatnam, Vizianagaram, Y.S.R.(Kadapa), Kurnool, Krishna districts continue transplanting of rice after clipping of leaf tips to avoid infestation of stem borer and leaf folder.
- In Kurnool district after draining out the water from the standing crops, spray 2 % Potassium nitrate (KNO₃) and urea solution @ 2 % under sunny weather conditions. Go for inter cultivation immediately after drying of the field.
- In Guntur district, to recover the crops(cotton, maize) from the excess moisture stress spray 2% urea or 1% KNO₃ solution 2-3 times at 4or 5 days interval.
- In West Godavari and YSR (Kadapa) districts present weather conditions are favourable for the incidence and spread of sigatoka leaf spot disease in Banana. During heavy rains to curb the spread of this disease, go for spraying of propiconazole @ 0.1% (or) tebuconazole + trifoxystrobin @ 1ml per litre for 2-3 times in 25 days interval.
- In Chittoor and Nellore districts the present weather conditions are favourable for fall army worm in Maize. To control spray Neem oil @ 5ml/L of water in early vegetative stage crop. In 30 days old crop spray Larvin @ 1 g/L of water after current spells of rain.

Telangana

- Drain out excess water in the paddy fields and maintain 2-3cm of water level.
- Prevailing weather conditions are congenial for the incidence of Bacterial Leaf Blight in rice. To control the spread of the disease, spray Agrimycin @ 0.4 g or Plantomycin @ 0.2 g per liter of water after current spells of rain.
- Preharvest germination of seeds is observed in Greengram. Hence, incorporate the crop into the soil as green manure and take up sowing of rice by direct seeding or with drum seeder.
- Prevailing continuous rains and cloudy weather is congenial for incidence of wilt in cotton. To control, soil

drenching Copper-Oxy-Chloride @ 3 g per litre of water.

Tamil Nadu

- In Cauvery Delta Zone, prevailing weather is congenial for white fly infection in coconut, apply neem oil 30 ml / lit or maida mavu solution (25 g / litre of water).
- In Western Zone, prevailing weather is conducive for Leaf Blight in maize. Spray Mancozeb @ 2gm/lit or Kresoxim methyl @ 1ml/lit of water. In young maize plants, if Fall Army Worm is observed spray Emamectin benzoate @ 0.4g/lit of water.
- In High Altitude Hilly Zone, planting of potato may be taken up in 45cm x 45cm spacing. Along with basal application of 8 tons of well decomposed farmyard manure, 80 kg urea, 315 kg Single super Phosphate and 15 kg Muriate of potash should be applied during field preparation.
- In High Rainfall Zone, green manure crops sown in the coconut basin or in the interspace of coconut gardens have to be incorporated into the soil if they have attained 50% flowering.
- In South Zone, prevailed weather condition induced Shoot and fruit borer incidence. To control spray Azadirachtin 0.03 % WSP (300 ppm) 5.0 g/lit. (or) Emamectin benzoate 5 % SG @ 4 g/10 litre.
- **Animal Husbandry:**
- In Tamilnadu, the prevailing weather condition is conducive for Food and Mouth Disease in cattle. Farmers are requested to utilize vaccination camp being conducted in all Government Veterinary Hospitals.
- In Karnataka, for control of biting fly, hang the alovera plant in the animal shed. Maintain the ambient room temperature in the poultry house.

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

Realised Rainfall: Rainfall occurred in all districts except Lower Subansari district of Arunachal Pradesh; all districts except Bongaigaon, Chirang Darrang, Dhubri, Morigaon, N.C.Hills and Nowgaon districts of Assam; all districts except West Garo Hills and West Khasi Hills districts of Meghalaya; all districts except serchhip district of Mizoram; all districts except Bishnupur,Chandel, Churachandpur and Thoubal districts of Manipur; all districts except Dimapur district of Nagaland and Dhalai, South Tripura and West Tripura districts of Tripura.

Advisories:

- As **rain/thundershowers** likely at **most/many places** over Assam & Meghalaya during the period, over Nagaland, Manipur, Mizoram & Tripura from 23rd to 25th **along with heavy rainfall** at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura from 23rd to 25th August, avoid irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables.

Arunachal Pradesh

- In Arunachal Pradesh, current weather is favorable for soft-rot disease in ginger, keep field weed free and avoid water stagnation. Spray Imidacloprid 17.5% SL during clear/dry days to control Viral leaf-curl diseases in chilli at flowering / fruiting stage.

Assam & Meghalaya

- In Hill Zone of Assam, continue sowing of sesame and nursery sowing of cauliflower after current spells of heavy rain. Spray Fipronil 5 SC @ 50 ml per bigha of land or Thiamethoxam 25 WG @ 13 gm per bigha of land against stem borer and case worm attack in Sali rice at the time of tillering stage during the rain free weather. Drainage system should be improved to prevent rhizome rot in ginger and turmeric. The affected areas may be drenched with 0.3% Mancozeb 75 WP @ 2g/l of water after current spells of rain.
- In Lower Brahmaputra Valley Zone, spray Fipronil 5 SC @ 50 ml per bigha of land or Thiamethoxam 25

WG @ 13 gm per bigha of land against stem borer and case worm attack in Sali rice at the time of tillering stage during the rain free weather. Continue nursery sowing of early cauliflower after heavy spell of rain. Due to congenial weather condition, there is chance of infestation of fruit sucking moth in citrus orchards. Thereby, farmers are also asked to prepare the poison baiting with 0.1% Malathion 50 EC @ 1 ml/litre of water, molasses (1%) and fruit juice helps in effective management of this pest. Farmers of flood affected are advised to continue transplanting of seedlings of short duration HYV Sali rice varieties viz. Luit, Kapilee, Dishang etc. up to 1st week of September. Undertake replanting of dead hills within 7-10 days of transplanting of Sali rice with seedling of same age. Continue sowing of cow pea, black gram/ green gram. Complete the sowing of sesamum at the earliest.

- In Upper Brahmaputra Valley Zone, continue transplanting of seedlings of 60-70 days old seedlings of Gitesh and Prafulla varieties *Sali* rice. Continue sowing of green gram and early cauliflower. To control the infestation of citrus trunk borer in citrus crop, the holes made by the pest in the trunks should be spiked with wire to kill the grub followed by cleaning and plastering it with wet soil. Alternatively, the holes should be plugged with cotton/cloths soaked in insecticides like Dichlorvos (0.07%) and then plastered with mud to have an airtight condition.
- In Barak Valley Zone, spray Flubendiamide 39.35% @ 0.1% or Thiamethoxam 25 WG @ 100 g/ha or Fipronil 5 SC @ 370 ml/ha for effective control of stem borer and case worm infestation in Sali rice at tillering stage if infestation is above ETL on non rainy days. Complete sowing of early cauliflower and radish. Continue sowing of cow pea, green gram and black gram.
- In Central Brahmaputra Valley Zone, undertake gap filling of Sali rice. Farmers are also advised to do weed management and maintain a depth of 5-6 cm water level in the paddy field. Spray Chloropyriphos 20EC or Monocrotophos 40EC @ 1.5ml per litre of water against rice hispa along with other insects like leaf folder, case worm etc in Sali rice. Continue harvesting of Capsularis and Olitorius jute. Undertake sowing of *kharif* pulses (green gram & black gram).
- In North Bank Plain Zone, continue sowing of *kharif* sesame, black gram/ green gram and cole crops. Spray Chloropyriphos 20EC or Quinalphos 25EC @ 2.0-2.5 ml per litre of water against rice hispa along with other insects like leaf folder, case worm etc. in *Sali* rice field at tillering stage. Weather is favorable for disease and pest so farmers are advised to prepare the slurry of dry cow dung and water and apply the slurry in paddy field.
- In Meghalaya, continue transplanting of *Sali* rice. Spray Azadirachtin 0.15% EC @ 3ml/litre or other neem formulation against attack of Hopper, Stem Borer, Leaf Fodder in *Sali* rice at active tillering stage when weather is clear. In flood affected areas of West Garo Hills, continue transplanting of Gitesh variety or other submergence tolerance variety like Swarna Sub 1, Jalashree and Jolkunwari when water recedes as seedlings can be kept for upto 72 days in the nursery. Ensure proper drainage system in the ginger/turmeric and vegetable crop field. Continue sowing of cole crops, cow pea and French bean on clear weather. Spray Trichoderma Harzianum or any Copper Oxychloride fungicides @ 4g/l of water at weekly interval against rhizome rot in ginger/ turmeric.

Manipur, Mizoram, Tripura and Nagaland

- In Manipur, spray Dithane M-45 @ 2ml/ litre water to control Tikka disease in groundnut. Spray Hexaconazole 5% EC @2ml/ litre of water against rust in soybean. Spray Fipronil 5%SC @ 2ml/ litre water against Leaf Folder/ Gall Midge/ Stem Borer and Copper Hydroxide 53.8% DF @ 3g/ litre water against Bacterial Leaf Blight in rice. Monitor water level in the *Kharif* rice field at tillering to panicle initiation stage. Spray Redomil MZ 72 WP @ 2g/litre water alternately with Carbendazim @ 2g/lit water at 14 days interval against Soft rot in ginger and Rhizome rot in turmeric.
- In Mizoram, spray Copper Oxy Chloride (COC) or Ridomil Gold @ 2 g/litre of water in turmeric during sunny days to reduce shoot rot disease in vegetative stage. Due to high humidity (90-95%) and moderate

rainfall, possibility of rust disease on soybean is higher. So farmers are advised to spray Hexaconazole 5% @ 2.0 ml/litre of water to control the disease. Spray Chlorantraniliprole @ 0.3 ml/litre of water or Fipronil 5% SC @ 2.0 ml/ litre of water against rice leaf folder/rice stem borer infestation in rice.

- In Tripura, there is chance of attack of Gandhi Bug in *Jhum* rice field. Apply Fipronil 1 ml per litre of water if infestation is more than ETL i.e. 16 bugs per 100 ear heads. Maintain about 5 cm water in the field of *Aman* rice at tillering stage. Apply 20% solution of fresh dung in Aman rice to control the incidence of leaf blight. Attack of White Gurb in groundnut can controlled by soil application of 10% Phorate @ 10 kg/ha.
- In Nagaland continue harvesting of Naga King chilli, tomato, cow pea and maize. If in some plot, rice has not been sown due to less rainfall or has been damage, cultivate low water consuming crops like maize, cowpea, black gram, green gram, sesame etc. Continue land preparation for sowing of green gram. There is chance of attack of brown spot, caseworm, leaf folder, rice hispa disease in TRC/WRC rice at tillering stage. Spray 1g of Ediphenphos in one litre of water against brown spot infestation if infestation is high and spray Chloropyriphos 20 EC or Quinalphos 25EC @ 2.0-2.5 ml per litre of water against caseworm, leaf folder, rice hispa disease .

Animal Husbandry

- In Northeastern states, carry out immunizations against BQ, HS, Foot and mouth disease as well as anthrax diseases in livestock like cows, buffaloes, goats and pigs. Also carry out vaccination (RDF1) against Ranikhet disease in one week old chicks and against Gamboro disease in two weeks old chicks. During the monsoon season, animals should not be fed with water submerged rotten grasses.
- In North Bank Plain Zone, prevailing weather may cause stress to poultry birds. So the poultry farmers are advised to feed them with lemon water and Glucon-D @10gm/ 1 litre of water.

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

Realised Rainfall: Significant rainfall occurred in North & Middle Andaman districts of Andaman & Nicobar Islands, in Arwal, Aurangabad, Banka, Bhabua, East Champaran, Gaya, Jahanabad, Kathihar, Khagadia, Kishanganj, Monghyar, Nalanda, Nawada, Rohtas and West Champaran districts of Bihar; in all district of Jharkhand except Deoghar, Garhwa, Godda, Hazaribagh, Jamtara and Lahadaga; in all districts of Odisha; in all districts of Sub-Himalayan West Bengal & Sikkim except Cooch Behar and North Dinajpur and in all districts of Gangetic West Bengal except Murshidabad and Nadia. Weather remained dry/mostly dry over the rest of the region.

Advisories:

- As **rain/thundershowers** likely at **most/many places** over West Bengal & Sikkim, Odisha, Jharkhand during the period, over Bihar from 23rd to 25th **along with heavy rainfall** at isolated places over Gangetic West Bengal and Odisha on 22nd, **heavy to very heavy rainfall** at isolated places over Odisha and **heavy rainfall** at isolated places over Gangetic West Bengal, Jharkhand on 23rd, **heavy to very heavy rainfall** at isolated places over Gangetic West Bengal and Odisha and **heavy rainfall** at isolated places over Sub-Himalayan West Bengal & Sikkim, Jharkhand on 24th, **Heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places likely over Odisha; **heavy to very heavy rainfall** at isolated places over Gangetic West Bengal and Jharkhand on 25th August, avoid irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables.

Odisha

- In East and South-Eastern Coastal Plain Zone and North Central Plateau Zone, drain out excess water from paddy and non-paddy fields. Wash out the mud from the paddy and non-paddy leaves by spraying water just

after receding of flood water.

- In North Eastern Coastal Plain Zone, continue transplanting of kharif rice; in case of aged seedlings, transplant 3 to 4 seedlings per hill with closer spacing. Carry out wrapping and propping when sugarcane crop (medium and late duration varieties) becomes 4-5 months old.
- In South Eastern Ghat Zone, due to continuous rainfall in last few days, flood like situation has arisen in some places of Malkangiri district and it may cause damages in existing crops. Make proper arrangement for drain out excess water from the crop field immediately. Wash out the mud from the paddy leaves by spraying water just after receding of flood water. In case of partially damaged direct seeded rice fields, do not go for Beushaning as it may further reduce the plant population; drain out excess water, remove weeds from the rice field and adjust the plant population by redistribution of hills and top dress N and K to boost the growth after cessation of heavy rainfall. Avoid application of plant protection chemicals as well as fertilizers to the standing crops. To protect vegetable seedlings from rainfall, cover the nursery beds with polythene. In up and medium land, where there is no scope for revival of rice, go for pre-Rabi crops like black gram, green gram, horse gram, sesame etc after cessation of heavy rainfall.
- In Mid Central Table Land Zone, arrange to drain out the excess water from vegetable fields. Harvest the matured vegetables and keep them in safe place. Harvest the matured Papaya and Banana. Postpone the irrigation and application plant protection chemical till the weather is clear.

Bihar

- In North West Alluvial Zone, carry out weed management in the rice field on priority bases; regular monitoring is advised for infestation of stem borer and leaf folder in early sown paddy crop. Carry out transplanting of early varieties of cauliflower seedlings.
- In South Bihar Alluvial Zone, carry out transplanting of brinjal, tomato, chilli, cauliflower and cabbage seedlings; apply 10-15 tonnes of cow dung and also apply 60 kg Nitrogen, 50 kg Phosphorus and 40 kg Potassium per hectare before final preparation of field. To control cut worm attack in maize field, apply insecticides chlorpyrifos @ 2ml per litre of water or furadon 4-5 granules in per whorl of the maize plant. If leaf folder or stem borer is observed in paddy, broadcast Cartap 4% granules @ 25 kg/ha in clear sky for effective control.

Jharkhand

- In Western Plateau Zone, farmers wishing to cultivate early table pea may arrange improved seed, fertilizers etc.; recommended early variety is Arkel; 40 kg seeds, 35 kg Urea, 200 kg S.S.P. and 25 kg Muriate of Potash are required for cultivation in 1 acre. Farmers wishing to cultivate early potato may arrange improved seed, fertilizers etc.; recommended early varieties are Kufri Ashoka and Kufri Pukhraj; 12 quintal seeds (germinated tubers of 20-30 gram each), 40 kg Urea, 70 kg D.A.P., 80 kg Muriate of Potash and 10 kg Sulphur are required for cultivation in 1 acre. Broadcast bio-fertilizer, blue green algae (if available) in rice field after 15 days of transplanting @ 4 kg per acre in submerged rice field.
- In South Eastern Plateau Zone, in fallow slopey land, undertake sowing of niger, lobia, rice bean, urdbean, moongbean, guar, sesame, linseed, safflower and castor upto 1st to 2nd week of September. Drain out excess water from pigeon pea, ginger, turmeric and yam fields.

West Bengal

Sub-Himalayan West Bengal:

- In Hill Zone, monitor water level in the rice field; construct proper drainage system to avoid flooding in crop field. Provide adequate drainage facilities in turmeric field.
- In Old Alluvial Zone, transplant 4-6 weeks old healthy seedlings of cabbage and cauliflower in the main field. Complete transplanting of 25-30 days old seedlings of aromatic rice within this week; for getting good quality and yield, plant 3-4 healthy seedlings in each hill at a distance of 20 × 15 cm. Drain out excess water from Turmeric and Ginger field to avoid rotting of rhizomes. To control *Khaira* disease in transplanted rice (due to Zinc deficiency) spray chelated Zinc @ 0.5-1.0 gram/litre of water during clear sky conditions.
- In Terai Zone, transplant 4-6 weeks old healthy seedlings of cabbage and cauliflower in the main field; at the time of transplanting apply 5.5 kg of Nitrogen and Phosphorus and 9.5 kg Potash.

Gangetic West Bengal:

- In Red & Laterite Soil Zone, maintain water depth at 2cm in the field. Complete the top dressing after 20-30

DAS of the crop by applying 12kg Urea/bigha. Regular monitoring for infestation of stem borer is advised in timely sown paddy crop; if infestation is observed, apply Cartap hydrochloride 4G @3kg/bigha to protect the crop during clear weather.

- In New Alluvial Zone, 20-25 days after transplanting, hand weeding must be done to control weeds in kharif rice and next weeding may be done 35-40 days after transplanting. Weeds may be controlled chemical spray by Oxydiazone 25% 700ml/acre or Butachlor 50% 1.25 Kg/acre or Thiobencarb 50% 800ml/acre in 200 litres of water when the sky is clear.
- In the Coastal saline Zone, keep the bunds and Aman paddy field weed free by hand weeding; for preventing stem borer attack apply Chlorothanolifol (Fatera) at 15-20 DAT @1.3kg/bigha only in granular form during clear weather so that the poisonous effect can extend up to panicle initiation stage and then decrease and become zero after panicle bearing stage.

Andaman & Nicobar Islands

- Carry out weeding in rice main field and maintain thin film of water. Carry out weeding in vegetable field and keep the drainage channel clean to remove rain water. Make ridges and transplant the healthy banana suckers.

Animal Husbandry

- Don't give green fodder from water stagnated area to the cattle; do not give pond water to the animals; to protect the animals from external parasites, give Butox as prescribed by veterinary doctor. Smoke of neem leaves in animal-shed is advisable for the control of mosquito and house fly.

Fishery

- In Odisha, drain out excess surface water from the pond. Protect ponds with net so that fishes do not come out of the pond.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Realised Rainfall: Significant rainfall occurred in all districts of Gujarat and Maharashtra.

Advisories:

- **Moderate thunderstorm accompanied with lightning** at isolated places very likely over Vidarbha on 24th & 25th August, 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. Farmers are advised to avoid standing in the open or working in the field during thunderstorm period. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at **most/many places** over Gujarat, Konkan & Goa, Madhya Maharashtra, Vidarbha during the period **along with Heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places very likely over Madhya Maharashtra and Gujarat region; **heavy to very heavy rainfall** at isolated places over Saurashtra & Kutch and Konkan & Goa and **heavy rainfall** at isolated places over Vidarbha on 22nd, **Heavy to very heavy rainfall** at a few places **with extremely heavy falls** at isolated places very likely over Saurashtra & Kutch; **heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places over Gujarat region; **heavy to very heavy rainfall** at isolated places over Madhya Maharashtra and Konkan & Goa on 23rd, **Heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places likely over Saurashtra & Kutch; **heavy to very heavy rainfall** at isolated places over Gujarat region and **heavy rainfall** at isolated places over Konkan & Goa, Madhya Maharashtra on 24th, **heavy to very heavy rainfall** at isolated places over Gujarat region, and **heavy rainfall** at isolated places over Konkan & Goa, Saurashtra & Kutch on 25th August, avoid irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables.

Maharashtra

- **In Konkan**, drain out excess water from standing crops, orchards, vegetable fields, rice and finger millet. Postpone the fertilizer and spraying operations in the fields. If incidence of blue beetle is noticed on rice

crop, spray Quinalphos 25% EC @ 20 ml or Triazophos 40%EC@ 12.5 ml or Lambda cyhalothrin 5% EC @ 5 ml per 10 liter of water during clear weather. To control downy mildew in cucurbitaceous vegetables, spray Dithane M-45 or Dithane Z-78 each @ 2.5 g/litres of water during clear weather.

- **In Madhya Maharashtra**, drain out excess water from standing crops, orchards and vegetable fields. Maintain 3-5 cm water level in rice fields. To control rust in soybean, spray Propiconazole @ 10ml in 10 litres of water during clear weather. Heavy rainfall likely to occur at isolated places in isolated areas for Ghat Zone, the ghat areas of Kolhapur and Satara districts during next 2-3 days, drain out excess water from standing crops, orchards and vegetable fields. Frequent rains and high humid condition is favourable for occurrence of tikka and rust in groundnut crop; to control spray Mancozeb @ 25 g + Bavistin @25 g in 10 liters of water during clear weather.
- **In Marathwada**, due to rainfall during last few days and as per forecast of rainfall for next five days, drain out excess water from all *kharif* crops, vegetables and orchards. For management of fall armyworm in *kharif* sorghum, take alternate spray of Emamectin benzoate 5% @ 4 gm or Spinetoram 11.7 SC @ 4 ml per 10 liter of water during clear weather condition. Due to nutrient deficiency, yellowing of leaves is observed in turmeric crop; for management, spray of Grade-2 Micronutrient @ 50 gm per 10 liter of water during clear weather condition.
- **In Vidarbha**, drain out excess water from standing crops, orchards and vegetable fields. If para wilt are observed in cotton undertake drenching with Carbendazim 50%WP @ 20 g in 10 litres of water during clear weather. Undertake nursery sowing of radish (Pusa Ketaki, Pusa Deshi) with fertilizer application @ 50 kg N and 25 Kg P /ha after current spell of rains. Due to continuous rainfall in isolated places and water logging condition, if wilting is observed in cotton, remove excess amount of water from the fields and undertake drenching with Copper Oxochloride @ 25 gm per 10 liters of water or Carbandazim 50 WP @ 10 g per 10 liters of water during clear weather.

Gujarat

- In South Gujarat, remove excess water and maintain 3-5 cm of water level in rice fields. Provide proper drainage to remove excess water from sugarcane, sweet corn, okra, cucurbits, brinjal and Yam crop fields.
- In Saurashtra and Kutch, in view of continuous rain and wet condition, drain out excess water immediately from fields in low-lying areas for prevention of wilting. Under present weather condition (continuous rainfall and wet condition), apply Urea, Ammonium Sulphate and Murate of Potash fertilizers each @ 30 kg/ha in cotton to prevent wilting. Spray of *Beauveria bassiana* @ 40 gm/10 litres of water for the control of *Heliothis* & *Prodenia* infestation in groundnut crop, after current spells of rain, is advised.
- In North Gujarat, drain out excess water from groundnut, cotton, green gram, maize, cluster bean, cowpea, sesame and pearl millet crops. Due to forecast of rainfall, avoid application of fertilizers / irrigation in the standing crops. Carry out the new planting of saplings in orchards. Sowing of short duration pulses crops as intercrop in orchards is advised. Undertake sowing of castor, fodder maize and fodder sorghum after current spells of heavy rain. Complete transplanting of chili, brinjal, bhindi, cowpea, cluster bean and cowpea crops after current spells of heavy rain.
- In Middle Gujarat, drain out excess water from soybean, tomato, chili fields. Complete transplanting of rice, chili and tomato after current spells of heavy rain. Transplanting should be carried out on one side of furrow so that seedlings are safe from water logging problems. Continue planting of mango and banana. Carry out weeding and hoeing operations at vapsa condition in pearl millet at 3-4 weeks to maintain optimum soil moisture.

Animal Husbandry

- In Gujarat, keep animal indoor in rainy period. Keep fodder at safe place to avoid spoilage due to rainfall.

Realised Rainfall: Rainfall occurred in all districts of Chhattisgarh and Madhya Pradesh except Bhopal during the week.

Advisories:

- **Moderate thunderstorm accompanied with lightning** at isolated places very likely over East Madhya Pradesh, Chhattisgarh on 24th & 25th August, 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. Farmers are advised to avoid standing in the open or working in the field during thunderstorm period. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at **most/many places** over Madhya Pradesh, Chhattisgarh during the period **along with Heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places very likely over West Madhya Pradesh and **heavy rainfall** at isolated places over East Madhya Pradesh on 22nd, **heavy rainfall** at isolated places over West Madhya Pradesh on 23rd, **heavy rainfall** at isolated places over Chhattisgarh on 24th & 25th August, avoid irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables.

Madhya Pradesh

- In Nimar Valley Zone, for management of Girdle beetle in soybean, spray the crop with Thicloprid 21.7 SC @ 650 ml/ha, profenophos 50 EC @ 1.25 lit/ha. or Trizophos 40 EC @ 800 ml/ha. after current spells of rain. Undertake transplanting of onion after current spells of heavy rain.
- In Jhabua Hills Zone, to control of fall army worm in maize, spray Emamectin benzoate @ 10ml/pump. Prepare drainage channels in proper distance for drainage of excess rain water in soybean and maize crop fields. Prepare field for cultivation of rainy season vegetables in raised furrow and poly-mulching method.
- In Kymore and Satpura Hill Zone, drain out excess water from maize, soybean and turmeric fields. There is possibility of semi-granular disease in tomato, brinjal and chilli, sprinkle two spells of any fungal drug @ 1 to 1.5 gm per liter of water at 10-15 days intervals
- In Bundelkhand Zone, continue nursery sowing of tomato, chilli, brinjal, etc. Carry out planting of new orchards of papaya, mango, lemon etc. after current spells of heavy rain

Chhattisgarh

- In Chhattisgarh Plain Zone, if the maize crop has reached 30-35 days age, undertake intercultural operations. In the fields of pigeon pea and other pulses crops where water is lying stagnant in, proper drainage arrangement should be made. For protection of oilseed and pulses crops from white fly, Metasystox should be sprayed @ 3 ml per litre of water or Nuvan can be sprayed @ 1 ml per litre of water.
- In Northern Hill Zone, in the transplanted rice fields, maintain water level up to 3-5 cm. Farmers are advised Weeding/ Intercultural operation in maize before broadcasting of urea. Apply 10 - 15 grains of Furadon (insecticides) in each leaf sheath if the crops are attacked by stem borer after current spells of rain.
- In Bastar Plateau Zone, 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, vaccinate cattle to prevent from Haemorrhagic Septicaemia and Black Quarter diseases. Vaccinate the goat to control PPR disease.

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

Realised Rainfall : Significant rainfall occurred in all the districts of Himachal Pradesh except Kinnaur, Lahaul & Spiti and Shimla and in all the districts of Uttarakhand; in Jammu, Kathua, Poonch, Rajouri, Reasi, Samba and Udhampur districts of Jammu & Kashmir (UT); in all the districts of East Uttar Pradesh except Ballia, Basti, Deoria, Gazipur, Gorakhpur, Jaunpur, Kaushambi, Kushinagar, Maharajganj, and Mau districts; in all districts of West Uttar Pradesh except Gautam Budh Nagar, Ghaziabad and Meerut districts; in all the districts of East Rajasthan; Jalore, Jodhpur, Nagaur, Pali in West Rajasthan; in Gurdaspur, Nawanshahr, Ropar, Sangrur, Mohali districts of Punjab; in all districts except Hisar, Jind, Katihal, Sirsa districts of Haryana; in all districts of Delhi.

- **Advisories: Moderate thunderstorm accompanied with lightning** at isolated places very likely over south Rajasthan on 22nd & 23rd August, provide mechanical support to young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Farmers are advised to avoid standing in the open or working in the field during thunderstorm period. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at **most/many places** over East Uttar Pradesh, Uttarakhand, East Rajasthan during the period **along with Heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places very likely over East Rajasthan, **heavy to very heavy rainfall** at isolated places over West Rajasthan on 22nd, **heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places over Rajasthan and **heavy rainfall** at isolated places over East Uttar Pradesh on 23rd, **heavy to very heavy rainfall** at isolated places over West Rajasthan and **heavy rainfall** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad (UTs), Himachal Pradesh, Uttarakhand, East Uttar Pradesh, East Rajasthan on 24th, **heavy rainfall** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad (UTs), Himachal Pradesh, Uttarakhand, West Rajasthan on 25th August, avoid irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables.

UTs of Jammu & Kashmir and Ladakh

- In Sub-Tropical Zone, do not allow rain water to stagnate in pulses field. Carry out weeding operation in vegetable fields. To control plant hopper in rice, install pheromone traps @ 1/kanal. Spray Mancozeb @ 0.25% in maize crop during clear weather, if stalk rot is observed.
- In Cold Arid Zone, to control blight and leaf spot on tomato, chilli, brinjal and capsicum; spray Mancozeb 75WP @ 0.3%.
- In Intermediate Zone, carry out weeding in maize. In case rice crop is affected by Hispa, spray Chlorpyrifos 20EC @ 2 ml/litre of water or Triazophos 40EC @ 2.5 ml/litre of water or Chlorpyrifos + Cypermethrin @ 2 ml/litre of water per hectare. Collect and destroy the affected leaves. To control red pumpkin beetle in cucurbits, apply Imidachloprid 1 ml/3 litres of water or Dichlorvos 30 EC @ 2 ml/ litre of water on clear day.
- In Valley Temperate Zone, apply irrigation to maize crop. Undertake sowing of carrot, radish and turnip and transplanting of seedlings of cole crops.

Himachal Pradesh

- In Sub Montane and Low Hills Sub Tropical Zone, carry out weeding in pulses. Undertake sowing of raddish, carrot, broccoli and lettuce. If upper leaves of the paddy seedlings become yellow and lower leaves remain green, it indicates the iron deficiency. To overcome this problem, spray Ferrous Sulphate @ 0.5 % with 0.25% lime solution.
- In Mild Hills Sub Humid Zone, optimum soil moisture level should be maintained in cucurbitaceous crops,

as dry conditions may lead to poor pollination and thus drop in yield of the crop. In case of black rot on apple trees, spray the trees with Propineb or Zineb @ 600 g / 200 litres of water. Install pheromone traps @ 3-4 traps per acre for monitoring of the pest population of diamond backmoth in cole crops, pod borer in pea and fruit borer in tomato.

- In High Hill Temperate Dry Zone, on seeing the symptoms of Powdery Mildew disease in pea, spray Carrathen 5 ml or Ballitan 5 g or Tebucanazole 4 ml or Hexaconazole 5EC 5 ml in 10 litres of water. Spray again after 10-15 days if necessary.
- In Mid Hills Sub Humid Zone, undertake sowing of French beans, radish, turnip and carrot. To control the fruit rot in tomato, remove the yellow leaves 15-20 cm from the ground and spray Mancozeb 250 g / 100 litres of water at an interval of 8-10 days. Add sticker to the mixture and spray on a clear day.

Punjab, Haryana, Delhi

- In Western Zone of Punjab, undertake planting of evergreen fruit plants like citrus, mango, guava, litchi, loquat, sapota etc. Due to prevailing humid weather conditions, farmers are advised to regularly monitor rice crop for fungal diseases. 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 on clear days. Attack of jassid on bhindi can be reduced by spraying 40ml Confidor 17.8 SL (Imidacloprid) or 40g Actara 25 WG (Thiamethoxan).
- In Western Plain Zone of Punjab, weather is suitable for attack of stem borers in rice. If more than 5% dead hearts appears in the field then spray 20 ml Fame 480 SC or 170 g Mortar 75 SG or 350 ml of Marktriazol /Sutathion 40 EC or 560 ml Monocrotophos 36 SL or one litre of Chlorpyrifos 20 EC in 100 litres of water per acre. Heavy rainfall followed by bright sunny days can result in parawilt incidence in cotton, spray cobalt chloride (10 mg per litre of water) only on affected plants within 24 hours of symptoms appearance. Weather is highly favourable for development and multiplication of whitefly population in the cotton, apply Polo 50 WP @ 200g/acre or Obren 240 SC @ 200ml/acre or Triazophos 40 EC @ 600 ml /acre or Ethion 50 EC @ 800 ml/acre in 100 litres of water with manually operated knapsack sprayer and in 50 litres of water with shoulder mounted power sprayer or tractor mounted sprayer.
- In Undulating Plain Zone of Punjab, past weather remained congenial for attack of rice hispa. On the transplanted crop, spray 800 ml Ekalux 25 EC (quinalphos) or 1.0 litre Dursban 20 EC (chlorpyrifos) in 100 litres of water per acre with a manually operated sprayer to control hispa. Weather would be congenial for attack of leaf folder and plant hoppers in rice and basmati. Spray the crop with 20 ml Fame 480 SC (Flubendiamide) or 170g of Mortar 75 SG (Cartap hydrochloride) or one litre of Coroban/Durmet/Force 20 EC (Chlorpyrifos) in 100 litres of water per acre. For control of plant hopper spray 94 ml Pexalon 10 SC (Triflumezopyrim) or 120 g Chess 50 WG (Pymetrozine) or 40 ml Confidor 200 SL/Crocodile 17.8 SL (imidacloprid) or 800 ml Ekalux/Quinguard/Quinalmass 25 EC (Quinalphos) in 100 litres of water per acre. Remove excess rain water immediately after heavy rainfall from Sugarcane. To save crop from Pyrrilla damage, Spray the crop with 600 ml Dursban 20 EC (chlorpyrifos) in 400 litres of water per acre with manually operated sprayer.
- In Central Plain Zone of Punjab, continue sowing of okra and cucurbits such as cucumber, bottle gourd, sponge gourd, pumpkin etc. To prevent the incidence of mealy bug on cotton crop, remove all the weeds growing around the crop fields and regularly monitor the crop. If symptoms of fungal foliar leaf spots are observed, spray the crop with 200 ml of Amistar Top in 200 litres of water per acre. Save the rice crop from sheath blight by keeping the bunds of the field clean; if the symptoms are observed, spray Galelio way@400ml or Nativo @80 g or Amitsar Top/Tilt/Folicur/Pikapika@200ml in 200 litres of water per acre. Prevailing weather is favourable for the development and spread of fruit rot and die back disease of chilli, spray with 250 ml Folicur or 750 gm of Indofil M-45or Blitox in 250 litres of water per acre at 10 days interval to timely check the disease.

- In Western Zone of Haryana, possibilities of variable weather and light to moderate rainfall, farmers are advised to withhold irrigation, spray in crops. Due to higher humid prevailing in the environment may increase the infestation of insect/pest, regularly monitor the crop. Due to favourable conditions keep vigil on insect pest in rice crop. Due to possible of rain, if rainwater stand in the field then quickly arrange for drainage of water from the cotton fields. Keep vigil on white fly infestation, if above the economical threshold level (ETL), spray one liter Nimbecidine mixed with 250 liter water per acre, when sky remain clear. For control of leafhopper spray 40 ml imidacloprid (Confidor) 200SL mixed with 120-150 liter water per acre, during clear weather condition.
- In Eastern Zone of Haryana, withhold intercultural/hoeing operation and spraying in the cotton crops. Proper drainage management to be done if there is standing water after rain. Monitor the cotton crop for white fly attack carefully. Undertake transplanting of brinjal on ridge whose seedlings are ready. Keeping in view of present weather, farmers are advised to monitor crop regularly for leaf folder or stem borer as paddy crop is in vegetative stage. Install pest specific pheromone traps @ 3-4/acre in the paddy fields for monitoring of stem borer. In present weather condition, monitor constantly brown plant hopper (BPH) in paddy field. Undertake sowing of carrot on raised bed and transplanting of fruit crops after rain with consultation of officers of Horticultural Dept GoH.
- In Delhi, in view of the realized rainfall, do proper arrangement for drainage in all vegetables, pulse, maize and nurseries of the crops and avoid spraying in the crops. Undertake transplanting of brinjal, tomato, chilli and early cauliflower on ridge whose seedlings are ready, sowing of sweet corn (Madhuri, win orange) and baby corn (HM-4). Maintain proper drainage in the fields. Undertake sowing of guar (Pusa Navbahar, Durga Bahar), radish (Pusa Chetki), cluster bean (Pusa Komal), Beans (Pusa Sem 2, Pusa Sem 3), spinach (Pusa Bharti), amaranths (Pusa Lal Chaulai, Pusa Kiran) and ladyfinger (Pusa A-4) on ridges. Undertake transplanting of rainy season onion in the prepared fields and maintain proper drainage in the fields. Monitor crop regularly for leaf folder or stem borer as rice is in vegetative stage. Install pest specific pheromone traps @ 3-4/acre in the paddy fields for monitoring of stem borer. Undertake weeding and hoeing in the standing crops and vegetables to protect them from weeds and proper drainage in all pulses, vegetables and other crops.

Uttar Pradesh:

- **In East Uttar Pradesh**, in the paddy field, if plants started turning yellow i.e. top leaves turned yellow and bottom leaves remained green, farmers are advised to spray zinc sulphate solution (6.0 kg zinc sulphate dissolved in 300 litres of water / ha.) or zinc sulphate @25kg per hectare. Undertake weeding and thinning and split application nitrogen in standing crop's field. Apply 40 kg nitrogen (87 Kg urea) at top dressing after sowing of 25-30 day of sunflower. Farmers are advised to give top dressing of urea in their spring sugarcane as per proper moisture is available in soil if not done yet & tying them to avoid lodging for fast growing sugarcane. Undertake intercultural operations and ensure no water lodging in Brinjal, Chillies, Okra etc.
- **In West Uttar Pradesh**, if Khaira disease is visible in paddy, spray 20-25 kg Zinc sulphate and 2.5 kg lime in 800 liters of water for its control. In the paddy crop, apply the second top dressing of urea at the rate of 50 to 60 kg per hectare after 55-60 days after transplanting. Undertake second weeding-hoeing in maize crop, after 35-40 days and second top dressing of urea after 40 to 45 days of sowing at the rate of 60 to 70 kg per hectare. Spray 60-65 kg urea along with 25 kg sulphur per hectare in sesame crop. Undertake weeding in pigeon pea, green gram and black gram crops, okra and propping in sugarcane.

Uttarakhand

- In Sub Humid Sub Tropic Zone, maintain water level of 5-6cm in rice fields. Carry out manual weeding in rice field. Drain out excess water from sugarcane. Tie up 3-4 plants of sugarcane to prevent from falling.
- In Bhabar and Tarai Zone, undertake land preparation for sowing of rapeseed. Arrange for short duration varieties. Give proper support to the cucurbits plants. Avoid direct contact of fruits with soil.
- In Hill Zone, undertake land preparation for sowing of vegetable pea. Procure short duration varieties for sowing.

Rajasthan

- In Flood Prone Eastern Plain Zone, to control white grub in bajra crop, spray Chloropyriphos @ 4 litre /500-600 liter water per hectare.
- In Irrigated North Western Plain Zone, Prevailing weather is favourable for the development and spread of fruit rot and die back disease of chilli. Farmers are advised to spray the crop with 250 ml Copper Oxy Chloride + 10 gram Streptocycline 100 litres of water per acre at 10 days interval to timely check the disease.
- In Sub Humid Southern Plain and Aravali Hill Zone, release Trichogramma @ 1.5 lack/ha for the control of fall army worm at egg stage in maize. If infestation is increase than foliar spray of Emamectin benzoate 5 SG @ 0.4 g/l water for the control of fall army worm in maize. Spray should be done when sky is clear.
- In Semi Arid Eastern Plain Zone, undertake transplanting of tomato, chilli and brinjal in the field. Use healthy, vigour & nematode infestation free plants for transplanting and also papaya seedlings.
- In Arid Western Plain Zone, weather is congenial for leaf eater insects in pearl millet, broadcast Quinalphos 1.5 % dust @ 25 kg per hectare.

The Agromet Products in this Bulletin are generated by Agrimet Division, weather forecast issued by NWFC, New Delhi and Agromet Advisories are prepared based on the DAAS Bulletins issued by different Agrometeorological Field Units.