



National Agromet Advisory Service Bulletin

Friday 24th August 2018
(For the period 24th to 29th August 2018)



Issued by
India Meteorological Department

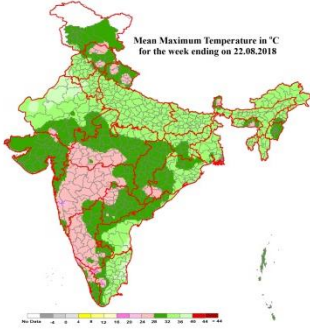
Weblink For

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

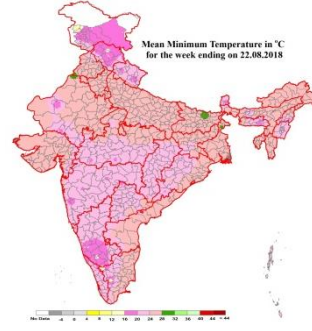
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending on 22.08.2018

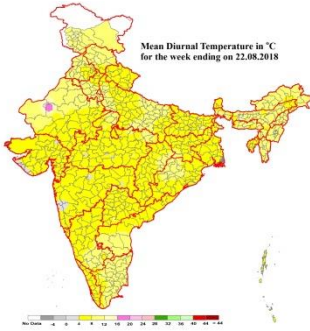
Mean Maximum Temperature (°C) for the week ending on 22.08.2018



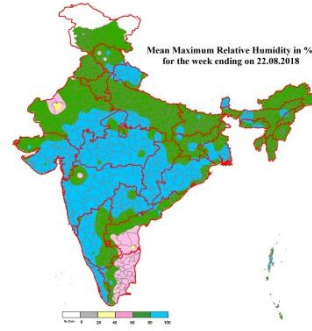
Mean Minimum Temperature (°C) for the week ending on 22.08.2018



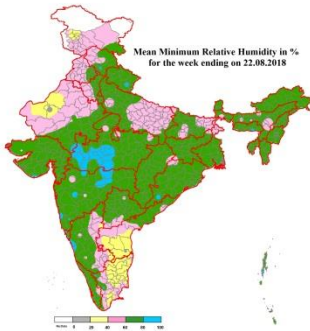
Mean Diurnal Temperature Variation (°C) for the week ending on 22.08.2018



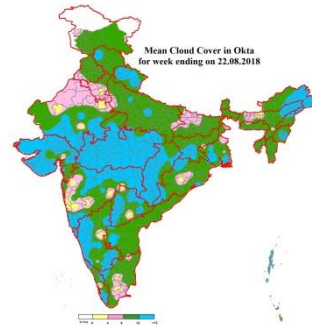
Mean Maximum Relative Humidity (%) for the week ending on 22.08.2018



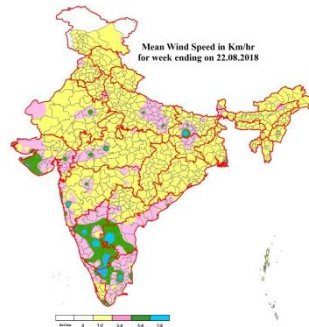
Mean Minimum Relative Humidity (%) for the week ending on 22.08.2018



Mean Cloud Cover (okta) for the week ending on 22.08.2018

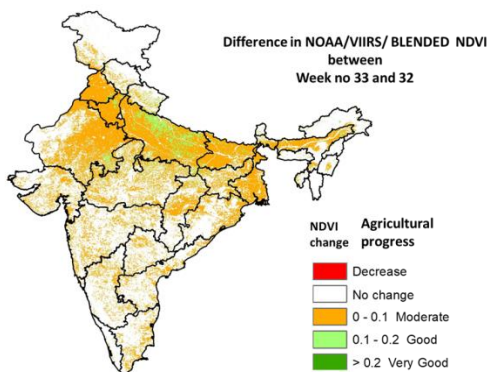
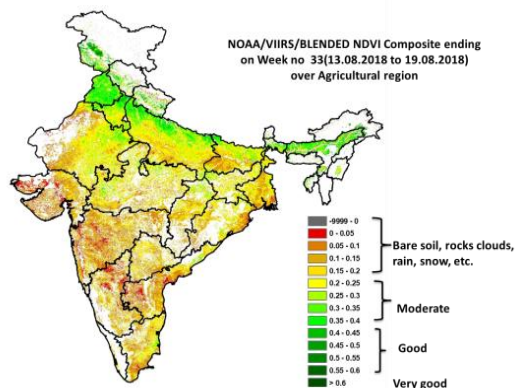


Mean Wind Speed (km/hr) for the week ending on 22.08.2018



NOAA/VIIRS/BLENDED NDVI composite for the week ending on 19th August 2018 over Agricultural regions of India

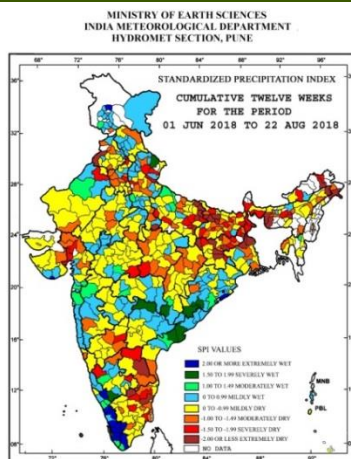
Difference in NOAA/VIIRS/BLENDED NDVI between 12th August and 19th August 2018



- Agriculture vigour is good over few places in Uttarakhand and adjoining Uttar Pradesh and Haryana and in isolated parts of Punjab and Jammu & Kashmir, it is moderate over most parts of North Eastern states and remaining parts of Punjab; many parts of Sub-Himalayan West Bengal, Northern part of Bihar, West Madhya Pradesh, East Rajasthan, Himachal Pradesh, remaining parts of Uttar Pradesh, Haryana and Jammu & Kashmir; few parts of Jharkhand, Northern part of Chhattisgarh, Odisha, Gangetic West Bengal and East Madhya Pradesh and isolated parts of Tamilnadu, South Bihar. Due to persistent cloud cover, NDVI over crop cover could not be derived in remaining parts of Indian region.

- Good agricultural vigour was noticed over many parts of Uttar Pradesh and isolated parts of Haryana, East Rajasthan, North Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, North eastern states, Uttarakhand, Punjab, Haryana and Himachal Pradesh.

Standardised Precipitation Index Cumulative 12 weeks for the period 1st June to 22nd August 2018

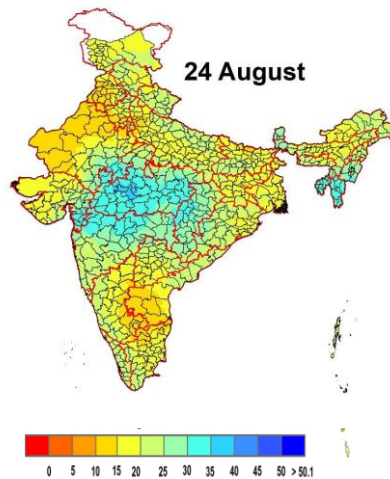


- Extremely/severely wet conditions experienced in few districts of Kerala; Koraput, Puri, Rayagada districts of Odisha; Bandipore district of Jammu & Kashmir; Chamoli district of Uttarakhand; Diu district of Saurashtra, Kutch & Diu; Bijapur district of Chhattisgarh; East Godavari, West Godavari districts of Andhra Pradesh; Adilabad district of Telangana; Theni, Tirunelveli districts of Tamil Nadu & Puducherry; Kodagu, Mysore districts of Karnataka.
- Extremely/Severely dry conditions experienced many districts of Arunachal Pradesh; Jharkhand; few districts of West Bengal; Bihar; Uttarakhand; Kamrup, Dhubri, Tinsukia, Kamrup Metro., districts of Assam; West Garo Hills district of Meghalaya; Azamgarh, Ballia, Chandauli, Deoria, Fatehpur, Jaunpur, Kanpur Dehat, Kushi Nagar, Mau, Maharajganj, Varanasi, Ghaziabad, Mahoba districts of Uttar Pradesh; Ambala, Sonapat, Panchkula districts of Haryana; Ferozepur district of Punjab; Hanumangarh district of Rajasthan; Betul, Chhindwara districts of Madhya Pradesh; Ahmedabad, Mehsana districts of Gujarat Region; Cuddapah, Kurnool districts of Andhra Pradesh; Dharmapuri, Namakkal, Thanjavur, Tiruvannamalai, Viluppuram, Krishnagiri districts of Tamil Nadu &

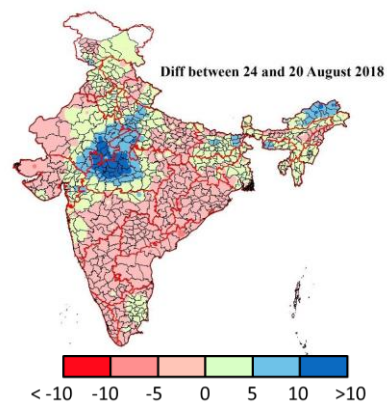
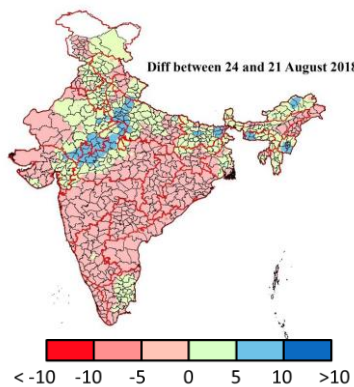
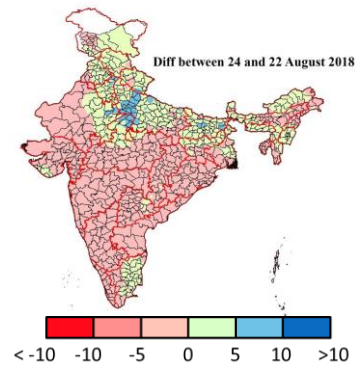
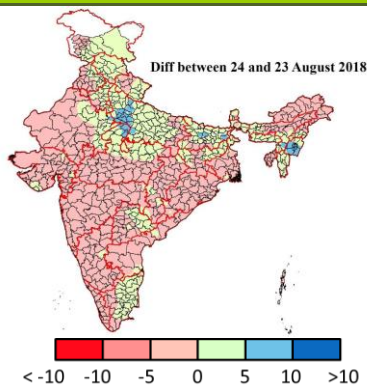
Puducherry; Yadgir, Shimoga, Chickballapur districts of Karnataka; Lakshadweep district of Lakshadweep.

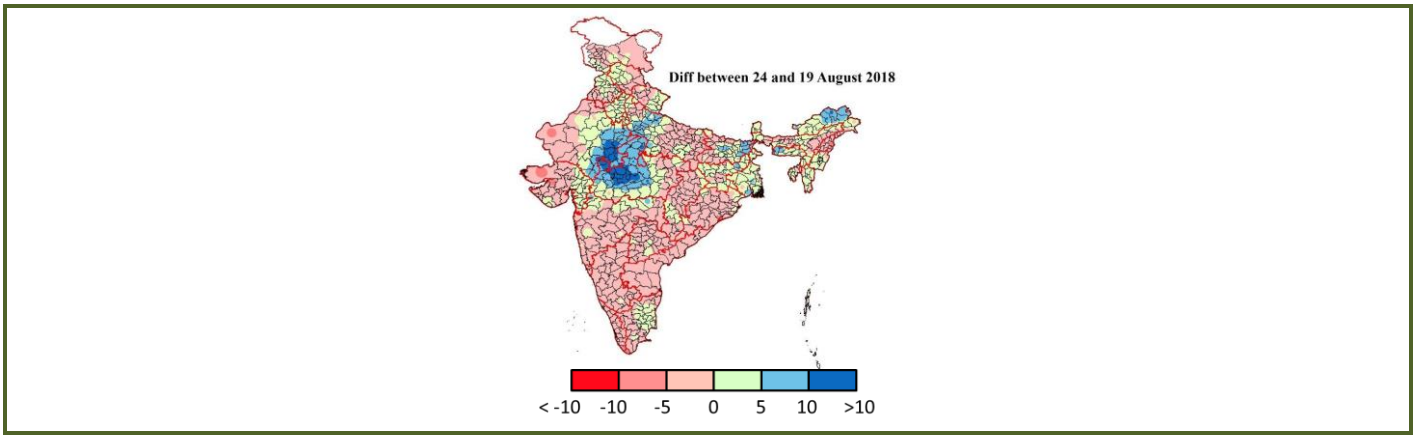
- Moderately dry conditions experienced in few districts of Assam; Bihar; Delhi; Gujarat Region; Chhattisgarh; Lohit district of Arunachal Pradesh; West Tripura district of Tripura; Burdwan, Hooghly, Howrah districts of West Bengal; Bolangir district of Odisha; Giridih, Sahibganj, Jamtara, Ramgarh districts of Jharkhand; Balrampur, Faizabad, Gonda, Kaushambi, Auraiya, Badaun, Bulandshahar, Jalaun, Jyotiba Phule Nagar, Rampur districts of Uttar Pradesh; Garhwal Tehri district of Uttarakhand; Amritsar, Jalandhar, Kapurthala, Mansa districts of Punjab; Lahaul & Spiti district of Himachal Pradesh; Udhampur district of Jammu & Kashmir; Jalore, Bundi, Tonk districts of Rajasthan; Ashoknagar, Balaghat, Chhatarpur, Dindori, Sagar, Seoni districts of Madhya Pradesh; Surendranagar district of Saurashtra, Kutch & Diu; South Goa district of Konkan & Goa; Satara district of Maharashtra; Nellore, Chittoor districts of Andhra Pradesh; Cuddalore, Madurai, Nagapattinam, Perambalur, Tiruvarur, Vellore, Tirupur districts of Tamil Nadu & Puducherry; Bijapur, Raichur, Bellary districts of Karnataka.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

Daily Soil Moisture (mm) for 24th August 2018 (ending at 0830 IST) for 60 cm depth

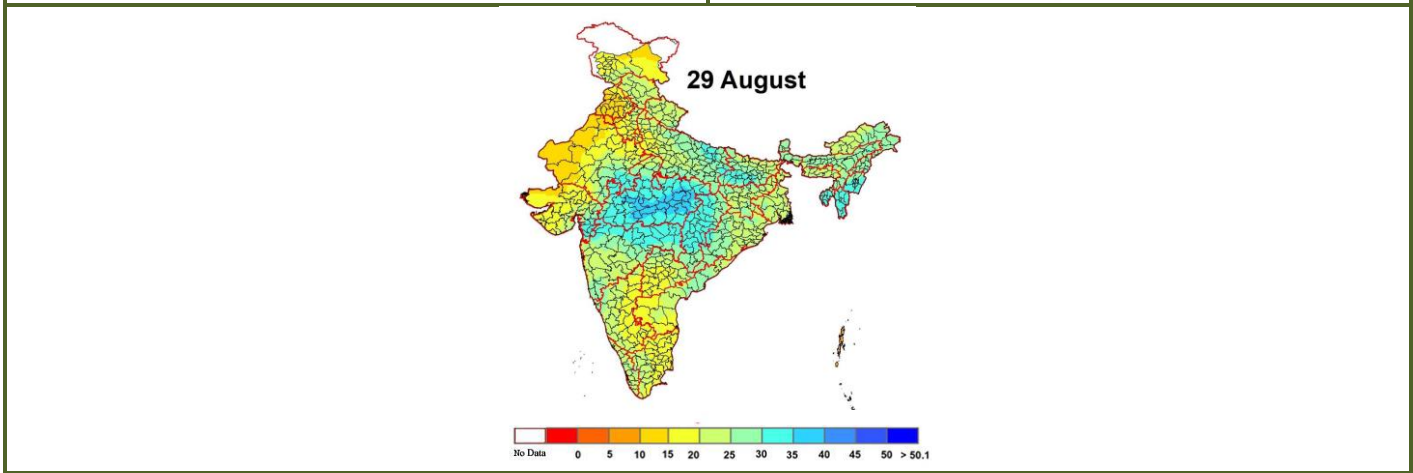
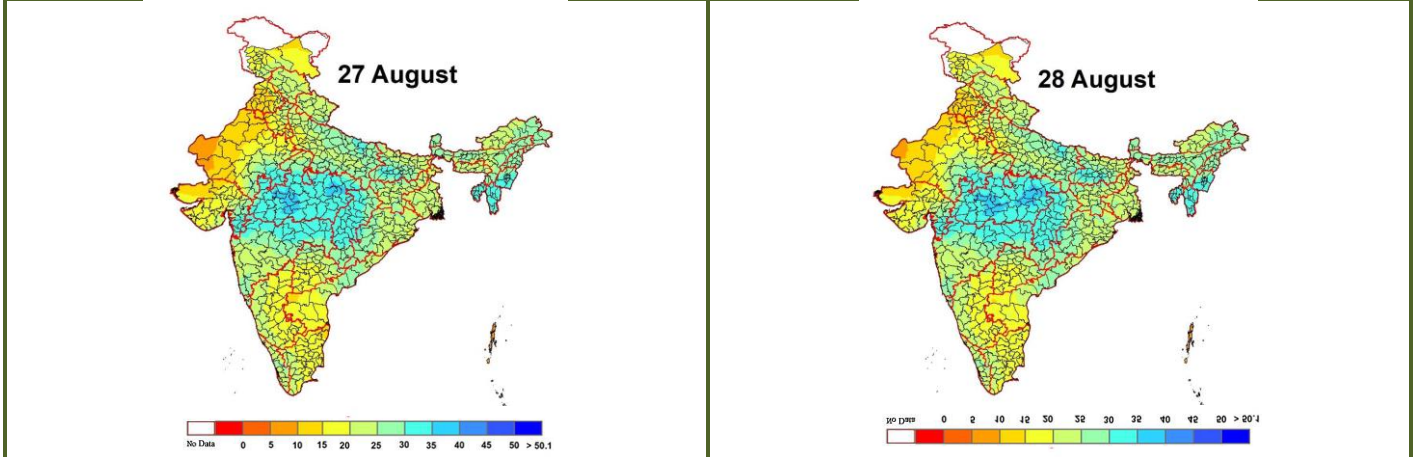
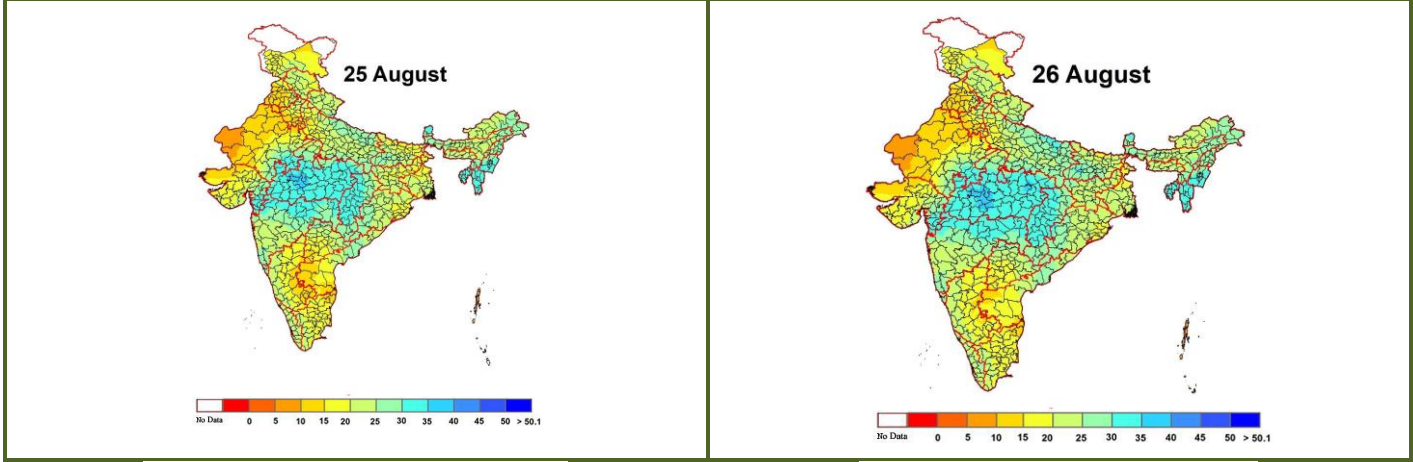


Difference of Soil Moisture (mm) for 60 cm depth





Forecasted Soil Moisture (mm) from 25th to 29th August 2018 (ending at 0830 IST) for 60 cm depth



Weather Forecast for next 5 days valid upto 0830 hours of 29th August 2018

- Meteorological subdivision wise detailed 5 days rainfall forecast is given in Table below.
- No significant change in temperatures very likely over most parts of the country during next 2-3 days.

5 Day Rainfall Forecast (Mid day) 24th August 2018

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

% Station Reporting Rainfall

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

Weather Warning during next 5 days

- **24 August (Day 1):** Heavy to very heavy rain with extremely falls at isolated places very likely over Assam & Meghalaya and Uttarakhand; heavy to very heavy rain at isolated places very likely over Bihar, Uttar Pradesh & Himachal Pradesh and heavy rain at isolated places very likely over Nagaland, Manipur, Mizoram & Tripura, Jharkhand, Odisha, West Bengal & Sikkim, Andaman & Nicobar Islands, East Rajasthan, north Chhattisgarh, Madhya Pradesh, coastal Tamilnadu, Coastal & South Interior Karnataka, Coastal Andhra Pradesh and Telangana. Rough to very rough sea conditions are likely to prevail over west central Arabian sea. Fishermen are advised not to venture in this area.
- **25 August (Day 2):** Heavy to very heavy rain at isolated places very likely over Jharkhand, Odisha, Uttar Pradesh, Uttarakhand and East Madhya Pradesh; heavy rain at isolated places very likely over Assam & Meghalaya, Bihar, Gangetic West Bengal, Andaman & Nicobar Islands, East Rajasthan, north Chhattisgarh, West Madhya Pradesh, Konkan & Goa and Coastal & South Interior Karnataka. Rough to very rough sea conditions are

likely to prevail over west central Arabian sea. Fishermen are advised not to venture in this area.

- **26 August (Day 3):** Heavy to very heavy rain at isolated places very likely over Odisha; heavy rain at isolated places very likely over Assam & Meghalaya, Gangetic West Bengal, Jharkhand, East Rajasthan, West Uttar Pradesh, Haryana, Chandigarh & Delhi, north Chhattisgarh, East Madhya Pradesh and Konkan & Goa and Coastal & South Interior Karnataka. Rough to very rough sea conditions are likely to prevail over west central Arabian sea. Fishermen are advised not to venture in this area.
- **27 August (Day 4):** Heavy rain at isolated places likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Odisha, East Rajasthan, West Uttar Pradesh, Uttarakhand, East Madhya Pradesh, Chhattisgarh, south Gujarat Region, Coastal Karnataka and Kerala.
- **28 August (Day 5):** Heavy to very heavy rain at isolated places likely over Gujarat Region; heavy rain at isolated places likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Odisha, Uttarakhand, Chhattisgarh, East Madhya Pradesh, Saurashtra & Kutch, Coastal Karnataka and Kerala.

Weather Outlook for subsequent 2 days from 29th to 31st August 2018

- Widespread rainfall with isolated heavy falls activity likely over northeast & east India.
- Fairly widespread rainfall activity likely over northern plains, parts of central India and along west coast.
- Isolated to scattered rainfall activity likely over rest parts of the country.

Salient Advisories

- As rough to very rough Sea conditions are likely to prevail over **west central Arabian Sea** from 24th to 26th August, fishermen are advised not to venture into this area.
- As rain/thundershowers likely at most/many places over **Nagaland, Manipur, Mizoram & Tripura** during the period, over **Assam & Meghalaya** on 24th, 25th, 27th and 28th, over **Arunachal Pradesh** on 24th, 25th and 28th, along with heavy to very heavy rain with extremely heavy falls at isolated places very likely over Assam & Meghalaya on 24th, heavy rain at isolated places very likely over Nagaland, Manipur, Mizoram & Tripura on 24th, 27th and 28th, over Assam & Meghalaya from 25th to 28th August, rain/thundershowers likely at most/many places over **Uttarakhand** and **West Uttar Pradesh** during the period, over **East Uttar Pradesh** from 24th to 26th, at many places over **Himachal Pradesh** on 24th, over **East Rajasthan** from 25th to 28th, along with heavy to very heavy rain with extremely heavy falls at isolated places very likely over Uttarakhand on 24th August, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.
- In view of the widespread rainfall with heavy to very heavy rainfall at isolated places during next two days: provide adequate drainage in maize, groundnut and vegetable fields in **Bihar**. In **East Madhya Pradesh**, in view of heavy rainfall forecast, drainage may be arranged in vegetables, pulses and oilseed cropfields.
- Utilising the realized and expected rainfall, continue transplanting of rice in Coastal Andhra Pradesh and Telangana. Complete transplanting of Sali rice in **Assam** after current spells of heavy rain. In **Saurashtra & Kutch**, continue sowing of castor and pigeon pea. In Middle Gujarat, continue sowing of castor and cluster bean crops. Undertake land preparation for transplanting of Samba rice in **Tamil Nadu**.
- In **Rayalaseema**, farmers are advised to undertake sowing of contingency crops like red gram, castor, cowpea, korra, bajra and horse gram instead of rainfed groundnut as there will be yield reduction in late sown crop. In North Interior Karnataka, continue sowing of red gram (late sown -August month) crop with 25% higher seed rate under sufficient moisture condition.
- In **North Saurashtra**, for the control of aphid in groundnut, spray Imidacloprid 17.8 % @ 5 ml or Thiomethoxam @ 3 g or Dimethoate @10 ml in 10 liters of water.
- In **East Vidarbha**, to control sucking pest in cotton, apply 5% Nimboli Arc at initial stage and after reaching ETL foliar spray Dimethoate 30% EC @ 13 ml per 10 litres of water after current spells of rain.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala, all districts of Coastal Karnataka, Belgavi, Bidar, and Kalburgi districts of North Interior Karnataka, Bangalore (Rural), Chikamangaluru, Kodagu, Mysuru and Shivamogga districts of South Interior Karnataka, all districts of Coastal Andhra Pradesh except Nellore and Prakasam, all districts of Telangana except Jogulamba Gadwal and Nagarkurnool and in Kanniyakumari, Nilgiris, Puducherry, Theni and Tirunelveli districts of Tamil Nadu and Puducherry during the week. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most places over Coastal Karnataka during the period, at many places over South Interior Karnataka during the period, over North Interior Karnataka on 27th and 28th, over Kerala from 26th to 28th, along with heavy rain at isolated places likely over coastal Tamilnadu on 24th, over Coastal & South Interior Karnataka from 24th to 26th, over Coastal Karnataka and Kerala on 27th and 28th August, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.
 - As rough to very rough Sea conditions are likely to prevail over west central Arabian Sea on 24th to 26th August, fishermen are advised not to venture into this area.
 - **Kerala:**
 - In areas not affected by flood, due to continuous rain, there is a chance of foot rot in pepper. Add 2 kg Trichoderma to a mixture of 90 kg FYM and 10 kg Neemcake and kept for two weeks with sufficient moisture. Add 2.5 kg of this mixture to each matured vine to control foot rot of pepper. Severely affected pepper vines should be sprayed with and soil should be drenched with 1% Bordeaux mixture or 20 g Pseudomonas fluorescens or 2.5 g copper oxychloride or 2 g copper hydroxide in one litre of water.
 - Keep perforated Mancozeb sachet @ 2 per palm(2-3 g filled in perforated plastic sachet) as a prophylactic measure against bud rot in coconut.
 - In Northern Zone, for mosquito bug – blight disease complex in Cashew plants at flushing stage, spray solution of Lamda Cyhalothrin insecticide 3ml + Copper Oxychloride fungicide 5g dissolved in 5 litres of water. For controlling leaf eating caterpillar in banana, cut & destroy affected leaves with larvae and spray Ekalux 1.5ml/litre of water in leaf axils. For rice leaf folder in paddy at milking stage, open the folded leaves with thorny twig and use biocontrol Trichogramma Chelonix @ 5 nos/per 5 cent. To control rice bug in paddy at milking stage, spray 2 ml Malathion per litre of water either before 9 am or after 3 pm. Undertake plant protection methods after current spells of rain.
 - **Andhra Pradesh:**
 - In Coastal Andhra Pradesh, continue transplanting of rice. Clip the leaf tips before transplanting. Transplant 33 seedlings per square meter and maintain 2-3 seedlings per hill. Drain out excess stagnated water from the fields of direct sown paddy. Apply recommended doses of fertilizers to crops like paddy, BT cotton, red gram, black gram, green gram and bajra.
 - In Rayalaseema, take up sowing of contingency crops like red gram, castor, cowpea, kora, bajra and horse gram instead of rain-fed groundnut as there will be yield reduction in late sown crop. As iron deficiency was observed in rice in few parts, spray Ferrous Sulphate @ 5gm/litre of water 2 times at 7 days interval.
 - In Coastal Andhra Pradesh, to control pillody attack in sesamum at flowering to capsule formation stage, remove infected plants and destroy to avoid further spread. Spray Methyl Demeton or Dimethoate @ 400 ml/acre after current spells of rain.
 - In Rayalaseema, present weather conditions are favourable for thrips and jassids attack in groundnut. To control spray Dimethoate @ 400 ml or Imidachloprid @ 60 ml/200 litres of water per acre. Due to dry weather conditions, heavy wind speed and high temperatures the cotton crop is wilting. To control, spray 1% KNO₃ or 19:19:19 solution on the crop. The present weather conditions are favourable for fall army worm and grain pod borer in maize. To control spray Thiomethoxam @ 2.5 ml. + Lamda Cyhalothrin @ 10 ml/10 litres of water @ 200 L per acre. The present weather conditions are favourable for spodoptera in blackgram and greengram. To control, spray Chlorpyrifos @ 2.5 ml/litre of water.
 - **Telangana:**
 - Continue transplanting of rice and transplanting of chillies. Prevailing weather conditions are congenial for the incidence of hispa and stem borer in rice. To control hispa, spray Quinalphos or Profenophos @ 2 ml or Chlorpyrifos @ 2.5 ml per liter of water. For stem borer, apply Cartap Hydrochloride 4G @ 8kg per acre. Prevailing weather conditions are congenial for the incidence of sucking pests in cotton. To prevent the pests, apply Monocrotophos and water in 1:4 ratio with a soft brush on tender part of the stem for 30 days old crop. The prevailing weather conditions are congenial for incidence of sucking pests in vegetables. To control, spray Fipronil @ 2ml or Thiomethoxim @ 0.3g per litre of water. The incidence of Stem Fly and Stem Girdler is noticed in Soybean. To control, spray Dimethoate @ 2 ml per liter

or Quinalphos @ 2 ml + Neem seed kernel extract (NSKE) @ 5 ml per liter or Chlorantriliprole @ 0.3 ml per liter of water. Undertake plant protection measures on a non-rainy day.

▪ **Tamil Nadu:**

➤ Take up land preparation for transplanting of Samba rice. Dry seeding with seed drill can also be taken up. Treat seeds with pseudomonas fluorescence 10g/kg of seed before sowing. Continue land preparation for sowing of irrigated as well as rain-fed maize crop. Utilizing the rainfall, take up sowing of sorghum and cowpea under rain-fed lands. Continue sowing of gourd vegetables. Tomato seedlings may be transplanted in ridges and furrows. Provide support to sugarcane, banana and pepper plants. Apply foliar spray of castor gold (0.5 ml/litre of water) in castor crop field to arrest flower dropping and good capsule setting during current weather condition.

➤ Occurrence of stem borer and rice hispa is being noticed in the kuruvai paddy. To control this pest, spray Chlorophyriphos @ 500 ml/200 litre of water for one acre. . In the prevailing weather condition leaf sheath diseases of paddy is noticed at pinnacle initiation stage. To control spray carbendazim @ 1g per litre of water. To control the incidence of sucking pest in the vegetable crops, spray neem seed kernal extract 5%. Present weather conditions are favorable for the Tikka leaf spot incidence in Groundnut. Spray Carbendazim 500 gram or Mancozeb 1000 gram per ha. Spray Dimethoate 30 EC @ 2 ml/litre or Phosphamidon 40 SL @ 2 ml/litre to manage the shoot borer in ginger at vegetative stage. Undertake plant protection measures on a non rainy day.

▪ **Karnataka:**

➤ In North Interior Karnataka, continue sowing of red gram (late sown -August month) crop with 25% higher seed rate under sufficient moisture condition. Continue intercultural operations in pigeon pea, soybean and maize crops to conserve soil moisture.. Prepare the ridges and furrows and compartment bunds in the lands reserved for *rabi* sowing so as to conserve moisture in the soil which will be helpful for the *rabi* crops.

➤ In Coastal Karnataka, continue intercultural operations in maize and cotton crops after current spells of rain. To avoid the Zinc deficiency in rice field, apply Zinc Sulphate @ 20 kg / ha. Undertake planting of arecanut and pepper.

➤ In South Interior Karnataka, undertake sowing of short duration crops like cowpea (vegetable purpose), field bean, horse gram, Foxtail millet, Little millet, Kodo millet, ragi crops. Carry out mulching in red gram and maize crops by using the residues of weeds, Gliricidia and other green manure crops grown on the bunds, borders and along the drainage lines. Continue intercultural operations in green gram, groundnut, sesame, maize and red gram crop after current spells of rain. Undertake thinning operation for better availability of scarce soil moisture to the reduced population of crop plants. Complete transplanting of rice and ragi. Adopt crop rotation with rai, maize in vegetable crop fields. Due to cloudy weather, there is chance of flower drop in cotton; spray Planofix @ 1.0 ml in 4.5 liters of water. Undertake plant protection measures after current spells of rain.

➤ In North Interior Karnataka, to manage aphids in black gram, spray Dimethoate @ 1.7 ml / liter of water in clear weather. For the control of leaf eating caterpillars in soybean, spray Quinalphos @ 2 ml or Monocrotophos @ 1ml or Chlorpyrifos @ 2 ml dissolved in one liter of water.

➤ In North Interior Karnataka, continue fresh plantation of fruit trees, teak, neem, tamarind, acacia or other trees which are useful to prepare the agricultural implements on the bunds, uncultivated and marginal lands.

• **Animal Husbandry**

➤ In Karnataka, vaccinate the animals against the diseases like Foot & Mouth disease, Haemorrhagic Septicaemia and Black Quarter. Vaccinate (ET vaccine) sheep and goats against Enterotoxemia.

➤ In Kerala, there are chances of contagious disease in cattle during monsoon season. Avoid grazing in water logged areas. Take vaccination from nearby veterinary clinics.

➤ In Tamil Nadu, to control ticks, spray Butox (2ml butox per liter of water) to avoid spread of haemoprotozoan infection in cattle. Avoid grazing of animals near ponds and lakes to avoid fluke infestation. Sheep and goat should be dewormed by using suitable anti-helminthic by consulting with local veterinary doctor. Mosquitoes are a serious problem to livestock. The most effective control method available is source reduction by removing or draining mosquito breeding sites. Daily fogging or aerosoling for adult mosquitoes may also provide relief.

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

- **Realised Rainfall:** Rainfall occurred in Lohit, Lower Dibang Valley, Papumpare, Tawang, Upper Subansari, West Kameng and West Siang districts of Arunachal Pradesh, all districts of Assam except Baksa, Bongaigaon, Darrang, Dhemaji, Dhubri, Kamru (Rural), Kamrup (Metro), Karbi Anglong, Karimganj and Sibsagar, all districts of Meghalaya except Ribhoi, in Aizwal, Kolasib and Lunglei districts of Mizoram, Imphal West district of Manipur, all districts of Nagaland except Kephire, Kohima, Mon and Phek, all districts of Tripura during the week. Weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain/thundershowers likely at most/many places over Nagaland, Manipur, Mizoram & Tripura during the period, over Assam & Meghalaya on 24th, 25th, 27th and 28th, over Arunachal Pradesh on 24th, 25th and 28th, along with heavy to very heavy rain with extremely heavy falls at isolated places very likely over Assam & Meghalaya on 24th, heavy rain at isolated places very likely over Nagaland, Manipur, Mizoram & Tripura on 24th, 27th and 28th, over Assam & Meghalaya from 25th to 28th August, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.
- **Arunachal Pradesh:**
 - Carry out weeding in rice field. Undertake immediate sowing of certified seeds of crops like French bean, pumpkin and okra. Carry out earthing up in ginger field. Harvest mature cobs of maize and use stubs as fodder for livestock.
 - Monitor rice crop against sheath blight. For control, spray Sheathmar @ 3 gram per litre of water on a non rainy day.
- **Assam:**
 - Transplanting of *Sali* rice may be completed. In case of transplanting of over-aged seedlings, closer spacing (8 inch x 6 inch) with more number of seedlings (6-7 seedlings/hill) is advocated. Gap filling after 7-10 days is recommended. Continue transplanting of 60-70 days old seedlings of Gitesh and Prafulla in the main fields. Damaged hills of rice in the main field should be replaced by new seedlings or by splitting already established healthy hills. Select recommended varieties like Pusa Synthetic, Pusa Snowball, Improved Japanese, etc., for mid sowing of Cauliflower seeds. Well drained loam to clay loam soil is suitable for mid and late varieties. Undertake land preparation and sowing of radish. Continue sowing black gram and green gram. Select improved varieties like T-9, T-27, Pant U 19, T-122, Saonia mah (SB121), KU 301 and USJD113 for black gram and T44, Kopergaon, K851, ML56, ML131, SG1 (Pratap), SGC16, SGC20, Sonai (SG21-5) etc for green gram. Harvest jute crop at the small pod stage to get optimum yield and good quality of fibre. Provide mechanical support to chilli plants. Sowing of sesamum seeds should be completed within this month. Select recommended varieties like Gauri, Binayak, RT-1, Punjab Til No-1 etc. Collect promising varieties like INR 1008, TANU-9 or other local varieties for cultivation of finger millet.
 - Present weather is conducive for rice hispa in Sali paddy at tillering stage. To control, use mechanical methods and avoid spraying of pesticides. For leaf miner and stem borer attack in the Sali rice field, apply Chlorpyrifos @ 2ml per litre of water after current spells of rain. In rainy weather condition papaya plant get affected by mosaic and leaf curl diseases. For effective control of the diseases rouge out the affected plant or spray with Rogar @ 0.1%. Carry out roguing of diseased arhar plants to prevent phyllody disease. For stem borer in maize crop, spray Fenitrothion 1.0 liter mixed with 200-250 liters of water in 1 hectare crop in clear weather conditions.
- **Meghalaya:**
 - Prepare nursery bed for sowing of cole crops. Sow the seeds of broccoli (varieties Pushpa, Aiswarya, Fiesta, Lucky, etc.); cabbage (H-139) & cauliflower (local) in the nursery at 5 cm spacing between the line under the protected structures. Maintain 5 cm of standing water in rice field. Keep the field free of weeds. Continue sowing of chilli, brinjal, French bean and cow pea. Maintain proper drainage in ginger, turmeric, maize and cucurbit fields.
- **Manipur:**
 - Maintain 5-7cm water level in the kharif rice field at tillering and panicle initiation stage. Carry out weeding at tillering stage after the rains. Carry out weeding and earthing up and provide drainage in black gram, rice bean, soybean and groundnut crops.
 - In the rice field, spray Coragen 3-5 ml per 15 litres of water at early stage infestation of case worm, stem borer, gall midge, hoppers and thrips. Spray Carbendazim @ 0.5g / litre of water to control Tikka disease in groundnut. Spray Dichlorovos 76 EC 0.05% @ 0.6ml/ litre of water against hairy caterpillars in black gram and rice bean crops after current spells of rain.
- **Mizoram:**
 - Transplant 2-3 seedlings of kharif rice in one place to avoid gap filling. Spacing should be 20 cm row to row and 15 cm plant to plant. Keep some seedlings in nursery or corner of the field for gap filling. Harvest all chilli and cucurbit crops and keep seeds for next season. Undertake raising seedlings of Khasi mandarin, acid lime, star fruit, plum and peach. Transplant seedlings in secondary bed or polythene bags at 4-6 leaves stage. Maintain proper drainage in passion fruit, coffee, rubber and oil palm plantations and in maize, pulses and paddy fields. Carry out earthing up in ginger and turmeric crops. Undertake planting of rubber at newly established place.
 - In large gardens of cucurbitous crops, apply Carbaryl 0.2 per cent or Malathion 0.15 per cent suspension containing sugar or jaggery at 10 g/litre of water at fortnightly intervals at flowering and fruit initiation against fruit fly/pumpkin beetle after current spells of rain.

- **Tripura:**
 - For better pod formation in groundnut, apply two hand weedings along with earthing up at 20 and 40 days after sowing. This is the time to harvest the crop. Harvest the crop if 80 to 90 percent crop in the field is matured. About 20 percent moisture during harvesting prevents losses due to shattering. After harvesting, dry the crop up to 14 percent moisture level before storing.
 - Carry out weeding in paddy fields at tillering stage of Aman rice. Harvest Aus rice and keep it under shed.
 - There may be attack of bacterial leaf blight (BLB) in Aman rice which may reduce tillering and delay flowering. Manage the attack by spraying fresh cow dung extract 20% twice (starting from initial appearance of the disease and another at fortnightly interval). Spray Mancozeb or Chlorothalonil 2 g/litre twice at 10 days interval to manage downy mildew attack in bitter melon and pointed gourd. For the attack of Gundhi Bug in Jhum rice, remove the weeds in the vicinity of paddy and collect bugs by hand netting. If infestation is more than THL, i.e. 16 bugs per 100 ear heads, apply Fipronil 1 ml per liter of water. Light trap at 200 to 300 mt interval may also be used to manage the attack. Undertake plant protection methods after current spells of rain.
- **Nagaland:**
 - Carry out earthing up in soybean, ginger and turmeric field after current spells of rain. Carry out timely harvesting in cucurbits and okra. Remove infested okra and brinjal fruits and shoots regularly and destroy them. Monitor TRC/WRC paddy against brown spots.
- **Animal Husbandry**
 - Keep the poultry house well ventilated during the day time. Change litter periodically and provide fresh and clean drinking water. Vaccinate poultry birds against Coccidiosis, Ranikhet and Gamboro diseases.
 - De-worm pigs/piglets, goat and sheep. Vaccinate pigs against FMD & swine fever and cattle/sheep/goat against FMD, Hemorrhagic Septicaemia, Black Quarter, etc. Precaution should be taken against Japanese encephalitis, a mosquito borne disease. Avoid stagnant water in and around the sty, maintain proper hygienic condition.
 - Give Dairy animals a balanced feed so that their milk production capacity is enhanced. To prevent mastitis in dairy cows, clean the floor of the dairy shed with suitable antiseptic solution. Wash and clean the udder of cows before and after milking. Carry out periodic cleaning of cowsheds along with the feeding pans during the rainy season to prevent fungal and bacterial infections.
- **Fishery**
 - Feeding should be done with quality floating feed containing 20 percent crude protein. To maintain optimum concentration of dissolved oxygen in the ponds, regular aeration may be done by splashing the water by hand or bamboo or by using mechanical aerator.

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

Realised Rainfall: Rainfall occurred in all districts of Andaman and Nicobar Islands except Nicobar, in Araria, Banka, Bhagalpur, Buxar, Kishanganj, Nalanda, Nawada, Supaul and West Champaran districts of Bihar; all districts of Jharkhand except Giridih, Godda, Gumla, Jamtara, Khunti, Pakur and Palamau, in all districts of Odisha, in all districts of Gangetic West Bengal except Murshidabad and in all districts of Sub-Himalayan West Bengal & Sikkim except Cooch Behar, Malda, North Dinajpur and South Dinajpur during the week. Weather remained mainly dry over rest of the region.

- **Advisories:**
 - As rain/thundershowers likely at most/many places over Sub-Himalayan West Bengal & Sikkim, Gangetic West Bengal, Odisha, Bihar, Jharkhand and Andaman & Nicobar islands during the period along with heavy/heavy to very heavy rain very likely at isolated places over Bihar on 24th & 25th, over Jharkhand from 24th to 26th and over Odisha during the period, heavy rain at isolated places over Gangetic West Bengal from 24th to 26th August, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.
- **Odisha:**
 - In Western Undulating Zone, undertake weeding in transplanted rice after current spells of rain. In direct seeded rice at seven to eight week stage, maintain water level upto 5cm in the fields. Provide adequate drainage in the fields of pulses, maize and groundnut.
 - Complete hoeing, weeding and earthing up in pigeon pea at six-seven week stage. Early sown maize crop is at 6 to 7 week stage. Apply 8 kg N/acre followed by earthing up provide adequate drainage in maize, groundnut. Undertake nursery raising of tomato and brinjal and continue planting of lemon, banana, papaya and mango saplings after current spells of heavy rain.
 - Wrapping and propping should be done in 4-5 months old sugarcane. To control early shoot borer, spray Chloropyrifos or Quinalphos @ 400 ml/ac in 200 litres of water after current spells of rain.

- **Bihar:**
 - In view of the widespread rainfall with heavy to very heavy rainfall at isolated places during next two days, provide adequate drainage in maize, groundnut and vegetable fields.
 - In the upland areas, where rice could not be transplanted due to deficient rainfall, September Pigeon pea could be sown after 25th August. So, land preparation is advised after current spells of heavy rainfall. Pusa-9 and Sarad varieties are recommended for sowing in North Bihar. Application of 20kg/ha Nitrogen, 45kg/ha Phosphorus, 20 kg/ha Potash and 20 kg Sulphur/ha is advised during land preparation. Seed should be treated with Thiram/Capton @ 2.5g/kg of seed. Intercultural operation is advised in July sown pigeon pea crop after current spells of rain.
 - Planting of Rajendra parwal-1, Rajendra Parwal-2, FP-1, FP-3, Swarm rekha, Swarn allokkik, IIVR-1, 2, 105 varieties of pointed guard is advised after current spells of heavy rain in North Bihar. Seed rate @ 2500 plants/hectare with planting distance of 2x2 meter are advised.
 - Continue planting of new saplings of fruit plants such as mango, litchi, jackfruit, guava, custard apple, lemon etc. after current spells of heavy rain. Before planting, application of 40-50 kg FYM per plant is advised.
 - Regular monitoring is advised for infestation of stem borer in rice crop at tillering stage. If infestation is observed, application of Cartap hydrochloride 4G(*Caldan*) @ 10kg/acre is advised to protect the crop.
- **Jharkhand:**
 - In fallow uplands, farmers may sow Kulthi or Niger. Improved variety of Kulthi are V.L.G.-19 or Birsa kulthi-1 and of Niger are Birsa niger-1, Birsa niger-2, Birsa niger-3, Pooja-1 after current spells of heavy rain.
 - Strengthen the bunds of the rice fields. Broadcast urea after 20-25 days of transplanting of rice. Undertake weeding before broadcasting. To control stem borer attack in rice, spray Monocrotophos 36 E.C. @ 1-2 ml per litre of water and mix Tipol in the solution or prepare the solution in soap water. In case of heavy infestation of the insect, apply granular insecticide like Carbofuran 3 G @ 12 kg per acre) or Forate 10 G (@ 4 kg per acre). However, at the time of broadcasting of granular insecticide, stagnant water in the field is essential.
- **West Bengal:**
 - In the Sub-Himalayan West Bengal, provide proper drainage facility in soybean, ginger and turmeric fields. Carry out weeding in large cardamom field. Harvest mature cobs of Maize and mature fruits of round chilli. Keep the Jute plants bundle submerged in fresh & flowing water with concrete or stone stack for good quality fiber. Undertake sowing of black gram in uplands after seed treatment. Remove excess water from kharif vegetable fields.
 - In Gangetic West Bengal, maintain proper water level in the Aman wet seeded paddy field. Weeding should be done at regular interval by hand weeding in the main field. Make arrangements for proper air movement for avoiding damp condition inside the betel vine garden. Undertake sowing of sweet corn and baby corn on a raised bed.
 - In Sub-Himalayan West Bengal, to control brown spot of rice, spray Carbendazim @ 1 gram/liter of water. To Control of Bacterial leaf blight (BLB) disease of rice, spray Copper oxy chloride @ 4 gram/ liter of water at morning or evening hour. For the management of cucurbitaceous fruit fly population, use pheromone traps. For management of brinjal fruit & shoot borer, spray Coragen 18.5% E.C @ 0.5 ml/litre of water after clipping off all the infested twigs, flowers, buds, fruits etc.
 - In Gangetic West Bengal, drench the soil around brinjal, tomato and chilli seedlings with Diethane M-45@2.5g/liter of water for preventing wilting after current spells of rain. Apply systemic pesticide with sticker. For stem borer attack in Aman paddy, apply granular pesticide Cloranthratrol 0.4g@1.25kg per bigha. If insect population of fruit borer, diamond back moth, etc. is above ETL in cabbage and cauliflower, spray Spinosad 1.0 ml/4 litres of water under clear sky conditions.
- **Andaman & Nicobar Islands:**
 - Apply first dose of fertilizers in transplanted rice. Sow leafy vegetables (*Amaranthus* and poi) on raised beds of 30 cm height and 45-100 cm width. Do hand weeding in vegetable crops and remove excess rain water from the field.
- **Animal Husbandry**
 - In West Bengal, protect animals from diseases caused due to excessive rainy conditions and de-worm them at this time. Keep the shade clean and dry. Vaccinate cattle against BQ and FMD. Vaccinate goat and sheep against Enterotoxemia. Vaccinate poultry birds against Ranikhet disease.
 - In Andaman & Nicobar Islands, monitor for foot and mouth disease in livestock and consult the local veterinary doctor.
 - In Bihar, animals must be vaccinated for FMD, HS and BQ namely Trivac vaccine administered dose @ 2.5-3ml S/C per animal is recommended.
- **Fisheries**
 - In West Bengal, apply lime @ 20kg per bigha in fish culture pond. Apply Mustard oil cake and Rice bran (1:1) as fish feed @ 3-2% body weight of total stock of fish in the pond.
 - In Andaman & Nicobar Islands, do manuring in the fish pond to improve primary production of the

fingerlings.

- In Odisha, it is right time to go for pisciculture. Collect fingerlings. After releasing the fingerlings in the ponds, keep a bag full of FYM or paddy husk. Depending upon the size of the ponds, apply 5-10 kg of limes to newly developed pisciculture. Maintain 6 ft water depth with pH 6.8-7.5, turbidity 20-30 cm and plankton growth of 2.5/50 liter water. Avoid overcrowding. The fishes should be fed daily with oil cake bran mixture at the rate of 2-3 % of their total biomass.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rainfall occurred in all district of Konkan & Goa, all districts of Madhya Maharashtra except Sangli, all districts of Marathwada and Vidarbha, all districts of Gujarat Region except Ahmedabad, Banaskantha, Bharuch, Daman, Gandhinagar, Mehsana, Narmada, Navsari, Patan and Vadodara during the period. Weather remained mainly dry over rest of the region during the week.
- **Advisories:**
 - As rain/thundershowers likely at most places over Konkan & Goa during the period, at many places over Madhya Maharashtra from 26th to 28th, over Gujarat Region on 27th and 28th, over Saurashtra & Kutch on 28th, along with heavy to very heavy rain at isolated places likely over Gujarat Region on 28th, heavy rain at isolated places over Konkan & Goa on 25th and 26th, over south Gujarat Region on 27th and over Saurashtra & Kutch on 28th August, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.
 - **Maharashtra:**
 - In South Konkan, maintain water level of 5-10 cm in rice field. Apply second dose of nitrogenous fertilizers Urea @ 800 g of per Are area in *nagli* fields after current spell of rain. In North Konkan, maintain water level of 3-5 cm in rice field. Drain out excess water from orchards and vegetable fields.
 - In Madhya Maharashtra, maintain 3-5 cm water level in rice fields. If there is stagnated water in the furrows, remove the water by digging out trenches.
 - In Marathwada, drain out excess water from tumeric field, undertake drenching with Copper Oxchloride @ 25 gm per 10 liter of water. Undertake top dressing with Nitrogen @ 325 g per plant in mrug bahar pomegranate orchard and @ 500 g per plant in sapota orchard.
 - In West Vidarbha, undertake plucking of green pods of green gram. Apply second top dressing of nitrogen fertilizer @ 40 kg N/ha to 50 days old maize crop on a non-rainy day. Undertake intercultural operation like weeding in cotton. Also apply second dose of fertilizer if not done in late sown cotton on a non-rainy day. In East Vidarbha, maintain 3-5 cm water level in rice fields.
 - In Madhya Maharashtra, to control parawilt in cotton, undertake drenching with solution of Urea @ 1.5 kg + Potash @ 1.5 kg in 100 litres of water (150-200 ml per plant) after current spell of rain.
 - In East Vidarbha, to control sucking pest in cotton, apply 5 % Nimboli Arc at initial stage and after attaining ETL foliar spray Dimethoate 30 % EC @ 13 ml per 10 litres of water after current spells of rain.
 - **Gujarat:**
 - In Saurashtra & Kutch, continue sowing of castor and pigeon pea crops. Continue transplanting of brinjal, chilli and early cauliflower seedlings under sufficient moisture condition. Undertake intercultural operations in cotton, pearl millet and vegetable crops to conserve soil moisture.
 - In Middle Gujarat, drain out excess water from black gram, green gram and vegetable crop fields. Continue sowing of castor and cluster bean crops. Continue transplanting of tomato, brinjal and chilli crops and intercultural operations in black gram and green gram.
 - In South Gujarat, maintain optimum water level in rice field. Undertake intercultural operations in pigeon pea crop before flowering. Continue nursery preparation of chilli and brinjal crops. As a precautionary measure for control of mealybug, grow two rows densely planted of pigeon pea or maize around the cotton field and also as intercrop of 1-2 rows of maize after 5 to 6 rows of cotton.
 - In North Gujarat, carry out intercultural operations in cotton, pearl millet, maize and vegetable crops.
 - In South Gujarat, for management of mealy bug in cotton apply Aacetamiprid 20 SP @2 g, Chloropyriphos 20 EC @25 ml/10 litres of water.
 - In North Saurashtra, for the control of aphid in groundnut, spray Imidacloprid 17.8 % @5 ml or Thiomethoxam @ 3 g or Dimethoate @10 ml in 10 liters of water. If population of lady bird beetle is more, do not spray pesticides.
 - In South Saurashtra, due to cloudy weather condition incidence of mite is observed in sesame crop, for control, spray Dicophol @ 20 ml or Ethion @20 ml in 10 litres of water.
- **Animal Husbandry**
 - In Gujarat, provide 30-35 g mineral mixture in daily diet of cattle. Spray Deltamethrin or Amitraz 2 ml/litre of water for the control of tick. Spray phenyl in the animal shed to avoid flies and mosquitoes. Keep animals indoors during rainfall. Keep fodder in safe place to avoid spoilage due to rainfall.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rainfall occurred in all districts of East Madhya Pradesh except Chattarpur and Tikamgarh, all districts of West Madhya Pradesh except Bhind, all districts of Chhattisgarh except Surguja during the week.
- **Advisories:**
 - As rain/thundershowers likely at many places over Madhya Pradesh during the period, over Chhattisgarh from 25th to 28th, along with heavy to very heavy rain at isolated places very likely over East Madhya Pradesh on 25th, heavy rain at isolated places over Madhya Pradesh on 24th, over East Madhya Pradesh from 26th to 28th, over West Madhya Pradesh on 25th, over North Chhattisgarh from 24th to 26th, over Chhattisgarh on 27th and 28th August, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.
 - **Madhya Pradesh:**
 - In West Madhya Pradesh, provide proper channels for drainage of excess rain water in the crop fields. Continue intercultural operations in green gram, black gram, red gram, soybean, maize and vegetables and apply 1/3 dose of recommended nitrogen fertilizer in form of urea in maize after current spells of rain. Undertake transplanting of new saplings of orchards.
 - In East Madhya Pradesh, in view of heavy rainfall forecast, drainage may be provided in vegetables, pulses and oilseed crops. Continue transplanting of brinjal, chilli and tomato. Continue weeding in rice and maize crops and apply the recommended nitrogen fertilizer after current spells of rain. Undertake planting of horticultural crops like papaya, mango, guava etc.
 - In Kymore Plateau and Satpura Hill Zone, continue intercultural operations in rice, soybean and red gram after current spells of rain. Continue sowing of green gram and black gram.
 - In Central Narmada Valley Zone, for control of attack of girdle beetle in soybean, spray Thiacloprid (21.7% w/w) @ 650 ml/ha or Traizophos 40 E.C. @ 1000 ml/ha after current spells of rain.
 - In East Madhya Pradesh, there is possibility of incidence of soybean diseases like leaf spot and anthracnose. For management spray pre mixed fungicide Tebuconazole + Sulphur @ 2 gm/litre or Thiophenate Methyl/Carbendazim @ 1 g/litre of water after current spells of rain.
 - **Chhattisgarh:**
 - Undertake first top dressing with urea (25 kg/acre) in rice at tillering stage after current spells of rain. Continue intercultural operations in different *khari* crops like maize, arhar, groundnut, soybean, urad, moong, vegetables etc. after current spells of rain. Continue sowing of red gram, green gram and black gram in fallow field. Continue planting of banana, papaya, mango, guava etc. Continue nursery sowing of brinjal, early tomato, chilli and onion in upland areas. If the upland area is still fallow, farmers are advised to sow the crop like horsegram and Niger.
 - In Bastar Plateau Zone, earthing up should be done in colocasia, amahaldi, turmeric and elephant foot yam for effective rhizome formation and weed management. Undertake planting of improved varieties of grafted cashew nut plant (Indira kaju-1, Vengurla-4, Vengurla-7, Vengurla-9 etc).
 - For control of attack of blast in rice crop, spray Tricyclazole @120 g per acre and the spray should be repeated after 10-12 days as per requirement after current spells of rain.
- **Animal Husbandry**
 - In Madhya Pradesh, cattle should be keep in shade and provide clean and fresh water two times a day. Vaccinate the cattle for control of FMD and HS disease.
 - In Chhattisgarh, carry out vaccination of animals against Black Quarter, Anthrax and other disease. Create smoke in cattle house to prevent them from mosquitoes.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Himachal Pradesh except Bilaspur, Kinnaur, Kullu, Lahaul & Spiti, Shimla and Solan, in Gurdaspur, Hoshiarour and Patiala districts of Punjab, Ambala, Faridabad and Yamunanagar districts of Haryana, South Delhi district of Delhi, Jammu, Kathua, Reasi, Samba and Udhampur districts of Jammu & Kashmir, Allahabad, Ambedkar Nagar, Azamgarh, Balia, Banda, Basti, Deoria, Gonda, Kanpur Dehat, Maharajganj, Mirzapur, Pratapgarh, Rai Bareilly, Sant Ravidas Nagar, Sonbhadra and Varanasi districts of East Uttar Pradesh, Agra, Auraiya, Bagpat, Bijnaur, Firozabad, Hamirpur, Jhansi, Kanshiram Nagar, Lalitpur, Mahamaya Nagar, Mahoba, Mathura, Muzzaffarnagar, Pilibhit, and Saharanpur districts of West Uttar Pradesh, all districts of Uttarakhand, except Garwhal Tehri, Nainital and Udham Singh Nagar, all districts of East Rajasthan, Barmer, Bikaner and Pali districts of West Rajasthan during the week. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most/many places over Uttarakhand and West Uttar Pradesh during the period, over East Uttar Pradesh from 24th to 26th, at many places over Himachal Pradesh on 24th, over East

Rajasthan from 25th to 28th, along with heavy to very heavy rain with extremely heavy falls at isolated places very likely over Uttarakhand on 24th, heavy to very heavy rain at isolated places very likely over Uttar Pradesh on 24th and 25th, over Himachal Pradesh on 24th, over Uttarakhand on 25th, heavy rain at isolated places over East Rajasthan from 24th to 27th, over Haryana, Chandigarh & Delhi on 27th, over West Uttar Pradesh on 26th and 27th, over Uttarakhand on 27th and 28th August, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.

▪ **Jammu & Kashmir:**

- Continue hoeing/weeding in rice and apply 2nd dose of nitrogenous fertilizer as top dressing. Continue nursery raising of cole crops and land preparation for sowing carrot seed. Continue cultivation of *Calocybe indica* (Milky mushroom). Continue intercultural operations in pulses and maize. Continue picking up of matured tomato, brinjal, capsicum, okra and broccoli. Continue planting of new orchards and gap filling.
- In Valley Temperate Zone, maintain water level of 3-5 cm in rice fields. In case of bush type pulses, where pods have matured harvesting may be done.
- In Intermediate Zone there are chances of attack of blister beetle in maize crop. If observed, apply Carbofuron 3G @ 20 kg/ha (apply 3-4 granules/leaf whorls to control the blister beetle).

▪ **Uttarakhand:**

- In unirrigated (rainfed) mid hilly regions, undertake sowing of pea after current spells of heavy rain. Provide proper drainage in *kharif* maize, pulses and vegetables fields. Undertake sowing of radish, cabbage, broccoli and turnip. Continue picking up of matured cucurbits and vegetables like tomato, capsicum, chilli in clear weather. Undertake harvesting of matured apple. Continue planting of orchards like mango, guava, lemon, papaya, litchi etc. Continue intercultural operations in maize and rice after current spells of rain.
- In Sub Humid Sub Tropic Zone, maintain water level of 5-6 cm in rice fields. Undertake field preparation for vegetable pea and toria. Undertake picking up of matured cucurbits. Provide proper drainage in standing crop fields.
- To control white rotting in french bean and cowpea (lobia), spray Caerbendazim @ 1 g/litre of water after current spells of rain.

▪ **Himachal Pradesh:**

- Make bunds for conserving rain water in the rice fields. Bund should be higher and wider so that more rain water can be conserved in the fields. Continue intercultural operations in *kharif* pulses like mung, mash soybean, cowpea and kulthi and sowing of peas, turnip, carrot, spinach etc. in high hilly regions. Undertake intercultural operations in vegetables in polyhouse. In mid hill region undertake nursery sowing of Chinese cabbage and direct sowing of raddish, carrot, broccoli and lettuce.
- Weather is congenial for attack of blast and brown spot on rice. To control spray Carbendazim @ 2 g per litre of water on a non rainy day.
- Weather is conducive for stalk rot and stem borer in maize, to control stalk rot drench maize fields with bleaching powder @ 16 kg/ha a week before tasseling and to control stem borer put pinch of Thimate granules in affected plants on a non rainy day.

▪ **Punjab, Haryana & Delhi:**

- In Punjab, in transplanted rice, apply second and third dose urea @ 37 kg per acre. Apply irrigation in rice and maize as per requirement. Continue sowing of *kharif* moong and mash. Continue weeding and hoeing in sugarcane, maize, pulses, vegetables and orchard crops. Undertake nursery sowing of mid season cauliflower and planting of seedlings of onion. Undertake planting of evergreen fruit plants such as citrus, litchi, mango, guava, loquat, ber, amla and papaya. Continue sowing of radish in Western Plain Zone. In Western Zone, apply 4 sprays of 2 % Potassium Nitrate (13-0-45) solution in cotton at weekly intervals, starting at flower initiation.
- In Haryana, maintain 5-6 cm standing water upto maximum tillering stage in rice fields. Continue weeding in rice. Continue intercultural operations in sugarcane, guar and bajra.
- In Delhi, undertake weeding and hoeing in all crops and vegetables and apply split dose of nitrogen. Undertake sowing of sarson saag (Pusa saag-1), radish (Versa kee rani, summer long, long chetaki), spinach (all green), coriander (pant Haritama, hybrids). Continue transplanting of chilli, brinjal and cauliflower. Continue sowing of baby corn and sweet corn. Continue preparation of nurseries of cauliflower for mid season (Nov.-Dec.) and sowing of carrot on raised bed.
- In Punjab, in case severe attack of thrips and jassids in cotton, spray the crop with Ulala 50 WG @ 80 g in 100 litres of water per acre. Parawilt in cotton plants can be checked by spraying Cobalt Chloride @ 10 mg/litre of water on the affected plants at the initial stage of wilting. Undertake plant protection measures on a non rainy day.
- In Delhi, there are chances of attack of mite and jassid in ladyfinger, brinjal and chilli crops. To control mite, spray Phosmite @ 2 ml per litre of water and spray Dimethoate 30 EC @ 2 ml/litre of water against jassid on a non rainy day.

▪ **Uttar Pradesh:**

- In East Uttar Pradesh, apply 2nd dose of urea @ 125kg/ha in rice after current spells of rain. Undertake nursery sowing of cauliflower, cabbage, chilli and tomato, sowing of spinach, radish, carrot, turnip, beetroot, fenugreek, coriander, okra and cucurbits after current spells of heavy rain. Continue intercultural operations in moong, urad, red gram and soybean crops and thinning operation in bajra and jowar after current spells of rain. Continue planting of mango, ber, guava, lime etc. in new orchard.
- In West Uttar Pradesh, undertake hoeing & weeding in all crops and vegetables, broadcast second split dose of nitrogen for optimum growth after current spells of rain. Undertake preparation of nurseries of cauliflower for mid season (Nov-Dec.). Undertake picking up of matured cucurbits.
- In South Western Semi Arid Zone, there are chances of attack of flies or sucking pests in soybean crop, spray Imidacloprid 17.8 % SC @ 1ml/3 litres of water after current spells of rain.

▪ **Rajasthan:**

- In East Rajasthan, undertake nursery raising of cauliflower and sowing of radish. Continue intercultural operations in moong and urad and thinning operation in pearl millet and sorghum after current spells of rain. Continue earthing up in cotton and maize. Continue planting of fruit crops like mango, plum, pomegranate, aonla etc. Continue picking up of matured pods of cluster bean (guar). Continue transplanting papaya seedlings.
- In West Rajasthan, continue intercultural operations in cotton and groundnut in clear weather. Apply Nitrogen @ 20 kg per hectare in sesame and pearl millet crops. Undertake nursery preparation for cauliflower, cabbage chili and brinjal. Continue planting new seedlings of kinnow in already prepared pits in the field.
- In Arid Western Plain Zone, to control infection of root/collar rot in standing crop of groundnut, apply Carbendizem @ 2.0 kg/ha on a non rainy day.
- In Semi Arid Eastern Plain Zone, okra crop may suffer from yellow mosaic disease. Spray Malathion 50 EC @ 1.0 ml per litre of water before & after flowering after current spells of rain.

• **Animal Husbandry**

- In Jammu & Kashmir, mineral mixture should be supplemented in diet. Give vaccination against FMD. Provide adequate amount of fresh cool and clean drinking water. Increase protein content in animal ration by 2%.
- In Himachal Pradesh get the cattles vaccinate against the Foot and Mouth Disease (FMD) & Black Quarter and keep the animals shed dry, neat and clean. Got the cow dung test for the treatment of stomach bugs if any. Spray 5 ml Sypermethrin or Amitrar mixture (2 ml /1 litre of wtaer) on the floor and walls of the cattle sheds.
- In Uttarakhand possibility of occurrence of Langra fever in cattle, vaccinated them with consultation of veterinarian.

• **Apiculture:**

- In Jammu & Kashmir, migrate bee colonies to safer areas having bee flora. Provide sugar feeding/artificial diet. Protect bee hive from wax moth and ants. Unite weak bee colonies. Protect colonies from rain.
- In Himachal Pradesh examine colonies for barroa mites. Dust sulphur on sealed brood in the colony and not on larvae to control mites attack on honeybees. For protection of ants put the legs of apiary into water so that ants could not attack apiary.

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.