



राष्ट्रीय कृषि मौसम परामर्श सेवा बुलेटिन

National Agromet Advisory Service Bulletin

शुक्रवार, दि. 22 अगस्त 2025

(अवधि: 22 अगस्त से 26 अगस्त 2025)

Friday, 22nd August 2025

(For the period 22nd August to 26th August 2025)

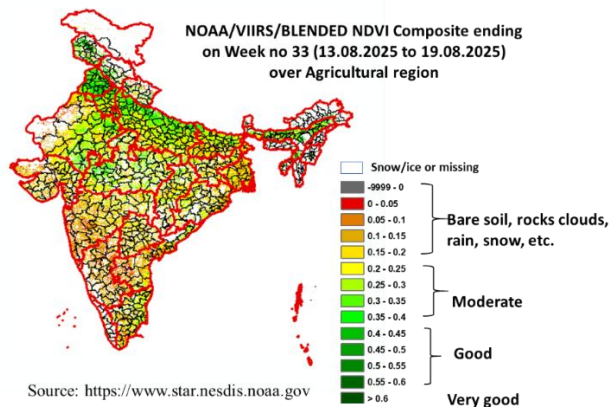


कृषि मौसम विज्ञान प्रभाग,
भारत मौसम विज्ञान विभाग, पुणे
द्वारा जारी

Issued by
Agricultural Meteorology Division,
India Meteorological Department, Pune.

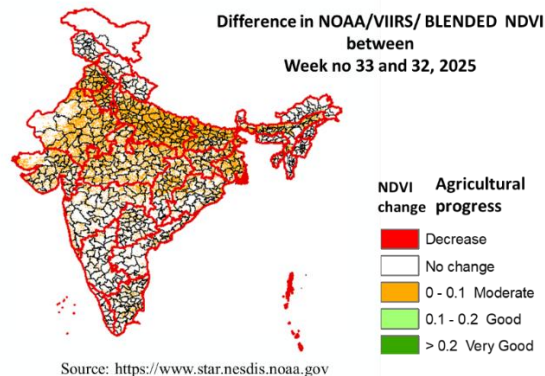


NOAA/VIIRS/BLENDED NDVI composite for the week number 33 (13.08.2025 to 19.08.2025) over Agricultural regions of India



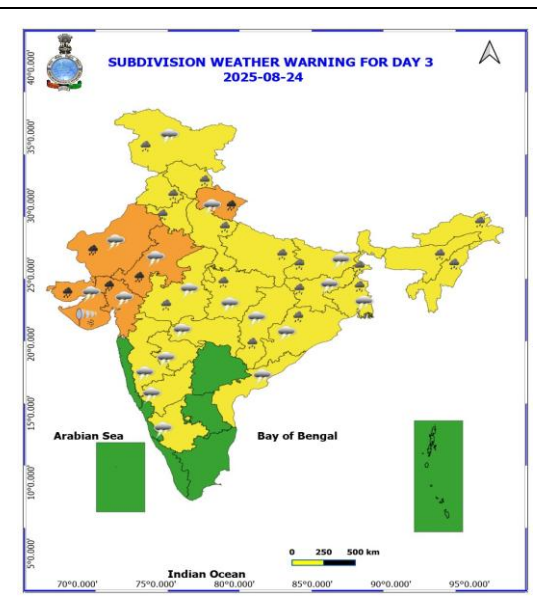
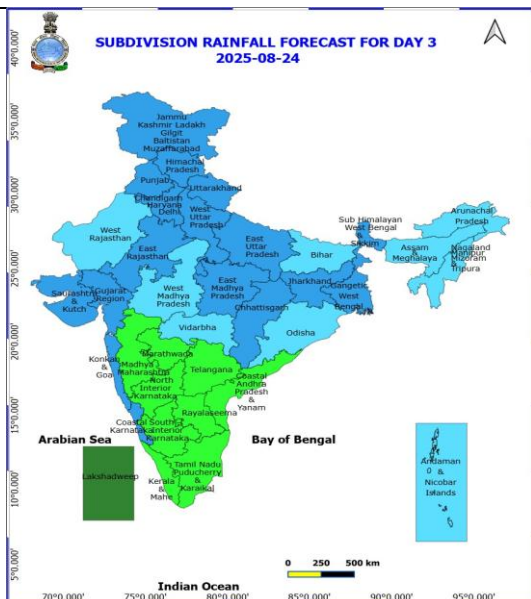
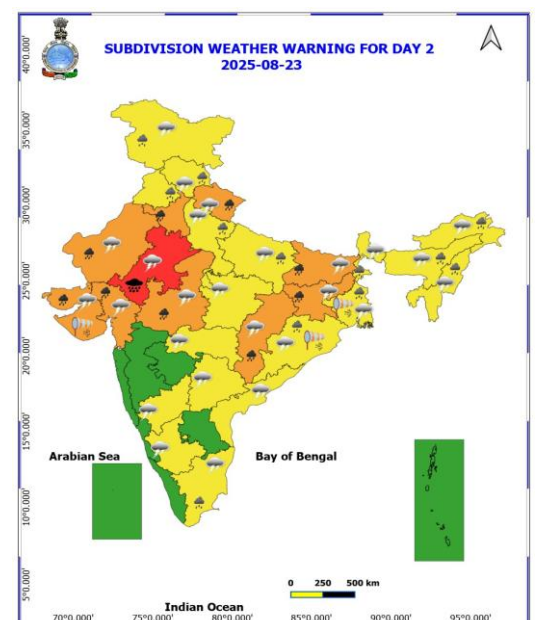
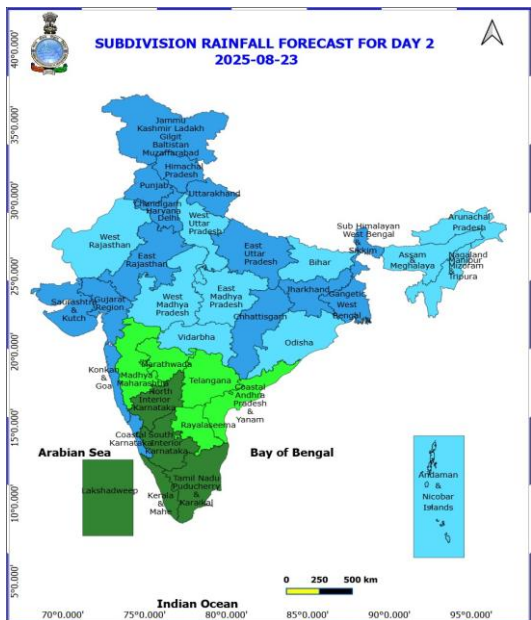
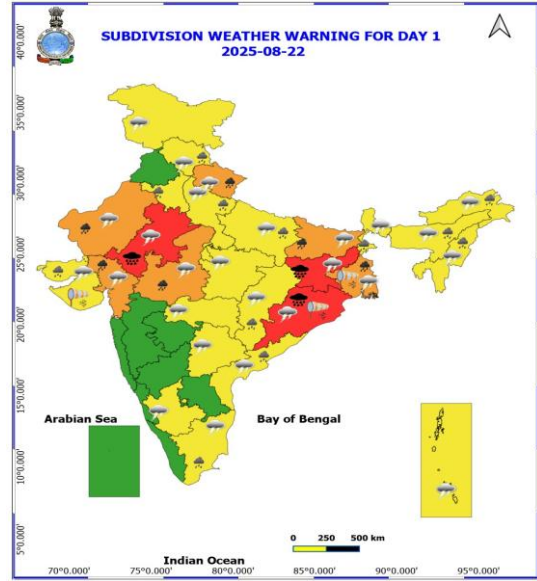
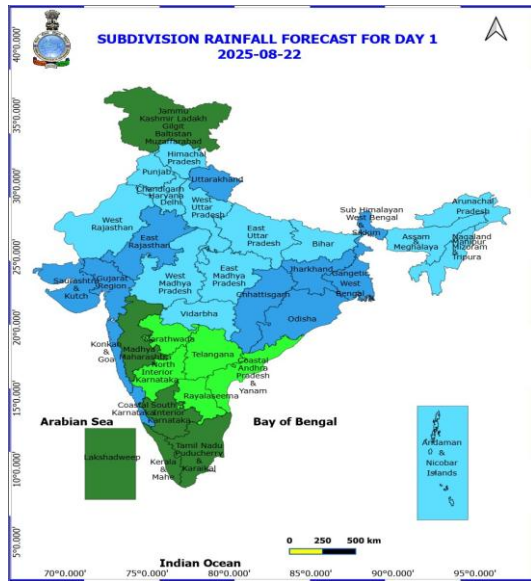
Agricultural vigour was good at many places of Himachal Pradesh, valley region of Jammu & Kashmir; few places of, Punjab & Uttarakhand and at isolated places of Haryana, North Eastern states & North districts of Uttarpradesh adjoining Uttarakhand & Nepal. Due to persistent rainfall during past week NDVI could not be captured over rest of the country.

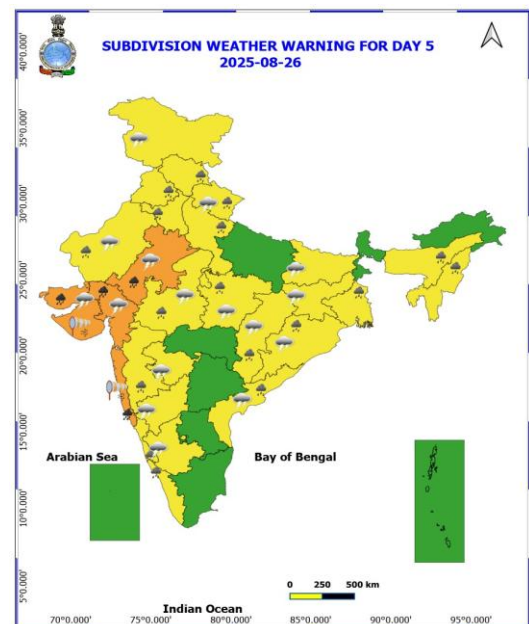
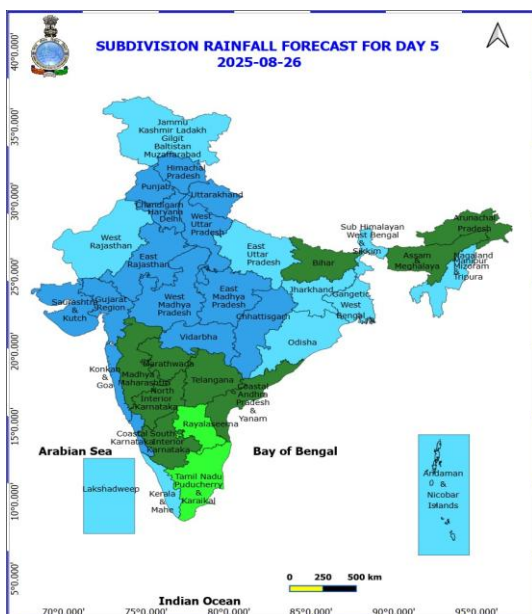
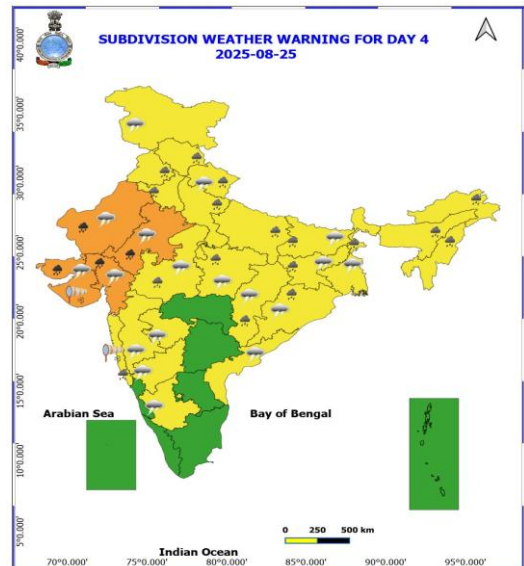
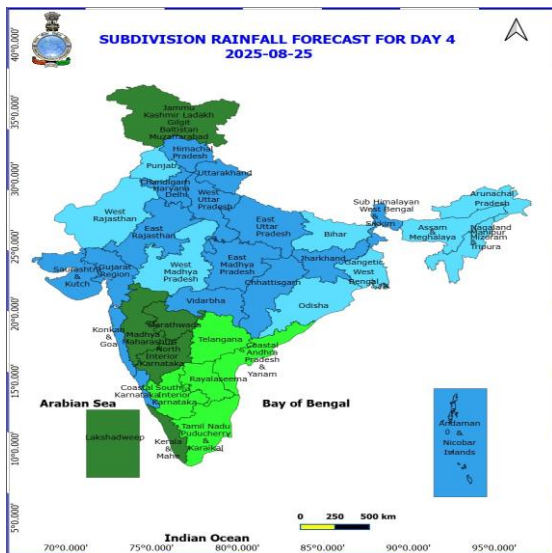
Difference in NOAA/VIIRS/BLENDED NDVI between week number 33 and 32 2025



Difference in agricultural vigour was moderate at many to most places of Uttar Pradesh, East Rajasthan, Assam, Gangetic West Bengal, Punjab, Haryana and Madhya Pradesh.

Sub-Divisionwise Rainfall Forecast and weather warning for next 5 days





Legend	Category	% Stations
WS	Widespread/Many Places	76-100
FWS	Fairly Widespread/Many Places	51-75
SCT	Scattered/A Few Places	26-50
ISOL	Isolated Places	1-25
DRY	No Rain	0

No heavy Rainfall	Heavy Rainfall / Snowfall
Heavy	
Very heavy	
Exceptionally Heavy	
No TS	Thunderstorm / Squall / Hailstorm
Light TS	
Moderate TS	
Severe TS / Very Severe TS / Hailstorm	

Weather Warning during next 5 days

22 August (Day 1)

- ❖ **Heavy to Very Heavy Rainfall with isolated Extremely Heavy Rainfall** very likely at isolated places over East Rajasthan, Jharkhand and Odisha.
- ❖ **Heavy to Very Heavy Rainfall** very likely at isolated places over Bihar, Gangetic West Bengal, Gujarat Region, Uttarakhand, West Madhya Pradesh and West Rajasthan.
- ❖ **Heavy Rainfall** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Chhattisgarh, Coastal Andhra Pradesh, Haryana, Chandigarh & Delhi, Himachal Pradesh, Nagaland, Manipur, Mizoram and Tripura, Saurashtra & Kutch, Sub Himalayan West Bengal & Sikkim, Tamil Nadu Puducherry &

Karaikal and Uttar Pradesh.

- ❖ **Thunderstorm accompanied with lightning & gusty winds(30-40kmph)** very likely at isolated places over Andaman & Nicobar Islands, Bihar, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Jharkhand, Odisha, South Interior Karnataka, Telangana and West Bengal & Sikkim.
- ❖ **Thunderstorm accompanied with Lightning** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Chhattisgarh, Coastal Andhra Pradesh, Gujarat State, Himachal Pradesh, Madhya Pradesh, Nagaland, Manipur, Mizoram and Tripura, Rajasthan, Tamil Nadu Puducherry & Karaikal, Uttar Pradesh, Uttarakhand and Vidarbha.
- ❖ **Strong Surface Winds** very likely at isolated places over Gangetic West Bengal, Odisha and Saurashtra & Kutch.
- ❖ **Squally wind with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail along and off Somalia, Oman coasts, most parts of westcentral Arabian sea, adjoining & some parts of southwest east central Arabian Sea.
- ❖ **Squally weather with wind speed reaching 40 - 50 kmph gusting to 60 kmph** likely to prevail along and off South Gujarat, over most parts of eastcentral and northeast Arabian sea, along and off Odisha, West Bengal adjoining north Bay of Bengal.

23 August (Day 2)

- ❖ **Heavy to Very Heavy Rainfall with isolated Extremely Heavy Rainfall** very likely at isolated places over East Rajasthan.
- ❖ **Heavy to Very Heavy Rainfall** very likely at isolated places over Bihar, Chhattisgarh, Gujarat State, Haryana, Chandigarh & Delhi, Jharkhand, Uttarakhand, West Madhya Pradesh and West Rajasthan.
- ❖ **Heavy Rainfall** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Nagaland, Manipur, Mizoram and Tripura, Odisha, Punjab, Tamil Nadu Puducherry & Karaikal, Uttar Pradesh and West Bengal & Sikkim.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(30-40kmph)** very likely at isolated places over Bihar, Interior Karnataka, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Jharkhand, Odisha, Telangana and West Bengal & Sikkim.
- ❖ **Thunderstorm accompanied with Lightning** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Chhattisgarh, Coastal Andhra Pradesh, Gujarat State, Himachal Pradesh, Madhya Pradesh, Nagaland, Manipur, Mizoram and Tripura, Rajasthan, Tamil Nadu Puducherry & Karaikal, Uttar Pradesh, Uttarakhand and Vidarbha.
- ❖ **Strong Surface Winds** very likely at isolated places over Gangetic West Bengal, Odisha and Saurashtra & Kutch.
- ❖ **Squally wind with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail along and off Somalia, Oman coasts, most parts of westcentral Arabian sea, adjoining & some parts of southwest, eastcentral Arabian Sea.
- ❖ **Squally weather with wind speed reaching 40 - 50 kmph gusting to 60 kmph** likely to prevail along and off south Gujarat coasts, northeast and adjoining sea areas, along and off Odisha, West Bengal adjoining north Bay of Bengal.
- ❖ **Squally weather with wind speed reaching 45 - 55 kmph gusting to 65 kmph** likely to prevail over some parts of eastcentral and northeast Arabian Sea, off south Gujarat coasts.

24 August (Day 3)

- ❖ **Heavy to Very Heavy Rainfall** very likely at isolated places over Gujarat State, Rajasthan and Uttarakhand.
- ❖ **Heavy Rainfall** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Bihar,

Chhattisgarh, Haryana, Chandigarh & Delhi, Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Jharkhand, Madhya Pradesh, Nagaland, Manipur, Mizoram and Tripura, Odisha, Punjab, Uttar Pradesh and West Bengal & Sikkim.

- ❖ **Thunderstorm accompanied with lightning & gusty winds(30-40kmph)** very likely at isolated places over Bihar, Gangetic West Bengal, Interior Karnataka, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Jharkhand and Odisha.
- ❖ **Thunderstorm accompanied with Lightning** very likely at isolated places over Chhattisgarh, Coastal Andhra Pradesh, Gujarat State, Madhya Pradesh, Maharashtra, Rajasthan and Uttarakhand.
- ❖ **Strong Surface Winds** very likely at isolated places over Saurashtra & Kutch.
- ❖ **Squally wind with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail along and off Somalia, Oman coasts, most parts of westcentral Arabian sea, adjoining southwest & eastcentral Arabian Sea.
- ❖ **Squally weather with wind speed reaching 40 - 50 kmph gusting to 60 kmph** likely to prevail along and off south Gujarat coasts, off north Maharashtra coasts, over some parts eastcentral and northeast Arabian Sea.

25 August (Day 4)

- ❖ **Heavy to Very Heavy Rainfall** likely at isolated places over Gujarat State and Rajasthan.
- ❖ **Heavy Rainfall** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Bihar, Chhattisgarh, Haryana, Chandigarh & Delhi, Himachal Pradesh, Jharkhand, Konkan & Goa, Madhya Pradesh, Nagaland, Manipur, Mizoram and Tripura, Odisha, Punjab, Sub Himalayan West Bengal & Sikkim, Uttar Pradesh and Uttarakhand.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(30-40kmph)** likely at isolated places over Bihar, Gangetic West Bengal, Interior Karnataka, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Jharkhand and Odisha.
- ❖ **Thunderstorm accompanied with Lightning** likely at isolated places over Chhattisgarh, Coastal Andhra Pradesh, Gujarat State, Madhya Maharashtra, Madhya Pradesh, Marathwada, Rajasthan and Uttarakhand.
- ❖ **Strong Surface Winds** likely at isolated places over Konkan & Goa and Saurashtra & Kutch.
- ❖ **Squally wind with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail along and off Somalia, Oman coasts, most parts of westcentral Arabian sea, adjoining & some parts of southwest, northwest & eastcentral Arabian Sea.
- ❖ **Squally weather with wind speed reaching 40 - 50 kmph gusting to 60 kmph** likely to prevail over some parts of northeast Arabian Sea along and off Gujarat.
- ❖ **Squally weather with wind speed reaching 45 - 55 kmph gusting to 65 kmph** likely to prevail over some parts of eastcentral and northeast Arabian Sea.

26 August (Day 5)

- ❖ **Heavy to Very Heavy Rainfall** likely at isolated places over East Rajasthan, Gujarat State and Konkan & Goa.
- ❖ **Heavy Rainfall** likely at isolated places over Assam & Meghalaya, Chhattisgarh, Coastal Andhra Pradesh, Coastal Karnataka, Gangetic West Bengal, Haryana, Chandigarh & Delhi, Himachal Pradesh, Kerala & Mahe, Madhya Maharashtra, Madhya Pradesh, Nagaland, Manipur, Mizoram and Tripura, Odisha, Punjab, Uttarakhand, West Rajasthan and West Uttar Pradesh.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(30-40kmph)** likely at isolated places over Bihar, Interior Karnataka, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Jharkhand and Odisha.
- ❖ **Thunderstorm accompanied with Lightning** likely at isolated places over Chhattisgarh, Coastal Andhra

Pradesh, Gujarat State, Madhya Pradesh, Marathwada, Rajasthan and Uttarakhand.

- ❖ **Strong Surface Winds** likely at isolated places over Konkan & Goa and Saurashtra & Kutch.
- ❖ **Squally wind with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail along and off Somalia, Oman coasts, many parts of westcentral Arabian sea, adjoining & some parts of southwest Arabian Sea.
- ❖ **Squally weather with wind speed reaching 40 - 50 kmph gusting to 60 kmph** likely to prevail over some parts of northeast & eastcentral Arabian Sea, along and off south Gujarat, North Maharashtra, Goa, Karnataka, north Kerala.
- ❖ **Squally weather with wind speed reaching 45 - 55 kmph gusting to 65 kmph** likely to prevail over some parts of westcentral and northwest & adjoining eastcentral Arabian Sea.

Advisory for fishermen

- As **Squally wind with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail along and off Somalia, Oman coasts, most parts of westcentral Arabian sea, adjoining & some parts of southwest eastcentral Arabian Sea; **Squally weather with wind speed reaching 40 - 50 kmph gusting to 60 kmph** likely to prevail along and off South Gujarat, over most parts of eastcentral and northeast Arabian sea, along and off Odisha, West Bengal adjoining north Bay of Bengal on 22nd August; **Squally wind with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail along and off Somalia, Oman coasts, most parts of westcentral Arabian sea, adjoining & some parts of southwest, eastcentral Arabian Sea. **Squally weather with wind speed reaching 40 - 50 kmph gusting to 60 kmph** likely to prevail along and off south Gujarat coasts, northeast and adjoining sea areas, along and off Odisha, West Bengal adjoining north Bay of Bengal. **Squally weather with wind speed reaching 45 - 55 kmph gusting to 65 kmph** likely to prevail over some parts of eastcentral and northeast Arabian Sea, off south Gujarat coasts on 23rd August; **Squally wind with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail along and off Somalia, Oman coasts, most parts of westcentral Arabian sea, adjoining southwest & eastcentral Arabian Sea. **Squally weather with wind speed reaching 40 - 50 kmph gusting to 60 kmph** likely to prevail along and off south Gujarat coasts, off north Maharashtra coasts, over some parts eastcentral and northeast Arabian Sea on 24th August; **Squally wind with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail along and off Somalia, Oman coasts, most parts of westcentral Arabian sea, adjoining & some parts of southwest, northwest & eastcentral Arabian Sea. **Squally weather with wind speed reaching 40 - 50 kmph gusting to 60 kmph** likely to prevail over some parts of northeast Arabian Sea along and off Gujarat. **Squally weather with wind speed reaching 45 - 55 kmph gusting to 65 kmph** likely to prevail over some parts of eastcentral and northeast Arabian Sea on 25th August; **Squally wind with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail along and off Somalia, Oman coasts, many parts of westcentral Arabian sea, adjoining & some parts of southwest Arabian Sea. **Squally weather with wind speed reaching 40 - 50 kmph gusting to 60 kmph** likely to prevail over some parts of northeast & eastcentral Arabian Sea, along and off south Gujarat, North Maharashtra, Goa, Karnataka, north Kerala. **Squally weather with wind speed reaching 45 - 55 kmph gusting to 65 kmph** likely to prevail over some parts of westcentral and northwest & adjoining eastcentral Arabian Sea on 26th August, 2025, **fishermen are advised not to venture into these areas.**

Salient advisories

- As **rain/thundershowers at many/most places** likely over Arunachal Pradesh, Assam & Meghalaya, Bihar, West Bengal & Sikkim, Odisha, Jharkhand, Chhattisgarh, Vidarbha, Konkan & Goa, Andaman & Nicobar, Himachal Pradesh, Uttarakhand, Madhya Pradesh, Uttar Pradesh, Punjab, Haryana, Chandigarh & Delhi,

Rajasthan, Gujarat State and Coastal Karnataka during next 4 to 5 days, over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 23rd, 24th & 26th, over Kerala and Lakshadweep on 26th and **Heavy to Very Heavy Rainfall with isolated Extremely Heavy Rainfall** very likely at isolated places over Jharkhand & Odisha during next 24 hours, over East Rajasthan during next 48 hours; **Heavy to Very Heavy Rainfall** very likely at isolated places over Gangetic West Bengal during next 24 hours, over Bihar, West Madhya Pradesh during next 48 hours, over Uttarakhand during next 3 days, over West Rajasthan during next 4 days, over Gujarat Region during next 5 days, over Chhattisgarh, Haryana, Chandigarh & Delhi and Jharkhand on 23rd, over Saurashtra & Kutch during 23rd to 26th, over East Rajasthan during 24th to 26th and over Konkan & Goa on 26th; **Heavy Rainfall** very likely at isolated places over Saurashtra & Kutch during next 24 hours, over Tamil Nadu Puducherry & Karaikal during next 48 hours, over Arunachal Pradesh, Sub Himalayan West Bengal & Sikkim, East Uttar Pradesh during next 4 days, over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Haryana, Chandigarh & Delhi, Himachal Pradesh, West Uttar Pradesh during next 5 days, over Coastal Andhra Pradesh & Chhattisgarh on 22nd & 26th, over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 23rd & 24th, over Odisha & Punjab during 23rd to 26th, over Bihar, Chhattisgarh & Jharkhand on 24th & 25th, over Madhya Pradesh during 24th to 26th, over Konkan & Goa on 25th, over Uttarakhand on 25th & 26th, over Coastal Karnataka, Gangetic West Bengal, Kerala & Mahe, Madhya Maharashtra, West Rajasthan on 26th, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid waterlogging.

- **Gujarat** - Provide mechanical support to horticultural crops and staking or support to vegetables and young fruit plants to avoid lodging due to strong / gusty winds. Make arrangements to drain out excess water from rice, sugarcane, vegetables and tuber crops in **South Gujarat Heavy Rainfall Zone**; groundnut, cotton, soybean, green gram, black gram and sesame in **South Saurashtra Zone**; castor, cotton, groundnut, pearl millet and sesame in **North Gujarat Zone**; cotton, green gram, black gram, red gram, groundnut and vegetables in **Bhavnagar** district; rice, pearl millet, pigeon pea, green gram, black gram, cotton, soybean, maize castor and vegetables in **Mahisagar** and **Chhota Udaipur** districts.
- **Odisha** - In **Keonjhar and Mayurbanj districts**, clear the blockages in drainage channels to remove excess water from crop fields. In **Sambalpur and Jharsuguda** districts, ensure proper drainage in rice and maize fields.
- **Rajasthan** - Maintain proper drainage in standing crops like maize, soybean and vegetable nurseries in **Sub-Humid Southern Plain and Aravalli Hill Zone**; cotton, maize and soybean in **Southern Humid Plain Zone** and rice, maize, soybean, black gram and groundnut in **Southeastern Humid Plain Zone**. In **Jalore and Pali** districts, make provision to drain out excess rain water from fields of pearl millet, green gram and cluster beans.
- **Uttarakhand** - In **Bageshwar** district, delay sowing of rapeseed in rainfed hilly region. Provide proper drainage in the crop fields.
- **Himachal Pradesh** - In **Mid Hills Sub Humid Zone**, undertake harvesting of matured tomato, capsicum and brinjal fruits immediately. Ensure that drainage channels in ginger and turmeric fields are clean from weeds. Do not allow rain water to stand in maize crop and in **Sub Montane and Low Hills Sub Tropical Zone**, undertake staking in cucurbits to prevent lodging. Maintain proper drainage channels in rice, maize, cucumber, summer squash, bitter gourd, bottle gourd, tomato and brinjal.
- **Jharkhand** - In **Western Plateau Zone**, provide drainage in maize, black gram, green gram, tuber crops and vegetables; cover the vegetable seedlings with polythene to protect them from heavy showers.
- **Bihar** - In **Aurangabad, Nawada, Jamuai, Lakhisarai, Munger, Kaimur and Gaya** districts, ensure proper drainage to drain out excess rainwater from standing crops of pigeon pea, turmeric, yam, sunflower and maize, as well as from vegetable nurseries. For cucurbitaceous vegetables, provide support to the vines so that they can be kept above the ground, preventing rotting due to rain.
- **Chhattisgarh** - In **Balrampur** district, provide mechanical support to orchards and other tall / weak crops

with stakes or bamboo to prevent lodging or breakage. Ensure proper drainage in rice and vegetables. Postpone fresh transplantation of rice in low land areas.

- **West Bengal** - In **Coastal Saline Zone**, arrange good drainage system for newly transplanted winter vegetables and inside betel vine garden. Avoid any spraying and fertilizer application. Maintain proper drainage channel in fields of rice and groundnut in **Laterite and Red Soil Zone** and rice, jute and vegetables in **Paschim Bardhaman** district.
- **Madhya Pradesh** - Make proper arrangements for drainage of excess rainwater from soybean, maize and vegetables in **Malwa Plateau Zone**; soybean, pigeon pea, green gram and vegetables in **Guna** district and maize, soybean and groundnut in **Shivpuri** district

➤ As **Thunderstorm accompanied with lightning & gusty winds (30-40kmph)** very likely at isolated places over South Interior Karnataka, Andaman & Nicobar Islands during next 24 hours, over Telangana & West Bengal & Sikkim during next 48 hours, over Bihar, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Jharkhand & Odisha during next 5 days, over Interior Karnataka during 23rd to 26th, over Gangetic West Bengal on 24th & 25th, provide mechanical support to banana & papaya plantations and staking to young plants and vegetables. Undertake propping in sugarcane.

➤ Sowing/Transplanting/Harvesting

- transplanting of rice in Tamil Nadu and Andhra Pradesh
- sowing of finger millet, black gram and cowpea; transplanting of rice and planting of arecanut in Karnataka
- transplanting of chilli, brinjal and early cauliflower; planting of *kinnow* in Rajasthan
- planting of *kharif* onion; transplanting of cauliflower and planting of citrus, mango, guava, litchi, loquat and sapota in Punjab
- transplanting of rice in Bihar
- nursery sowing of cabbage, capsicum & tomato; transplanting of brinjal, chilli, tomato and early cauliflower in Uttar Pradesh
- harvesting of jute; sowing of green gram and black gram in Assam
- picking of matured pods of green gram and black gram in Maharashtra

➤ Pest and Disease

- In Punjab, spray Nimbecidine @ 1 litre in 200-250 litres of water per acre, during clear weather if infestation of white fly noticed above economical threshold level in cotton.
- In Assam, apply Fipronil 5 SC @ 50ml per bigha or Thiamethoxam 25 WG @ 13g per bigha, preferably during clear weather condition only for effective control of stem borer and caseworm attacks on Sali rice during tillering stage.
- In Odisha, spray Chlorpyrifos 50% + Cypermethrin 5% EC @ 400ml/acre during clear weather to manage leaf webber in red gram.
- In Tamil Nadu, spray Profenophos @ 400ml/acre or Apply Cartap hydrochloride 4G @ 6 kg/ac for effective control of stem borer in rice.

Detailed Agromet Advisories

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

Realised Rainfall: Significant rainfall occurred in all the districts of Kerala; in Chengalpattu, Chennai, Coimbatore, Kanchipuram, Kanyakumari, Nilgiris, Ranipet, Thanjavur, Tirunelveli, Tirupathur, Tiruvallur, Vellore districts of Tamilnadu; in all the districts of Telangana; in all the districts of Andhra Pradesh except Anantapur, Annamayya District, Chittoor and Sri Satyasai District and in all districts of Karnataka except Ballari, Bangalore Rural, Chamarajanagar, Chikaballapur, Kolar, Mandya, Ramanagara, Tumakuru.

Advisories:

- As **rain/thundershowers at many/most places** likely over Coastal Karnataka during next 4 to 5 days, over Kerala and Lakshadweep on 26th and **Heavy Rainfall** very likely at isolated places over Tamil Nadu Puducherry & Karaikal during next 48 hours, over Coastal Andhra Pradesh on 22nd & 26th, over Coastal Karnataka, Kerala & Mahe on 26th, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid waterlogging.
- As **Thunderstorm accompanied with lightning & gusty winds (30-40kmph)** very likely at isolated places over South Interior Karnataka during next 24 hours, over Telangana during next 48 hours, over Interior Karnataka during 23rd to 26th, provide mechanical support to banana & papaya plantations and staking to young plants and vegetables. Undertake propping in sugarcane.

Kerala

- In Central Zone, propping should be done to protect banana plants. Weather is congenial for Rhizome rot in banana. As a prophylactic measure, drench the basin with 3 litre of pseudomonas solution (20g per one litre of water) in non-rainy period.
- In Southern Zone, to control bacterial leaf blight in paddy, mix 20 grams of fresh cow dung in 1 litre of water and extract the filtrate. Then, mix 20 grams of Pseudomonas in 1 litre of water. Combine both solutions and spray the mixture on the plants during clear weather conditions.
- In High Altitude Zone, provide propping to standing banana crop as there is chance of high wind speed in the coming dates.
- In Problem Area Zone, in rubber, protect young leaves of budded seedlings from shedding due to fungal diseases. Spray Copper oxy chloride @ 4g in 1 litre of water.
- In Northern Zone, weather is congenial for bud rot in coconut. As a prophylactic measure spray 1% Bordeaux mixture into the axils of top leaves of the surrounding palms.

Karnataka

- In Coastal Zone, undertake planting of new arecanut saplings at higher places/hilly areas. Undertake sowing of vegetable seeds in upland areas after 04-05days. At 15-20 days of transplanting, go for application of post emergent herbicide 2,4D sodium salt for broad leaves weeds @ 4g/ litres.
- In Hill Zone, undertake transplanting of paddy as there is sufficient rain occurred during the last few days and transplanting of arecanut saplings and use healthy saplings. Maintain proper drainage in the arecanut and ginger field. Provide drainage during transplanting of paddy. Drain out the water and apply the fertilizer after cessation of rainfall.
- In North Transition Zone, undertake harvesting of green gram crop immediately after the reduction in rainfall. Hand picking may be done where soil condition is too wet. Para wilt is noticed in cotton crop due to excess soil moisture, drench the crop with Saaf @ 2g and 5 gm 19:19:19 per litre of water. In groundnut, apply 200 kg of Gypsum per acre when crop is 35-40 days old crop. To control fall armyworm in maize, spray Imamectin benzoate 5% SG or Chlorantraniliprole 18.5 SC @ 0.3g per litre of water. To manage incidence of pod borer in green gram, spray Chlorantraniliprole 18.5 SC @ 0.3 ml or Cyhalothrin + Chlorantraniliprole @ 0.5 ml per litre of water.
- In North East Dry Zone, drain out excess water from low lying area. Undertake transplanting of rice, apply 10 kg N as a top dressing at 3rd and 6th weeks after transplanting and during panicle initiation stage. Undertake transplanting of chilli, dip the seedlings in Trichoderma and Psuedomonas solution before transplanting. To manage color rot/stem rot in groundnut, avoid water stagnation due to heavy rainfall through proper drainage and maintain good organic matter with Trichoderma in the soil. Early sown sorghum, bajra and maize depends on soil moisture availability go for protective irrigation.
- In North Dry Zone, in pigeon pea 45 to 50 days after sowing carryout nipping operation. Due to high cloudy condition and rainfall, there is chance of occurrence of anthracnose disease in grapes; spray Thiophanate methyl @ 1g/litre of water. In case of severe infestation of fall army worm in maize, spray Spinetoram 11.7 % SC @ 0.5 ml/l or Chlorantraniliprole 18.5 @ 0.3ml/lit of water or Thiamethoxam 12.6 % + Lambda

cyhalothrin 9.5% ZC @ 0.25 ml/litre of water.

- In North East Transition Zone, undertake transplanting of brinjal and tomato. Spray pulse magic (micronutrient mixture) @ 5g per litre of water in black gram and green gram at flowering and pod formation stage. Incidence of pod borer in green gram can be managed by spraying the crop with Chlorantraniliprole @ 0.2g or Emamectin benzoate @ 0.2g or Spinosad @ 0.1ml per litre of water.
- In Eastern Dry Zone, undertake sowing of finger millet, black gram, cowpea. Carry out intercultural operation in red gram, maize, groundnut, sunflower, tomato, chilli. Carry out earthing up for better availability of soil moisture to the crop. Apply 200-gram gypsum per acre in groundnut crop. Undertake thinning operation for better availability of scarce soil moisture to the reduced population of crop plants.
- In Central Dry Zone, cloudy and humid conditions favor blast in paddy, monitor and spray only in clear weather. Provide proper drainage in ragi and cloudy humid weather increases blast risk, apply protection only during dry mornings. Postpone gypsum and fertilizer application during continuous rainfall.
- In Southern Dry Zone, ensure proper drainage in all crops, support banana and pepper plants, protect vegetables from fruit rot and blight, and schedule fertilizer and pesticide applications during dry intervals.
- In South Transition Zone, undertake transplanting of paddy. Remove weeds from bunds and drainage channels to remove the excess water and reduce potential pest infestation. Due to gusty wind provide stake/support to banana, tomato to prevent lodging. Drain out excess water from maize and ginger field.

Andhra Pradesh

- In North Coastal Zone, undertake transplanting of rice by clipping leaf tips. Utilizing the moisture go for top dressing of fertilizers in 30-40 day old *ragi* crop and inter cultivation in red gram.
- In High Altitude Tribal Zone, drain out excess water from standing crop and vegetable fields. Strengthen maize plants by light earthing up around the base.
- In Scarce Rainfall Zone of Rayalaseema, continue transplanting of paddy. June sown groundnut crop is at flowering to pod formation stage. Farmers are advised to apply gypsum@200 kg per acre and take up intercultivation to maintain weed free condition.
- In Southern Zone, groundnut sowings in the month of July is not done due to moisture stress, are advised to sow alternate crops like cowpea, castor, *korra* and field bean etc only when there is enough moisture in the soil.
- In Krishna Godavari Zone, drain out excess water from maize, paddy, sesame, cotton, and pigeon pea fields. If the rice is completely submerged or damaged during the early stages, short-duration varieties should be sown.

Telangana

- In Northern Telangana, provide proper drainage channels in rice, maize, cotton, soybean, pigeon pea, turmeric fields to drain out excess water during heavy rains.
- In Southern Telangana, after the rains subside, farmers who have sown seedlings so far can take advantage of the rains and plough the fields and sow short-duration (120-125 days) varieties of rice using the recommended weed and weed management methods in direct sowing of rice. Drain out excess water from cotton and undertake intercultural activities. Due to heavy rains, there is a possibility of phosphorus deficiency in maize and the plants will turn purple. After the rains stop, apply 5g, 19-19-19 or 20 g DAP should be mixed with 1 litre of water and sprayed on the plants

Tamilnadu

- In North Eastern Zone, continue transplanting of rice by utilizing the expected rainfall. Provide proper drainage facility to the nursery field, groundnut and banana.
- In Western Zone, considering the rainfall and strong wind speed, detrashing and propping in sugarcane crop may be done to avoid lodging.
- In Coastal Zone, weather is congenial for rice stem borer in paddy, release parasitoid *Trichogramma japonicum* @1,00,000/ha at active tillering stage (37, 44 and 51 DAP) or Azadirachtin 0.03% @ 4 ml/l or Cartap hydrochloride 50% SP @ 2g/l or Flubendiamide 20 WG @ 0.25 g/l or Thiamethoxam 25 WG @ 0.2

g/litre.

- In Cauvery Delta Zone, prepare nursery for samba paddy crop. Provide support with wooden poles to banana to avoid lodging of tree due to wind.
- In High Rainfall Zone, provide mechanical support to banana crop to avoid lodging. 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 High altitude Hilly Zone, weather is congenial for basal rot in garlic crop. Soil drenching with Carbendazim @ 1g/litre or Copper oxychloride @ 2.5g/litre during rain free period.
- In Southern Zone, the prevailing weather condition is favour for the stem borer incidence in paddy crop. To control the stem borer population place pheromone traps @ 4 Nos per acre. Also, spray Profenophos @ 400 ml/acre or Apply Cartap hydrochloride 4G @ 6 kg/ac for effective control of stem borer.

Animal Husbandry:

- In Tamil Nadu, considering the prevailing weather enough drinking water may be given to cattle, dairy cow, sheep, goat and poultry birds.
- In Kerala, during rainy season, precautions should be taken to avoid ectoparasitic infestations. Deworming of animals should be done after microscopical examination of dung sample in a veterinary hospital.

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

Realised Rainfall: Significant rainfall occurred over Anjaw, Changlang, Dibang Valley, East Kameng, Lower Subansari, Papumpare, Tawang and West Kameng districts of Arunachal Pradesh; over Baksa, Barpeta, Biswanath, Bongaigaon, Cachar, Chirang, Darrang, Dhubri, Dima Hasao, Golghat, Hailakandi, Jorhat, Kamrup (Rural), Kamrup (Metro), Kokrajhar, Lakhimpur, Morigaon, Nagaon, Nalbari, Sibsagar, Sribhumi, Tamulpur, Udalgiri and West Karbi Anglong districts of Assam; over all districts of Meghalaya; over Aizwal, Kolasib, Lawngtlai, Saiha and Serchhip districts of Mizoram; over all districts of Manipur except Senapati; over Dimapur, Kohima, Mokochung, Wokha and Zunheboto districts of Nagaland and over all districts of Tripura.

Advisories:

- As **rain/thundershowers at many/most places** likely over Arunachal Pradesh, Assam & Meghalaya during next 4 to 5 days and **Heavy Rainfall** very likely at isolated places over Arunachal Pradesh during next 4 days, over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during next 5 days, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid waterlogging

Arunachal Pradesh

- Considering the warning of heavy rain in some areas, harvest mature *Jhum* rice promptly before the arrival of rain and store it properly for drying during sunny days. Ensure proper drainage in the field of rice, soybean, finger millets, maize and banana orchards. Use straw or dry leaf mulch to retain moisture and reduce rain impact. Remove decaying plant parts regularly. Support plants to protect them from strong winds and keep leaves and pods off the soil to prevent fungal infections. Ensure proper drainage in rice field and maintain a water level of 5-7 cm in the fields.

Assam

- In Hill Zone, continue sowing of green gram and black gram. Provide mechanical support to orchards, staking in vegetables & harvest all the mature vegetables (tomato, cucumber, brinjal etc.) from the field. Due to favourable weather condition (increased humidity and high temperature), there is chance of stem borer and caseworm attacks on *Sali* rice during tillering stage. For effective pest control, apply Fipronil 5 SC @ 50ml per bigha or Thiamethoxam 25 WG @ 13g per bigha, preferably during clear weather condition only. Due to rise in temperature and humidity, stem borer infestations may occur in the sugarcane fields. As preventive measure, remove and destroy affected plants by uprooting, or burning them. Additionally, proper drainage should be maintained across the field to help reduce pest incidence.
- In Lower Brahmaputra Valley Zone, undertake harvesting of jute and seed bed preparation/ sowing of finger mille. Continue nursery bed preparation and sowing of seed of early cauliflower and brinjal by taking the

advantages of soil moisture. Continue sowing of black and green gram. Severe attack of yellow stem borer in rice may be observed due to scanty rainfall, spray Fipronil 5 SC @ 2ml/litre of water during clear weather.

- In Upper Brahmaputra Valley Zone, considering moderate to heavy rainfall forecast in the coming 5 days, postpone sowing operation of sesamum, black gram, green gram and radish seeds. Withhold pesticide spraying operation on days with heavy rainfall. Transfer the seedlings of fruit crops, flower crops, vegetable crops etc. to a safer location. In case if the seedling cannot be transferred, make provisions for firm temporary sheds (made of bamboo and net or plastic). Harvest the matured crops (banana, citrus, coconut etc.) and transfer it to a safer location. Provide mechanical support to the horticultural crops like banana, citrus, papaya etc. Make necessary arrangement to drain out excess water from the orchards.
- In Barak Valley Zone, undertake sowing of green gram and black gram. Provide adequate drainage facilities in the field of rice. Harvest the mature fruits, crops and vegetables. Provide mechanical support to papaya, guava, banana, dragon fruit and facilitate drainage system to get rid of excess water.
- In Central Brahmaputra Valley Zone, continue harvesting of jute and sowing of green gram and black gram. Undertake nursery bed preparation and sowing of early cauliflower. Undertake gap filling in *Sali* rice field within 7-10 days after transplanting with seedling of same age. For low land areas farmers should go for portable nursery bed in wooden boxes, thermocol boxes and portable seedling tray for raising of seedlings of different vegetables like brinjal, cabbage, cauliflower, broccoli etc.
- In North Bank Plain Zone, undertake sowing of black gram on ridges and furrows. Complete sowing of sesame. Undertake gap filling within 7-10 days after transplanting of *Sali* rice with seedling of same age. Present weather condition is favourable for heavy infestation of Army worm, rice hispa along with other insects like leaf folder, case worm etc., to control spray Chlorpyrifos 20EC or Monocrotophos 40EC @ 1.5ml per litre of water. To control the army worm, remove excess nurseries and weeds from the field and bunds.

Meghalaya

- After transplanting of rice, maintain a thin layer of 2-3 cm stagnating water in the field. First hand weeding at 20-25 days after transplanting & second hand weeding at 40-45 days after transplanting should be done to reduce the weed problem. Use cono-weeder for line transplanted rice for reducing labour cost. Check and repair field bunds to retain desired water levels and prevent flooding or uncontrolled water flow. In ginger field, reapply light, dry mulch (like straw) to suppress weed growth and prevent soil splash after the rain. Provide support (staking) to banana plant to prevent lodging. Prune dead or weak branches to reduce wind damage. Ensure orchard drains are free flowing.

Manipur

- Monitor insect, pest infestation in paddy field. Regularly monitor the water level in the crop field and carry out weeding manually or by using cono-weeder. In maize, finger millet, soybean, black gram, ginger, turmeric, vegetables and orchard avoid water logging due to rains, carry out weeding after rains when optimum soil moisture is attained and monitor insect, pest infestation in the crop field. Undertake harvesting of matured cobs of maize and finger millet crop. For biological control of red hairy caterpillars on black gram, apply DiPel @ 1g/ litre water. Spray Malathion (0.1%) against larval infestation in shoots of ginger/ turmeric after rains.

Mizoram

- As moderate to heavy rainfall with strong wind is predicted, cover the fruit bearing/fruits mature plants like mango and banana with proper netting. Provide bamboo/other support to fruit bearing plant and fruit bearing branches. Provide proper drainage systems in pulse crop fields to prevent waterlogging. Continuous wet weather conditions may be favourable for the spread of soft rot and rhizome rot in ginger. Prevent water stagnation in ginger field and remove affected clumps in case of severe infestation and drench the affected and surrounding areas with Mancozeb 75% WP @ 3g per litre of water.

Nagaland

- Considering rainfall in the coming days, install yellow sticky traps in the field of TRC/WRC rice during

maximum tillering stage to monitor the pest population. Maintain 2-3cm water level in lowland rice field during tillering stage. Drain out excess water from the field. High humidity and dense plant canopy favour sheath blight in rice field. Monitor the plant for sheath blight. As there is forecast of rain, maintain proper drainage in the field of soybean to avoid water stagnation. Weeding may be done during dry days and immediately cover the base of the plant with soil and natural mulching materials to avoid runoff. Undertake harvesting of Naga King chilli.

Tripura

- Considering the warning of heavy rain, ensure proper drainage in the field of rice. Harvest matured vegetables. Strengthen the poles of the bower plant. Provide drainage from the vegetable field. Heavy or very heavy rain likely in some places in the next few days, drain out the excess water from the field of rice cultivating in the low-lying areas (*Aus* rice during flowering or milk stage, *Aman* and *Sali* rice during stage of tillering) as quickly as possible.

Animal Husbandry

- Repair the roof of the sheds. Do not tie cattle under trees or near any weak structures and should not be allowed to graze in open fields during thunderstorm. Keep animals away from open water, pond or river. Keep animals away from tractors and other metal farm equipment.

Fisheries:

- In North Bank Plain Zone, as there is sufficient water accumulation in the fisheries, release of new batches of fishes in fish ponds. Select healthy, diseases free breeds of fishes from authentic sources after consulting with fishery officials.
- Repair and raise the bund heights and provide netting encircling the fisheries to prevent the fishes from eloping.

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

- **Realised Rainfall:** Significant rainfall occurred in Aurangabad, Begusarai, Gaya, Khagadia, Madhubani, Monghyar, Muzzafarpur, Nalanda, Nawada, Patna, Purnea, Saharsa. Samastipur, Sheikhpura, Sheohar & Vaishali districts of Bihar; in Bokaro, Dhanbad, East Singhbhum, Giridih, Sahebganj, Saraikela, Ramgarh & Ranchi districts of Jharkhand; in all the districts of Odisha except Boudh; in all the districts of Andaman & Nicobar Islands; in all the districts of West Bengal & Sikkim except Hooghly, Malda and Soreng.

Advisories:

- ❖ As **rain/thundershowers at many/most places** likely over Bihar, West Bengal & Sikkim, Jharkhand, Odisha and Andaman & Nicobar during next 4 to 5 days and **Heavy to Very Heavy Rainfall with isolated Extremely Heavy Rainfall** very likely at isolated places over Jharkhand & Odisha during next 24 hours; **Heavy to Very Heavy Rainfall** very likely at isolated places over Gangetic West Bengal during next 24 hours, over Bihar during next 48 hours, over Jharkhand on 23rd; **Heavy Rainfall** very likely at isolated places over Sub Himalayan West Bengal & Sikkim during next 4 days, over Odisha during 23rd to 26th, over Bihar & Jharkhand on 24th & 25th, over Gangetic West Bengal on 26th, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid waterlogging.
- As **Thunderstorm accompanied with lightning & gusty winds (30-40kmph)** very likely at isolated places over Andaman & Nicobar Islands during next 24 hours, over West Bengal & Sikkim during next 48 hours, over Bihar, Jharkhand & Odisha during next 5 days, over Gangetic West Bengal on 24th & 25th, provide mechanical support to banana & papaya plantations and staking to young plants and vegetables. Undertake propping in sugarcane.

Bihar

- In North East Alluvial Zone, prepare the field and carry out transplanting of paddy seedlings; take measures to control weeds in paddy fields. Do not allow water to stagnate in vegetable fields and orchards. In the maize crop sown on time, carry out first weeding after 15-20 days; do not let waterlogging take place in the field;

maintain proper drainage system. Prepare nursery of early cabbage on the ridges. Harvest the ripe fruits and vegetables.

- In North West Alluvial Plain Zone, postpone scheduled irrigation in the paddy crop. Make proper drainage arrangements in the fields of vegetable crops. Undertake propping to prevent lodging of sugarcane plants at this stage of growth. Undertake planting of pointed gourd at seed rate @ 2500 plants/hectare during fair weather; apply 3–5 kg compost, 250g neem or castor cake, 100g Single Super Phosphate (SSP), 25g Muriate of Potash (MOP) and 10–15g Thimet/pit before planting. Complete the transplanting of early varieties of cauliflower under fair weather conditions.
- In South Bihar Zone, ensure proper drainage of excess rainwater from standing crops of pigeon pea (*arhar*), turmeric, yam, sunflower, and maize, as well as from vegetable nurseries. For cucurbitaceous vegetables, provide support to the vines so that they can be kept above the ground, preventing rotting due to rain. Apply 30 kg nitrogen per hectare as top dressing in paddy (vegetative Stage) crop that is 25–30 days old; do weeding in the paddy field. Monitor maize crop regularly for stem borer infestation; on observing such symptoms, apply Carbofuran (3G) @ 7 kg/ha in the whorl of the plants when sky is clear.

Jharkhand

- In Western Plateau Zone, provide drainage in maize, black gram, green gram, tuber crops and vegetables; cover the vegetable seedlings with polythene to protect them from heavy showers; simultaneously, manage rain water through in-situ conservation, do weeding and hoeing in the standing crops and vegetables. In paddy, apply 25% of the nitrogen at 2 to 3 weeks after transplanting and the remaining 25% at 6 weeks after transplanting. Considering the chances of fruit rot infestation in chilli and brinjal, spray Carbendazim 50% WP @ 2g/litre of water in clear sky conditions.

Odisha

- In North Western Plateau Zone, ensure proper drainage in non-paddy fields and intercultural operations in pulses, groundnut, and sesamum. In paddy, chances of Bacterial Leaf Blight are high; spray Streptomycin @ 1 ml + Copper Oxychloride @ 30 g per 10 litres of water. Maintain 1 cm water up to tillering and later 5 cm until the reproductive stage. For maize, to control aphids, spray Dimethoate @ 2 ml per litre of water and for stem borer, apply Carbofuran @ 1g per leaf whorl. In brinjal, to manage fruit and shoot borer, release Trichogramma card @ 20,000 per acre at 10-day intervals. In groundnut, apply gypsum @ 100 kg per acre for better pod filling.
- In Western Undulating Zone, provide drainage in pulses, maize, groundnut, cotton, and vegetables to avoid waterlogging. In paddy, install pheromone traps @ 8 nos./acre and light traps @ 1/acre to monitor stem borer and leaf folder, and if leaf blast appears, spray Tebuconazole 50% + Trifloxystrobin 25% WG @ 80g/acre during clear weather. In cotton, to control sucking pests like aphids and jassids, spray Neem oil @ 600–800 ml + 200 g detergent powder per acre in 200 litres of water. In arhar and maize, neem-based pesticide (1500 ppm) can also be applied @ 3 ml/litre of water or @ 600ml/acre in 200 litres of water against sucking pests.
- In East and South-Eastern Coastal Plain, withhold application of fertilizers and pesticides for the time being. Tie sugarcane leaves from four to five plants together to prevent lodging and provide staking. Provide mechanical support to banana, papaya plants. Drain excess water from maize, pulses, groundnut, jute and vegetable fields. In paddy at tillering stage, to manage blast, spray Tebuconazole + Trifloxystrobin @ 80 g/acre in clear weather, and for swarming caterpillar, apply Lambda-cyhalothrin @ 400 ml/acre in the evening. In *arhar*, for leaf webber, spray Chlorpyrifos 50% + Cypermethrin 5% EC @ 400 ml/acre after rainwater recedes. In black gram and green gram, to control leaf eating caterpillar, apply neem oil formulation (300 ppm) @ 1 litre/acre, and if severe, use Emamectin Benzoate 5% SG @ 60 g/acre.
- In West Central Table Land Zone, ensure proper drainage in fruit and vegetable crops. In paddy at tillering stage, to control stem borer and leaf folder, install pheromone traps (4–5/acre); if infestation crosses threshold, apply Azadirachtin 0.15% EC @ 800 ml/acre. For bacterial blight in paddy, spray Plantomycin @ 1g/litre + Copper oxychloride @ 1g/litre of water. In maize, to manage stem borer and fall armyworm, spray Chlorntraniliprole 18.5% SC @ 0.4 ml/litre during clear weather. In chilli, to control sucking pests like aphids

and thrips, spray Imidacloprid 17.8 SL @ 0.3 ml/litre in clear conditions.

- In Mid-Central Table Land Zone, in paddy at tillering stage, to manage leaf folder and case worm, spray Fipronil 5% SC @ 400 ml/acre. In maize at knee-high stage, to control Maydis leaf blight, spray Mancozeb 75% WP @ 400 g/acre. In sugarcane, for red rot management, spray Metalaxyl 8% + Mancozeb 64% WP @ 400 g/acre in 200 liters of water. In red gram, to manage leaf webber, spray Chlorpyrifos 50% + Cypermethrin 5% EC @ 400 ml/acre. In groundnut, for leaf miner, aphids, and thrips, apply Emamectin Benzoate 5% SG @ 80 g/acre in 200 litres of water.
- In North Central Plateau Zone, complete transplanting of paddy this week and maintain 2–3 cm standing water; for blast disease spray Hexaconazole 5% EC @ 30 ml/15 litres of water, and for stem rot apply Carbendazim 50% WP @ 2 g/litre. In paddy, for stem borer management, clip seedling tips before transplanting, destroy egg masses, and if infestation occurs, spray Neem oil 1500 ppm @ 1.5 ml/litre. In green gram and black gram, to manage aphids and thrips, spray Imidacloprid 17.8 SL @ 2 ml/litre of water, and for caterpillars, apply Profenophos + Cypermethrin as needed. In tomato, for fungal diseases like leaf blight, spray Carbendazim or Mancozeb @ 1–2 g/litre of water.
- In North Eastern Coastal Plain Zone, maintain 3–5 cm standing water in paddy fields and postpone top dressing of fertilizers if excess water accumulates. In paddy, for weed management, apply Bensulfuron methyl + Pretilachlor @ 10 kg/ha. In jute, to control semilooper and Bihar hairy caterpillar, spray Lambda-cyhalothrin 4.9 CS @ 250 ml/acre. Keep drainage channels open in vegetable fields to avoid water stagnation.
- In Eastern Ghat High Land Zone & South Eastern Ghat Zone, drain excess water from paddy fields and apply the second top dressing of Urea @ 27 kg/acre if not done; for blast disease, spray Tricyclazole 75 WP @ 6g/10 litres of water, and for leaf folder, apply Chlorantraniliprole 18.5 SC @ 0.3 ml/litre of water. In maize, ensure drainage to prevent root rot and to control fall armyworm, spray Spinetoram 11.7 SC @ 0.4 ml/litre of water if infestation exceeds 5%. In black gram and green gram, for aphids and yellow mosaic virus, spray Thiamethoxam @ 0.3 g/litre of water. In vegetables like tomato, brinjal, okra, and chilli, to control fruit borer spray Emamectin Benzoate 5% SG @ 0.4 g/litre, and for leaf spot apply Mancozeb 75% WP @ 2.5 g/litre of water.
- In North Eastern Ghat Zone, ensure drainage in maize and vegetable fields. In transplanted paddy, for blast disease spray Tebuconazole 50% + Trifloxystrobin 25% WG @ 1 g/litre of water, and in upland direct sown paddy, apply Nominee Gold + Sathi @ 80 ml + 80 ml/acre at 25 DAS for weed control. In okra, for mealy bug, spray Fenitrothion 50% EC @ 1.5 l/ha in clear weather.

West Bengal & Sikkim

Sub-Himalayan West Bengal

- In Hill Zone, gradually increase the water level in rice field up to 5-10cm; spray Lambda-cyhalothrin 5% EC @ 2ml/litre of water or Thiamethoxam 25% WG @ 5g/15 litre of water against Thrips and Leaf folder during rain-free period. Monitor fields for early signs of rhizome rot in ginger such as yellowing and wilting; promptly remove infected plants and spray Bordeaux mixture (1%) as a preventive measure against fungal infections. Warm temperatures, high relative humidity, and elevated soil moisture caused by rainfall create ideal conditions for the development and spread of Anthracnose disease in chilli; to control, spray Bavistin @ 1.0g or Dithane M-45/Copper oxychloride @ 1.5g per litre of water during clear weather.
- In Terai Zone, in case of blast disease infestation in Aman paddy, application Potassium @ 5-6 kg per bigha as top dressing is recommended in place of Nitrogenous fertilizer. Do not start retting of matured jute in running water; look for stagnant water of pond or small water bodies; for retting use of CRIJAF SONA (4 kg per bigha) or NINFET powder (6kg per bigha). To prevent fruit fly in pumpkin, use pheromone traps with spot spraying of molasses @ 200ml + Malathion 50% EC @ 20ml during clear weather. To control fruit and shoot borer in okra, remove and burn all the infected plant parts; install light traps and Pheromone traps @ 1-2 per bigha; spray Bacillus thuringiensis 5% W.P @ 1.5g per litre of water during clear weather.
- In Old Alluvial Zone, due to cloudy and humid weather conditions may conducive attack of Blast and Brown spot disease in rice, judicious use of nitrogen fertilizer and weed management in the field is advised. Maintain

proper drainage channels in jute field. If incidence of powdery mildew in pointed gourd is noticed, spray Carbendazim @ 5g or Zineb @ 20g per 10 litres of water; maintain good drainage system and remove excess water from the field.

Gangetic West Bengal

- In Coastal Saline Zone, rice crop may get attacked by bacterial disease like yellowing of leaves and tips; as a preventive measure, apply one spraying of Potash @ 6g + chelated Zinc @ 1g + Sulphur @ 2-3g mixed with 1 litre of water after 20-25 days after transplanting.
- In Laterite and Red Soil Zone, waterlogged or saturated fields can hinder root growth and increased risk of bacterial/fungal infections in rice; before transplanting, ensure proper puddling and drainage in the field to prevent water stagnation. To control the attack of tikka disease in groundnut, spray Carbendazim @ 1g + Mancozeb @ 2g per litre water at 15 days' interval.
- In New Alluvial Zone, light top dressing with nitrogen fertilizer in rice may be done two weeks after transplanting, if required. Crizaf-Sona powder may be added @ 4 Kg per bigha pond at the time of retting jute to reduce the retting time and improve the quality of fiber.

Andaman & Nicobar Islands

- In Andaman & Nicobar Islands, remove old dried leaves of banana to improve airflow and reduce spread of Sigatoka; apply vermicompost tea (1:5 dilution) at root zone for nutrient boost. To control fruit borer in brinjal, install pheromone traps (Leucinodes lure) @ 5 traps/acre; spray chilli-garlic extract (5%) as a bio-repellent during dry spells; mulch with dried leaves to suppress weeds and conserve soil moisture. In bottle gourd, spray neem seed kernel extract (4%) on tender leaves during clear weather; train vines on trellis to improve aeration and fruit quality; install pheromone traps @ 15 per acre to control fruit fly.

Animal Husbandry

- In Odisha, keep livestock and poultry sheds clean, dry, and well-ventilated to prevent infections like mastitis. Use smoke to repel insects and seal poultry shed crevices to block predators. Vaccinate cattle against FMD every 6 months with a booster 28 days after the first dose, preferably post-deworming. Also ensure timely vaccination against HS, BQ, and Enterotoxaemia. For poultry, vaccinate chicks against Ranikhet at 1–7 days and again at 20–28 days. Provide balanced feed to small ruminants.
- In Bihar, to protect the dairy animals from Lumpy Skin Disease (LSD), vaccinate them with goat pox vaccine.

Fishery

- In Odisha bamboo or nylon mesh screens should be erected at the inlets and outlets to prevent loss and entry of unwanted fish. Nylon nets may be erected on bunds to prevent loss of fish with overflowing water. Heavy rainfall may decrease the salinity of water in the pond. Farmers are advised to apply alky-dimethyl-benzyl ammonium chloride (3ppm) as a disinfectant after cessation of rain.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Realised rainfall: Significant rainfall occurred in all districts of Maharashtra & Goa and in all districts of Gujarat except Ahmedabad, Anand, Chhota Udepur, Gandhinagar, Kheda, Panchmahal & Vadodara.

Advisories:

- As **rain/thundershowers at many/most places** likely over Vidarbha, Konkan & Goa, Gujarat State during next 4 to 5 days and **Heavy to Very Heavy Rainfall** very likely at isolated places over Gujarat Region during next 5 days, over Saurashtra & Kutch during 23rd to 26th, over Konkan & Goa on 26th; **Heavy Rainfall** very likely at isolated places over Saurashtra & Kutch during next 24 hours, over Konkan & Goa on 25th, over Madhya Maharashtra on 26th, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid waterlogging.

Maharashtra

- In Konkan, in view of realized rainfall and forecast of heavy / heavy to very heavy rainfall at isolated / few places in Ratnagiri, Raigad and Sindhudurg districts during 24th to 26th August, make arrangements to drain out excess water from rice, finger millet, turmeric, groundnut, vegetables and fruit orchards. Maintain 2.5 to 5

cm water level in rice fields. In 30 to 40 days of transplanted rice field, apply second dose of nitrogen fertilizer 870 g of urea per guntha, during the tillering stage of the crop during low rainfall intensity.

- In Madhya Maharashtra, in view of realized rainfall and forecast of heavy rainfall at isolated / few places, make arrangements to drain out excess water from rice, maize, groundnut, soybean, vegetables and orchards. Maintain 2 to 3 cm water level in rice fields. Undertake intercultural operation in groundnut and maize crop. In Solapur district, undertake harvesting of timely sown matured green gram, black gram. Continue nipping in 45 days old pigeon pea. For effective control of white grubs in sugarcane, apply Thiamethoxam 0.90% + Fipronil 0.20% GR @ 15 kg per hectare, placing it directly into the soil within the furrows. Due to frequent rain and high humidity there is incidence of brown plant hoppers and green plant hoppers on rice crop, for control spray Fipronil 5 S.C. @ 20 ml or Imidacloprid 17.8 S.L. @ 2 ml per 10 litres of water during clear weather. Due to the rainfall received in the past week and high humidity, infestation of fall armyworm observed in maize, for control spray Spinetoram 11.7% SC @ 0.5 ml per litre of water during clear weather.
- In Marathwada, undertake harvesting of timely sown and matured green gram, black gram. To enhance the fruit growth in custard apple spray water soluble fertilizer 19:19:19 @ 10 g per 10 litres of water. In groundnut crop due to cloudy condition and increased humidity incidence of sucking pests observed, for control spray Imidacloprid 17.8% SL @ 2 ml or Quinalphos 25% EC 20 ml per 10 litres of water. If infestation of fall armyworm is observed in early sown rabi sorghum, for management spray Emamectine Benzoate 5 % @ 4 g or Spinetoram 11.7 SC @ 4 ml per 10 litres of water.
- In Vidarbha, continue nipping in 45 days old pigeon pea. Maintain 3 to 5 cm water level in transplanted rice fields. Apply top dressing of nitrogen fertilizer @ 40 kg N/ha to 25-30 days old maize crop with hoeing. Due to prolonged cloudy weather condition, incidence of thrips observed in cotton crop, for control spray Imidacloprid 17.8 % SL @ 3.0 ml or Thiomethoxam 25 % WG @ 2 g per 10 litres of water during clear weather. Wilt disease observed in pigeon pea crop, for control undertake drenching of Trichoderma @ 2 g per litre of water or copper oxychloride @ 3 g per litre of water during clear weather. Due to cloudy weather condition, initial incidence of leaf eating caterpillar observed in pigeon pea for control, apply Nimboli Arc 5 % per 10 litres of water, initial incidence of stem fly observed in soybean, for control undertake foliar spray Indoxacarb 15.8 sc @ 7 ml per 10 litres of water.

Gujarat

- In Bhal & Coastal Zone, drain out excess rain water from standing crop fields. Carry out interculturing and hand weeding in cotton under vapsa conditions; to manage sucking pests at initial stages, spray neem seed extract @ 500g or Neem oil @ 50ml in 10 litres of water during rain free period.
- In South Gujarat Heavy Rainfall Zone, drain out excess rain water from standing crop fields of paddy, sugarcane, vegetables and orchards. Postpone chemical and fertilizer application.
- In South Gujarat Zone, drain out excess rain water from standing crops of paddy, cotton, pigeon pea and fruit orchards. Prop the sugarcane with strong bamboos or tie the canes together in a clump using sugarcane leaves to protect against wind and heavy rain. Postpone chemical and fertilizer application.
- In North Gujarat Zone, drain out excess rain water from standing crop fields. Postpone inter-culturing and weeding activities during the warning period. Postpone application of irrigation, chemicals and fertilizers.
- In North Saurashtra Zone, drain out excess rain water from fields of groundnut, cotton, sesame, pearl millet, green gram, black gram, cow pea, pigeon pea, castor and vegetable crops. Spray Ridomil @ 20g/10 litres of water for prevention of Alternaria/fungal leaf spot and Powdery mildew diseases in sesame crop during clear weather only. Spray Hexaconazole or Propiconazole @ 10ml/10 litres of water under clear weather to prevent leaf spot & rust infestation in groundnut.
- In Middle Gujarat Zone, drain out excess rain water from standing crop fields. Postpone application of irrigation, chemicals and fertilizers. Provide mechanical support to banana plants at fruiting stage.
- In North West Zone, drain out excess rain water from standing crop fields. Postpone application of irrigation, chemicals and fertilizers.
- In South Saurashtra Zone, drain out excess rain water from standing crop fields. Postpone plant protection

measures till rain subsides. Interculturing and hand weeding should be carried out in cotton under vapsa conditions.

Animal Husbandry

- In Gujarat, keep animals in shed during rainfall hours. Keep fodder in safe place to avoid spoilage due to rainfall. Spray Deltamethrin or Amitraz @ 2ml/litre of water for the control of ticks. Spray phenyl in the shed to avoid flies and mosquitoes. Provide 6-8 kg good quality dry roughage with 15-20 kg green fodder to the animals. For milch animals, regularly follow schedule of 1 kg feed + 50g mineral mixture per 2 liters of milk yield. Feed animals with a mixture of green grass + hay + minerals + dry feed. Ensure vaccination of animals against different diseases during rainy season.

CENTRAL INDIA [M.P, CHHATTISGARH]

Realised Rainfall: Significant rainfall occurred in all districts of Chhattisgarh except Balrampur, Jashpurnagar, Korba, Manendragarh Bharatpur, Raigarh, Surajpur & Sarguja and in all districts of Madhya Pradesh except Chhatarpur, Damoh, Niwari, Panna, Rewa, Sidhi, Singrauli, Tikamghar, Umaria, Satna, Sheopur Kalani & Bhind.

Advisories:

- As **rain/thundershowers at many/most places** likely over Chhattisgarh, Madhya Pradesh during next 4 to 5 days and **Heavy to Very Heavy Rainfall** very likely at isolated places over West Madhya Pradesh during next 48 hours, over Chhattisgarh on 23rd; **Heavy Rainfall** very likely at isolated places over Chhattisgarh on 22nd & 26th, over Madhya Pradesh during 24th to 26th, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid waterlogging.

Madhya Pradesh

- In Satpura Plateau Zone, for maintaining the purity of soybean seed, farmers are advised for roughing of plants of other varieties in seed production programme. Ensure drainage arrangement in the field so as to avoid waterlogging caused due to heavy rains. Do intercultural operations as per field conditions. To avoid lodging in sugarcane, tie three or four canes each other with the help of green leaves, and do need based intercultural operations and earthing up. Make proper drainage system in the sugarcane fields to minimize outbreaks of Pyrilla pests.
- In Nimar Valley Zone, make arrangements to elevate the cucurbitaceous vegetables so that the vines can be saved from rotting due to rain. If infestation of Semi looper, Tobacco caterpillar and Gram caterpillar is seen in soybean crop, spray Indoxacarb 14.5% @ 120ml or Flubendiamide 39.35% @ 60ml or Spinetoram 11.7% @ 180ml per acre when the weather is clear.
- In Jhabua Hills Zone, to control sucking pests and yellow vein mosaic disease in soybean at flowering stage, spray Thiamethoxam 25% WG @ 150 ml/ha. Maize is at silking stage; to prevent lodging due to strong winds and heavy rainfall, earthing should be carried out in maize crops.
- In Gird Zone, in view of the possible weather, make arrangement in crops and vegetables to remove additional rain water. Harvest or pick vegetables & fruits and send them to the market as soon as possible. Due to forecasted weather conditions, there may be possibility of leaf curl (*Churramurra* disease) in chilli; to control, apply Thiamethoxam 25 W.G. @ 100g mixed in 500 to 600 liters of water per hectare when clear is weather.
- In Bundelkhand Zone, in view of moderate to heavy rainfall forecast, postpone transplanting of tomato, chili, brinjal, cauliflower and cabbage. Considering the possibility of Shoot borer caterpillar in jowar crop, monitor the crop and if noticed, put Cartap hydrochloride 4G @ 3-4 grains in the stem during clear sky conditions.
- In Central Narmada Valley Zone, maintain proper water level in paddy fields; apply nitrogenous fertilizer only during fair weather conditions. Do intercultural operations follow by application of nitrogenous fertilizer in Brinjal (Vegetative Stage), Chili (Vegetative) and Okra (Flower Initiation).
- In Malwa Plateau Zone, in case of continued rains, infection of anthracnose disease is likely to occur in soybean (flowering stage); conduct surveillance of the crop at regular intervals and spray Tebuconazole 25.9/38.39 SC @ 625ml/ha or Tebuconazole 10% + Sulphur 65% WG or Carbendazim 12% + Mancozeb 63%

WP @ 1.25 kg/ha immediately after the symptoms are seen when clear is weather.

- In Kymore Plateau and Satpura Hill Zone, to increase growth in standing crops and eliminate yellowing, foliar application of N P K 19:19:19 water soluble fertilizer @ 100 grams per pump. Arrange proper drainage in maize, pulses, oilseeds, and vegetables. For the control of Fall army worm in maize crop, spray Emamectin Benzoate 5 SG @ 100g per acre in 150 litres of water.
- In Vindhya Plateau Zone, do bunding for water and soil conservation in paddy cultivation. At this time the soybean crop is in the flowering and pod stage; farmers are advised not to use any pesticides. Current weather is congenial for the incidence of pod borers complex (Viz. pod fly, pod bug and Plume moth) in cucurbitaceous family crops, green gram and black gram; to control, spray Profenophos 50 EC @ 1500ml/ha in 600-700 litre of water.

Chhattisgarh

- In North Hill Zone, for the control of yellow stem borer in the paddy crop, destroy the adult pests and their eggs and pull out the dead heart; use pheromone trap @ 2 nos per acre; if boat-shaped spots are seen in the paddy crop, spray Tricyclazole @ 0.6g/litre of water during clear weather. Provide mechanical support to orchards and other tall/weak crops with stakes or bamboo to prevent lodging or breakage. Adopt ladder like bamboo structure for cucurbit crops. Carry out earthing up and provide support with bamboo to long duration maize plants or maize plants at flowering stage. In Okra, spray Imidacloprid 17.8 SL @ 0.5 ml per litre or Emamectin @ 0.5 ml per litre water one or two days after rainfall.
- In Bastar Plateau Zone, drain out excess rain water from the transplanted paddy fields; if symptoms of sheath blight disease are seen in paddy, spray Hexaconazole @ 1g/litre of water during clear weather. Place T-shaped bamboo perches @ 10 pc per acre to manage caterpillar population in maize fields. Make proper arrangement of poles and ropes to support the vines of gourd, bitter gourd, cucumber, cowpea, bean and pumpkin. Identify and remove water suckers in banana and provide immediate support of bamboo to the plants which have flowered/fruited. If symptoms of powdery mildew disease are seen in cucurbitaceous crops, spray Dinocap @ 1ml/litre or Carbendazim @ 1g/litre at an interval of 10 days during clear weather.
- In Chhattisgarh Plain Zone, when rice crop is reach tillering stage, apply the second dose of nitrogen fertilizer in the form of urea (30 kg/hectare); to prevent BLB disease in rice crop, balanced fertilizers should be used; in case of disease infestation, apply potash fertilizer @ 8-10 kg/ha during clear weather. Carry out intercultural operations at 20-25 days after sowing in vegetable crops like bitter guard, bottle guard and cowpea for weed control. Arrange staking for creeper vegetables like bitter gourd, gourd vegetable and other pumpkin family vegetables. If symptoms of powdery mildew disease are seen in black gram, spray soluble sulphur (sulphate and other similar products) @ 3g per litre of water during clear weather.

Animal Husbandry

- In Madhya Pradesh, to control ectoparasite in cattle, apply Malathion or Cypermethrin @ 3.0ml/litre of water on the body of the cattle.
- In Chhattisgarh, vaccinate poultry birds to protect them against Ranikhet disease (first dose F-1 in age of 7 days & second dose R2B in age of 8 week). There is a possibility of PPR, sheep pox and Fadakhia disease in sheep and goats, hence get them vaccinated to prevent these diseases.

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

Realised Rainfall: Significant rainfall occurred in all the districts of Himachal Pradesh except Lahaul & Spiti; over Baramulla, Jammu, Kathua, Kupwara, Poonch, Rajouri, Reasi, Samba & Udhampur districts of Jammu & Kashmir; in all the districts of Uttarakhand; in Amritsar, Gurdaspur, Hoshiarpur, Jalandhar, Ludhiana, Pathankot, Rupnagar, SBS Nagar districts of Punjab; in Ambala, Chandigarh, Faridabad, Gurgaon, Jhajjar, Mewat, Panchkula, Panipat, Rohtak, Sonapat, Yamunnagar districts of Haryana; in all districts of Delhi; in Banswara, Baran, Bharatpur, Dholpur, Dungarpur, Jhalawar, Pratapgarh, Rajsamand, Sirohi, Tonk & Udaipur districts of Rajasthan; in Barabanki, Basti, Hardoi, Kheri, Lucknow, Maharajganj, Sitapur & Unnao districts of East Uttar Pradesh and in Agra, Auraiya, Baghpat, Bareilly, Bijnor, Etah, Hathras, Lalitpur, Mathura, Meerut, Moradabad,

Rampur, Saharanpur, Sambhal, Shahjahanpur & Shamli districts of West Uttar Pradesh.

Advisories:

- ❖ As **rain/thundershowers at many/most places** likely over Himachal Pradesh, Uttarakhand, Uttar Pradesh, Punjab, Haryana, Chandigarh & Delhi, Rajasthan during next 4 to 5 days, over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 23rd, 24th & 26th and **Heavy to Very Heavy Rainfall with isolated Extremely Heavy Rainfall** very likely at isolated places over East Rajasthan during next 48 hours; **Heavy to Very Heavy Rainfall** very likely at isolated places over Uttarakhand during next 3 days, over West Rajasthan during next 4 days, over Haryana, Chandigarh & Delhi on 23rd, over East Rajasthan during 24th to 26th; **Heavy Rainfall** very likely at isolated places over East Uttar Pradesh during next 4 days, over West Uttar Pradesh, Haryana, Chandigarh & Delhi, Himachal Pradesh during next 5 days, over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 23rd & 24th, over Punjab during 23rd to 26th, over Uttarakhand on 25th & 26th, over West Rajasthan on 26th, postpone irrigation, intercultural operations and application of plant protection measures & fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid waterlogging.
- As **Thunderstorm accompanied with lightning & gusty winds (30-40kmph)** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during next 5 days, provide mechanical support to banana & papaya plantations and staking to young plants and vegetables. Undertake propping in sugarcane.

Himachal Pradesh

- In High Hill Temperate Dry Zone, carry out weeding in rajmash and barley fields. To control late blight disease in potato, spray Copper Oxychloride 50% WP @ 2.0-2.5 g per litre or Mancozeb 35% SC @ 2 ml per litre of water in the field after current spells of rain.
- In Mid Hills Sub Humid Zone, undertake harvesting of matured tomato, capsicum and brinjal fruits immediately. Ensure that drainage channels in ginger and turmeric fields are clean from weeds. Do not allow rain water to stand in maize crop as it is highly sensitive to standing water and promotes bacterial stalk rot.
- In Sub Montane and Low Hills Sub Tropical Zone, undertake staking in cucurbits to prevent lodging. Maintain proper drainage channels in rice, maize and vegetable fields like cucumber, summer squash, bitter gourd, bottle gourd, tomato and brinjal.
- In High Hills Sub Temperate Wet Zone, undertake transplanting of 4-5 weeks old cauliflower, cabbage and broccoli seedlings in Kullu district. Carry out hoeing and weeding in kidney beans and finger millets. To control whitefly infestation in cucurbits, spray Imidacloprid @ 60ml per 200 litres of water.

U.T of Jammu & Kashmir

- In Sub Tropical Zone, carry out weeding, hoeing and earthing up operations in maize. Carry out thinning, weeding and hoeing operations in *kharif* black gram, at optimum soil moisture condition. Do not allow water to stagnate in maize, pulses and vegetable fields. Postpone application of chemical plant protection measures till weather gets clear.
- In Intermediate Zone, ensure proper drainage in maize, *kharif* pulses, rice and vegetable fields. Provide mechanical support to young vegetable plants to prevent lodging and ensure a better crop stand against strong winds. To control Rice Hispa, spray Chlorpyrifos @ 2ml per litre of water or Cypermethrin @ 2ml per litre of water on a non-rainy day.
- In Valley Temperate Zone, maintain a thin layer of water in rice field. Carry out hoeing and weeding in maize. Maintain proper drainage channels in maize, beans and pulses. Apply second top dose of urea in hybrid maize @ 4 kg/kanal.

U.T. of Ladakh

- In Cold Arid Zone, undertake harvesting of matured barley. Remove loose smut infected wheat plants to reduce the spread of the disease. Apply irrigation to wheat as per requirement. Undertake picking of filled pea pods. Undertake harvesting of cucurbits.

Uttarakhand

- In Bhabar and Tarai Zone, maintain proper drainage channels in sugarcane & maize and postpone spraying of pesticides in view of heavy rainfall forecast. Carry out hoeing and weeding in maize, on a non-rainy day.

- In Hill Zone, undertake harvesting of matured cabbage. Use light trap, pheromone trap to monitor and attract and kill adult fruit flies in cucumber. Regularly remove and destroy infested fruits to reduce the fruit fly population.
- In Sub Humid Sub Tropic Zone, in view of heavy rainfall forecast, postpone use of pesticides and fertilizers in rice. Postpone sowing of green gram. ensure drainage of excess water from barnyard millet, finger millet and already sown green gram.

Horticulture

- In High Hill Temperate Dry Zone of Himachal Pradesh, clean the grass and weeds in apple tree basins and maintain mulch for prolonged moisture retention. To control woolly aphid in apple trees, spray Chlorpyrifos @ 400 ml per 200 litres of water. In Mid Hills Sub Humid Zone, collect and dispose of fallen and diseased apple fruits to avoid spread of infection.
- In Intermediate Zone of Jammu & Kashmir, provided staking in young fruit plants to avoid damage from adverse weather conditions. Remove all water/stock sprouts from the plant emerging from stem up to a height of 30 cm from ground level. Remove tying material from bud/graft union carefully. Keep the orchards clean from weeds/unwanted plants. Install insect traps such as light trap, sticky traps and pheromones traps to check insect-pest attack. Undertake staking in newly planted orchards to provide support against strong winds. Implement proper drainage systems and management practices to prevent water logging in fruit orchards and ensure healthy tree growth.

Punjab

- In Western Zone of Punjab, undertake planting of *kharif* onion crop both with bulb sets as well as seedlings and planting of evergreen fruit plants like citrus, mango, guava, litchi, loquat, sapota.
- In Western Plain Zone of Punjab, high humidity level, favour insect infestation, keep vigil on white fly infestation in cotton. If infestation of white fly above to the economical threshold level, spray Nimbecidine @ 1 litre in 200- 250 litres of water per acre, when sky remain clear.
- In Sub Montane Undulating Plain Zone of Punjab, undertake planting of evergreen fruit plants such as citrus, mango, litchi, guava, loquat, ber, amla and papaya. Earthing up of sugarcane crop may be done to prevent lodging. Carry out weeding in green gram, maize and soybean to save crop from water and nutrient stress. Monitor the rice crop for appearance of plant hopper. If appeared, spray 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) or one litre Coroban / Dursban 20 EC (chlorpyrifos) in 100 litres of water per acre. Knee high maize borer in maize can be controlled by spraying Chlorantraniliprole 18.5 SC @ 30 ml in 60 litres of water per acre at 2-3 weeks old crop to control maize borer in both irrigated and rainfed crops.
- In Central Plain Zone of Punjab, undertake planting of evergreen plants such as citrus, guava, mango, litchi, sapota, jamun, bael, amla. Undertake transplanting of brinjal and mid-season varieties of cauliflower in the main field and planting of bulb sets of onion. To prevent lodging, prop up the crop at the end of August by using trash twist method. Drain out excessive rain water from the periphery of fruit plant or orchards if any.

Haryana

- In Western Zone of Haryana, carry out manual weeding in paddy at 30 to 40 days after transplanting. Drain out the excess amount of water from cotton, pearl millet, moong bean and cluster bean fields immediately to prevent waterlogging condition. Withhold irrigation, spray in crops, interculturing operation. Farmers are advised to vigilance before doing the agriculture operation due to possible rainfall activity. Due to high moisture and favourable conditions, keep vigil on root weevil in rice crop and if infestation occurs apply 10 kg Karberil 4 G/Sevidal 4 G per acre, when sky remain clear. High humidity, favours insect infestation in cotton, keep vigil on white fly infestation. If infestation of white fly above to the economical threshold level (ETL), spray Nimbecidine @ 1litre mixed with 200-250 litre water per acre, when weather remain clear. High humidity (58-90%) and favourable temperature (26-34°C) may increase the infestation of sucking insect-pest in vegetables and fruits; regularly monitor and spray when sky remains clear.
- In Eastern Zone of Haryana, keeping the view of weather forecast, avoid irrigation to cotton, bajra crop and

make drainage system to drain out of excess water. As per the weather condition monitor disease regularly. In case of pink caterpillar infestation in the cotton, install 10-12 pheromone traps with PG lure per acre of the crop and spray Spinosad 45% SC @ 0.5-1.0 ml and neem insecticide 1500 ppm @ 5ml per litre of water on the crop alternately in the evening at an interval of 10-10 days. Monitor all crops regularly against white flies and sucking pests. Regularly inspect paddy crops for the problem of dwarfism, dwarfism has been observed in paddy crop and transmitted to paddy plants by white backed aphids. To control white backed aphids in paddy, spray Dinotefuran 20% SG @ 80g in 200 liters of water per acre when 5-10 aphids per plant are observed.

Delhi

- In Delhi, undertake sowing of sweet corn, baby corn and carrot in raised bed and sowing of sarson saag, radish, spinach, coriander. Undertake transplanting of brinjal, chilli and early cauliflower if seedlings are ready. Undertake transplanting of onion seedling in the prepared fields. Monitor brinjal, cauliflower, cabbage, tomato etc, for borer insect, use pheromone trap @ 3-4/acre.

Uttar Pradesh

- In Western Plain Zone, undertake transplanting of seedlings of brinjal, chilli, tomato and early cauliflower during fair weather. Carry out planting of new saplings of mango, guava, amla, lemon, etc. Provide proper drainage in all vegetable crops; make scaffolding in cucurbitaceous vegetables. To reduce the adverse effect of waterlogging in paddy, spray a 2% solution of NPK mixture (19:19:19) two to three times on the foliage; if *Khaira* disease is seen in paddy, spray a solution of 2.25 kg Zinc sulphate and 2.5 kg slaked lime in 800 litres of water. There is a possibility of outbreak of stem borer / shoot fly pest in maize crop; for its prevention, spray Emamectin Benzoate 5% SG @ 200g/ha in 500-600 litres of water during clear weather. Carry out second weeding in sesame crop at 35-40 days after sowing during rain-free period.
- In Central Zone, undertake transplanting of seedlings of brinjal, chilli, tomato and early cauliflower during fair weather. Carry out planting of new saplings of mango, guava, amla, lemon, etc. If *Khaira* disease is seen in paddy, spray a solution of 2.25 kg Zinc sulphate and 2.5 kg slaked lime in 800 litres of water during clear weather. To control weeds in the black gram/green gram crop, apply Imazethapyr 10 SL at the rate of 1.0 liter / hectare, in 500-600 liters of water after 15-20 days of sowing on a clear sky day. To control outbreak of leaf and pod borer in sesame crop, spray Emamectin Benzoate 5% SG at the rate of 200 g / hectare 500-600 liters water on clear weather. To control white *gidar*/termite infestation in groundnut crop, apply Fipronil 0.3% GR @ 20 kg / ha on a clear sky day.
- In Bundelkhand Zone, this is the suitable time for establishment of new orchards of mango, guava, litchi, *aonla*, jackfruit, lemon, *jamun*, *ber*, banana, papaya, etc. Undertake weeding in pigeon pea, green gram and black gram crop under *vapsa* conditions only. To control the citrus canker disease in lemon spray copper oxychloride @ 2.5g per liter of water. Apply 30 kg nitrogen per hectare at 25-30 days after transplanting of high yielding varieties of non-basmati rice crop and 15 kg nitrogen per hectare in scented varieties. For the control of stem borer pest in paddy, apply Carbofuran @ 20 kg per hectare or Chlorpyrifos 20 EC @ 1.5 litres per hectare in 600 litres of water during clear weather. To control leaf sucker or hopper pest in sesame crop, spray Neem oil @ 5ml/litre of water or Imidacloprid 17.8 SL @ 0.3ml/litre of water when the sky is clear. Monitor mites and jassids in okra, chilli and cucurbitaceous crops.
- In Eastern Plain Zone, continue sowing cabbage, capsicum, tomato, etc. in the nursery; carry out transplanting of ready seedlings as soon as possible. Undertake planting of improved varieties of mango, guava, litchi, *amla*, *bael*, *jamun*, lemon, *chironji*, *lasora*, *mahua* and other fruit plants. If sugarcane have attained a length five feet, carry out first tying at a height of 2 feet; tie two bunches of sugarcane in a line together with the dry leaves. The weather is still suitable for sowing ladyfinger in Kharif. Complete the plantation of tissue cultured banana variety G9. For the control of *Khaira* disease in paddy, spray 5 kg of Zinc sulphate and 2.5 kg of lime mixed in 800 litres of water during clear weather. Continue sowing of cucumber, bitter gourd, bottle gourd, ridge gourd, ash gourd, amaranth and radish. Undertake weeding split application of nitrogen, top dressing of Zinc/Iron/Sulphur in standing paddy crop. Undertake weeding and thinning and split application of nitrogen in pigeon pea and sorghum crops. To protect brinjal crop from stem and fruit borer pests, spray

Chlorantraniliprole @ 1.0ml per litre of water at an interval of 10-15 days during clear weather.

Rajasthan

- In Sub Humid Southern Plain and Aravali Hill Zone, ensure proper drainage management in standing crops and vegetable nurseries. Carry out thinning, weeding and hoeing in maize crop after the current spell of moderate to heavy rainfall.
- In Flood Prone Eastern Plain Zone, to control the mosaic disease in okra crop, spray Diafenthiuron 50 WP @ 1.0g / litre of water at interval of 15 days during clear weather.
- In Transitional Plain Zone of Inland Drainage Zone, to control leaf spot disease in peanut crop, spray 0.5g Bavistin per litre of water after the weather clears. To prevent bacterial blight in green gram, *moth* beans and cowpea crops, spray 1g of Streptocycline and 20g of Copper fungicide per 10 litres of water on clear weather days.
- In Hyper Arid Partially Irrigated Western Plain Zone, Apply required irrigation in groundnut crop to keep soil moist for better penetration of pegs. Also irrigate the fodder crops during moisture stress periods.
- In Semi-Arid Eastern Plain Zone, due to continuous cloudy sky, groundnut may be affected by leaf spot disease; to control, spray Bavistin @ 0.5g per litre of water. To manage Bacterial blight attack on green gram, *moth* beans and cowpea crops, spray Streptocyclin @ 1g and copper fungicide @ 20g per 10 litres water on a clear day.
- In Arid Western Plain Zone, to reduce evaporation from the top surface of the soil, cover the soil with weeds. For the effective control of Fall army worm in pearl millet, spray Chlorantraniliprole 18.5 EC @ 1g/ 3 litres of water, when sky is clear. Present weather conditions are favourable for incidence of pod borer attack in early sown green gram; spray Flubendiamide 20 WG @ 250g or Enamectin benzoate 5 SG @ 90-120g per hectare if the pest population above ETL level. and spray Dimethoate 30 E.C. @ 1litre per hectare when the symptoms of yellow mosaic virus appear on the crops.
- In Irrigated North Western Plain Zone, undertake planting new saplings of kinnow in prepared pits of orchards. Purchase kinnow plants from certified nursery & keep kinnow orchard free from weed by weeding time to time.

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