



National Agromet Advisory Service Bulletin

Friday 25th September 2020

(For the period 25th September to 29th September 2020)



Issued by

India Meteorological Department

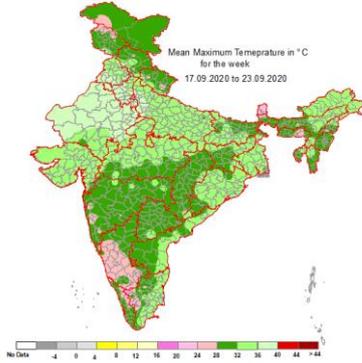
Weblink For

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

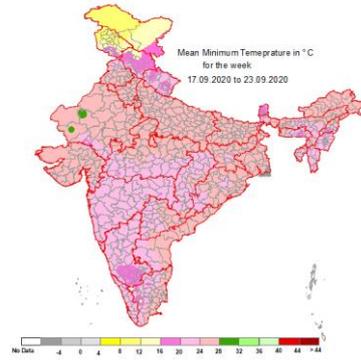
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

spatial distribution of weather parameters for the week 17.09.2020 to 23.09.2020

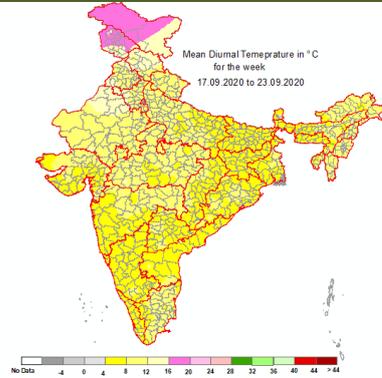
Mean Maximum Temperature (oC) for the week 17.09.2020 to 23.09.2020



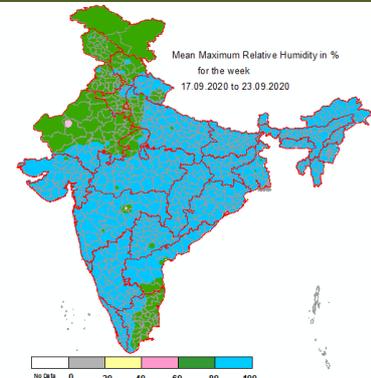
Mean Minimum Temperature (°C) for the week 17.09.2020 to 23.09.2020



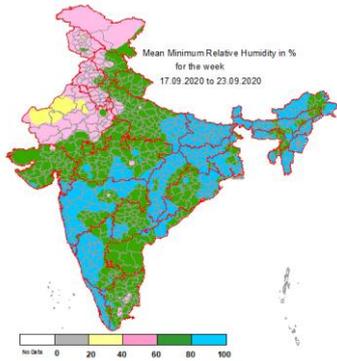
Mean Diurnal Temperature Variation (°C) for the week 17.09.2020 to 23.09.2020



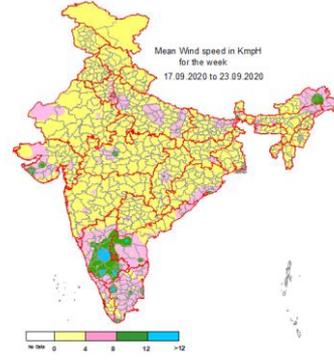
Mean Maximum Relative Humidity (%) for the week 17.09.2020 to 23.09.2020



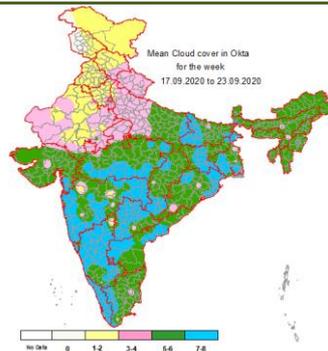
Mean Minimum Relative Humidity (%) for the week 17.09.2020 to 23.09.2020



Mean Wind Speed (km/hr) for the week 17.09.2020 to 23.09.2020

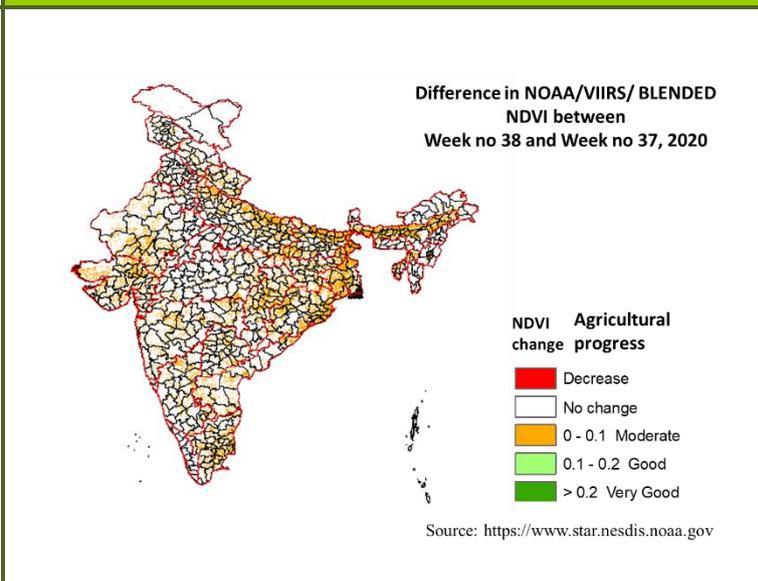
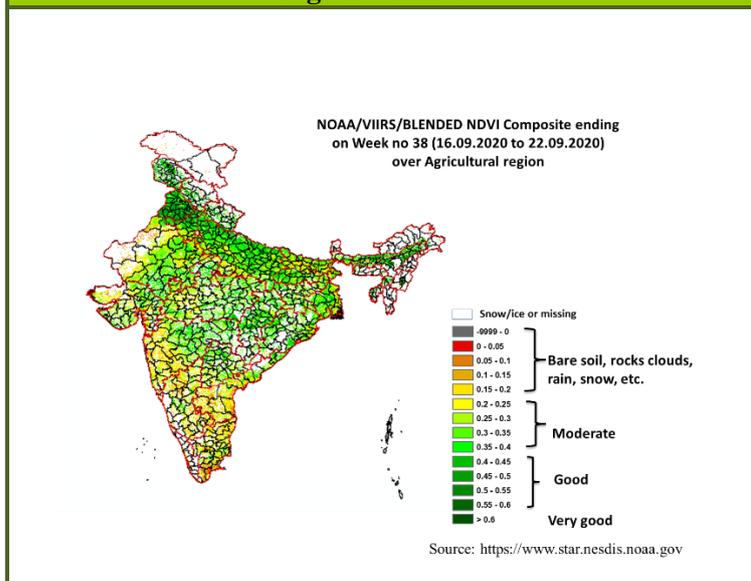


Mean Cloud Cover (okta) for the week 17.09.2020 to 23.09.2020



NOAA/VIIRS/BLENDED NDVI composite for the week number 38 (16.09.2020 to 22.09.2020) over Agricultural regions of India

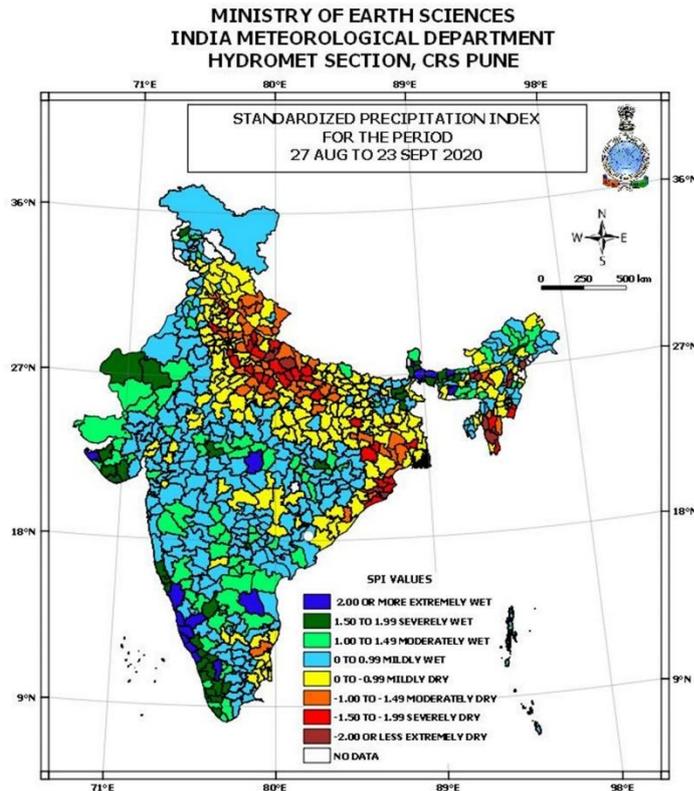
Difference in NOAA/VIIRS/BLENDED NDVI between week number 38 and week number 37, 2020



Agricultural vigour was good in most parts of Punjab, Northern Part of Haryana, at many places of Jamm & Kashmir, Himachal Pradesh, Uttarakhand, North Eastern states; at a few places of Uttar Pradesh, Bihar, Odisha, Chhattisgarh, East Madhya Pradesh, Vidarbha & North Coastal Andhra Pradesh and at isolated places of West Madhya Pradesh, East Rajasthan, Gujarat, Marathwada, Telangana, Jharkhand, Karnatka, Tamilnadu and West Bengal & Sikkim

Difference in Agricultural vigour was good at a few places in Uttarakhand, Sub Himalayan West Bengal, Sikkim & North Eastern states and isolated at Himachal Pradesh, Uttar Pradesh, Bihar, Gangetic West Bengal, Chhattisgarh, Odisha, East Madhya Pradesh, Coastal Andhra Pradesh, Tamilnadu and Jammu & Kashmir.

Standardised Precipitation Index for the period 27th August to 23rd September 2020



- Extremely/ Severely wet conditions exist in Cuddapah district of Andhra Pradesh; Barpeta, Kokrajhar, Bongaigaon, Dhemaji, Chirang districts of Assam; Katihar, Purnea districts of Bihar; Amreli, Jamnagar, Junagarh, Devbhumi Dwarka, Gir Somnath districts of Gujarat; Kupwara, Srinagar districts of Jammu; Uttar Kannada, Dakshin Kannada, Udupi, Chikmagalur, Chitradurga, Kodagu districts of Karnataka; Alapuzha, Cannur, Kottayam, Kozhikode, Malappuram, Palakkad, Thrissur, Trivandrum, Idukki, Kasargod, Pathanamthitta, Wynad districts of Kerala; Dewas, Chindwara districts of West Madhya Pradesh; Sindhudurg district of Maharashtra; East Garo Hills district of Meghalaya; Jaisalmer, Jodhpur districts of Rajasthan; Coimbatore, Nilgiri, Thenidistricts of Tamilnadu; Diu district of Union Territory; Cooch Behar, Darjeeling, Jalpaiguri districts of West Bengal; Lakshadweep district of Andaman & Nicobar Islands; East Sikkim, South Sikkim districts of Sikkim; Sahibganj district of Jharkhand; Janjgir district of Chhatisgarh; North Goa, South Goa districts of Goa; M. Malkajgiri district of Telangana.
- Extremely/Severely dry conditions exist in Darrang, Morigaon districts of Assam; Jind, Yamuna Nagar, Palwal districts of Haryana; Chandel district of Manipur; Aizwal, Lunglei, Mamit, Saiha, Serchhip districts of Mizoram; Kohima, Mon, Wokhadistricts of Nagaland; Bhadrak, Cuttack, Jagatsinghpur, Jajpur, Kendrapara, Puri districts of Odisha; Barabanki, Faizabad, Gonda, Hardoi, Jaunpur, Kanpur Dehat, Lucknow, Sitapur, Unnao, Auraiya, Badaun, Etawah, Firozabad, Mathura, Moradabad, Pilibhit, Shahjahanpur, Sambhal districts of Uttar Pradesh; Hooghly district of West Bengal; Chatra, West Singbhum, Jamtara, Seraikela-Khar districts of Jharkhand.
- Moderately wet to moderately dry conditions were experienced in remaining districts of the country.

Weather Forecast for next 5 days upto 0830 hours IST of 30th September 2020

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

5 Day Rainfall Forecast (MID-DAY)

25-September-2020

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

% Station Reporting Rainfall

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

Weather Warning during next 5 days

25 September (Day 1):

- ♦ **Heavy to very heavy rainfall** at isolated places **with extremely heavy falls** at isolated places very likely East Bihar, Sub-Himalayan West Bengal & Sikkim, west Assam & Meghalaya and Arunachal Pradesh and **heavy rainfall** at isolated places over Gangetic West Bengal, Odisha, Nagaland, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal & North Interior Karnataka and Tamilnadu, Puducherry & Karaikal.
- ♦ **Thunderstorm with Hail/lightning** at isolated places very likely over Uttarakhand and **with lightning** at isolated places over Vidarbha, Chhattisgarh, Bihar, Jharkhand, West Bengal & Sikkim, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka and Tamilnadu, Puducherry & Karaikal.
- ♦ **Strong wind speed** (45-55 kmph) over Southwest Arabian sea; **Squally weather** with wind speed (40-50 kmph) over Southwest Bay of Bengal. Fisherman are advised not to venture into these areas.

26 September (Day 2):

- ♦ **Heavy to very heavy rainfall** at isolated places over likely Arunachal Pradesh and Assam & Meghalaya and **heavy rainfall** at isolated places over Bihar, Sub-Himalayan West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana and Coastal Karnataka.
- ♦ **Thunderstorm with lightning** at isolated places very likely over Vidarbha, Chhattisgarh, Jharkhand, Gangetic West Bengal, Arunachal Pradesh, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka and Tamilnadu, Puducherry & Karaikal.
- ♦ **Strong wind speed** (45-55 kmph) over Southwest Arabian sea. Fisherman are advised not to venture into these areas.

27 September (Day 3):

- ♦ **Heavy rainfall** at isolated places over Assam & Meghalaya and Coastal Andhra Pradesh & Yanam.
- ♦ **Thunderstorm with lightning** at isolated places likely over Vidarbha, Chhattisgarh, Gangetic West Bengal, Coastal Andhra Pradesh & Yanam and Tamilnadu, Puducherry & Karaikal.

28 September (Day 4):

- ♦ **Heavy rainfall** at isolated places over Andaman & Nicobar Islands and Coastal Andhra Pradesh & Yanam.
- ♦ **Thunderstorm with lightning** at isolated places likely over Coastal Andhra Pradesh & Yanam and Tamilnadu, Puducherry & Karaikal.

29 September (Day 5):

- ♦ **Heavy rainfall** at isolated places over Andaman & Nicobar Islands and Coastal Andhra Pradesh & Yanam.
- ♦ **Thunderstorm with lightning** at isolated places likely over Odisha, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema and Tamilnadu, Puducherry & Karaikal.

Weather Outlook for subsequent 2 days from 30th September to 2nd October, 2020

- Scattered rainfall activity over northeast India, peninsular India and adjoining central India, along the west coast and over Islands, Isolated to scattered rainfall activity over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad and some parts of east India. Dry weather likely over rest parts of the country.

Advisory for Fishermen

- **Strong wind speed (45-55 kmph)** over Southwest Arabian sea; Squally weather with wind speed (40-50 kmph) over Southwest Bay of Bengal on 25th, **Strong wind speed (45-55 kmph)** over Southwest Arabian sea on 26th September, Fisherman are advised not to venture into these areas.

Salient advisories

- **Thunderstorm with lightning** at isolated places very likely over Vidarbha, Chhattisgarh, Jharkhand, Gangetic West Bengal, Arunachal Pradesh, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka and Tamilnadu, Puducherry & Karaikal on 26th, **Thunderstorm with lightning** at isolated places likely over Vidarbha, Chhattisgarh, Gangetic West Bengal, Coastal Andhra Pradesh & Yanam and Tamilnadu, Puducherry & Karaikal on 27th, **Thunderstorm with lightning** at isolated places likely over Coastal Andhra Pradesh & Yanam and Tamilnadu, Puducherry & Karaikal on 28th, **Thunderstorm with lightning** at isolated places likely over Odisha, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema and Tamilnadu, Puducherry & Karaikal on 29th September,
 - Provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds.
 - Keep harvested produce at safer places.
 - Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers likely at most/ many places** over Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam and Coastal Karnataka during the period, over Arunachal Pradesh from 25th to 27th, over Assam & Meghalaya from 25th to 28th, over Gangetic West Bengal on 25th & 26th, over Marathwada and Telangana on 25th, 26th & 29th and over North Interior Karnataka from 25th to 27th & 29th along with **Heavy to very heavy rainfall** likely at isolated places over Arunachal Pradesh and Assam & Meghalaya and **heavy rainfall** at isolated places over Bihar, Sub-Himalayan West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana and Coastal Karnataka on 26th, **Heavy rainfall** at isolated places over Assam & Meghalaya and Coastal Andhra Pradesh & Yanam on 27th, **Heavy rainfall** at isolated places over Andaman & Nicobar Islands and Coastal Andhra Pradesh & Yanam on 28th & 29th September,
 - Avoid irrigation, intercultural operation and application of plant protection chemicals and fertilizers to the standing crops.
 - Arrange for adequate drainage to avoid water stagnation in standing crop fields.
 - Drain out excess water from the fields of pulses, maize and vegetables.
 - Keep the cattle under shed during heavy rainfall.

➤ **Undertake the following :**

- continue nursery sowing of *Mundakan* rice in Kerala.
- continue nursery sowing/sowing of *Samba* rice in Tamil Nadu.
- In Arunachal Pradesh, continue sowing of mustard after current spells of heavy rain.
- land preparation and sowing of rabi maize in Hill Zone of Assam.
- land preparation for sowing of improved varieties of toria, rye and yellow mustard in Jharkhand.
- continue sowing of toria crop in Jammu & Kashmir.
- In Punjab, undertake planting of early varieties of potato.
- sowing of early mustard in Haryana.
- transplanting of cabbage and cauliflower and land preparation for planting of sugarcane in Uttarakhand.
- In West Uttar Pradesh, undertake sowing of toria, mustard and vegetable pea.

Detailed Agromet Advisories

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

Realised Rainfall: Significant rainfall occurred in all districts of Kerala; all the districts except Nellore in Coastal Andhra Pradesh, Suryapet district in Telaganana and Yanam; all the districts of Coastal Karnataka, in all districts of North Interior Karnataka except Haveri district; in Chikkamagaluru, Hassan, Kodagu, Shivamogga and Tumakuru districts of South Interior Karnataka; in Chennai, Coimbatore, Kanyakumari, Nilgiris, Theni and Tiruvallur districts of Tamil Nadu during the week.

Advisories:

- **Thunderstorm with lightning** at isolated places very likely over Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka and Tamilnadu, Puducherry & Karaikal on 26th, over Coastal Andhra Pradesh & Yanam and Tamilnadu, Puducherry & Karaikal on 27th & 28th, over Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema and Tamilnadu, Puducherry & Karaikal on 29th September, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely **at most/ many places** over Coastal Andhra Pradesh & Yanam and Coastal Karnataka during the period, over Telangana on 25th, 26th & 29th and over North Interior Karnataka from 25th to 27th & 29th along with **heavy rainfall** at isolated places over Coastal Andhra Pradesh & Yanam, Telangana and Coastal Karnataka on 26th, **Heavy rainfall** at isolated places over Coastal Andhra Pradesh & Yanam on 27th, 28th and 29th September, arrange for adequate drainage to avoid water stagnation in the crop fields. Postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.

Karnataka

- In Coastal Karnataka, drain out excess water from standing crop fields. To reduce the square/flower bud/flower drop in cotton crop, spray Planofix @ 0.25 ml/litre of water.
- In South Interior Karnataka, open drainage channels to facilitate rapid drainage of excess water in in

Chikkamagaluru, Kodagu and Shivamogga districts. To trigger the root activity in coffee plantation, apply 1 bag Urea / acre at sufficient soil moisture level. Undertake planting of 11-12 month old, 5-6 leaves seedlings of coconut. Avoid growing tomato, tobacco near papaya orchards. If both thrips & mites infestation are seen together in chili, spray Difenthiuron or Fenpropathrin 30 EC @ 0.5 ml/litre of water in clear weather.

- In North Interior Karnataka, undertake harvesting of sunflower crop in clear weather. Spray 1% Potash in groundnut crop to manage reddening of leaves at the time of flowering. Onion twister disease is observed in most of the area in Dharwad district; for control, spray Hexaconazole/ Proficonazole @1.0 ml or Imidachlopid @ 0.3 ml / litre of water after current spells of rain.

Kerala

- In Central Zone, continue nursery sowing for second paddy (mundakan) crop. There is chance of Pythium soft rot in ginger, dig out the affected plants and drench the soil with copper oxychloride 2g per litre of water. While applying second dose of fertilizers to coconut palms, apply 550 gram urea, 700 gram Rajphos and 800 gram potash under irrigated conditions and apply 500 gram urea, 800 gram Rajphos and one kg potash under rainfed conditions.
- In High Altitude Zone, provide propping to standing banana crop. Take necessary phyto-sanitary measures to manage capsule rot (Azhukal disease) in cardamom and spray 1% Bordeaux mixture (500-1000 ml/plant). Keep vigilance against Red palm weevil, rhinoceros beetle in coconut and areca nut. Sigatoka leaf spot disease may become severe in banana due to increase in relative humidity; if found to be severe, spray 1% Bordeaux mixture or Bavistin (1g/litre of water) after cutting the severely affected leaves and burning them. In Pepper, drench the soil and with 0.2 % Copper oxy chloride and spray the aerial part with 1% Bordeaux mixture as a prophylactic measure to control Quick wilt and pollu disease. Application of Trichiderma/Pseudomonas culture can manage quick wilt.
- In Southern Zone, there is a chance of Anthracnose disease in Cowpea. As a prophylactic measure, apply 1% Bordeaux mixture or spray copper oxychloride 3 gram per one litre of water.

Andhra Pradesh

- In Srikakulam, Vizianagaram and Visakhapatnam district, prevailing weather is favourable for incidence of sucking pest in Cotton (Flowering Stage), vegetable nurseries and papaya. Spray Imidaclopid 0.3 ml/lit or neem oil 0.5 ml/lit./ lit of water after current spells of rain.
- In Ananthpur district, drain out excess water from Red gram. Sterility mosaic disease was noticed in some areas in Red gram, uproot the SMD affected plants and simultaneously spray the crop with Kerathane @ 2.5 ml/litre of water.
- In Kurnool district, drain out excess water from cotton, Red gram, Groundnut, for better establishment of crops. After draining out the water from the field, spray 2 % potassium nitrate (KNO₃) and urea solution @ 2 % under sunny weather conditions. Go for weed control immediately after drying of the field.
- In East Godavari district, undertake sowing of cow pea. Seed rate is 0.8 kg to 1.2 kg and for bush type varieties 12-16 kg/acre. Before sowing farmers need to treat the seed with Trichoderma @ 8g or Captan Or Thiram @ 3g per liter of water.
- In Guntur district drain out the excess water from the cotton. Due to excess moisture in the cropped field plants may fail to absorb the soil nutrients, that lead to square and boll dropping, to recover the crops from the excess moisture stress spray 2% urea or 1% KNO₃ solution 2-3 times at 4 or 5 days interval.
- In Prakasam district, Heavy rains and water logging conditions are are favourable for Phytophthora blight in Redgram. To control spray Mancozeb 3 gr. or Metalaxyl 2 gr. /litre of water.
- In West Godavari district, humid and drizzling favours the blast disease. To control blast spray

Tricyclozole @ 0.6 g/lit. In tillering stage. Leaf folder causes damage in rice crop during vegetative stage. To control leaf folder damage release *Trichogramma chilonis* @5 cc (1,00,000/ha) thrice at 37, 44 and 51 days. Avoid excessive nitrogenous fertilizers.

- In Chittoor, In view of the rains received during last week, in rice crop where lodging is noticed spray 5% salt solution to prevent germination of grains. • If the excess water is present in paddy fields, drain out the water immediately and if the crop is at booting stage apply 25kg urea and 15 kg MOP.
- In Nellore district drain out excess water from Red gram which is at vegetative stage. To control wilt in Red gram due to excess moisture, drench the plants with Copper oxy chloride @ 3 gm per liter of the water. After draining out the water from the field, spray 2 % potassium nitrate (KNO₃) and urea solution @ 2 % on a non rainy day.

Telangana

- Drain out excess water from the fields of rainfed crops like cotton, maize, redgram, soyabean and vegetables wherever heavy rainfall received.
- Incidence of Pink Boll Worm is noticed in Cotton. To monitor install 4 Pheromone traps per acre and control measures may be taken up after observing 7-8 adults insects for consecutive three days. To control, spray Thiodicarb @ 1.5 g or Chlorpyrifos @ 2 ml per liter of water.
- Prevailing weather conditions are congenial for the incidence of Hispa and Stem borer in rice. If incidence is noticed, to control Hispa ▪ Spray Profenophos @ 2ml or Chlorpyrifos @ 2.5 ml per liter of water. Stem Borer ▪ Apply Carbofuran 3G @ 10kg or Phorate @ 4 kg per acre at 15-20 days after transplanting.

Tamil Nadu

- In Cauvery Delta Zone, to control the stem borer incidence in rice, seedling treatment can be done with Chlorpyrifos 20 EC @ 2.5 ml/ Litre for 20 minutes or transplanting the seedling after cutting the tip of the leaf. In the main field, for 1 acre Samba crop, apply 200 kg of gypsum, 10 kg zinc sulphate, 15 kg of urea, 40 kg DAP and 10 kg potash as basal fertilizers. Apply 100 kg of neem cake before transplanting to avoid insect and nematode attack and nutrient loss due to rain.
- In Southern Zone, continue sowing of drought tolerant rice varieties like Anna 4, Co 53, and ADT 45.
- In Western Zone, continue nursery sowing of Samba rice. Prevailing weather is conducive for leaf blight in maize. Spray Mancozeb @ 2gm or Kresoxim methyl @ 1ml/litre of water. In young maize plants, if Fall Army Worm is observed, spray Emamectin benzoate @ 0.4g/litre of water. Due to continuous rain in some areas, damping off disease is observed in young tomato plants; to control, drenching with Copper oxy chloride @ 2.5 g/litre is recommended. Weather is conducive for bacterial leaf spot disease in rice; spray Copper Hydroxide @ 3g/litre of water. Due to present weather, thrips attack is observed in *Samba* paddy nursery; spray Imidachlorprid @ 0.4 ml or Thiomethaxem @ 0.5 g / litre of water. Prevailing weather is conducive for leaf blight in maize; spray Mancozeb @ 2g or Kresoxim methyl @ 1ml/litre of water.

Animal Husbandry:

- In Karnataka, for milch animals regularly follow schedule of 1 kg feed + 50 g mineral mixture per 2 litres of milk yield. Feed animals with a mixture of green grass + hay + minerals + dry feed like a khichri. Vaccinate (ET vaccine) sheep and goats against Enterotoxemia. Maintain optimum room temperature in silkworm and poultry rearing house.
- In Tamil Nadu, Prevailing weather condition is favourable for ranikhet disease in poultry. The main symptoms are twisting of neck and paralysis of wings and legs, Diarrhoea. Drop in egg production and sudden death. To prevent ranikhet diseases in poultry contact the local veterinarian for vaccination.

Fishery

- In Southern Dry Zone, as there is sufficient water in the farm pond, leave fingerlings of Raho, Catla,

Grasscarp at 1:1:1 ratio (4000 fingerlings/acre) into farm pond.

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

Realised Rainfall : Rainfall occurred in all districts of Meghalaya and Tripura; all the districts except Changlang district of Arunachal Pradesh; all the districts except N. C. Hills district of Assam; all districts except Chhimituipu and Lunglei districts of Mizoram; all the districts except Chandel and Imphal West districts of Manipur; Kohima, Longleng, Mokokchung, Paren, Phek, Wokha and Zunheboto districts of Nagaland.

Advisories:

- **Thunderstorm with lightning** at isolated places very likely over Arunachal Pradesh on 26th September, provide mechanical support to banana, young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at most/ many places over Nagaland, Manipur, Mizoram & Tripura, during the period, over Arunachal Pradesh from 25th to 27th, over Assam & Meghalaya from 25th to 28th, along with **Heavy to very heavy rainfall** at isolated places over likely Arunachal Pradesh and Assam & Meghalaya and **heavy rainfall** at isolated places over Nagaland, Manipur, Mizoram & Tripura on 26th, **Heavy rainfall** at isolated places over Assam & Meghalaya on 27th September, arrange for adequate drainage to avoid water stagnation in the crop fields. Postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Store the harvested products at safe places. Keep the cattle under shed during heavy rainfall.

Arunachal Pradesh

- In Arunachal Pradesh, continue sowing of mustard after current spells of heavy rain. In already sown mustard fields, arrange for proper drainage in the field to avoid water stagnation and do re-sowing in areas where crop is damaged by rain. Planting of potato is not advised as the soil is very muddy due to continuous rain in the previous week. Due to continuous rain, there is report of submergence of WRC rice in some area. If the submergence of paddy under flood water is less than 3 days, then it normally recovers. During clear/dry days, top dressing of urea 10-15 kg/ha and MOP-20 kg/ha is advised. If totally damaged, prepare the field for sowing of early Rabi vegetables and crops.

Assam & Meghalaya

- In Hill Zone of Assam, continue nursery sowing/ transplanting of cauliflower and sowing of Rabi maize. Make provision of mechanical support to the canes of sugarcane, by tying 3 to 4 canes together by their leaves to prevent lodging. Drainage system should be improved to prevent rhizome rot in ginger and turmeric. The affected areas may be drenched with 0.3% Mencozeb 75 WP @ 2g/litre of water. Due to congenial weather condition, there is chance of infestation of fruit sucking moth in citrus orchards. Prepare the poison baiting with 0.1% Malathion 50 EC @ 1 ml/litre of water, molasses (1%) and fruit juice helps in effective management of this pest. Moreover, farmers are advised to destruction and disposal of fallen fruits from the orchards.
- In Lower Brahmaputra Valley Zone, spray Fipronil 5 SC @ 50 ml per bigha of land or Thiamethoxam 25 WG @ 13 gm per bigha of land against stem borer and case worm attack in Sali rice at the time of active tillering stage during the rain free weather. Continue nursery sowing of early cauliflower and sowing of maize. Farmers are advised to repair the bunds in *Sali* paddy fields, so as to conserve rain water. Standing water of 5±2 cm depth should be maintained in the fields. Due to frequent rainfall coupled with

temperature of 25-30°C and application of excessive Nitrogen, there is chance of blight disease in *Sali* paddy. On occurrence of symptoms, top dress with MOP @ 2 kg/bigha, instead of Nitrogen. Present weather condition is conducive for pod borer and aphid infestation in pigeon pea. Spray Fenitrothion @ 130-200 ml in 65-95 litre of water per bigha, 3 times post flower initiation, at 15 days interval.

- In Upper Brahmaputra Valley Zone, maintain a depth of 5±2 cm standing water in the fields of rice. Continue sowing of green gram, radish and early cauliflower. Cloudy weather and rainfall coupled with high humidity and daytime temperature may trigger the occurrence of blast and brown spot disease in *Sali* rice crop. Spray fungicides like Glyodin or Azoxystrobin or Trifloxystrobin at an interval of 15 days under fair weather condition.
- In Barak Valley Zone, maintain 5 cm of the water level and also suggested to prepare the bunds of the surrounding rice field. Prevailing weather situation may favour for the stem borer and leaf folder infestation at the tillering stage in rice, farmers are advised to monitor the field against these insects and also suggested to spray Thiamethoxam @ 0.3 g/litre or Chlorantraniliprole @ 0.4 ml/litre of water during fair weather. Also spray Imidachloprid 17.8% SL @ 1.0 ml/litre of water against Brown Plant Hopper infestation in rice. Undertake nursery preparation for sowing of winter vegetables and land preparation for rabi pulses like rajma, garden pea.
- In Central Brahmaputra Valley Zone, continue sowing of *kharif* pulses (green gram & black gram) and cole crops. Undertake sowing of *Rabi* maize. In *Sali* rice at tillering stage, there is chance of stem borer and caseworm infestation which may be controlled by draining out of excess water or spraying Chloropyrifos (20%) @ 2ml/litre to control the attack.
- In North Bank Plain Zone, continue sowing brinjal and cole crops. Present Weather condition is favourable for heavy infestation of rice hispa, leaf folder, army worm case worm etc. in *Sali* rice field at tillering stage. Spray Chloropyrifos 20EC or Monocrotophos 40EC @ 1.5ml per litre of water. Since there is possibility of getting rainfall during next 5 days, farmers are advised to repair the bunds in paddy field to conserve rain water. Maintain 5+2 cm depth of standing water in the field.
- In Meghalaya, ensure proper drainage system in the ginger/turmeric and vegetable crop field. Continue nursery sowing/ transplanting of cole crops. Drain out the field for some time (2-3 days) to facilitate the tillering in *Sali* rice. Spray Azadirachtin 0.15% EC @ 3ml/litre or other neem formulation against Hopper, Stem Borer, Leaf Fodder in *Sali/Kharif* Rice (Lowland) when weather is clear.

Manipur, Mizoram, Tripura and Nagaland

- In Manipur, spray Dithane M-45 @ 2ml/ litre water to control Tikka disease in groundnut. Spray Hexaconazole 5% EC @2ml/ litre of water against rust in soybean. In rice, during panicle initiation to flowering stage, maintain optimum water level in the *Kharif* rice fields. Spray Hexaconazole @2ml/ litre of water against sheath blight or sheath rot disease in rice and spray Copper Hydroxide 53.8% DF @ 3g/ litre water during flowering stage or Tricyclazole 18.0%w/w + Tebuconazole 14.4 % w/w SC @2ml/litre water against Smut disease. Spray Acephate 95%SC @1ml/litre of water 2 times at 7 days interval or Buprofezin 15% + Acephate35% WP @ 2.5g/ litre water twice with 15days interval against White back plant hopper/ aphid in rice. Spray Streptocycline @ 2g/15 litre of water (at least three pumps per sangam) or Copper Hydroxide 53.8 % DF @ 3g/ litre of water against Bacterial Leaf Blight in rice. Spray Redomil MZ 72 WP @ 2g/litre water alternately with Carbendazim @ 2g/lit water at 14 days interval against Soft rot in ginger and Rhizome rot in turmeric. Continue nursery raising of cole crops (cauliflower/ cabbage/ broccoli).
- In Mizoram, continue harvesting of *Jhum* rice on sunny days. Due to high humidity (90-95%) and moderate rainfall, possibility of rust disease on soybean is higher. So farmers are advised to spray

Hexaconazole 5% @ 2.0 ml/litre of water to control the disease. Apply Cypermethrin 2.0 ml/litre of water against gundhi bugs infestation in normal rice at Panicle emergence stage if attack is above ETL. Spray Copper Oxy Chloride (COC) or Ridomil Gold @ 2 g/litre of water during sunny days to reduce shoot rot disease in vegetative stage of ginger plant.

- In Tripura, complete sowing of black & green gram at the earliest. Avoid stagnant water in the field. Maintain good drainage in the field. Undertake harvesting of groundnut. Prevailing cloudy and humid weather is conducive for the attack of Blast in Aman rice during tillering stage. The attack may be managed with continuous flooding. For chemical control of the disease apply Tricyclazole 75 WP @ 0.6 gm/litre of water or Carbendazim 50 WP (Bavistin) @ 1 gm per litre of water.
- In Nagaland, spray Neem Seed Kernel Extract 5 % against leaf folder disease in rice. Keep the bunds clean. Undertake harvesting of groundnut and transplanting of onion and cole crops. Carry out weeding and earthing up in ginger, turmeric, Naga king chilly and large cardamom. Organic mulching may be done in these crops in order to retain moisture for the upcoming days. Undertake nursery sowing of tomato.

Animal Husbandry

- In Northeastern states, carry out immunizations against BQ, HS, Foot and mouth disease as well as anthrax diseases in livestock like cows, buffaloes, goats and pigs. Also carry out vaccination (RDF1) against Ranikhet disease in one week old chicks and against Gamboro disease in two weeks old chicks. During the monsoon season, animals should not be fed with water submerged rotten grasses.
- In some parts of Assam, infection of Lumpy skin disease in livestock has been observed. The disease is characterized by mild fever for two-three days, followed by development of stiff, round nodules on the skin all over the body. If such symptoms are observed, consult local veterinarian at the earliest for proper diagnosis and immediate treatment.

Fishery

- In Lower Brahmaputra Valley Zone of Assam, due to continuous rainfall, water level of the fish ponds may increase, causing overflow and destruction of embankment, further causing escape of fish from pond. It is therefore advised to raise nylon net around the ponds to prevent escaping of fish. Bamboo piling may be used to protect these earthen dykes from erosion.
- In North Bank Plain Zone of Assam, 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: Significant rainfall occurred in all districts of Andaman & Nicobar Islands, in all districts of Bihar except Bhabua and Buxar; in all districts of Jharkhand except Chatra, Jamtara, Lohardaga and West Singhbhum; in all districts of Odisha and in all districts of West Bengal & Sikkim. Weather remained dry/mostly dry over the rest of the region.

Advisories: **Thunderstorm with lightning** at isolated places very likely over Jharkhand on 26th, over Gangetic West Bengal on 26th & 27th, over Odisha on 29th September, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm.

- As **rain/thundershowers** likely **at most/ many places** over Gangetic West Bengal on 25th & 26th, **heavy rainfall** at isolated places over Bihar, Sub-Himalayan West Bengal & Sikkim on 26th, over

Andaman & Nicobar Islands on 28th and 29th September, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and store the harvested products at safe places.

Odisha

- In West Central Table Land Zone, in paddy crop, to control stem borer infestation apply Rynaxypyr 20 SC @ 0.3ml or Cartap hydrochloride 50 SP @ 1.25g or Acephate 75 SP @ 1.5g/litre of water; to control if leaf folder pest is found, apply Cartap hydrochloride 50 SP @ 1.25g or Acephate 75 SP @ 1.5g/litre of water; for gall midge infestation, so apply Carbofuran 3G @ 12kg/acre on a non rainy day.
- In North Eastern Plateau Zone, after ascertaining the residual soil moisture, undertake sowing of toria varieties @ 2-3 kg/acre by the end of this month; treat seeds with Carbendazim @ 1.5 g per kg of seeds 7 days prior to sowing and treat with 200 g PSB per kg seeds just before sowing. Carry out intercultural operations in pulses and ragi. Harvest groundnut when inner side of the pod becomes black in colour.
- In Mid Central Table Land Zone, due to recent rainfall, paddy fields adjacent to rivers, rivulets, drainage lines and canals may get affected by swarming caterpillar infestation; to control, apply Chloropyriphos + Cypermethrin @ 400 ml/acre in paddy fields and on bunds during evening hours.

Bihar

- In North East Alluvial Zone, undertake transplanting of cabbage, cauliflower and brinjal seedlings after current spells of heavy rain.
- In North West Alluvial Zone, undertake nursery sowing of late cauliflower and transplanting of mid-duration cauliflower. Monitor paddy crop for Brown Plant Hopper (BPH); if damage is more, spray Imidacloprid 17.8 % SC @ 1.0 ml / 3 litres of water. Gundhi bug may appear in early sown rice field; it causes appreciable losses to crop during milky stage; to control, apply Folidol dust @ 10-15 kg per hectare at early morning or late evening on clear days. Monitor green gram and black gram for yellow vein mosaic virus (YMV) disease caused by white fly; if infestation is found, spray Imidacloprid @ 0.3ml/litre of water or Trizofos 40 EC @ 1 ml/litre of water; uproot and destroy affected plants before spray. Undertake plant protection methods after current spells of rain.

Jharkhand

- In South Eastern Plateau Zone, start land preparation for cultivation of short duration early potato. Undertake nursery sowing of mid-duration and late variety cauliflower. Pigeon pea crop is at active vegetative stage; in areas facing deficient rain during the last week, crop is prone to various leaf eating and sucking pests; to control, spray Monochrotophos @ 1 ml per liter of water by mixing Teepol @ 0.5 ml per liter of water during day time.
- In Central & North Eastern Plateau Zone, prepare land for sowing of improved varieties of toria, rye and yellow mustard. Continue cultivation of horse gram (kulthi) and toria. Continue sowing of short duration early potato. Continue sowing of tomato, cabbage and cauliflower inside net shed with raised seed bed; treat seeds with Carbendazim @ 2g or Trichoderma @ 5g per kg of seeds before sowing. Harvest maize crop when the husk turn yellow and grains are hard enough having less than 30% moisture; store @ 8-10 % moisture.

West Bengal

Sub-Himalayan West Bengal:

- In Terai Zone, to control sheath blight in Aman paddy, drain out excess water from infected field; reduce the dose of Nitrogen fertilizer; apply bio fungicides like Trichoderma, Pseudomonas Fluorescens; spray Propiconazol+ Difenconazole 1ml or Carbendazim + Flusilazole 1.5 ml or Carbendazim (Bavistin) 1 g per liter of water. To control downy mildew in cabbage and cauliflower, spray 2.5 g Metalaxyl +

Mancozeb/litre of water on a non rainy day.

Gangetic West Bengal:

- In the Coastal Saline Zone, to control sheath blight and rot diseases in wet seeded Aman paddy, spray Validimethrin@1ml or Carbendazin @ 2g/litre of water. Spray Streptocycline @ 0.2g/liter of water + Planktomycin @ 1-2g/liter of water + Copper fungicide or blue copper @ 2g/liter of water to control BLB disease in wet Aman paddy. To control bacterial wilt in brinjal crop at fruit bearing stage, drain out excess water and drench the soil around the plant base with Diethane M-45@2.5g/litre of water on a non rainy day.
- In Laterite & Red Soil Zone, in transplanted paddy, apply 18 kg Urea/bigha at around 20-25 days after sowing of cucumber; if irregular brown spots are noticed on the leaves, sometimes with yellow edges, it maybe Alternaria Leaf Blight; spray Tricyclazole 75WP @ 0.6 ml per liter of water on a non rainy day.

Andaman & Nicobar Islands

- In Andaman Islands, maintain thin film of water at 3 to 5cm in rice main field. Prepare the upland area and make bed of 3 x 1m with drainage facility for sowing of marsa bhaji. Raise nursery of chilli for transplanting in upland area; use seed @ 500 to 800 g/ha.
- In Nicobar Islands, prepare the upland area and make bed of 3 x 1m with drainage facility for sowing of marsa bhaji. Raise nursery of chilli for transplanting in upland area; use seed @ 500 to 800 g/ha.

Animal Husbandry

- Use mosquito repellent in the shed during to control spread of diseases like Blue tongue in sheep and goat; vaccinate them against Anthrax disease. Provide 16 hours of light to the poultry birds during cloudy weather to avoid mortality.

Fishery

- In Odisha, take proper care so that fishes do not escape from the pond; apply mahua oil cake @ 2.5t/ha with 1 m depth of water to kill the predators and weed fishes in perennial ponds.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- Realised Rainfall: Significant rainfall occurred in all districts of Maharashtra; in Bharuch, Chota Udepur, Dadra Nagar Haveli (DNH), Daman, Dangs, Narmada, Navsari, Panchmahal, Surat, Tapi, Vadodara and Valsad districts of Gujarat Region and in all the districts of Saurashtra & Kutch except Botad, Devbhoomi Dwarka, Gir Somnath, Jamnagar, Kutch, Morbi and Surendranagar districts.

Advisories:

- Thunderstorm with lightning at isolated places very likely over Vidarbha on 26th, 27th September, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm.
- As rain/thundershowers likely at most/ many places over Konkan on 25th & 26th, over Marathwada on 25th, 26th & 29th September, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and store the harvested products at safe places.

Maharashtra

- **In Konkan**, in view of rainfall during last few days and expected rainfall during next 2 days, drain out excess water from standing crops, orchards and vegetable fields; also postpone intercultural operations and fertilizer applications in Sindhudurg and Ratnagiri district. Undertake nursery bed preparation for vegetables like brinjal, chilli, tomato in Ratnagiri district. To control anthracnose in new flush of mango,

spray Propineb @ 20 g or Thiophenate methyl @ 10 g or Carbendazim @ 10 g per 10 liter of water during clear weather in Sindhudurg district on a non rainy day.

- **In Madhya Maharashtra**, as heavy rain is expected in Kopargaon, Sangmner, Parner, Shevgaon, Pathardi, Karjat, Jamkhed of Ahmednagar district on 25th & 26th September, arrange adequate drainage facilities in standing crops, orchards and vegetable fields. Keep inputs ready for sowing of rabi Bengal gram. To control powdery mildew in cucurbits, spray Azoxystrobin @ 10 ml or Cymoxanil + Mancozeb @ 25 g per 10 liters of water during clear weather. To control blight in onion, spray Lambda-syhalothrin 5 EC @ 6 ml + Tebuconazole @ 10 ml + Sticker @ 10 ml per 10 liters of water in clear weather condition. Continue harvesting of matured soybean and groundnut during clear weather. Keep the harvested produce in safer places. To control blast in finger millet, spray Dithane M-45 @ 25 g in 10 liters of water during clear weather. Undertake transplanting of 40-45 days old onion, apply Nitrogen @ 40 kg, Phosphorous @ 40 kg and Muriate of Potash @ 60 kg per ha as basal dose at the time of transplanting. Due to humid and cloudy weather condition if incidence of whitefly is observed in cotton fields, spray Triazophos 40 EC @ 1500 ml per ha in 500 liters of water during clear weather.
- **In Marathwada**, in view of excess rain fall received during last few days, drain out excess water from standing crops, orchards and vegetable fields. To control rhizome fly in turmeric, spray Quinalphos 25 % @ 20 ml per 10 liters of water along with sticker during clear weather.
- **In Vidarbha**, continue harvesting of matured soybean during clear weather. Keep the harvested produce in safer place. Undertake sowing of rabi sorghum and safflower. Due to congenial weather wilting/blight symptoms are observed in kharif pigeonpea, for control undertake drenching with Copper Oxy-chloride 50% WP @ 25g or Captan 75% WP @ 20 g in 10 litres of water during clear weather. To control leaf folder in pigeon pea, spray Nimboli Arc of 5 % per 10 liters of water during clear weather.

Gujarat

- In South Gujarat, maintain the 5-7 cm stagnant water in the rice (mid/late variety) field. Drain out water one week before harvesting of rice (early mature variety). Drain out excess water from finger millet, okra, pigeon pea fields. Undertake nursery preparation of tomato, chili and brinjal. Spray Carbendazim 50% WP @ 10 gm in 10 liters of water at the onset of Anthracnose disease in green gram and cowpea crops under clear weather.
- In North Gujarat, undertake harvesting of matured maize crop. Collect matured green gram pods and cover it with plastic as rainfall is expected. Avoid intercultural operation in groundnut (pegging stage) crop. To manage root rot in cotton crop, mix Carbendazim 50 WP @ 10 gm or Copper Oxychloride @ 20 gm in 10 liters of water and apply in the root zone around the wilting plants of cotton.
- In Middle Gujarat, undertake harvesting of ripened ear heads of pearl millet and store in well ventilated godowns. Maintain 4 to 5 cm water level in the rice field. At initial incidence of Pinworm in tomato crop, install 40 yellow sticky trap per hectare; in case of heavy incidence, spray Chlorantraniliprole 18.5 SC @ 3 ml or Flubendiamide 480 SC @ 3 ml in 10 liters of water in clear weather.
- In Saurashtra and Kutch, undertake harvesting of matured bunch groundnut crop to prevent sprouting losses. Under present weather condition infestation of tikka & rust diseases observed in groundnut (semi spreading) crop; spray Propiconazole @ 20 ml or Tebuconazole @ 15 ml /10 litres of water under clear weather. Heavy infestation of semilooper is observed in castor; spray Chlorpyrifos @ 30 ml in 10 litres of water in clear weather.

Animal Husbandry

- In Gujarat, keep the fodder at safe place to avoid spoilage due to rainfall.

CENTRAL INDIA [M.P., CHHATTISGARH]

Realised Rainfall: Rainfall occurred in all districts of Chhattisgarh, in all districts of Madhya Pradesh except in Chhatarpur, Damoh, Katni, Panna, Tikamgarh, Asoknagar, Bhind, Datia, Guna, Gwalior, Mandsaur, Morena, Neemuch, Rajgarh, Sheopur Kalani, Shivpuri and Vidisha districts during the week.

Advisories:

- **Thunderstorm with lightning** at isolated places very likely over Chhattisgarh on 26th & 27th September, provide mechanical support to banana, young fruit plants and vegetables and carry out propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Keep cattle/goats indoor during thunderstorm.

Madhya Pradesh

- In Nimar Valley Zone, for the management of boll rot in cotton, prophylactic spray with Copper Oxychloride 400 gm + Streptocyclin 20 gm in 200 lit. of water/acre may be taken up. Continue harvesting of soybean. If Groundnut crop is infested with Cercospora leaf spot (Tikka) disease, spray the crop with Carbendazim 1 gm or Mancozeb 2 gm/litre of water..
- In Malwa Plateau Zone, in some of the areas, early maturing soybean varieties are ready to harvest; harvest the soybean crop (immediately after change in pod colour) in order to minimize the yield losses due to shattering as well as to prevent quality deterioration due to rains; store harvested crop in safe place covering it with Tarpolin. Carry out transplanting rainy season onion in the prepared fields; ensure proper drainage in the fields. In medium and long duration varieties of soybean, spray pre-mixed formulations like Betacyfluthrin + Imidacloprid (350 ml/ha) or Thiamethoxam + Lambda Cyhalothrin (125 ml/ha) in the initial stage for control of stem fly and girdle beetle and in case of only semilooper infestation, spray the crop with Lambda Cyhalothrin 4.9 SC (300 ml/ha) or Indoxacarb 15.8 EC (333 ml/ha) or Flubendiamide 39.35 SC (150 ml/ha) or Flubendiamide 20 WG (275 ml/ha).
- In Bundelkhand Zone, in view of the attack of white fly in (late mature varieties) soybean crop, hence farmers are advised to regular monitoring the crop; spray profenophos 50 E.C. @ 1.5 ml mixed with 1 litre of water in clear sky condition. Farmers are advised to arrange the seed and fertilizer for sowing of potato and garlic along with the preparation of the fields. Start the sowing to early sown the reddish, fenugreek, spinach, corianders and turnip.

Chhattisgarh

- In Chhattisgarh Plain Zone, maintain 5-7cm water level in the rice fields. If leaf caterpillar and girdle beetles is observed in soybean crop, apply Trizophos 40% EC 1 liter/ ha or Flubendiamide 39.35% SC 150 ml per ha. 500 liter water per ha.
- In Northern Hill Zone, If infestation of Brown Plant Hopper occurs (5-10 hoppers/hill) in rice, it is advised to alter the micro-climate of the rice field by alternate wetting and drying technique (water should not stand in the field for long time). If problem still persists, spray Pymetrozine 50% WG @ 120 g/acre or Dinotefuran 20 % SG @ 80 g/acre or Imidacloprid 17.8% SL @ 50 ml/acre or Acephate 75% SP @ 400 g/acre. Use only pesticides recommended for brown plant hopper at recommended dose only. To control aphid in maize, farmers are advised to spray imidacloprid 200 SL @ 150 ml/ha.
- In Bastar Plateau Zone, spray Pseudomonas @ 10 g /litre of water or Tebuconazole (50%) + Trifloxystrobin 25 WG @ 0.40 g /litre of water to control blast disease in paddy. Apply Rynaxypyr 150 gm/ha to control stem borer in rice. If swarming caterpillar are seen in rice fields, spray Quinalphos 25 EC @ 2 ml / litre of water.

Animal Husbandry

- In Chhattisgarh, Store cattle feeds in dry places. Keep the cattle shed floor dry as far as possible. Cattle sheds should be well protected from flies and mosquitoes to maintain milk production and prevention from disease.

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

Realised Rainfall : Significant rain occurred in Bageshwar, Champawat, Pithoragarh and Udham Singh nagar of Uttarakhand; in **Banswara, Chittogarh, Dungarpur, Pratapgarh, Udaipur districts in Rajasthan**; in Allahabad, Ballia, Chitrakoot, Deoria, Gorakhpur, Kushinagar, Maharajganj, Sant Kabirnagar, Sant Ravidasnagar, Sonbhadra and Sultanpur districts of East Uttar Pradesh. No significant rainfall occurred over rest of the region.

Advisories:

UTs of Jammu & Kashmir and Ladakh

- In Sub Tropical Zone, apply irrigation to rice crop. Undertake harvesting of matured maize cobs. Undertake harvesting of matured green gram pods. Continue sowing of toria crop. Due high humidity coupled with high temperature the incidence of brown spot appears in rice. Spray Mancozeb @ 0.25%. Repeat spray at 15 days interval.
- In Cold Arid Zone, remove grass mulch from the vegetable nursery beds if the seeds have started germinating. Undertake harvesting of potato.
- In Intermediate Zone, continue sowing of toria. If rice crop is affected by Hispa, spray Chlorpyrifos 20EC @ 2 ml/litre of water or Triazophos 40EC @ 2.5 ml/litre of water or Chlorpyrifos + Cypermethrin @ 2 ml/litre of water per hectare. Collect and destroy affected leaves.
- In Valley Temperate Zone, undertake harvesting of matured maize cobs. Continue harvesting of rice. Carry out thinning operation in carrot, beet, turnip and radish.

Himachal Pradesh

- In Sub Montane and Low Hills Sub Tropical Zone, undertake harvesting of maize. Continue field preparation for early sowing of mustard. Continue land preparation for early sowing of wheat. False smut is expected in rice crop. Symptoms include increase in grains size with brown colored fungus inside. Spray Blitox @ 500 g per acre 2-3 times at 10 days interval.
- In Mild Hills Sub Humid Zone, undertake harvesting of maize. Undertake planting of button mushrooms. Monitor the rice crop for false smut disease. False smut causes chalkiness of grains which leads to reduction in grain weight. False smut is visible only after panicle exertion. Rain, high humidity, and soils with high nitrogen content also favours disease development. Collect and burn diseased ears.
- In High Hill Temperate Dry Zone, carry out ploughing operation after harvesting pea, to control the growing weeds. Continue harvesting of matured pods of rajmash and mature barley.
- In Mid Hills Sub Humid Zone, in crops like gourds and tomato, to control the fruit fly attack, spray 10 g jaggery +2ml Melathion per litre of water. Continue sowing of cabbage, cauliflower and other cole crops as well as early varieties of garden pea.

Punjab, Haryana, Delhi

- In Western Zone of Punjab, due to favourable weather for root crops, continue sowing of “desi” varieties of radish (Punjab Safed Mooli2), turnip (L-1) and carrot (Punjab Black Beauty and PC 161). Weather is suitable for planting of evergreen fruit plants like citrus, mango, guava, litchi, loquat, sapota etc. Irrigate the crops as per need. As per prevailing humid weather conditions, regularly monitor cotton crop for infestation of whitefly and jassid. If the damage/population of sucking insect pests reaches economic threshold levels, spray the crop with Ulala 50 WG (flonicamid) @ 80g/acre or Osheen 20 SG (dinotefuran) @ 60g/ acre or

Polo@ 200g/acre for the control of whitefly and jassid. To control fungal foliar leaf spots, cotton crop should be sprayed with Amistar Top or 200 ml/acre in 200 liters of water at 15-20 days interval. In paddy fields if more than 5% dead hearts due to paddy stem borers, spray 20 ml Fame 480 SC or 170g Mortar 75 SG in 100 litres of water/acre during vegetative stage.

- In Western Plain Zone of Punjab, the weather conditions are ideal for sowing early varieties of potato. In basmati, stem borer is a serious problem. When more than 2% dead hearts or white ears appear, spray Fame 480 SC @ 20 ml or Mortar 75 SG @ 170 g or Coragen 20 SC @ 60 ml or Monocil 36 SL @ 560 ml or Coroban/Dursban/ Lethal/Chlorguard/ Durmet /Classic /Force 20 EC one litre or Fipronil 80 % WG @ 15 g in 100 litres of water/acre.
- In Undulating Plain Zone of Punjab, weather is ideal for planting of potato, transplanting of cauliflower, broccoli during the period and continue planting of evergreen fruit trees like mango, litchi, guava, etc. Weather would be congenial for attack of leaf folder and plant hoppers in rice and basmati. Weather would be congenial for development of sheath blight in paddy and basmati. Spray the crop with 80 g Nativo 75 WG (trifloxystrobin+tebuconazole) in 200 litres of water per acre. Give second spray 15 days thereafter. To save crop from Pyrrilla damage, spray sugarcane crop with 600 ml Dursban 20 EC (chlorpyrifos) in 400 litres of water per acre with manually operated sprayer.
- In Central Plain Zone of Punjab, continue transplanting of mid-season cauliflower and also the best time for sowing of carrot, broccoli, Chinese cabbage, spinach. Suitable time for planting of evergreen fruit plants like citrus, mango, guava, litchi, loquat, sapota, etc. Save the rice crop from sheath blight by keeping the bunds of the field clean; if the symptoms are observed, spray Nativo @80 g or Amistar Top/Tilt/Folicur/Pikapika@200ml in 200 litres of water per acre towards the base of crop Monitor the crop regularly for whitefly attack and spray when population reaches 6 adults/leaf in the upper canopy of the plant before 10 AM. Control cotton jassid by spraying 80g Ulala 50WG or Osheen 20 SG or 40ml Confidor 200 SL or Imidacel /Markdor/Isogashi 17.8SL or Confidence 555 or 40 g Actara/Dotara/Thomson/Extra Super 25WG in 100 litres of water per acre.
- In Western Zone of Haryana, withhold temporarily, application of irrigation and chemical spray in existing crops and complete picking in cotton crop. Also suggested to keep harvested bajra crop at safe places and monitor for infestation of insect/pest and diseases in field.
- In Eastern Zone of Haryana, monitor paddy crop regularly for leaf folder or stem borer. Install pest specific pheromone traps@3-4 per acre in the paddy fields for monitoring of stem borer. To save the rice crop from sheath blight, keep the bunds of the field clean by removing grass. In view of variable weather, apply needful irrigation in the cotton crops. Monitor the cotton crop for white fly attack carefully. To prevent the incidence of mealy bug on the crop, remove all the weeds growing around the crop fields.
- In Delhi, undertake sowing of early pea, radish (Pusa Chetki), spinach (Pusa Bharti), amaranths (Pusa lal Chaulai, Pusa Kiran), sweet corn (Madhuri, Vin orange) and baby corn (H.M-4) on ridges. Undertake sowing of early mustard - Pusa Sarson-28, Pusa Tarak etc. Undertake transplanting of brinjal, tomato, chilli and early cauliflower on ridge whose seedlings are ready. Proper drainage should be done in the fields. Under the present weather condition, monitor paddy crop for the infection of bacterial leaf blight. In present weather conditions, false smut may appear in basmati (paddy) crop, spray Blitox 50 @ 500 grams per acre at 10 days' interval (2-3 times). In present weather conditions termites may damage crops and vegetables, spray Chlorpyrifos 20 EC @ 4 ml/litre of water with irrigation water. Keeping present weather in view, monitor the fields regularly. Spray Imidacloprid 17.8 % SC@ 1.0 ml / 3 lit. of water against white flies and other sucking pests in all crop and vegetables when sky remains clear.

Uttar Pradesh:

- **In East Uttar Pradesh**, undertake sowing of pigeon Pea. Transplanting of brinjal, tomato, chilli and early cauliflower on ridge is advised for those farmers whose seedlings are ready. maintain optimum moisture in maize and soybean fields. If farmers observe that paddy leaves are yellowing, water-soaked streaks are spreading from leaf tips and margins, becoming larger and sometimes leaves completely becomes yellow, then spray solution of copper hydroxide 77 WP @ 1.25 kg/ha mixing with 150 liters of water at 10-12 days intervals. Monitor insect pest and disease infestation to sorghum, if it goes to ETL then apply recommended control measures.
- In West Uttar Pradesh, undertake sowing of toria, mustard and vegetable pea. Prepare the fallow fields for Potato cultivation. There is a possibility of infestation of *Sundai* pest in sesame crop, so to prevent it, spray Spemethrin 25% EC @ 0.5 liters / ha in 500-600 liters of water in clear weather. In the black gram/green gram crop, there is a possibility of outbreak of pod borer, so for prevention, spraying of 5% of Nibouli or Qinalfas 25 EC @ 1.25 liters / ha in 500-600 litres of water is advised in clear weather. Undertake sowing of rapeseed and coriander. Undertake transplanting of capsicum, cauliflower and cabbage. For prevention of stem borer in brinjal, remove the affected part of plant and spray neemgiri 4% at 10 days interval.

Uttarakhand

- In Sub Humid Sub Tropic Zone, Maintain optimum soil moisture in fields of rice, sugarcane and vegetable crops. Use 2% Methyl Parathion powder @10 kg per acre to prevent the infestation of Gundhi Bug insects in the rice crop.
- In Bhabar and Tarai Zone, undertake harvesting of maize during clear weather conditions. Undertake harvesting of rice during clear weather conditions. Undertake field preparations for sowing of potato.
- In Hill Zone, continue harvesting of rice. Undertake sowing of garlic. Undertake sowing of onion seeds in well prepared beds. Undertake land preparation for sowing of potato.

Rajasthan

- In Irrigated North Western Plain Zone, early sown Groundnut crop is at ripening stage, dig up the ground to see if the legumes have been ripened. If 80% of the legumes are ripened, groundnut should be dug. Undertake planting of evergreen fruit plants like citrus, mango, guava, litchi, loquat, sapota etc. In moong crops, when pod borer appears, spray of quinalphos 25 E.C. Or monocrotophos 36 W.S.C. 250 ml per bigha. In moong crops, when pod borer appears, spray of quinalphos 25 E.C. Or monocrotophos 36 W.S.C. 250 ml per bigha. Picking the ripe pod of moong and dry them in the sun for 7-10 days.
- In Flood Prone Eastern Plain Zone, to control of bristle beetle in moong crop. Spray acephate 75% SP 750 gm/hectare in 400-600 litre of water. Spray thiamethoxam 25 WG @ 0.3 g per litre water to control white fly in cluster bean. To control blight disease in guar to spray copper oxy chloride 50 W.P. @ 0.3 percent.
- In Semi Arid Eastern Plain Zone, pick well ripe pods of pulse crops like green gram, moth bean and cowpea. Due to cloudy sky, spray Carbendazim 50 W.P. @ 0.5 gm per litre water to protect groundnut against leaf spot disease. To protect the kharif crops from the attack of white grub, use Imidachlorpid 17.8 SL @ 300 ml per hectare mixed with 80-100 kg soil before irrigation.
- In Arid Western Plain Zone, pearl millet crop is at maturity stage so harvest the crop at physiological maturity stage and keep in safe place. Prepare the nursery for tomato (Pusa Rubi, Pusa120, Arka Vikas, Sonali, Pusa Hibrid-2, Pusa Hibrid-1 and Pant Bahar) and brinjal (Aajad B-1, BR-112, Pusa Bhairav, Pusa Anupam, Pusa Hibrid-5 and Punjab Bahar).
- For controlling sucking insects (aphid, jassid and white fly) in cotton, groundnut, cluster bean and moth bean apply spray of monocrotophos 36 SL 250 ml or dimethoate 30 EC 300 ml or methyl dimeton 25 EC

300 ml per bigha or imidacloprid (17.8 SL) 0.005 % (3 ml/10 liter water) spray may be repeated at an interval of 15 days if needed.

- In Southeastern Humid Plain Zone, continue nursery preparation for capsicum. Undertake nursery sowing of medium duration cauliflower. Harvest the green gram, black gram and prepare field for early sowing of mustard & gram under conserved moisture.
- In Transitional Plain Zone of Inland Drainage, undertake transplanting of ready seedlings of brinjal, tomato, chilli, early cauliflower and sowing of radish (Pusa Chetki), spinach (Pusa Bharti, All green), amaranths (Pusa lal Chaulai, Pusa Kiran) on ridges. Picking of well ripe pods of pulse crops like green gram, moth bean and cowpea may be done.

Animal Husbandry

- In Uttar Pradesh, according to weather condition, farmers are advised to give proper care of their livestock and tie them at clean place. Vaccinate animals against foot and mouth diseases.

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