



National Agromet Advisory Service Bulletin

Friday 4th September 2020

(For the period 4th September to 8th September 2020)



Issued by

India Meteorological Department

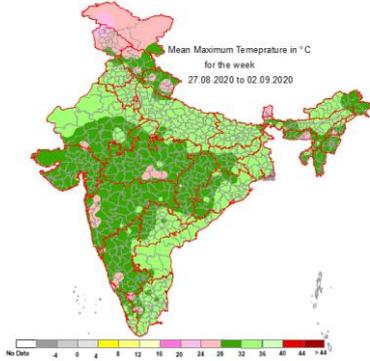
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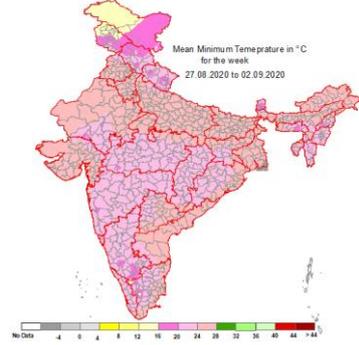
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spatial distribution of weather parameters for the week 27.08.2020 to 02.09.2020

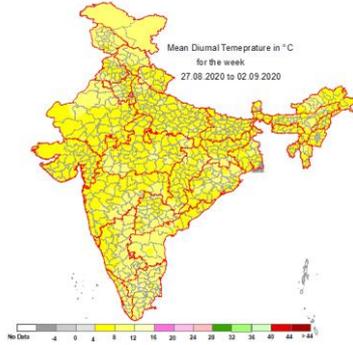
Mean Maximum Temperature (°C) for the week 27.08.2020 to 02.09.2020



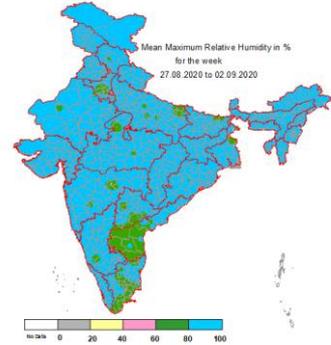
Mean Minimum Temperature (°C) for the week 27.08.2020 to 02.09.2020



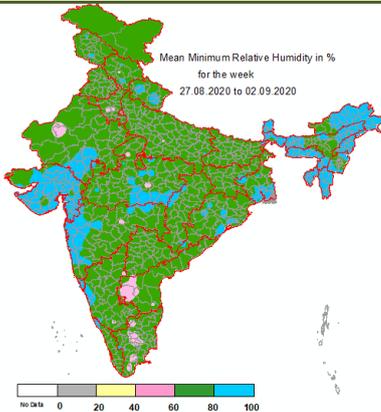
Mean Diurnal Temperature Variation (°C) for the week 27.08.2020 to 02.09.2020



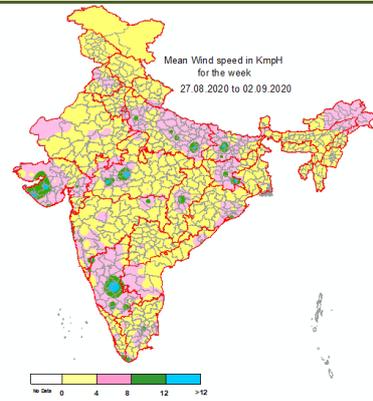
Mean Maximum Relative Humidity (%) for the week 27.08.2020 to 02.09.2020



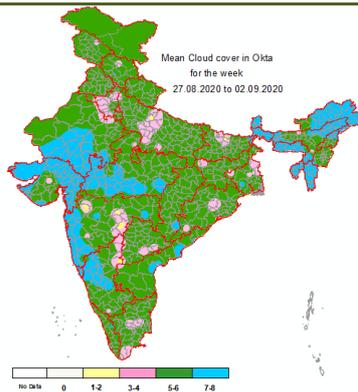
Mean Minimum Relative Humidity (%) for the week 27.08.2020 to 02.09.2020



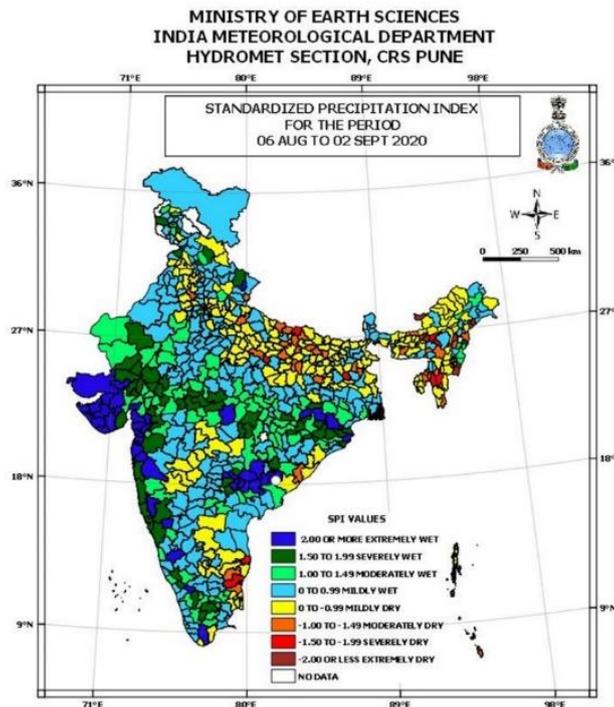
Mean Wind Speed (km/hr) for the week 27.08.2020 to 02.09.2020



Mean Cloud Cover (okta) for the week 27.08.2020 to 02.09.2020



Standardised Precipitation Index for the period 6th August to 2nd September 2020



- Extremely/Severely wet conditions exist in Banaskantha, Broach, Valsad, Mehsana, Sabarkantha, Surat, Gandhinagar, Anand, Narmada, Navsari, Patan, Tapi, Chhota Udepur, Amreli, Bhavnagar, Jamnagar, Junagarh, Kutch, Rajkot, Surendranagar, Porbandar, Botad, Devbhumi Dwarka, Gir Somnath, Morbi districts of Gujarat; Bilaspur, Kullu districts of Himachal Pradesh; Poonch, Ramban districts of Jammu & Kashmir (UT);
- Uttara Kannada, Belgam, Dharwad, Chikmagalur, Kodagu districts of Karnataka; Wynad district of Kerala; Dewas, Hoshangabad, Indore, Jhabua, Raisen, Sehore, Shajapur, Balaghat, Chindwara districts of West Madhya Pradesh; Mumbai City, Raigad, Ratnagiri, Thane, Sindhudurg, Mumbai Suburban, Palghar, Kolhapur, Nashik, Pune, Nandurbar, Bhandara, Gondia districts of Maharashtra; Kephire district of Nagaland; Angul, Bargarh, Bhadrak, Boudhgarh, Deogarh, Dhenkanal, Jagatsinghpur, Jajpur, Jharsuguda, Kendrapara, Keonjhar, Malkangiri, Sundargarh district of Orissa; Gurdaspur district of Punjab; Jalore, Jodhpur, Banswara, Dungarpur, Sirohi, Udaipur, Pratapgarh districts of Rajasthan; Coimbatore, Dindigul, Nilgiri, Theni, Tirunelveli districts of Tamilnadu; Dadara & Ngr Hav, Daman, Diu districts of U.T; Simdega district of Jharkhand; Chamoli, Bageshwar districts of Uttarakhand; Bastar, Janjgir, Bijapur, Sukma districts of Chhatisgarh; North Goa, South Goa districts of Goa; South Delhi district of Delhi; Karimnagar, Warangal, B.Kothagudem, Jangaon, J.Bhupalpally, Mahabubabad, Peddapalle, Rajanna Sircilla, Siddipet, Warangal_Urban, Y.Bhuvanagiri, Mulugu districts of Telangana.
- Extremely/Severely dry conditions exist in Tawang, Tirap districts of Arunachal Pradesh; Darrang, Nagaon, Morigaon districts of Assam; Chandel district of Manipur; Aizwal, Mamit, Serchhip districts of Mizoram; Dimapur, Wokha districts of Nagaland; Tiruvallur, Viluppuram districts of Tamilnadu; Puducherry district of U.T; Kaushambi, Maharajganj districts of Uttar Pradesh; South Andaman districts of A & N ISLANDS; Deoghar district 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 09th 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 day.

5 Day Rainfall Forecast (MID-DAY) 04-September-2020

Met-Sub-Division	04-Sep Today	05Sep Sat	06Sep Sun	07Sep Mon	08Sep Tue
1. Andaman & Nicobar Islands	FWS	FWS	FWS	FWS	WS
2. Arunachal Pradesh	FWS	FWS	FWS	FWS	FWS
3. Assam & Meghalaya	FWS	FWS	FWS	FWS	FWS
4. N. M. M. & T.	SCT	FWS	FWS	FWS	SCT
5. S.H. West Bengal & Sikkim	FWS	WS	WS	WS	WS
6. Gangetic West Bengal	ISOL	SCT	FWS	FWS	FWS
7. Odisha	ISOL	ISOL	SCT	SCT	FWS
8. Jharkhand	ISOL	SCT	SCT	FWS	FWS
9. Bihar	ISOL	SCT	FWS	WS	WS
10. East Uttar Pradesh	ISOL	ISOL	SCT	FWS	FWS
11. West Uttar Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
12. Uttarakhand	FWS	SCT	FWS	SCT	SCT
13. Haryana, Chd & Delhi	FWS	ISOL	ISOL	DRY	DRY
14. Punjab	FWS	ISOL	ISOL	DRY	DRY
15. Himachal Pradesh	FWS	SCT	ISOL	ISOL	DRY
16. J & K and Ladakh	FWS	SCT	ISOL	DRY	DRY
17. West Rajasthan	FWS	ISOL	ISOL	ISOL	ISOL
18. East Rajasthan	FWS	SCT	SCT	ISOL	ISOL
19. West Madhya Pradesh	SCT	ISOL	ISOL	SCT	SCT
20. East Madhya Pradesh	SCT	SCT	SCT	SCT	SCT
21. Gujarat Region	ISOL	ISOL	ISOL	ISOL	DRY
22. Saurashtra & Kutch	ISOL	ISOL	ISOL	DRY	DRY
23. Konkan & Goa	FWS	FWS	FWS	FWS	FWS
24. Madhya Maharashtra	FWS	FWS	FWS	SCT	SCT
25. Marathwada	SCT	FWS	FWS	SCT	SCT
26. Vidharbha	ISOL	ISOL	SCT	SCT	SCT
27. Chhattisgarh	SCT	SCT	SCT	FWS	FWS
28. Coastal A. P. & Yanam	SCT	SCT	SCT	FWS	FWS
29. Telangana	SCT	SCT	FWS	FWS	FWS
30. Rayalaseema	SCT	SCT	SCT	SCT	SCT
31. T.N.,Puducherry & Karaikal	FWS	FWS	SCT	SCT	ISOL
32. Coastal Karnataka	WS	WS	WS	WS	WS
33. North Interior Karnataka	SCT	FWS	WS	WS	WS
34. South Interior Karnataka	WS	WS	WS	WS	WS
35. Kerala & Mahe	WS	FWS	WS	FWS	FWS
36. Lakshadweep	WS	WS	WS	FWS	FWS

% Station Reporting Rainfall

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

Weather Warning during next 5 days

04 September (Day 1):

- ◆ **Heavy to very heavy rainfall** very likely at isolated places over Tamilnadu, Puducherry & Karaikal and **heavy rainfall** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad (UTs), Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Rajasthan, Arunachal Pradesh, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Madhya Maharashtra, Rayalaseema, south interior Karnataka and Kerala & Mahe.
- ◆ **Thunderstorm accompanied with lightning** very likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad (UTs), Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Rajasthan, East Madhya Pradesh, Vidarbha, Chhattisgarh,

Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim, Konkan & Goa, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamilnadu, Puducherry & Karaikal and Kerala & Mahe.

- ◆ **Strong Wind** (speed reaching 45-55 kmph) very likely over Southwest Arabian Sea and **Squally weather** with wind (speed reaching 40- 50 kmph) southeast & east central Arabian Sea. Fishermen are advised not to venture into these areas.

05 September (Day 2):

- ◆ **Heavy rainfall** very likely at isolated places over Uttarakhand, East Rajasthan, Arunachal Pradesh, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Madhya Maharashtra, Rayalaseema, Tamilnadu, Puducherry & Karaikal, Coastal & South Interior Karnataka and Kerala & Mahe.
- ◆ **Thunderstorm accompanied with lightning** very likely at isolated places over Uttarakhand, Rajasthan, East Madhya Pradesh, Vidarbha, Chhattisgarh, Arunachal Pradesh, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Konkan & Goa, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Tamilnadu, Puducherry & Karaikal and Kerala & Mahe.
- ◆ **Strong Wind** (speed reaching 45-55 kmph) very likely over Southwest & Southeast Arabian Sea and Maldives area and **Squally weather** with wind (speed reaching 40-50 kmph) along & off Kerala coast. Fishermen are advised not to venture into these areas.

06 September (Day 3):

- ◆ **Heavy to very heavy rainfall** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, South interior Karnataka and Kerala & Mahe and **heavy rainfall** at isolated places over Uttarakhand, Bihar, Odisha, Arunachal Pradesh, Assam & Meghalaya, Madhya Maharashtra, Konkan & Goa, Coastal & North Interior Karnataka and Tamilnadu, Puducherry & Karaikal.
- ◆ **Thunderstorm accompanied with lightning** very likely at isolated places over Bihar, Jharkhand, Gangetic West Bengal, Odisha, Konkan & Goa, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana and Tamilnadu, Puducherry & Karaikal.
- ◆ **Strong Wind** (speed reaching 45-55 kmph) very likely over Southwest & Southeast Arabian Sea and Maldives area and **Squally weather** with wind (speed reaching 40-50 kmph) along & off Kerala coast, Lakshadweep and Comorin area. Fishermen are advised not to venture into these areas.

07 September (Day 4):

- ◆ **Heavy rainfall** likely at isolated places over Chhattisgarh, Bihar, Sub-Himalayan West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Tamilnadu, Puducherry & Karaikal, Karnataka and Kerala & Mahe.
- ◆ **Thunderstorm accompanied with lightning** likely at isolated places over Bihar, Jharkhand, Gangetic West Bengal, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Coastal Andhra Pradesh & Yanam, Telangana and Tamilnadu, Puducherry & Karaikal.
- ◆ **Strong Wind** (speed reaching 45-55 kmph) likely over Southwest Arabian Sea and **Squally weather** with wind (speed reaching 45-55 kmph) along & off Kerala coast. Fishermen are advised not to venture into these areas.

08 September (Day 5):

- ◆ **Heavy rainfall** likely at isolated places over Vidarbha, Chhattisgarh, Bihar, Sub-Himalayan West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Karnataka and Kerala & Mahe.
- ◆ **Thunderstorm accompanied with lightning** likely at isolated places over Bihar, Jharkhand, Gangetic West Bengal, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana and Tamilnadu, Puducherry & Karaikal.
- ◆ **Strong Wind** (speed reaching 45-55 kmph) likely over Southwest Arabian Sea. Fishermen are advised not to venture into these areas.

Weather Outlook for subsequent 2 days from 09th September, 2020 to 11th September, 2020

- ◆ Fairly widespread rainfall with isolated heavy falls likely over East & northeast India and over scattered to fairly widespread rainfall over south Peninsular India. Isolated to scattered rainfall over parts of Central India. Dry weather likely over Gujarat state and Northwest India except over East Uttar Pradesh.

Weather Warning for Fishermen

- **Strong Wind (speed reaching 45-55 kmph)** very likely over Southwest & Southeast Arabian Sea and Maldives area and Squally weather with wind (speed reaching 40-50 kmph) along & off Kerala coast on 5th, **Strong Wind (speed reaching 45-55 kmph)** very likely over Southwest & Southeast Arabian Sea and Maldives area and Squally weather with wind (speed reaching 40-50 kmph) along & off Kerala coast, Lakshadweep and Comorin area on 6th, **Strong Wind (speed reaching 45-55 kmph)** likely over Southwest Arabian Sea and Squally weather with wind (speed reaching 45-55kmph) along & off Kerala coast on 7th, **Strong Wind (speed reaching 45-55 kmph)** likely over Southwest Arabian Sea on 8th September, Fishermen are advised not to venture into these areas.

Salient advisories

- In **South Gujarat**, take immediate measures to drain out excess water from standing crops. If crops like pearl millet, maize and pulses are destroyed by flood/excess rains, cultivate clusterbean, green

gram, black gram, pigeon pea, castor; flax for seeds production and fodder crops like sorghum, cow pea. In Kharif paddy, in addition to recommended dose of fertilizers, spray 1.5% Potassium Silicate at tillering and panicle initiation stage for obtaining higher yield and minimizing incidence of stem borer, sheath mite and lodging percentage. In **Saurashtra and Kutch**, drain out excess water from cotton fields, pigeon pea and onion nursery beds.

- **Thunderstorm accompanied with lightning** very likely at isolated places over Uttarakhand, Rajasthan, East Madhya Pradesh, Vidarbha, Chhattisgarh, Arunachal Pradesh, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Konkan & Goa, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Tamilnadu, Puducherry & Karaikal and Kerala & Mahe on 5th, **Thunderstorm accompanied with lightning** very likely at isolated places over Bihar, Jharkhand, Gangetic West Bengal, Odisha, Konkan & Goa, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana and Tamilnadu, Puducherry & Karaikal on 6th, over Bihar, Jharkhand, Gangetic West Bengal, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Coastal Andhra Pradesh & Yanam, Telangana and Tamilnadu, Puducherry & Karaikal on 7th & 8th 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.
 - Farmers are advised to avoid standing in the open or working in the field during thunderstorm period.
 - Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at **most/many places** over Arunachal Pradesh, Assam & Meghalaya, Sub Himalayan West Bengal & Sikkim, Konkan & Goa, Coastal and South Interior Karnataka and Kerala during the period, over Coastal Andhra Pradesh & Yanam on 7th & 8th, over Telangana, Gangetic West Bengal and Bihar from 6th to 8th, over Madhya Maharashtra from 4th to 6th, over Marathwada and Vidarbha on 5th & 6th, over Nagaland, Manipur, Mizoram & Tripura from 5th to 7th Sept. along with **Heavy rainfall very likely at isolated places** over Uttarakhand, East Rajasthan, Arunachal Pradesh, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Madhya Maharashtra, Rayalaseema, Tamilnadu, Puducherry & Karaikal, Coastal & South Interior Karnataka and Kerala & Mahe on 5th, **Heavy to very heavy rainfall very likely** at isolated places over Sub-Himalayan West Bengal & Sikkim, South interior Karnataka and Kerala & Mahe and **heavy rainfall** at isolated places over Uttarakhand, Bihar, Odisha, Arunachal Pradesh, Assam & Meghalaya, Madhya Maharashtra, Konkan & Goa, Coastal & North Interior Karnataka and Tamilnadu, Puducherry & Karaikal on 6th, **Heavy rainfall likely** at isolated places over Chhattisgarh, Bihar, Sub-Himalayan West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Tamilnadu, Puducherry & Karaikal, Karnataka and Kerala & Mahe on 7th, **Heavy rainfall likely at isolated places** over Vidarbha, Chhattisgarh, Bihar, Sub-Himalayan West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Karnataka and Kerala & Mahe on 8th September,
 - Avoid irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops.
 - Arrange for adequate drainage to avoid water stagnation in the crop fields.
 - Drain out excess water from the fields of pulses, maize and vegetables.
- Undertake following field operations :
 - sowing of *kharif* pulses (green gram & black gram), sesame in Assam.

- nursery sowing of cauliflower and cabbage in Himachal Pradesh
- transplanting of mid-season cauliflower and sowing of carrot, broccoli, chinese cabbage, spinach in Punjab.
- transplanting of tobacco seedlings in the field in Middle Gujarat.
- sowing of green gram and black gram, transplanting of brinjal, chilli, tomato and early cauliflower in East Uttar Pradesh.
- sowing of pigeon pea in Bihar.

Detailed Agromet Advisories

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

Realised Rainfall: Significant rainfall occurred in the districts East Godavari, Prakasam, Sirkakulam, West Godavari, Anantapur, Chittoor and Cuddapah of Andhra Pradesh, Yanam district, B. Kothagudem, Jangaon, Khammam, Mahabubabad, Medak, Siddipet and Warangal_Rural districts of Telangana; Palakkad and Wayannad districts of Kerala; in all districts except Karaikal, Kanyakumari, Kancheepuram, Tirunelveli, Tiruvallur, Tiruvannamalai, Toothukudi districts of Tamil Nadu and Significant rainfall occurred in all the districts of Coastal Karnataka and in all the districts of South Interior Karnataka except Ballari, Chikkamagaluru, Chitradurga, Davangere and Shivamogga. Weather remained mostly dry over rest of the region.

Advisories:

- **Thunderstorm accompanied with lightning** very likely at isolated places over Coastal Andhra Pradesh & Yanam, Tamilnadu, Puducherry & Karaikal and Kerala & Mahe on 5th, **Thunderstorm accompanied with lightning** very likely at isolated places over Coastal Andhra Pradesh & Yanam, Telangana and Tamilnadu, Puducherry & Karaikal on 6th, 7th & 8th 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. Farmers are advised to avoid standing in the open or working in the field during thunderstorm period. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at **most/many places** over Coastal and South Interior Karnataka and Kerala during the period, over Coastal Andhra Pradesh & Yanam on 7th & 8th, over Telangana from 6th to 8th Sept. along with **Heavy rainfall very likely at isolated places** over Rayalaseema, Tamilnadu, Puducherry & Karaikal, Coastal & South Interior Karnataka and Kerala & Mahe on 5th, **Heavy to very heavy rainfall very likely** at isolated places over South interior Karnataka and Kerala & Mahe and **heavy rainfall** at isolated places over Coastal & North Interior Karnataka and Tamilnadu, Puducherry & Karaikal on 6th, **Heavy rainfall likely** at isolated places over Coastal Andhra Pradesh & Yanam, Telangana, Tamilnadu, Puducherry & Karaikal, Karnataka and Kerala & Mahe on 7th, 8th September, avoid irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables.

Karnataka

- In Coastal Kannada district, drain out excess water from maize, cotton, ginger, turmeric crop fields and papaya orchards. For management in cashew leaf beetle & weevil pest, spray Monocrotophos @ 1.5 ml /litre of water.
- In North Dry Zone, in shallow black and red sandy soils undertake sowing of pearl millet, sunflower, castor, desi cotton, minor millets, sunflower + castor and fodder crops; in medium deep black soils (both kharif and rabi cropping areas), take up sowing of desi cotton.
- In North East Transition Zone, farmers are advised to take up harvesting of green gram on priority basis depending upon the prevailing weather situation. Green gram seeds are properly sun dried in order to bring down the moisture. To control aphid incidence in soybean, spray Imidacloprid 0.3 ml or Dimethoate 1.75ml or Acephate 1 g or Acetamiprid 0.2g or any neem based insecticide@ 2ml dissolved in one litre of water.
- In Eastern Dry Zone, undertake sowing of late Kharif crops like finger millet, ragi, horse gram, niger, field bean, maize, sunflower and cowpea (for vegetable purpose).
- In Central Dry Zone, apply Deltamethrin- 2.8 EC or Cypermethrin-10 EC or Penvarate 20 EC @ 0.5 ml per litre of water at 55, 85 and 115 DAS for boll worm management in cotton crop. For control of sucking pests in groundnut, spray Dimethoate-30 EC 1.7 ml per litre of water at the time of pest incidence. Planting of castor, bajra and pigeon pea as trap crop has been found effective for controlling many insect-pests in groundnut while intercropping with pearl millet generally reduces jassids population in groundnut.
- In Southern Transition Zone, go for hand weeding in kharif paddy, clean the bunds and maintain water level in order control weeds; spray Chlorpyrifos @2ml/litre of water to control case worm. Go for spraying of Dimethoate 30 E. C. 1.7 ml per liter of water to control aphids and spray Mancozeb @ of 2 g or Carbendizim @ 1 g or Jineb 2.5 g/litre of water to control blast disease in Ragi crop.

Kerala

- In High Altitude Zone, farmers are advised to provide propping to standing banana crop and to take necessary phyto-sanitary measures to manage capsule rot (Azhukal disease) in cardamom and spray 1% Bordeaux mixture (500-1000 ml/plant). Keep vigilance against Red palm weevil, rhinoceros beetle in coconut and arecanut. Sigatoka leaf spot disease may become severe in banana due to increase in relative humidity, if found severe spray 1% Bordeaux mixture or Bavistin (1g/lit of water) after cutting the severely affected leaves and burn it.
- In Central Zone, there is a chance of appearance of rice bug in paddy, spray 2 ml malathion per one litre of water. Pesticides application should be done either before 9 am or after 3 pm, otherwise the pesticide application will adversely affect the pollination. To manage bacterial wilt in ginger, spray a mixture of cow dung slurry (20g cow dung per one litre of water) and pseudomonas solution (20g per one litre of water).
- In Southern Zone, in rice, apply Sampoorna Nutrient Multimix @ 10 gram/litre 5 to 7 days before panicle initiation. Also application of Borax @ 2 gram/ litre is also suitable during this stage. Spraying of Pseudomonas @20 gram/ litre once in a week in tomato is recommended as precautionary measure against bacterial wilt.

Andhra Pradesh

- In Srikakulam district due to prevailing dry spell direct seeded rice and maize are experiencing moisture stress spray with 13-0-45(multi-k)@10 gm/lit or 2% urea.

- In Ananthpur district, the present weather conditions are favorable for leaf spot in groundnut. To control spray Hexaconazole @ 400 ml or Tebuconazole @ 200 ml /200 ml of water for one acre of area.
- In Guntur district, 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 from sowing to panicle initiation stage in rice there should not be any water logging condition. Make alley ways for proper air and drainage conditions such that increase in number of tillers with good growth conditions.
- In YSR Cadapah district present weather conditions are favourable for the incidence of leaf spot in groundnut. To control spray Chlorothalonil @ 400 g in 200 lit of water.
- In Vizainagaram district present weather conditions are favourable for the incidence of leaf folder in paddy. To control go for spraying of Chloropyriphos @2.5ml (or) Profenophos @ 2ml per liter of water.

Telangana

- Prevailing weather conditions are favourable for Bacterial Leaf Blight in paddy . To stop the apply of Nitrogenous fertilizers to crop temporarily. In early stage to control the spreading of disease to spray copper oxy chloride @ 3 g + Plantomycine @ 0.2 g per liter of water.
- In rice nurseries if hispa damage observed to control, spray profenophos @ 2ml /lit water.
- Prevailing cloudy weather is congenial for incidence of Black Arm disease in cotton. To control, spray Copper-Oxy-Chloride @ 30 g and Plantomycin @ 1 g per 10 litre of water.

Tamil Nadu

- In Cauvery Delta Zone, prevailing weather condition is conducive for stem borer infection in rice, apply Chlorpyriphos 20 EC 500 ml/ acre or Profenophos 50 EC 400 ml/ acre.
- In Western Zone, by utilizing expected rainfall, sowing of fodder rainfed sorghum may be taken up. Undertake nursery preparation for Samba rice. Prevailing weather is conducive for leaf blight in maize. Spray Mancozeb @ 2gm/lit or Kresoxim methyl @ 1ml/lit of water. Weather is conducive for bacterial leaf spot disease in rice, spray Copper Hydroxide @ 3g/lit of water. Provide adequate support to banana and tall crops. Weather is conducive for bacterial leaf spot disease in rice, if found spray Copper Hydroxide @ 3g/lit of water. Due to rain and high relative humidity rhizome rot would initiate infection in turmeric. Drench with Bordeaux mixture 1% or Copper oxy chloride 0.25%.
- In High Altitude Hilly Zone, provide adequate drainage facilities in the field to drain excess water. Due to cloudy weather, there may be chance of occurrence of blister blight disease in tea crop. Foliar spray of Copper Oxy Chloride (COC) @ 84g / acre may be done.
- In South Zone, high cloud cover, rainfall and high humidity are expected, blossom midge may occur in Jasmine. To control blossom midge spray monocrotophos 36 SL @ 2 ml/litre of water.

Animal Husbandry:

- In Karnataka, vaccinate (ET vaccine) the sheep and goat against Enterotoxemia. Diseases like HS and BQ are seen in cattle and buffaloes; vaccinate against these diseases.
- In Cauvery Delta Zone of Tamil Nadu, weather situation is favorable for the development of Aflatoxin infection in the Corn kernels and Paddy Straw, which may affect the health of cattle. To prevent the infection, dry the Corn kernels and Paddy Straw before feeding.

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

Realised Rainfall : Rainfall occurred in Changlang, Dibang Valley, East Kameng, East Siang, Lohit, Lower Dibang Valley, Lower Subansari, West Kameng and West Siang districts of Arunachal Pradesh; all districts except Darrang, Golghat, Jorhat, Kamrup(Rural), Kamrup(Metro), Morigaon, Nowgaon, Sonitpur, Sibsagar and Udalgiri districts of Assam; all districts of Meghalaya and Tripura; all districts except Chhimituipui, Kolasib, Lunglei, Manit and Serchhip districts of Mizoram; all districts except Bishnupur, Chandel, and Thoubal districts of Manipur; Dimapur, Longleng, Paren and Phek districts of Nagaland.

Advisories:

- **Thunderstorm accompanied with lightning** very likely at isolated places over Arunachal Pradesh on 5th, over Assam & Meghalaya on 5th, 7th & 8th, over Nagaland, Manipur, Mizoram & Tripura on 7th & 8th 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. Farmers are advised to avoid standing in the open or working in the field during thunderstorm period. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at **most/many places** over Arunachal Pradesh, Assam & Meghalaya during the period, over Nagaland, Manipur, Mizoram & Tripura from 5th to 7th Sept. along with **Heavy rainfall very likely at isolated places** over Arunachal Pradesh, Assam & Meghalaya on 5th, **heavy rainfall** at isolated places over Assam & Meghalaya on 6th, **Heavy rainfall likely** at isolated places over Nagaland, Manipur, Mizoram & Tripura on 7th, **Heavy rainfall likely at isolated places** over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, on 8th September, avoid irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables. **Arunachal Pradesh**
- In Arunachal Pradesh, undertake land preparation for planting of potato on hills and sowing of green gram. Undertake harvesting of *Jhum* rice when 80–85% of the grains are straw colored (i.e., yellow-colored) during clear/dry days. Maintain proper water level in WRC rice field during active tillering/panicle initiation stage.

Assam & Meghalaya

- In Hill Zone of Assam, continue nursery sowing of cauliflower after current spells of heavy rain. Spray Quinolphos @ 2 teaspoonful /5 litre of water against rice hispa in Sali rice at the time of tillering stage during the rain free weather. In present weather condition, constant monitoring for stem borer attack in maize field is advised. Spray Trichocards @ 4/acre to control stem borer attack. Apply proper support to cucurbitaceous crops.
- In Lower Brahmaputra Valley Zone, spray Fipronil 5 SC @ 50 ml per bigha of land or Thiamethoxam 25 WG @ 13 gm per bigha of land against stem borer and case worm attack in Sali rice at the time of tillering stage during the rain free weather. Continue nursery sowing of early cauliflower. Complete sowing of black gram/ green gram within the first fortnight of September.
- In Upper Brahmaputra Valley Zone, in chronically flood affected areas, after recession of flood seedlings of varieties like Monohar Sali, Solpona, Govindabhog etc. or any other traditional high yielding late Sali variety can be transplanted. In case of aged seedlings closer spacing with more number of seedlings per hill (6-7 seedlings/hill) is advocated along with recommended dose of urea, SSP, MOP fertilizers and organic manure. Damaged hills of rice in the main field should be replaced by new seedlings or by splitting already established healthy hills. Make provisions to maintain a depth of 5±2 cm standing water in the fields. Continue sowing of green gram, radish and early cauliflower. Complete the planting of Assam lemon seedlings in the main field at the earliest.

- In Barak Valley Zone, spray Flubendiamide 39.35% @ 0.1% or Thiamethoxam 25 WG @ 100 g/ha or Fipronil 5 SC @ 370 ml/ha against infestation of stem borer and case worm during the tillering stage of Sali rice. Continue sowing of *kharif* pulses (green gram & black gram) and cole crops.
- In Central Brahmaputra Valley Zone, Continue harvesting of Capsularis and Olitorius jute. Continue sowing of *kharif* pulses (green gram & black gram) and cole crops. 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 Chlorantraniliprole 0.4G @ 10kg/ha or Flubendiamide 20% SG @125g/ha to control the attack. Maintain 5±2 cm water in the field of Sali rice.
- In North Bank Plain Zone, continue sowing of black gram/ green gram and cole crops. In flood affected areas undertake directly sowing of the sprouted seeds of very short duration (less than 100 days) photo-insensitive varieties like Luit, Kopilee and Dishang in the main field. 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 Chloropyriphos 20EC or Monocrotophos 40EC @ 1.5ml per litre of water. Also application of Malathion dust (2% dust applied at 25 kg/ ha) or Chlorpyriphosdust (1.5%) or Endosulfan dust (5%) along the bunds of the field kills army worm pest and also prevents the migration of larvae to other rice fields. The technique was widely adopted because it proved to be a cheap and effective method for managing the army worm.
- In Meghalaya, ensure proper drainage system in the ginger/turmeric and vegetable crop field. Continue sowing/ transplanting of cole crops, cow pea and French bean on clear weather. Undertake harvesting of matured cobs of maize. Spray with Mancozeb @ 2.5 ml/10 litre of water against Leaf blotch attack in turmeric. Spray Azadirachtin 0.15% EC @ 3ml/litre or other neem formulation against hopper, stem borer, leaf fodder in *Sali* rice during active tillering stage 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 stage, spray Hexaconazole @2ml/litre water against sheath blight or sheath rot, spray Copper Hydroxide 53.8%DF@3g/litre water against Bacterial Leaf Blight and to avoid any sucking insect, spray Imidachloprid @ 8ml/ 15 litre of water after rains. Maintain water level in the *Kharif* rice field at tillering to panicle initiation stage. Spray Redomil MZ 72 WP @ 2g/litre water alternately with Carbendazim @ 2g/lit water at 14 days interval against Soft rot in ginger and Rhizome rot in turmeric. Continue nursery raising of cole crops (cauliflower/ cabbage/ broccoli).
- In Mizoram, due to high humidity (90-95%) and moderate rainfall, possibility of rust disease on soybean is higher. So farmers are advised to spray Hexaconazole 5% @ 2.0 ml/litre of water to control the disease. Spray Chlorantraniliprole @ 0.3 ml/litre of water or Fipronil 5% SC @ 2.0 ml/ litre of water against rice leaf folder/rice stem borer infestation in normal rice at vegetative stage. Apply Cypermethrin 2.0 ml/litre of water against gundhi bug infestation in Jhum rice during tillering to panicle emergence stage during sunny days. Spray Acephate 75% SP @ 2.0 g/litre or Imidacloprid 17.8% SL @ 1.0 ml/litre of water against brown plant hopper disease in lowland rice during sunny days. Undertake sowing of cowpea.
- In Tripura, continue land preparation for sowing of black & green gram, sesamum. Undertake harvesting of *Jhum* rice. Prevailing humid weather is conducive for the attack of Blast in *Aman* Rice during panicle initiation stage. The attack may be managed manually by flooding the field followed by apply Tricyclazole 75 WP @ 0.6 gm/litre of water or Carbendazim 50 WP (Bavistin) @ 1 gm per litre of water. Due to cloudy and humid weather there may be attack of Stem and Cob rot disease in maize in upland and medium upland. Apply combination of Trichoderma Viride (5ml per litre) and Seodomonous Flurensense

(5ml per litre) to manage the attack

- In Nagaland, there is chance of attack of brown spot disease in TRC/WRC rice at tillering stage. Spray 1g of Ediphenphos in one litre of water against brown spot infestation if infestation is high Spray of Neem Seed Kernel Extract @ 5% for management of early stage of hairy caterpillar and tobacco caterpillar during vegetative stage in soybean. Spray neem oil 0.5% to control shoot borer in ginger. Undertake sowing of green gram, rabi maize, sesamum, french bean, etc. and nursery beds preparation for winter vegetable crops like Chinese cabbage, cabbage, cauliflower, broccoli, coriander, tomato, onion, spinach, knol-knol etc.

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.

Fishery

- In Upper Brahmaputra Valley Zone of Assam, composite culture of fish with long duration rice varieties in low land situation may be undertaken to increase the income. About 1,350 numbers of fingerlings (Rohu, Common carp, Mrigal, Catla etc.) may be released in one bigha of land after transplanting of paddy.
- In North Bank Plain Zone of Assam, to maintain optimum concentration of dissolve 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 North & Middle Andaman districts of Andaman & Nicobar Islands, in Aurangabad, Banka, Begusarai, Bhabua, Bhagalpur, Bhojpur, Buxar, Darbhanga, Jahanabad, Kathihar, Kishanganj, Lakhisarai, Madhepura, Monghyar, Purnea, Rohtas, Saharsa, Samstipur and Sheikhpura districts of Bihar except; in Bokaro, Dumka, East Singbhum, Godda, Gumla, Hazaribagh, Khunti, Latehar, Lohardagga, Palamau Ramgarh, Ranchi, Sahebganj, Simdega and West Singbhum district of Jharkhand; in all districts of Odisha except Cuttack and Kendrapara; in all districts of Gangetic West Bengal except Bankura and in all districts of Sub-Himalayan West Bengal & Sikkim except North Dinajpur and South Dinajpur. Weather remained dry/mostly dry over the rest of the region.

- **Advisories: Thunderstorm accompanied with lightning** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim on 5th, **Thunderstorm accompanied with lightning** very likely at isolated places over Bihar, Jharkhand, Gangetic West Bengal, Odisha on 6th, 7th & 8th 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. Farmers are advised to avoid standing in the open or working in the field during thunderstorm period. Keep cattle/goats indoor during thunderstorm.
- **As rain/thundershowers** likely at **most/many places** over Sub Himalayan West Bengal & Sikkim during the period, over Gangetic West Bengal and Bihar from 6th to 8th Sept. along with **Heavy rainfall very likely at isolated places** over Sub-Himalayan West Bengal & Sikkim on 5th, **Heavy to very heavy rainfall very likely** at isolated places over Sub-Himalayan West Bengal & Sikkim and **heavy rainfall** at isolated places over Bihar, Odisha on 6th, **Heavy rainfall likely** at isolated places over Bihar, Sub-Himalayan West Bengal & Sikkim on 7th, over Bihar, Sub-Himalayan West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands on 8th September, avoid irrigation, intercultural

operations and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess water from the fields of pulses, maize and vegetables.

Odisha

- In North Eastern Ghat Zone, in upland well drained soil, complete the nursery sowing of tomato; use high yielding varieties @ 150-200 g seed/acre; use polythene cover above the nursery to avoid the seedlings from excess rainfall. There is a chance of downy mildew attack in vegetables; if observed, spray Metalaxyl 8% + Mancozeb 64% @ 2 g/litre of water.
- In Mid Central Table Land Zone, to control blast disease in paddy, apply Tricyclazole 75% WP @ 120 g/acre; for control of BLB, apply 500 g COC + 200 g Plantomycin per acre; for control of Thrips, apply Fipronil 5% SC @ 2ml/litre of water.
- In Western Undulating Zone, BLB disease may infest paddy crop in this weather condition; spray Streptocyclin 20g/acre @ 0.1g/litre of water with Copper oxychloride 500g/acre @2.5g/litre of water. Thrips infestation occurs in paddy during this weather condition; to control, spray Thiomethaxome 25%WG 80g/acre @0.4g/litre of water. Drain out water from cotton, maize, arhar, green gram, groundnut and sugarcane crop fields.

Bihar

- In North East Alluvial, carry out weeding in paddy crop; maintain 5 cm water in the field; if symptoms of Khaira disease appear in paddy, mix 5 kg Zinc sulphate with 2.5 kg quenched lime and spray it in 1500 litres of water at the rate of one hectare. Complete the sowing of pigeon pea by the middle of this month.
- In North West Alluvial Zone, in upland areas, undertake sowing of Pusa-9 and Sarad varieties of September pigeon pea as weather condition is favourable for sowing; during land preparation, apply 20kg/ha Nitrogen, 45kg/ha Phosphorus, 20 kg/ha Potash and 20 kg Sulphur/ha; treat seeds with Thiram/Captan @ 2.5gm/kg of seeds.

Jharkhand

- In Western Plateau Zone, timely sown green gram and black gram crops are at maturity stage; harvest crop at right time to avoid shattering of pod/siliquea that reduces yield; the crops bear flowers at least in two phases; pluck/pick the golden yellow color siliquea/pod developed from first phase of flowering; leave the green pod to mature. Harvested pod may be stored at a safer place and threshing may be done after drying in sun. Arrange seeds for cultivation of rape seed, potato and table pea. Start transplanting of the seedlings of tomato, cauliflower, cabbage, etc. on ridge to avoid water stagnation near root zone.
- In Central & North Eastern Plateau Zone, undertake sowing of improved varieties of kulthi and planting of potato. Undertake sowing of tomato, cabbage and cauliflower after seed treatment with Carbendazim@2g or Trichoderma @5g per kg of seeds. To control Gall midge in rice crop, apply Phorate 10 g @ 10 kg per hectare, and for Case worm and Stem borer, spray Chlorpyrifos or Quinolphos @ 1.5 ml per litre of water. To control Blast & brown spot disease spray Carbendazim 0.1% or Tricyclazole (beam) (75 WP) 0.06% per litre of water.

West Bengal

Sub-Himalayan West Bengal:

- In Hill Zone, carry out weeding in rice either manually or by using cono-weeder followed by top dressing of Nitrogen (44 kg urea/ha). Carry out hand weeding at 20 & 40 days after sowing in soybean crop; if seedling rot is a problem, undertake re-sowing after seed treatment with Thiram @ 4.5 gm per kg of seeds.
- In Old Alluvial Zone, complete transplanting of 25-30 days old seedlings of aromatic rice within this week; plant 3-4 healthy seedlings in each hill at a distance of 20 × 15 cm for getting good quality and production;

keep 6-7 cm water in the field. Select uplands for sowing of black gram; complete the sowing after seed treatment with Rhizobium.

Gangetic West Bengal:

- In New Alluvial Zone, make proper arrangements for drainage in all vegetables, pulse, maize and nurseries of the crops; do not apply irrigation to the crops. In present weather condition, monitor rice crop for brown plant hopper; if insect population is above ETL, spray of Imidacloprid 17.8 % SC@ 1.0 ml / 3 lit of water or Acephate 75 SP 625gm /ha; drain out water for 3-4 days before use of pesticide and direct the spray towards the base of the plants; split application of N may reduce the hopper attack; neem oil 3% 15litre/ha or neem seed kernel extract 5% 25 kg/ha may also be applied to control it. Take plant protection measures during clear weather.
- In the Coastal Saline Zone, to control sheath blight attack in wet seeded Aman paddy, spray Validimethrin@1ml or Carbendazin@2g/litre of water. For wilting, spray Streptocyclene and apply additional potash fertilizer to the plants after draining out of water. To control stem rot or phytophthora attack in betel vines, drain out excess water and arrange proper aeration, pluck the affected leaves and apply Redomil @ 1.5 ml/litre of water.

Andaman & Nicobar Islands

- Apply first dose of fertilizers in transplanted rice as the weather is conducive. Do hand weeding and earthing up in vegetable field and apply vermi compost @ 5 tons/ha. Clean the coconut garden, cut them into pieces and go for composting. Store and save the rain water, for future use in agriculture activity as deficit in rainfall is observed.

Animal Husbandry

- Keep cattle shed clean; use bleaching powder if necessary. Monitor for Foot and Mouth disease in livestock and consult the local veterinary doctor.

Fishery

- In Andaman & Nicobar, do manuring in the fish pond to improve primary production of the fingerlings.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Realised Rainfall: Significant rainfall occurred in all the districts of Gujarat; in all districts of Konkan & Goa; all districts except Ahmednagar, Dhule, Jalgaon, Sangli, Satara, Solapur districts of Madhya Maharashtra and all districts except Akola, Buldhana, Chandrapur and Yeotmal districts of Vidarbha.

Advisories:

- **Thunderstorm accompanied with lightning** very likely at isolated places over Vidarbha, Konkan & Goa, Madhya Maharashtra, Marathwada on 5th, over Konkan & Goa, Madhya Maharashtra, Marathwada on 6th, over Konkan & Goa, Madhya Maharashtra on 7th & 8th 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. Farmers are advised to avoid standing in the open or working in the field during thunderstorm period. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at **most/many places** over Konkan & Goa during the period, over Madhya Maharashtra from 4th to 6th, over Marathwada and Vidarbha on 5th & 6th Sept. along with **Heavy rainfall very likely at isolated places** over Madhya Maharashtra on 5th, **heavy rainfall** at isolated places over Madhya Maharashtra, Konkan & Goa on 6th September, avoid irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in the crop fields. Drain out excess

water from the fields of pulses, maize and vegetables.

Maharashtra

- In Konkan, due to cloudy weather and alternatively rainy and sunny conditions, the incidence of rice blast and stem borer in rice may be observed, spray Tricyclazole 10 grams or Isoprothiolane 10 ml per 10 liters of water against rice blast and spray Cartap hydrochloride 50% SP @ 20 gms or Triazophos 40% EC @ 12.5 ml per 10 liter of water against stem borer to control the attack during clear weather. To control downy mildew and powdery mildew on cucurbitaceous vegetables, spray Dithane M-45 or Dithane Z-78 each @ 2.5 gm/litre of water at an interval of 10 to 15 days during clear weather. Due to forecast of intermittent rainfall and increase in temperature congenial for vegetative flush in mango, for protection of vegetative flush of mango from hoppers and midge fly incidence, spray Deltamethrin 2.8% EC @ 9 ml per 10 litre of water during clear weather. Apply 2nd split dose of nitrogen @ 35kg urea per acre to turmeric crop after three months of planting.
- **In Madhya Maharashtra**, maintain 3 to 5 cm at the tillering stage and 5 to 10 cm water level at stem elongation in rice field. Temperature and high humid condition is favourable for occurrence of Tikka leaf spot in groundnut, for control spray Mancozeb @ 25 g + Bavistin @ 25 g in 10 liters of water during clear weather. Undertake harvesting in green gram when 70 % of pods mature during clear weather, sundry and store it at safer place to avoid losses. Due to humid and cloudy condition blight, blast and brown spots may occurs in rice crop, spray Carbendazim 50 % W.P. 500 gm per hectare in 500 liters of water use sticker 0.1 % (1 ml in 1 liter of solution) during spraying . Due present condition of weather infestation of Fall Army Worm may occurs in maize crop if it is more than 10% of cropped area then to control spray of Chlorantriliprole 18.5 SC 4 ml per 10 lit. of water during clear weather. Topping of main axis growing point in hybrid cotton at 80 days after sowing which is beneficial to reduce the vegetative growth and height of plants. Undertake harvesting and threshing of matured black gram and green gram during clear weather. Keep the harvested produce in safer place after proper sun drying. To control Brown spot in sugarcane crop, spray propiconazole 10 ml + chlorothalonil 20 g or carbendazim 10 g + mancozeb 25 g in 10 liters of water should be sprayed with bamboo if the cane is large.
- **In Marathwada**, harvest matured green gram and vegetables and store it at safe places. To control Sigatoka leaf spot in banana spray Carbandazim 50 WP @ 10 gm or Propiconazole 10 % EC @ 10 ml per 10 liters of water during clear weather condition. To control fall armyworm in late sown maize crop, spray Emamectin benzoate 5% @ 4 gm or Spinetoram 11.7 SC @ 4 ml per 10 liters of water during clear weather condition.
- In **Vidarbha**, flood condition is observed in Gadchiroli, Wadsa, Chamorshi and Bhamragad blocks of Gadchiroli district and Brahmpuri, Sawali and Gondpipari blocks of Chandrapur district, it is advised to apply 20 kg N /ha after receding of flood water in paddy crop to get more tillers. To control initial incidence of sucking pest attaining ETL of sap sucking in cotton crop, spray Acetamiprid 20 % SP @ 2 gm or Fipronil 5 % SC @ 30 ml per 10 liters of water during clear weather. Undertake harvesting of matured green gram and keep the harvested produce in safer place after sundrying. To control fruit drop in mandarin orange (Ambia bahar) spray of 1.5 g Gibberellic acid + 1 kg Urea + 100 gm Carbendazim 50% WP per 100 litres of water. Due to recent continuous rainy/cloudy weather/waterlogging wilting symptoms are observed in pigeonpea, to control undertake drenching with copper oxychloride 50%WP@25g or captan 75%WP @ 20 g in 10 litres of water.

Gujarat

- In Middle Gujarat, carry out transplanting of ready tobacco seedlings in the field. Carry out interculturing and weeding operations as well as gap filling in transplanted chilli and tomato crops. Carry out spraying of

Carbendazim 50 WP 10 g in 10 litres of water for control of blast disease in pearl millet. Regularly monitor for borer in brinjal crop by using 4-6 pheromone traps per acre; collect infested shoots/fruits and bury in the soil.

- In South Gujarat, take immediate measures to drain out excess water from standing crops. If crops like pearl millet, maize and pulses are destroyed by excessive rains, cultivate clusterbean, green gram, black gram, pigeon pea, castor; flax for seeds production and fodder crops like sorghum, cow pea. In Kharif paddy, in addition to recommended dose of fertilizers, spray 1.5% Potassium silicate at tillering and panicle initiation stage, for obtaining higher yield and minimizing incidence of stem borer, sheath mite and lodging percentage.
- In Saurashtra and Kutch, in the fields where kharif crops are wilted or damaged severely and re-sowing is necessary, take up sowing of ajwain, suwa, castor and sesame as well as chick pea for green pods. Drain out excess water from cotton field; present weather conditions are congenial for infestation of jassids, whitefly and thrips; to control, spray Flonicamid 50 % WG % 4g/ 10 litres of water. Drain out excess water from pigeon pea field and onion nursery beds. Pick pods of green gram and cow pea in time and store them in an aerated place.
- In North Gujarat, to monitor pink bollworm in cotton, install two pheromone traps (with lure) per acre, check if on average, 8 male adults per day are trapped for 3 consecutive days; if noticed, spray neem seed kernel extract 5% or neem oil @ 50 ml per 10 litres of water or pick and burry the infested flowers/bolls/plant in soil to control pink bollworm infestation. To control bacterial blight disease in cluster bean, spray Mancozeb @ 25g in 10 litres of water.

CENTRAL INDIA [M.P., CHHATTISGARH]

Realised Rainfall: Rainfall occurred in all districts of Madhya Pradesh except in Singrauli, Bhind, Gwalior, Sheopur Kalani districts, all districts of Chhattisgarh except Bijapur and Dantewara districts during the week.

- **Advisories: Thunderstorm accompanied with lightning** very likely at isolated places over East Madhya Pradesh, Chhattisgarh on 5th 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. Farmers are advised to avoid standing in the open or working in the field during thunderstorm period. Keep cattle/goats indoor during thunderstorm.

Madhya Pradesh

- In Kymore and Satpura Hill Zone, drain out excess water from maize, soybean and turmeric fields. There is possibility of semi-granular disease in tomato, brinjal and chilli, sprinkle two spells of any fungal drug @ 1 to 1.5 gm per liter of water at 10-15 days intervals
- In Malwa Plateau Zone, drain out excess water from soybean fields and maintain adequate drainage. Continue transplanting of onion. In the situation of continuous drizzling, in some area, it has been observed that the defoliating insects have started feeding on soybean pod which may results in probable situation of non-podding. Therefore, farmers are advised to control the defoliating insects using contact insecticides like Indoxacarb 333 ml/ha or Lambda cyhalothrin 4.9 CS 300 ml/ha. To make insecticide spray effective and reach the larvae, it is most important to use at least 500 liter water with knapsack sprayer or 120 liter water per hectare with power sprayer. In case of infestation by White fly is observed in addition to defoliators, it is advised to spray Bitacyfluthrin + Imidachloprid 350 ml/ha or Thiomethoxam + Lambda cyhalothrin 125 ml/ha.
- In Nimar Valley Zone, for management of Girdle beetle in soybean, spray the crop with Thicloprid 21.7 SC @ 650 ml/ha, profenophos 50 EC @ 1.25 lit/ha. or Trizophos 40 EC @ 800 ml/ha. after current spells of

rain. Undertake transplanting of onion.

- In Jhabua Hills Zone, to control of fall army worm in maize, spray Emamectin benzoate @ 10ml/pump. Prepare drainage channels in proper distance for drainage of excess rain water in soybean and maize crop fields.

Chhattisgarh

- In Chhattisgarh Plain Zone, drain out excess water from pigeon pea, maize and other pulse crops and maintain proper drainage. For protection of oilseed and pulses crops from white fly, Metasystox should be sprayed @ 3 ml per litre of water or Nuvan can be sprayed @ 1 ml per litre of water.
- In Northern Hill Zone, in the transplanted rice fields, maintain water level up to 3-5 cm. Farmers are advised Weeding/ Intercultural operation in maize before broadcasting of urea. Apply 10 - 15 grains of Furadon (insecticides) in each leaf sheath if the crops are attacked by stem borer.
- In Bastar Plateau Zone, undertake nursery sowing of medium duration cauliflower and sowing of capsicum. Complete sowing of minor millet (Kodo) and finger millet.

Animal Husbandry

- In Madhya Pradesh, vaccinate cattle to prevent from Haemorrhagic Septicaemia and Black Quarter diseases. Keep goat in dry and shaded place, provide green fodder and provide clean and fresh water three times in a day. Vaccinate the goat to control PPR disease.

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

Realised Rainfall : Significant rainfall occurred in all districts except Alwar, Jhunjhunu, Sawai Madhopur, Sikar, Churu, Hanumangarh, Sri Ganganagar districts of Rajasthan; in Bahraich, Ballia, Banda, Basti, Chitrkoot, Kheri and Shrawasti districts of East Uttar Pradesh and Aligarh, Bareilly, Bijnor, Etah, Jhansi, Lalitpur, Mahamayanagar, Mahoba and Moradabad districts of West Uttar Pradesh; all districts except Fatehgarh Saheb, Kapurthala, Ludhiana, Mansa, Nawanshahar, Taran Taran, Mohali, Ropar, Sangrur in Punjab, in Faridabad, Fatehabad, Karnal districts of Haryana, New Delhi, North Delhi, North East Delhi and North West Delhi; all districts except Bandipore, Doda, Kargil, Ladakh(Leh), Pulwama districts of Jammu and Kashmir (UTs); all districts except Kinnaur and Lahaul and Spiti districts of Himachal Pradesh; all districts except Chamoli, Garhwal Pauri and Haridwar districts of Uttarakhand.

- **Advisories: Thunderstorm accompanied with lightning** very likely at isolated places over Uttarakhand, Rajasthan on 5th September,, provide mechanical support to young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Farmers are advised to avoid standing in the open or working in the field during thunderstorm period. Keep cattle/goats indoor during thunderstorm.
- As **rain/thundershowers** likely at **many places** over Uttarakhand on 4th , 6th and at a few places over East Rajasthan on 5th Sept. along with **Heavy rainfall very likely at isolated places** over Uttarakhand, East Rajasthan on 5th September, avoid irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in the crop fields.

UTs of Jammu & Kashmir and Ladakh

- In Sub Tropical Zone, in Basmati rice during tillering/jointing stage to control plant hopper, install pheromone traps @ 1/kanal or spray Imidacloprid 200SL @ 6.25 ml/Kanal; spray Carbendazim @ 0.1% to control the attack of sheath blight; spray Tricyclozole @ 0.06% to control blast attack; spray Mancozeb @ 0.25% to control brown spot attack; spray Flubendiamide @ 0.3ml/litre of water neem kernel extract 5% @ 25kg/ha to control leaf folder infestation during clear weather. Spray Quinalphos @ 0.03% or

Dichlorvos @ 0.05% against hairy caterpillar attack in *Kharif* pulses (moong/mash) late sown if attack is above ETL during clear weather.

- In Cold Arid Zone, spray Mancozeb 75WP @ 0.3% or Hexaconazole 5EC @ 0.05% for blight and leaf spot of tomato, chilli, brinjal and capsicum. Spray with Metalaxyl 8% + Mancozeb 64% @ 0.25% or Mancozeb 75WP @ 0.3% against fruit rot in of tomato, chilli, brinjal and capsicum. For wilt and root rot drench the soil with Carbendazim 50WP @ 0.1% or Carbendazim 12% + Mancozeb 63% 75WP @ 0.5%. For angular leaf spot in cucurbits, spray the crop with Streptocycline @ 0.02%. For downy mildew diseases spray the crop with Metalaxyl 8% + Mancozeb 64% @ 0.25%. Avoid water stagnation. Rogue out wilted or rotted plants from fields.
- In Intermediate Zone, 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 against Hispa infestation in rice crop. Also apply Tricyclazole @ 0.06 % or 1 ml in 1.5 liters of water against blast disease in rice. Apply Carbofuron 3G @ 20 kg/ha (apply 3- 4 granules/leaf whorls to control the blister beetle in maize during tasseling/silking stage. Farmers are advised to provide adequate drainage facilities to avoid water logging in pulse crop fields. Undertake nursery sowing of cole crops.
- In Valley Temperate Zone, continue harvesting of matured cobs of maize. Continue sowing of carrot, radish and turnip and transplanting of seedlings of cole crops. Maintain water level of 5 ±2cm in rice fields. Spray Tricyclozole in the field of rice @ 6g/ 10litre as per the package against blast infestation.

Himachal Pradesh

- In Sub Montane and Low Hills Sub Tropical Zone, carry out weeding in pulses. Undertake nursery bed preparation for rice. Provide proper arrangement for drainage in all vegetables, pulse, maize and nurseries of the crops and avoid any type of spray in the crops. Spray Chlorpyrifos 20 EC @ 4ml/litre of water against termites in vegetables.
- In High Hill Temperate Dry Zone, spray Ridomil MZ-72 W.P. (25%) twice at 15 days of interval and then spray Dithane M-45 (0.25%) after 7 days of interval as required against late blight in potato. Spray Streptocycline (1 gram / 10 litre) and Blitox (Copper Oxochloride) 3gm/litre at 15 days interval after flowering against Black rot disease in cauliflower/ cabbage. Undertake harvesting of matured pods of pea.
- In Mid Hills Sub Humid Zone, continue sowing of French beans, radish, turnip and carrot in high hills area. Undertake sowing of Arkel pea, spinach, methi and raise the nursery for sowing of cauliflower and cabbage.
- In Mild Hills Sub Humid Zone, spray apple trees at walnut stage with Propineb or Zineb @ 600 g / 200 litre water against black rot disease, spray with 0.5 % Imidachloprid against aphids on underside of leaves, spray Fenazaquin @ 50 ml or Propargite @ 200 ml or HMO @ 2litre / 200 litre water against infestation of mites. Install pheromone traps @ 3-4 traps per acre for monitoring of the pest population for diamond backmoth in cole crop, pod borer in pea and fruit borer in tomato.

Punjab, Haryana, Delhi

- In Western Zone of Punjab, due to prevailing humid weather conditions, farmers are advised to regularly monitor rice crop for fungal diseases. Regularly monitor cotton crop for infestation of whitefly; if population reaches 6 whiteflies per leaf in the upper canopy, spray with 80g Ulala 50 WG (flonicamid) or 200g Polo in 125-150 litres of water/acre on clear days. Attack of jassid on bhindi can be reduced by spraying 40ml Confidor 17.8 SL (Imidachloprid) or 40g Actara 25 WG (Thiamethoxan). To control fruit and shoot borer of brinjal, spray Proclaim 5 SG @80g or Coragen 18.5 SC @ 80ml in 100-125 litres of water per acre. Brinjal mite may also be checked by spraying 300 ml Omite 57 EC in 100-150 litres of water per acre.

- In Western Plain Zone of Punjab, drain out excess rain water from the orchard. Irrigation and application of fertilizer and pesticides should be withheld in rice. Under coming weather conditions there are chances of fruit rot attack in chilli, give 3-4 sprays of folicur @ 250 ml or Indofil M-45 or Blitox 50 WP @ 750 g/acre at 10 days interval.
- In Undulating Plain Zone of Punjab, past weather remained congenial for attack of rice hispa. On the transplanted crop, spray 800 ml Ekalux 25 EC (quinalphos) or 1.0 litre Dursban 20 EC (chlorpyrifos) in 100 litres of water per acre with a manually operated sprayer to control hispa. Repeat the spraying if the attack persists. Weather would be congenial for attack of leaf folder and plant hoppers in rice and basmati. Remove excess rain water immediately after heavy rainfall. To save crop from *Pyrilla* damage, spray the crop with 600 ml Dursban 20 EC (chlorpyrifos) in 400 litres of water per acre with manually operated sprayer. Weather is favourable for attack of maize borer. Use trichocards twice having 40,000 eggs of *Corcyra cephalonica* parasitized by *Trichogramma chilonis* per acre to control borer damage. Attack of white fly may be noticed in black gram and soyabean.
- In Central Plain Zone of Punjab, undertake 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 Nativio @80 g or Amitsar 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, due to possibility of rainy conditions, advised to keep weather in mind while application of chemical spray in crops; keep arrangements for drain out excess rain water from fields. Undertake harvesting of early sown bajra crop in clear weather.
- In Eastern Zone of Haryana, undertake sowing of rapeseed such as TL-15, TL-68 by the first fortnight of September and field preparation for early mustard. 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). There is a possibility of attack of leaf hopper, stem borer and white back hopper in rice during this time. Arrange for proper drainage in field. Withhold irrigation, intercultural/hoeing operation and spraying in the cotton crops. Proper drainage management should be done if there is standing water after rain. Monitor the cotton crop for white fly attack carefully.
- In Delhi, in view of the realized rainfall, do proper arrangement for drainage in all vegetables, pulse, maize and nurseries of the crops and avoid spraying in the crops. Undertake sowing of 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 field preparation for early mustard- Pusa Sarson-28, Pusa Tarak etc. Install pest specific pheromone traps @ 3-4/acre in the paddy fields for monitoring of stem borer, diamond back moth (DBM). Undertake weeding and hoeing in the standing crops and vegetables to protect them from weeds and proper drainage in all pulses, vegetables and other crops. Undertake transplanting of brinjal, tomato, chilli and early cauliflower on ridge whose seedlings are ready. False smut may appear in basmati (paddy crop). Symptoms include increase in grains size with brown colored fungus inside. Spraying of Blitox 50 @ 500 grams per acre at 10 days interval (2-3 times).

Uttar Pradesh:

- **In East Uttar Pradesh**, for control of Khaira disease in paddy crops, apply zinc sulphate@ 25kg/ha as

basal. For control of stem borer, brown plant hopper, gall midge, leaf folder and jassids, apply Quinalphos 25 EC @ 1litre/ha. For low and high yielding varieties of sorghum, after thinning process, perform second and last top dressing with 50-60kg of Nitrogen per hectare (109-130kg. Urea) preferably 30-35 days after sowing. In soybean, spray Dimethiats 30 EC @ 1 ltr/ha for protection from yellow vein mosaic disease. Start nursery sowing of tomato (hybrid variety) and Knol khol, gobhi. Undertake sowing of Radish, use 6-8 Kg/ha seeds for sowing. Undertake sowing of fodder sorghum. For treatment of yellow powdery mildew disease of Mung and Black gram (Urd) 3 to 4 sprays of Dimethoate 30 EC or Methyl-O-Demeton 25 EC 1 liter dissolved in 1000 litre water at an interval of 10-15 days according to requirement. Remove weeds from the orchard and apply recommended dose of manures and fertilizers to the fruits trees depending on the plant age. In vegetables (like brinjal, tomato, cauliflower, cabbage etc), for monitoring of borer, Diamond Back moth (DBM) insects, farmers are advised to use pheromone trap @ 3- 4/acre.

- **In West Uttar Pradesh**, farmers are advised to control the bacterial disease / leaf spot diseases in vegetables and citrus fruits by spray of copper oxychloride 2.5 g with streptomycin 200 ml per liter of water. In sesame crop, do the second weeding 30-30 days after sowing. In case of outbreak of stem borer in paddy crop, Imidacloprid 17.8% SL at the rate of 25 g / ha should be sprayed in 500-600 litre of water. In maize crop, there is a possibility of outbreak of stem borer pest, so for its prevention, Imidactin Benzoate 5% Sg 4 g / ha should be sprayed in 500-600 litre of water solution Sprinkle on clean weather. Undertake second weeding in groundnut crops after 35 - 40 days of sowing. Farmers are advised to control of caterpillar in the fields of groundnut crop at this time. For the control of this pest, spray imamectin benzoate @ 2.0 ml. per liter of water.

Uttarakhand

- In Sub Humid Sub Tropic Zone, maintain proper arrangements of drainage to remove excess amount of water from maize, sugarcane and vegetables crop etc. Farmers are advised to avoid irrigation, application of fertilizer and spraying of pesticides/insecticides as there is possibility of heavy rainfall during the foresaid period. Spray the solution of 37 EC Endosulfan in 200 litre of water @ per acre against stem borer attack in late sown maize crop.
- In Bhabar and Tarai Zone, undertake sowing/ transplanting/ of cabbage, broccoli, and turnip. To control the Leaf folder and stem borer infestation in rice, spray 150ml of Chlorantraniliprole 20 SC or 1 litre of Fipronil 5 SC in 500 litre of water per ha after 50 days of transplanting. Undertake sowing of toria crop.
- In Hill Zone, continue sowing/ transplanting of vegetable pea, radish, carrot and cauliflower after current spell of rain. For management of hopper attack in rice, spray Buprofezin 25SC @ 800ml/ha. Or Imidacloprid 17.8SL @125ml/ha. In Finger millet crop, spray Pseudomonas fluorescens (0.5%) against Blast & Helminthosporium leaf spot disease and also spray Chloropyrifos 20EC @ 2.5 litre per hectare or Imidacloprid@3ml per 10 litre of water against stem borer attack during non rainy period.

Rajasthan

- In Irrigated North Western Plain Zone, on appearance of spotted boll worm in cotton field, spray 5% ark of neem ki nimboli/quinalphos (25 EC) @ 2.0 ml or fenvalerate (20 EC) @ 1.0 ml per litre water. Keep the cotton field free from weeds. Undertake weeding and maintain optimum plant population. Regularly check cotton fields for appearance of white fly if white fly population reach above economic threshold level (8-12 white fly/leaf), spray neem based (Nimbosidin 5 ml + liquid soap 1 ml per litre water) or diphenheuron (50 WP) 1gm/litre water.
- In Flood Prone Eastern Plain Zone, to control of yellow mosaic virus disease in greengram crop, spray with imidacloprid 17.8 SL @ 5 ml /15 litre of water.
- In Semi Arid Eastern Plain Zone, spray Carbendazim 50 WP @ 0.5 gm per litre water to protect groundnut

crops against leaf spot disease.

- In Arid Western Plain Zone, prevailing weather conditions may increase the chances of tikka disease in groundnut, spray Mencozeb or Chlorothalonil @ 2 gram per litre of water. For controlling sucking insects like aphid, jassid and white fly apply spray of monocrotophos 36 SL 250 ml or dimethoate 30 EC 300 ml for 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.

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