



National Agromet Advisory Service Bulletin

Friday 13th September 2019

(For the period 13th to 17th September 2019)



Issued by

India Meteorological Department

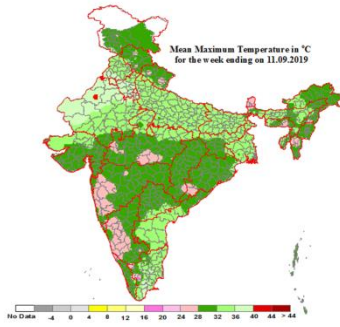
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District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>

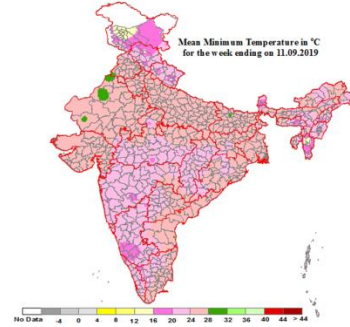
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending on 11.09.2019

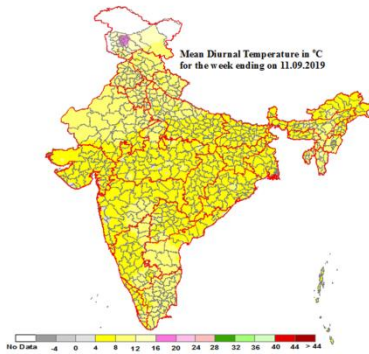
Mean Maximum Temperature (°C) for the week ending on 11.09.2019



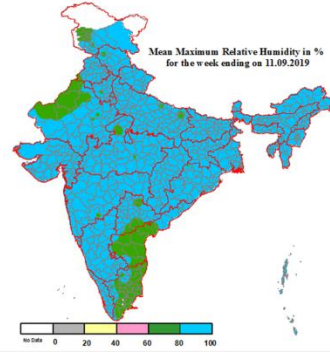
Mean Minimum Temperature (°C) for the week ending on 11.09.2019



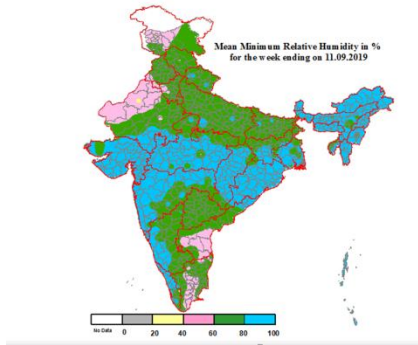
Mean Diurnal Temperature Variation (°C) for the week ending on 11.09.2019



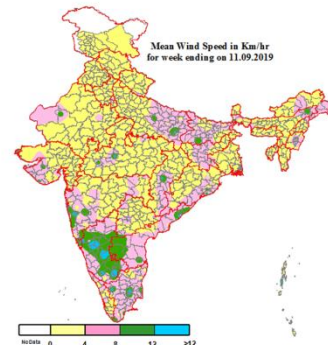
Mean Maximum Relative Humidity (%) for the week ending on 11.09.2019



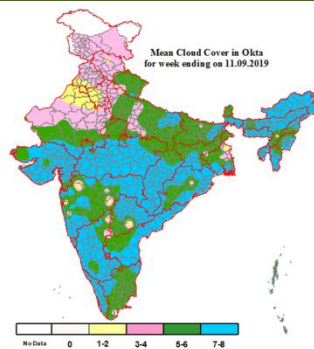
Mean Minimum Relative Humidity (%) for the week ending on 11.09.2019



Mean Wind Speed (km/hr) for the week ending on 11.09.2019

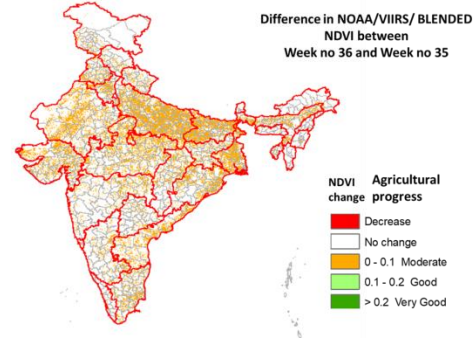
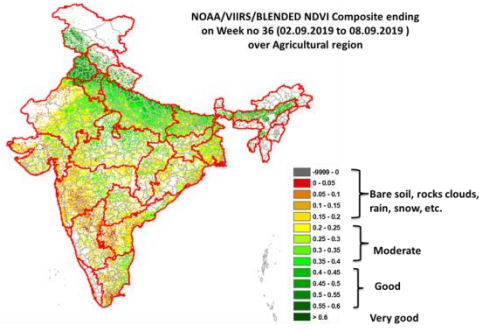


Mean Cloud Cover (okta) for the week ending on 11.09.2019



NOAA/VIIRS/BLENDED NDVI composite for the week number 36 (02.09.2019 to 08.09.2019) over Agricultural regions of India

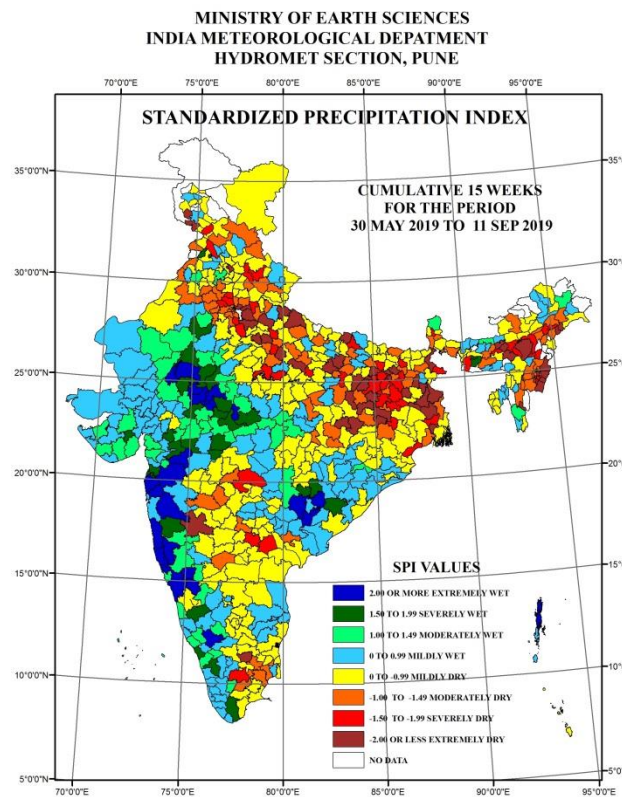
Difference in NOAA/VIIRS/BLENDED NDVI between week number 36 and week number 35



Agriculture vigour was good at most places of Jammu & Kashmir & Punjab; at many places in North Eastern States, Himachal Pradesh & Uttarakhand; at a few places over Haryana, Uttar Pradesh & Madhya Pradesh, at isolated places Bihar, Sub Himalayan West Bengal & Sikkim, Jharkhand, Vidarbha, North Chhattisgarh, North Coastal Andhra Pradesh and Kerala.

Good Agricultural vigour has been observed at a few places over Madhya Pradesh and at isolated pockets of Himachal Pradesh, Uttarakhand, Jammu & Kashmir, Vidarbha, North Coastal Andhra Pradesh, North Chhattisgarh, Jharkhand, Gangetic West Bengal, North Eastern states, Odisha, East & Central Uttar Pradesh and adjoining Bihar.

**Standardised Precipitation Index
Cumulative 15 weeks for the period 30th May to 11th Sep 2019**



- Extremely/Severely wet conditions exist in Valsad, Chhota Udepur, Botad districts of Gujarat; Uttara Kannada, Dharwad, Haveri, Chikmagalur, Mysore districts of Karnataka; Kozhikode, Palakkad districts of Kerala; Barwani, Bhopal, Khandwa, Mandsaur, Neemuch, Raisen, Rajgarh, Ratlam, Sehore, Shajapur, Burhanpur, Agar districts of West Madhya Pradesh; Raigad, Ratnagiri, Thane, Sindhudurg, Mumbai Suburban, Palghar, Dhule, Kolhapur, Nashik, Pune, Satara, Nandurbar

districts of Maharashtra; East Garo Hills district of Meghalaya; Koraput district of Orissa; Kapurthala district of Punjab; Ajmer, Bhilwara, Bundi, Chittorgarh, Jhalawar, Kota, Sikar, Rajsamand districts of Rajasthan; Tirunelveli district of Tamilnadu; Dadara & Nagar Haveli districts of Union Territory, North & Middle Andaman districts of Andaman & Nicobar Islands; Bastar, Bijapur, Narayanpur, Sukma, Kondagaon districts of Chhattisgarh; North Goa districts of Goa.

- Moderately wet conditions exist in Lower Dibang Valley district of Arunachal Pradesh; Baksa district of Assam; Broach, Dangs, Surat, Amreli, Bhavnagar, Jamnagar, Junagarh, Surendranagar districts of Gujarat; Udupi, Belgam, Gadag, Davangere, Kodagu, Mandya districts of Karnataka; Cannur, Malappuram districts of Kerala; Dewas, Dhar, Guna, Harda, Hoshangabad, Indore, Jhabua, Ujjain, Vidisha, Alirajpur, Jabalpur, Mandla, Narsi nghpur, Seoni districts of West Madhya Pradesh; Sangli, Gadchiroli districts of Maharashtra; Lunglei district of Mizoram; Boudhgarh district of Orissa; Bhatinda, Patiala districts of Punjab; Jodhpur, Nagaur, Pali, Jhunjhunu, Sawai Madhopur, Tonk, Udaipur, Baran, Pratapgarh districts of Rajasthan; Nilgiri, Theni districts of Tamilnadu; North Sikkim district of Sikkim; South Goa districts of Goa.
- Moderately/ mildly dry conditions experienced in remaining districts in the country.

Weather Forecast for next 5 days valid upto 0830 hours of 18th September 2019

- ◆ Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table-1.
- ◆ No significant change in maximum temperatures likely over major parts of the country during next 2- 3 days.

5 Day Rainfall Forecast (MID-DAY)

13th September 2019

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

13 September (Day 1): ♦ **Heavy to very heavy rainfall** with **extremely heavy falls** very likely to occur at isolated places over Gujarat region and West Madhya Pradesh; **Heavy to very heavy rainfall** at isolated places over East Rajasthan, Sub- Himalayan West Bengal & Sikkim, Assam & Meghalaya and Konkan & Goa; **Heavy Rainfall** at isolated places over Uttarakhand, East Uttar Pradesh, East Madhya Pradesh, Bihar, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Saurashtra & Kutch, Madhya Maharashtra and Tamilnadu, Puducherry & Karaikal.

- ♦ **Thunderstorm accompanied** with **lightning** very likely to occur at isolated places over Odisha and Jharkhand.
- ♦ **Strong winds**, speed reaching 40-50 kmph, are likely to prevail over westcentral & southwest

Arabian Sea. **Squally weather conditions** are likely to prevail along & off Gujarat coast. Fishermen are advised not to venture into these areas.

14 September (Day 2): ♦ **Heavy to very heavy rainfall** very likely to occur at isolated places over West Madhya Pradesh; **Heavy Rainfall** at isolated places over Uttarakhand, East Uttar Pradesh, East Rajasthan, East Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Gujarat region, Madhya Maharashtra, Konkan & Goa and Andaman & Nicobar Islands.

- ♦ **Thunderstorm accompanied with squall** (wind speed 50-60 kmph) very likely to occur at isolated places over Andaman & Nicobar Islands; with **lightning** at isolated places over Gangetic West Bengal and Jharkhand.
- ♦ **Strong winds**, speed reaching 40-50 kmph, are likely to prevail over westcentral & southwest Arabian Sea. Fishermen are advised not to venture into these areas.

15 September (Day 3): ♦ **Heavy Rainfall** very likely at isolated places over East Uttar Pradesh, Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Andaman & Nicobar Islands.

- ♦ **Thunderstorm accompanied with squall** (wind speed 50-60 kmph) very likely to occur at isolated places over Andaman & Nicobar Islands; with **lightning** at isolated places over Gangetic West Bengal.
- ♦ **Strong winds**, speed reaching 40-50 kmph, are likely to prevail over westcentral & southwest Arabian Sea. Fishermen are advised not to venture into these areas.

16 September (Day 4): ♦ **Heavy to very heavy Rainfall** at isolated places likely to occur over Andaman & Nicobar Islands; **Heavy rainfall** at isolated places over East Uttar Pradesh, West Madhya Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya and Coastal Karnataka.

- ♦ **Thunderstorm accompanied with squall** (wind speed 50-60 kmph) very likely to occur at isolated places over Andaman & Nicobar Islands; with **lightning** at isolated places over Odisha.
- ♦ **Strong winds**, speed reaching 40-50 kmph, are likely to prevail over westcentral & southwest Arabian Sea. Fishermen are advised not to venture into these areas.

17 September (Day 5): ♦ **Heavy Rainfall** at isolated places likely to occur over East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands, Coastal Andhra Pradesh & Yanam, Telangana, Coastal & South Interior Karnataka, Kerala & Mahe and Tamilnadu, Puducherry & Karaikal.

- ♦ **Thunderstorm accompanied with squall** (wind speed 50-60 kmph) very likely to occur at isolated places over Andaman & Nicobar Islands; with **lightning** at isolated places over Odisha.
- ♦ **Strong winds**, speed reaching 40-50 kmph, are likely to prevail over westcentral & southwest Arabian Sea. **Squally weather conditions** are likely to prevail along & off Tamilnadu coast. Fishermen are advised not to venture into these areas.

Weather Outlook for subsequent 2 days from 18th September to 20th September 2019

- ♦ Fairly widespread to widespread rainfall likely over central & east India and with isolated heavy falls over northeast India and northern peninsular India. Scattered to fairly widespread rainfall with isolated heavy falls likely to occur along northern parts of west coast.
- ♦ Isolated to Scattered rainfall likely to occur over rest parts of the country outside northwest India where isolated rainfall is likely.

Salient advisories

- **Thunderstorm accompanied with squall** (wind speed 50-60 kmph) very likely to occur at isolated places over Andaman & Nicobar Islands from 14th to 17th; **Thunderstorm accompanied with lightning** very likely at isolated places over Gangetic West Bengal on 14th & 15th, over Jharkhand on

14th and over Odisha on 16th & 17th September, provide mechanical support to young fruit plants, banana and staking of vegetables to prevent the crops from lodging due to strong winds. Undertake propping up in sugarcane in Odisha.

- As rain/thundershowers likely at most places over **Konkan**, at most/ many places over **Gujarat Region** on 13th & 14th, over Vidarbha on 13th & 17th and over Marathwada on 17th September along with **Heavy to very heavy rainfall** with **extremely heavy falls** at isolated places very likely over Gujarat region on 13th, **heavy rainfall** very likely at isolated places over Konkan on 13th & 14th September, rain/thundershowers likely at most/ many places over **Arunachal Pradesh, Assam & Meghalaya, East Uttar Pradesh** and **Madhya Pradesh** during the period, along with **Heavy to very heavy rainfall very likely** at isolated places over West Madhya Pradesh on 14th, over Assam & Meghalaya on 13th, **heavy rainfall** very likely at isolated places over East Uttar Pradesh during the period, over West Madhya Pradesh and Assam & Meghalaya on 15th & 16th and over Arunachal Pradesh on 15th September; avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields in East Uttar Pradesh, West Madhya Pradesh, Assam & Meghalaya, Arunachal Pradesh, Gujarat Region and Konkan.
- In North Bank Plain Zone of **Assam**, there is chance of attack of leaf folder /rice hispa tillering stage of early transplanted rice. If there is one damage leaf per hill due to attack of leaf folder or appearance of one adult hispa per hill is observed, the farmers are advised to spray Chloropyriphos 20EC or Monocrotophos 40EC @ 1.5ml per litre of water after current spells of rain.
- In Western Plain Zone of **Punjab**, due to persistence of high humidity and cloudy weather. false smut may appear in rice, spray with Kocide 46 DF (Chopper hydroxide) @ 500 g in 200 litres of water per acre to control false smut and after 10 days of its application spray Tilt 200 ml in 200 litres of water.

Detailed Agromet Advisories

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

Realised Rainfall: Significant rainfall occurred in all the districts of Kerala, in Coimbatore, Kanyakumari, Nilgiris districts of Tamilnadu; in East Godavari, Sirkakulam, Visakhapatnam & West Godavari districts of Andhra Pradesh; B. Kothagudem, J. Bhupalpally, Kumaram Bheem, Mahabubabad, Nizamabad & Warangal_Rural of Telangana; in all districts of Coastal Karnataka, in Belagavi, Dharwad, Haveri district of North Interior Karnataka, in Chikkamagaluru, Hassan, Kodagu, Mysuru, Shivamogga districts of South Interior Karnataka during the week. Weather remained mainly dry in rest of the districts.

Advisories:

- As rain/thundershowers likely at most/many places over **Coastal Karnataka** and **Kerala** during the period, at many places over South Interior Karnataka, Coastal Andhra Pradesh and Telangana on 16th & 17th September along with heavy rainfall at isolated places over Coastal Karnataka on 16th & 17th, over Coastal Andhra Pradesh, Telangana, South Interior Karnataka, Kerala and Tamilnadu, Puducherry & Karaikal on 17th September, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide mechanical support to banana, young fruit plants and staking

in vegetables to prevent the crops from lodging due to heavy rain. Provide adequate drainage in standing crop fields.

Kerala

- Due to heavy rains during the past weeks, there is a chance of quick wilt disease in pepper. To control quick wilt and pollu disease, drench the soil with 0.2 % Copper oxychloride and spray the aerial part (plant) with 1% Bordeaux mixture as a prophylactic measure. Application Trichoderma/ Psuedomonas culture will control the quick wilt infestation. Apply fertilizers @ 250g Urea, 285g Rock phosphate, 350g Potash, 500 g MgSO₄ and 2 kg lime per plant in coconut. As a prophylactic measure to control bud rot, apply 1% Bordeaux mixture in the tender leaf axils.
- In Central Zone, there is a chance of appearance of rice bug in paddy, spray Malathion @ 2 ml per one litre of water after current spells of rain. Pesticides application should be done either before 9 am or after 3 pm. Otherwise, the pesticide application will adversely affect the pollination.
- In High Altitude Zone, weather is congenial for soft rot in ginger, drench the soil with 1% Bordeaux mixture/0.3% Mancozeb after current spells of rain and apply green leaf mulching to prevent soil erosion and to increase the organic matter content in the soil.

Andhra Pradesh

- In North Coastal Andhra Pradesh, there is a chance to whitefly infestation in water stagnated fields of sugarcane. To control, spray monocrotophos @ 1.6 ml/litre of water or dimethoate @ 1.7 ml/ litre of water for two times in 10 days intervals and while spaying ensure that entire the plant should get wet.
- In Scarce rainfall Zone of Rayalaseema, as the prevailing weather is favourable for Jassid spread in groundnut, for control spray dimethoate @ 2ml/L or imidacloprid @ 0.3 ml/ litre of water.
- In Krishna Godavari Zone of Andhra Pradesh, weather is congenial for incidence of blast in paddy Spray Tricyclozole @ 0.6 g per liter of water.
- In Southern Zone of Andhra Pradesh, farmers who have not taken up kharif crops are advised to undertake sowing of horsegram

Telangana

- In Southern Telangana zone, to prevent sucking pests in cotton, apply Monocrotophos and water in 1:4 ratio with a soft brush on tender part of the stem for 60 days old crop.
- In Northern Telangana prevailing weather conditions are favourable for blast and hispa in paddy. To control blast apply of tricyclozole @ 0.6 g or isoprothiolane @ 1.5 ml per liter of water and to control, hispa spray profenophos @ 2ml or chloripyriphos @ 2.5 ml per litre of water after current spells of rain .

Tamil Nadu

- In Puducherry, continue land preparation and nursery sowing of Samba rice with long duration varieties like CR 1009, ADT 50 and KKL R 1.
- In Cauvery Delta Zone, undertake land preparation for sowing of rainfed cotton, maize and nursery raising of *Samba* rice
- In Western Zone, continue sowing of winter irrigated cotton. Undertake nursery sowing of *Samba* paddy.
- In Southern Zone, weather is congenial for Serpentine leaf miner in Tomato, spray 30 ml Chlorantraniliprole with 10 litres of water for control.
- In North Western Zone, undertake weeding in black gram and green gram crop and foliar spray of pulse wonder @ 2 kg / 400 litre of water to achieve higher grain yield.

Karnataka

- In South Interior Karnataka, continue harvesting of onion and sowing of sunflower, ragi, sugarcane and soybean crops. Carry out earthing up in maize (30-45 days old) and groundnut crops. Deep ploughing and sowing of horse gram or green manure crops for later stage mulching in mango orchard recommended. Canopy thinning is suggested for proper penetration of sunlight in mango orchard.
- In North Interior Karnataka, complete harvesting of green gram crop. In medium black to deep black soils, continue sowing of sunflower and sorghum crops.
- In Coastal Karnataka, drain out excess water from standing crop fields.
- In South Interior Karnataka, due to high humidity, wilt disease was noticed in banana; spray Bevistin @ 2mg / litre of water after current spells of rain. Since Cloudy weather encourages the occurrence of boll worms in cotton, spray Profenophos @ 2 ml/litre of water after current spells of rain.
- In North Interior Karnataka, incidence of pod borer has been noticed in the soybean ecosystem; Spray Emamectin Benzoate @ 0.2 gram/litre of water.

Animal Husbandry

- In Karnataka, maintain optimum room temperature in silkworm and poultry rearing houses.
- Agroforestry**
- Agro forestry on the bund involving Melia dubia (Hebbevu), Silver Oak and Agase, Halubevu, Glyceridia is recommended for sustainable income under abnormal extreme rainfall events.

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

Realised Rainfall : Rainfall occurred in all districts of Arunachal Pradesh except Lower Subansari; Baksa, Barpeta, Bongaigaon, Cachar, Chirang, Darrang, Dhemaji, Dhubri, Dibrugarh, Goalpara, Golghat, Hailakandi, Jorhat, Karbi Anglong, Karimganj, Kokrajhar, Lakhimpur, Morigaon, N.C.Hills, Sonitpur, Sibsagar, Tinsukia and Udalgiri districts of Assam; all districts of Meghalaya; Aizwal, Kolasib, Lawngtlai, Lunglei, Mamit and Saiha districts of Mizoram; Churachandpur, Imphal West and Tamenglong district of Nagaland and Dhalai, North Tripura and South Tripura districts of Tripura.

- **Advisories:** As rain/thundershowers likely at most/ many places over Arunachal Pradesh, Assam & Meghalaya during the period, over Nagaland, Manipur, Mizoram & Tripura from 13th to 16th along with **Heavy to very heavy rainfall** at isolated places over Assam & Meghalaya on 13th, **heavy rainfall** very likely at isolated places over Assam & Meghalaya on 15th & 16th and over Arunachal Pradesh on 15th September; avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields in Assam & Meghalaya and Arunachal Pradesh.

Arunachal Pradesh

- In Arunachal Pradesh, maintain 2-5 cm water level in the WRC rice field. Undertake nursery bed raising for early cauliflowers and tomato. Under excessive moisture, there is every possibility of rhizome rot in ginger and turmeric. To manage the disease, provide adequate drainage and apply Trichoderma Harzianum @ 50 g/bed along with FYM/ neem cake and undertake mulching.

Assam & Meghalaya

- In Upper Brahmaputra Valley Zone of Assam, due to congenial weather, there is chance of attack of stem borer, hispa and swarming caterpillar in the rice fields. Spray Chlorpyrifos 20 EC or Quinalphos 25 EC @ 66-80 ml per 66-80 litre of water per bigha against the infestation. To prevent the spread of army worms from one field to another, it is advised to apply Malathion 5% dust in the bunds. Undertake sowing of cauliflower and radish.
- In Lower Brahmaputra Valley Zone, continue transplanting of Finger millets, sowing of maize.
- In Hill Zone of Assam, continue the sowing of Arhar, green gram/ blackgram/ sesamum.
- In Central Brahmaputra Valley, continue sowing of black gram and green gram. Prevailing weather is very conducive for infestation of stem borer and caseworm which may be controlled by draining out of excess water or spraying Chlorpyrifos(20%) @2ml/litre of water after current spells of rain.
- In Barak Valley Zone of Assam, weather is congenial for attack of rice hispa in Sali rice. To manage the pest, spray with Chlorpyrifos 20 EC @ 2 ml per litre of water. To control Bacterial Leaf Blight disease, apply 1 kg Potash fertilizer per bigha of land or stop top dressing of Nitrogenous fertilizer or spray with Carbendazim @ 1 gm per litre of water after current spells of rain.
- In North Bank Plain Zone of Assam, there is chance of attack of leaf folder /rice hispa in seedling and tillering stage of early transplanted rice. If there is one damage leaf per hill due to attack of leaf folder or appearance of one adult hispa per hill is observed, the farmers are advised to spray Chlorpyrifos 20EC or Monocrotophos 40EC @ 1.5ml per litre of water after current spells of rain. Farmers of flood affected areas are advised to transplant 20-25 days seedling of short duration cultivars like Luit, Kapilee, Kolong and Dishang in the main field with a spacing of 15x15 cm upto mid of September. Continue sowing of kharif Sesame and pulses (green gram and black gram).
- In Meghalaya, maintain proper drainage in the field of ginger and turmeric. Undertake transplanting for cole crops (cabbage, cauliflower, broccoli) and land preparation and sowing of French bean and cowpea. When weather is clear, drench the soil with Bio-Control agents, Trichoderma based formulation 4 gram/1 litre of water to avoid Soft rot/Wilt in ginger and turmeric at the interval of 30 days.

Manipur, Mizoram, Tripura and Nagaland

- In Nagaland, spray fungicide mixture of Carbendazim 0.05% + Mancozeb 0.2% upto to 50 DAS to control leaf spot disease in groundnut. Also spray NSKE@ 5% to manage early stage larvae and sucking pest in soybean crop. Undertake plant protection methods after current spells of rain. Keeping in view of rainfall, for maize, pulses, vegetables-water logging should be avoided by doing proper drainage in the fields.
- In Manipur, continue planting of potato and onion. Maintain water level of 5-8 cm in the *kharif* rice field. Spray Carbendazim @ 0.5g / lit of water to control tikka disease in groundnut and also spray Mancozeb 75%WP @ 1.25 to 2 kg/ ha at 7 to 10 days interval against rust disease in Soybean after current spells of rain.
- In Mizoram, to control rice blast, spray Tricyclazole @ 1 gram per litre of water after current spells of rain. Continue harvesting of matured cobs of maize and pods of green gram. Maintain drainage properly to avoid water stagnation in standing crops. Undertake sowing of cowpea and nursery raising of brinjal, chilli and early crucifer crops.
- In Tripura, continue sowing of black & green gram and sesame. Due to cloudy and humid weather, there is chance of attack of Stem and Cob rot disease in maize crop at grain filling stage. The combination of Trichoderma Viride (5ml per litre) and pseudomonas Fluresense (5ml per litre) may be applied to manage the attack. Infestation like Damping off, downy mildew may occur in vegetable field. Maintain good drainage in vegetable field.

Animal Husbandry

- In Upper Brahmaputra valley zone of Assam, to protect the livestock from worm infestations, it is advised to give Piperzine or Mebendazole at recommended dose after proper consultation with veterinary doctor.
- In Tripura, monsoon weather could lead to gastrointestinal parasites infection in pig. It is advised to maintain good sanitary conditions of pig sheds.
- In Nagaland, avoid water logging around cattle sheds and keep the sheds dry.

Fishery

- In Barak Valley Zone of Assam, to avoid insect infestation in nursery ponds, apply soap oil emulsion (mixture of cheap soap @ 2.5 kg and kerosene oil @ 13 litre per bigha of pond) and apply gently in nursery ponds.
- 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.

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

Realised Rainfall: Rainfall occurred in all districts of Andaman & Nicobar Islands; in Araria, Bhagalpur, Buxar, Gopalganj and Kishanganj districts of Bihar; in Dhanbad, Dumka, East Singhbhum, Giridih, Gumla, Jamtara, Khunti, Ramgarh, Saraikela, Simdega and West Singhbhum districts of Jharkhand; in all districts of Odisha; in all districts of Gangetic West Bengal except Birbhum, Burdwan, Howrah, Murshidabad and Nadia and in all districts of Sub-Himalayan West Bengal & Sikkim except East Sikkim, Malda, North Dinajpur and South Dinajpur.

Advisories:

- Thunderstorm **accompanied** with **squall** (wind speed 50-60 kmph) very likely to occur at isolated places over Andaman & Nicobar Islands from 14th to 17th ; **Thunderstorm accompanied** with **lightning** at isolated places over Gangetic West Bengal on 14th & 15th , over Jharkhand on 14th and over Odisha on 16th & 17th September, provide mechanical support to young fruit plants, banana and propping up in sugarcane/staking of vegetables to prevent the crops from lodging due to strong winds.
- As rain/thundershowers likely at most places over Sub-Himalayan West Bengal & Sikkim, most/ many places over Andaman & Nicobar Islands, Bihar during the period, over Gangetic West Bengal from 13th to 15th , over Jharkhand on 13th, 14th & 17th and over Odisha on 16th & 17th September along with **heavy rainfall** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim during the period; avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields in Sub-Himalayan West Bengal & Sikkim.

Odisha

- Carry out propping in sugarcane. Undertake sowing of niger in fallow uplands and nursery raising of tomato, brinjal and planting of papaya. Carry out hoeing and weeding in cotton and sesame crops. Carry out land preparation for sowing of kharif onion. Undertake transplanting of 40-45 days old onion

seedlings in raised beds. Continue cultivating ginger in areas with high loamy soil.

- For infestation of swarming caterpillar, case worm and hispa in paddy, spray Chlorpyrifos 20 EC @ 500 ml/acre or Lambda-Cyhalothrin 5 % EC @ 200 ml/acre or Quinalphos 25% EC @ 800 ml/acre. Undertake plant protection measures after current spells of rain.

Bihar

- Complete sowing of late arhar by mid-September. Take up sowing of early radish and transplanting of brinjal seedlings. Maintain optimum water level in rice.
- Monitor arhar crop sown in June-July for insects and pests. Spray Profenofos/Chlorpyrifos @ 2ml/litre of water in maize crop against stem borer attack. Undertake plant protection measures after current spells of rain.

Jharkhand

- Take up sowing of toria (rapeseed) and table pea. Maintain bunds to keep water stagnated in the rice field. Continue harvesting timely sown green gram and black gram crops during clear weather. Farmers having assured irrigation may proceed for early potato cultivation.
- Spray Dichlorovos (Nuvan) @ 2 ml per liter of water with sticker to control hairy caterpillar in late sown green gram and black gram crops. Timely sown direct seeded paddy crop is at flowering stage and susceptible to the attack of Gandhi bug. To control, carry out dusting of Chlorpyrifos / Quinalphos / Methyl Parathion dust @ 10 kg per acre. Undertake plant protection measures after current spells of rain.

West Bengal

- In Sub-Himalayan West Bengal, carry out hand weeding in rice 35 days after transplanting and maintain 2-3 cm of standing water in rice fields. Remove excess water after rainfall. Carry out careful rouging and destruction of infected ginger and large cardamom plants.
- For control of aphids, hoppers, white fly and thrips in chilli crop, apply Imidacloprid 17.8 SL@1ml / 5 litres of water or Thiomethoxam @1g / 3 litres of water. Undertake plant protection measures after current spells of rain.
- In Gangetic West Bengal, transplant tomato, brinjal and chilli seedlings in main field in ridge furrow system. Use staking during planting of seedlings. Maintain proper water level in transplanted rice field. Carry out one hand weeding in Aman wet seeded paddy. Keep the drainage channels clean and arrange proper aeration in the betel vine gardens. Prepare seed bed for nursery sowing of winter vegetables.

Andaman & Nicobar Islands

- In Andaman & Nicobar Islands, treat the nursery paddy seedlings with 6 packets of Azospirillum and transplant in the main fields. Do weeding in brinjal, okra and chilli grown in upland area after current spells of rain and apply vermi-compost or farm yard manure @ 2.5 tonnes/ha.

Animal Husbandry

- In Bihar, to control the external parasites in animals, give medicines like Butox in consultation with local veterinary doctor.
- In Odisha, vaccinate calves above three months and sheep and goat above two months against Foot and Mouth disease. Carry out de-worming in animals. Provide clean drinking water to poultry birds to avoid Escherichia Coli infection to birds.
- In West Bengal, to control FMD in cattle, wash wounds with Potassium Permanganate solution. In Andaman & Nicobar Islands, provide mineral mixture supplemented to the egg laying birds or layers to improve egg production.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Realised Rainfall: Rainfall occurred in all districts of Konkan & Goa; in all districts except Solapur, Sangli districts of Madhya Maharashtra, in all districts of Vidarbha except Yeotmal; in all districts of Gujarat.

Advisories:

- As rain/thundershowers likely at most places over Konkan, at most/ many places over Gujarat region on 13th & 14th and over Vidarbha on 13th & 17th and over Marathwada on 17th September along with **Heavy to very heavy rainfall** with **extremely heavy falls** at isolated places very likely over Gujarat region on 13th, **heavy rainfall** very likely at isolated places over Konkan on 13th & 14th September ; avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields Gujarat region &Konkan.

Maharashtra

- In Konkan, maintain 5 cm water level in rice fields. Provide adequate drainage facilities in standing crop fields. To control downy mildew and powdery mildew in vegetables, spray Dithane M-45 or Dithane Z-78 each @ 2.5 g/litre of water after current spells of rain. Prevailing weather is congenial for vegetative flush in mango, spray Lambda cyhalothrin 5% EC @ 6ml or Quinalphos 25% EC @ 25 ml + Bavistin @ 20 g per 10 liters of water. Undertake plant protection methods after current spells of rain.
- In Madhya Maharashtra, maintain 5 cm water level in rice fields. Continue land preparation for sowing of rainfed gram and undertake harvesting of matured green gram and black gram after current spell of rain. Keep the harvested produce in safer place. Continue land preparation for *rabi* jowar, safflower and rainfed gram in fallow lands. To reduce dropping of leaves, flower and boll of cotton, spray NAA (Planofix) @ 40 ml per 100 liters of water. To control leaf eating caterpillar in soybean, spray Quinalphos @ 25 ml per 10 litres of water. Undertake plant protection methods after current spells of rain.
- In Marathwada, continue land preparation for planting of preseasonal sugarcane and picking of matured green gram during clear weather. To control anthracnose in soybean, spray Tebuconazole 10 % WP + Sulfur 65 % WG @ 10 g per 10 liter of water after current spells of rain.
- In Vidharbha, continue picking of matured black gram after current spell of rain. Keep the harvested produce in safer place. In fallow lands, undertake sowing of early *rabi* pigeon pea, sesame, green gram and black gram up to 15th September. In late sown soybean (50 and 70 DAS) undertake foliar spray of 2% urea (200 g Urea +10 litre water) after current spell of rain for better productivity. To control pink boll worm in cotton (5 % infestation) , spray Quinalphos 25% AF @ 25 ml or Chlorpyriphos 20% EC @ 25 ml per 10 liters of water after current spell of rain. Maintain 5-7 cm water level in rice fields. To control stem borer in the crop, spray Acephate 75% WP @ 20 g or Quinalphos @ 32 ml in 10 liter of water after current spells of rain. Undertake foliar spray of 2% Urea (200 g Urea +10 litre water) in soybean (flowering stage) after current spell of rain for better productivity.

Gujarat

- In Gujarat region, drain out excess water from standing crop fields. In Saurashtra & Kutch, drain out excess water from the groundnut, sesamum, pearl millet etc. crops. Continue picking of mature pods green gram during clear weather.
- In South Gujarat, undertake nursery preparation for chilli seedlings. Continue transplanting of seedlings of bell pepper after current spells of heavy rain.
- In North Gujarat, continue picking of mature pods of green gram and cowpea crops in clear weather. Undertake intercultural operations in black gram crop.
- In Middle Gujarat, undertake picking of matured pods of green gram crop after current spells of rain. Carry out intercultural operations at vapsa condition in transplanted tobacco field after current spells of rain.
- In Saurashtra, in the prevailing warm & humid weather, there is chance of Phytophthora blight & powdery mildew in seamum, spray Ridomil @20 gm / 10 liters of water on a non-rainy day.

Animal Husbandry:

- In Gujarat, provide balanced mineral mixture in diet of animals. Keep animal in shed. Keep fodder in safe place to avoid spoilage due to rainfall.

CENTRAL INDIA [M.P., CHHATTISGARH]

Realised Rainfall: Rainfall occurred in all districts of Chhattisgarh except in Balrampur, in all districts of East Madhya Pradesh except Chhatarpur, Satna, Singrauli and Tikamgarh districts and in all districts of West Madhya Pradesh except in Barwani and Sheopur Kalani districts.

Advisories:

- As rain/thundershowers likely at most/many places over Madhya Pradesh during the period and over Chhattisgarh on 13th & 17th along with **Heavy to very heavy rainfall very likely** at isolated places over West Madhya Pradesh on 14th , **heavy rainfall very likely** at isolated places from 15th & 16th September, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields in West Madhya Pradesh.

Madhya Pradesh

- In Madhya Pradesh, keeping in view of heavy rainfall forecast, farmers are advised to provide adequate

drainage in all vegetables, pulse, maize crop fields.

- In Malwa Plateau Zone, continue intercultural operations in soybean, maize and cotton crops. Farmers are advised to install Light Trap / Insects specific Pheromone Trap in soybean crop in order to assess the likely infestation of insects and for integrated pest management. For management of defoliators and white fly in soybean, spray pre-mixed insecticides like Betacyfluthrin + Imidacloprid @ 350 ml/ha or Thimethoxam + Lambda cyhelothrin @ 125 ml/ha after current spells of rain.
- In Jabhua Hill Zone, provide drainage channels at proper distance for drainage of excess rain water in tomato, chilli, brinjal, kharif onion and early cauliflower crop and give recommended dose of fertilizers.
- In Satpura Plateau Zone, if leaf eating caterpillar is observed in soybean crop, apply Trizofas @ 2 ml/acre or Flubendiamide @ 0.5 ml/acre +200 liter water. Bud necrosis disease is observed in groundnut, for control, apply Monocrotophos @ 1.6 ml/liter of water and for stem rot of groundnut spray of Saaf @ 3gram/ liter of water after current spells of rain.

Chhattisgarh

- In Northern Hill Zone, continue nursery sowing of brinjal, early tomato, chilli and onion in the upland areas. Undertake intercultural operations in different kharif crops like Maize, Ragi, Arhar, Groundnut, Soybean, Urd, Mung etc on a non rainy day. After weeding, broadcast urea as per requirement.
- In Chhattisgarh Plain Zone, continue nursery sowing of medium duration cauliflower after current spells of heavy rain. Maintain 5cm water level in rice fields. In the rice crop, continuous monitoring of harmful insects should be done. For this light trap should be used. Light trap should be placed at some distance from the crop and bulb should be lighted from evening 06:30 pm to 10:30 pm. Collected insects should be destroyed in the morning hours.
- In Bastar Plateau Zone of Chhattisgarh, undertake field preparation for sowing of horse gram, blackgram, green gram and sesame.

Animal Husbandry

- In Madhya Pradesh, cattle sheds should be kept dry and farmers are advised to provide dry feed along with green feed in (50:50) ratio and 20-30 g mineral mixture and salt for the dairy animal's every day. . Vaccinate the chicks at 7 days (F1) and at 6 weeks with R2B. Vaccinate the poultry birds to prevent Ranikhet disease. (first F-1 in age of 7 days & second R2B in age of 8 weeks)
- In Chhattisgarh, cattle sheds should be kept dry to prevent from foot rot disease. Hygiene should be maintained around cattle shed, Bushes, parthenium weeds should be uprooted and pits etc. should be filled to control mosquitoes.

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

Realised Rainfall: Rainfall occurred in Gurdaspur, Ludhiana, Nawanshar, Patiala, Ropar districts of Punjab; in all the districts of East Rajasthan except Ajmer, Alwar, Bharatpur, Dausa, Jaipur, Jhunjhunu, Sawai Madhopur, Sikar, Sirohi and Tonk. Rainfall occurred in Pali district of West Rajasthan; in Balrampur, Farrukhabad and Maharajganj districts of East Uttar Pradesh and in Agra and Jotiba Phule Nagar districts of West Uttar Pradesh; in Kangra, Mandi and Una districts of Himachal Pradesh; Reasi district of Jammu and Kashmir and in all districts of Uttarakhand except Almora, Chamoli, Garhwal Tehri and Uttarkashi during the week.

Advisories: As rain/thundershowers likely at many places over East Uttar Pradesh during the period and over East Rajasthan and Uttarakhand on 13th & 14th September along **heavy rainfall very likely** at isolated places over East Uttar Pradesh during the period, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields in East Uttar Pradesh.

Jammu & Kashmir

- In Sub Tropical Zone, spray imidacloprid @0.3 ml/litre of water on maize, to control jassid and other sucking pests. To control stalk rot in maize, avoid water stagnation and apply mancozeb @ 2.5 gm/litre of water. Manually rogue out mosaic affected plants of kharif pulses at initial stage of attack.
- In Intermediate Zone, undertake sowing of toria in fallow lands utilizing the realized rainfall. To control Hispa on rice, apply chlorpyrifos @ 2 ml/litre of water. Spray Tricyclazole @ 0.06 % or 1 ml in 1.5 litres of water to control Blast on rice. Weather is favourable for the attack of aphids in maize crop.

To control the attack, spray Dimethoate 30 EC/ Rogor @ 2 ml/litre of water on clear weather conditions. If aphid population is not managed, then repeat the spray after 15 days interval.

Himachal Pradesh

- In Sub Montane and Low Hills Sub Tropical Zone, to control attack of blast and brown spot on rice, spray Carbendazim @ 2.0 g / litre of water. To control Stalk rot in maize, drench maize fields with bleaching powder @16 kg/ha a week before tasseling. In maize, for control of stem borer, spray Carbrayl @ 2gm/ litre of water or broadcasting of Carbofuran 3% G or phorate 10 % G @ 8 kg/acre. Undertake field preparations for sowing of early mustard. Carry out weeding and hoeing in all crops and vegetables for optimum growth.
- In Mid Hills Sub Humid Zone, undertake transplanting of cabbage. Carry out hoeing and weeding operations in vegetable crops. Complete picking of apple fruits and keep the orchards neat and clean.
- In High Hill Temperate Dry Zone, remove the weed from the potato field. For the prevention of blight disease in potato, spray Ridomil 2.5 g or Blitox (copper oxy chloride) at 3 g per litre of water.

Punjab, Haryana and New Delhi

- In Punjab, continue transplanting of vegetables (tomato, chilli, brinjal, cauliflower) and sowing of maize. Undertake planting of kharif onion crop both with bulbsets as well as seedlings. In early transplanted rice, drying of leaves due to bacterial leaf blight disease may be noticed, avoid ponding of water to check further spreading of infection. Undertake planting of ever green fruit plants like mango, sweet orange, mandarin, lime, lemon, litchi, guava, aonla, loquat and papaya.
- In Western Plain Zone of Punjab, due to persistence of high humidity and cloudy weather false smut may appear in rice, spray with Kocide 46 DF (Chopper hydroxide) @ 500 g in 200 litres of water per acre to control false smut and after 10 days of its application spray Tilt 200 ml in 200 litres of water.
- In Undulating Plain Zone, use fruit fly trap to control fruit fly damage in guava orchards and cucurbits. Farmers are advised to remove foot rot infected plants from rice field and avoid ponding of water to check further spreading of infection. Weather condition is favourable for planting of evergreen fruit plants like Mango, Litchi, Guava.
- In Haryana, continue transplanting of matured seedlings of tomato, cauliflower, cabbage in prepared field and complete the sowing of ladyfinger, bottle gourd, cucumber, ridge gourd and summer radish. Continue land preparation for sowing for pulses i.e. green gram, lobia, moth. Maintain optimum water level and undertake weeding operation in paddy crop.
- In Delhi, continue transplanting of early cauliflower, tomato, chilli, brinjal cauliflower and cabbage whose seedlings are ready. In present weather condition, constant monitoring for leaf folder in paddy field, control the pest, mechanical methods, such as rope method (to dislodge the larvae) is advised. In vegetables (brinjal, cauliflower, cabbage, tomato etc), monitor borer insect, use pheromone trap @ 3-4/acre. If insect population is above ETL, spraying of Spinosad 1.0 ml/4 litre of when sky is clear against fruit borer, diamond back moth. Termites may damage crops and vegetables in the present weather, spray Chlorpyrifos 20 EC @ 4 ml/litre of water.
- In Undulating Plain Zone of Punjab, borers in sugarcane can be managed by using Tricho-cards having 20,000 eggs of *Corcyra cephalonica* parasitized (seven days old) by *Trichogramma chilonis* and *Tricogramma japonicum* per acre at 10 days interval. Sucking pest population may increase which can also transmit Mosaic disease in mung and mash, spray recommended insecticides for control of sucking pest. Due to high humid conditions, sheath blight may appear in Basmati rice and attack of brown spot appear in direct seeded rice, apply fungicides for control.
- In Western Zone of Punjab, due to mainly dry weather along-with cloudy sky, irrigate the cotton crop. Apply 4 sprays of 2 % potassium nitrate (13-045) solution at weekly intervals, starting at flower initiation. If the population of sucking insect pests reaches economic threshold levels, spray the crop with Ulala 50 WG @ 80g/acre or Osheen 20 SG @ 60g/ acre for the control of whitefly. For the control of jassid, use Osheen 20 SG @ 60g per acre or Ulala 50 WG @ 80g/acre in 125-150 litres of water with manually operated knapsack sprayer.
- In Western Zone of Haryana, due to favourable weather condition there is chance of occurrence of myrothecium leaf spot, bacterial blight in cotton, for control spray 800 gram Copper-oxy-chloride mixed with 250 liter water per acre. Also, due to favourable weather, monitor the infestation of rice leaf roller and stem borer in early transplanted rice crop. If infestation is noticed then broadcast 7.5 kg Fipronil (Regent/Mortal) 0.3 G mixed with 10 kg dry sand in per acre.

Uttar Pradesh

- In East Uttar Pradesh, maintain optimum soil moisture in the maize crop and avoid water logging as maize crops are most susceptible to water logging. Undertake dressing of Nitrogen after hand weeding and thinning in maize, bajra, pigeon pea, sorghum, great millet etc. Undertake dressing of urea fertilizer in paddy crop at panicle initiation stage. There is possibility for attack of Gundhi bug in paddy; hence farmers are advised monitoring the crop and take suitable control measures if noticed. Undertake earthing in banana plant and propping in sugarcane to protect them from lodging by heavy rainfall. Undertake intercultural operations and apply fertilizer in sugarcane after current spells of rain.
- In West Uttar Pradesh, maintain optimum moisture level in Maize at grain formation stage. Farmers are advised for monitoring for brown plant hopper (BPH) in paddy field. Maintain optimum water level in paddy crop at Flowering / milk stage. Drain out excess rainwater from jowar and bajra fields. For management of stem borer in paddy, spray Chlorpyrifos 20EC @ 1.5 litres in 500-600 litres of water per hectare. There is a possibility of stem borer in the maize as well as jowar and bajra crop, for control, spray Dimethoate 30 EC @ 1 liter / ha or Qinalphos 25 EC @ 1.5 liters / ha in 400-800 liters of water on a non rainy day.

Uttarakhand

- In Bhabar and Tarai Zone, if more than 5% maize plants are damaged due to fall armyworm, then spray Spinetoram 11.7%SC @ 0.5 ml/lit or Chlorantraniliprole 18.5% SC @ 0.4 ml/lit or Thiamethoxam 12.6% + Lambda Cyhalothrin 9.5% ZC @ 0.25 ml/lit of water. To control the Leaf folder stem borer in rice, spray 150ml of chlorantraniliprole 20 SC or 1 litre of Fipronil 5 SC in 500 litres of water per ha after 50 days of transplanting. Undertake sowing of toria. Undertake planting of evergreen fruit plants like mango, guava, lemon, papaya, litchi etc. and carry out weeding and hoeing operations in the orchards.
- In Hill Zone, undertake sowing of radish, mustard and coriander. Maintain proper water level in paddy during milking stage. If blast disease is observed on paddy leaves, spray Carbendazim 50 WP@10 gram/10 liters of water during clear sky condition and apply the 2nd doses after 10-12 days interval. Monitor soybean, green gram and, black gram regularly. If white flies or sucking pests are observed above ETL on crops, spray Imidacloprid @ 0.5-1.0 ml or Neem oil @ 2-2.5ml per litre of water with added adhesive in small quantity during clear sky condition.
- In Sub-Humid Sub-Tropic Zone, under prevailing weather condition there is possibility of khaira disease in rice crop, spray 5 kg Zinc sulphate with 20 kg of urea dissolved in 800-1000 litres of water after current spells of rain. Continue plantation of fruit orchards and maintain proper drainage in orchards.

Rajasthan

- In Semi-Arid Eastern Plain Zone, undertake field preparation for sowing of rainfed Taramira and mustard, pea and radish.
- In Flood Prone Eastern Plain Zone, okra crop may be affected from yellow mosaic disease. In this disease leaves become cup shaped & turn yellowish. This disease is spread by white fly attack. Spray Malathion 50 EC @ 1.0 ml per litre water.
- In Irrigated North Western Plain Zone, continue planting of new seedlings of kinnow in prepared pits of orchards. Purchase kinnow plants from certified nursery & keep kinnow orchard free from weed by weeding time to time.
- In Transitional Plain Zone and Inland Drainage Zone, undertake planting of fruit plants like ber, aonla, pomegranate. Also advised to transplant onion seedling in the prepared fields.
- In Arid Western Plain Zone, weather is congenial for Semilooper and Bihar hairy caterpillar in castor crop, spray Quinalphos 25 EC @ 1 liter per hectare.

Animal Husbandry

- In Uttar Pradesh, Vaccinate the goat to control PPR disease. Vaccinate cow and buffalo against FMD and langra diseases. Provide mixture of dry/green fodder with mineral salts and clean drinking water to the cattle. Vaccinate the poultry birds to prevent Ranikhet disease. Provide mineral mixture, fresh and clean water to birds.
- In Rajasthan, weather is congenial for Hemorrhagic Septicemia and black quarter diseases in livestock so farmers are advised to do vaccination to protect their animal from these diseases.

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