



# *National Agromet Advisory Service Bulletin*

*Friday 27<sup>th</sup> September 2019*

*(For the period 27<sup>th</sup> September to 01<sup>st</sup> October 2019)*



*Issued by*

*India Meteorological Department*

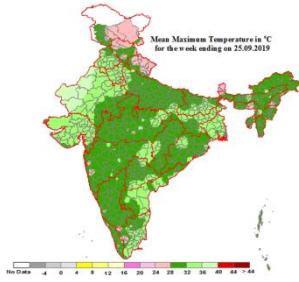
**Weblink For**

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

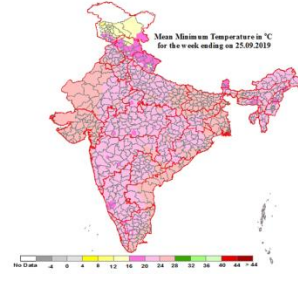
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

**Spatial distribution of weather parameters for the week ending on 25.09.2019**

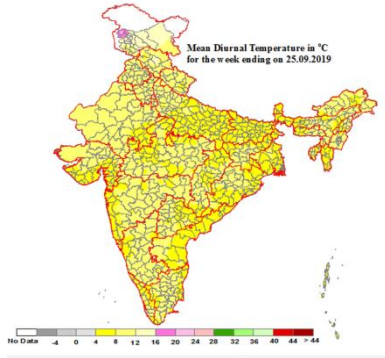
**Mean Maximum Temperature (°C) for the week ending on 25.09.2019**



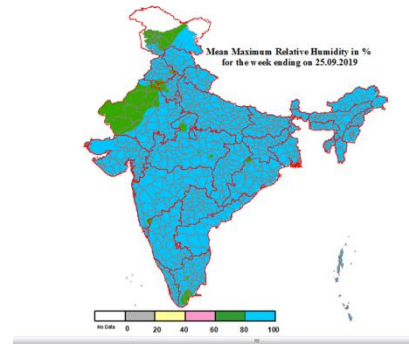
**Mean Minimum Temperature (°C) for the week ending on 25.09.2019**



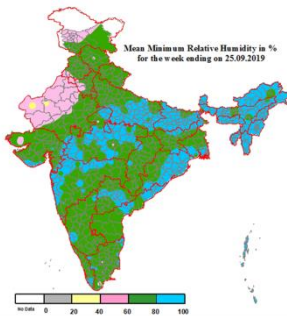
**Mean Diurnal Temperature Variation (°C) for the week ending on 25.09.2019**



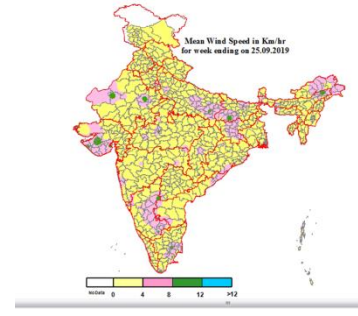
**Mean Maximum Relative Humidity (%) for the week ending on 25.09.2019**



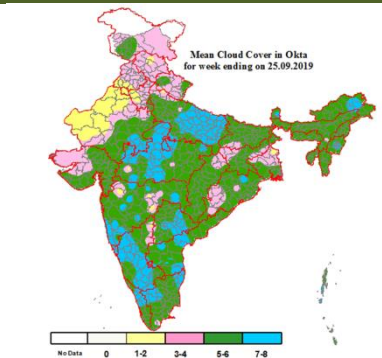
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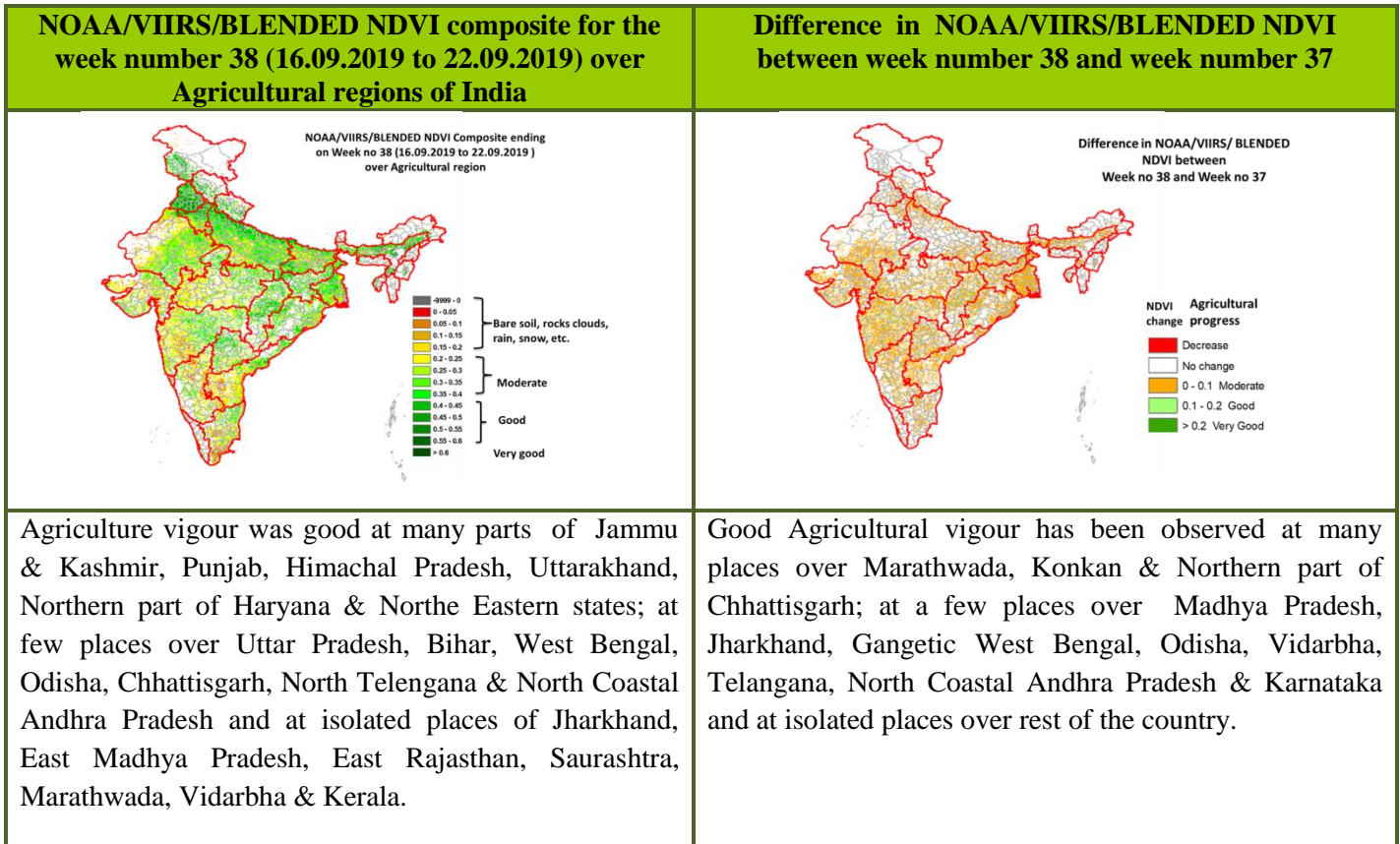
**Mean Wind Speed (km/hr) for the week ending on 25.09.2019**



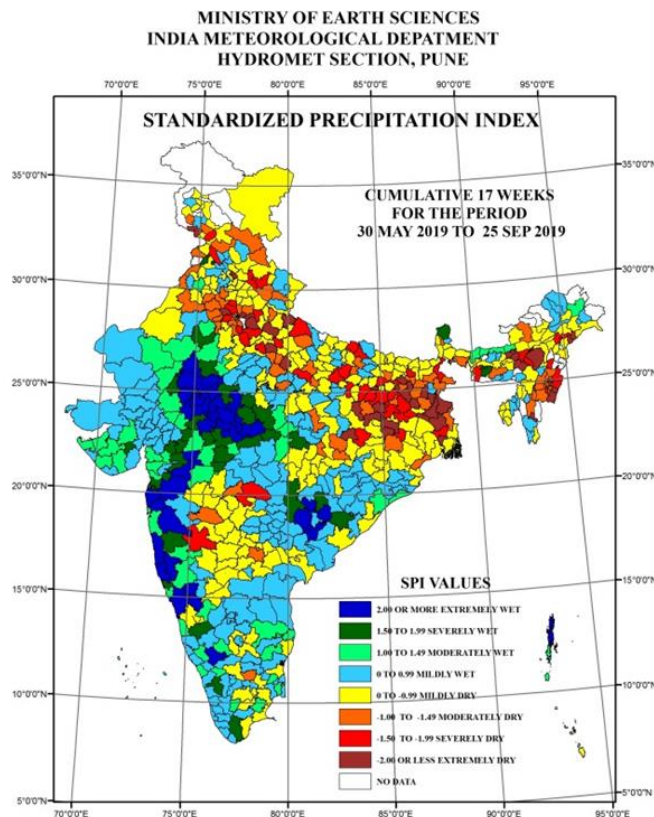
**Mean Cloud Cover (okta) for the week ending on 25.09.2019**







### Standardised Precipitation Index Cumulative 17 weeks for the period 30<sup>th</sup> May to 25<sup>th</sup> Sep 2019



- Extremely/Severely wet conditions exist in Valsad, Dangs, Chhota Udepur, Botad districts of Gujarat; Uttara Kannada, Dharwad, Haveri, Chikmagalur, Mysore districts of Karnataka; Palakkad district of Kerala; Barwani, Bhopal, Dewas, Guna, Hoshangabad, Indore, Jhabua, Khandwa, Mandasaur, Neemuch, Raisen, Rajgarh, Ratlam, Sehore, Shajapur, Ujjain, Vidisha, Burhanpur, Ashoknagar, Alirajpur, Agar, Mandla,

Narsinghpur, Sagar districts of West Madhya Pradesh; Raigad, Ratnagiri, Thane, Sindhudurg, Mumbai Suburban, Palghar, Dhule, Kolhapur, Nashik, Pune, Satara, Nandurbar, Gadchiroli districts of Maharashtra; East Garo Hills district of Meghalaya; Koraput district of Orissa; Kapurthala district of Punjab; Ajmer, Bhilwara, Bundi, Chittorgarh, Jhalawar, Kota, Sikar, Tonk, Baran, Rajsamand, Pratapgarh districts of Rajasthan; Tirunelveli districts of Tamilnadu; Dadara & Nagar Haveli districts of Union Territory; North & Middle Andaman districts of Andaman & Nicobar Islands; North Sikkim districts of Sikkim; Bastar, Bijapur, Narayanpur, Sukma, Kondagaon districts of Chhattisgarh; North Goa districts of Goa.

- Moderately wet conditions exist in Chittoor district of Andhra Pradesh; Lower Dibang Valley district of Arunachal Pradesh; Kokrajhar, Udalguri, Baksa, Chirang districts of Assam; Broach, Surat, Narmada, Navsari, Amreli, Jamnagar, Junagarh, Rajkot, Surendranagar, Devbhumi Dwarka districts of Gujarat; Udupi, Belgam, Davangere, Kodagu, Mandya districts of Karnataka; Kozhikode district of Kerala; Dhar, Harda, Khargone, Damoh, Jabalpur, Seoni districts of West Madhya Pradesh; Mumbai City, Jalgaon, Sangli districts of Maharashtra; Ganjam, Puri districts of Orissa; Bhatinda districts of Punjab; Jodhpur, Nagaur, Pali, Banswara, Dungarpur, Jaipur, Jhunjhunu, Sawai Madhopur, Udaipur districts of Rajasthan; Nilgiri, Sivaganga, Theni, Tiruvallur, Tiruvannamalai, Tiruvarur, Ariyalur districts of Tamilnadu; Puducherry district of Union Territory; South Andaman district of Andaman & Nicobar Islands; South Goa district of Goa.
- Moderately dry conditions exist in East Kameng district of Arunachal Pradesh; Banka, Bhagalpur, Katihar, Khagaria, Lakhisarai, Vaishali districts of Bihar; Gurgaon, Hisar, Jind, Mahendragarh, Mewat, Bhiwani, Faridabad, Kaithal, Fatehabad districts of Haryana; Kangra, Kinnaur, Lahaul & Spiti districts of Himachal Pradesh; Udhampur, Rajouri districts of Jammu; Shahdol districts of West Madhya Pradesh; Beed, Washim districts of Maharashtra; Churachandpur, Imphal West, Senapati, Tamenglong, Thoubal districts of Manipur; West Khasi Hills districts of Meghalaya; Aizwal district of Mizoram; Balasore district of Orissa; Amritsar, Ferozepur districts of Punjab; Hanumangarh district of Rajasthan; Namakkal district of Tamilnadu; Deoria, Kaushambi, Mau, Rae Bareilly, Sitapur districts of Uttar Pradesh.
- Severely / extremely dry conditions experienced in remaining districts in the country.

#### Weather Forecast for next 5 days valid upto 0830 hours of 02<sup>th</sup> October 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)

27<sup>th</sup> September 2019

Met-Sub-Division	27-Sep Today	28Sep Sat	29Sep Sun	30Sep Mon	01Oct Tue
1. Andaman & Nicobar Islands	SCT	SCT	SCT	SCT	SCT
2. Arunachal Pradesh	SCT	SCT	FWS	FWS	SCT
3. Assam & Meghalaya	SCT	FWS	FWS	WS	WS
4. N. M. M. & T.	FWS	FWS	FWS	FWS	WS
5. S.H. West Bengal & Sikkim	WS	WS	WS	WS	FWS
6. Gangetic West Bengal	WS	WS	WS	WS	FWS
7. Odisha	FWS	FWS	SCT	SCT	SCT
8. Jharkhand	WS	WS	FWS	SCT	SCT
9. Bihar	WS	WS	WS	FWS	SCT
10. East Uttar Pradesh	WS	WS	SCT	SCT	SCT
11. West Uttar Pradesh	FWS	FWS	SCT	ISOL	SCT
12. Uttarakhand	WS	WS	FWS	FWS	SCT
13. Haryana, Chd & Delhi	SCT	SCT	SCT	SCT	FWS
14. Punjab	SCT	FWS	SCT	SCT	FWS
15. Himachal Pradesh	WS	WS	FWS	SCT	FWS
16. Jammu & Kashmir	FWS	FWS	SCT	SCT	FWS
17. West Rajasthan	ISOL	ISOL	SCT	SCT	ISOL
18. East Rajasthan	SCT	FWS	FWS	FWS	FWS
19. West Madhya Pradesh	FWS	FWS	SCT	SCT	FWS
20. East Madhya Pradesh	WS	FWS	SCT	SCT	SCT
21. Gujarat Region	WS	WS	WS	WS	FWS
22. Saurashtra & Kutch	WS	WS	WS	WS	FWS
23. Konkan & Goa	WS	WS	FWS	FWS	FWS
24. Madhya Maharashtra	FWS	SCT	SCT	SCT	SCT
25. Marathawada	SCT	SCT	ISOL	ISOL	ISOL
26. Vidharbha	FWS	SCT	SCT	SCT	SCT
27. Chhattisgarh	FWS	FWS	SCT	SCT	SCT
28. Coastal A. P. & Yanam	SCT	SCT	SCT	SCT	SCT
29. Telangana	FWS	FWS	SCT	SCT	SCT
30. Rayalaseema	SCT	SCT	ISOL	ISOL	ISOL
31. T.N., Puducherry & Karaikal	ISOL	ISOL	SCT	SCT	ISOL
32. Coastal Karnataka	FWS	SCT	SCT	SCT	SCT
33. North Interior Karnataka	FWS	SCT	SCT	SCT	SCT
34. South Interior Karnataka	FWS	SCT	SCT	SCT	SCT
35. Kerala & Mahe	SCT	SCT	FWS	FWS	SCT
36. Lakshadweep	SCT	SCT	SCT	SCT	SCT

**% Station Reporting Rainfall**

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

**Weather Warning during next 5 days**

**27 September (Day 1):** ♦ **Heavy to very heavy rainfall** very likely at isolated places over Gujarat state, Uttarakhand, East Uttar Pradesh and Bihar and **heavy rainfall** at isolated places over Telangana, South Interior Karnataka, Konkan & Goa, Madhya Maharashtra, Madhya Pradesh, Chhattisgarh, Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, East Rajasthan, West Bengal & Sikkim, Jharkhand, Odisha and Assam & Meghalaya.

♦ **Thunderstorm accompanied with lightning** very likely to occur at isolated places over Madhya Maharashtra, Madhya Pradesh, Chhattisgarh, Vidarbha, West Uttar Pradesh and Odisha.

♦ **Squally weather** likely to prevail over Gujarat coast & adjoining northeast Arabian Sea and east Indian Ocean & adjoining south Bay of Bengal. Fishermen are advised not to venture into these areas.

**28 September (Day 2):** ♦ **Heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over Bihar; **heavy to very heavy rainfall** at isolated places over Himachal Pradesh, Gujarat state, Uttarakhand and Sub-Himalayan West Bengal & Sikkim and **heavy rainfall** at isolated places over Jammu & Kashmir, East Madhya Pradesh, Chhattisgarh, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, East

Rajasthan, Gangetic West Bengal, Jharkhand and Assam & Meghalaya.

◆ **Thunderstorm accompanied with lightning** very likely to occur at isolated places over Madhya Maharashtra, Madhya Pradesh, Chhattisgarh, Vidarbha and Odisha.

◆ **Squally weather** likely to prevail over Gujarat coast & adjoining northeast Arabian Sea and east Indian Ocean & adjoining south west Bay of Bengal. Strong winds, speed reaching 40-50 kmph, likely to prevail over north Bay of Bengal. Fishermen are advised not to venture into these areas.

**29 September (Day 3):** ◆ **Heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over Bihar; **heavy to very heavy rainfall** at isolated places over Himachal Pradesh, Gujarat state, East Rajasthan, Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya and heavy rainfall over Uttarakhand, East Uttar Pradesh, West Rajasthan, Gangetic West Bengal and Nagaland, Manipur, Mizoram & Tripura.

◆ **Thunderstorm accompanied with lightning** very likely to occur at isolated places over Odisha.

◆ **Squally weather** likely to prevail over Gujarat coast & adjoining northeast Arabian Sea and east Indian Ocean & adjoining south west Bay of Bengal. Strong winds, speed reaching 40-50 kmph, likely to prevail over north Bay of Bengal. Fishermen are advised not to venture into these areas.

**30 September (Day 4):** ◆ **Heavy to very heavy rainfall** likely at isolated places over Assam & Meghalaya and Gujarat region and **heavy rainfall** at isolated places over Himachal Pradesh, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Kerala & Mahe, Uttarakhand, Sub-Himalayan West Bengal & Sikkim and Saurashtra & Kutch.

**01 October (Day 5):** ◆ **Heavy to very heavy rainfall** very likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura and **heavy rainfall** likely at isolated places over Kerala & Mahe, Gujarat region, Himachal Pradesh, Uttarakhand, Punjab and Haryana, Chandigarh & Delhi.

#### **Weather Outlook for subsequent 2 days from 02<sup>nd</sup> October to 04<sup>th</sup> October 2019**

- ◆ Fairly widespread to widespread rainfall with isolated heavy falls likely over parts of northwest, northeast & south peninsular India.
- ◆ Scattered to fairly widespread rainfall likely to occur over the rest of the country except over some parts of west India and Islands where isolated rainfall is likely.

#### **Salient advisories**

- **Thunderstorm accompanied with lightning** very likely to occur at isolated places over Odisha from 27<sup>th</sup> to 29<sup>th</sup> September, over Madhya Pradesh, Chhattisgarh, Madhya Maharashtra and Vidarbha on 27<sup>th</sup> & 28<sup>th</sup> September, provide mechanical support to young fruit plants, banana and vegetables, to prevent the crops from lodging due to strong winds. Undertake propping up in sugarcane.
- As rain/thundershowers likely at **most/ many** places over **West Bengal & Sikkim** during the period, over **Bihar** from 27<sup>th</sup> to 30<sup>th</sup>, over **Jharkhand** from 27<sup>th</sup> to 29<sup>th</sup>, over Odisha on 27<sup>th</sup> & 28<sup>th</sup> along with Heavy to very heavy rainfall with extremely heavy falls very likely at isolated places over Bihar on 28<sup>th</sup> & 29<sup>th</sup>, heavy / heavy to very heavy rainfall very likely at isolated places over Sub-Himalayan West Bengal & Sikkim from 28<sup>th</sup> to 30<sup>th</sup> September; rain/thundershowers likely at most/ many places over **Gujarat and Konkan** during the period, at many places over Madhya Maharashtra and Vidarbha on 27<sup>th</sup> September along with Heavy to very heavy rainfall at isolated places very likely over Gujarat state from 27<sup>th</sup> to 29<sup>th</sup> and over Gujarat Region on 30<sup>th</sup>, heavy rainfall very likely at isolated places over Saurashtra & Kutch on 30<sup>th</sup> September; avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields Gujarat, Bihar and Sub-Himalayan West Bengal & Sikkim. Keep harvested produce at safer places.

- As rain/thundershowers likely at most/many places over **Jammu & Kashmir** and **Uttar Pradesh** on 27<sup>th</sup> & 28<sup>th</sup>, over **Uttarakhand** from 27<sup>th</sup> to 30<sup>th</sup>, over **Himachal Pradesh** on 27<sup>th</sup> to 29<sup>th</sup> Sept.& 1<sup>st</sup> Oct and over **east Rajasthan** from 28<sup>th</sup> Sept. to 1<sup>st</sup> Oct., at many places over **Nagaland, Manipur, Mizoram & Tripura** during the period, over Arunachal Pradesh on 29<sup>th</sup> & 30<sup>th</sup>, over Assam & Meghalaya from 28<sup>th</sup> Sept. to 1<sup>st</sup> October along with **heavy/heavy to very heavy rainfall** very likely at isolated places over Assam & Meghalaya from 28<sup>th</sup> Sept. to 1<sup>st</sup> October and over Nagaland, Manipur, Mizoram & Tripura from 29<sup>th</sup> September to 1<sup>st</sup> October; **heavy to very heavy rainfall** at isolated places over Himachal Pradesh and Uttarakhand on 28<sup>th</sup> & 29<sup>th</sup> and over East Rajasthan on 29<sup>th</sup>, **heavy rainfall very likely** at isolated places over Himachal Pradesh and over Uttarakhand on 30<sup>th</sup> September and 1<sup>st</sup> October; avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields.
- In **Nagaland**, keeping in view of heavy rainfall forecast, water logging should be avoided in maize, pulses, vegetables by maintain proper drainage in the fields. The present weather is favourable for tikka disease in groundnut. Collect the affected plants and destroy them. In **Manipur**, drain out excess water from soybean, groundnut, rice bean, millet/ black gram fields.
- Utilizing the realised rainfall, continue sowing of sesame and horse gram in fallow lands in **Odisha**. Continue nursery sowing of late *Samba* rice in **Tamil Nadu**. In **Madhya Maharashtra**, undertake land preparation for rabi jowar, safflower and rainfed gram in fallow lands.

## *Detailed Agromet Advisories*

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

**Realised Rainfall:** Significant rainfall occurred in all the districts of Andhra Pradesh, all the districts of Telangana except Vikarabad district; in all the districts of Kerala; in all the districts of Tamilnadu except Ariyalur, Coimbatore, Karaikal, Puducherry, Ramanathapuram, Tirunelveli, Tirupur, Tiruvannamalai, Toothukudi; in all districts of Karnataka except Haveri district North Interior Karnataka and Shivamogga district of South Interior Karnataka during the week.

**Advisories:** As rainfall likely at many places over **Kerala** on 29<sup>th</sup> and 30<sup>th</sup> and over Telangana on 27<sup>th</sup> & 28<sup>th</sup> September, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.

#### **Kerala**

- In Southern Zone, *Viruppu* rice is at maturity stage, drain out the water from the fields 10 days before harvesting.
- In Problem Area Zone, weather is congenial for downy mildew in cucurbits, spray Cymoxanil + Mancozeb 0.3%. Also for Phomopsis rot of brinjal and cercospora leaf spot of bhindi, spray 0.3% Mancozeb after current spells of rain.
- In Central Zone, weather is congenial for Erwinia rot in banana. Proper drainage should be ensured in the banana field. As a precaution, apply lime in the banana basin or bleaching powder in the irrigation channels. To improve the disease resistance, drench the basin with Pseudomonas @ 20g per litre of water. Affected plants can be protected by drenching the basin with 3 g Copper oxychloride or 2g Copper hydroxide per one litre of water. Severely affected plants should be cut and removed to prevent the spread of disease.

#### **Andhra Pradesh**

- In North Coastal Andhra Pradesh, farmers those are not yet raised paddy nurseries, they can choose short duration varieties like MTU 1156, MTU 1153, NLR 34449 and RJL 1880 for direct sowing.
- In Scarce rainfall Zone of Rayalaseema, utilizing the rainfall received during the last five days, farmers are advised to sow contingency crops like fodder jowar and horsegram.
- In Krishna Godavari Zone of Andhra Pradesh, weather is congenial for incidence Stem borer, Leaf folder and Hispa : Spray Monocrotophos @ 1.6 ml or chloropyriphos @ 2.5 ml or Phosphomidon @ 2.0 ml or acephate @ 1.5 g or chlorantraniliprole @ 0.4 ml per liter of water on a non rainy day.
- In Southern Zone of Andhra Pradesh, due to low temperature and high humidity there is a chance of severe occurrence of early leaf spot in groundnut. To control, spray Hexaconazole @ 2 ml /litre of water on a non rainy



day.

### **Telangana**

- In Southern Telangana zone, drain out the excess water from the fields of rainfed crops wherever heavy rainfall received.
- In Northern Telangana, the weather conditions are favourable for bacterial leaf blight in paddy crop. Application of nitrogenous fertilizer should be done in controlled manner. To control, spray agrimycin @ 4 g / 10 lit or poushamycin @ 2 g/ lit of water, two times at 5-7 days interval.
- 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.

### **Tamil Nadu**

- In Cauvery Delta Zone, undertake field Preparation for nursery sowing of late *Samba*. In *Samba* nursery, applications of 2 kg DAP/cent is recommended.
- In South Zone, undertake sowing of cotton@15 kg of delinted cotton of KC 3 & K12 and Pulses @20 kg/ ha greengram (Co-8) & black gram (MDU-1, vamban-8).
- In North Western Zone, due to water stagnation, there are chances for occurrence of soil borne diseases in all crops. For management of soil borne diseases, mix thoroughly with 1 kg of *Trichoderma viridii* + 1 kg of *Pseudomonas fluorescense* with 200 kg of decomposed farm yard manure morning and evening for 5 days. Whereas during available moisture conditions, the mixed bio inputs were broadcasted in fields to control disease for increasing crop yields.
- In Western Zone, weather is congenial for anthracnose in grapes. Spray 1% Bordeaux mixture or 0.25% Copper fungicide.
- In High Altitude Hilly Zone, continue sowing of green manure crops namely Lupin, Buckwheat as crop rotation for control of nematodes and damping off disease in the soil.

### **Karnataka**

- In North Interior Karnataka, complete harvesting of black gram crop during clear weather and continue land preparation for *rabi* crops sowing. In medium black soils, continue sowing of sunflower, sorghum, chickpea, safflower, sorghum + chickpea (2:1), safflower + chickpea (2:4) crops.
- In South Interior Karnataka, complete sowing of sunflower, ragi, sugarcane and soybean crops. Continue sowing of fodder sorghum, maize, bajra, cowpea crops. Undertake staking in banana.
- In South Interior Karnataka, to control stem borer in maize, spray Quinolphos-25 EC @ 2ml/liter of water or Chlorophyriphos -20 EC @ 2ml/liter of water after current spells of rain. If the incidence of Red hairy caterpillar is noticed in groundnut, hand picking of grown up larvae followed by dusting with Fenvol (0.4%) or Malathion dust @8-10kg/acre after current spells of rain is advised.
- In North Interior Karnataka, incidence of fruit borer is noticed in tomato and brinjal crops; spray the crop with Malathion 50EC dissolved in one litre of water. To manage pink boll worm in cotton, spray Prophenophas @ 2 ml or Thiodicarb @ 1 gm / liter of water, after current spells of rain.

### **Animal Husbandry:**

- In Tamil Nadu, de-worm the goats and sheep for Tape worm and Round worm enrage. De-worm the young ones once in every month and it should be done upto 6th month.
- In Karnataka, keep the animal shed dry to avoid hoof infection & to prevent fly breeding.

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

**Realised Rainfall :** Rainfall occurred in all districts of Arunachal Pradesh except Dibang Valley; all districts except Darrang and Karbi Anglong districts of Assam; all districts except Lunglei district of Mizoram; all districts of Manipur, Meghalaya and Nagaland and all districts except North Tripura district of Tripura.

**Advisories:** As rain/thundershowers likely at many places over Nagaland, Manipur, Mizoram & Tripura during the period, over Arunachal Pradesh on 29<sup>th</sup> & 30<sup>th</sup>, over Assam & Meghalaya from 28<sup>th</sup> Sept. to 1<sup>st</sup> October along with **heavy/heavy to very heavy rainfall** very likely at isolated places over Assam & Meghalaya from 28<sup>th</sup> Sept. to 1<sup>st</sup> October and over Nagaland, Manipur, Mizoram & Tripura from 29<sup>th</sup> September to 1<sup>st</sup> October; 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, Nagaland, Manipur, Mizoram & Tripura.

### **Arunachal Pradesh**

- In Arunachal Pradesh, continue nursery bed raising for early cauliflower and tomato. Undertake sowing of black gram in rice fallow of Jhum fields at the earliest.
- Under excessive moisture, there is possibility of rhizome rot disease in ginger and turmeric. To manage the disease, provide adequate drainage and apply *Trichoderma Harzianum* @ 50 g/bed along with FYM/ neem cake.



## Assam & Meghalaya

- In Lower Brahmaputra Valley Zone, continue nursery raising/transplanting of cole crops. Due to favourable weather, Sigatoka leaf spot may be observed in the banana plant. Spray Carbendazim @ 0.5gm/litre of water against Sigatoka leaf spot.
- In Central Brahmaputra Valley, undertake sowing of *rabi* maize and cole crops. Prevailing weather is very conducive for infestation of stem borer and caseworm in Sali rice which may be controlled by draining out of excess water or spraying Chloropyriphos(20%) @2ml/litre of water after current spells of rain.
- In Upper Brahmaputra Valley Zone of Assam, due to congenial weather, there is chance of attack of blast and brown spot disease in the rice fields. Spray Carbendazim or Thiophenate methyl @ 1g/litre of water and subsequently two more sprays of Ediphenphos @ 1 ml/litre of water, at an interval of about 15 days against blast disease. To control brown spot disease, spray Mancozeb @ 2.5 g/litre or Ediphenphos @ 1 ml/litre or Carbendazim @ 1g/litre.
- In Barak Valley Zone of Assam, prevailing weather conditions favours more egg laying capacity of Yellow stem borer (YSB). So, the farmers are advised to spray Chloropyriphos 20EC @ 1 ml per litre of water after current spells of rain.
- In North Bank Plain Zone of Assam, repair the field bunds to conserve water in the paddy field. There is chance of attack of leaf folder /rice hispa disease attack in tillering/ panicle initiation stage of rice. Spray of Chlorpyriphos 20 EC @ 2.5 litre/ha or Quinalphos 25 EC @2.0 litre/ha on the rice crop during evening hours after current spells of rain. Complete sowing of kharif Sesame and pulses (green gram and black gram).
- In Meghalaya, continue nursery raising/ transplanting for cole crops (cabbage, cauliflower, broccoli) 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. Spray Tricy-Biofungicide, Pseudomonas fluorescens @ 4g/10 litre against blast in rice after current spells of rain. Maintain proper water level up to 4-5 cm in the rice fields.

## Manipur, Mizoram, Tripura and Nagaland

- In Nagaland, keeping in view of heavy rainfall forecast, water logging should be avoided in maize, pulses, vegetables by maintain proper drainage in the fields. The present weather is favourable for tikka disease in ground nut. Collect the affected plant debris and burn them.
- In Manipur, continue planting of potato, nursery sowing of cole crops and sowing of Broad bean/ pea/French bean after current spells of heavy rain.. Maintain water level of 5-8 cm in the *kharif* rice field. Drain out excess water from soybean, groundnut, rice bean, millet/ black gram field.
- In Mizoram, continue harvesting of matured cobs of maize after current spells of rain. Continue nursery raising of brinjal, chilli and early crucifer crops.
- In Tripura, continue sowing of black & green gram after current spells of heavy rain. Undertake land preparation for nursery sowing of cole crops. Prevailing cloudy and humid weather is conducive for the attack of Blast disease in Aman rice. Apply Tricyclazole 75 WP @ 0.6 gm/litre of water or Carbendazim 50 WP (Bavistin) @ 1 gm per litre of water after current spells of rain.

## Animal Husbandry

- In Mizoram, keep surrounding of poultry house clean to avoid mosquitoes and other blood sucking insects that may transmit fowl pox. Vaccination of chicken (0- 7 days old, ideally 4 days old) against Ranikhet disease is advised in the presence of qualified personnel.

## Fishery

- In Upper Brahmaputra Valley Zone of Assam, provide supplementary feeds in the fisheries with rice bran and mustard oil cake mixed in the ratio of 1:1 in bags at different depths of water.

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

**Realised Rainfall:** Rainfall occurred in all districts of Andaman & Nicobar Islands; in Aurangabad, Banka, Begusarai, Bhabua, Gaya. Gopalganj, Jahanabad, Madhepura, Nalanda, Purnea, Samastipur, Shiekpura, Sitamarhi, Siwan, Vaishali and West Champaran districts of Bihar; in Bokaro, Deogarh, Dhanbad, East Singbhum, Godda, Gumla, Hazaribagh, Palamu, Ramgarh, Sahebganj and Simdega districts of Jharkhand; in all districts of Odisha except Kalahandi, Malkangiri and Nawarangpur; in all districts of Gangetic West Bengal and in all districts of Sub-Himalayan West Bengal & Sikkim. Weather remained dry/mainly dry over the rest of the region.

**Advisories: Thunderstorm accompanied with lightning** very likely to occur at isolated places over Odisha from 27<sup>th</sup> to 29<sup>th</sup> 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.

As rain/thundershowers likely at **most/ many** places over West Bengal & Sikkim during the period, over Bihar from 27<sup>th</sup> to 30<sup>th</sup>, over Jharkhand from 27<sup>th</sup> to 29<sup>th</sup>, at many places over Odisha on 27<sup>th</sup> & 28<sup>th</sup> along with **Heavy to very**

**heavy rainfall with extremely heavy falls** very likely at isolated places over Bihar on 28<sup>th</sup> & 29<sup>th</sup> **heavy / heavy to very heavy rainfall** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim from 28<sup>th</sup> to 30<sup>th</sup> September; avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields in Bihar and Sub-Himalayan West Bengal & Sikkim

### **Odisha**

- Continue nursery raising of tomato and planting of brinjal. Go for sowing of sesame, niger and pre-Rabi pulses like green gram, black gram and horse gram in fallow uplands. Go for early planting of high yielding varieties of cole crops like radish, cabbage, cauliflower, beans, cluster bean and tomato. Undertake sowing of sweet corn and toria. Complete the planting of papaya. Carry out harvesting of groundnut if plants have turned yellow. Sundry the crop before storing it.
- The present weather condition is favourable for brown plant hopper (BPH) infestation in transplanted paddy. To control BPH, alter the micro-climate of the rice field by alternate wetting and drying technique. If problem still persists, spray Pymetrozine 50% WG @ 120 g/acre or Dinotefuran 20 % SG @ 80 g/acre or Imidacloprid 17.8% SL @ 50 ml/acre or Acephate 75% SP @ 400 g/acre. Undertake plant protection measures after current spells of rain.

### **Bihar**

- Take up sowing of early radish, transplanting of brinjal, planting of mango, litchi and guava plants and complete the sowing of September pigeon pea after current spells of heavy rain. Drain out excess water from groundnut and ragi fields.
- For control of bacterial blight in paddy, apply Streptocycline 50 g + Copper Oxochloride 2.5 kg/ha dissolved in 1000 litres of water and spray 12 days intervals over affected crop. Undertake plant protection measures after current spells of rain.

### **Jharkhand**

- Continue sowing of toria. Continue harvesting timely sown green gram and black gram crops during clear weather. Farmers having irrigation facility may go for cultivation of potato and table pea. Prepare seedlings of brinjal, cabbage and cauliflower. Take up planting different varieties of mango, litchi and guava plants in already dug pits.
- Spray fungicide Beam @ 5 gram per 10 liter of water for control of blast and other fungal diseases in paddy field. Apply Chlorpyrifos / Quinolphos / Methyl Parathion dust @ 10 kg per acre for gundhi bug attack in direct seeded paddy. Undertake plant protection measures after current spells of rain.

### **West Bengal**

- In Sub-Himalayan West Bengal, maintain optimum water level in rice fields. Carry out careful rouging and destruction of infected ginger and large cardamom plants. For management of fruit fly in cucurbitaceous vegetables, install pheromone trap @ 6-8 nos./ha and apply bait spray in spots @ 30 nos./ha (at least). Prepare bait by mixing 10 ml Chlorpyrifos with 200g molasses. To control downy mildew in cucurbits, spray Metalaxyl + Mancozeb @ 2-2.5g/liter of water. Undertake plant protection measures after current spells of rain.
- In Gangetic West Bengal, arrange proper air movement inside the betel nut garden. Provide channels to remove excess water from furrows in vegetable fields. Take up sowing of early pea after seed-treatment with Captan or Thiram @ 2 gm/ kg and subsequently with Rhizobium culture. For control of blast disease in paddy crop, apply Tricyclazole @ 0.75 g in 1 liter of water. Spray at an interval of 10-12 days depending on the severity. Apply Acephate @ 0.75g per litre of water for mosaic virus infection in black gram. Undertake plant protection measures after current spells of rain.

### **Andaman & Nicobar Islands**

- In Andaman & Nicobar Islands, close the bunds in rice main field to maintain 5 cm of water level till flowering stage. Do weeding in vegetables. Prepare nursery for brinjal using seed rate @ 200-400g/ha. Clean crown portion of coconut tree and remove all the fallen leaves from the field.

### **Animal Husbandry**

- In Bihar, to control the external parasites in animals, give medicines like Butox in consultation with local veterinary doctor. Provide the animals mineral mixture @ 50-60 gram per day.
- In Jharkhand, vaccinate poultry birds against Ranikhet disease.
- In Odisha, provide sufficient clean drinking water to animals. Keep the shed clean and dry. Vaccinate animals and birds.
- In West Bengal, in poultry shed, rearrange litter with new one and apply lime on it. Avoid wet feed and provide only dry feed. Maintain proper temperature within brooder house.
- In Andaman & Nicobar Islands, provide Haematinic Syrup to piglets to improve health and avoid anaemia.

### **Fishery**

- In Odisha, prepare new pond by cultivation and cleaning. Prepare nursery pond as per need. Release the IMC in proper proportion to feed in different layers of water in the pond like Catla, Rohu, and Mirkali. In Andaman & Nicobar Islands, feed fish fingerlings of IMC carps with the mixture of rice bran and ground nut oil cake at 1:1 ratio at the rate of 2 % of body weight.

**Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa, Madhya Maharashtra, Marathawada, in Vidharbha except Gondia and Yeotmal districts; in Anand, Bhruach, Chota Udepur, Dahod, Dangs, Mahisagar, Narmada, Navsari, Panchmahal, Tapi, Vadodara, Valsad districts of Gujarat Region, in Amreli, Gir Somnath, Junagarh, Rajkot districts of Saurashtra & Kutch during the period. Weather remained mainly dry over rest of the region

**Advisories: Thunderstorm accompanied with lightning** very likely to occur at isolated places over Madhya Maharashtra and Vidharbha on 27<sup>th</sup> & 28<sup>th</sup> 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.

As rain/thundershowers likely at most/ many places over Gujarat and Konkan during the period, at many places over Madhya Maharashtra and Vidharbha on 27<sup>th</sup> September along with **Heavy to very heavy rainfall** at isolated places very likely over Gujarat state from 27<sup>th</sup> to 29<sup>th</sup> and over Gujarat Region on 30<sup>th</sup>, **heavy rainfall** very likely at isolated places over Saurashtra & Kutch on 30<sup>th</sup> September; avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields Gujarat. Keep harvested produce at safer places.

### **Maharashtra**

- In Konkan, maintain 5 cm water level in rice fields. To control nodal blast in rice, spray Tricyclazole 75 WP @ 10 g or Isoprothialane 40 EC @ 10 ml per 10 litres of water after current spells of rain. Drain out excess water from the field where early rice varieties is in maturity stage, vegetables and standing crop fields, orchards. Undertake harvesting of matured early varieties of rice during clear weather. Keep the harvested produce in safer place. To control hoppers in mango, spray Lambda cyhalothrin 5% EC @ 6ml or Quinalphos 25% EC @ 25 ml per 10 liter of water during clear weather.
- In Madhya Maharashtra, undertake land preparation for rabi jowar, safflower and rainfed gram in fallow lands. Continue harvesting of matured green gram and black gram after current spell of rain. Keep the harvested produce in safer place. To control Spodoptera litura in soybean, spray SLNPV @ 10 ml or Nomuraea rileyi @ 50 g per 10 liters of water after current spell of rain. If reddening of cotton leaves are observed, spray urea @ 200 g, zinc sulphate @ 70 g per 15 liters of water after current spell of rain. To control brown plant hoppers in rice, spray Acetamiprid 20 SP @ 100 g per 500 litres of water per ha after current spell of rain. Drain out excess water from vegetables and standing crop fields, orchards. For control of blight in rice, spray Copper oxychloride @ 25 g or Carbendazim @ 10 g per 10 litres of water after current spell of rain.
- In Marathawada, continue picking of matured green gram on a non rainy day. Keep the harvested produce in safer place. To control white grub in sugarcane, undertake soil application with metarhizium anisopliae @ 4 kg per acre on a non rainy day.
- In Vidharbha, maintain 5-7 cm water level in rice fields. Continue picking of matured black gram after current spell of rain. Keep the harvested produce in safer place. To control wilt and root rot in pigeon pea, undertake drenching with Copper oxychloride @ 25 g / 10 litres of water after current spell of rain. To control girdle beetle in soybean, spray Chlorantraniliprole (Korezen) 18.5 SC @ 3 ml or Profenofos 50% EC @ 20 ml or Triazophos 40% EC @ 12.5 ml in per 10 liters of water after current spell of rain.

### **Gujarat**

- In Gujarat Region, drain out excess water from standing crop fields.
- In South Gujarat, undertake land preparation for planting of sugarcane, nursery preparation for chilli and brinjal, sowing of cowpea crop after current spells of heavy rain and provide staking to newly planted grafts of mango.
- In North Gujarat, as there is possibility of rainfall, avoid irrigation in groundnut, cotton and castor crops. Continue harvesting of matured bajra, maize, green gram and cowpea crops after current spells of rain and keep harvested produce at safer places.
- In Middle Gujarat, undertake harvesting of pearl millet crop after current spells of rain.
- In Saurashtra & Kutch, continue harvesting of black gram, pearl millet crops after current spells of rain. Install pink bollworm pheromone traps in the cotton field.
- In South Gujarat, for effective control of mealybug in cotton, spray Chlorpyrifos 20 EC @ 25ml / 10 liters of water after current spells of rain.
- In Saurashtra, monitor the cotton crop for infestation of jassid and white fly; if required, spray Diafenthiuron 50 % wp @ 16 g / 10 litres of water after current spells of rain.

### **Animal Husbandry**

- In Gujarat, keep animals indoor during heavy rainfall period. Keep fodder in safe place to avoid spoilage due to rainfall.

## CENTRAL INDIA [M.P., CHHATTISGARH]

**Realised Rainfall:** Rainfall occurred in all districts of West Madhya Pradesh and in all districts of East Madhya Pradesh except in Balaghat, Chindwara, Dindori, Seoni and Umaria districts; in Balrampur, Bastar, Bijapur, Dantewara, Durg, Jashpurnagar, Kanker, Kondagaon, Korba, Koriya, Narayanpur, Raigarh, Sukma and Surajpur districts of Chhattisgarh.

**Advisories: Thunderstorm accompanied with lightning** very likely to occur at isolated places over Madhya Pradesh and Chhattisgarh on 27<sup>th</sup> & 28<sup>th</sup> September, provide mechanical support to young fruit plants, banana and staking of vegetables to prevent the crops from lodging due to strong winds.

- As rain/thundershowers likely at many places over Madhya Pradesh and Chhattisgarh on 27<sup>th</sup> & 28<sup>th</sup> along with **heavy rainfall very likely** at isolated places over East Madhya Pradesh and over Chhattisgarh on 28<sup>th</sup> September, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields.

### Madhya Pradesh

- In West Madhya Pradesh, keeping in view of heavy rainfall during last week, farmers are advised to drain out excess water from vegetables, soybean, pulse, maize crop fields and maintain adequate drainage in the crop fields.
- 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 Nimar Valley Zone, in areas in Cotton crop where Jassid & White fly crosses ETL, apply Imidachloprid 17.8 SL @ 3 ml/10 litre or Thiamethoxam 25 WG @ 2g/ 10 litre or Acetamiprid 20 SP @ 3g/10 litres of water. Install pheromone traps @ 5/ha for monitoring Pink bollworm.
- In Malwa Plateau Zone, 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. In case of soybean infested with Myrothecium leaf spot, Anthracnose, Aerial Blight and Charcoal rot, it is advised to spray the crop with Tebuconazole @ 625 ml/ha or Tebuconazole + Sulphur 1 kg/ha or Hexaconazole @ 500 ml/ha or Pyroclostrobin @ 500 g/ha with the use of 500 litre of water. For control of Girdle beetle in soybean, spray the crop with Thicloprid 21.7 SC @ 650 ml/ha, Profenophos 50 EC @ 1.25 lit/ha or Triazophos 40 EC @ 800 ml/ha. Undertake plant protection methods 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 Maize, Ragi, Arhar, Urd, Mung etc.
- In Chhattisgarh Plain Zone, maintain 5-7cm water level in rice fields. In the rice crop, for monitoring of harmful insects install light traps. 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.
- In Bastar Plateau Zone of Chhattisgarh, continue sowing of horse gram, black gram, 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:** Significant rain occurred in Samba district of Jammu & Kashmir and in Almora, Champawat, Dehradun and Nainital districts of Uttarakhand; in Gurdaspur district of Punjab; in North Delhi; in Banswara, Baran, Bharatpur, Dungarpur, Jhalawar, Kota, Pratapgarh in East Rajasthan and Jalore in West Rajasthan; in all districts of East Uttar Pradesh except Azamgarh, Ballia, Banda, Chandouli, Chitrakoot, Farrukhabad, Gazipur, Hardoi, Kannauj, Kanpur Dehat, Kheri, Kushinagar, Maharajganj, Mau, Sant Kabir Nagar and Unnao and rainfall occurred in Aligarh, Auraiya, Etah, Firozabad, Hamirpur, Jalaun, Jhansi, Lalitpur and Mahoba districts of West Uttar Pradesh. Weather remained mainly dry in rest of the region.

**Advisories:** As rain/thundershowers likely at most/many places over Jammu & Kashmir and Uttar Pradesh on 27<sup>th</sup> & 28<sup>th</sup>, over Uttarakhand from 27<sup>th</sup> to 30<sup>th</sup>, over Himachal Pradesh on 27<sup>th</sup> to 29<sup>th</sup> Sept. & 1<sup>st</sup> Oct and over east Rajasthan



from 28<sup>th</sup> Sept. to 1<sup>st</sup> Oct along with **heavy to very heavy rainfall** at isolated places over Himachal Pradesh and Uttarakhand on 28<sup>th</sup> & 29<sup>th</sup> and over East Rajasthan on 29<sup>th</sup>, **heavy rainfall very likely** at isolated places over Himachal Pradesh on and over Uttarakhand on 30<sup>th</sup> September and 1<sup>st</sup> October, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields.

### **Jammu & Kashmir**

- In Sub Tropical Zone, shift already harvested maize crop to safer places. Do not allow water to stagnate in fields. Postpone harvesting and threshing of crop till the weather gets clear. Postpone harvesting and threshing of maize crop till the weather gets clear. Shift already harvested maize crop to safer places. Do not allow water to stagnate in fields. Undertake sowing of toria intercropped with gobi sarson. Undertake sowing of winter vegetables like potato, radish, carrot, turnip, garlic, fenugreek and spinach after current spells of rain.
- In Intermediate Zone, to control attack of blister beetle in maize crop, apply Carbofuron 3G @ 20 kg/ha (apply 3- 4 granules/leaf whorls to control the blister beetle) after current spells of rain. Also collect blister beetle by hand and kill them by burning or putting in water. Continue sowing of root crops like carrot and radish.

### **Himachal Pradesh**

- In Mid Hills Sub Humid Zone, undertake sowing of carrot, radish, pea, coriander, garlic and turnip. To control the bark biting insect in Mango, Citrus, Litchi, Guava, and Stone Fruits, rotate a sharp end flexible wire in the hole made by the insect so that the larve gets crushed.
- In Mild Hills Sub Humid Zone, spray antracol 500 g per 200 litres of water for prevention of fungal diseases in pomegranate after current spells of rain.
- In High Hill Temperate Dry Zone, carry out weeding operation in oats after current spells of rain.

### **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. Continue planting of ever green fruit plants like mango, sweet orange, mandarin, lime, lemon, litchi, guava, aonla, loquat and papaya.
- In Undulating Plain Zone, due to high humid conditions, sheath blight may appear in rice and basmati. Attack of brown spot may be noticed in direct seeded rice. Apply recommended fungicides for control. Farmers are advised to remove foot rot infected plants from rice field and avoid ponding of water to check further spreading of infection. Use fruit fly trap to control fruit fly damage in guava orchards and cucurbits.
- In Haryana, continue sowing of pulses i.e. green gram, lobia, moth. Pick the cotton after sunrise to evaporate the dew from the open cotton bolls.
- In Western Zone of Haryana, due to favourable weather, farmers are advised to monitor the infestation of paddy blast, if infestation/symptom observed than spray Tricyclazole 120 gram (Bim or sivik) 75 WP mixed with 200 liter water per acre, spray when weather remain clear. Due to rain the infestation of Boll rot disease may occur in cotton field, spray 2 gram copper oxychloride or 2 gram Bavistin mixed with per liter water. For better leaf adhesive use 10 gram selvat or 50 ml triton in 100 liter solution in cotton crop.
- In Delhi, continue transplanting of early cauliflower, tomato, chilli, brinjal cauliflower and cabbage whose seedlings are ready. In present weather condition, false smut may appear in paddy spray Blitox 50 @ 500 grams per acre at 10 days interval (2-3 times). 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. White flies and other sucking pests may damage crops and vegetables in the present weather, spray Imidacloprid 17.8 % SC@ 1.0 ml / 3 lit. 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.

### **Animal Husbandry**

- In Western Zone of Haryana, due to humid weather conditions farmers are advised to keep the animals under well ventilated places. Keep cleanliness around the animal shed to avoid the infestation of house fly/others. Provide the 50 grams iodized salt and 50 to 100 grams mineral mixture daily with feed & green fodder to keep them healthy.

### **Uttar Pradesh**

- In East Uttar Pradesh, for the control of Brown mildew disease of rice, spray Zinc manganese carbonate (75%)

solution at a rate of 2kg per hectare. Maintain optimum moisture in maize at cob development stage and in Soybean at flowering and pod formation stages. Undertake sowing of Toria. Undertake sowing of Tomato and cole cabbage seeds in nursery. For control of Pyrrila disease in sugarcane, spray phosphomidon (300-400 milliliter) or Methyl-o-demeton (1.5 liter) dissolved in 1000 liters of water. Monitor insect pest and disease infestation in pearl millet, bulrush millet, pigeon pea, sorghum etc., if it goes above ETL then apply recommended control measures.

- In West Uttar Pradesh, monitor the rice crop against Gundhi bug and take suitable control measures if noticed. Undertake top dressing of Nitrogen/Urea in paddy crop. Maintain optimum water level in paddy crop at Flowering / milk stage. For management of stem borer in paddy, spray Chlorpyrifos 20EC @ 1.5 litres in 500-600 litres of water per hectare. Undertake sowing of sarson saag, Radish, Spinach, Coriander on raised bed. Drain out of excess rain water in vegetable crop fields. Transplant of medium duration variety Shimla, chilli, tomato, cabbage field. Tomato, Brinjal and Chilli. Continue planting of horticultural crops viz, papaya, mango, guava etc.

#### **Uttarakhand**

- In Bhabar and Tarai Zone, undertake sowing of toria. To control the yellow mosaic disease in soybean, black gram and green gram, destroy the plants which are turning yellow. Spray Sarvangi insecticide to control the white fly in soybean, black gram and green gram. To control the leaf blight disease in maize, solution of Mancozeb 75 WP @ 3g/litre of water should be sprayed. On the occurrence of brown plant hopper in rice, spray 1 litre Buprofezin 25 SC or 150 ml of Imidacloprid 17.8 SL in 500 litres of water per ha. To control the late blight in tomato, spray solution of Mancozeb @ 2.5 g/litre of water.
- In Sub-Humid Sub-Tropic Zone, there is possibility for attack of gundhi bug in paddy. Dust malathion 5% dust or lindane 1.3 % @ 20-25 kg/ha when sky remains clear. Burn the red rot infested plants outside the sugarcane field. Undertake sowing of autumnal crop of sugarcane. Undertake field preparation for early sowing of potato.
- In Hill Zone, continue sowing of radish, mustard and coriander. Monitor pulse crops regularly; if white flies or sucking pests/ insect observed above ETL on crops, spray sarvangi insecticide with added adhesive in small quantity. Complete picking of apple fruits. Carry out proper sun drying of walnut fruits before storing. Collect and store wild walnut fruits for nursery. If wilting is observed in the collar region of vegetable pea, spray and drench Bavistin (1%) or Dithane M-45 (0.2%) It helps to control wilt and protects seedlings during the initial stages of growth.

#### **Rajasthan**

- In Semi-Arid Eastern Plain Zone, field preparation may be started for the sowing of rainfed Taramira, procure improved varieties seed (RTM-1355, RTM-1351, RTM-314 and RTM-2002).
- 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 Sub Humid Southern Plain and Aravali Hill Zone, harvest Sorghum, pearl millet and green fodder at flowering stage for prepare silage. Also preparation of seed bed should be done for raising nursery of onion for Rabi season.
- In Arid Western Plain Zone, there is attack of termite in field crops, apply 3 lit. Chloropyriphos or 300 ml. Imidachloprid/ha on a non rainy day.

#### **Animal Husbandry**

- In Uttar Pradesh, cattle sheds should be kept dry as far as possible. Cattle sheds should be well protected from flies and mosquitoes. Increase light duration in poultry farms. Poultry should be kept under running fan condition so that saturated and suffocated air should go out of the poultry sheds.
- In Rajasthan, vaccinate the livestock against FMD and brucellosis (only to 04 – 10 months female calf) diseases and give oral dose for stomach worms time to time as per the advice of registered veterinarian.

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