



National Agromet Advisory Service Bulletin

Friday 11th October 2019
(For the period 11th to 15th October 2019)



Issued by
India Meteorological Department

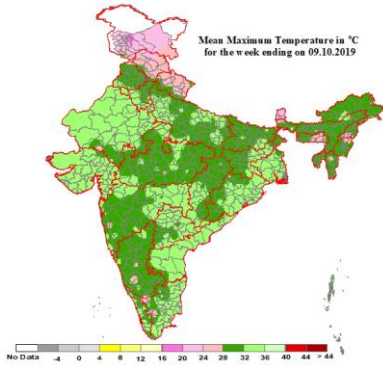
Weblink For

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

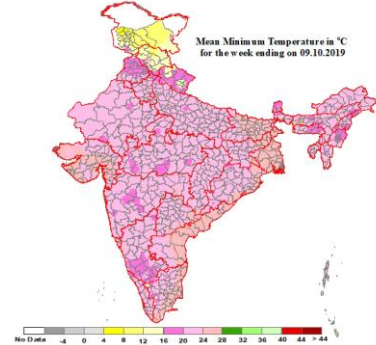
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending on 09.10.2019

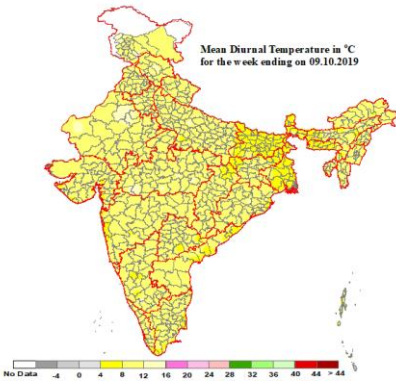
Mean Maximum Temperature (°C) for the week ending on 09.10.2019



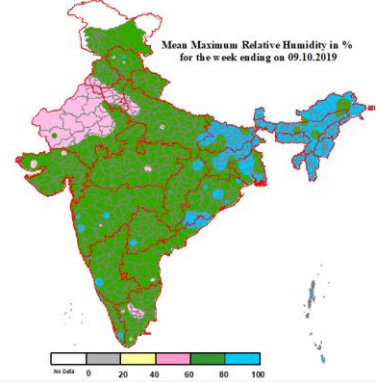
Mean Minimum Temperature (°C) for the week ending on 09.10.2019



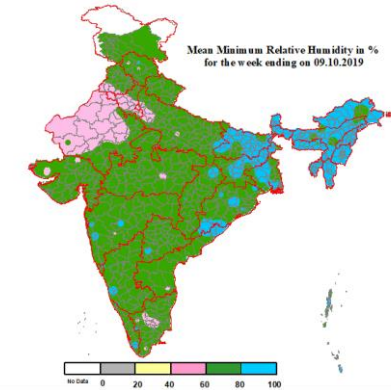
Mean Diurnal Temperature Variation (°C) for the week ending on 09.10.2019



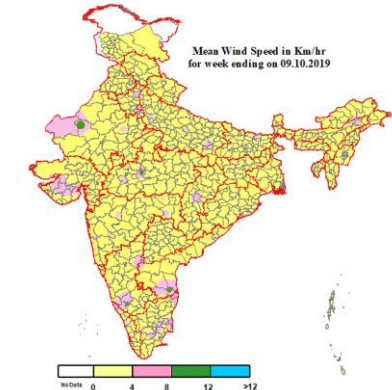
Mean Maximum Relative Humidity (%) for the week ending on 09.10.2019



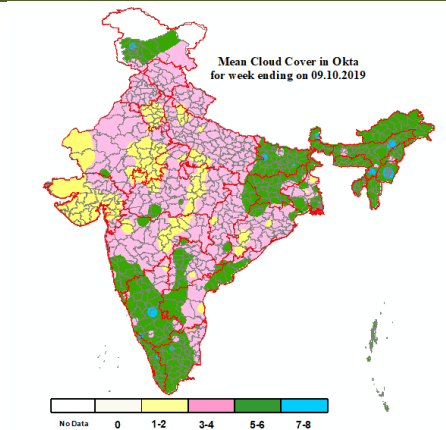
Mean Minimum Relative Humidity (%) for the week ending on 09.10.2019



Mean Wind Speed (km/hr) for the week ending on 09.10.2019

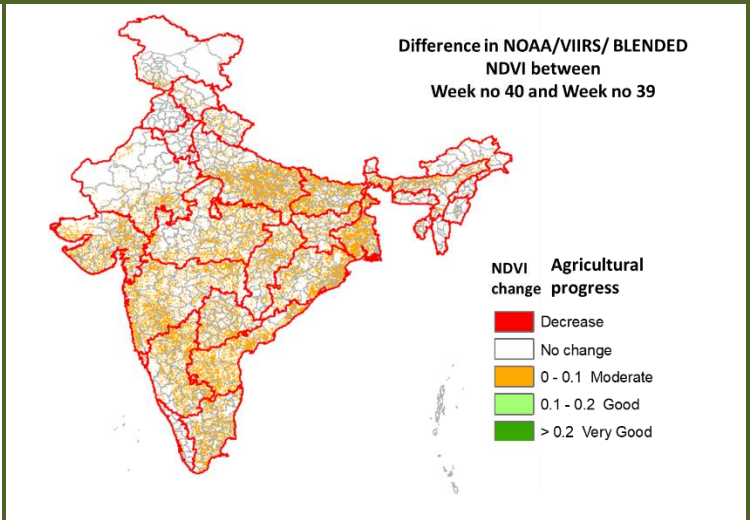
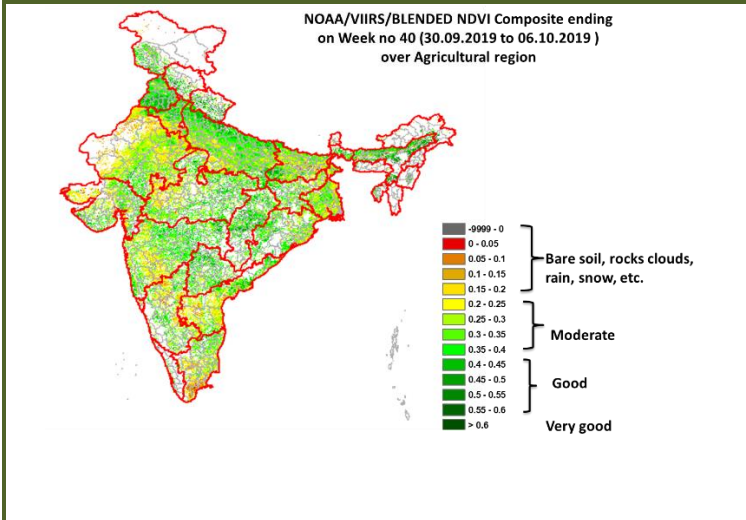


Mean Cloud Cover (okta) for the week ending on 09.10.2019



NOAA/VIIRS/BLENDED NDVI composite for the week number 40 (30.09.2019 to 06.10.2019) over Agricultural regions of India

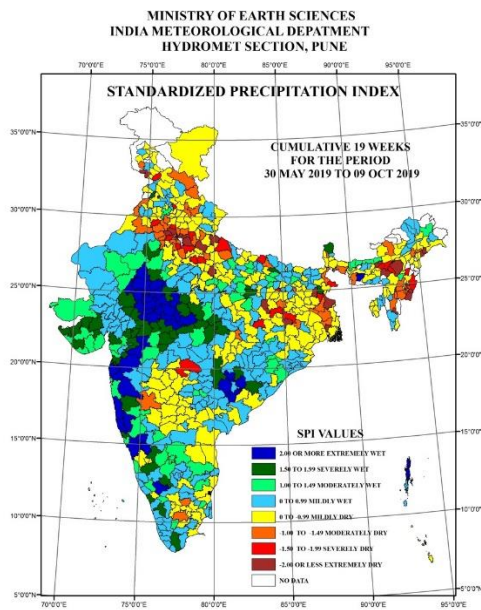
Difference in NOAA/VIIRS/BLENDED NDVI between week number 40 and week number 39



Agriculture vigour was good at most parts of North Eastern states; at many parts of Uttarakhand, Himachal Pradesh, North Chhattisgarh; at a few places over Jammu & Kashmir, Punjab, Haryana, Uttar Pradesh, Bihar, Sub Himalayan West Bengal, North Coastal Andhra Pradesh, Vidarbha, Saurashtra, Madhya Pradesh and Telangana. It was isolated over rest of the country.

Good Agricultural vigour has been observed at a few places over Madhya Pradesh and at isolated places over Tamilnadu, Karnataka, Telangana, Andhra Pradesh, Odisha, West Bengal, Sikkim, Bihar, East Uttar Pradesh and Konkan.

**Standardised Precipitation Index
Cumulative 19 weeks for the period 30th May to 9th Oct 2019**



- Extremely/Severely wet conditions exist in Gopalganj district of Bihar; Broach, Valsad, Dangs, Chhota Udepur, Jamnagar, Junagarh, Surendranagar, Botad, Devbhumi Dwarka, Morbi districts of Gujarat; Uttara Kannada, Dharwad, Haveri, Chikmagalur, Davangere, Mandya, Mysore districts of Karnataka; Kozhikode, Palakkad districts of Kerala; Barwani, Bhopal, Dewas, Dhar, Guna, Harda, Hoshangabad, Indore, Jhabua,

Khandwa, Mandsaur, Neemuch, Raisen, Rajgarh, Ratlam, Sehore, Shajapur, Ujjain, Vidisha, Burhanpur, Ashoknagar, Alirajpur, Agar, Jabalpur, Mandla, Narsinghpur, Sagar, Seoni 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 districts of Meghalaya Koraput districts of Orissa; Kapurthala districts of Punjab; Ajmer, Banswara, Bhilwara, Bundi, Chittorgarh, Dungarpur, Jhalawar, Kota, Sikar, Tonk, Udaipur, Baran, Rajsamand, Pratapgarh districts of Rajasthan; Tirunelveli districts of Tamilnadu; Dadara & Nagar Haveli districts of Union Territory Mirzapur, Sant Ravidas Nagar districts of Uttar Pradesh; North & Middle Andaman districts of Andaman & Nicobar Islands; North Sikkim districts of Sikkim; Sahibganj districts of Jharkhand; Bastar, Bijapur, Narayanpur, Sukma, Kondagaon districts of Chhattisgarh; North Goa district of Goa.

- Moderately wet conditions exist in Anantpur, Chittoor districts of Andhra Pradesh; Lower Dibang Valley districts of Arunachal Pradesh; Kokrajhar, Udalguri, Baksa, Chirang districts of Assam; Buxar, Samastipur, Siwan districts of Bihar; Surat, Narmada, Navsari, Amreli, Bhavnagar, Kutch, Rajkot, Porbandar, Gir Somnath districts of Gujarat; Udupi, Belgam, Koppal, Chitradurga, Kodagu, Tumkur districts of Karnataka; Khargone, Chindwara, Damoh, Rewa, Singrauli districts of West Madhya Pradesh; Mumbai City, Jalgaon, Sangli districts of Maharashtra; Parn districts of Nagaland; Boudhgarh, Ganjam, Jharsuguda, Kandhamal districts of Orissa; Patiala districts of Punjab; Jodhpur, Nagaur, Pali, Jaipur, Jhunjhunu, Sawai Madhopur districts of Rajasthan; Nilgiri, Theni, Tiruvannamalai, Ariyalur districts of Tamilnadu; Allahabad, Ambedkar Nagar, Ballia, Banda, Barabanki, Basti, Pratapgarh, Hamirpur districts of Uttar Pradesh; South Goa districts of Goa; Karimnagar, Rajanna Sircilla districts of Telangana.
- Moderately dry conditions exist in East Kameng district of Arunachal Pradesh; Sibsagar districts of Assam; Sheikhpura districts of Bihar; Gurgaon, Hisar, Jind, Mahendragarh, Mewat, Bhiwani, Faridabad, Kaithal districts of Haryana; Kinnaur, Lahaul & Spiti districts of Himachal Pradesh; Rajouri district of Jammu.
- Severely / extremely dry conditions exist in remaining districts in the country.

Weather Forecast for next 5 days valid upto 0830 hours of 16th October 2019

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

5 Day Rainfall Forecast (MID-DAY)

11^h October 2019

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

% 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

11 October (Day 1): ♦ **Heavy rainfall** very likely at isolated places over Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Rayalaseema, Interior Karnataka and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning** very likely at isolated places over Chhattisgarh, Jharkhand, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Telangana, Interior Karnataka, Tamilnadu, Puducherry & Karaikal and Kerala & Mahe.

12 October (Day 2): ♦ **Heavy rainfall** very likely at isolated places over Madhya Maharashtra, South Interior Karnataka and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning** very likely at isolated places over Chhattisgarh, Odisha, Marathwada, Madhya Maharashtra, Konkan & Goa, Interior Karnataka and Kerala & Mahe.

13 October (Day 3): ♦ **No Weather Warning.**

14 October (Day 4): ♦ **No Weather Warning.**

15 October (Day 5): ♦ **Heavy rainfall** likely at isolated places over Nagaland, Manipur, Mizoram & Tripura and Rayalaseema.

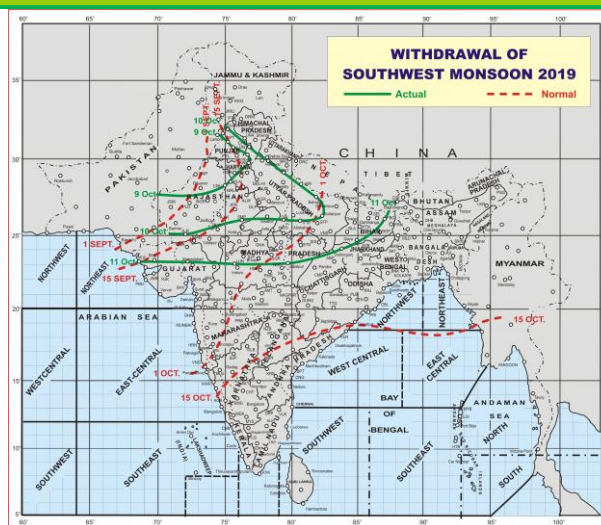
♦ **Thunderstorm accompanied with lightning** likely at isolated places over Coastal Andhra Pradesh and Telangana.

Weather Outlook for subsequent 2 days from 16th to 18th October 2019

♦ Scattered to fairly widespread rainfall likely over south peninsular India and Isolated to scattered rainfall likely over east & northeast India. Isolated heavy falls are likely over parts of east & peninsular India.

♦ Mainly Dry weather is likely to prevail over rest of the country.

Withdrawal of Southwest monsoon 2019



♦ Southwest monsoon has further withdrawn from entire Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Uttar Pradesh, some parts of Bihar, Jharkhand, Chhattisgarh and East Madhya

Pradesh and some more parts of West Madhya Pradesh, entire Rajasthan and some parts of Saurashtra & Kutch and Gujarat region.

◆ Conditions are becoming favourable for further withdrawal of southwest monsoon from most parts of central India and some more parts of West and East India during next 2 days.

Salient advisories

- **Thunderstorm accompanied with lightning** very likely to occur at isolated places over Odisha, Chhattisgarh, Madhya Maharashtra, Marathwada and Konkan & Goa on 11th & 12th, over Interior Karnataka and Kerala on 12th, over Coastal Andhra Pradesh and Telangana on 15th October, 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 **many places** over Kerala and South Interior Karnataka during the period, over North Interior Karnataka from 11th to 13th October along with **heavy rainfall** very likely at isolated places over Kerala and South Interior Karnataka on 12th October, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation in Kerala and South Interior Karnataka. Keep harvested produce at safer places.
- Utilizing the realised and expected rainfall:
 - Undertake land preparation and sowing of rapeseed/mustard in **Assam**.
 - In Western Zone of **Tamil Nadu**, continue transplanting of *Samba* rice.
 - In Southern Telangana zone, continue sowing of rabi redgram, groundnut and castor.
 - In North Interior Karnataka, continue sowing of sunflower, sorghum, chickpea, niger and safflower
 - In North Gujarat, undertake land preparation for sowing of *Rabi* crops viz. mustard, gram and fennel
 - In **Madhya Maharashtra**, continue land preparation for sowing of rabi jowar, safflower and rainfed gram in fallow lands. In **Vidarbha**, continue land preparation of *rabi* crops like safflower, jowar, linseed and gram in fallow lands.
 - In Semi-Arid Eastern Plain Zone of **Rajasthan**, undertake field preparation for sowing of rainfed Taramira.
 - In Bhabar and Tarai Zone of Uttarakhand, continue sowing of mustard.
- In **Madhya Maharashtra**, to control sucking pests in cotton, spray Imidacloprid 17.8 SL @ 2 ml per 10 litres of water on a non rainy day.

Detailed Agromet Advisories

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

Realised Rainfall: Significant rainfall occurred in Erode, Krishnagiri, Nilgiris, Salem districts in Tamilnadu; in all the districts of Kerala except Kannur, Kasaragod, Palakkad and Thrissur; all the districts of the region except Ananthpur and Cuddepah districts of Rayalaseema; all districts of Coastal Karnataka, in all districts North Interior Karnataka except Bidar, Raichur and Yadgir and in all districts of South Interior Karnataka during the week.

Advisories:

- As rain/thundershowers likely at many places over Kerala and South Interior Karnataka during the period, over North Interior Karnataka from 11th to 13th October along with **heavy rainfall** very likely at isolated places over Kerala and South Interior Karnataka on 12th October, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate

drainage in standing crop fields to avoid water stagnation in Kerala and South Interior Karnataka. Keep harvested produce at safer places.

- **Thunderstorm accompanied with lightning** very likely to occur at isolated places over Interior Karnataka and Kerala on 12th, over over Coastal Andhra Pradesh and Telangana on 15th October, 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.

Kerala

- In Problem Area Zone and Central Zone, undertake harvesting of *Virippu* paddy during clear weather. start land preparation for Mundakan paddy in harvested fields. Also mahali incidence can be severe in Arecanut, spray 1% Bordeaux mixture.
- In Central Zone, weather is congenial for powdery mildew in vegetables, spray 20g Pseudomonas per one litre of water.
- 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.
- In Northern Zone, weather is congenial for Tea mosquito attack and associated fungal diseases in newly planted seedlings of cashewnut, spray combination of Bordeaux mixture (1% strength) + Quinalphos (2ml/litre of the Bordeaux mixture) after current spells of rain.

Andhra Pradesh

- In North Coastal Andhra Pradesh ,continue harvesting of maize. Present prevailing weather conditions are favourable for sheath blight and leaf blast diseases in rice. Spray Tricyclozole + Hexaconazole (Impression) @ 1 g per litre of water on a non rainy day.
- In Scarce rainfall Zone of Rayalaseema, continue sowing of Bengal gram in black soils and horsegram in red soils at optimumsoil moisture conditions. Due to high soil moisture, leaf reddening is observed in cotton. Spray Magnesium sulphate @ 10 g and 10 grams of DAO or Potassium nitrate twice at weekly interval.
- In Southern Zone of Andhra Pradesh, continue harvesting of early groundnut in clear weather. Drain the excess water from inundated fields of paddy and take precautionary measures against fungal diseases.

Telangana

- In Southern Telangana zone, continue sowing of Rabi Redgram, Groundnut and Castor.
- In Northern Telangana, drain out the excess water from the field of rainfed crops wherever heavy rainfall received. The prevailing weather conditions are congenial for cercospora & Alternaria leaf spot in cotton. To control, spray propiconazole@1ml per liter of water.

Tamil Nadu

- In Cauvery Delta Zone, foliar application of 0.5% ZnSO₄ +1% urea can be done to Samba paddy at tillering stage.
- In Western Zone, weather is congenial for sigatoka leaf spot in turmeric, spray Chlorothalanyl @ 2g per liter of water or Propiconazole @ 2ml per liter of water.
- In High Rainfall Zone, to improve the yield of banana, Spray micronutrients viz., ZnSO₄ (0.5%), FeSO₄ (0.2%), CuSO₄ (0.2%) and H₃BO₃ (0.1%) at 3rd, 5th and 7th MAP to increase yield and quality of banana.

Karnataka

- In North Interior Karnataka, continue sowing of sunflower, sorghum, chickpea, niger, safflower, etc. Carry out harvesting of soybean on priority basis after taking the local weather into consideration. Undertake propping to sugarcane crop.
- In North Interior Karnataka, if pod borer eggs are noticed in pigeon pea crop at flowering stage, spray Profenophos @2ml or Methomyl 0.6 g in one litre of water after current spells of rain.
- In South Interior Karnataka, complete sowing of sunflower, ragi, sugarcane and soybean crops and

sowing of fodder sorghum, maize, bajra, cowpea crops. Take up fresh plantation of fruit trees, teak, neem, tamarind, acacia or other trees on the bunds, uncultivated and marginal land.

- In South Interior Karnataka, spray Imidachloprid 17.8 SL @ 0.5 ml or Thiamethoxam 25 WP @ 0.7 g or Chloropyriphos 20 EC @ 2 ml per liter of water for BPH in paddy crop. Spray Chloropyriphos 20 EC 2 ml/litre of water for stem borer in ragi crop. Undertake plant protection measures after current spells of rain.

Animal Husbandry:

- In Tamil Nadu, in cattle as a preventive measure for Babesiasis disease, apply Butox @ 2 ml/l of water on cattle and also spray it on the nearby areas of the cattle shed to control ectoparasites.
- In North Western Zone of Tamil Nadu, before start of North East Monsoon, poultry farmers are advised to follow precautions like clearing of thick bushes, grasses around the poultry shed and clearing of drainage systems. Litter should be free from high wetness.
- In Karnataka, vaccinate the livestock for Black Quarter and foot and mouth diseases.

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

Realised Rainfall : Rainfall occurred in Changlang, Kurung Kumey, Lohit, Lower Dibang Valley, Papumpare, Tirap and Upper Subansari districts of Arunachal Pradesh; Barpeta, Cachar, Chirang, Darrang, Dhemaji, Dhubri, Dibrugarh, Goalpara, Hailakandi, Jorhat, Kamrup (Rural), Karbi Anglong, Karimganj, Kokrajhar, Lakhimpur, Morigaon, Nalbari, Sonitpur and Sibsagar districts of Assam; East Khasi Hills, Ri-Bhoi, South Garo Hills and West Garo Hills districts of Meghalaya; Kolasib, Lawngtlai, Lunglei, Mamit and Saiha districts of Mizoram; Tamenglong district of Manipur; Dimapur, Kohima, Longleng, Mokokchung, Mon, Paren, Tuensang, Wokha districts of Nagaland and Dhalai and North Tripura districts of Tripura.

Advisories:

Arunachal Pradesh

- In Arunachal Pradesh, undertake harvesting of jhum rice and transplanting of cole crops. Continue sowing of black/green gram in rice fallow of Jhum fields at the earliest. Maintain adequate moisture level in the field where maize crop is in CRI stage or in tasseling stage.

Assam & Meghalaya

- In Lower Brahmaputra Valley Zone, continue land preparation and sowing of rapeseed/mustard and transplanting of cole crops. Undertake planting of potato and sowing of tomato. Due to favourable weather condition, there is chance of attack of leaf folder in rice crop. For control, spray Quinolphos 25EC @ 1ml per litre of water during fair weather situation. Prevail weather condition is also favourable for incidence and spread of rice hispa in paddy field. If Hispa population exceeds more than 2 adult per hill then it is recommended to spray Chloropyriphos 20EC @ 1ml/litre of water during rain free weather situation. In case of high Hispa incidence, skip top dressing of Nitrogen fertilizer.
- In Central Brahmaputra Valley, continue sowing of *rabi* maize and cole crops. Continue land preparation for sowing of rapeseed-mustard and *rabi* pulses and oilseeds. 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.
- In Upper Brahmaputra Valley Zone and Barak Valley Zone of Assam, continue planting of potato.
- In Upper Brahmaputra Valley Zone, prevailing weather is favourable for occurrence of blast and brown spot disease in rice. 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, undertake land preparation for planting of potato and sowing of rapeseed

and mustard. Also undertake nursery sowing of brinjal, mid cauliflower and cabbage.

- In North Bank Plain Zone of Assam, undertake land preparation/ sowing of rapeseed-mustard and cole crops. There is chance of attack of leaf folder /stem borer disease attack in tillering/ panicle initiation stage of rice. Spray of Chlorpyrifos 20 EC @ 2.5 litre/ha or Quinalphos 25 EC @2.0 litre/ha on the rice crop during evening hours.
- In Hill Zone of Assam, continue sowing of black gram. Protect cucurbitaceous crops against fruit fly by use of bait trap (mixing jaggary 10 % with Malathion 0.1 %) and putting at different corners of the field.
- In Meghalaya, continue nursery raising/ transplanting for cole crops (cabbage, cauliflower, broccoli). 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. Maintain proper water level up to 4-5 cm in the rice fields.

Manipur, Mizoram, Tripura and Nagaland

- In Nagaland, undertake harvesting of groundnut. Continue land preparation for sowing of *rabi* crops and nursery preparation for vegetables like cabbage, cauliflower, knolkhol, broccoli, radish, tomato after the harvesting of upland rice/maize. Undertake harvesting of low land/ Jhum rice.
- In Manipur, continue planting of potato, nursery sowing of cole crops and sowing of Broad bean/ pea/French bean. Maintain water level of 5-8 cm in the *kharif* rice field. For the fields where rice had failed due to uneven distribution of rainfall during the growing season, cultivation of black gram/ lentil/ green gram / Lathyrus (kachari) may be done as contingency crop by the mid of November. Spray Tricyclazole 75WP @ 9 g/ 15 litre water or Hexaconazole @ 2ml/ litre water against blast disease in rice on a non rainy day.
- In Mizoram, continue harvesting of matured cobs of maize. Continue nursery raising of brinjal, chilli and early crucifer crops. Undertake harvesting of jhum rice. Undertake sowing of soybean along with standing maize crop during clear/dry days. There is chance 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 or apply Ridomil @ 2 g/litre of water on a non rainy day.
- In Tripura, continue transplanting of cole crops. Prevailing cloudy and humid weather is conducive for the attack of Blast disease in Aman rice. Apply Tricyclazole 0.8 gm or Propiconazole 1 ml per litre of water on a non rainy day.

Animal Husbandry

- In Upper Brahmaputra Valley Zone of Assam, present weather condition is congenial for the attack of Foot and Mouth Disease in livestock. As prophylactic measure the mouth and leg parts of healthy animals should be washed periodically with baking soda and should be timely vaccinated. Infected cows and buffaloes should be isolated and kept separately. Potash should be applied in the areas where lesions have developed followed by washing with fresh water and thereafter application of alum. Local veterinarian should be consulted as early as possible for proper diagnosis and immediate treatment.
- In Barak Valley Zone of Assam, farmers are advised to give anthelmintic drug to their cattle within this season and prevailing conditions favours the attack of foot and Mouth disease in cattle, so it is advised to get vaccinated their livestock against Foot and Mouth disease. Prevailing weather condition is favourable for Ranikhet disease of poultry. Feed Tetracycline powder with rice to the poultry birds.

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 Banka, Begusari, Bhabua, Jamui and Khagadia districts of Bihar; in Bokaro, Deogarh, Dumka, East Singbhum, Giridih, Godda, Jamtara, Koderma, Ramgarh and Ranchi districts of Jharkhand; in Angul, Deogarh, Dhenkanal, Ganjam., Jharsuguda, Kandhamal, Keonjhar, Koraput, Mayurbhanj, Nayagarh, Rayagada, Sambalpur and Sundargarh districts of Odisha; in all districts of Gangetic West Bengal except Howrah, Kolkata, Purulia and West Midnapore and in all districts of Sub-Himalayan West Bengal & Sikkim except South Dinajpur. Weather remained dry/mainly dry over the rest of the region.

Advisories:

Odisha

- **Thunderstorm accompanied with lightning** very likely to occur at isolated places over Odisha on 11th & 12th October, 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.
- Undertake harvesting of early sown matured kharif groundnut crop as the soil is favourable for digging operation. Continue sowing of sesame, niger and pre-Rabi pulses like green gram, black gram and horse gram in fallow uplands. Continue early planting of high yielding varieties of cluster bean, brinjal, tomato, chilli, capsicum as well as cole crops like radish, cabbage, cauliflower. Complete the planting of papaya. Go for sowing of Rabi groundnut, maize and toria. Carry out harvesting of kharif maize crop.
- Spray Tebuconazole 50%+ Trifloxystrobin 25% (Nativo 75 WG) @ 0.4g or Carbendazim 50 WP @ 2g or Tricyclazole 75 WP @ 0.6g per litre of water to control blast disease in kharif paddy. Alternately, spray leaf extracts of Bael (25 g fresh leaves) or Tulsi (25 g fresh leaves) or Neem (200 g fresh leaves) per litre of water on a non rainy day.

Bihar

- Drain out the excess water from pigeon pea and maize fields. Drain out excess water from rice fields and maintain 5-7 cm water level. Carry out rouging off of viral infested vegetable crops like chilli and tomato. Infected plants should be uprooted and buried in the soil. If infection is more, spray of Imidacloprid @ 0.3 ml per litre of water.

Jharkhand

- Direct seeded paddy crop in uplands is at maturity stage. Harvest when the soil is dry. Keep harvested material at safe place to avoid losses. It is optimum time for nursery raising of tomato. For one acre of planting area, take 4 kg seeds and sow them on 200 x 200 meter nursery bed after seed treatment with Thiram. Take up sowing of mustard. Continue sowing Rabi crops like rainfed wheat, table pea, potato or different vegetables, if assured irrigation facility is available. Otherwise proceed for rapeseed (toria) cultivation.
- For management of leaf eating insects in green pea crop, spray neem or tobacco leaf extract diluted in the ratio of 1:10 litres or neem oil @ 5 ml per liter of water. Spray Dichlorvos @ 0.5 ml per litre of water for hairy caterpillar in groundnut crop.

West Bengal

- In Sub-Himalayan West Bengal, drain out excess water from vegetable field to avoid rotting of plants. Prepare raised bed for sowing crucifers. Apply Trichoderma mixed with organic manure @ 5g/kg of manure in seed bed 7 days prior to sowing and treat the seeds with Carbendazim @ 2g/kg of seeds before sowing.
- Spray Validamycin @2 ml/litre of water or Hexaconazole @1 ml/litre of water twice at 7-10 days interval to control sheath blight in rice crop.
- In Gangetic West Bengal, drain out excess rain water from paddy and brinjal fields. Apply last top

dressing to late transplanted Aman paddy with urea and MOP. Keep the paddy fields weed-free. Apply Streptocyclene @ 0.5g/liter water and Blitox @ 4g/liter of water for bacterial leaf blight in late transplanted Aman paddy at tillering stage. Spray Spinosad @1.5ml/liter of water or FEM @ 4ml/10 liter for pod borer in black gram. For stem borer in brinjal, collect and destroy the damaged and dead plants. Spray Neem oil @2ml/litre of water.

Andaman & Nicobar Islands

- In Andaman & Nicobar Islands, sow pre-soaked seeds of cucurbits, okra and cowpea in raised beds with good drainage facility. Clean the coconut gardens, cover the manurial pit and release Baculo virus infested beetles 6-8 /ha to control rhinoceros beetle. Farmers of North and Middle Andaman are advised not use any fertilizers as moderate rainfall is expected. Farmers of Campbel Bay are advised to make raised bed of 3 feet width with proper ploughing for vegetable.

Animal Husbandry

- In Jharkhand, keep the cattle sheds clean to avoid mastitis disease in milch animals. Vaccinate poultry birds against Ranikhet disease.
- In West Bengal, avoid grazing cattle in the submerged fields. Feed only straw and dry feed material. Keep the shed clean and dry. For Foot and Mouth disease, wash the wound with potassium permanganate solution
- In Andaman & Nicobar Islands, keep the animal shed clean, provide dry bed for poultry and carry out vaccination to avoid infectious diseases to the farm animals.

Fishery

- In Odisha, purchase fish seeds from a reliable fish seed producer and stock 3000 nos. of advance fingerlings of more than 8cm size per one acre of pond area. In case of three species combination, the stock numbers should be Catla-900, Rohu-1200 and Mrigal-900. In case of six species combination, the stocking numbers should be Catla-800, Rohu-1200, Mrigal-500, Common carp-300, Grass carp-100 and Silver carp-100. Maintain the average water depth of the pond at more than 5ft. In West Bengal, apply fish feed (Rice bran and Mustard oil cake in the ratio 1:1) @ 3-2% of the total body weight of the fish stock.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rainfall occurred in North and South Goa, Raigad, Sindhudrug, and Thane districts of Konkan & Goa; Ahmednagar, Kolhapur, Nasik, Pune, Sangali, satara and Solapur districts of Madhya Maharashtra; Jalna, Osmanabad and Parbhani districts of Marathawada and in Dangs district of Gujarat during the period. Weather remained dry/mainly dry over the rest of the region.

Advisories:

- Thunderstorm **accompanied** with **lightning** very likely to occur at isolated places over Madhya Maharashtra, Marathawada and Konkan & Goa on 11th & 12th October, 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.

Maharashtra

- In Konkan, maintain water level 7-10 cm in late varieties of rice. Continue harvesting of matured early varieties of rice on a non rainy day. Keep the harvested produce in safer place. To control anthracnose in new flush of mango, spray Propineb @ 20 g per 10 liters of water on a non rainy day. To control hoppers in mango, spray Lambda cyhalothrin 5% EC @ 6ml or Quinalphos 25% EC @ 25 ml per 10 liter of water on a non rainy day.
- .In Madhya Maharashtra, undertake harvesting of matured early varieties of rice matured groundnut and soybean on a non rainy day. Keep harvested produce in safer place. Continue land preparation for rabi crops like wheat, rainfed gram, rabi jawar and safflower in fallow lands. Drain out excess water from

orchards, standing crops and vegetable fields. To control thrips in onion, spray Dimethoate 30 EC @ 15 ml or Lambda cyhalothrin 5 % EC @ 6 ml with sticker. To control sucking pest in cotton, spray Imidacloprid 17.8 SL @ 2 ml per 10 litres of water. To control wilt in pigeon pea, prepare solution of Trichoderma @10 g per 1 liter of water and undertake drenching @ 50-100 ml per plant. Undertake plant protection methods on a non rainy day

- In Marathawada, continue harvesting of matured soybean on a non rainy day. Keep the harvested produce in safer place. Continue land preparation for rabi safflower and rabi gram in fallow lands. To control reddening in cotton first spray Magnesium sulphate @ 20 g + DAP @ 200 g per 10 liters of water and then spray Urea @ 150 g + MOP @ 150 g per 10 liter of water on a non rainy day.
- In Vidharbha, continue harvesting of soybean. Undertake intercultural operation like weeding in cotton and pigeon pea. Maintain 5-7 cm water level in rice fields. Continue land preparation of *rabi* crops like safflower, jowar, linseed and gram in fallow lands. To control above ETL infestation of aphids, jassids, thrips, white fly (10 aphids, 2-3 jassid, 10 thrips, 10 white fly per leaf), undertake spray of Azadirachtin 1500 ppm @ 25 ml or Azadirachtin 0.03% (300 ppm) @ 50 ml or Imidacloprid 17.8% SL 2.5 ml or Buprofezin 25% SC @ 20 ml per 10 liters water. To control above ETL level infestation of pink boll worm in cotton, undertake spray of Thiodicarb 75 WP @ 20g or Quinalphos 25% EC @ 25 ml or Profenofos 50% EC @ 20 ml per 10 liters of water.

Gujarat

- In North Gujarat, undertake land preparation for sowing of *Rabi* crops viz. mustard, gram, fennel and carrot. Complete harvesting of groundnut, sesame, bajra, maize, green gram and cowpea crops.
- In Middle Gujarat, complete harvesting of pearl millet and picking of matured pods of green gram crop. Carry out intercultural operations in transplanted tobacco field.
- In Saurashtra & Kutch, complete harvesting of sesame, soybean, bunch groundnut, pearl millet and pulses crops.
- In South Gujarat, continue harvesting of matured rice and pulse crops. Undertake planting of sugarcane crop.
- In North Saurashtra, in brinjal and tomato constant monitoring of borers by using pheromone traps 4-6 per acre is advised, If insect population is above ETL spray Spinosad @3.0 ml/10 litres of water against fruit borer.

Animal Husbandry

- In Gujarat, feed silage & hay material along with concentrate feed to animals.

CENTRAL INDIA [M.P., CHHATTISGARH]

Realised Rainfall: Rainfall occurred in Jhabua district of West Madhya Pradesh, in Bastar, Bijapur, Jashpurnagar and Korba districts of Chhattisgarh. Mainly dry weather prevailed in rest of the region.

Advisories:

Madhya Pradesh

- In Madhya Pradesh, continue harvesting of matured soybean. Undertake preparation of nursery bed for Rabi vegetable crops. Treated seeds to be sown in line i.e. Tomato, Brinjal, Chilli, Cabbage and cauliflower etc.
- In Gird Zone, continue harvesting of matured bajra, urad and moong. Undertake land preparation for sowing of mustard.
- In Nimar Valley Zone, in areas where Jassid & White fly crosses ETL in Cotton crop, 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.

Chhattisgarh

- Thunderstorm **accompanied** with **lightning** very likely to occur at isolated places over Chhattisgarh on

11th & 12th October, provide mechanical support to young fruit plants, banana and staking of vegetables to prevent the crops from lodging due to strong winds.

- In Chhattisgarh Plain Zone, maintain 5-7cm water level in rice fields. In the rice crop, for monitoring of yellow stem borer, install pheromone traps 10 nos. per acre. Undertake nursery preparation for early varieties of cauliflower and cabbage, tomato, chilli and capsicum. Undertake earthing up in banana plantation.
- In Northern Hill Zone, continue nursery sowing of brinjal, tomato, chilli. In Bastar Plateau Zone, continue sowing of horse gram, black gram, green gram and sesame.

Animal Husbandry

- In Madhya Pradesh, cattle sheds should be kept dry. Vaccinate the cow and buffaloes for FMD disease and vaccinate goats with ETV vaccine. Take measures to control ticks and mites in animals.

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

Realised Rainfall : Rainfall occurred in Barnala district of Punjab, in New Delhi and North Delhi districts of Delhi; in Allahabad, Chandauli, Chitrakoot, Kaushambi, Mirzapur, Pratapgarh, Sant Ravidasnagar, Sonbhadra and Varanasi districts of East Uttar Pradesh. Weather remained dry/ mainly dry in the region.

Advisories:

Jammu & Kashmir

- In Sub Tropical Zone, continue harvesting of early maturing rice varieties. Continue harvesting and threshing of maize crop. Undertake harvesting of bajra and pulses. Carry out thinning and hoeing operation in 15-20 days old toria crop. Undertake planting of winter potato. Undertake sowing of radish, carrot, turnip, garlic, fenugreek and spinach. Undertake weeding and hoeing in turmeric.
- In Intermediate Zone, stop irrigation in rice crop which is near to maturity. Undertake harvesting of maize. Undertake hoeing and weeding operations in root crops like carrot and radish.

Himachal Pradesh

- In High Hill Temperate Dry Zone, continue harvesting of potato. Carry out weeding operations in oat. Carry out ploughing operation in harvested cabbage / cauliflower fields.
- In Mild Hills Sub Humid Zone, spray of Blitox @500 g per 200 litre of water along with 2 kg urea post harvest on pear, to prevent the damaged and diseased plant parts from further infection. Spray Thiamethoxam @ 200 g/ 200 litres of water to protect the apple trees against woolly aphids.
- In Mid Hills Sub Humid Zone, to control the woolly aphid in apple, spray Chlorpyrifos @ 400ml/200 litres of water. Drench the solution in basins of the tree to control the root borer in the orchards. To control the Malformation disease in Mango fruit, spray KMS/ NAA @ 40 ml/ 200litres of water. Continue sowing of carrot, radish, spinach and turnip.
- In Sub Montane and Low Hills Sub Tropical Zone, undertake harvesting of maize. Make preparation for harvesting of rice and pulses. Rice hispa is expected in rice fields; for management, clear the grasses from bunds or spray cypermethrin 10EC (1ml /litre) or chlorpyrifos 20 EC @ 2.5ml /litre of water. Undertake field preparation for early sowing of mustard. Carry out weeding and hoeing operations in tomato, chilli, capsicum and brinjal. Undertake planting of potato.

Punjab, Haryana and New Delhi

- In Punjab, complete planting of ever green fruit plants like mango, sweet orange, mandarin, lime, lemon, litchi, guava, aonla, loquat and papaya. Undertake sowing of carrot, broccoli, Chinese cabbage, radish, spinach and transplanting of mid-season cauliflower. Harvest matured maize crop.
- In Undulating Plain Zone, due to high humid conditions, attack of brown spot may be noticed in direct

seeded rice. Apply recommended fungicides for control. Harvest the mature paddy crop as per weather.

- In Haryana, continue sowing of pulses i.e. green gram, lobia, moth. Undertake sowing of mustard and gram crop. Continue harvesting of matured bajra and mung, arrange to cover the harvested bajra and mung crop.
- In Western Zone of Haryana, due to favourable weather condition may infestation of rice leaf roller and stem borer in rice crop. If infestation occurs than broadcast 10kg Methyl parathion 2% Dust in per acre. Due to prevailing weather condition, there is chance of infestation of rice blast in early transplanted rice crop. If infestation occurs than spray 200 gram Carbendazim 50 WP mixed with 200 liter water per acre.
- In Delhi, undertake sowing of mustard, transplanting of onion seedling in the prepared fields and planting of early potato. Undertake transplanting of mature seedlings of cauliflower, cabbage, broccoli and tomato. In present weather conditions, rouging of viral infested crop should be done in chilli and tomato. Infected plants should be uprooted and buried in the soil. If infection is more than spray of imidacloprid @ 0.3 ml per litre of water is advised for control the vector.
- In Western Zone of Punjab, to protect rice crop from sheath blight, spray the crop with Amistar Top or Tilt/Bumper or Folicur Orius @ 200ml or Nativo @ 80g in 200 litres of water per acre at the base of the plants. Regularly monitor the rice fields for plant hopper infestation.

Uttar Pradesh

- **In East Uttar Pradesh**, undertake harvesting of matured short duration varieties of rice. Undertake sowing of toria in optimum soil moisture condition. Remove emerging side suckers of banana and give the support by bamboo to prevent from lodging. Irrigate the paddy crop as per requirement. For control of stem borer, brown plant hopper, gall midge, leaf folder and jassids in paddy, apply Profenophos 50EC @2 ml/litre of water. Monitor insect pest and disease infestation in pigeon pea, if it goes above ETL, then apply recommended control measures. Undertake land preparation for timely sowing of Raya.
- **In West Uttar Pradesh**, monitor the rice crop against Gundhi bug and take suitable control measures if noticed. Undertake harvesting of mature maize crop in the clear sky weather and dry the maize seeds thoroughly before storing them. Undertake sowing of potato. Farmers are advised to arrange the seed and fertilizer for sowing of rabi vegetable crops potato, garlic, coriander, Spinach etc. Continue transplanting of medium duration variety of capsicum, tomato, cabbage, Tomato, Brinjal and Chilli. Continue planting of horticultural crops viz, papaya, mango, guava etc.

Uttarakhand

- In Bhabar and Tarai Zone, continue sowing of mustard. To control the leaf blight disease in maize, spray solution of Mancozeb 75 WP @ 3g/litres of water. On the occurrence of brown plant hopper on 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 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. To control late blight on tomato, spray solution of mancozeb @ 2.5 g/litres of water.
- In Hill Zone, stop irrigation in paddy which is about to mature. Spray Imidacloprid @0.5% or Neem oil @2-2.5ml on soybean to check the population of white fly.
- In Sub-Humid Sub-Tropic Zone, undertake harvesting of sugarcane (CO-0238) crop. The weather is conducive for the infestation of Gundhi bug in rice. For control, apply Malathion dust in the morning hours. Undertake harvesting of matured vegetables.

Rajasthan

- In Sub Humid Southern Plain and Aravali Hill Zone, undertake field preparation for sowing of rabi crops (mustard, taramira & gram) under residual moisture. Also undertake preparation of seed bed for raising nursery of onion for rabi season.
- In Arid Western Plain Zone, harvest moth and moong crops at physiological maturity for getting better grain and fodder yield. Weather is congenial for tikka disease in groundnut spray of Mancozeb 2 g/lit. of

water.

- In Semi-Arid Eastern Plain Zone, undertake field preparation for sowing of rainfed Taramira, procure improved varieties seed (RTM-1355, RTM-1351, RTM-314 and RTM-2002).

Animal Husbandry

- In East Uttar Pradesh, provide fresh water for drinking, balanced feed with 50% green fodder for milch animal. Vaccination should be done to prevent foot mouth diseases. Vaccinate the goat to control PPR disease.
- In East Uttar Pradesh, cattle sheds should be kept dry as far as possible. Farmers are advised to provide dry fodder with green fodder in (50:50) ratio & 20-30 g mineral mixture and salt for the dairy animal's every day.

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