



National Agromet Advisory Service Bulletin



Friday 14th September 2018
(For the period 14th to 19th September 2018)



Issued by
India Meteorological Department

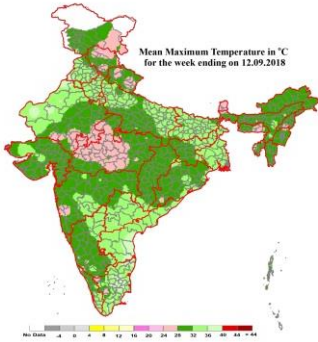
Weblink For

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

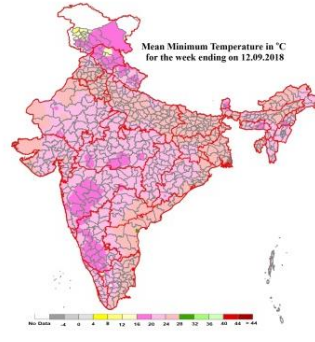
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending on 12.09.2018

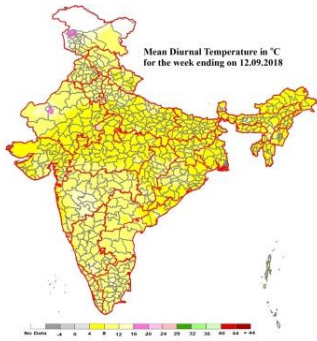
Mean Maximum Temperature (°C) for the week ending on 12.09.2018



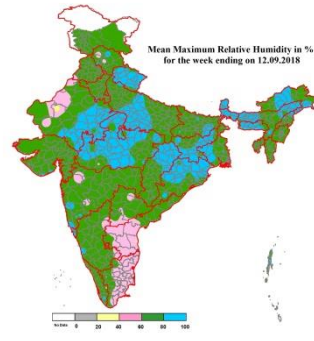
Mean Minimum Temperature (°C) for the week ending on 12.09.2018



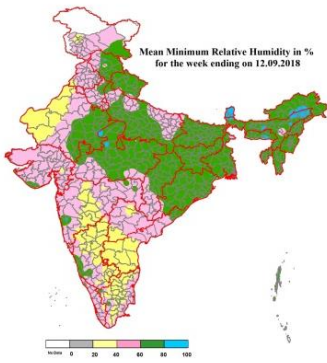
Mean Diurnal Temperature Variation (°C) for the week ending on 12.09.2018



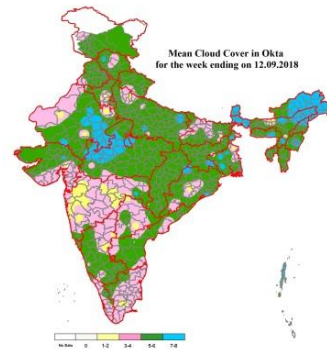
Mean Maximum Relative Humidity (%) for the week ending on 12.09.2018



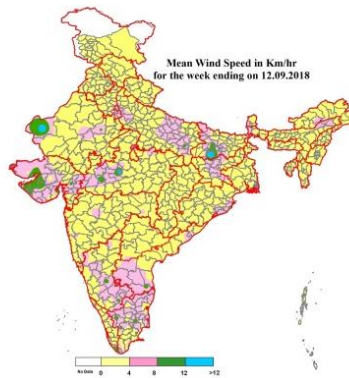
Mean Minimum Relative Humidity (%) for the week ending on 12.09.2018



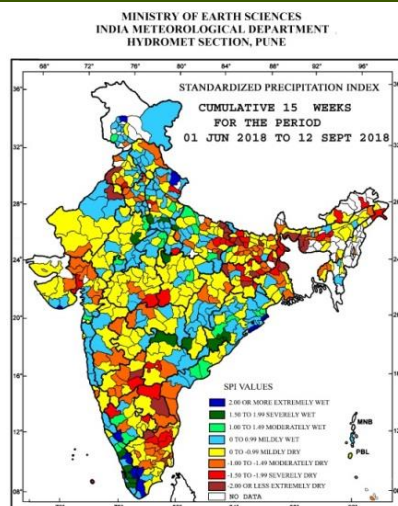
Mean Cloud Cover (okta) for the week ending on 12.09.2018



Mean Wind Speed (km/hr) for the week ending on 12.09.2018

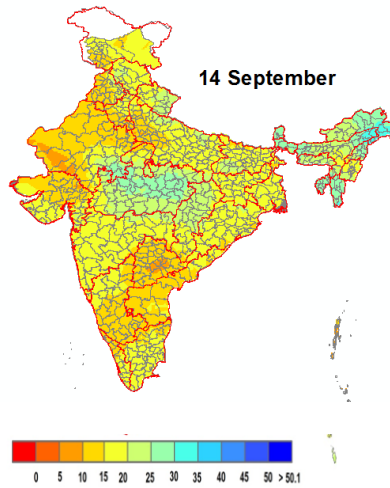


Standardised Precipitation Index Cumulative 15 weeks for the period 1st June to 12th September 2018

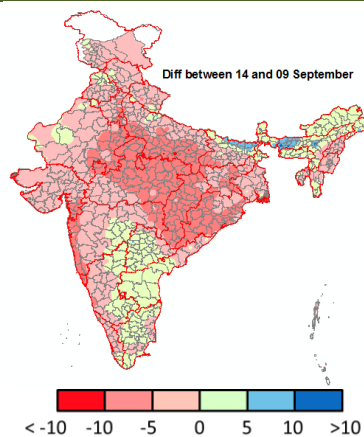
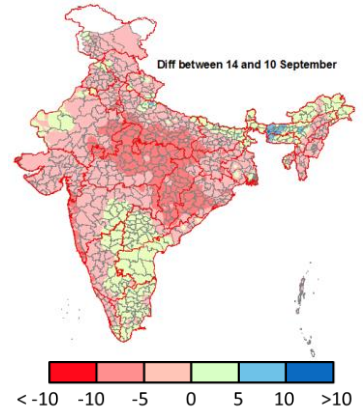
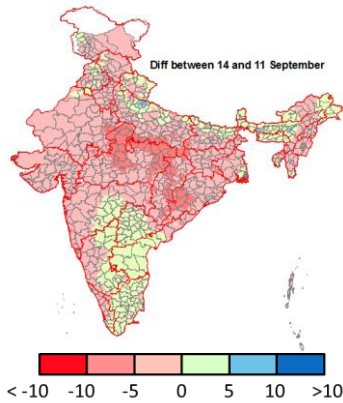
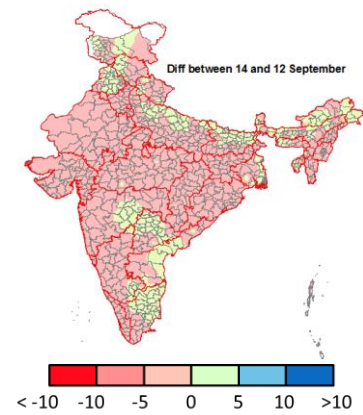
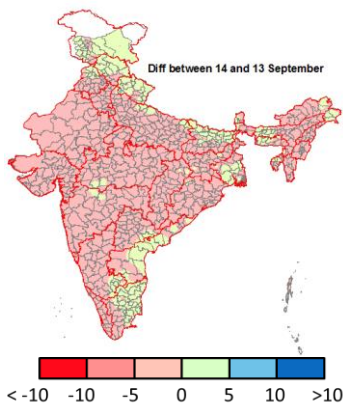


- Extremely/severely wet conditions experienced in few districts of Kerala; Kendrapara, Koraput, Puri, Rayagada districts of Odisha; Bandipore district of Jammu & Kashmir; Kannauj, Etah, Mathura districts of Uttar Pradesh; Chamoli district of Uttarakhand; Ropar district of Punjab; Sawai Madhopur district of Rajasthan; Tikamgarh district of Madhya Pradesh; Diu district of Saurashtra, Kutch & Diu; Bijapur district of Chhattisgarh; Adilabad district of Telangana; Theni, Tirunelveli districts of Tamil Nadu & Puducherry; Kodagu district of Karnataka.
- Extremely/Severely dry conditions experienced in few districts of Arunachal Pradesh; West Bengal; Jharkhand; Kamrup, Dhubri, Morigaon districts of Assam; West Garo Hills district of Meghalaya; East Champaran, Jahanabad, Jamui, Muzaffarpur, Saharsa, Saran, Siwan, Vaishali districts of Bihar; Azamgarh, Ballia, Chandauli, Deoria, Kushi Nagar, Mau, Maharajganj, Ghaziabad, Mahoba districts of Uttar Pradesh; Almora district of Uttarakhand; Panchkula district of Haryana; Ferozepur, Mansa districts of Punjab; Hanumangarh district of Rajasthan; Betul, Chhindwara districts of Madhya Pradesh; Ahmedabad district of Gujarat Region; Cuddapah, Kurnool districts of Andhra Pradesh; Rangareddy districts of Telangana; Dharmapuri, Thanjavur, Tiruvannamalai, Viluppuram, Krishnagiri districts of Tamil Nadu & Puducherry; Raichur, Yadgir, Shimoga, Chickballapur districts of Karnataka; Lakshadweep districts of Lakshadweep.
- Moderately dry conditions experienced in many districts of Tripura; few districts of Assam; West Bengal; Gujarat Region; Tamil Nadu & Puducherry; Deoghar, Palamu, Jamtara districts of Jharkhand; Araria, Begusarai, Katihar, Khagaria, Monghyr, Nalanda, Patna, Sheikhpura, Arwal districts of Bihar; Balrampur, Fatehpur, Gonda, Jaunpur, Kanpur Dehat, Varanasi, Bulandshahar districts of Uttar Pradesh; Ambala, Hisar, Rohtak, Sonapat, Fatehabad districts of Haryana; Garhwal Tehri, Udham Singh Nagar, district of Uttarakhand; Amritsar, Bhatinda districts of Punjab; Kinnaur, Lahaul & Spiti districts of Himachal Pradesh; Udhampur district of Jammu & Kashmir; Jalore district of Rajasthan; Dewas, Harda districts of Madhya Pradesh; Surendranagar district of Saurashtra, Kutch & Diu; South Goa districts of Konkan & Goa; Satara Sholapur, Aurangabad, Amraoti, Buldhana districts of Maharashtra; Bilaspur, Janjgir, Jashpur districts of Chhattisgarh; Nellore, Prakasam, Chittoor districts of Andhra Pradesh; Nalgonda district of Telangana; Bagalkote, Bidar, Bijapur, Dharwad, Gadag, Bellary, Hassan districts of Karnataka.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

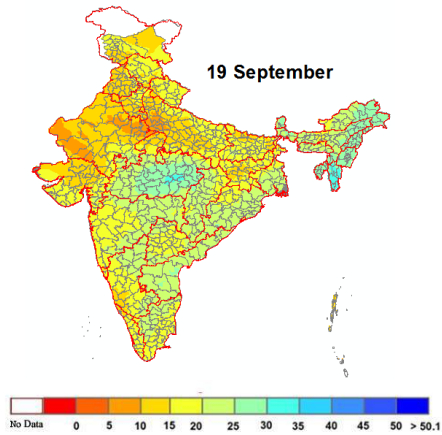
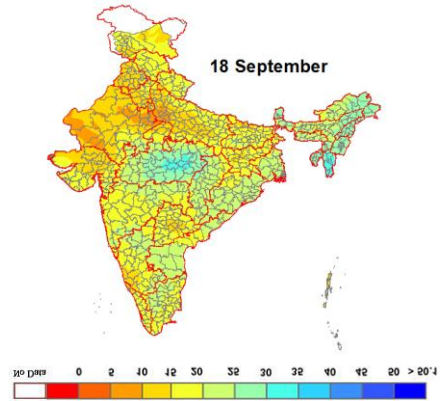
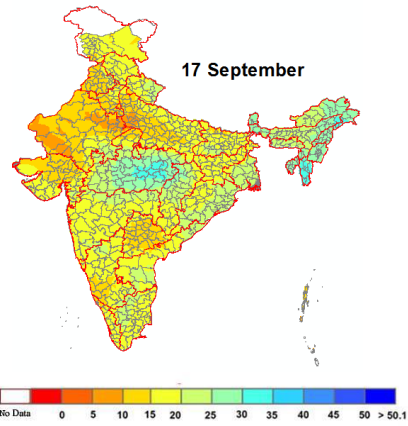
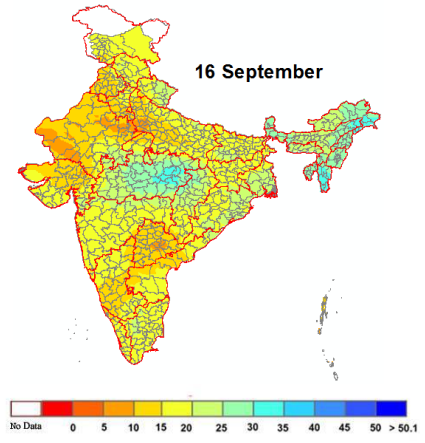
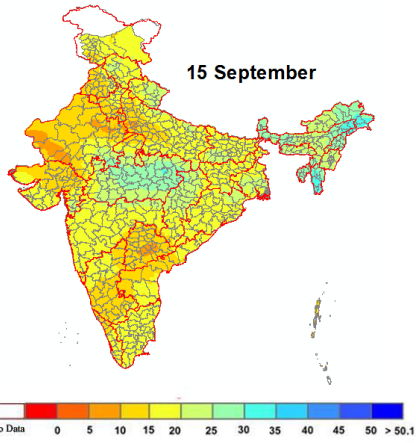
Daily Soil Moisture (mm) for 14th September 2018 (ending at 0830 IST) for 60 cm depth



Difference of Soil Moisture (mm) for 60 cm depth



**Forecasted Soil Moisture (mm) from 15th to 19th September 2018 (ending at 0830 IST)
for 60 cm depth**



Weather Forecast for next 5 days valid upto 0830 hours of 19th September 2018

- Meteorological subdivision wise detailed 5 days rainfall forecast is given in Table below.
- No significant change in temperatures likely over the rest of the country during next 2-3 days.

5 Day Rainfall Forecast (Mid day) 14th September 2018

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

- **14 September (Day 1):** Heavy to very heavy rain at isolated places very likely over Assam & Meghalaya and Sub-Himalayan West Bengal & Sikkim and heavy rain at isolated places over Arunachal Pradesh, Uttarakhand, Himachal Pradesh, Jammu & Kashmir and Tamilnadu. Thunderstorm accompanied with hailstorm and lightning very likely at isolated places over Uttarakhand, Himachal Pradesh, Jammu & Kashmir and thunderstorm accompanied with lightning over Tamilnadu and south Rayalaseema. Rough to very rough sea conditions are likely over northwest Arabian Sea. Fishermen are advised not to venture into this area.
- **15 September (Day 2):** Heavy rain at isolated places very likely over Assam & Meghalaya, Sub-Himalayan West

Bengal & Sikkim and Tamilnadu.

- **16 September (Day 3):** Heavy rain at isolated places very likely over Andaman & Nicobar Islands, Nagaland, Manipur, Mizoram & Tripura and Tamilnadu. Rough to very rough sea conditions are likely over Andaman Sea, Eastcentral & South Bay of Bengal. Fishermen are advised not to venture into these areas.
- **17 September (Day 4):** Heavy to very heavy rain at isolated places likely over Andaman & Nicobar Islands and heavy rain at isolated places over Odisha, Nagaland, Manipur, Mizoram & Tripura, Tamilnadu and Coastal Andhra Pradesh. Rough to very rough sea conditions are likely over Andaman Sea, Eastcentral & South Bay of Bengal. Fishermen are advised not to venture into these areas.
- **18 September (Day 5):** Heavy to very heavy rain at isolated places likely over Andaman & Nicobar Islands, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura and heavy rain at isolated places over Coastal Andhra Pradesh. Rough to very rough sea conditions are likely over Andaman Sea, Eastcentral & South Bay of Bengal. Fishermen are advised not to venture into these areas.

Weather Outlook for subsequent 2 days from 19th to 21st September 2018

- Widespread rainfall likely over Andaman & Nicobar Islands and scattered to fairly widespread rain likely over northern parts of peninsular India and east & northeast India.
- Isolated rainfall likely over the the rest of the country outside the plains of northwest India where dry weather is likely to prevail.

Salient Advisories

- As rough to very rough sea conditions are likely over **northwest Arabian Sea** on 14th and over **Andaman Sea, Eastcentral & South Bay of Bengal** from 16th to 18th September, fishermen are advised not to venture into this area.
- As thunderstorm accompanied with lightning over **Tamilnadu** and **south Rayalaseema** on 14th September, provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds and keep cattle indoors.
- As thunderstorm accompanied with hailstorm and lightning very likely over **Uttarakhand, Himachal Pradesh, Jammu & Kashmir** on 14th September, use hail net for orchard crops to protect from mechanical damage. Provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds and keep cattle indoors.
- As rain/thundershowers likely at most/many places over **Nagaland, Manipur, Mizoram & Tripura** and **Andaman & Nicobar islands** during the period, over **Sub-Himalayan West Bengal & Sikkim** on 14th & 15th, at many places over **Arunachal Pradesh** on 14th, over **Assam & Meghalaya** on 14th, 17th and 18th and over **Odisha** on 18th September along with heavy/heavy to very heavy rain at isolated places very likely over Assam & Meghalaya on 14th, 15th and 18th, over Nagaland, Manipur, Mizoram & Tripura from 16th to 18th, over Sub-Himalayan West Bengal & Sikkim on 14th & 15th and over Andaman & Nicobar islands on 17th & 18th, heavy rain at isolated places over Arunachal Pradesh on 14th September, 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 the Sub-Himalayan West Bengal, provide proper drainage facility in large cardamom, soybean, ginger and turmeric fields.
- As rain/thundershowers likely at most/many places over **Uttarakhand, Himachal Pradesh** and **Jammu & Kashmir** on 14th and 15th, along with heavy rain very at isolated places very likely over Uttarakhand, Himachal Pradesh, Jammu & Kashmir on 14th September, 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 **Tamil Nadu**, medium duration *Samba* rice varieties can be sown in the prepared nursery. In the absence of wet nursery, direct dry seeding of medium duration rice can be done with the sufficient rain for *Samba* season.
- In **Marathwada**, apply protective irrigation in soybean, sorghum and turmeric. Apply irrigation in soybean with help of sprinkler.
- In **West Vidarbha**, due to prevailing subdued rainfall activity, wherever possible give protective irrigation during morning/evening hours to avoid moisture stress in cotton and soybean crop particularly in rain deficient areas. If irrigation is not possible, undertake foliar spray of 1% KNO₃ or 1.5% sulphate of potash to minimize water stress condition in cotton and soybean crops.
- In flood affected region of **Kerala**, as there will be thick deposition of silt at the base of the banana plants, rake the soil followed by earthing up. Ensure aeration and drainage in the banana fields. Remove all the diseased and rotten leaves.

Detailed Agromet Advisories

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

Realised Rainfall: Rainfall occurred in Kolar and Mandya districts of South Interior Karnataka, Hyderabad district of Telangana during the week. Weather remained mainly dry/dry over rest of the region.

● **Advisories:**

- As rainfall likely at a few places along with heavy rain at isolated places likely over Tamilnadu from 15th to 17th, over Coastal Andhra Pradesh on 17th and 18th September, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- As thunderstorm accompanied with lightning over Tamilnadu and south Rayalaseema on 14th September, provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds and keep cattle indoor.
- As rough to very rough sea conditions are likely over northwest Arabian Sea on 14th September. Fishermen are advised not to venture into this area.
- **Kerala:**
 - Regulate the shade in the pepper gardens. Tapping in rubber can be resumed. Repair damaged rain guards. Take care of tapping panels. As there will be thick deposition of silt at the base of the banana plants, rake the soil followed by earthing up. Ensure aeration and drainage in banana field. Remove all the diseased and rotten leaves.
 - In Northern Zone, *Viruppu* rice is ready for harvesting. Drain the field 10 days before harvesting. Start field preparations for second rice crop nursery.
 - As a preventive measure against bud rot in coconut, tie small perforated sachets containing 2 g of Mancozeb to the top leaf axil. To control bacterial leaf blight in paddy, mix 200 g of cow dung in 1litre of water and spray the cow dung slurry by mixing with 20g pseudomonas twice at 10 days interval on a non rainy day.
- **Andhra Pradesh:**
 - In Coastal Andhra Pradesh, in case of transplanting of over aged seedlings, transplant 66 hills/sq. meter , 5-6 seedlings per hill. Apply 25 % extra Nitrogen (3/4 at transplanting and 1/4th at PI stage). Intercultivation is recommended in bajra crop.
 - In Coastal Andhra Pradesh, spray Propiconazole @ 1.0 ml or Hexaconazole @ 2.0 ml per litre of water for sheath blight and Acephate @ 1.5 g or Cartap hydrochloride @ 2.0 g per litre of water for leaf folder in paddy crop. Spray Dimethoate @ 1.7 ml per litre of water for sucking pest in cotton crop.
 - In Scarce Rainfall Zone of Rayalaseema, in cotton, If the suking pest incidence is above ETL, farmers are advised to spray 0.4ml/l of Imidachloprid (or) 0.2 g of Acetamiprid (or) 1.5g of Acephate (or) 1.6ml Monochrotophos. Pink boll worm incidence was noticed below ETL level, farmers are advised to take the following measures. Pheromone traps should be installed immediately at the field level for monitoring of the incidence levels on community basis. Observation of rosette flowers are sampling of green bolls should be done regularly for monitoring and intensity of the field incidence.
- **Telangana:**
 - Prevailing weather conditions are congenial for the incidence of hispa and stem borer in rice. To control hispa,

spray Quinalphos or Profenophos @ 2 ml or Chlorpyrifos @ 2.5 ml per litre of water. For stem borer, apply Cartap Hydrochloride 4G @ 8kg per acre. The incidence of Stem Fly and Stem Girdler is noticed in Soybean. To control, spray Dimethoate @ 2 ml per liter or Quinalphos @ 2 ml + Neem seed kernel extract (NSKE) @ 5 ml per liter or Chlorantriliprole @ 0.3 ml per liter of water. For pink boll worm in cotton, arrange pheromone traps @ 4 per acre for monitoring the pest; arrange Pheromone traps @ 10 per acre for moth trapping and if more than 8 moths are found in traps consecutively for 3 days, control it by spraying Profenophos @ 2 ml or Thiodicarb @ 1.5 g per liter of water. The prevailing dry weather conditions are congenial for incidence of sucking pests in vegetables. To control, spray Fipronil @ 2ml or Thiomethoxim @ 0.3g per litre of water.

▪ **Tamil Nadu:**

- Medium duration rice varieties can be sown in the prepared nursery. In the absence of wet nursery, direct dry seeding of medium duration rice can be done with the sufficient rain for Samba season. Provide propping for early season and midseason plated canes against lodging with heavy wind anticipated. Also, protect banana crop against lodging by giving support. Take up seed pelleting for Cotton cultivation. Use seeds coated with the mixture of Arappu leaf powder 100 g/kg along with DAP 40 g/kg, micronutrient mixture 15 g/kg and Azospirillum 200 g/kg using 500ml maida solution or gruel as adhesive (300 ml/kg) to increase the germination and vigour. Dibble the seeds at a depth of 3-5 cm on the side of the ridge. Irrigate paddy, tapioca and horticulture crops as dry weather if forecast.
- To control the incidence of sucking pest in the vegetable crops, spray neem seed kernal extract 5%. Due to present weather, thrips insect attack is observed in samba paddy nursery. Spray Monocrotophos @ 2ml per litre of water. Apply 1 kg of Trichoderma Viride with 100 kg of farm yard manure per acre of land to prevent diseases caused by fungus in small onion.

▪ **Karnataka:**

- In Coastal Karnataka, to reduce the flower bud/flower drop in cotton, spray Planofix @0.25 ml/litre of water. To avoid the Zinc deficiency in rice field, apply Zinc Sulphate @ 20 kg/ha.
- In South Interior Karnataka, provide protective irrigation to standing crops as per requirement. Spray Planofix @ 1.0 ml /4.5 liters of water against flower drop in cotton. Complete sowing of short duration crops like cowpea (vegetable purpose), field bean, horse gram, Foxtail millet, Little millet, Kodo millet and ragi crops. Continue intercultural operations in groundnut, maize and red gram crop after current spells of rain.
- In North Interior Karnataka, complete the harvesting of green gram. In medium black to deep black soils, undertake sowing of sunflower and *rabi* sorghum crops. Continue intercultural operations in pigeon pea, soybean and maize crops to conserve soil moisture and earthing up in maize. Apply irrigation in sugarcane in alternate rows to save water or adopt drip irrigation method. Undertake nipping in red gram. Prepare the ridges and furrows and compartment bunds in the lands reserved for *rabi* sowing so as to conserve moisture in the soil which will be helpful for the *rabi* crops.
- In South Interior Karnataka, to manage Bacterial blight disease in Pomegranate, spray Streptomycin Sulphate @ 0.5 g+ Copper Oxy-Chloride @2.5 g/liter of water; then take up spraying of Micro nutrients viz., 1 g Zinc Sulphate + 1 g Magnesium Sulphate + 1 g Borax + 1g Calcium dissolved in one liter of water.
- In North Interior Karnataka, to manage powdery mildew disease in late sown green gram and black gram crop spray Propioconazole @ 0.5ml or wettable Sulphur @ 3gm or Carbendiazim @ 1 g dissolved in one litre of water in clear weather. Spray Oxydemeton Methyl 25 EC or Imidacloprid 17.8 SL @0.25 ml in 1 liter of water for controlling green leaf hoppers and thrips in sunflower.

• **Animal Husbandry**

- In Karnataka, vaccinate the animals against the diseases like Foot & Mouth disease, Haemorrhagic Septicaemia and Black Quarter. Vaccinate (ET vaccine) sheep and goats against Enterotoxemia.
- In Kerala, avoid grazing of cattle in water logged areas. Keep hygienic conditions in sheds to prevent mastitis disease in cows. Take vaccination from nearby veterinary clinics. Consult veterinary doctor for medication.
- In Tamil Nadu, the period between September to November is the vulnerable period for the spread of foot and mouth disease. Hence vaccination of is advised for the control of disease. To control ticks, spray Butox (2ml butox per liter of water) to avoid spread of haemoprotozoan infection in cattle.

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

Realised Rainfall: Rainfall occurred in all districts of Arunachal Pradesh except Dibang Valley, all districts of Assam except Darrang, Dhubri, Kamrup (Rural), Karbi Anglong and Nagaon, all districts of Meghalaya, Aizwal, Champhai, Lunglei and Serchhip districts of Mizoram, Imphal West district of Manipur, all districts of Nagaland except Dimapur and North Tripura district of Tripura during the week. Weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain/thundershowers likely at most/many places over Nagaland, Manipur, Mizoram & Tripura during the period, at many places over Arunachal Pradesh on 14th, over Assam & Meghalaya on 14th, 17th and 18th, along with heavy to very heavy/heavy rain at isolated places very likely over Assam & Meghalaya on 14th, 15th and

18th, over Nagaland, Manipur, Mizoram & Tripura from 16th to 18th, heavy rain at isolated places over Arunachal Pradesh on 14th September, 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.

▪ **Arunachal Pradesh:**

- Undertake raising nursery of hybrid tomato, cauliflower and cabbage on raised bed (15-20 cm) after treating seeds with Trichoderma @ 10 g/kg are with Captan/Thiram @ 3 g/kg seeds. Avoid or delay harvesting of Jhum rice. Carry out de-suckering of banana leaving one sucker per plant to maintain the health of mother plant. Remove the male flower in banana bunches to attain better fruit size
- Spray Triazophos 40EC@4ml/litre of water against leaf folder using sticker and apply need based spray of Flubendiamide 3.5% + Hexaconazole 5% @ 2ml/litre of water against rice skipper & leaf folder using sticker in kharif rice on a non rainy day.

▪ **Assam:**

- Provide adequate drainage to coconut, arecanut and sesamum crops. Continue nursery sowing of seeds of recommended varieties of cauliflower, cabbage, knoll khol, tomato, brinjal, radish, carrot and spinach beet in nursery beds and complete the sowing black gram and green gram after current spells of heavy rain. In already sown pulses crops, measures should be taken to remove excess water from the fields. Provide mechanical support to sugarcane crop. Mid-September to mid- October is the optimum time for sowing of Rabi Maize. Select hybrid or composite variety for cultivation. Take up sowing preferably in well drained sandy loam soil after current spells of heavy rain. Transplant one month old seedlings of Finger millet in the main field.
- In flood affected areas of Upper Brahmaputra Valley Zone, where the rice crop was totally damaged, farmers may collect seeds of very short duration varieties such as Luit, Kapilee and Dichang for direct sowing under fair weather conditions. Since moderate to heavy rainfall is predicted for next two days, avoid sowing operations.
- In rainy weather condition papaya plant get affected by mosaic and leaf curl diseases. For effective control of the diseases rouge out the affected plant or spray with Rogar @ 0.1%. Prevailing weather is favourable for attack of leaf folder, army worm, rice hispa at tillering stage of paddy field. To control, spray Chloropyriphos 20EC or Monocrotophos 40EC @ 1.5ml per liter of water. If there is attack of army worn in Sali paddy, spray Chloropyriphos 20 EC or Quinalphos 25 EC @ 2.5-3 ml per litre of water. Undertake plant protection measures after current spells of rain.

▪ **Meghalaya:**

- Prepare nursery bed for sowing of cole crops. Sow the seeds of broccoli (varieties Pushpa, Aiswarya, Fiesta, Lucky, etc.); cabbage (H-139) & cauliflower (local) in the nursery at 5 cm spacing between the line under the protected structures. Transplant one month old seedling on the raised bed at 45 x 45 cm spacing (Cabbage, Cauliflower, Broccoli) and 45 x 30 cm (Knol khol). Maintain 5 cm of standing water in rice field. Keep the field free of weeds. Undertake sowing of carrot and radish. Continue sowing of French bean and cow pea. Maintain proper drainage in ginger, turmeric and cucurbit fields. Harvest cucurbits, brinjal and chilli.

▪ **Manipur:**

- Maintain 5 cm water level in paddy field. Provide drainage in ginger and turmeric crops. Carry out land preparation for planting potato for early crop and also for production of seeds in foothills and upland areas with fertile and sandy loam soil. After harvesting of colocasia/ cucurbits, raised beds may now be prepared as for sowing of pea/ french bean/ broad bean. Recommended varieties for French bean are Pant Anupam, Anupam (to be planted at a spacing of 30cm x 45cm) and Tangkhul Hawai (local) (to be planted at a spacing of 30cm x 60cm with 2-3 seeds per hill). For broad bean, plant local variety at a spacing of 30cm x 45cm. And for pea, Arkel or Azad may be planted at a spacing of 10 cm x 30cm. Raise nurseries of onion & tomato under polyhouses. Raise late crop cauliflower nursery.
- In the rice field, spray Coragen 3-5 ml per 15 litres of water at early stage infestation of case worm, stem borer, gall midge, hoppers and thrips. Spray Carbendazim @ 0.5g / litre of water to control Tikka disease in groundnut. Spray Dichlorovos 76 EC 0.05% @ 0.6ml/ litre of water against hairy caterpillars in black gram and rice bean crops after current spells of rain.

▪ **Mizoram:**

- Complete transplanting of kharif rice with 2-3 seedlings to avoid gap filling. Spacing should be 20 cm row to row and 15 cm plant to plant. Keep some seedlings in nursery or corner of the field for gap filling. Undertake raising seedlings of Khasi mandarin, acid lime, star fruit, plum and peach. Transplant seedlings in secondary bed or polythene bags at 4-6 leaves stage. Maintain proper drainage in passion fruit, coffee, rubber and oil palm plantations and in maize, pulses and paddy fields. Carry out earthing up in ginger and turmeric crops after current spells of rain. Undertake planting of rubber at newly established place. Use rain cap while tapping a rubber plant.
- In large gardens of cucurbitous crops, apply Carbaryl 0.2 per cent or Malathion 0.15 per cent suspension containing large sugar or jaggery at 10 g/litre of water at fortnightly intervals at flowering and fruit initiation against

fruit fly/pumpkin beetle after current spells of rain.

▪ **Tripura:**

- Carry out weeding in paddy fields at tillering stage of Aman rice. Harvest Aus rice and keep it under shed. Carry out land preparation for sowing of sesamum, black gram and green gram after current spells of heavy rain. Avoid stagnation of water in groundnut field. Plan to cultivate early winter vegetables such as cabbage, radish, brinjal, etc. Nursery may be prepared in a land where chances of stagnation of water are less. In case of lowland, land preparation may be delayed for some time.
- Prevailing cloudy and humid weather is conducive for the attack of blast disease in rice crop. The attack can be managed with continuous flooding. For chemical control of the disease, apply Tricyclazole 75 WP @ 0.6 gm/litre of water or Carbendazim 50 WP (Bavistin) @ 1 gm per liter of water. Due to cloudy and humid weather there may be attack of Stem and Cob rot disease. The combination of Trichoderma Viride (5ml per litter) and Seodomonous Flurensense (5ml per litter) may be applied to manage the attack. Undertake plant protection measures after current spells of rain.

▪ **Nagaland:**

- Carry out earthing up and maintain proper drainage in soybean field. Carry out timely harvesting in cucurbits and okra. Avoid injuries to cucurbit crops while harvesting and handling.
- Remove infested okra and brinjal fruits and shoots regularly and destroy them. Monitor TRC/WRC paddy against brown spots. Use mechanical methods such as smoking and hand picking of adults and nymphs to prevent gundhi bug attack in Jhum paddy at panicle initiation stage..

• **Animal Husbandry**

- Keep the poultry house well ventilated during the day time. Change litter periodically and provide fresh and clean drinking water. Vaccinate poultry birds against Fowl pox, Coccidiosis, Ranikhet and Gamboro diseases.
- De-worm pigs/piglets, goat and sheep. Vaccinate pigs against FMD & swine fever and cattle/sheep/goat against FMD, Hemorrhagic Septicaemia, Black Quarter, etc. To prevent mastitis in dairy cows, clean the floor of the dairy shed with suitable antiseptic solution. Wash and clean the udder of cows before and after milking. Precaution should be taken against Japanese encephalitis, a mosquito borne disease. Avoid stagnant water in and around the sty, maintain proper hygienic condition

• **Fishery**

- In Assam, sufficient water has accumulated in the pond. Start new stocking of quality fingerlings/ yearlings. Feeding may be done properly with quality and floating feed containing 20 percent crude protein. To maintain the dissolve oxygen regular aeration may be done using hand or bamboo splashing or using mechanical aerator. Application of quick lime is highly recommended in order to rectify water pH. Application of fish feed (mustard oil cake) is essential for achieving higher yield. To avoid insect infestation in nursery ponds, apply soap oil emulsion (mixture of cheap soap @ 2.5 kg and kerosene oil @ 13 litter per bigha of pond) and apply gently in nursery ponds.

• **Apiculture**

- In Assam, honeybee colonies should be provided with artificial diet. Effective artificial diet comprises of sugar (as carbohydrate); black gram or green gram or soybean powder (as protein source) and water @ 1 kg of sugar and 100 gm protein powder mixed in one litre of water.

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

Realised Rainfall: Rainfall occurred in Araria, Bhabua, Gaya, Kishanganj, Madhepura, Madhubani, Purnea, Sitamarhi, Supaul and West Champaran districts of Bihar, all districts of Jharkhand except Deogarh, Garhwa, Godda, Khunti, Koderma and Pakur, all districts of Odisha except Gajapati and Koraput, all districts of Sub-Himalayan West Bengal & Sikkim except South Dinajpur and in all districts of Gangetic West Bengal except Hooghly, Murshidabad and Nadia during the week. Weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain/thundershowers likely at most /many places over Andaman & Nicobar islands during the period, over Sub-Himalayan West Bengal & Sikkim on 14th & 15th and at many places over Odisha on 18th September along with heavy/heavy to very heavy rain very likely at isolated places over Sub-Himalayan West Bengal & Sikkim on 14th & 15th and over Andaman & Nicobar islands on 17th & 18th September, 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 Sub-Himalayan West Bengal & Sikkim and Andaman & Nicobar islands.
- Rough to very rough sea conditions are likely over Andaman Sea, Eastcentral & South Bay of Bengal from 16th to 18th September. Fishermen are advised not to venture into these areas.

▪ **Odisha:**

- Maintain the water level upto 5cm in rice fields. Strengthen the field bunds and prevent loss of water from the fields. Bacterial leaf blight (BLB) may occur and spread during this weather condition. To control BLB spray

streptocycline 1g mixing with Bavistin 20g per 10lit water if symptoms appear. Spray 200 litres of spray solution per acre crop area with sticker. Undertake plant protection methods on a non rainy day.

- Undertake sowing of sesame. Grow improved HYV like Prachi, Kalika, Kanak, Vinayak etc. Use 1 to 1.2 kg seeds/acre. Before sowing treat the seeds with 3 g Ceresan/kg seeds. Apply 6:8:8 kg NPK/acre during final land preparation. Sow the seeds in lines at 30x10 cm. Continue nursery raising of tomato and brinjal and continue planting of lemon, banana, papaya and mango saplings.
- Ensure good drainage in the banana plantation. In the prevailing weather, there is chance of Sigatoka disease in banana. As a precaution, Spray Pseudomonas 20g/litre of water. In case of severe attack, spray Bavistin 1 g by mixing it with gum in 1 liter of water on lower surface of the leaf on a non rainy day.
- **Bihar:**
 - Farmers are advised to apply 30 kg Nitrogen/hectare in early transplanted paddy crop which is in panicle initiation stage.
 - In the upland areas, complete the sowing of September pigeon pea. Transplanting of mid duration varieties of cauliflower such as Pusa aghani, Pusi, Patna men, Pusa synthetic-1, Pusa shubhra, Pusa sarad, Pusa medhna, Kaasi kuwari, and early snowball is advised. Monitoring of leaf eating caterpillar is advised in early sown cauliflower. If infestation is observed, spraying of Spinosad 1ml/4litres of water is advised to protect the crop.
 - Continue planting of pointed guard Rajendra parwal-1, Rajendra Parwal-2, FP-1, FP-3, Swarn rekha, Swarn allokik, IIVR-1, 2, 105 varieties in North Bihar. Seed rate @ 2500 plants/hectare with planting distance of 2x2 meter are advised.
 - Continue planting of new saplings of fruit plants such as mango, litchi, jackfruit, guava, custard apple, lemon etc. Before planting, application of 40-50 kg FYM per plant is advised.
 - Present weather condition is conducive for damping off disease in vegetables nursery. For prevention, soil treatment with Trichoderma and proper seed treatment is advised before sowing. Avoid dense planting and sowing should be done at shallow depth. Provision of proper drainage is advised in the nursery field. In severe case of infestation, spraying of Copper Oxylchloride @ 2.5 g/litre of water is advised in nursery.
- **Jharkhand:**
 - Undertake harvesting of matured green gram/black gram. Farmers may proceed for field preparation to cultivate Toria after harvesting of green gram/black gram.
 - Continue sowing of Niger in fallow uplands with improved variety of Niger are Birsa niger-1, Birsa niger-2, Birsa niger-3, Pooja-1. Undertake nursery raising of tomato, brinjal, cabbage and cauliflower.
 - Timely sown direct seeded rice crops (Last week of June) are at flowering stage and this stage is susceptible to the attack of the insect Gandhi bug. To control the insects, dusting of Chlorpyriphos/Quinolphos/Methyl Parathion dust @ 10 kg per acre is recommended. However, dusting should be performed during clear weather. The alternative method (in the case of unavailability of the insecticides), is of dusting coal/wood ash mixed with kerosén oil.
 - Due to high humidity and cloudy weather, there is chance of tikka disease in groundnut. Apply Endofil M-45 (4g)+ Bavistin 1g in 4 litres of water.
- **West Bengal:**
 - In the Sub-Himalayan West Bengal, provide proper drainage facility in large cardamom, soybean, ginger and turmeric fields. Spread the extracted jute fibre in sunlight for drying. Continue preparation of seed bed for early winter vegetables crops.
 - In Gangetic West Bengal, undertake sowing of sweet corn and baby corn on a raised bed. Keep 2-3 inch water level in the Aman paddy field and carry out periodic weeding. Arrange proper aeration in betel vine garden. Prepare upland area for sowing of early winter vegetables like cabbage, cauliflower etc. Make the seed bed with proper ridge furrow system for proper drainage of rain water. Undertake transplanting of brinjal after dipping the roots of the seedlings in a solution of Bavistin (2g/litre of water).
 - In Sub-Himalayan West Bengal, to control brown spot of rice, spray Hexaconazole @ 1ml/litre of water. For the management of cucurbitaceous fruit fly population, use pheromone traps. For white fly and jassid apply Acetamiprid 20% SP@1g/3lit or Thiomithoxam 0.3 SG @1g/3litres of water. For management of brinjal fruit & shoot borer, spray Coragen 18.5% E.C @ 0.5 ml/litre of water after clipping off all the infested twigs, flowers, buds, fruits, etc. As high humidity has been forecasted, incidence of blast disease may occur in rice crop. If so, spray Tricyclazole 75% WP @ 0.5 gm/litre of water. Carry out careful roguing and destruction of infected plants of soybean.
 - In Gangetic West Bengal, for stem borer attack in Aman paddy, broadcast Cartap 4% granules or Carbofuran 3% G @ 10 kg/acre or Chlorpyriphos 20 EC @ 2 ml/ litre of water for effective control. If insect population of fruit borer, diamond back moth, etc. is above ETL in cabbage and cauliflower, spray Spinosad 1.0 ml/4 litres of water under clear sky conditions. Spray Dimethoate 30% EC@ 1ml/lit of water at clear weather condition to control jassid in chilli, brinjal and bhindi. Stem rot or phytophthora attack may take place in betel vine due to continuous rain and high humidity, pluck the affected leaf from field, apply redomil@1.5ml/liter of water and drain out excess water and arrange proper aeration.

- **Andaman & Nicobar Islands:**
 - In the Andaman Islands, keep open the rice field bund at 15 cm height to remove excess water as moderate to heavy rainfall is expected. Improve drainage facility in the vegetable field to avoid rotting. Timely harvest the matured vegetables and take them to the nearby market. Avoid using pesticide and fungicides particularly those containing sulphur.
 - In Nicobar Islands, do intercultural operations in coconut community garden after current spells of rain.
- **Animal Husbandry**
 - In West Bengal, protect animals from diseases caused due to rainy conditions and de-worm them at this time. Keep the shade clean and dry. Vaccinate cattle against BQ and FMD. Vaccinate goat and sheep against Enterotoxemia. To prevent fungal attack in poultry shed, rearrange the litter with new one, apply lime on litter, avoid wet food and feed only dry food to birds. The thickness of litter should not be exceeded 1 and a 1/2 inch. Vaccinate poultry birds against Ranikhet disease.
 - In Andaman & Nicobar Islands, keep the poultry litters dry by stirring the litters frequently and adding hydrated limes at the rate of 7 kg per 100 sq feet floor space.
 - In Bihar, animals must be vaccinated for FMD, HS and BQ namely Trivac vaccine administered dose @ 2.5-3ml S/C per animal is recommended.
- **Fisheries**
 - In West Bengal, apply mustard oil cake and rice bran (1:1) as fish feed @ 3-2% body weight of total stock of fish in the pond. Run off of water from outside due to rain makes the pond water dirty. Increase the height of bank around the pond, clean the water by removing weeds and other wastage material and apply lime or potassium permanganate solution in the water.
 - 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.
 - In Odisha, it is right time to go for pisciculture. Collect fingerlings. After releasing the fingerlings in the ponds, keep a bag full of FYM or paddy husk. Depending upon the size of the ponds, apply 5-10 kg of limes to newly developed pisciculture. Maintain 6 ft water depth with pH 6.8-7.5, turbidity 20-30 cm and plankton growth of 2.5/50 liter water. Avoid overcrowding. The fishes should be fed daily with oil cake bran mixture at the rate of 2-3 % of their total biomass.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rainfall occurred in Chandrapur, Gadchiroli, Gondia and Nagpur districts of Vidarbha during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, maintain water level of 5-10 cm in rice field. In North Konkan, apply protective irrigation in nagli, vegetables and orchards.
 - In Madhya Maharashtra, in rice fields, maintain water level of 5 to 10 cm at panicle initiation stage and 10 cm at flowering stage. Apply protective irrigation in *kharif* crops if soil moisture stress is observed. Undertake harvesting of black gram and green gram. Undertake land preparation for sowing of *rabi* jowar and safflower. Undertake sowing of *rabi* (*rangada*) onion (varieties: Baswant 780, Phule Samarth and N-2-4-1).
 - In Marathwada, apply protective irrigation in soybean, sorghum and turmeric. Apply irrigation in soybean with help of sprinkler. Undertake intercultural operation like weeding in pomegranate orchards. Also apply protective irrigation as per availability and requirement of water using drip irrigation system. Undertake harvesting of timely sown and matured pearl millet as early as possible.
 - In West Vidarbha, complete harvesting of late sown matured green gram and timely sown black gram. Keep the harvested produce in safer place. Due to prevailing subdued rainfall activity, wherever possible give protective irrigation during morning/evening hours to avoid moisture stress in cotton and soyabean crop particularly in rain deficient areas. If irrigation is not possible undertake foliar spray of 1% KNO₃ or 1.5% sulphate of potash to minimize water stress condition in cotton and soyabean crops. In East Vidarbha, Undertake foliar spray of 2% Urea (200 g Urea +10 litres water) in soybean (flowering stage) for better productivity.
 - In Konkan, to control stem rot borer in cashew, remove the bark of affected stem with help of 15 mm knife and remove the cashew stem rot borer from stem and soak the stem in to the paste of Chloropyriphos 20% EC @ 10 ml. per 10 liter water.
 - In Madhya Maharashtra, for control of blight and thrips in onion, spray Dithen M-45 @ 30 g + Lambda Cyhalothrin 5 EC @ 10 ml per 10 litres of water.
 - **Gujarat:**
 - In South Gujarat, complete sowing of pigeon pea, green gram and black gram crops, where crop was damaged due to water logging condition. Continue sowing of cucumber.

- In Saurashtra & Kutch, apply irrigation in groundnut (pegging stage to pod development stage) and vegetable crops. Continue picking of ripen pods of cow pea and green gram in time. Complete transplanting of brinjal, chilli and early cauliflower seedlings under sufficient moisture condition. Continue intercultural operations vegetable crops to conserve soil moisture.
- In North Gujarat, carry out gap filling in castor and fennel crops. Carry out intercultural operations in standing crops.
- In Middle Gujarat, complete transplanting of tomato, brinjal and chili crops. Carry out intercultural operations in pearl millet and groundnut crops.
- In South Saurashtra Zone, for the control of stem rot in groundnut, furrow application of 2.5 kg/ha *Tricoderma viridi*, 500 kg castor cake OR vermicomposting. For the control of rust and tikka, sprayfungicides mencozeb 26 gm mix in 10 litre of water.
- In South Gujarat, install 5 pheromone traps for monitoring of pink bollworm in cotton. To manage infestation of white fly in chilli and brinjal crops, apply Triazophos 40 EC @ 20 ml/10 litres of water.
- In North Saurashtra, under present weather conditions, severe attack of thrips observed in cotton since last two weeks; for control, spray Profenfos @ 20 ml or Ethion @ 20 ml + Imidacloprid 30.5 % @ 3 ml with neem seed extract 500 ml or neem oil 40 ml/10 litres of water.
- **Animal Husbandry**
- In Gujarat, spray Deltamethrin or Amitraz 2 ml/litre of water for the control of tick.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rainfall occurred in all districts of East Madhya Pradesh except Chhindwara and Seoni, in Agar, Ashoknagar, Bhind, Datia, Guna, Hoshangabad, Mandasaur, Morena, Neemuch, Raisen, Rajgarh, Sheopur Kalani, Shivpuri and Vidisha districts of West Madhya Pradesh, Bilaspur, Dhamtari, Gariaband, Janjgir, Jashpur nagar, Kanker, Korba, Koriya, Mahasumund, Raigarh, Surajpur and Surguja districts of Chhattisgarh during the week. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - In West Madhya Pradesh, undertake nursery preparation for cauliflower and cabbage. Continue intercultural operations in green gram, black gram, red gram, soybean, maize and vegetables. Apply remaining 1/3 dose of recommended nitrogen fertilizer in form of urea in maize and in rice crop @ 15kg/acre. Undertake picking up of matured vegetables. Continue transplanting of new saplings of orchards.
 - In East Madhya Pradesh, apply irrigation in standing crops as per requirement. Continue weeding in rice, maize and vegetable crops and apply the recommended nitrogen fertilizer. Continue planting of horticultural crops like papaya, mango, guava etc.
 - In Kymore Plateau and Satpura Hill Zone, continue intercultural operations in rice, soybean and red gram. Continue nursery preparation for early season *rabi* vegetables. Undertake field preparation for sowing of vegetable pea. Arrange good quality seed of variety- Arkel, PSM-3 or Azad pea-1 etc.
 - In Jhabua Hill Zone, to control stem rot disease in ginger and turmeric spray Blitox 50 @ 2.5g/litre solution and to control shoot borer spray Triazophos @ 2 ml/litre of water.
 - In Satpura Plateau Zone, to control infection of sucking pest in cotton, spray Thymethoxzon @ 0.25 g/litre of water or Imidacloprid @ 0.5 ml/litre of water.
 - **Chhattisgarh:**
 - Continue first top dressing with urea (25 kg/acre) in rice at tillering stage. Apply nitrogen @ 30 kg/ha in maize at tasselling stage. Continue planting of banana, papaya, mango, guava etc. Continue nursery sowing of brinjal, early tomato, chilli and onion in upland areas. In Plain Zone, short duration rice is in flowering stage, apply third dose of Nitrogen fertilizer at 50% flowering.
 - In Bastar Plateau Zone, earthing up should be done in colocasia, amahaldi, turmeric and elephant foot yam for effective rhizome formation and weed management. Continue planting of improved varieties of grafted cashew nut plant (Indira kaju-1, Vengurla-4, Vengurla-7, Vengurla-9 etc). Continue weeding in rice and apply second dose of Nitrogen in clear weather.
 - For control of attack of blast in rice crop, spray Tricyclazole @120 g per acre and the spray should be repeated after 10-12 days as per requirement on a non rainy day.
- **Animal Husbandry**
 - In Madhya Pradesh, provide clean and fresh water two times a day. Vaccinate the cattle for control of FMD and HS disease.
 - In Chhattisgarh, provide concentrate feed to milch animals mixed with dry and green fodder and insure for enrich diet having protein, carbohydrate, fat, vitamins etc.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Himachal Pradesh except Chamba, Kinnaur and Lahaul & Spiti, in Jalandhar, Kapurthala, Ludhiana, Nawashahar, Ropar and Sas Nagar (Mohali) districts of Punjab, Ambala, Chandigarh, Gurgaon, Jhajar, Kurukshetra, Mewat, Palwal and Sonapat districts of Haryana, in North Delhi, North East Delhi, South Delhi and South West Delhi districts of Delhi, Jammu, Reasi, Samba and Udhampur districts of Jammu & Kashmir, Banda, Deoria, Gonda, Hardoi, Kanpur City, Pratapgarh, Rai Bareilly, Sonbhadra and Sultanpur districts of East Uttar Pradesh, Agra, Bagpat, Etawah, G B Nagar, Hamirpur, Jhansi, Lalitpur, Mahoba and Mainpuri districts of West Uttar Pradesh, Bageshwar, Dehradun, Nainital, Pithoragarh and Uttarkashi districts of Uttarakhand, all districts of East Rajasthan except Alwar, Banswara, Dungarpur, Jhunjhunu, Sikar, Sirohi and Udaipur during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most/many places over Uttarakhand, Himachal Pradesh and Jammu & Kashmir on 14th and 15th, along with heavy rain very at isolated places very likely over Uttarakhand, Himachal Pradesh, Jammu & Kashmir on 14th September, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
 - As thunderstorm accompanied with hailstorm and lightning very likely over Uttarakhand, Himachal Pradesh, Jammu & Kashmir on 14th September, use hail net for orchard crops to protect from mechanical damage. Provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds and keep cattle indoor. Keep harvested produce at safer places.
 - **Jammu & Kashmir:**
 - Maintain water level of 3-5cm in rice at flowering stage. Continue sowing of toria, methi, spinach beet, coriander, radish, carrot, beet root and spinach. Apply irrigation in maize and pulses. Continue nursery raising of cole crops. Undertake nursery sowing of *rabi* vegetables. Continue cultivation of Dhingri (*Pleurotus*spp.) mushroom.. Continue weeding and hoeing in ginger and turmeric. Continue picking up of matured tomato, brinjal, capsicum, okra and broccoli. In Valley Temperate Zone, undertake harvesting of matured rice crop, green cobs of maize and matured sunflower in clear weather.
 - To control the attack of sheath blight in rice crop, spray Carbendazim @ 0.1% after current spells of rain.
 - **Uttarakhand:**
 - Undertake sowing of toria. Continue sowing of pea, radish, cabbage, broccoli and turnip. Apply second top dressing of 1/4th dose of Nitrogen in rice @ 25 kg/ha. Maintain sufficient moisture in rice field at ear head emergence stage. Continue picking up of matured cucurbits and vegetables like tomato, capsicum, chilli in clear weather. Continue harvesting of matured apple. Continue planting of orchards like mango, guava, lemon, papaya, litchi etc.
 - In Hill Zone, undertake harvesting of mature rainfed crops like Cheti Dhan, Barnyard millet, Amaranth etc. Maintain proper level of water in irrigated rice during milking/grain filling stage. Undertake sowing of pea and toria.
 - To control leaf blight disease in maize crop, spray Mancozeb @ 2.5g/litre of water after current spells of rain.
 - In Hill Zone, if there is an outbreak of white fly or sucking pests in vegetables, spray Imidacloprid @ 1.0 ml/3 litres of water after current spells of rain.
 - **Himachal Pradesh:**
 - Make bunds for conserving rain water in the rice fields. Bund should be higher and wider so that more rain water can be conserved in the fields. Continue intercultural operations in peas, turnip, carrot, spinach in high hilly regions in clear weather. In mid hill region continue nursery sowing of Chinese cabbage and direct sowing of raddish, carrot, broccoli and lettuce. In High Hill Temperate Dry Zone, continue sowing of oats. Continue intercultural operations in vegetables in polyhouse. Continue weeding in apple orchard and apply irrigation. Continue nursery sowing of mid season cauliflower and cabbage in poly house in mid hills and lower regions.
 - In Mid Hills Sub-Humid Zone, undertake field preparation for sowing of garlic, radish, carrot, turnip and other winter vegetables.
 - To control attack of stem borer in rice, broadcast of Cartap 4% granules or Carbofuran 3% G @ 10 kg/acre or Chlorpyrifos 20 EC @ 2 ml/litre of water after current spells of rain.
 - To control white fly and sucking pest in vegetables spray Imidacloprid @ 1 ml/3litres of water after current spells of rain.
 - **Punjab, Haryana & Delhi:**
 - In Punjab, in transplanted rice, apply second and third dose urea @ 37 kg per acre. Undertake planting of early varieties of potato and pea. Apply irrigation in rice, cotton, maize and vegetables as per requirement. Continue sowing of spinach, radish, turnip and carrot. Continue weeding and hoeing in sugarcane, maize, pulses, vegetables and orchard crops. Continue nursery sowing of mid season cauliflower and planting of seedlings of onion. Continue planting of fruit plants such as citrus, litchi, mango, guava, loquat, ber, amla and papaya.

- In Haryana, maintain 5-6 cm standing water upto maximum tillering stage in rice fields. Continue weeding in rice. Continue intercultural operations in vegetables. For raising new orchards obtain good quality fruit plants from reliable source or nursery. Undertake harvesting of timely sown bajra.
- In Delhi, undertake field preparation for sowing of early pea and early mustard. Continue weeding and hoeing in all crops and vegetables. Continue sowing of sarson saag (Pusa saag-1), radish (Versa kee rani, summer long, long chetaki), spinach (all green), coriander (pant Haritama, hybrids). Continue preparation of nurseries of cauliflower for mid season (Nov.-Dec.) and sowing of carrot on raised bed.
- In Punjab, for control of sheath blight disease in rice, spray Amistar Top 325 SC @ 200ml/acre dissolved in 200 litres of water on a non rainy day.
- In Delhi, in paddy crop constant monitoring of stem borer by using pheromone traps 4-6 per acre is advised, if insect population is above ETL, then broadcast Cartap 4% granules @ 10 kg/acre for effective control.
- **Uttar Pradesh:**
 - In East Uttar Pradesh, apply the second and last top dressing dosage of Nitrogen in rice. Continue sowing of toria. Continue nursery sowing of cauliflower, cabbage, chilli and tomato, sowing of spinach, radish, carrot, turnip, beetroot, fenugreek, coriander, okra and cucurbits. Continue weeding and thinning in red gram, sesame, bajra and sorghum. Continue planting of mango, ber, guava, lime etc. in new orchard. Continue picking up of matured brinjal and bottle gourd.
 - In West Uttar Pradesh, continue hoeing & weeding in all crops and vegetables, broadcast second split dose of nitrogen for optimum growth. Continue preparation of nurseries of cauliflower for mid season (Nov-Dec.). Continue picking up of matured cucurbits. In Western Paln Zone, continue sowing of toria. Undertake planting of early varieties of potato.
- **Rajasthan:**
 - In East Rajasthan, continue sowing of radish. Continue transplanting of mid season cabbage and cauliflower. Procure improved varieties of seeds for sowing of mustard. Undertake field preparation for sowing of early pea, Taramira and mustard. Continue planting of fruit crops like mango, plum, pomegranate, aonla etc. Continue picking up of matured pods of cluster bean (guar). Undertake picking up of well riped pods of pulse crops like green gram, moth bean and cowpea.
 - In West Rajasthan, apply irrigation and undertake earthing up in sugarcane. Maintain 4-5 cm water level in rice fields. In hybrid maize broadcast 40 kg N and in desi and composite maize 35 kg N at tasselling and silking stage. Undertake transplanting of cauliflower and cabbage. Continue planting new seedlings of kinnow in already prepared pits in the field.
 - In Sub Humid Southern Plain and Aravali Hill Zone, for control of stem borer in maize apply Phorate 10 G 3% granules @ 5-7.5 kg/ha.
- **Animal Husbandry**
 - In Jammu & Kashmir, provide supplementary mineral mixture with 50 gm iodized salt regularly to the milking and pregnant animals. Give vaccination against BQ and HS. Ensure green fodder to the livestock.
 - In Himachal Pradesh, give mixture of hay & green fodder to cattle. Weather is conducive for ticks and mites attack on animals. For control spray Butox @ 2.0 ml per litres of water.
- **Apiculture:**
 - In Jammu & Kashmir, inspect bee colonies. Continue raising of new frames by providing comb foundation sheets to healthy colonies. Raise new queen if needed.
 - In Himachal Pradesh examine bee colonies for barroa mites. Dust sulphur on sealed brood in the colony and not on larvae to control mites attack on honeybees. For protection of ants put the legs of apiary into water so that ants could not attack apiary.

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