



National Agromet Advisory Service Bulletin

Friday 20th October 2017
(For the period 20th to 25th October 2017)



Issued by
India Meteorological Department

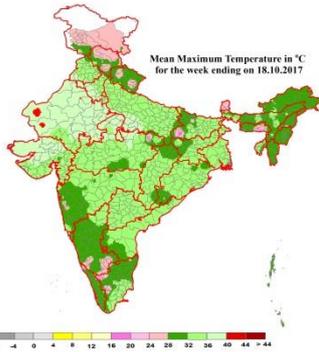
Weblink For

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

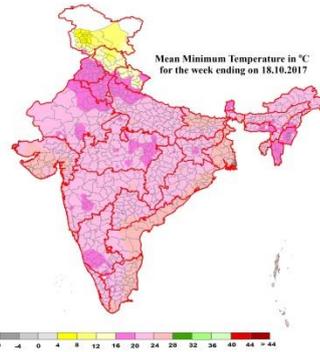
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending 18.10.2017

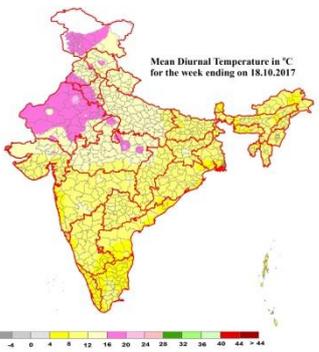
Mean Maximum Temperature (°C) for the week ending 18.10.2017



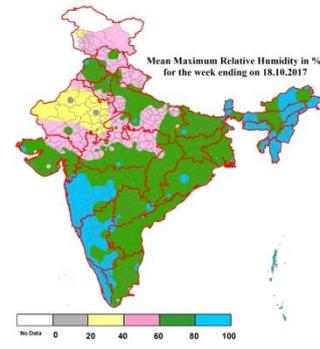
Mean Minimum Temperature (°C) for the week ending 18.10.2017



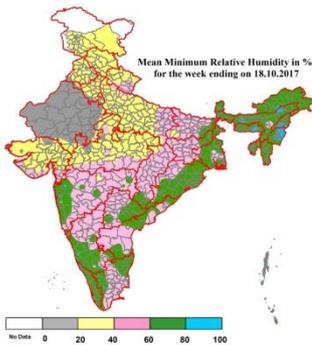
Mean Diurnal Temperature Variation (°C) for the week ending 18.10.2017



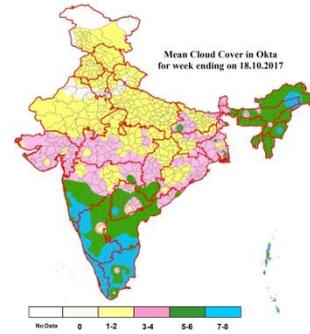
Mean Maximum Relative Humidity (%) for the week ending 18.10.2017



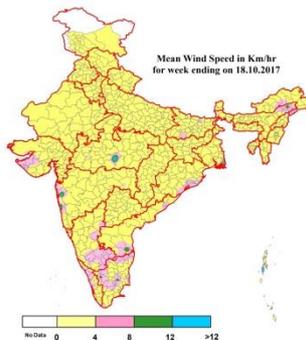
Mean Minimum Relative Humidity (%) for the week ending 18.10.2017



Mean Cloud Cover (okta) for the week ending 18.10.2017

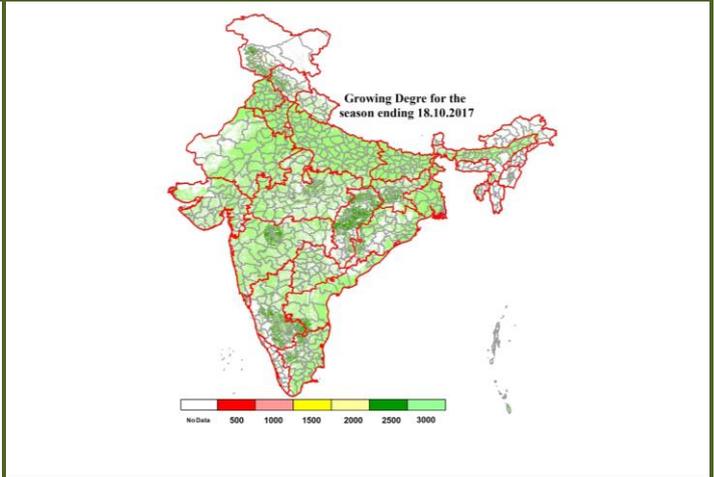
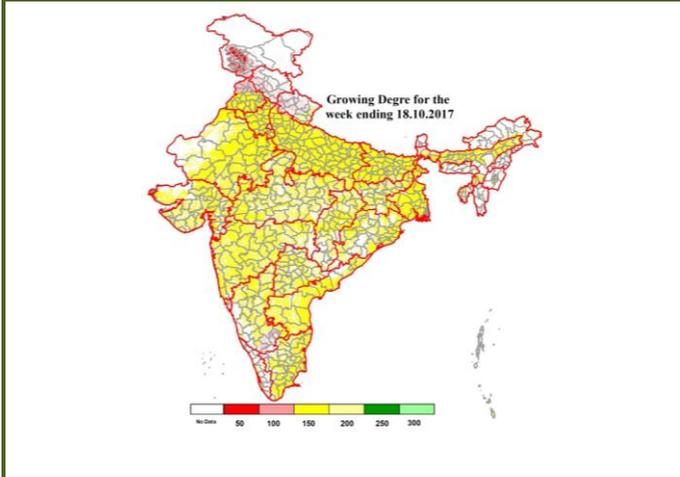


Mean Wind Speed (km/hr) for the week ending 18.10.2017



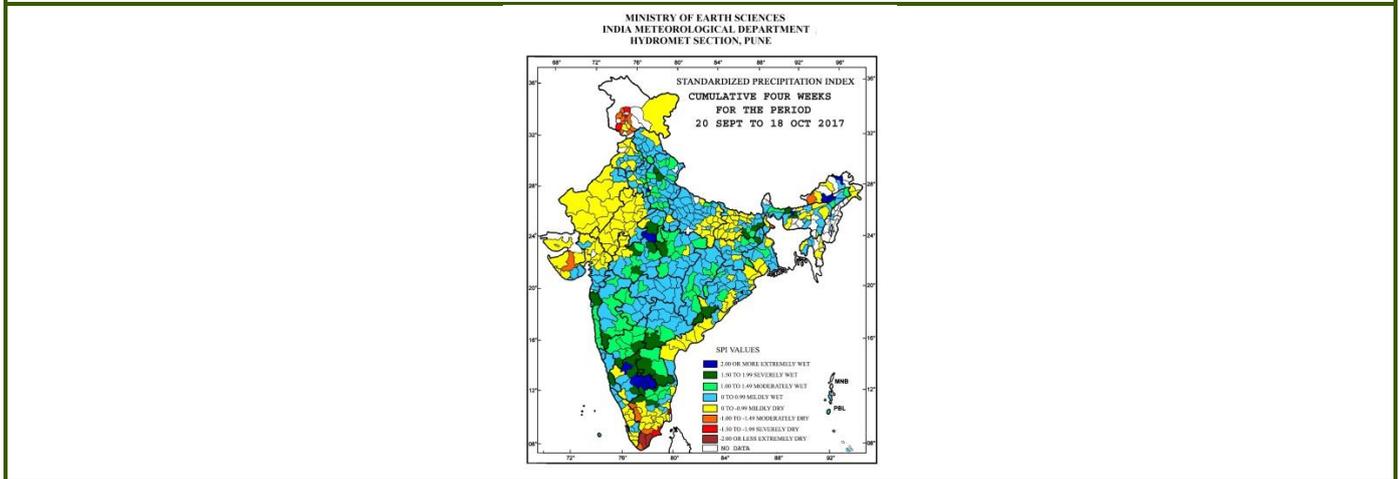
Growing Degree Days for the week ending 18.10.2017

Growing Degree Days for the season ending 18.10.2017

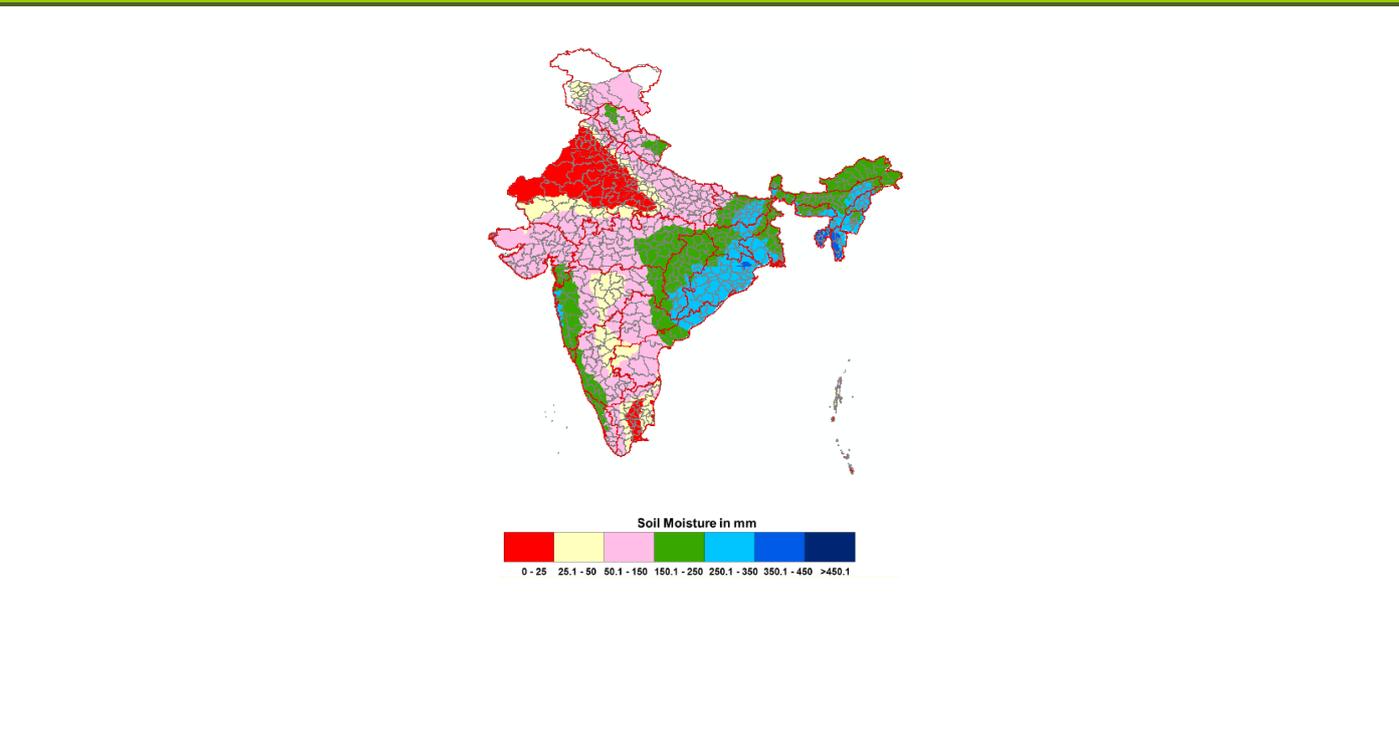


* Base temperature for *Kharif* Season is taken as 10⁰ C

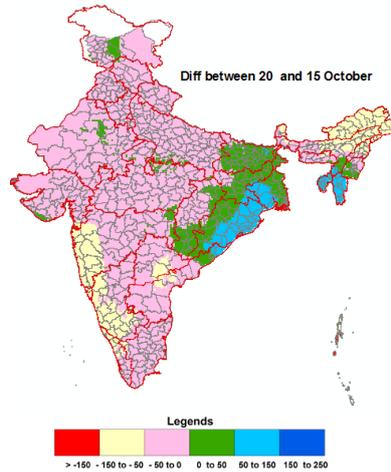
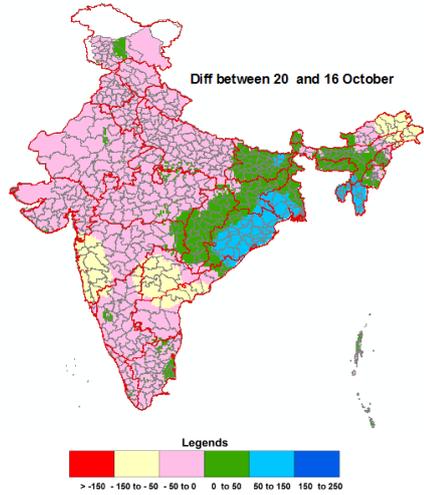
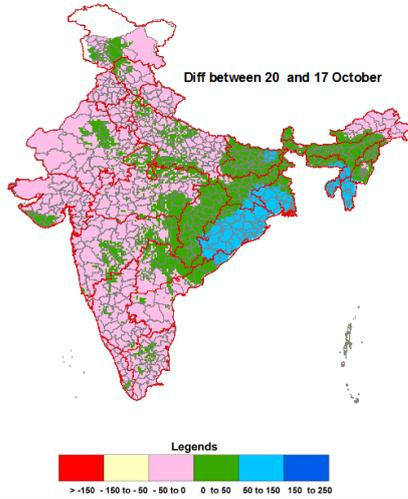
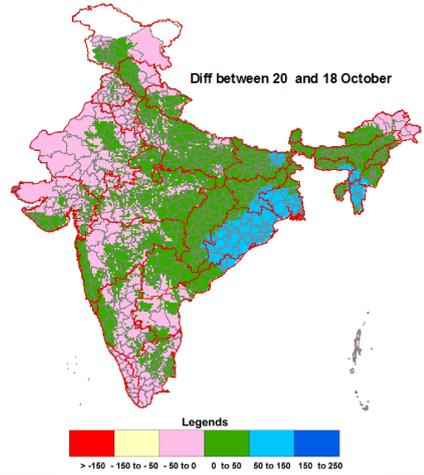
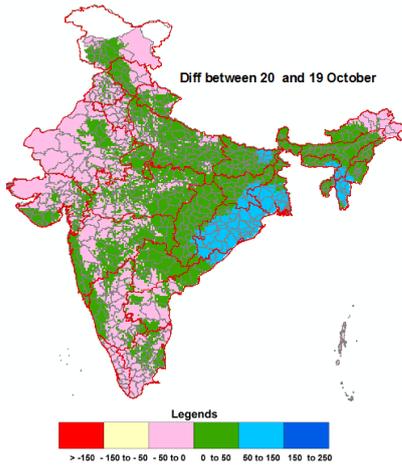
**Standardised Precipitation Index
Cumulative 4 weeks for the period 20th September 2017 to 18th October 2017**



Daily Soil Moisture (mm) for 20th October (ending at 0830 IST) for 1 m depth



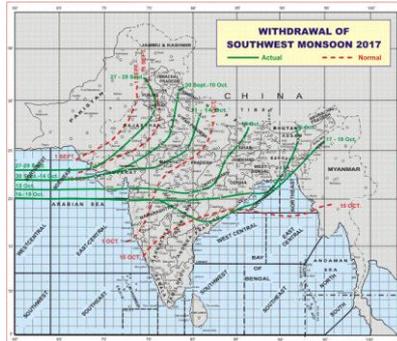
Difference of Soil Moisture (mm) for 1 m depth



Depression

- The depression over coastal Odisha moved further northwards and lay centred at 0830 hours IST of today, the 20th October 2017 over coastal Odisha near lat. 21.0°N and long. 86.5°E, about 35 km northnorthwest of Chandbali (Odisha). The system is very likely to move nearly northwards for some more time and then north northeastwards. As the system is expected to move nearly north northeastwards close to the coast, moisture incursion would continue during next 24 hours and hence the system is very likely to maintain its intensity during next 24 hours. It is very likely to weaken gradually into a well marked low pressure area thereafter.

Withdrawal of South West Monsoon



- The monsoon withdrawal line continues to pass through Lat.26.0°N/Long.95.0°E, Kohima, Lat. 20.0°N/Long. 88.0°E, Kalingapatnam, Nizamabad, Aurangabad, Dahanu, Lat. 20.0°N/Long. 65.0°E and Lat. 20.0°N/Long. 60.0°E.

Weather Warning during next 5 days

- **20 October (Day 1):** Heavy to very heavy rain with extremely heavy falls very likely at isolated places over Sub-Himalayan West Bengal & Assam & Meghalaya; heavy to very heavy rain very likely at a few places over Gangetic West Bengal and at isolated places over north Odisha and Nagaland, Manipur, Mizoram & Tripura and heavy at isolated places over Bihar and Jharkhand. Thunderstorm accompanied with lightning & gusty winds very likely at isolated places over Vidarbha, Chhattisgarh, South Interior Karnataka and Kerala. Squally winds speed reaching 45-55 kmph gusting to 65 Kmph very likely along & off north Odisha and West Bengal coasts. Fishermen are advised not to venture into Sea off Odisha and West Bengal coasts.
- **21 October (Day 2):** Heavy to very heavy rain with extremely heavy falls very likely at isolated places over Sub-Himalayan West Bengal and Assam & Meghalaya; heavy rainfall very likely at isolated places over Gangetic West Bengal, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura. Squally winds speed reaching 30-40 kmph gusting to 50 Kmph very likely along & off West Bengal coast. Fishermen are advised not to venture into Sea off West Bengal coast.
- **22 October (Day 3):** Heavy rain at isolated places likely over Arunachal Pradesh, Assam & Meghalaya and Nagaland.
- **23 October (Day 4):** No weather warning.
- **24 October (Day 5):** No weather warning.

Weather Outlook for subsequent 2 days from 25th to 27th October 2017

- Conditions are likely to become favorable to further withdrawal of southwest monsoon from remaining parts of northeastern states, central India and northern parts of peninsular India.
- Rain at many places likely over southern parts of peninsular India.
- Rain at isolated places likely over northeast India.
- Weather is likely to be dry over the remaining parts of the country.

Weather Forecast for next 5 days valid upto 0830 hours of 25th October 2017

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- No significant change in maximum and minimum temperatures over most parts of the country during next 2-3 days.
- Northerly to northeasterly surface winds of 10-15 kmph very likely to prevail over plains of northwest India during next 2 days.

5 Day Rainfall Forecast (Mid-day) 20th October 2017

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

% 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		

Salient Advisories

- As heavy to very heavy rain with extremely heavy falls very likely at isolated places over **Sub-Himalayan West Bengal & Assam & Meghalaya**; heavy to very heavy rain very likely at a few places over **Gangetic West Bengal** on 20th and 21st October and heavy to very heavy rain very likely at isolated places over **north Odisha** and **Nagaland, Manipur, Mizoram & Tripura** and heavy at isolated places over **Bihar** and **Jharkhand** on 20th October, avoid 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. Avoid harvesting of crops and keep harvested produce at safer places.

- As squally winds speed reaching 45-55 Kmph gusting to 65 Kmph very likely along & off **north Odisha** and **West Bengal coasts**, Fishermen are advised not to venture into Sea off Odisha and West Bengal coasts on 20th and Squally winds speed reaching 30-40kmph gusting to 50 Kmph very likely along & off West Bengal coast on 21st October, Fishermen are advised not to venture into Sea off West Bengal coast.
- As thunderstorm accompanied with lightning & gusty winds very likely at isolated places over **Vidarbha, Chhattisgarh, South Interior Karnataka** and **Kerala** on 20th October, provide support to banana, young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds and keep cattle indoor.
- In Coastal Saline Zone of **West Bengal** , as heavy to very heavy rainfall is expected, drain out of excess water from rice, betel vine and vegetable fields and maintain adequate drainage. In New Alluvial Zone, undertake harvesting of Aman rice after current spells of rain.
- In Southern Zone of **Andhra Pradesh**, in areas due to breaches in tanks and flooding of rain water on harvested groundnut heaps, farmers are advised to immediately drain out the water from the fields and dry the produce. Spray Methyl Uzanol @ 0.5-1% on the pods wetted with rain water to arrest the contamination aflatoxin. Undertake harvesting of groundnut crop and thoroughly dry the produce.
- In **Jharkhand, Madhya Pradesh, Chhattisgarh** and **Jammu & Kashmir** continue sowing of toria. In **Haryana** and **Delhi**, continue sowing of mustard.

Detailed Zonewise Agromet Advisories

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

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala except Wayand, all districts of Coastal Karnataka, all districts of North Interior Karnataka, all districts of South Interior Karnataka except Mysuru, in Chennai, Coimbatore, Didigul, Kancheepuram, Kanyakumari, Karur, Krishnagiri, Nilgiris, Ramanathapuram, Salem, Theni, Tiruppur, Tiruvallur, Tiruvannamalai, Trichy, Vellore, Villupuram and Viraudhnagar districts of Tamil Nadu, all districts of Coastal Andhra Pradesh except Srikakulam, Vizianagaram and West Godavari, all districts of Rayalaseema, all districts of Telangana except Adilabad, Khammam and Nizamabad during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with lightning & gusty winds very likely at isolated places over South Interior Karnataka and Kerala on 20th October, provide support to banana, young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds and keep cattle indoor.
 - **Kerala:**
 - In the Southern Zone, undertake cultivation of banana, vegetables and fodder grass as intercrops in coconut fields. Continue tapping of rubber, planting of Nendran bananas and sowing of mundakan rice in Thiruvananthapuram and Kollam districts.
 - In the Central Zone, there is a chance of rice leaf folder in mundakan paddy (second crop) in seedling stage. Spray 2ml fame/10 litre of water and sowing of cabbage and cauliflower seeds in the nursery beds. Addition of pseudomonas culture to the soil at the time of planting of cabbage and cauliflower will help to reduce fungal diseases.
 - In the Problem Area Zone, ensure proper drainage in coconut, nutmeg and pepper fields and continue harvesting of Nendran bananas.
 - In the Northern Zone, continue nursery preparation for mundakan rice, harvest all matured crops quickly and planting of vegetables(okra).
 - **Karnataka:**
 - In Central Dry Zone, continue sowing of rabi crops like Bengal gram, safflower, rabi jowar under rainfed condition and maize, onion under irrigated condition.
 - In Southern Dry Zone, undertake sowing of ragi, maize, fodder maize, minor millets or vegetable crops like tomato, brinjal, chilli and other horticulture crops under optimum moisture condition.
 - In Dharwad, Belagavi and Haveri districts of North Transition Zone, continue sowing of *rabi* sorghum (DSV-4, M 35-1 Muguthi, CSV-29R and SPV-2217), safflower (A-1 and A-2), chickpea (Annigeri-1, BG-1105, BGD-103, JG-11 and BGS-964) and wheat (rainfed: DWR-162, DWR-137, irrigated: DWR-162, US-428, UAS-304) in October under favorable conditions.

- In Northeast Dry Zone, utilising the realised rainfall, continue sowing of sunflower, maize, *rabi* sorghum, wheat, Bengal gram (JG -11, Annegeri -1, ICCV-10) and safflower crops. Continue fresh plantation of fruit trees, teak, neem, tamarind, acacia *etc.*
- In North East Transition Zone, continue new plantation of sugarcane (variety Co-86032) crop. Prepare the seeds (seed hardening for drought resistance and uniform germination) for sowing of chick pea and sorghum and undertake sowing at optimum moisture.
- In Eastern Dry Zone, continue land preparation for sowing of *rabi* crops and undertake sowing of short duration crops like ragi (Indaf-9, GPU- 45 & 66, ,PR- 202), cowpea (KBC-1, TVX-944 and PKB-4 for vegetable purpose), sunflower (Morden, KBSH-1,41,44 & 52 and Niger (KBN-1, No-71) and in black soils-Bengal gram (Annigeri-1, J.J-11, KAK-2, Vishal) under optimum moisture condition.
- In Hill Zone, to reduce the square/flower bud/flower drop in cotton, spray Planofix @ 0.25 ml/litres of water.
- In Hill Zone, incidence of stem borer is likely in ginger, turmeric and cardamom; for the control insect, spray 1.2 ml Monocrotophos or 2 ml Chloropyriphos per litre of water.
- In Central Dry Zone, due to cloudy weather and rainfall, there is possibility of incidence of purple blotch in onion, to control spray Chlorothalanin or Mancozeb @ 2 g per liter with adhesive gum to the spraying mixture after current spells of rain. Wherever shoot fly damage is noticed in maize crop, remove the affected plants completely and apply Carbofuran granules in to the whorls @ 5 kg /acre.
- In Southern Dry Zone, in Paddy field blue beetle insects is noticed. To manage this pest by spraying of Chloropyriphos 20EC @ 2ml/litre of water.
- **Andhra Pradesh:**
- In the Krishna Godavari Zone, to overcome present excess moisture condition, top dress the nitrogenous fertilizers and adopt intercultivation wherever possible immediately. Continue land preparation for sowing of blackgram:LBG-752, LBG-20, T-9, LBG-623, PU-31, LB-402, LBG-709 and LBG-787.
- In the Scarce Rainfall Zone, drain out excess water from cotton fields and continue procuring seeds and keeping inputs ready for sowing of Bengal gram in black soil areas after seed treatment with Carbendazim @2.5g/kg. In Kurnool district, undertake harvesting of onion, foxtail millet, green gram and black gram crops.
- In the Southern Zone, undertake harvesting of groundnut crop and thoroughly dry the produce. In areas due to breaches in tanks and flooding of rain water on harvested groundnut heaps farmers are advised to immediately drain out the water from the fields and dry the produce. Spray Methyl Uzanol @ 0.5-1% on the pods wetted with rain water to arrest the contamination aflatoxin. In Kadapa district, remove the standing water from banana field and cover the matured fruit bunches with banana leaves and harvest within two weeks. In Nellore district, undertake nursery preparation for sowing of rice after proper seed treatment.
- In the Scarce Rainfall Zone, prevailing wet, humid conditions are favourable for spread of late leaf spot in groundnut. Farmers are advised to spray Carbendazim @1g + Mancozeb @ 3g/litre for control.
- **Telangana:**
- In North Telangana Zone, continue land preparation for sowing of maize, sowing of groundnut, cowpea, field bean, green gram and black gram. Continue sowing of jowar(Magi Jower)
- In South Telangana Zone, at present, red gram crop is at bud initiation to flowering stage which is more congenial for incidence of maruca flower Webber. To control at initial stage, spray NSKP @ 0.5% or Neem oil @ 5 ml / litre of water. Based on the severity, spray Chlorpyriphos @ 2.0 ml + Diclorovas @ 1.0 ml/litre of water.
- In North Telangana Zone, incidence of false smut will be seen in rice at flowering stage due to high relative humidity and rains. To control, undertake prophylactic spraying of Propiconazole @1ml/litre of water twice at 50 and 100% panicle emergence.
- **Tamil Nadu:**
- In the Cauvery Delta Zone, continue harvesting of kuruvai rice. Continue nursery field preparation of thaladi rice crop.
- In the Western Zone, since rainfall is expected for next five days, provide sufficient drainage for recently sown crops. Irrigated Tapioca planted during July can be top dressed with Nitrogen and Potassium at 45 and 120 kg/ ha followed by earthing up.
- In the South Zone, continue sowing of sorghum, maize, black gram, green gram and cotton.
- In the High Altitude Hilly Zone, drainage facilities should be created in the field to drain off excess water. Green manure crops namely lupin and buckwheat can be grown as crop rotation for control of nematodes and damping off disease in the soil.
- In the High Rainfall Zone, as heavy winds (14 -16 kmph) are blowing from the west direction in the fourth coming days, staking should be given to young rubber and banana plants.
- In the Cauvery Delta Zone, grass hopper incidence is being noticed in the direct sown samba paddy fields due to prevailing weather condition. To manage this, spray Chlorpyriphos @ 500 ml/ acre + Azadirachtin @ 250 ml / acre with 200 litres of water .
- In the High Rainfall Zone, to control sigatoka leaf spot in banana, spray Propiconazole @1 ml /litre + Teepol @ 0.5 ml /litre.

▪ **Animal Husbandry**

- In the Problem Area Zone of Kerala, avoid moist conditions in cattle shed to prevent incidence of foot rot.
- In the Central Zone of Kerala, undertake deworming of animals. In calves, first dose of medicine should be given within 15 days of age.
- In the Cauvery Delta Zone of Tamil Nadu, the floor and walls of sheds should be cleaned and coated with lime solution. The menace of fly and mosquitoes should be reduced in the cattle shed.
- In the Western Zone of Tamil Nadu, prevent animals from drinking stagnated rain water against food contamination. Provide clean and good drinking water to animals. Keep the animal shed and surrounding dry to control multiplication of disease causing mosquito and flies.

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

- **Realised Rainfall:** Rainfall occurred in Dibang Valley, East Siang, Lower Dibang Valley, Lohit, Papumpare, Upper Subansari and West Kameng districts of Arunachal Pradesh, Barpeta, Cachar, Chirang, Darrang, Dhubri, Dibrugarh, Golagaht, Hailkandi, Jorhat, Karimganj, Lakhimpur, Morigaon, Nagaon, Nalbari, Sonitpur, Tinsukia and Udalgairi districts of Assam, East Garo, East Khasi Hills and Ribhoi districts of Meghalaya, Aizwal, Lunglei and Serchip districts of Mizoram, Imphal East and Imphal West district of Manipur, all districts of Tripura during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rainfall is very likely at most places over Assam & Meghalaya from 20th to 22nd, at most/many places over Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura from 20th to 22nd October, along with heavy to very heavy rain with extremely heavy falls very likely at isolated places over Assam & Meghalaya on 20th and 21st and heavy rain at isolated places on 22nd, heavy rain at isolated places over Arunachal Pradesh and Nagaland on 22nd, over Nagaland, Manipur, Mizoram & Tripura on 20th and 21st October, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage to standing crops.
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Arunachal Pradesh, continue nursery sowing of hybrid tomato, cabbage and cauliflower on raised nursery beds. Remove excess sucker from banana in mother plant and give support to banana bunches to protect them from falling due to heavy rain. Undertake land preparation for sowing of *rabi* crops like maize, pulses, oilseeds. Undertake sowing of pea. Alternate drying and wetting of field is highly desirable in WRC field. Harvest mature cobs of maize.
 - In Meghalaya, maintain water level of 2-5 cm in rice. Undertake nursery preparation of cabbage, broccoli and cauliflower.
 - In the North Bank Plain Zone of Assam, continue land preparation for sowing of rape seed and mustard. Optimum sowing period is from 20th October to 20th November. Undertake planting of potato after rice. Continue sowing of Knolkhol, brinjal and tomato. Undertake relay cropping with suitable varieties of pea in the rice field 20- 25 days before harvesting the Sali paddy.
 - In Barak Valley Zone of Assam, undertake planting of potato during mid-October to mid-November. Complete field preparation and undertake sowing of rape seed (TS-36, TS-38 and TS-29 varieties).
 - In Lower Bramhaputra Valley Zone of Assam, continue land preparation for planting of potato. Undertake sowing of cabbage, spinach, garlic and transplanting of brinjal.
 - In the North Bank Plain Zone of Assam, at PI, milky and dough stage of Sali paddy, take plant protection measure against Gundhi bug based on ETL. Apply Malathion 5% dust @ 20 kg/ha to control rice bug infestation in *Sali* rice. Protect betel vine from foot rot and leaf spot diseases by spraying plants with 0.5% Bordeaux mixture solution. Destroy/bury affected vine and leaves.
 - In Hill Zone of Assam, undertake nursery sowing of vegetables. As wilt may occur due to excessive water and humid condition in banana field, drain out the water from the field and only one sucker should be allowed to grow with each mother plant and other suckers should be removed.
 - In Upper Bramhaputra Valley Zone of Assam, maintain a depth of 5 to 7 cm of water in *Sali* rice field. Undertake planting of potato and land preparation for sowing of toria.
 - In Central Bramhaputra Valley Zone and North Bank Plain Zone of Assam, continue land preparation for sowing of rapeseed-mustard and toria. Undertake nursery sowing of brinjal and cole crops.
 - In Arunachal Pradesh, install local trap of dead frog/fermented fish etc against gundhi bug in rice or spray triazophos/chloripyriphos@1- 2ml/litre. Maintain periphery of nursery field weed free and clean to prevent disease and pest harboring in weeds. Apply need based spray of Flubendiamide 3.5% + Hexaconazole 5% @ 2ml/litre against rice skipper & leaf folder using sticker.
 - In Barak Valley Zone of Assam due to rainfall and humid weather condition there is chance of attack of sheath blight, stem borer and Bacterial Leaf Blight diseases in sali rice field. Apply Carbendazim @ 2 g/litre of water against sheath blight and stem borer attack, apply 1 kg Potash fertilizer per bigha of land or stop top dressing of nitrogenous fertilizer against Bacterial Leaf Blight after current spells of rain.
 - In the North Bank Plain Zone, at panicle initiation, milk and dough stage of Sali paddy, farmers may take plant

protection measure against Gundhi bug based on ETL in Sali paddy. Apply Malathion 5% dust @20 kg/ha to control rice bug infestation after current spells of rain.

▪ **Nagaland, Mizoram, Manipur and Tripura:**

- In Tripura, undertake sowing of sesame and potato after current spells of rain. Provide drainage in cauliflower, radish, brinjal, bittergourd and pointed gourd crops. Maintain 2 to 5 cm of water in Aman rice fields.
- In Manipur, drain out excess water and maintain at the level of 5 to 8 cm if accumulated due to rains in the field of rice. Continue harvesting of soybean, groundnut, black gram and rice bean after current spells of heavy rain. Continue land preparation for planting of potato. Undertake nursery preparation of cabbage, broccoli and cauliflower.
- In Mizoram, continue sowing of *rabi* maize, toria and nursery sowing of early cole crop, brinjal, chilli, capsicum and onion.
- In Nagaland, continue harvesting of jhum rice and cucurbits in clear weather. Continue land preparation for sowing of toria and *rabi* maize. Undertake nursery preparation of vegetables.

• **Animal Husbandry**

- In Hill Zone of Assam, ensure proper ventilation in poultry houses. Replace the poultry houses with fresh litter and keep the houses clean. Climate is congenial for attack of Diathermia, advice to increase protein in feed of poultry birds.
- In the Barak Valley Zone of Assam, feed calcium and Vitamin supplements to the dairy cattle to have good productive and reproductive performance. Use lime powder as calcium source up to 2 kg per 100 kg of feed for Layer birds and provide them light during the night time to have more egg production.

• **Fishery**

- Add 2 to 5% vitamin mineral mixture in fish feed for good growth and to strengthen immunity in fish.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa except Mumbai City, all districts of Madhya Maharashtra except Dhule, Jalgaon and Nandurbar, all districts of Marathwada except Hingoli, Nanded and Parbhani, in Washim district of Vidarbha, Dangs, Navsari, Surat, Tapi and Valsad districts of Gujarat Region, Amreli district of Saurashtra & Kutch during the week and weather remained mainly dry/dry over rest of the region.

• **Advisories:**

- As thunderstorm accompanied with lightning & gusty winds very likely at isolated places over Vidarbha, provide support to banana, young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds and keep cattle indoor.

▪ **Maharashtra:**

- In North Konkan, mid-late and Late varieties of rice are in grain formation stage. Maintain water level of 5-10 cm in the field. Early varieties of rice are at maturity stage and ready for harvesting in some parts of the district. Harvest early matured rice variety during morning to afternoon hours, dry the harvested crop for 1-2 days, store the harvested crop in shed after threshing. Do not apply any insecticides/fungicides 8 days before harvesting of matured rice crop.
- In South Konkan, continue harvesting of matured rice in morning hours in clear weather and followed by immediate threshing and drying for 3 to 4 days.
- In Madhya Maharashtra, complete sowing of rainfed gram considering the soil moisture. For sowing use Digvijay, Vijay, Jacki 9218 varieties. Sowing of *rangada* (*rabi*) onion should be completed till October end. For sowing prefer varieties such as Baswant 780, Phule Samarth & N-2-4-1. Continue harvesting of matured *kharif* soybean and jowar. Prepare field for preseasonal sugarcane. Undertake planting upto 15th November. Select improved varieties like Co 86032 (Nira) and salinity and alkalinity tolerant varieties like CoM 0265 (Phule 265), Phule 10001 for planting.
- In Marathwada, continue sowing of *rabi* jowar at vapsa condition. Undertake sowing of *rabi* sunflower by dibbling method. Undertake picking of cotton early in the morning to keep cotton clean. Undertake pruning in grapes.
- In Vidarbha, continue harvesting of matured soybean crop & keep harvested produce in safer place. Undertake sowing of rainfed gram. For sowing use DigVijay, Vijay, Jacki 9218 variety. Undertake sowing of *rabi* jowar at vapsa condition. In late maturing rice varieties maintain 5-7 cm water level in rice field. Apply 3rd dose of Nitrogen @ 20kg/ha to rice crop at flowering stage or 70 to 80 days after transplanting.
- In Konkan, due to change in weather, the incidence of mango hoppers may be observed on new flush of mango, spray 25 % Cypermethrin @ 3 ml or 2.8 % Deltamethrin @ 9 ml per 10 liters of water.

▪ **Gujarat:**

- In North West Zone and North Gujarat Zone, complete harvesting of matured groundnut, sesame, bajra, maize, green gram and cowpea. Undertake land preparation for sowing of mustard, carrot and *rabi* fennel crops in North Gujarat Zone and for mustard crop in North West Zone.
- In South Gujarat Heavy Rainfall Zone, continue land preparation for *rabi* crops; undertake planting of sugarcane crop, nursery preparation of chilli and brinjal and sowing of offseason okra. Complete harvesting of matured pulses

and rice.

- In North Saurashtra Zone, continue sowing of garlic (Gujarat Garlic-5 or Local), gram (Gujarat chana-2 (unirrigated), Gujarat chana-3 (irrigated), mustard (Varuna, Gujarat rai-3) crop. complete threshing of groundnut and keep harvested produce in safe place. Undertake intercultural operations to maintain the soil moisture and to control weeds. Undertake mulching by using dry grass, crop residues etc. Apply irrigation to the crops as per availability and crop stage.
- In Bhal and Coastal Zone, continue harvesting of matured sesame, pearl millet, green gram and cowpea. Keep inputs ready for sowing of *rabi* crops like wheat, chickpea, sorghum and mustard. maintain water level of 5-7 cm in rice fields. Reduce the irrigation interval in standing crops like cotton, castor, rice field, vegetable crops and grass etc.
- In Middle Gujarat Zone, continue harvesting of sesame, pearl millet, green gram crops.
- In South Saurashtra Zone, continue harvesting of matured groundnut, pulse crops like black gram, green gram, chickpea and soybean. Apply irrigation in sugarcane crop and vegetables.
- In North Saurashtra Zone, heavy infestation of prodenia observed in castor; spray Quinalphos @ 20 ml in 10 liters of water for control. Pink boll worm infestation was noticed in cotton; pick and bury the infested flowers/bolls in soil for control. Also spray Profenofos 50 EC @ 20 ml or Cypermethrin @ 10 ml in 10 liters of water.
- In Middle Gujarat Zone, for control of semi looper in castor crop, spray Quinalphos 25 EC @ 20 ml in 10 litres of water at 15 days interval.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Andaman & Nicobar Islands, West Mednapore district of Gangetic West Bengal, Cooch Behar, East Sikkim, Jalpaiguri and North Sikkim districts of Sub-Himalayan West Bengal & Sikkim, Begusarai, Bhagalpur and Lakhsarai districts of Bihar, Dumka district of Jharkhand, Kandhamal, Keonjhar, Korapur, Nawarangpur and Rayagada districts of Odisha during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers very likely at most/many places over Andaman & Nicobar Islands from 22nd to 24th, over West Bengal & Sikkim on 20th & 21st and over Odisha and Jharkhand on 20th October along with heavy to very heavy rainfall with extremely heavy falls at isolated places over Sub Himalayan West Bengal, heavy to very heavy rainfall at a few places over Gangetic West Bengal on 20th & 21st and at isolated places over north Odisha on 20th October, avoid 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. Avoid harvesting of crops and keep harvested produce at safer places.
 - As squally winds speed reaching 45-55 Kmph gusting to 65 Kmph very likely along & off north Odisha and West Bengal coasts, Fishermen are advised not to venture into Sea off Odisha and West Bengal coasts on 20th and Squally winds speed reaching 30-40kmph gusting to 50 Kmph very likely along & off West Bengal coast on 21 October, Fishermen are advised not to venture into Sea off West Bengal coast.
 - **Odisha:**
 - In North Eastern Coastal Plain Zone, continue nursery sowing of tomato and early cauliflower.
 - In North Eastern Ghat Zone, continue sowing of sesame. In short duration varieties of rice, apply 15kg Urea and 10kg MOP and in medium duration varieties apply 18kg Urea with 13kg MOP at Panicle initiation stage.
 - In North Central Plateau Zone, undertake land preparation for sowing of mustard and sesame in fallow uplands.
 - In Eastern Ghat High Land Zone, complete nursery sowing of tomato. Complete sowing of black gram and green gram in upland.
 - In North Eastern Coastal Plain Zone, current weather is favourable for attack of top shoot borer and Pyrrilla in sugarcane. Following control measures should be adopted after cessation of rain, for control of top shoot borer, release bio agent *Trichogramma chilonis* @ 50000/acre at a time for 4-6 times and for pyrrilla, spray Chloropyriphos or Fipronil @ 400 ml/acre in 200 litre of water.
 - In North Central Plateau Zone, complete N-fertilizer application after current spells of rain in transplanted paddy @ 8kg/Acre if the crop is at P.I. stage so that the fertilizers do not get washed away. If there is weed infestation one hand weeding may be carried out before top dressing the fertilizer. If there is infestation of blast disease in paddy spray Tricyclazole 1gm/litre of water. In case of BLB infestation the crop should be sprayed with 1g Plantomycin+ 2g Copper oxychloride /litre of water. If the crop is infested by leaf folder spray Monocrotophos@2ml/ litre of water and repeat the spray after 10days observing the severity of infestation.
 - **Bihar:**
 - In North East Alluvial Zone, continue field preparation for sowing of lentil, mustard, maize and pea. Continue planting of early variety of potato.
 - In South Bihar Alluvial Zone, present weather conditions are highly favourable for incidence of blast disease in rice, spray Bavistin 2 g/litre of water 2-3 times with an interval of 10 day. In North East Alluvial Zone, for control of

shoot borer in sugarcane, spray Chlorpyrifos 20 EC @ 3ml/litre of water.

▪ **Jharkhand:**

- In South Eastern Plateau Zone, undertake planting of short duration early potato varieties viz. Kufri Ashoka and Kufri Pukhraj, Kufri Surya and Kufri Puskar of 80-90 days crop. Undertake harvesting of short duration varieties of rice.
- In Western Plateau Zone, continue harvesting of matured rice in clear weather. Farmers having at least 3-4 irrigation facility may proceed for cultivation of wheat, potato and green pea. and those who have only 2 - 3 irrigation facility may proceed for gram, toria and mustard sowing. For sowing of toria select varieties like T.-9, B.R.-23 and P.T.-303. Undertake field preparation and sowing of mustard and select the improved varieties like Shiwani, Varuna, Pusa Bold, BR-40 etc. Select varieties like Kufri Ashoka, KufriPukhraj, KufriLalima, KufriPushkar and Kufri Kanchan for planting of potato and Arkel, Kashi Nandini, P.E.-6, Birsa Matar varieties for sowing of green pea.
- In Central and North Eastern Plateau Zone, continue harvesting of maize in clear weather. Undertake nursery bed preparation for tomato, cabbage, cauliflower, brinjal and papaya. Continue land preparation and sowing of toria, mustard, potato and pea.

▪ **West Bengal:**

- In Coastal Saline Zone, as heavy to very heavy rainfall is expected, drain out of excess water from rice, betel vine and vegetable fields and maintain adequate drainage.
- In the New Alluvial Zone, undertake harvesting of Aman rice after current spells of rain. Continue sowing of mustard, radish and broccoli .
- In Laterite and Red Soil Zone, drain out excess water from rice field and maintain adequate water level.
- In the Old Alluvial Zone, undertake transplanting of cabbage and cauliflower after current spells of heavy rain.
- In Laterite and Red Soil Zone, for control of Gundhi bug in rice, spray Neem Oil @ 5ml/litre of water during early hours of the day after current spells of rain.
- In Coastal Saline Zone, spray Triazophos @ 1.5 ml/litre of water for stem borer attack and Chlorpyrifos @1.5 ml/ litre of water for leaf roller attack in Aman rice after current spells of rain.

▪ **Andaman & Nicobar Islands**

- In Nicobar, provide adequate drainage in vegetable field to remove excess rain water.
- In North and Middle Andaman, apply FYM @ 10 kg/plant along with 5 kg neem cake to recover the coconut plant affected with coconut leaf eating caterpillar after current spells of rain.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rainfall occurred in Chhindwara district of East Madhya Pradesh, Betul district of West Madhya Pradesh, Bastar, Bijapur and Dantewada districts of Chhattisgarh during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - In Kymore Plateau and Satpura Hill Zone, continue harvesting of soybean, moong and urad. Continue nursery preparation of cauliflower and cabbage. Apply irrigation in rice fields at flowering stage. Continue field preparation for sowing of mustard and garden pea.
 - In Malwa Plateau Zone, continue nursery preparation for winter vegetables. Continue harvesting of matured soybean and maize .Continue field preparation for chickpea, potato, garlic and onion.
 - In Jhabua Hill Zone, continue harvesting of matured black gram, green gram, soybean, maize and vegetables. Undertake field preparation and sowing of mustard and chickpea.
 - In Gird Zone, continue sowing of toria. Continue land preparation for sowing of mustard. Continue harvesting of matured soybean, maize, green gram, black gram and bajra. Keep inputs ready for sowing of chickpea and lentil. Undertake field preparation for planting of potato.
 - In Bundelkhand Zone, continue sowing of linseed and mustard.
 - **Chhattisgarh:**
 - As thunderstorm accompanied with lightning & gusty winds very likely at isolated places over Chhattisgarh, provide support to banana, young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds and keep cattle indoor.
 - In North Hill Zone, undertake transplanting of winter vegetables like cauliflower, cabbage, chilli, tomato, brinjal etc. Continue sowing of *rabi* crops like toria, mustard, green pea and potato and arrange seed & fertilizer for cultivation of rain fed wheat, if having assured irrigation facility. Continue harvesting of matured maize.
 - In Bastar Plateau Zone, continue nursery preparation for *rabi* vegetables. Continue sowing of toria.
 - In Chhattisgarh Plain Zone, continue nursery sowing of vegetables. Keep inputs ready for sowing of *rabi* crops like chickpea, wheat, linseed, etc.
 - In North Hill Zone, attack of blast is observed in rice crop, spray Tricyclazole @ 120 gram per acre and repeat after 10-12 days as per requirement.

- **Animal Husbandry**

- In Madhya Pradesh, vaccinate the poultry birds to prevent Ranikhet disease. Provide green fodder, fresh and clean water three times a day to cattle.
- In Chhattisgarh, provide concentrate feed to milch animals mix 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:** Weather remained mainly dry/dry over the region during the week.

- **Advisories:**

- **Jammu & Kashmir:**

- In Sub Tropical Zone, as mainly dry weather would prevail, continue harvesting of matured pulses, rice and maize. Undertake transplanting of cole crops and sowing of mid season pea. Complete sowing of garlic.
- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, continue land preparation and sowing of toria and continue nursery raising of main season cole crops (cauliflower, cabbage and *Knolkhol*). Farmers are advised to utilize the upcoming dry weather conditions to harvest matured rice and early sown maize crop (where cobs and stem color turns yellow). Continue nursery sowing of late cauliflower and onion crop.

- **Uttarakhand:**

- In Sub Humid Sub Tropic Zone, undertake harvesting of matured vegetables, maize and soybean. Undertake intercultural operations in black gram, green gram.
- In Udham Singh district of Bhabar and Tarai Zone, continue harvesting of early and mid season variety of paddy. In irrigated areas continue sowing of radish and turnip and in unirrigated mid hills, radish varieties like Meenu early, Japanese white, Pusa Himani and early varieties of Saljam like Parpiltop, white glow should be sown.

- **Punjab, Haryana and Delhi:**

- In Delhi, continue sowing of mustard using varieties like PusaTarak, Pusa Mahak. Continue sowing of carrot in the raised bed. Continue field preparation for early pea. Continue nursery preparation on raised bed for mid season cauliflower (Nov.- Dec.). Continue sowing of sarsonsaag and transplanting of green onion seedling in the prepared fields. Undertake planting of early potato in the fields.
- In Haryana, as dry weather is forecasted during the period, farmers are advised to apply protective irrigation in standing crops wherever necessary. In Western Zone undertake picking of cotton in clear weather. Continue sowing of mustard with varieties RH-30, RH-0749, RH-0406, Varuna, Laxmi etc if sufficient moisture is available in soil. In Eastern Zone apply irrigation to late sown Basmati varieties to avoid water stress during anthesis and grain filling stage.
- In Western Zone of Punjab, continue sowing of wheat under irrigated condition. As dry weather would prevail, apply irrigation in rice and cotton fields as per requirement. Continue planting of early potato and “desi” varieties of radish (Punjab Pasand), turnip (L-1) and carrot (Punjab Black Beauty, Punjab Carrot Red and PC 34). In Western Plain Zone continue sowing of raya, berseem, onion, tomato, pea and chick pea. Complete sowing of potato.
- In Delhi, false smut may appear in paddy. Symptoms include increase in grains size with brown colored fungus inside. Spray Blitox 50 @ 500 grams per acre at 10 days interval (2-3 times).
- In Haryana, in Western Zone, there may be infestation of bacterial blight in cotton, if infestation is above ETL then spray 800g Copperoxychloride mixed with 250 water per acre in clear weather. In Eastern Zone there may be attack of hoppers on paddy, if infestation is above ETL then spray 330ml buprofezin (Tribune) 25SC or 250ml Monocrotophos 36SL or 125 ml Dichlorvos (Nuvan) 76 EC or 400g Carbaryl 50 WP in 200 litres water per acre.

- **Himachal Pradesh:**

- In Solan, Shimla, Bilaspur and Sirmour districts of Mid Hills Sub Humid Zone, undertake sowing of carrot, radish, spinach and turnip.
- In Mid Hills Sub-Humid Zone of Himachal Pradesh, continue sowing of Arkel pea or VL-7 after seed treatment with Bavastine @ 20g/10kg of seed. Continue transplanting of nursery of cabbage, broccoli, Brussels Sprout, Kel, *Knolkhol* and Chinese cabbage. Continue sowing of carrot, radish, spinach and turnip in the prepared fields.
- In Mid Hills Sub Humid Zone, for control of woolly aphid in apple, spray Chlorpyrifos (Dursban/Darmat/Masban/Navigator) @ 400ml/200 litres of water.

- **Uttar Pradesh:**

- In Central Plain Zone of Uttar Pradesh, continue harvesting of matured maize and pulse crops. Maintain moisture in the field of paddy and maize by light irrigation as paddy is at milk stage and maize is at grain filling stage. Undertake sowing of winter vegetable like spinach, fenugreek, coriander, carrot, radish etc. Undertake timely sowing of peas, mustard and lentil.
- In Central Plain Zone of Uttar Pradesh, there may be chances of attack of yellow mosaic in moong/urad crop for control spray 2 to 3 times of Dimethoate 30 E.C. @ 1 litre or Methyl-O-Demeton 25 E.C. @ 1 litre per hectare.

- **Rajasthan:**

- In Sub Humid Southern Plain and Aravali Hill Zone, in Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts, continue harvesting of matured moong and urad crops and picking of matured cobs of maize and pods in green gram. This is the right time for sowing of ajwain, gram and mustard. Sowing should be completed before 15th of October. Preparation of seed bed should be done for raising nursery of onion, chilli, brinjal, cauliflower, cabbage and tomato for *rabi* season.
- In Transitional Plain Zone, undertake harvesting and threshing of matured bajra and pulses. Undertake field preparation for sowing of mustard, taramira and gram.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, undertake field preparation for the sowing of mustard, gram, pea. Continue sowing of radish and carrot.
- In Arid Western Plain Zone, undertake sowing of mustard and gram between 15-25 October, when day temperature is below 35^oC.
- **Horticulture:**
 - In East Rajasthan, in Irrigated North Western Plain Zone, Hanumangarh and Sriganaganagar districts, start planting of new seedlings of kinnow in already prepared pit in the field. Purchase kinnow plants from certified nursery, after planting apply light irrigation at regular interval.
 - In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhopur districts of Flood Prone Eastern Plain Zone, prevailing weather condition is congenial for attack of fruitfly in guava, for control spray Malathion 50 EC @ 1.0 ml/litre of water.
- **Animal Husbandary:**
 - In Jammu & Kashmir, vaccination should be done in livestock against foot & mouth disease, Haemorrhagic Septicemia etc. Farmers are advised for silage making, so that green fodder should be conserved for scarcity period.
 - In Punjab, in poultry, provide 14-16 hours of total light to layers, including the day light. Gradually go on increasing the light when egg production starts.

- The Agromet Products in this Bulletin are generated by Agrimet Division, weather forecast issued by NWFC, New Delhi and Agromet Advisories are prepared based on the DAAS Bulletins issued by different Agrometeorological Field Units.