



National Agromet Advisory Service Bulletin

Friday 13th October 2017
(For the period 13th to 18th October 2017)



Issued by
India Meteorological Department

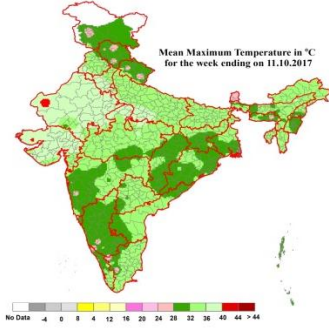
Weblink For

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

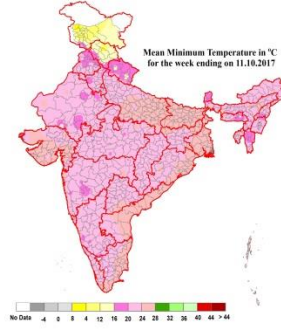
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending 11.10.2017

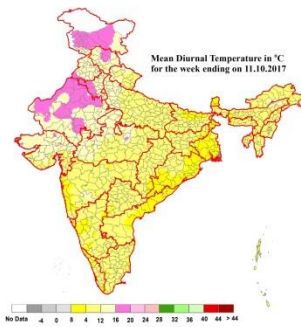
Mean Maximum Temperature (°C) for the week ending 11.10.2017



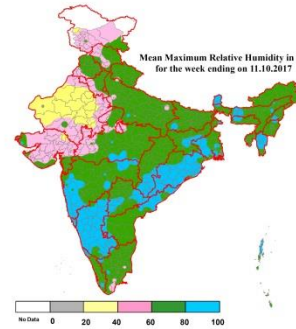
Mean Minimum Temperature (°C) for the week ending 11.10.2017



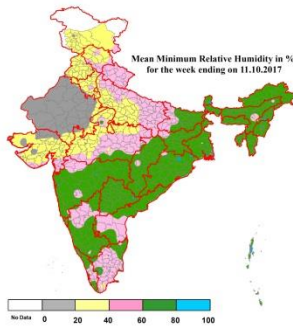
Mean Diurnal Temperature Variation (°C) for the week ending 11.10.2017



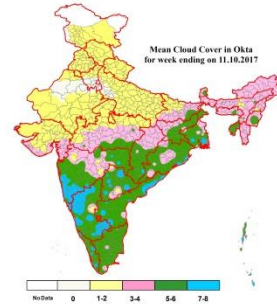
Mean Maximum Relative Humidity (%) for the week ending 11.10.2017



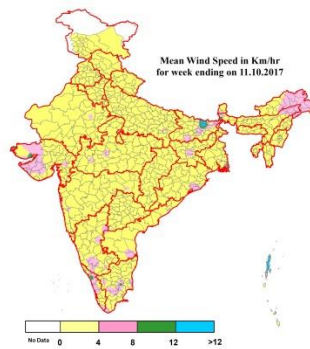
Mean Minimum Relative Humidity (%) for the week ending 11.10.2017



Mean Cloud Cover (okta) for the week ending 11.10.2017

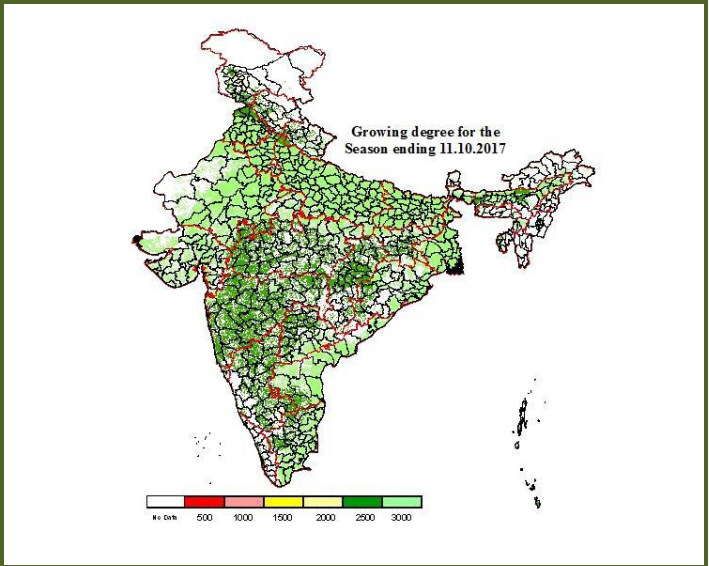
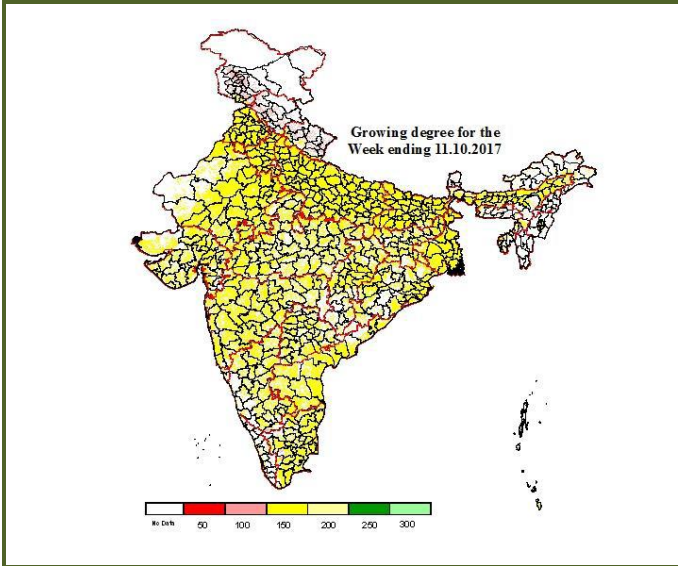


Mean Wind Speed (km/hr) for the week ending 11.10.2017



Growing Degree Days for the week ending 11.10.2017

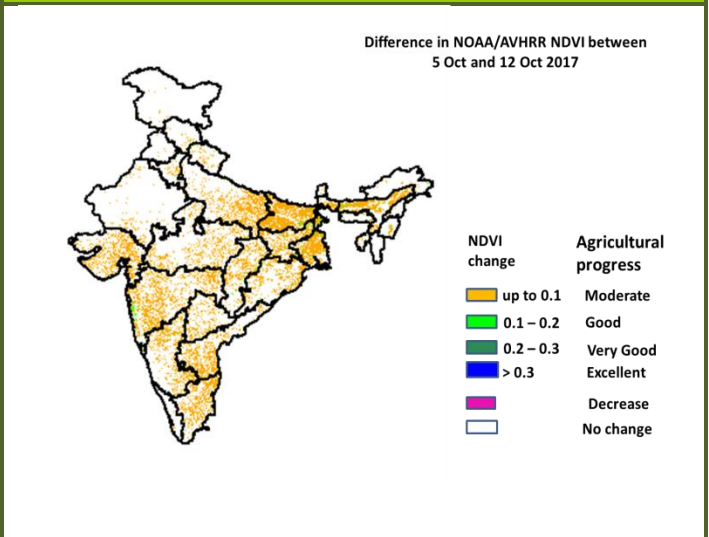
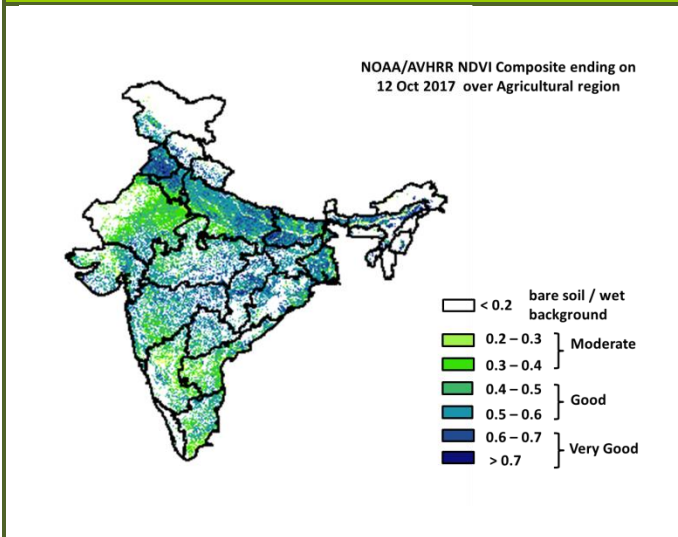
Growing Degree Days for the season ending 11.10.2017



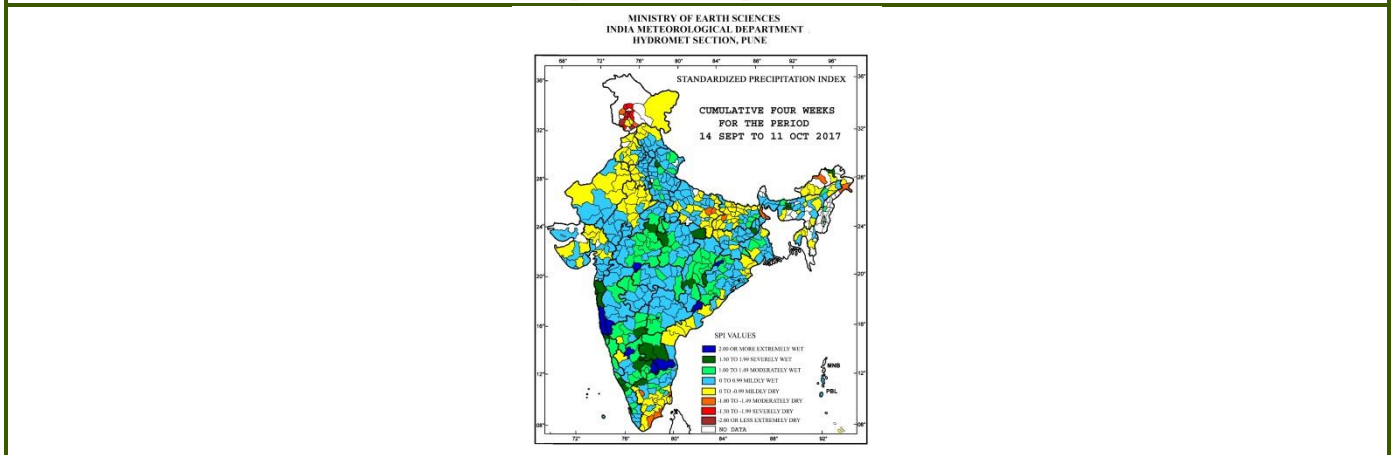
* Base temperature for *Kharif* Season is taken as 10⁰ C

NOAA/AVHRR NDVI composite ending on 12th October 2017 over Agricultural regions of India

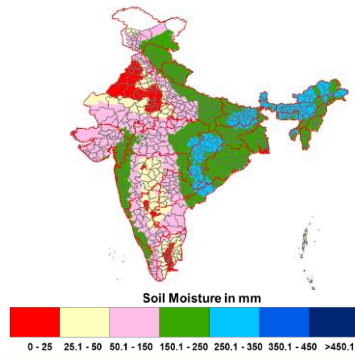
Difference in NOAA/AVHRR NDVI between 5th and 12th October 2017



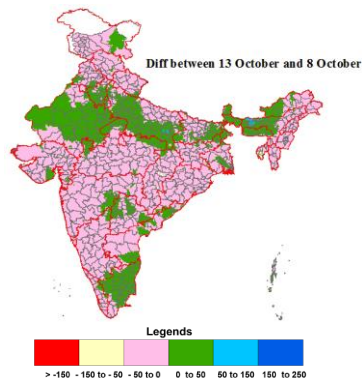
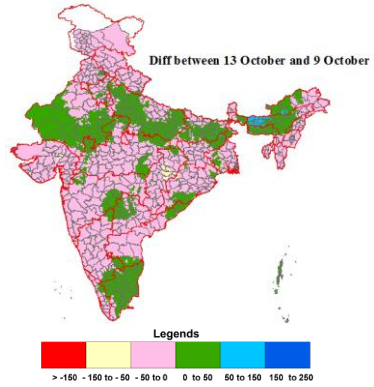
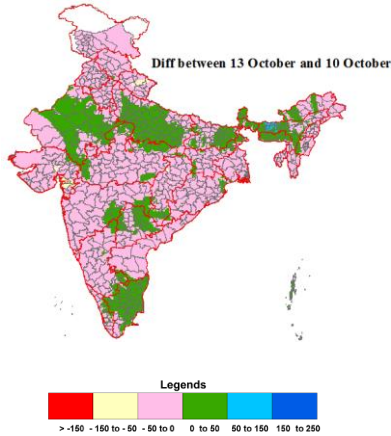
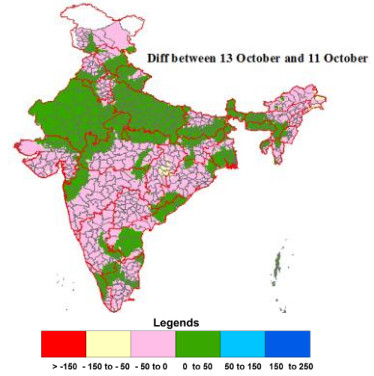
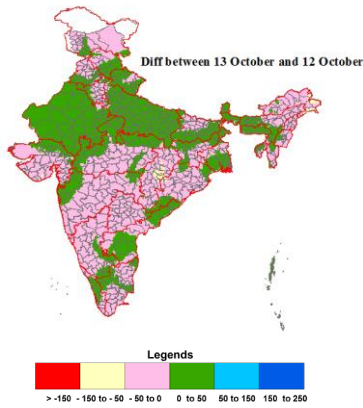
**Standardised Precipitation Index
Cumulative 4 weeks for the period 14th September 2017 to 11th October 2017**



Daily Soil Moisture (mm) for 13th October (ending at 0830 IST) for 1 m depth



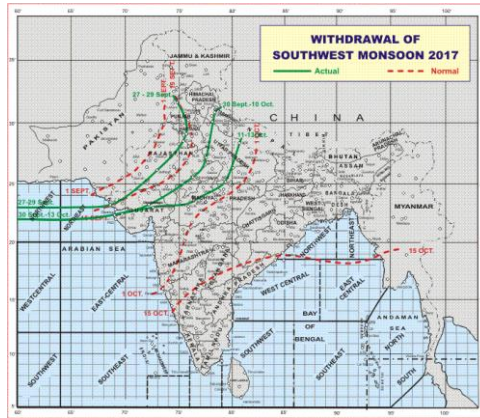
Difference of Soil Moisture (mm) for 1 m depth



Low Pressure

- A low pressure area is very likely to develop over eastcentral Bay of Bengal & neighbourhood around 15th October and likely to concentrate into a depression during subsequent 48 hours and move northwestwards.

Withdrawal of South West Monsoon



- The Southwest monsoon withdrawal line continues to pass through Lat. 28.5°N/Long. 81.0°E, Kheri, Nowgong, Shajapur, Ahmedabad, Dwarka, Lat. 22.0°N/Long. 65.0°E and Lat. 22.0°N/Long. 60.0°E.
- Favourable conditions are likely to develop for further withdrawal of Southwest monsoon from remaining parts of northwest India, some more parts of Central & West India and some parts of East India during next 2-3 days.

Weather Forecast for next 5 days valid upto 0830 hours of 18th October 2017

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- Fall in maximum and minimum temperatures by 2-3°C at many places over northwest India during next 2-3 days.
- No significant change in temperatures over rest parts of the country during next 3-4 days.

5 Day Rainfall Forecast (Mid-day) 13th October 2017

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

% Station Reporting Rainfall

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

Weather Warning during next 5 days

- **13 October (Day 1):** Heavy rain at isolated places very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamilnadu & Puducherry, Coastal Andhra Pradesh, South Interior Karnataka, Kerala and Lakshadweep. Thunderstorm accompanied with gusty wind & lightning very likely at isolated places over Assam & Meghalaya; with lightning at isolated places over Gangetic West Bengal, Odisha, Madhya Maharashtra, Marathwada, Vidharbha, Chhattisgarh, Tamilnadu & Puducherry, Coastal Andhra Pradesh, Telangana, Rayalaseema and Interior Karnataka.
- **14 October (Day 2):** Heavy rain at isolated places very likely over Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamilnadu & Puducherry, South Interior Karnataka and Kerala. Thunderstorm accompanied with lightning very likely at isolated places over Madhya Maharashtra, Tamilnadu & Puducherry, Coastal Andhra Pradesh, Telangana, Rayalaseema and Interior Karnataka.
- **15 October (Day 3):** Heavy to very heavy rain very likely at isolated places over Andaman & Nicobar Islands

and heavy at isolated places over Kerala.

- **16 October (Day 4):** Heavy rain likely at isolated places over Andaman & Nicobar Islands.
- **17 October (Day 5):** No weather warning.

Weather Outlook for subsequent 2 days from 18th to 20th October 2017

- Rain at most places with heavy falls at isolated places likely over Andaman & Nicobar Islands.
- Rain at many places likely over Lakshadweep, extreme south Peninsula India and along east coast.
- Weather is likely to be dry over the remaining parts of the country.

Salient Advisories

- As per the forecast and weather warning given above, the regions likely to receive rainfall at most/many places and heavy rainfall, 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.
- As thunderstorm accompanied with gusty winds and lightning very likely at isolated places over **Assam & Meghalaya** on 13th 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 **Tamil Nadu**, in the Cauvery Delta Zone, continue harvesting of kuruvai rice after current spells of rain & keep harvested produce at safer places and continue nursery preparation of *thaladi* rice. In the South Zone, continue sowing of sorghum, cotton and maize.
- In the Northern Zone of **Kerala**, continue nursery preparation for *mundakan* rice, harvest all matured crops after current spells of rain and keep harvested produce at safer places.
- In **Haryana**, as dry weather is expected during the period, apply protective irrigation in standing crops wherever necessary. Avoid moisture stress during flowering and boll formation stages in cotton.
- In **Jammu & Kashmir**, as mainly dry weather would prevail during the period, continue harvesting of matured rice, maize and pulses. In **Madhya Pradesh** continue harvesting soybean, maize, green gram, black gram. In **Gujarat**, complete harvesting of matured groundnut, sesame, bajra, maize, green gram and cowpea.
- In **Jharkhand, Madhya Pradesh, Chhattisgarh and Jammu & Kashmir** continue sowing of toria. In **Haryana and Delhi**, continue sowing of mustard.
- As thunderstorm accompanied with lightning very likely at isolated places over **Tamilnadu & Puducherry, Coastal Andhra Pradesh, Telangana, Rayalaseema, Interior Karnataka and Madhya Maharashtra** on 13th and 14th, over **Marathwada, Vidarbha, Gangetic West Bengal, Odisha and Chhattisgarh** on 13th October, keep cattle indoor.

Detailed Zonewise Agromet Advisories

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

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala except Palakkad; in all districts of Coastal Karnataka, in all districts of North Interior Karnataka except Dharwad and Gadag, in all districts of South Interior Karnataka; in all districts of Tamil Nadu except Chennai, Coimbatore, Kanyakumari, Karaikal, Nagapattinam, Ramanathapuram, Tirunelveli, Tiruvarur and Toothukudi; in all districts of Coastal Andhra Pradesh, Rayalaseema and Telangana during the week. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rainfall is very likely at most/many places over Kerala during the period, at many palces over Tamil Nadu from 13th to 15th, over Coastal Karnataka on 14th and 15th, over Coastal Andhra Pradesh and South Interior Karnataka on 13th October, along with heavy rain at isolated places over Tamil Nadu & Puducherry, South Interior Karnataka on 13th and 14th, over Coastal Andhra Pradesh on 13th and over Kerala on 13th, 14th and 15th October, avoid intercultural

operation and application of plant protection measures and fertilizers to the standing crops.

- As thunderstorm accompanied with lightning very likely at isolated places over Tamil Nadu & Puducherry, Coastal Andhra Pradesh, Telangana, Rayalaseema and Interior Karnataka on 13th and 14th October, 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, undertake harvesting of rice (Jyothi, Kanchana variety), land preparation for mundakan rice 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, undertake sowing of rabi crops like Bengal gram, safflower, rabi jowar under rainfed condition and maize, onion under irrigated condition. Drain out the excess water from the standing crop fields to avoid the lodging of crop.
- 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, Annigeri -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 Coastal Zone, arrange for proper drainage channels in plantation crops.
- In Hill Zone, to reduce the square/flower bud/flower drop in cotton, spray Planofix @ 0.25 ml/litres of water.
- In Southern Transition Zone, improve drainage in ill drained arecanut gardens and ginger, turmeric fields.
- 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 after current spells of rain.
- 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 on a non-rainy day.
- 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 on a non-rainy day.
- **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, as there is light to moderate rainfall forecast during the next 5 days, farmers those who are planning for harvesting of onion, foxtail millet, green gram and black gram crops are advised to take appropriate care while harvesting and protect the harvested produce.
- In the Southern Zone, undertake harvesting of groundnut crop after current spells of rains 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 field 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 Kadapa districts of the Southern Zone, in view of continuous rains there is possibility of incidence of climbing cut worm in rice. To control early instar larvae, spray Chlorpyrifos @ 2.5 ml. or to control grown up larvae, spray Fame @ 40-60 g/acre in 200 litres of water on a non-rainy day.
- 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 on a non rainy day.
- **Telangana:**
 - In North Telangana Zone, undertake 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, drain out excess water from the fields of rainfed crops where heavy rainfall has been received. 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 Chlorpyrifos @ 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 after current spells of rain & Keep harvested produce in safer place. 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 since wet spell is found prevailing.
 - In the South Zone, as rainfall is expected in the coming days, 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 Chlorpyrifos @ 500 ml/ acre + Azadirachtin @ 250 ml / acre with 200 litres of water after current spells of rain.
 - In the High Rainfall Zone, to control sigatoka leaf spot in banana, spray Propiconazole @ 1 ml /litre + Teepol @ 0.5 ml /litre after current spells of rain.
- **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 Lohit, Tirap and Upper Siang districts of Arunachal Pradesh, Cachar, Chirang, Haikandi, Karbi Anglong, Karimganj, Lakhimpur, Nalbari, Tinsukia and Udalgairi districts of Assam, East Khasi Hills and Ribhoi districts of Meghalaya, Aizwal, Lunglei and Serchip districts of Mizoram, Imphal West district of Manipur, Dimapur and Kohima districts of Nagaland, 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/many places over Assam & Meghalaya on 13th and 14th, at many places over Arunachal Pradesh on 13th and 14th October, along with heavy rain at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 13th and 14th October, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops.
 - As thunderstorm accompanied with gusty winds and lightning very likely at isolated places over Assam & Meghalaya on 13th 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.
 - **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.

- 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 and undertake planting of potato.
- In Barak Valley Zone of Assam, undertake planting of potato. Complete field preparation and undertake sowing of rape seed (TS-36, TS-38 and TS-29 varieties).
- In Lower Brahmaputra Valley Zone of Assam, continue land preparation for planting of potato. Undertake sowing of cabbage, spinach, garlic and transplanting of brinjal.
- 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 Brahmaputra 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 Brahmaputra 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 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, continue sowing of winter vegetable like tomato, cauliflower, cabbage, broccoli, etc. on raised nursery beds. Complete the harvesting of *jhum* rice in clear weather and undertake land preparation for planting of potato.
- 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 in clear weather. 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.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa except South Goa, all districts of Madhya Maharashtra except Nandurbar, all districts of Marathwada and Vidarbha, Daman, Dangs, Surat and Valsad districts of Gujarat Region during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with lightning very likely at isolated places over Madhya Maharashtra on 13th and 14th, over Marathwada and Vidarbha on 13th October, keep cattle indoor.
 - **Maharashtra:**
 - In Konkan, maintain 5-10 cm water level in rice fields at grain filling stage. Undertake harvesting of early sown matured rice crop during morning to afternoon hours in clear weather. Do not apply any insecticides/fungicides 8 days before harvesting of matured rice crop. Undertake planting of fruit crops like mango, cashew, coconut, arecanut, sapota. Undertake planting of biennial forage crops like Paragrass, Napier, Gajraj etc.
 - In Madhya Maharashtra, prepare field for preseasonal sugarcane. Planting may be undertaken between 15th October to 15th November. Store harvested soyabean, keeping moisture content below 12%. Complete planting of onion (Rangada) (varities : Basvant 780, Phule Samarth and N-2-4-1) till end of October. Undertake planting of pre-seasonal sugarcane between 15th October to 30th November. Undertake sowing of irrigated chickpea (varieties – Vikas, Vishwas, Phule G-12, Vijay, Vishal, Virat) between 20th October to 10th November. Undertake planting of onion (varieties- Basvant 780, *Phule Samarth* and N-2-4-1) before October end.

- In Marathwada, undertake preparatory tillage for sowing of wheat. In view of realized rainfall, provide adequate drainage to avoid water stagnation in the field. Undertake sowing of safflower. For sowing use 10 to 12 kg seeds per ha. Undertake harvesting of matured Kharif sorghum and soyabean. Undertake planting of autumn sugarcane (varieties : CO – 86032 or CO – 7219).
- In West Vidarbha, undertake harvesting of matured soyabean crop. Undertake preparatory tillage in harvested soybean fields with minimum tillage to avoid excess moisture loss from field for sowing of early rainfed *rabi* crops.
- **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 burry 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, all districts of Gangetic West Bengal, Darjeeling, East Sikkim, Malda, North Sikkim, South Sikkim and West Sikkim districts of Sub-Himalayan West Bengal & Sikkim, Banka, Begusarai, Bhagalpur, Jamui, Khagadia, Lakhsarai, Madepura, Monghyr, Nawada and Sheikhpura districts of Bihar, all districts of Jharkhand except Chatra, Garhwa, Khunti, Koderma, Palamu, Sahebganj and West Singhum, all districts of Odisha except Bargarh during the week and weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers very likely at most places over Andaman & Nicobar Islands during the period, along with heavy rain isolated places from 14th to 16th October, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in vegetable field to remove excess rain water.
 - As thunderstorm accompanied with lightning very likely at isolated places over Gangetic West Bengal and Odisha on 13th October, keep cattle indoor.
 - **Odisha:**
 - In North Eastern Coastal Plain Zone, maintain 2-3 cm water in rice field. Undertake nursery sowing of tomato and cauliflower.
 - In North Eastern Ghat Zone, undertake 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 Eastern Plateau Zone, undertake harvesting of early sown rice.
 - In Eastern Ghat High Land Zone, complete nursery sowing of tomato. Complete sowing of black gram and green gram in upland.
 - In North Eastern Ghat Zone, In cucurbitaceous crops, if attack of red pumpkin beetle is found spray Diclorvos 76 EC (DDVP) @ 1 g per litre of water.
 - In North Eastern Coastal Plain Zone, for control of pyrilla in sugarcane, spray Chloropyriphos or Fipronil @ 400 ml/acre in 200 litre of water.
 - **Bihar:**
 - In North East Alluvial Zone, undertake field preparation for sowing of lentil, mustard, maize and pea. Undertake

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 field preparation and 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, undertake harvesting matured rice in clear weather. Farmers having at least 3-4 irrigation facility may proceed for cultivation of rainfed 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, undertake harvesting of maize in clear weather. Undertake nursery bed preparation for tomato, cabbage, cauliflower, brinjal and papaya. Undertake land preparation and sowing of toria, mustard, potato and pea.
- In Central and North Eastern Plateau zone, to control leaf eating insect spray Monocrotophos @ 1.0 ml + Tipol @ 0.5 ml in per litre of water.
- **West Bengal:**
- In the New Alluvial Zone, undertake harvesting of Aman rice. 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.
- In Coastal Saline Zone, drain out of excess water from rice, betel vine and vegetable fields, use staking by wooden stick to support the seedlings of vegetables.
- 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 on a non-rainy day.
- 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 on a non rainy day.
- **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 Anuppur, Balaghat, Chhindwara, Dindori and Shahdol districts of East Madhya Pradesh, Betul, Burhanpur and Khargone districts of West Madhya Pradesh, all districts of Chhattisgarh except Baloda Bazar, Balrampur, Bemetara, Janjgir, Jashpur, Mungeli and Surajpur during the week and weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - In Kymore Plateau and Satpura Hill Zone, undertake 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, undertake sowing of linseed and mustard.
 - **Chhattisgarh:**
 - As thunderstorm accompanied with lightning very likely at isolated places over Chhattisgarh on 13th October, 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 Sriganganagar 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.