



# *National Agromet Advisory Service Bulletin*

*Friday 10<sup>th</sup> November 2017*  
*(For the period 10<sup>th</sup> to 15<sup>th</sup> November 2017)*



*Issued by*  
*India Meteorological Department*

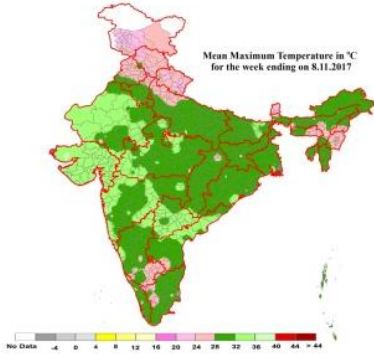
**Weblink For**

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

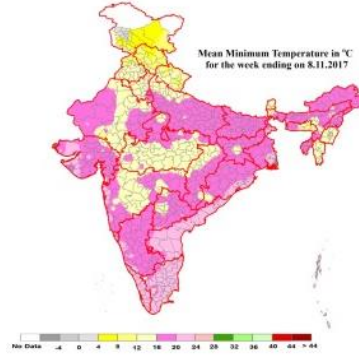
**State Composite AAS Bulletin:** <http://www.imdagrimet.gov.in/node/3544>

**Spatial distribution of weather parameters for the week ending 08.11.2017**

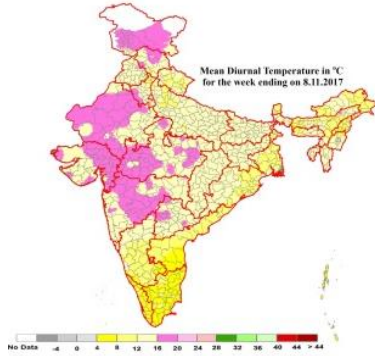
**Mean Maximum Temperature (°C) for the week ending 08.11.2017**



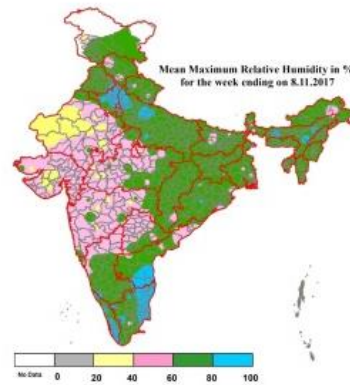
**Mean Minimum Temperature (°C) for the week ending 08.11.2017**



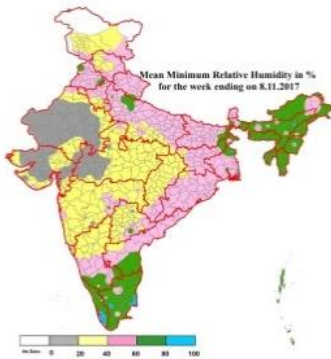
**Mean Diurnal Temperature Variation (°C) for the week ending 08.11.2017**



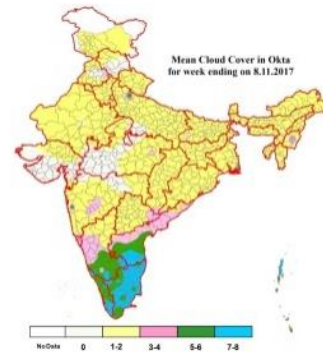
**Mean Maximum Relative Humidity (%) for the week ending 08.11.2017**



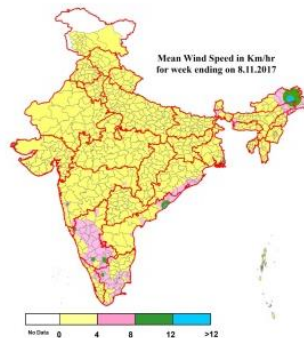
**Mean Minimum Relative Humidity (%) for the week ending 08.11.2017**



**Mean Cloud Cover (okta) for the week ending 08.11.2017**

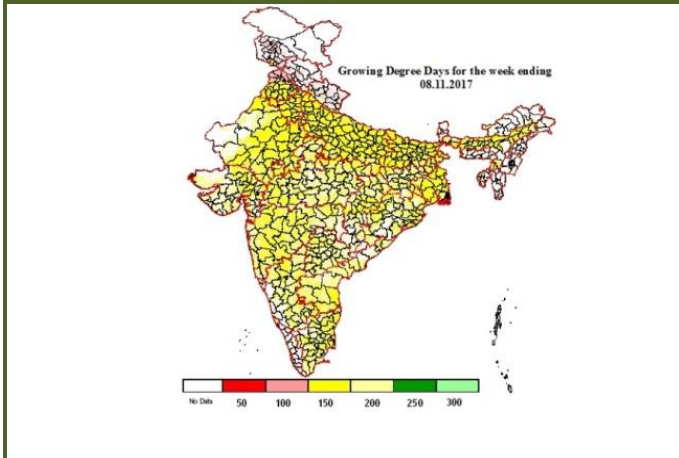


**Mean Wind Speed (km/hr) for the week ending 08.11.2017**

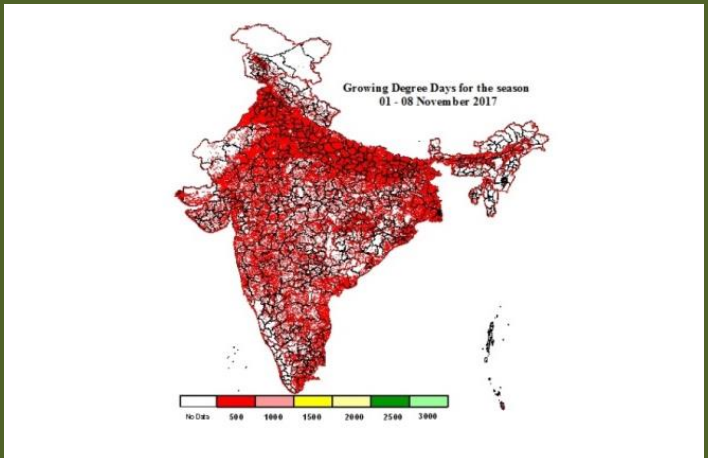




**Growing Degree Days for the week ending 08.11.2017**

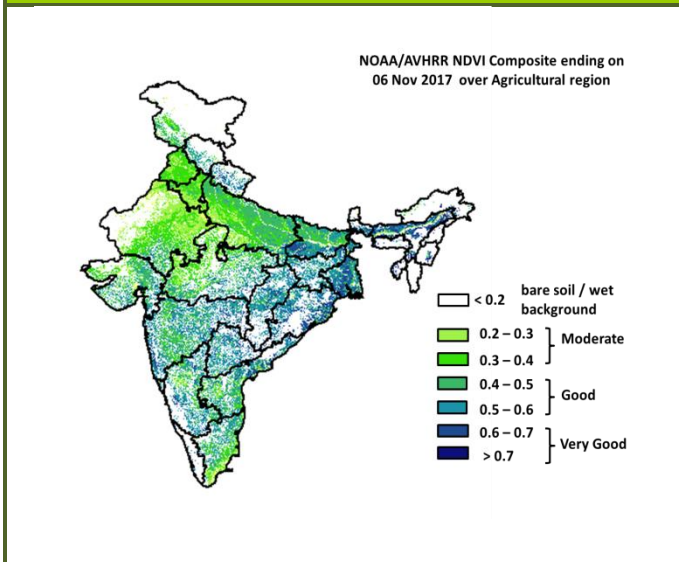


**Growing Degree Days for the season ending 08.11.2017**

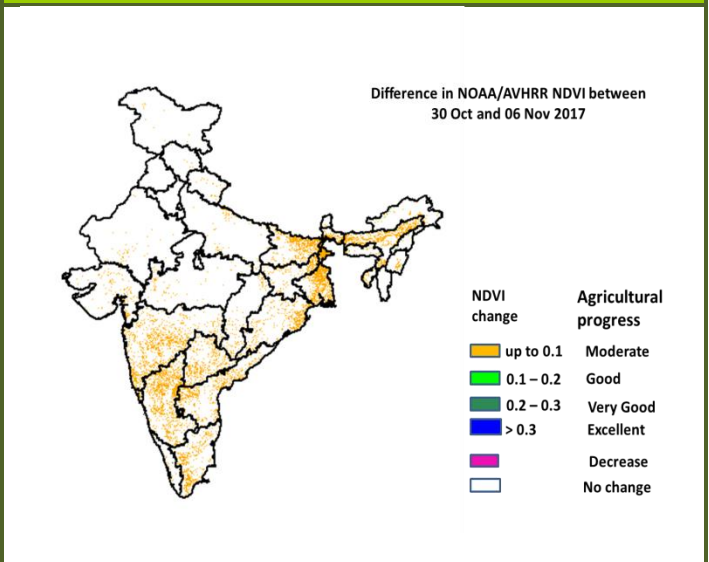


\* Base temperature for *Rabi* Season is taken as 05<sup>0</sup> C

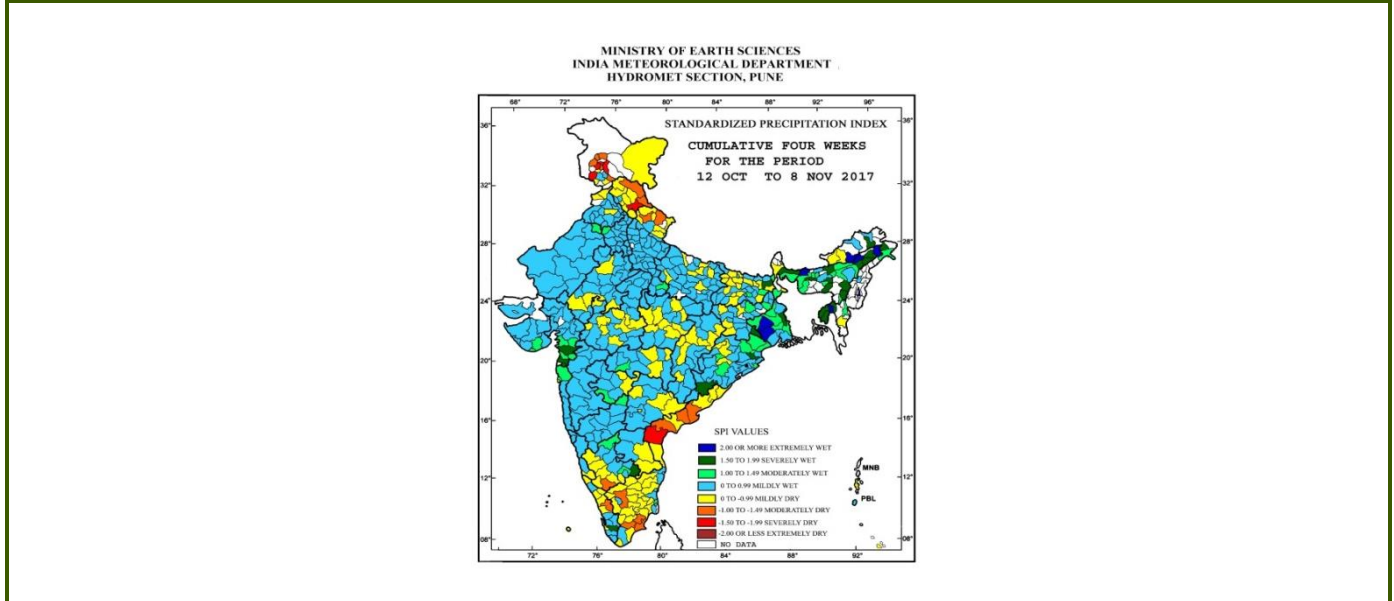
**NOAA/AVHRR NDVI composite ending on 6<sup>th</sup> November 2017 over Agricultural regions of India**



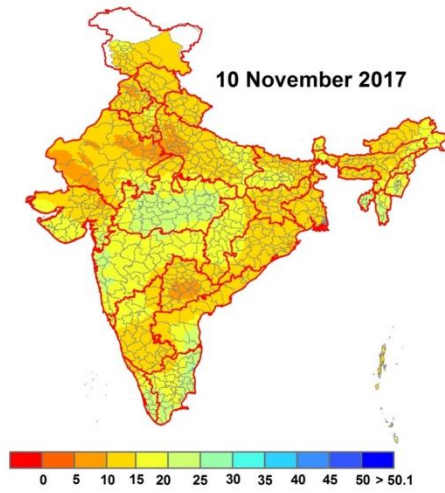
**Difference in NOAA/AVHRR NDVI between 30<sup>th</sup> October and 6<sup>th</sup> November 2017**



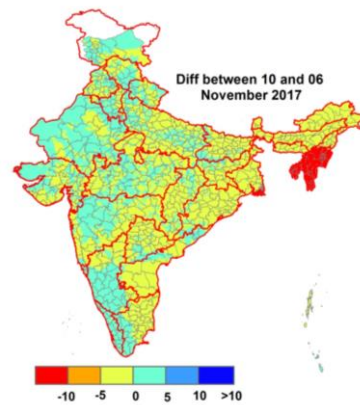
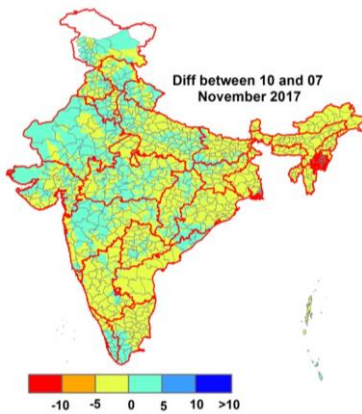
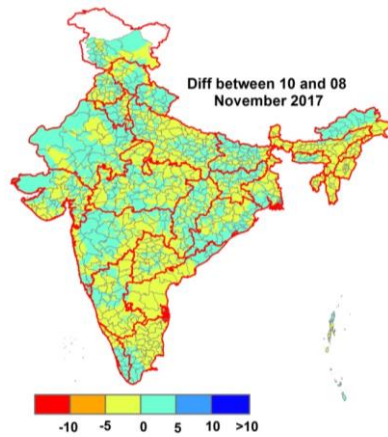
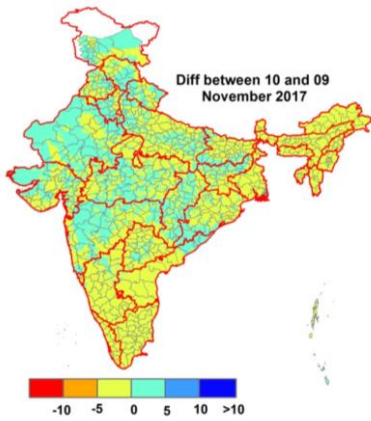
**Standardised Precipitation Index Cumulative 4 weeks for the period 12<sup>th</sup> October to 8<sup>th</sup> November 2017**

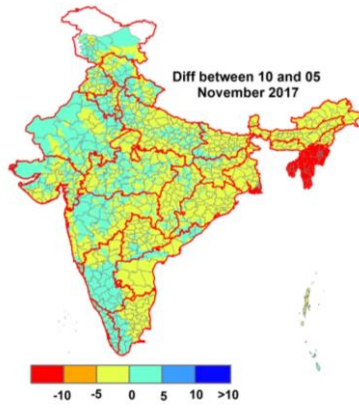


Daily Soil Moisture (mm) for 10<sup>th</sup> November (ending at 0830 IST) for 60 cm depth

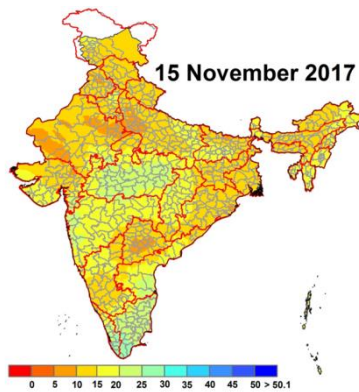
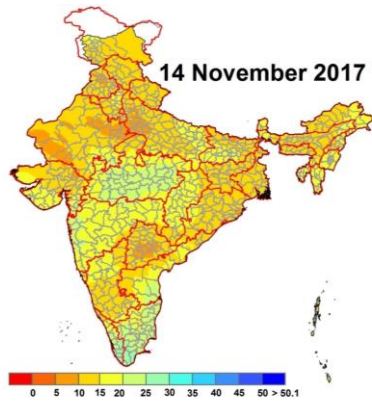
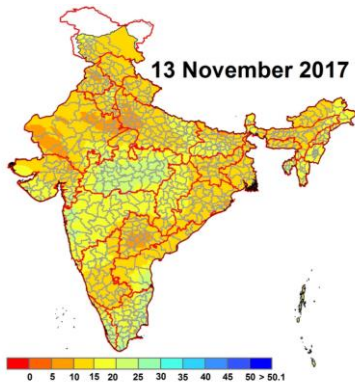
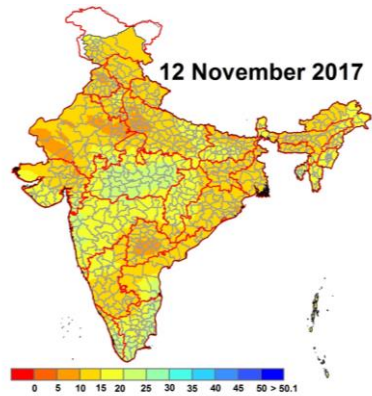
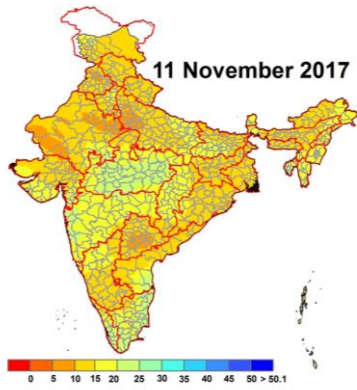


Difference of Soil Moisture (mm) for 60 cm depth





**Forecasted Soil Moisture (mm) from 11<sup>th</sup> November to 15<sup>th</sup> November 2017 (ending at 0830 IST)  
for 60 cm depth**



## Weather Forecast for next 5 days valid upto 0830 hours of 15<sup>th</sup> November 2017

- Meteorological subdivision wise detailed of 5 days rainfall forecast is given below.
- Gradual fall by 1-2°C in minimum temperatures very likely over northern plains and adjoining central India during next 48 hours.
- Shallow to moderate fog at isolated places in the morning hours very likely over north Bihar, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during next 3 days and over Haryana, Chandigarh & Delhi on 13<sup>th</sup> morning.

### 5 Day Rainfall Forecast (Mid day) 10<sup>th</sup> November 2017

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

#### % Station Reporting Rainfall

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

### Weather Warning during next 5 days

- **10 November (Day 1):** Heavy rain at isolated places very likely over Coastal Tamilnadu & Puducherry. Thunderstorm accompanied with lightning at isolated places very likely over Kerala and Tamilnadu & Puducherry. Dense to very dense fog very likely at a few places in the morning hours over Punjab and Uttar Pradesh and dense fog at isolated places over western parts of Haryana and north Rajasthan.
- **11 November (Day 2):** Heavy rain at isolated places very likely over Coastal Tamilnadu & Puducherry.



Thunderstorm accompanied with lightning at isolated places very likely over Tamilnadu & Puducherry. Dense fog very likely at isolated places in the morning hours over Punjab, Uttar Pradesh, western parts of Haryana and north Rajasthan.

- **12 November (Day 3):** Heavy rain at isolated places very likely over Coastal Tamilnadu & Puducherry. Dense fog very likely at isolated places in the morning hours over Punjab, Uttar Pradesh and north Rajasthan.
- **13 November (Day 4):** Heavy rain at isolated places very likely over south coastal Andhra Pradesh and Tamilnadu & Puducherry.
- **14 November (Day 5):** Heavy rain at isolated places very likely over south coastal Andhra Pradesh, South Interior Karnataka and Tamilnadu & Puducherry.

#### Weather Outlook for subsequent 2 days from 15<sup>th</sup> to 17<sup>th</sup> November 2017

- Likely deepening of a trough in the mid latitude westerlies associated with the approaching western disturbance and amplification of tropical easterlies could result in enhanced rainfall activity over south Peninsula extending upto southern parts of Maharashtra on 15<sup>th</sup> & 16<sup>th</sup>. The rainfall belt is likely to shift eastwards subsequently.
- Rain at many places likely over Andaman & Nicobar Islands, south Peninsula, at a few places over northwest India, along east coast and southern parts of northeast India.
- Weather is likely to be dry over the remaining parts of the country.

#### Salient Advisories

- Utilizing the realized and expected rainfall, continue nursery field preparation of *thaladi* rice in the Cauvery Delta Zone of **Tamil Nadu**. In the Northern Zone of **Kerala**, continue transplanting of rice and field preparation and sowing of rice in Problem Zone Area. In Central Dry Zone of Karnataka and North Interior Karnataka, continue sowing of Bengal gram.
- As rainfall is very likely at many places over **Tamil Nadu & Puducherry** and over **South Interior Karnataka** on 14<sup>th</sup> November, heavy rain very likely at isolated places over Coastal Tamilnadu & Puducherry on 10<sup>th</sup> to 12<sup>th</sup> and 14<sup>th</sup> November, over South Interior Karnataka on 14<sup>th</sup> and over South coastal Andhra Pradesh on 13<sup>th</sup> and 14<sup>th</sup>, rainfall very likely at many places over Andaman & Nicobar on 10<sup>th</sup>, 13<sup>th</sup> and 14<sup>th</sup> November, 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 lightning very likely at isolated places over **Kerala** on 10<sup>th</sup> and over **Tamilnadu & Puducherry** on 10<sup>th</sup> and 11<sup>th</sup> November, 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. Keep harvested produce at safer places.
- As dense to very dense fog very likely at a few places in the morning hours over **Punjab** and **Uttar Pradesh** and dense fog very likely at isolated places over Western parts of **Haryana** and **north Rajasthan** on 10<sup>th</sup>, dense fog very likely at isolated places in the morning hours over Punjab, Uttar Pradesh, Western parts of Haryana and north Rajasthan on 11<sup>th</sup> & 12<sup>th</sup> November, monitor the standing crops for incidence and spread of pest diseases, potato, tomato and onion crops for early/late blight disease. If symptoms are noticed, undertake plant protection measures.
- Under the prevailing weather conditions, land preparation/sowing of following *rabi* crops are advised in different States/Agroclimatic Zones as given below:
  - **Wheat:** Continue land preparation and sowing in Punjab, Haryana, Delhi, in Bhal and Coastal Zone of Gujarat, in Irrigated North Western Plain Zone, in Southern Plain Zone and in Sub Humid Southern Plain and Aravali Hill Zone of Rajasthan, in Jammu & Kashmir, South Interior Karnataka, Madhya Maharashtra, Marathwada and

Madhya Pradesh under sufficient soil moisture condition. Western disturbances approaching during 14-15 Nov 2017 in North West India during may be taken care for decision in sowing.

- **Mustard and rapeseed:** Under the prevailing weather conditions, continue sowing in Uttarakhand, Uttar Pradesh, Delhi, Haryana, Gujarat, Gangetic West Bengal, Assam, Nagaland, Manipur, Meghalaya, Tripura, Bihar, Jharkhand, Madhya Pradesh and Chhattisgarh.
- **Bengal gram:** Continue sowing of gram in Madhya Maharashtra, Marathwada, Vidarbha, Jharkhand, Madhya Pradesh, Chhattisgarh, Rayalseema, Telangana, Rajasthan (Western Plain Zone) and Punjab. Continue sowing in Jharkhand, Madhya Pradesh and Chhattisgarh. Complete sowing of gram in Madhya Maharashtra, Marathwada and Vidarbha
- As dry/mainly dry weather would prevail, continue harvesting of matured rice, pulses and cotton in Punjab. Continue harvesting of matured groundnut and maize in South Interior Karnataka and Continue harvesting of kharif rice in Odisha, Bihar, Jharkhand and North Telangana.
- In the Western Zone of **Tamil Nadu**, incidence of cotton grey mildew is observed on winter irrigated Cambodia cotton due to excess soil moisture from last week rainfall along with high relative humidity. To control, spray Tebuconazole @1 ml/litre of water on a non rainy day.

#### *Detailed Zonewise Agromet Advisories*

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

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala except Palakkad and Wynad; in all districts of Tamil Nadu except Karur, Madurai, Nammakal and Sivaganga; in Nellore district of Coastal Andhra Pradesh and in Chittoor and Cuddapah districts of Rayalaseema; in Dakshin Kannada district of Coastal Karnataka and in Chamarajnar, Chikballapur, Kolar and Mandya districts of South Interior Karnataka during the week. Weather remained dry/mainly dry over rest of the region.
- **Advisories:**
  - As rainfall is very likely at many places over Tamil Nadu & Puducherry on 14<sup>th</sup> November, heavy rain very likely at isolated places over Coastal Tamilnadu & Puducherry on 10<sup>th</sup> to 12<sup>th</sup> and 14<sup>th</sup> November, rainfall is very likely at many places over South Interior Karnataka on 14<sup>th</sup> November along with heavy rain very likely at isolated places on 14<sup>th</sup>, heavy rain at isolated places very likely over south coastal Andhra Pradesh on 13<sup>th</sup> and 14<sup>th</sup>, 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 lightning very likely at isolated places over Kerala on 10<sup>th</sup> and over Tamilnadu & Puducherry on 10<sup>th</sup> and 11<sup>th</sup> November, 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. Keep harvested produce at safer places.
  - **Kerala:**
    - In the Northern Zone, continue transplanting of rice and planting of cow pea.
    - In the Problem Area Zone, continue land preparation for sowing of second rice crop and harvesting of Nendran bananas.
    - In the High Altitude Zone, continue planting of polybag coffee seedlings, cultivation of short duration vegetable crops like amaranthus, cow pea etc. in the interspaces of newly planted banana crop and harvesting of green ginger and cardamom.
    - In Pathanamthitta district of the Southern Zone, undertake harvesting of six month old ginger and continue tapping of rubber in Thiruvananthapuram district.
    - In the Northern Zone, spray Malathion @ 2 ml/litre of water on lower sides of the leaves to control melon fruit flies in cucurbitaceous vegetables.
    - In the Central Zone, destroy the affected banana leaves to control incidence of spodoptera. Apply Quinalphos @ 2 ml/litre of water for epilachna beetle attack in vegetables.
    - In the Problem Area Zone, chances of occurrence of anthracnose disease in cow pea is more. Drench pits of cow pea with Copper oxy chloride @ 4g/ litre of water before planting as a prophylactic measure against this. In cucurbits spray Indofil M 45 @ 4g/ litre of water against downy mildew disease.
  - **Karnataka:**
    - In North Transition Zone, continue sowing of chickpea (Annigeri-1, BG-1105, BGD-103, JG-11 and BGS-964).



Undertake intercultural operations in sorghum crop. Complete harvesting of matured groundnut, soybean and maize cobs.

- In Coastal Zone and Hill Zone, complete harvesting /threshing matured rice in clear weather.
- In North East Dry Zone, continue first picking of early sown cotton. Undertake sowing of wheat crop.
- In North East Transition Zone, continue plantation of sugarcane (variety Co-86032) crop.
- In North Dry Zone, in medium black soils, undertake sowing of chickpea (A-1, GBS-964, JG-11, JG-11, BGD-103, GB-1105) and wheat under irrigated condition.
- In Southern Transition Zone, continue harvesting of matured maize cobs and arecanut.
- In Central Dry Zone, continue sowing of Bengal gram crop. Complete harvesting of matured groundnut and matured cobs of maize.
- In Eastern Dry Zone, continue sowing of 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), field bean (HA-1, 3, 4) under optimum moisture condition.
- In Southern Dry Zone, incidence of color rot disease is observed in pigeon pea (BRG 1 and BRG 2 varieties; to control, spray Bavistin @ 2gm/litre of water in clear weather.
- In Eastern Dry Zone, infestation of pod borer was noticed; to control, spray Indoxycarb 14.5 SC @ 0.5 ml/litre or Spynosad 45 SC @ 0.15 ml/litre or Chloropyrifos 20 EC @ 2ml/litre of water in clear weather.
- In North East Dry Zone, infestation of brown plant hopper is noticed in rice crop; to control, spray the crop with Chloropyrifos @2.0 ml or Monocrotophos @1.5 ml/litre of water in clear weather. In late sown cotton (boll development stage), infestation of myrid and mealy bugs is noticed; spray Monocrotophos @ 2 ml or Profenophos @ 2 ml/litre of water in clear weather.

▪ **Andhra Pradesh:**

- In the Krishna Godavari Zone, continue land preparation for sowing of Bengal gram.
- In the Scarce Rainfall Zone, continue sowing of groundnut under assured irrigated conditions. Complete sowing of Bengal gram by Nov 15<sup>th</sup> and harvesting of July first fortnight sown groundnut crop(kharif) on clear weather days. Continue sowing of Bengal gram in black soil areas after seed treatment.
- In the Southern Zone, remove standing water from horticultural crop fields and cover the matured fruit bunches with banana leaves and harvest within two weeks. To control damping of rhizomes, spray Copper Oxychloride @ 3 g/litre of water. In Nellore district, remove excess water stagnated in rice nurseries and main fields and apply 1 kg each of Nitrogen, P<sub>2</sub>O<sub>5</sub> and K before sowing the seed. As there is light rain forecast for the coming 5 days in Kadapa district, farmers are advised to take up Bengal gram in heavy soils and jowar, sunflower and fodder crops in paddy cultivated areas, if sufficient sowing moisture is available.
- In the High Altitude Tribal Zone, undertake sowing of mustard and cabbage and harvesting of paddy.
- In the Krishna Godavari Zone, prevailing weather conditions are congenial for attack of neck blast in rice. Spray Isoprothiolane @1.5 ml/litre of water.
- In the Scarce Rainfall Zone, farmers are advised to apply foliar dust as prophylactic measure over the heaped groundnut for control of groundnut pod sucking bugs.

▪ **Telangana:**

- In North Telangana Zone, continue harvesting of kharif rice, land preparation for sowing of rabi rice, sowing of maize, groundnut and rabi sorghum.
- In South Telangana Zone, undertake land preparation for sowing of rice and continue sowing of maize.
- In North Telangana Zone, spray Dinotefuran @ 100 g /200 litres of water for acre to control incidence of brown plant hopper observed in kharif rice.
- In South Telangana Zone, prevailing weather conditions are congenial for incidence of stem rot disease in groundnut. To control, drench the soil with Tebuconazole @ 1.0 ml/ litre of water.

▪ **Tamil Nadu:**

- Continue nursery field preparation of *thaladi* rice in the Cauvery Delta Zone of Tamil Nadu.
- In the South Zone, as isolated moderate to heavy rainfall is expected in the coming days, provide adequate drainage in rainfed and irrigated crops in order to prevent water stagnation. Undertake sowing of rainfed coriander and senna after seed treatment.
- In the Western Zone, incidence of cotton grey mildew is observed on winter irrigated Cambodia cotton due to excess soil moisture from last week rainfall along with high relative humidity. To control, spray Tebuconazole @1 ml/litre of water per hectare. Foliar nutrient sprays, plant protection sprays and fertilizer application may be completed on non rainy days. Because of the present level minimum temperature and high rainfall, Zinc deficiency may appear in samba transplanted rice. Spray ZnSO<sub>4</sub> 0.5% along with 1% urea twice at 10 days interval.
- In the Cauvery Delta Zone, stem borer and leaf folder incidence is being noticed in the samba paddy crop due to prevailing weather condition. To manage stem borer, spray Profenophos 50 E.C. @ 400 ml/acre and to manage leaf folder, spray Profenophos 50 E.C. @ 400 ml/acre on non rainy days.
- In the South Zone, as moderate rainfall is expected in the coming days, provide adequate drainage in rainfed and irrigated crops in order to prevent water stagnation. Undertake sowing of rainfed coriander and senna after seed

treatment.

- In the High Altitude Hilly Zone, drainage facilities should be created in the field to drain off excess water. To control bulb rot disease in garlic crop, soil drenching with Copper oxy chloride @ 1 g/litre of water can be done.
- In the North Western Zone, due to climate change, occurrence of fruit fly incidence is observed in cucurbits vegetables. For controlling and monitoring of the pest, set up Fruit fly trap @ 15 nos./acre.
- In the South Zone, as moderate to high cloud cover and high humidity is expected in the coming days, leaf hopper incidence may be noticed. To control, spray Imidacloprid 200 SL @ 100 ml/ha on non rainy days.
- **Animal Husbandry**
- In the Problem Area Zone of Kerala, avoid moist conditions in cattle shed to prevent incidence of foot rot.
- In the Cauvery Delta Zone of Tamil Nadu, clean the animal shed daily with Sodium bicarbonate (Baking soda) in 100-200gm / 10 litres of water to minimize the spread of infectious organism. Suitable bedding materials (paddy straw, dry grass, saw dust, rice husk etc.) to the depth of 2-4 inches for young animals should be provided on concrete floor.
- In the Western Zone of Tamil Nadu, because of the continuous wet spell, cattle and poultry feeds may get contaminated with fungus. During this season, feed the dried material against possible occurrence of dysentery and diarrhoea.
- In the Southern Zone of Tamil Nadu, mosquitoes in cowshed are predominant due to prevailing weather condition. If mosquitoes are a serious problem to livestock, control measures should be implemented. The most effective control method is removing or draining mosquito breeding sites. Daily fogging or aerosoling for adult mosquito itoes may provide relief but only as temporary control measure.
- In North Dry Zone of Karnataka, vaccinate (ET vaccine) sheep and goats against Enterotoxemia. In Southern Dry Zone of Karnataka, maintain the optimum room temperature in sericulture, poultry and dairy unit.

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

- **Realised Rainfall:** Weather remained dry/mainly dry over the region during the week.
- **Advisories:**
  - **Assam & Meghalaya, Arunachal Pradesh:**
  - In Arunachal Pradesh, continue sowing of rabi vegetables, pea, carrot and pineapple. Continue land preparation for sowing of potato. Undertake transplanting of healthy seedlings of cabbage, cauliflower, knolkhol, etc. Undertake harvesting of okra, soybean and mature cobs of maize. Drain excess water from Sali rice field 7-10 days before harvesting.
  - In Meghalaya, continue sowing of seeds/transplanting of seedlings of cauliflower, broccoli and cabbage. Continue harvesting of soybean crop when 95% of the pods become yellow. Continue sowing of pea in high altitude. Undertake land preparation and sowing of rapeseed and mustard. Harvest tender pods of French beans, rajmash and cow pea. Maintain proper drainage in the ginger and turmeric fields.
  - In the North Bank Plain Zone of Assam, continue land preparation and sowing of rapeseed and mustard. Continue planting of early varieties of potato. Continue sowing of cabbage, cauliflower, brinjal, knolkhol and tomato.
  - In Barak Valley Zone of Assam, continue land preparation for sowing of rapeseed, potato and khesari.
  - In Lower Bramhaputra Valley Zone of Assam, continue sowing of rapeseed and rabi vegetables. Undertake sowing of onion seeds. Undertake seed-bed preparation for Boro rice. Undertake land preparation for buckwheat so as to complete sowing by the end of November.
  - In Upper Bramhaputra Valley Zone of Assam, undertake harvesting of Sali rice. Continue planting of potato and undertake land preparation for sowing of toria.
  - In Meghalaya, apply need based alternate foliar spray of Hexaconazole 5% EC(2ml/litre) & Carbendazim 12% WP+Mancozeb 63% WP(2g/litre) at 15days interval beginning from first appearance of blast/bacterial blight disease in Sali/kharif rice.
  - 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.
  - In Hill Zone of Assam, undertake planting of potato and transplanting mature seedlings of cabbage, cauliflower, broccoli, etc. And planting of winter vegetables as weather is favourable. Continue land preparation/sowing of lentil. Carry out harvesting of Khasi Mandarin.
  - In Arunachal Pradesh, apply need based foliar spray of Sulfex @ 2 gm per litre of water to control powdery mildew in black/green gram and pea.
  - In Lower Bramhaputra Valley Zone of Assam, spray Malathion 5% dust @ 3Kg per bigha against Gundhi Bug in Sali paddy. Spray Quinolphos 25% EC with recommended dose of 2 liter per 750 liter of water per hectare area of land Leaf webber or roller & capsule borer in oilseed crop.
  - In Barak Valley Zone of Assam, apply 5% Malathion dust @ 20 kg per hector of land against gundhi bug at milky stage in Sali rice.
  - In the Hill Zone of Assam, spray Bavistin @ 0.5 g/ litre of water if infestation of Cercospora leaf spot is noticed.

- In Upper Brahmaputra Valley Zone of Assam, spray Malathion 50EC @ 1-1.5lit/ha in 500-700lit of water to control pod borer and leaf folder pests in green and black gram.
- **Nagaland, Mizoram, Manipur and Tripura:**
- In Manipur, continue harvesting of rice crop. Continue sowing of rapeseed/mustard, field pea, black gram and lentil when the field is slightly muddy. Continue land preparation/sowing of coriander and spinach. Continue transplanting of cabbage and cauliflower. Continue nursery raising of onion.
- In Mizoram, undertake thinning and weeding operations and apply irrigation to *rabi* maize, green gram, black gram, toria and soybean. Continue nursery sowing of early cole crop, brinjal, chilli, capsicum, French bean and onion. Carry out harvesting of kharif rice. Block drain channels in coffee and rubber plantations to maintain soil moisture, provide support to plants and replace dead plants with new seedlings.
- In Nagaland, continue land preparation for sowing of toria and *rabi* maize. Undertake nursery preparation of vegetables like cabbage, cauliflower, knolkhol, broccoli, radish and tomato.
- **Animal Husbandry**
- In Arunachal Pradesh, protect new born calves from cold. Protect them against FMD with 1st injection at 6-8 weeks of age, 2nd injection after 6 months of 1<sup>st</sup> injection followed by annual vaccination under vet supervision.
- In Meghalaya, vaccinate 6-9 month old calves Brucellosis with Brucella Abortus strain-19 @ 5 ml subcutaneous on the neck. Apply regular immunization to cattle against FMD, BQ and Hemorrhagic Septicemia.
- In Hill Zone of Assam, immunize cattle against FMD, BQ, Enterotoxaemia and Hemorrhagic Septicemia.
- In the Barak Valley Zone of Assam, 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.
- In Upper Brahmaputra Valley Zone of Assam, protect poultry birds from cold winds by installing gunny bags or plastic sheath curtains on the side walls of shed.
- In Manipur, vaccinate and de-worm cattle, sheep, goat and pigs. Carry out shearing of sheep during this month.
- **Fishery**
- In Arunachal Pradesh, apply fresh lime to maintain pH of pond water and apply fish feed (mustard oil cake) for higher yield.
- In Meghalaya, harvest nursery ponds and transfer fingerlings to grow out.
- In Barak Valley Zone of Assam, add 2 to 5% vitamin mineral mixture in fish feed for good growth and to strengthen immunity for disease resistance in fish.

### WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Weather remained dry over the region during the week.
- **Advisories:**
  - **Maharashtra:**
    - Complete harvesting of matured rice and nagli in Konkan and western Ghat Region of Madhya Maharashtra and harvesting of matured rice in East Vidarbha. Continue picking of fully opened cotton bolls in Madhya Maharashtra, Marathwada and Vidarbha.
    - In Madhya Maharashtra, complete sowing of irrigated gram. continue sowing of wheat. Complete planting of pre-seasonal sugarcane upto the 15th November. For control of thrips in onion, spray alternately Diamethoate 30% @ 15 ml or Lambda Cyhalothrine 5% @ 6 ml/ 10 litres of water.
    - In view of prevailing dry weather apply light irrigation to *rabi* gram & safflower (by sprinkler) vegetables and orchards like banana in Marathwada.
    - In East Vidarbha, continue sowing of gram, wheat and linseed.
  - **Gujarat:**
    - In Bhal and Coastal Zone, continue sowing of chickpea, undertake sowing of cumin, mustard and wheat. Undertake land preparation for sowing of fennel crop. Apply regular irrigation in castor.
    - In South Saurashtra Zone, undertake picking of matured clusters of castor. Complete land preparation for sowing of wheat; continue sowing of garlic, coriander, cumin crops.
    - In North West Zone of Gujarat, undertake picking of matured bolls of cotton, sowing of mustard and continue nursery preparation of cabbage. Carry out intercultural operation in castor.
    - In North Gujarat Zone, undertake picking of matured bolls of cotton. Continue land preparation for planting of potato. Continue sowing of mustard, gram, wheat, cumin crops and nursery preparation for cabbage.
    - In North Saurashtra Zone, undertake sowing of wheat, cumin, mustard and coriander crops; continue sowing of gram (Gujarat Chana-2 (unirrigated), Gujarat Chana-3 (irrigated)), mustard (Varuna, Gujarat Rai-3), pea and carrot (for vegetable purpose) and planting of garlic (Gujarat Garlic-5 or Local) and onion crops.
    - In South Gujarat Heavy Rainfall Zone, continue sowing of *rabi* pulses like Indian bean, gram, green gram crops, offseason okra and complete nursery preparation of chilli and brinjal. Complete threshing of rice.
    - In South Gujarat Zone, undertake sowing of wheat and gram crop. Continue planting of sugarcane. undertake intercultural operation in pigeon pea before flowering.



- In Middle Gujarat Zone, undertake sowing of wheat (GW-496, GW-503, GW-273, GW-322). Continue sowing of maize (Ganga safed-2, GM-6).
- **Animal Husbandry**
- In Gujarat, keep cattle indoor at night time to protect from cold wind.

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

- **Realised Rainfall:** Rainfall occurred in Nicobar and South Andaman districts of Andaman & Nicobar Islands. Weather remained dry/mainly dry over rest of the region during the week.
- **Advisories:**
  - **Odisha:**
    - In Western Undulating Zone, as dry weather would prevail during the period, continue harvesting of direct seeded rice, maize and picking of cotton. Prepare the main field for transplanting of tomato, cabbage and cauliflower at 3 to 4 week stage.
    - 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 Mid Central Table Land Zone, continue nursery raising of cole crops and harvesting of groundnut.
    - In North Central Plateau Zone, continue land preparation and sowing of mustard and sesame in fallow uplands.
    - In Western Undulating Zone, sugarcane crop is at (thirty seven to thirty eight week) grand growth stage. In the prevailing weather, there may be attack of Top shoot borer at this stage. Spray Triazophos/Profenophos 400ml per acre @ 2ml/lit of water. Scale insects and pyrilla may also infest the crop during this period. Spray buprofezin 400ml/acre @ 2ml/litre of water.
  - **Bihar:**
    - In South Bihar Alluvial Zone, in the areas where paddy crop is about to mature, irrigation should be stopped two weeks before harvesting. Undertake harvesting of matured rice crop and it should be dried in the field for 2-3 days and thereafter threshing should be done. In present weather condition, field preparation should be started for rabi crops. Ploughing and planking should be done properly to conserve the moisture in the soil. Undertake transplanting of mature seedlings of cauliflower, cabbage and tomato may be done in raised bed. Recommended spacing should be maintained. Prepare the field for sowing of potato. Sowing of carrot may be done in raised bed. Recommended cultivars: - Pusa Rudhira, Pusa Asita. Seed rate-4.0 kg/ acre.
    - In North East Alluvial Zone, continue field preparation and sowing of lentil, mustard, maize and pea. Continue planting of early variety of potato.
    - 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, after harvesting of rice, undertake land preparation for sowing of mustard. Improved varieties of like – Pusa bold, Shivani, Varuna, Kranti, JD 6 and Sedge 2 etc.can be undertaken by treating the seed with Bavistin @ 2g per kg seed. Generally 3 kg seed for an acre land is sufficient by maintaining plant to plant 30 cm and row to row 10 cm distance.
    - In Western Plateau Zone, continue harvesting of matured rice. After harvesting of rice, farmers having at least 3-4 irrigation facility may undertake cultivation of wheat, potato and green pea and those who have only 2 - 3 irrigation facility may proceed for sowing of gram, toria and mustard. Farmers wishing to cultivate Rainfed wheat may select one of the recommended varieties like HDR- 77, K-8027, Birsa genhu – 3 etc. 50 kg seeds are required for cultivation in one acre. Before sowing seed should be treated with fungicide like Bavistin. Undertake land preparation and sowing of linseed and gram with recommended varieties ( Linseed:Sweta, Shubhra, T-397 etc. Gram: B.G.-372, B.G.-256, K.W.R.-108, Pant G.-186, Pant G. -114 and for Kabuli gram are H.K.-94-134, B.G.-1053, B.G.-1003 etc)
    - In Central and North Eastern Plateau Zone, continue nursery bed preparation for tomato, cabbage, cauliflower and brinjal. Continue land preparation for sowing of mustard, potato and pea.
  - **West Bengal:**
    - In Coastal Saline Zone, carry out harvesting of Aman rice when grains become 80% mature as weather is going to remain clear. Continue sowing mustard. Carry out field preparation for lentil varieties viz. Subrata, Asha, Maitri, etc. Keep the cabbage, cauliflower and tomato fields weed free, apply fertilizer and light irrigation.
    - In the Hill Zone, carry out land preparation/transplanting of cabbage and cauliflower crops and apply irrigation as per requirement. Carry out harvesting of Mandarin orange from 2nd week of November. Continue regular harvesting of mature round chilli fruits.
    - In the New Alluvial Zone, continue harvesting of Aman rice. Continue sowing of mustard, radish and broccoli.
    - In Laterite and Red Soil Zone, carry out harvesting of rice when 80% grains in a panicle are mature. After harvesting, keep rice bundles in the field for sun drying. Carry out field preparation for potato and wheat crops by 15

th November. Prepare fine seed-bed for sowing cabbage and cauliflower.

- In the Old Alluvial Zone, to control the rice bug, spray Dichlorovos 76% E.C @ 0.75 ml per liter water or take snail rotten 100 gram and 10 ml. Dichlorovos 76%, mix it well, divide in three to four part in small cloth packets and hang them at proper distance in the field just above the panicle level. As preventive measures in early transplanted vegetables like Cabbage, Cauliflower, Brinjal etc. spray Neem oil 1% @ 3 ml/liter of water in the evening hours. To prevent blast disease in wheat crop, restrict wheat cultivation within 5 Km. from Bangladesh border.
- In the Hill Zone, spray Neem oil @ 3 ml per litre of water for gundhi bug in rice crop. Carry out careful rouging and destruction of infected ginger and turmeric plants.
- In the Laterite and Red Soil Zone, collect and destroy infected fruits of tomato and brinjal. Spray Quinalphos 25 EC @ 1 ml per litre of water to control fruit borer in tomato and spray Neem seed kernel @ 50 ml per litre of water to control shoot and fruit borer in brinjal. Spray Dimethoate 30% @ 1 ml per litre of water to control thrips in chilli and spray Neem oil @ 20 ml per litre of water to control sucking pest in lady's finger.

#### ▪ **Andaman & Nicobar Islands**

- As rainfall is very likely at many places over Andaman & Nicobar on 10th, 13th and 14th , avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- In North and Middle Andaman, provide support to the vine vegetables grown in bamboo structure as strong wind is expected. Avoid pesticide application during next five days and harvest the mature vegetables.
- In the Nicobar Islands, clean the drainage channels in vegetable field to remove excess rain water.

#### • **Animal Husbandry**

- In Coastal Saline Zone, increase the no. of chicks and no. of light bulbs per cage. Use dry food for feeding purpose.
- In the Old Alluvial Zone, keep the animals in a covered shed/area during the night. Feed clean and hygienic water to dairy animals. Apply Rice bran & Mustered oil cake (1:1) @ 3-2% of the total body weight of fish finger stocked in the pond as a supplementary feed.
- In the Andaman and Nicobar Islands, provide clean and hygienic water treated with potassium permanganate (1 ppm) to the poultry birds to avoid gastrointestinal infection. Keep piglets under brooding condition by providing light as moderate to heavy rainfall is expected during next five days.

#### • **Fisheries**

- In Mid Central Table Land Zone of Odisha, apply raw cow dung (RCD) @1000kg/acre of pond size. After 5 days of application of RCD apply 30 kg of DAP/acre and then after 3 days of application of DAP stocking should be done @ 2000 yearlings/ac OR fingerlings @ 3000/acre OR Fry @ 8000/acre of pond size.

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

- **Realised Rainfall:** Weather remained dry over the region during the week.

- **Advisories:**

- **Madhya Pradesh:**

- In Central Narmada Valley Zone, continue sowing of chickpea, wheat, barley, mustard and alsin. Continue planting of potato and garlic. Continue harvesting/threshing of matured rice crop.
- In Vindhya Plateau Zone, undertake sowing of wheat, gram, lentil and coriander. Complete planting of potato.
- In Bundelkhand Zone, continue sowing of wheat, chickpea, mustard, pea, linseed, lentil, green vegetables (fenugreek, spinach, coriander) and turnip. Continue planting of potato and nursery preparation for onion. Undertake mulching in newly planted mango and guava orchard and hoeing and weeding in fruit orchard basin.
- In Nimar Valley Zone, continue nursery preparation for onion. Select varieties GW-322, GW-366, HI-1544 for sowing of wheat.
- In Malwa Plateau Zone, continue transplanting of vegetable (cauliflower, cabbage, broccoli and tomato) crops and sowing of chickpea, pea, onion, and garlic. Continue field preparation and undertake sowing of wheat and continue planting of potato.
- In Jhabua Hill Zone, complete sowing of chickpea and mustard. Continue sowing of early maturing varieties (HI-1500, HI-1531, HW-2004, JWS-17) of wheat, vegetable crops like vegetable pea, fenugreek, spinach, radish and planting of onion.
- In Gird Zone, continue planting of potato and sowing of chickpea and pea.
- In Kymore Plateau and Satpura Hill Zone, undertake transplanting of vegetables and continue sowing of mustard, lentil and garden pea.

- **Chhattisgarh:**

- In Chhattisgarh Plain Zone, continue sowing of chickpea crop. Continue land preparation and undertake sowing of moong, urad, sunflower and safflower etc. from 15<sup>th</sup> November. Complete nursery sowing of vegetable crops (cauliflower, cabbage and kholchol early varieties).
- In Bastar Plateau Zone, undertake sowing of wheat, continue sowing of gram, pea, linseed and lentil crops and nursery preparation for *rabi* vegetables (cabbage, cauliflower, brinjal, tomato and chilly). Undertake field preparation for planting of *rabi* colocasia and bunda.

- In North Hill Zone, continue harvesting/threshing of matured rice. Continue sowing of mustard, green pea, gram and mustard. Continue transplanting of winter vegetables like cauliflower, cabbage, chilli, tomato, brinjal etc. Continue planting of potato and garlic and undertake nursery sowing of onion.
- **Animal Husbandry**
- In Madhya Pradesh, vaccinate the poultry birds to prevent Ranikhet disease. Vaccinate the goat against PPR disease. Provide green fodder, fresh and clean water three times a day to cattle. Use malathion/Cleaner/Butox 2ml/litre of water on whole body of animals to prevent from the ticks and lice.
- In Chhattisgarh, low temperature condition may adversely affect the milk production and performance of domestic animals; give protein enriched diet to the animals. Keep animal indoor. Provide supplementary wormicide medicine in feed of poultry birds.

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

- **Realised Rainfall:** Weather remained dry over the region during the week.
- **Advisories:**
  - As dense to very dense fog very likely at a few places in the morning hours over Punjab and Uttar Pradesh and dense fog very likely at isolated places over Western parts of Haryana and north Rajasthan on 10<sup>th</sup>, dense fog very likely at isolated places in the morning hours over Punjab, Uttar Pradesh, Western parts of Haryana and north Rajasthan on 11<sup>th</sup> & 12<sup>th</sup> November, monitor the standing crops for incidence and spread of pest diseases, potato, tomato and onion crops for early/late blight disease. If symptoms are noticed, undertake plant protection measures.
  - **Jammu & Kashmir:**
    - In Sub Tropical Zone, farmers may go for sowing of wheat varieties viz. PBW-550, HD-2967 under irrigated conditions and var. viz. PBW-644, PBW-396 and WH-1080 after the receipt of rain under unirrigated/rainfed conditions. Before sowing, treat the seed with carboxin/carbendazim @ 2g/kg or tebuconazole @ 1.25g/kg of seed to reduce seed borne inoculum of loose smut, black point, leaf blight, Karnal bunt and hill bunt. After receipt of rain, sowing of mustard crop var. (RSPR-01, Kranti) can be continued in irrigated areas whereas under rainfed areas sowing of RSPR-03 can be taken up.
    - In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, make preparations for timely sowing of wheat crop. The fields that have been vacated are required to be ploughed and prepared for conservation of moisture to keep them ready for timely sowing of wheat crop. Field preparation should be done with care as conservation of moisture is dependent on it. Those farmers which prepared their crop fields and ready for sowing of wheat crop are advised to undertake sowing (var. VL 907, HS 507 and HPW 349) under irrigated/rainfed conditions up to 800 -1000 m amsl, variety PBW-175 up to 1000 m amsl under rainfed condition only and VL 804, HS 507 and HPW 349 under irrigated/rainfed conditions up to 1000 -1350 m amsl in Intermediate (mid to high altitude) areas of the district. Farmers are also advised to continue sowing of mustard (var. Kranti, RLM 619, Varuna and RH 30) and oats crop (var. Kent and Sabzar), sowing of gram (C-235, Gaurav, K-468, SCS-3 and PBG-1) and pea (var. T-163, PG-2 and Rachna) where adequate moisture is available for sowing. - Treat the seed with captan or thiram or Bavistin (2g/kg seed) for the management of collar/root rot, rust and wilt in chick pea. Inoculate with Rhizobium culture (200-250g/acre) before sowing.
  - **Uttarakhand:**
    - In Sub Humid Sub Tropic Zone, continue harvesting of maize. Undertake nursery sowing of tomato.
    - 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, farmers are advised to procure good quality seeds of wheat. Seed rate: - 100 kg seed per hectare. Recommended cultivars: - H.D. 2687, H.D. 2851, H.D. 2894, H.D. 2967, D.B.W.-17. Application of Chlorpyrifos (20 EC) @ 5 litres per hectare with pre-irrigation water is recommended before sowing in the fields having perennial problem of termite infestation. Before sowing seeds should be treated with Bavistin or Thiram @ 2-2.5 g per kilogram of seed. Undertake sowing of gram in this week. Seed rate: - 60-80 kilogram for small and medium sized varieties and 80-100 kilograms for big sized varieties. R x R spacing to be maintained 30-35 cm. Varieties:- Kabuli type - Pusa 267, Pusa 1003, Pusa Chamatkar; local type - C235, Pusa 246, P.B.G. 1, Pusa 372 after seed treatment. Sowing of lentil can be done in this weather conditions. Cultivar: - Pusa Masoor -5 (L-4594). Seed treatment with Rhizobium and Phosphorus solubilising bacteria is advised. Keeping in view of suitable weather, sowing of pea should not be delayed as late sowing reduces the seed yield and exposes the crop to insect damage. Recommended cultivars: - Pusa Pragati, Arkel, Azad Matar-3, Pant Matar-3 and Bournville. Seed should be treated with fungicides, Captan or Thiram @ 2.0 gm/ kg and after that with crop-specific Rhizobium culture. It is highly recommended that the treated seeds should be sown after 24 hours of treatment. Sowing of potato should be done as soon as possible. Selection of cultivars can be done on the basis of need. Cultivars: -Kufri Badshah (Late blight



tolerant), Kufri Jyoti (Short duration), Kufri Alankar, Kufri Chandramukhi. Row to row × plant to plant spacing of 45cm×20cm or 60cm × 15 cm is advised. Seed treatment with 2 gm Mancozeb and 1 gm Carbendazim mixed per litre of water per kilogram of seed for five minute should be done. Thereafter, seeds should be dried in shade before planting in the field. Keeping in view of prevailing dry weather, arrangements should be done for harvesting mature rice crop. After harvesting, crop should be dried in the field for 2-3 days and thereafter threshing should be done.

- In Haryana, in Western Zone, as dry weather would prevail, continue picking of cotton. Continue sowing of mustard with varieties RH-30,RH-0749,RH-0406, Varuna , Laxmi etc if sufficient moisture is available in soil.
- In Western Plain Zone of Punjab, harvesting of paddy/basmati should be harvested as soon as they mature. Delayed harvesting may cause over-ripening and shattering. The harvested crop should be threshed on the same or next day of harvesting. Continue picking of cotton and harvesting of pulses.Undertake land preparation for sowing of wheat.Farmers are advised to procure the wheat varieties, namely, Unnat PBW 343, PBW 1 Zn (variety with high Zinc content), PBW 725, PBW 677, HD 3086, WH 1105, PBW 621, HD 2967 and durum wheat WHD 943 and PDW 291 for irrigated conditions and PBW 660 and PBW 644 for rainfed conditions. Complete sowing of root crop varieties of Punjab Pasand and Japanese white of radish, L-1 of turnip and Punjab Black Beauty, Punjab Carrot Red and PC-34 of carrot. Use 2 kg seed for turnip and 4 kg seed for carrot and radish per acre.
- In Haryana, in Western Zone, there may be infestation of bacterial blight in cotton, if infestation is above ETL then spray 800g Copper oxy chloride 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 High Hill Temperate Dry Zone, Poly houses should be kept closed to prevent the cold injury. Continue harvesting of Oats and Apple.
  - In Solan Shimla, Bilaspur and Sirmour districts of Mid Hills Sub Humid Zone, continue sowing of carrot, radish, spinach and turnip.
  - In High Hills Temperate Wet Zone, to control grass hopper (tela) insect in cole crops, spray Melathion @15ml in 15 litre of water. To protect the fruit plants (litchi, Apple etc.) from direct sun shine which may cause canker disease, white wash the stem upto first branch and also on branches of sunny side with the solution of 30 kg white wash + 500 gram copper sulphate +500 ml linseed oil in 200 litre of water.
- **Uttar Pradesh:**
  - In Varanasi district of Central Plain Zone of Uttar Pradesh, continue harvesting of matured rice. Continue sowing of pea, mustard, chickpea and linseed. Continue sowing of wheat, barely and planting of garlic and potato.
  - In Kanpur district of Central Plain Zone, continue harvesting of matured rice. Continue sowing of winter vegetable like spinach, fenugreek, coriander, carrot, radish etc. continue sowing of mustard, gram, pea and planting of potato.
- **Rajasthan:**
  - In Irrigated North Western Plain Zone, continue sowing of wheat and continue sowing of gram and barley.
  - In Arid Western Plain Zone, continue sowing of gram, isabgol and fenugreek.
  - In Flood Prone Eastern Plain Zone, continue sowing of lentil and planting of potato. Continue weeding and thinning in mustard.
  - In Southern Sub Humid Plain Zone, farmers are advised to go for ploughing and apply pre-sowing irrigation in vacant fields. Irrigation may be applied in sugarcane and vegetable crops as per need. Farmers are also advised to go for sowing of Rabi maize.
  - In Sub Humid Southern Plain and Aravali Hill Zone, in Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts, complete sowing of Barley. Continue land preparation for sowing of wheat and sowing of pea. Continue seed bed preparation for raising nursery of onion, chilli, brinjal, cauliflower, cabbage and tomato for *rabi* season.
  - In Arid Western Plain Zone, early sown mustard may be infested by saw fly or painted bug. Apply methyl Parathion 2% or Malathion 5% dust @ 24 kg/ha during morning or evening time and repeat after 15 days if required.
- **Animal Husbandry:**
  - In Jammu & Kashmir, Nomads/Bakarwals are advised to deworm their flocks using Panacur @ 7.5 mg/kg body weight to avoid the economic losses.Vaccination should be done against foot & mouth disease, Haemorrhagic Septicemia etc. to avoid economic losses to livestock keepers. Vaccination of chicks against Fowl pox disease should be done at 6 weeks of age. Ventilation and hygiene should be maintained in the poultry house.

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