



# *National Agromet Advisory Service Bulletin*



*Friday 9<sup>th</sup> November 2018*  
*(For the period 9<sup>th</sup> to 14<sup>th</sup> November 2018)*



*Issued by*  
*India Meteorological Department*

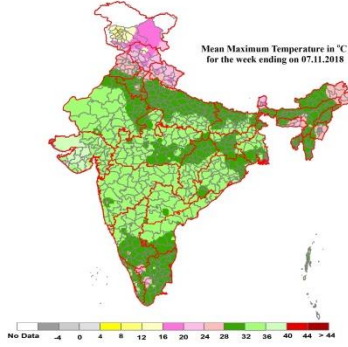
**Weblink For**

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

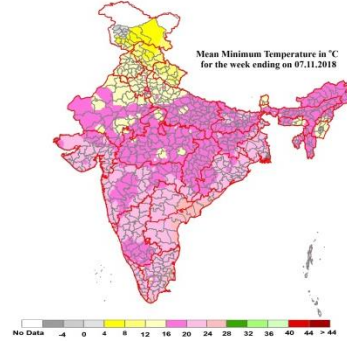
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

**Spatial distribution of weather parameters for the week ending on 07.11.2018**

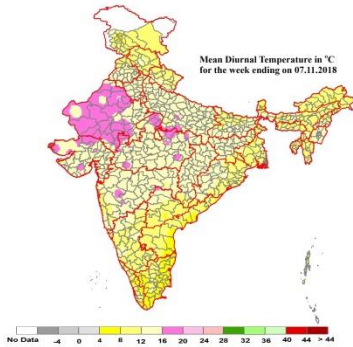
**Mean Maximum Temperature (°C) for the week ending on 07.11.2018**



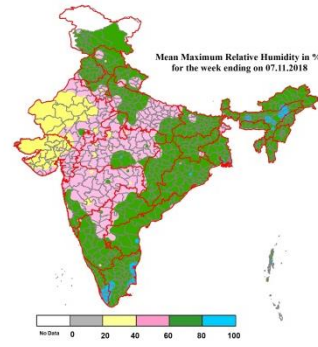
**Mean Minimum Temperature (°C) for the week ending on 07.11.2018**



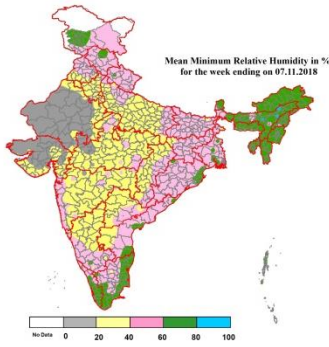
**Mean Diurnal Temperature Variation (°C) for the week ending on 07.11.2018**



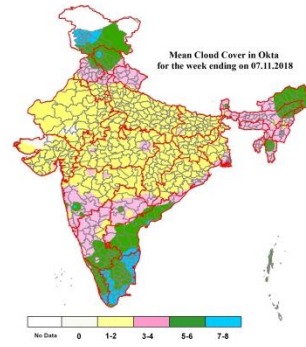
**Mean Maximum Relative Humidity (%) for the week ending on 07.11.2018**



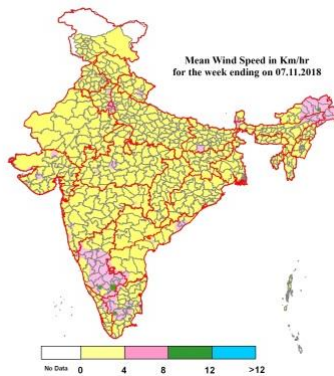
**Mean Minimum Relative Humidity (%) for the week ending on 07.11.2018**



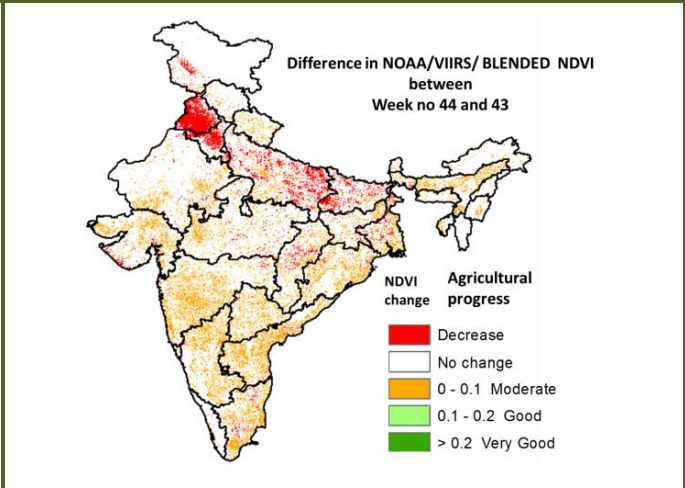
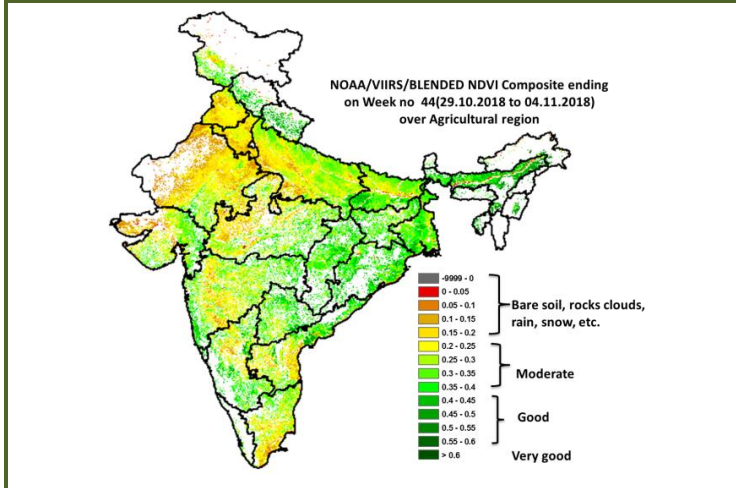
**Mean Cloud Cover (okta) for the week ending on 07.11.2018**



**Mean Wind Speed (km/hr) for the week ending on 07.11.2018**



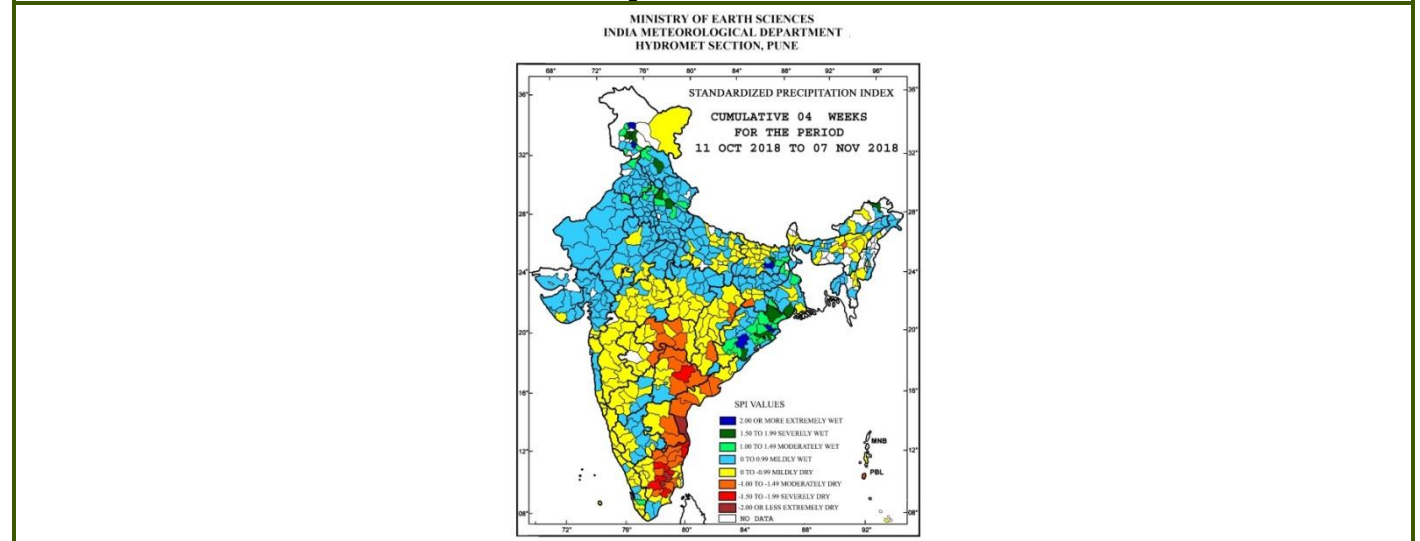
<b>NOAA/VIIRS BLENDED NDVI composite for the week number 44 ( 29.10.2018 to 04.11.2018) over Agricultural regions of India</b>	<b>Difference in NOAA/VIIRS BLENDED NDVI between week number 44 and 43</b>
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- Agriculture vigour is good over few pockets of NE states & West Bengal and isolated over Bihar, Chhattisgarh, Uttarakhand, Himachal Pradesh & North Coastal Andhra Pradesh. It was moderate over rest of the country.

- Moderate difference in agricultural vigour was noticed at many places over Andhra Pradesh, North Eastern States, Odisha, Gujarat, Madhya Maharashtra, Konkan & Goa; at a few places over Kerala and Telangana and isolated over rest of the country.

**Standardised Precipitation Index**  
**Cumulative 4 weeks for the period 11<sup>th</sup> October to 7<sup>th</sup> November 2018**



- Extremely/severely wet conditions experienced in few districts of Jammu & Kashmir; Upper Siang district of Arunachal Pradesh; East Midnapore district of West Bengal; Cuttack, Gajapati, Jajpur, Mayurbhanj, Kandhamal districts of Odisha; Khagaria, Lakhisarai, Monghyr districts of Bihar; Bijnor, Saharanpur districts of Uttar Pradesh; Kullu district of Himachal Pradesh.
- Extremely/Severely dry conditions experienced in few districts of Tamil Nadu & Puducherry; Nellore district of Andhra Pradesh; Warangal district of Telangana.
- Moderately dry conditions experienced in few districts of Andhra Pradesh; Telangana; Tamil Nadu & Puducherry; Morigaon district of Assam; Simdega district of Jharkhand; Nanded, Amraoti, Chandrapur, Nagpur, Yeotmal districts of Maharashtra; Bastar, Raigarh districts of Chhattisgarh.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

## Weather Forecast for next 5 days valid upto 0830 hours of 14<sup>th</sup> November 2018

- Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table below.
- Shallow to moderate fog in the morning hours likely at isolated places over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during next 5 days.
- The ongoing below normal night temperatures are likely to continue over parts of central India during next 3 days.
- Minimum temperatures are very likely to rise gradually by 2-3°C over northwest India during next 2 days.
- No significant change in minimum temperature likely over the rest of the country during next 2-3 days.

### 5 Day Rainfall Forecast (Mid-day) 9<sup>th</sup> November 2018

Met-Sub-Division	09-Nov Today	10Nov Sat	11Nov Sun	12Nov Mon	13Nov Tue
1. Andaman & Nicobar Islands	WS	WS	FWS	FWS	SCT
2. Arunachal Pradesh	ISOL	ISOL	ISOL	DRY	DRY
3. Assam & Meghalaya	DRY	DRY	DRY	DRY	DRY
4. N. M. M. & T.	DRY	DRY	DRY	DRY	ISOL
5. S.H. West Bengal & Sikkim	ISOL	ISOL	ISOL	DRY	DRY
6. Gangetic West Bengal	DRY	DRY	DRY	DRY	DRY
7. Odisha	ISOL	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. Uttarakhand	DRY	DRY	ISOL	ISOL	ISOL
13. Haryana, Chd & Delhi	DRY	DRY	DRY	DRY	ISOL
14. Punjab	DRY	DRY	DRY	ISOL	ISOL
15. Himachal Pradesh	DRY	DRY	ISOL	SCT	FWS
16. Jammu & Kashmir	ISOL	ISOL	SCT	FWS	FWS
17. West Rajasthan	DRY	DRY	DRY	DRY	DRY
18. East Rajasthan	DRY	DRY	DRY	DRY	DRY
19. West Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
20. East Madhya Pradesh	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	DRY
24. Madhya Maharashtra	DRY	DRY	DRY	DRY	DRY
25. Marathwada	DRY	DRY	DRY	DRY	DRY
26. Vidharbha	DRY	DRY	DRY	DRY	DRY
27. Chhattisgarh	DRY	DRY	DRY	DRY	DRY
28. Coastal Andhra Pradesh	DRY	DRY	DRY	DRY	SCT
29. Telangana	DRY	DRY	DRY	DRY	ISOL
30. Rayalaseema	DRY	DRY	DRY	DRY	ISOL
31. Tamilnadu & Puducherry	SCT	ISOL	ISOL	ISOL	SCT
32. Coastal Karnataka	DRY	DRY	ISOL	ISOL	ISOL
33. North Interior Karnataka	DRY	DRY	DRY	DRY	DRY
34. South Interior Karnataka	DRY	DRY	DRY	DRY	ISOL
35. Kerala	SCT	ISOL	ISOL	ISOL	ISOL
36. Lakshadweep	SCT	ISOL	ISOL	ISOL	ISOL

#### % Station Reporting Rainfall

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

### Weather Warning during next 5 days

- **09 November (Day 1):** Heavy to very heavy rain very likely at isolated places over Andaman & Nicobar Islands and heavy rain very likely at isolated places over south Tamilnadu. Squally wind speed reaching 30-40 kmph gusting to 50 kmph very likely over and around Andaman & Nicobar Islands and over Andaman Sea. Sea condition is very likely to be rough to very rough over the same area. Fishermen are advised not to venture into the sea.
- **10 November (Day 2):** Heavy to very heavy rain likely at isolated places over Andaman & Nicobar Islands. Squally wind speed reaching 40-50 kmph gusting to 60 kmph very likely over and around Andaman & Nicobar Islands, over Andaman Sea and Southeast & adjoining Eastcentral Bay of Bengal. Sea condition is likely to be rough to very rough over the same area. Fishermen are advised not to venture into these areas.
- **11 November (Day 3):** Heavy rain likely at isolated places over Andaman Islands. Squally wind speed reaching 50-60 kmph gusting to 70 kmph very likely over north Andaman Sea, Andaman Islands, and Southeast & adjoining Eastcentral Bay of Bengal. Sea condition is likely to be rough to very rough over the same area. Fishermen are advised not to venture into these areas.
- **12 November (Day 4):** Gale wind speed reaching 60-70 kmph gusting to 80 kmph very likely over eastcentral Bay of Bengal and adjoining south & westcentral Bay of Bengal. Sea condition is likely to be very rough to high over the same area. Fishermen are advised not to venture into these areas.
- **13 November (Day 5):** Heavy rain/snow likely at isolated places over Jammu and Kashmir. Gale wind speed reaching 65-75 kmph gusting to 85 kmph very likely over central and adjoining south Bay of Bengal. Sea condition is likely to be very rough to high over the same area. Fishermen are advised not to venture into these areas.

### Weather Outlook for subsequent 2 days from 14<sup>th</sup> to 16<sup>th</sup> November 2018

- Very rough to high Seas are likely to prevail over southwest Bay of Bengal off Tamil Nadu coast. North Tamil Nadu and south coastal Andhra Pradesh are likely to receive heavy to very heavy rainfall.
- Fairly widespread rain/snowfall likely over Western Himalayan region.
- Scattered to Fairly widespread rainfall activity likely over Andaman & Nicobar Islands and isolated over remaining parts of south peninsular India.
- Dry weather likely over the rest of the country.

### Salient Advisories

- Squally wind speed reaching 30-40 kmph gusting to 50 kmph very likely over and around **Andaman & Nicobar Islands** and over **Andaman Sea** on 9<sup>th</sup>, squally wind speed reaching 40-50 kmph gusting to 60 kmph very likely over and around Andaman & Nicobar Islands, over Andaman Sea and Southeast & adjoining Eastcentral Bay of Bengal on 10<sup>th</sup> and 50-60 kmph gusting to 70 kmph on 11<sup>th</sup>. Gale wind speed reaching 60-70 kmph gusting to 80 kmph very likely over eastcentral Bay of Bengal and adjoining south & westcentral Bay of Bengal on 12<sup>th</sup> and gale wind speed reaching 65-75 kmph gusting to 85 kmph on 13<sup>th</sup> November. Sea condition is very likely to be rough to very rough over the same area. Fishermen are advised not to venture into the sea.
- As rain/thundershowers likely at most/many places over **Andaman & Nicobar Islands** from 9<sup>th</sup> to 12<sup>th</sup>, along with heavy to very heavy rain/heavy rain very likely at isolated places over Andaman & Nicobar Islands from 9<sup>th</sup> to 11<sup>th</sup> November, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested produce at safe places.
- In the **Andaman & Nicobar** Islands, keep open the bunds in rice fields to drain out excess rain water. Keep all the harvested produce in safe places as moderate to heavy rainfall is expected during next three days. Provide adequate drainage in vegetable fields as well as in nursery to avoid water logging.
- As rain/snow likely at many places over **Jammu & Kashmir** on 12<sup>th</sup> and 13<sup>th</sup>, over **Himachal Pradesh** on 13<sup>th</sup>, along with heavy rain/snow likely at isolated places over Jammu and Kashmir on 13<sup>th</sup> November, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested produce at safe places.
- In Valley Temperate Zone of **Jammu & Kashmir**, farmers are advised to arrange drainage in the fields wherever there is possibility of water accumulation, also withhold all the field operations till the soil dries and

the field becomes workable.

In view of untimely snowfall in the valley, orchard growers in the valley are advised to undertake the following measures:

- Drain out excess water from the orchards by making drainage channels.
- If the fruit trees have tilted, reduce the canopy load by pruning and provide proper support to the plants.
- If the trees are partially uprooted, slowly pull back the trees to the original position after heavy pruning and provide proper support/staking to the main trunk to prevent further fall/movement.

### *Detailed Agromet Advisories*

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

- **Realised Rainfall:** Rainfall occurred in Kannur, Ernakulam, Kollam, Kottayam, Kozhikode, Mallapuram, Pathanamthitta and Thiruvananthapuram districts of Kerala, all districts of Tamil Nadu except Dharmapuri, Dindigul, Krishnagiri, Namakkal, Salem, Theni, Trichy and Vellore during the week. Weather remained mainly dry/dry over the rest of the region.
- **Advisories:**
  - **Kerala:**
    - In Northern zone, continue nursery sowing for *Mundakan* rice. The weather is suitable for planting of coconut seedlings. Mild ploughing in coconut garden will help to remove weeds and promote decay of organic matter. Fertilizer application may be done for May planted seedlings.
    - In Central zone, continue land preparation for transplanting of *Mundakan* rice.
    - In High Altitude Zone, it is an ideal time for planting polybag seedling of coffee. Also to control coffee berry borer at berry development stage of coffee, apply Carbaryl 50WP @ 4 kg in 200 litres of water after current spells of rain. Manuring of pepper vines may be done in basins taken around the plant, 10-15 cm deep and 30-40 cm radius, depending upon the growth of the plants.
    - In Central Zone, this is the best time to sow 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.
  - **Andhra Pradesh:**
    - In Rayalaseema, before transplanting of rice, apply carbofuran 3g granules @ 160 g per cent in the nursery one week prior to pulling the seedlings. Continue land preparation and sowing of chickpea.
    - In South Coastal Andhra Pradesh, in the present weather condition, hoppers may attack the rice crop. Spray Boprophezis @ 1.6 ml or Acepate 1.5 g or Phimetrogen 0.6 g per liter of water
    - In North Coastal Andhra Pradesh, due to prevailing weather condition pod borer may occur on Redgram which is at flowering to pod development stage. Spray Chloripyriphos @ 2.0 ml per litre of water or Acephate @ 1.0 g per litre of water.
  - **Telangana:**
    - Continue sowing of rabi Maize, Groundnut, Bengal gram, coriander, mustard & safflower in Northern Telangana zone.
    - The prevailing weather conditions are congenial for incidence of sucking pests in vegetables in South Telangana zone. To control, spray Fipronil @ 2ml or Thiomethoxim @ 0.3g per litre of water.
  - **Tamil Nadu:**
    - Heavy rain very likely at isolated places over south Tamilnadu on 9<sup>th</sup> November, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
    - Continue sowing of sunflower with a spacing of 45 x 15 cm for varieties and 60 x 30 cm for hybrids in the ridges and furrows. Adopt the seed rate of 7 kg for varieties and 5 kg for hybrids per hectare.
    - Prevailing weather is conducive for the spreading of yellow mosaic virus in pulses. Spray Dimethoate 30 EC 500 ml/ha or Thiamethoxam 75 WS 1 g/litre to control after current spells of rain.
    - Due to the prevailing weather condition, the incidence of Fall Army worm seen in Maize fields in Southern Zone. To control spray any one of the following insecticides 5ml Chlorantraniliprole 18.5 SC (Corogen) or 10 gm Emamectin benzoate 5 SG (Promactin) with 10 liter of water, stir well and spray the solution on the top of the shoot after current spells of rain.
    - In Western zone, to control Reddening disease in Winter Combodia cotton, spray mix solution of 5% Magnesium sulphate along with 1% urea and 0.1 % Zinc Sulphate after current spells of rain.
  - **Karnataka:**

- In South Interior Karnataka, continue harvesting of matured maize cobs, groundnut crops and arecanut. Continue sowing of sunflower, chickpea, safflower, field bean, cowpea, ragi, maize, Bengal gram, finger millet, horse gram and sorghum crops. Take up repeated intercultural operations in already sown crops to conserve soil moisture and to control weeds.
- In North Interior Karnataka, continue picking of cotton. Complete harvesting / threshing / sun drying of maize and late sown groundnut crops. Complete sowing of sorghum, Bengal gram, sunflower, chickpea, safflower and irrigated wheat. Carry out weeding in 20-25 days old sorghum, chickpea and safflower crops.
- In Coastal Karnataka, continue harvesting of fully matured rice crop and sundry the produce. Continue picking of cotton.
- In South Interior Karnataka, if pod borer is noticed in red gram, 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 for control. To manage leaf folder disease in rice, spray Quinolphose 2 ml/ litre of water or 0.5 ml Indoxycarb / liter of water.
- In Coastal Karnataka, deficiency of Potassium is noticed in rice crop in North Canara district; spray 1% Potassium (10 g Potassium Nitrate in 1 liter of water) in clear weather to overcome it.
- **Animal Husbandry**
- In Karnataka, essential salts must be mixed with sufficient quantity of dry fodder and given to the animals. Deworming must be done compulsorily in animals.

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

- **Realised Rainfall:** Rainfall occurred in East Siang, Lohit, Lower Dibang Valley, Papumpare, Upper Siang and West Siang districts of Arunachal Pradesh, Darrang, Dibrugarh, Kamrup Rural, Lakhimpur and Sibsagar districts of Assam, North Tripura district of Tripura during the week. Weather remained mainly dry over rest of the region.
- **Advisories:**
  - **Arunachal Pradesh:**
    - Continue harvesting of matured black gram and kharif rice. Continue sowing of pea/gram in rice fallow and transplanting of rabi vegetables.
  - **Assam:**
    - Continue planting of potato. Select sandy loam soil rich in organic matter for cultivation of potato. Transplant seedlings of cauliflower, knolkhol, tomato, brinjal and radish in the main field at 30-35 DAS. Continue sowing of rapeseed and mustard, lentil. Continue land preparation and sowing of wheat in Central Brahmaputra Valley Zone of Assam.
    - If there is attack of hispa in *Sali* rice, spray Chloropyrifos 20 EC and for leaf folder attack, spray Quinalphos 25 EC @ 2.5-3 ml per litre of water. For pod borer attack in red gram and green gram, spray Quinalphos @ 2.5 ml/litre of water followed by Dimethoate @ 2ml/litre of water at 10 days interval.
    - Due to favourable weather incidence and spread of Gundhi bug is observed in Sali rice at milking stage. Since clear with rain free weather is predicted in the coming 5 days, spray Malathion 5% dust @ 3kg per bigha to control the pest. In present weather condition in maize crop, apply Carbofuran 3% G or Phorate 10 % G @ 8 kg/acre against stem borer if insect population is above ETL.
  - **Meghalaya:**
    - Continue transplanting of cole crops, root crops and cucurbits. Carry out harvesting of French bean and cow pea. Harvest brinjal and chilli regularly. Maintain 5 cm of standing water in rice fields. Keep the field free of weeds. Carry out weeding in ginger and turmeric fields.
    - Spray Hexaconazole @ 1ml/litre of water at 15 days interval for control of sheath blight and sheath rot in Sali paddy.
  - **Manipur:**
    - Continue harvesting of rice. Drain out water from the crop field 10-15 days before expected date of harvesting. Take up sowing of mustard and rapeseed just after harvesting of rice, soybean, groundnut, black gram, rice bean etc. Prepare land for planting of potato.
  - **Mizoram:**
    - Continue harvesting of Upland rice, sowing of radish and leafy mustard and nursery preparation of tomato, crucifer, onion, brinjal and chilli.
    - Due to high humidity the problem of citrus canker get aggravated in acid lime leading to excessive fruit drop. Spray copper oxychloride 180 gms with Spreptocycline 6 gms in 60 liters of water to control canker.
  - **Tripura:**
    - Continue harvesting of maize. Continue transplanting of cabbage, cauliflower, radish and brinjal. Keep cucurbit field weed free.
    - For blast disease in Aman rice at panicle emergence stage, apply combination of Carbendazim and Mancozeb @ 1.5 gm per litter of water as prophylactic measure. In case of severe attack apply Tricyclazole 0.8 gm or Propiconazole 1 ml per litter of water. Repeat the application at 10 to 12 days interval if needed.
  - **Nagaland:**

- Complete sowing of rabi maize and mustard. Undertake transplanting of vegetable crops like cabbage, tomato, radish and broccoli.
- For management of blast disease in TRC/WRC rice, destroy the infested residue, stubbles, grass and weeds present in the bunds of the field as they act as a source for the infection.
- **Animal Husbandry**
- In Assam, the weather condition is favourable for infestation of round worm, flukes and tapeworms in cattle. De-worming may be done under recommendation and supervision of authorized practitioner.
- In North Eastern States, go for normal vaccination schedule against Ranikhet and Gumboro diseases in Broiler. Vaccinate pigs against FMD & swine fever and cattle/sheep/goat against FMD, Hemorrhagic Septicaemia, Black Quarter, etc.
- **Fishery**
- In Assam, maintain water level at a depth of 1m to 1.5m. Ensure good quality water in fish culture ponds by liming. Encircle fish culture ponds using happa net avoid escape of grown-out fishes.

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

- **Realised Rainfall:** Rainfall occurred in Nicobar district of Andaman & Nicobar Islands during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
  - **Odisha:**
    - Since the weather is expected to remain dry, harvest rice when 80-85% of the grains have matured and plants looks pale yellow in color. After harvesting, rice should be dried in the field for 2-3 days, threshed and stored at a moisture level of 12%. Take up sowing of rabi groundnut, sunflower, mustard and toria after necessary seed treatment. Take up sowing of onion in nursery bed @ 4 kg seeds/acre after treatment with Captan @ 2g/kg seeds. Continue sowing of tomato, cauliflower, cabbage, knolkhol, broccoli, radish, etc. Use low cost polythene cover above the vegetables nursery to avoid poor germination due to low temperature. Continue land preparation for wheat varieties like Kalyansona, Sonalika and UP 262 with seed rate @ 40kg/acre. Present weather conditions are favourable for proper germination of linseed, gram and pea. Take up sowing as Paira or sole depending upon moisture status of the soil. Treat seeds with fungicide followed by Rhizobium culture @ 20g/kg seed to enhance nodulation. Undertake sowing of sesamum varieties like Kalika, Kanak, Uma, Binayak and GT-2 @ seed rate 3kg/acre.
    - The present weather condition favours the attack of sucking pests like aphid and white fly in vegetable crops. To control, spray Imidacloprid @ 5ml/10 litres of water. To control sucking pest like blister beetle in Okra, spray Indoxacarb @ 1ml/litre of water and Diafenthiuron @ 1ml/2litres of water alternately in 7-10 days interval. Current weather may favour blast disease in Ragi. To control, spray Carbendazim 50% WP @ 1.5 g/litre of water.
  - **Bihar:**
    - Continue land preparation for timely sowing of rabi crops such as lentil, pea, rai, toria, garlic, coriander, sunflower, rajma and methi. Continue nursery sowing of rabi onion. Continue land preparation and sowing of Rabi maize, kidney beans and planting potato. Continue land preparation/sowing of wheat (varieties PBW-343, PBW-443, K-9107, HD-2733, HD-2824, HUW-206, HUW-468, K-307, CBW-38, DBW-39) and gram (varieties Pusa-256, KPG-59 (Udai), and Pusa-372). In the areas where paddy crop is about to mature, irrigation should be stopped two weeks before harvesting. After harvesting, crop should be dried in the field for 2-3 days and thereafter threshing should be done. Grains should be properly dried to right moisture level before storing.
    - Monitor cutworm in 15-20 days old maize, pea, lentil and kidney beans crop. For management, flood the field to bring the caterpillars out of cracks so that they are picked up by birds. In case of severe damage, spray Chlorpyrifos 20 EC @ 2.5 ml per liter of water. For sucking insect/pests such as white fly, leaf hopper and aphid in vegetables crop, spray Imidacloprid 17.8 % SL @ 0.3ml/liter of water.
  - **Jharkhand:**
    - After the harvest of rice crop, take up sowing of wheat with varieties like Birsa Genhu 3, K 8027, H D R 77 etc. Treat the seeds first with fungicide followed by insecticide keeping 5-6 hours of gap between the treatments. Continue sowing of rabi crops like barley, gram, pea, lentil, mustard/Toria/rai, linseed and potato after necessary seed treatment. Raise cauliflower, cabbage, chilli, tomato, etc. in nursery bed and transplant mature seedlings in the main field. Sow other vegetables like radish, palak, carrot, French bean, etc. in the field. Immediately sow seeds of recommended varieties of potato like Kufri Ashoka, Kufri Pukhraj, Kufri Lalima, Kufri Pushkar and Kufri Kanchan. Continue sowing of tuber crops like- Sweet potato (Pusasafed, S 30, Kalmegh, Rajendra 5); Jameenkand; Semalkand and misrikand (local, Rajendra 1). Go for the cultivation of short duration vegetables like- Bodi, Frenchbean and leafy vegetables and low water requirement vegetables like- tomato, brinjal, capsicum, rainy season cauliflower, potato and onion by adopting water



conservation techniques like- mulching and drip method.

- For leaf blight in pulse crop, spray Indofil M 45 @ 2 g per litre of water. For leaf eating insects in vegetable crops, spray Imidachlorpid @ 1g or Kung fu @ 2 ml per liter of water. For control of mites, jassids and hoppers in Okra, Chilli and cucurbitaceous crops, apply neem oil having concentration of 1500 ppm @ 3 ml per litre of water or chemicals like Omites or Rogar @ 2ml per litre of water.

- **West Bengal:**

- In Sub-Himalayan West Bengal, continue harvesting of soybean. Continue field preparation for planting of potato, garden pea and cole crops. Continue sowing of lentils after harvesting of Aman rice. Continue sowing of winter vegetable seeds in the nursery bed. Before sowing treat the seed bed with fungicide Copper-oxchloride @ 4g/litre of water.
- In Gangetic West Bengal, continue harvesting of mature rice crop. After harvesting, dry the crop in the field for 2-3 days and thereafter threshing should be done. After the harvest of rice crop, field should be ploughed with one deep ploughing followed by 2-3 general ploughings and planking to get the well pulverized seedbed for sowing of wheat or potato crops. Complete the sowing of mustard, gram and pea at the earliest. Continue transplanting of seedlings of cauliflower, cabbage, broccoli and tomato on raised beds. Continue planting of potato and sowing of rabi onion, coriander, fenugreek, turnip, spinach and radish. Provide staking to tomato plants to prevent lodging.
- In Sub-Himalayan West Bengal, for control of mealy bug attack in Aman paddy, spray Chlorpyriphos @ 2 ml/litre of water. For collection and destruction of fruit fly in cucurbit crops, place pheromone traps @ 2 per bigha. To control downey mildew of cucurbits, spray Metaloxy + Mancozeb @ 2.5 g/litre of water. For Aphid, hoppers, white fly and thrips in chilli crop, apply Imidaclorpid 17.8 SL @ 1ml/5 litres or Thiomithoxam 0.3 SG @ 1g/3 litres of water.
- In Gangetic West Bengal, spray Bavistin @ 1.5-2 g/litre of water at clear weather condition for yellowing of leaves in tomato and brinjal crops.

- **Andaman & Nicobar Islands:**

- As rain/thundershowers likely at most/many places over Andaman & Nicobar Islands from 9<sup>th</sup> to 12<sup>th</sup>, along with heavy to very heavy rain/heavy rain very likely at isolated places over Andaman & Nicobar Islands from 9<sup>th</sup> to 11<sup>th</sup> November, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested produce at safe places.
- Squally wind speed reaching 30-40 kmph gusting to 50 kmph very likely over and around Andaman & Nicobar Islands and over Andaman Sea on 9<sup>th</sup>, squally wind speed reaching 40-50 kmph gusting to 60 kmph very likely over and around Andaman & Nicobar Islands, over Andaman Sea and Southeast & adjoining Eastcentral Bay of Bengal on 10<sup>th</sup> and 50-60 kmph gusting to 70 kmph on 11<sup>th</sup>. Gale wind speed reaching 60-70 kmph gusting to 80 kmph very likely over eastcentral Bay of Bengal and adjoining south & westcentral Bay of Bengal on 12<sup>th</sup> and gale wind speed reaching 65-75 kmph gusting to 85 kmph on 13<sup>th</sup> November. Sea condition is very likely to be rough to very rough over the same area. Fishermen are advised not to venture into the sea.
- In the Andaman Islands, keep open the bunds in rice main field to drain out excess rainwater. Take all the harvested rice to nearby shed as moderate to heavy rainfall is expected during next five days. Provide drainage channel in vegetable field as well as nursery to drain out rain water.
- In the Nicobar Islands, avoid intercultural operation in the garden as moderate to heavy rainfall is expected.

- **Animal Husbandry**

- In Odisha, provide clean drinking water to cattle and keep the sheds clean. Don't allow urine or excreta to deposit in and around the shed to prevent flies. Provide vaccination at regular interval.
- In Bihar, vaccinate animals against FMD, HS and BQ. Make arrangements for proper sunlight and air in poultry house. Provide clean water to birds.
- In Jharkhand, keep animals in a covered shed/area during night to protect them from a sudden drop in temperature. Keep the animal bedding dry. Vaccinate against FMD, Haemorrhagic Septicaemia (HS), Black Quarter (BQ), Enteroxemia during this month.
- In West Bengal, vaccinate cattle against FMD. Keep the cow shed clean and dry. Vaccinate poultry birds against Ranikhet disease. Goat kids lose body energy very rapidly when exposed to cold or wet environment and may become weak or die. Ensure good management practices and feeding during this season. Mix essential salts with animal feed. Considering the fall in night temperatures, keep the new born chicks under bulb.
- In Andaman & Nicobar Islands, contact your nearby veterinarian if foot and mouth disease is observed. Regularly vaccinate your animal with multivalent vaccine under the supervision of qualified veterinary practitioner.

- **Fisheries**

- In Odisha, according to the acidity, apply lime @ 250-500 Kg/Ha. Agitate water for better growth of fish. Provide false netting for better growth of fish. Pisciculture farm ponds should be regularly cleaned. In winters,

reduce the amount of food for fishes and provide it between 2-3PM.

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

- **Realised Rainfall:** Weather remained mainly dry/dry over the region.
- **Advisories:**
  - **Maharashtra:**
    - In Konkan, continue sowing of kulthi, chavli and wal. Continue harvesting of rice in morning hours and follow immediate threshing of rice; grains may be dried in sun for 3 to 4 days.
    - In Madhya Maharashtra, continue sowing of chickpea with residual soil moisture or with light irrigation if irrigation facility is available. Continue harvesting of matured early varieties of rice. Under residual soil moisture, continue sowing of chickpea. Undertake planting of pre-seasonal sugarcane.
    - In Marathwada, apply protective irrigation in pigeon pea crop. Continue sowing of sunflower after irrigating the field. Continue picking of cotton. Apply protective irrigation to turmeric, vegetables and orchards.
    - In Vidarbha, Undertake sowing of gram, wheat and linseed. Continue harvesting of matured early varieties of rice.
    - In Konkan, there are chances of incidence of mango hopper on new flush of mango, if found spray Deltamethrin 2.8% EC (0.9 ml per 6 liters of water) or Thiomethoxam 25% WDG (0.1 gram per liter of water).
  - **Gujarat:**
    - In Middle Gujarat, continue harvesting of matured groundnut crop. Undertake picking of matured cotton bolls. Apply irrigation in pigeon pea and cluster bean crop as per need.
    - In North Gujarat, continue sowing of gram, mustard, fennel and cabbage crops. Undertake picking of matured cotton bolls. Carry out hand weeding in castor crop.
    - In South Gujarat, continue sowing of sweet corn crop.
    - In Saurashtra & Kutch, complete sowing of rabi mustard, garlic, chickpea crops. Plan for sowing of wheat and coriander crops. Carry out hand weeding in castor crop. Wherever possible, undertake mulching using dry grass, crop residues etc. to conserve soil moisture. Complete harvesting of matured groundnut, sesame, soybean, bajara, green gram and black gram crops.
    - In Saurashtra & Kutch, yellowing of cotton crop observed due to high temperature; irrigate at regular interval as per crops stage need and apply 35 kg/ha Urea and 35 kg/ha Ammonium Sulphate fertilizers.
    - In South Gujarat, for control of stem rot in banana drenching with Carbendazim 0.05% @ 1 gm/liter of water is advised.
- **Animal Husbandry**
  - In Gujarat, for prevention of foot & mouth disease in animals do vaccination with FMD vaccine. Provide 6-8 kg good quality dry roughage with 15-20 kg green fodder to the animals.

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

- **Realised Rainfall:** Weather remained mainly dry/dry over the region.
- **Advisories:**
  - **Madhya Pradesh:**
    - In East Madhya Pradesh, continue sowing of gram, lentil and linseed. Undertake planting of potato. Undertake nursery preparation for early season *rabi* vegetables. Continue sowing of pea and mustard. Continue sowing of carrot, beetroot, radish, spinach, fenugreek etc. Undertake sowing of wheat, early pea and garlic.
    - In West Madhya Pradesh, prepare the fields and undertake sowing of wheat crop with seed rate of 40 kg/acre. Before sowing, seed should be treated with thiram @ 2.0 gm + Carbendazim @ 1 gm/kg seed, then treat with azetobacter and PSB culture @ 5-5 gm/kg each. Continue sowing of gram. Undertake sowing of mustard and rapeseed. Undertake harvesting of green chilli, okra and cucurbit crops. Undertake sowing of garlic.
    - In Satpura Plateau Zone, in brinjal, tomato and bhindi crops attack of fruit borer has been observed, to control use Pheromone Trap @ 20 Nos/ha.
  - **Chhattisgarh:**
    - Farmers are advised to harvest the matured rice crop and keep it in the field for proper sun drying only for 1-2 days. For rabi crops, start field operations in fallow fields. The present time is appropriate for taking of utera (relay) crop. The farmers who are interested in relay crop can take the crop of lathyrus or linseed in their fields. Preparation for nursery sowing of tomato, brinjal, chillies and capsicum can be done and seed treatment by Thiram should be done @ 2 g/kg seed.
    - In Bastar Plateau Zone, continue harvesting of matured rice. Continue nursery preparation for *rabi* vegetables. Undertake sowing of linseed, safflower and Lathyrus crops.
    - In Chhattisgarh Plain Zone, use Pheromone Traps @ 20 Nos/ha. to control attack of fruit borer in brinjal, tomato and bhindi crops.

- **Animal Husbandry**
  - In Madhya Pradesh, provide clean and fresh water two times a day. Provide 35-40 gm mineral mixture per animal as supplement & green fodder 25 kg/cattle/day.
  - In Chhattisgarh, looking into the decrease in temperature and its possible adverse effects, dairy farmers are advised to keep the animals in the cattleshed with concrete/brick roof.

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

- **Realised Rainfall:** Rainfall occurred in Chamba, Kinnaur, Kullu, Lahaul & Spiti and Shimla districts of Himachal Pradesh, all districts of Jammu & Kashmir except Kathua and Ladakh(Leh), Chamoli and Uttarkashi districts of Uttarakhand during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
  - As rain/snow likely at many places over Jammu & Kashmir on 12<sup>th</sup> and 13<sup>th</sup>, over Himachal Pradesh on 13<sup>th</sup>, along with heavy rain/snow likely at isolated places over Jammu and Kashmir on 13<sup>th</sup> November, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
  - **Jammu & Kashmir:**
    - In Valley Temperate Zone, farmers are advised to provide drainage channels in the fields wherever there is possibility of water accumulation, also withhold all the field operations till the soil dries and the field becomes workable.
    - In view of untimely snowfall in the valley, orchard growers in the valley are advised to undertake the following measures:
      - Drain out excess water from the orchards by making drainage channels.
      - If the fruit trees have tilted, reduce the canopy load by pruning and provide proper support to the plants.
      - If the trees are partially uprooted, slowly pull back the trees to the original position after heavy pruning and provide proper support/staking to the main trunk to prevent further fall/movement.
      - Fruits still on the trees are may be harvested immediately for sale/storage. Clear the snow fallen on heaped harvested fruit in orchards and store the fruits under proper cover (in sheds) to prevent it from frost injury. Fallen leaves and rotten fruits of apple and apricot should be buried under the soil.
  - **Uttarakhand:**
    - Continue harvesting and threshing of mature rice crop in sub humid sub tropic zone. Keep the harvested crops in the field in safe place for proper sun drying for one to two days.
    - Continue early sowing of sugarcane crop. Harvest mature crop and send it to the sugar mills/ crushers.
    - Undertake nursery preparation for sowing of tomato, brinjal, chillies and capsicum.
    - Transplant the nursery of early varieties of winter vegetables like cauliflower, cabbage and knol-khol.
  - **Himachal Pradesh:**
    - Undertake sowing of mustard. Complete sowing of gram and lentil in lower areas of Sub-Montane & Low Hills Sub-Tropical Zone. Undertake early sowing of wheat in lower regions if soil moisture is adequate. For getting optimum yield, a seed rate of 100 kg/ha is recommended. Before sowing, seeds should be treated with Bavistin or Thiram @ 2-2.5 g per kilogram of seed. Undertake sowing of lentil.
    - Carry out weeding and hoeing in tomato, chilli, capsicum and brinjal for optimum growth.
    - To protect these crops from white flies and other sucking pests, spray Imidacloprid 17.8 % SC@ 1.0 ml / 3 litres of water.
    - To protect brinjal and tomato crops from shoot and fruit borer, infested fruits and shoots should be collected and buried inside the soil. Also install pheromone trap @25 per hectare. If the pest population is above threshold, spray spinosad 48 EC @ 1 ml /4 litres of water.
  - **Punjab, Haryana & Delhi:**
    - In Punjab, continue land preparation and sowing of mustard, raya and wheat. Continue harvesting of matured maize, green gram. Continue planting of early varieties of potato and pea. Complete sowing of spinach, radish, turnip and carrot. Continue planting of early varieties of sugarcane. Continue planting of seedlings of onion. Continue nursery sowing of tomato. Continue picking of matured cotton bolls. Undertake harvesting of matured rice.
    - In Haryana, continue intercultural operations in vegetables. Continue field preparation for sowing of mustard. Continue harvesting of timely sown bajra, guar, green gram, black gram and picking up of matured cotton bolls.
    - In Delhi, continue harvesting of matured rice. Continue planting of winter sugarcane at optimum soil moisture for better seed germination. Continue sowing of gram and sowing of garlic on raised bed. Continue sowing early mustard, pea and planting of early potato. Continue transplanting of onion. Continue sowing of sarsonsaag, radish, spinach, coriander. Continue transplanting of cauliflower, cabbage, broccoli and tomato.

Continue sowing of carrot on raised bed. Continue field preparation for sowing of wheat.

- In Undulating Plain Zone, due to hot & humid weather may increase infestation of hairy caterpillar in moong & mash. Spray Ekalux 25 EC (Quinalphos) @ 500 mL/acre in 80-100 L of water. Dry weather may increase whitefly population in pulses, spray 600 mL of Trizophos 40 EC or 250 mL of Rogor 30 EC. Weather conditions will be congenial for Plant hoppers and grasshopper which can be controlled by spraying the crop with 40 ml Confidor or Crocodile 17.8 SL or 800 ml of Ekalux/ Quinguard/ Quinalmass 25 EC or one litre Coroban/ Dursban 20 EC in 100 litres of water. High humid condition may lead to infection of fruit rot and die back in chilli, spray the crop with 750g of Indofil M-45 or Blitox in 250 litres of water/acre at 10 days interval.
- **Uttar Pradesh:**
  - In East Uttar Pradesh, continue land preparation for sowing of pea, garlic, coriander, spinach, radish, fenugreek, fennel etc. Undertake sowing of mustard if not done and select seed varieties like- Varuna, Rohini, Kanti, Krushna, Vardaan, Vaibhav and Narendra Rai (8501). Use Captan or Thimmer 2.5 gm per Kg of seed before sowing. After 15-20 days of sowing maintain 15cm distance in crops. For sowing of gram use varieties like Radhe, K-850, Pant, Kabuli.
  - In West Uttar Pradesh, undertake sowing of lentil. Seed treatment with Rhizobium and Phosphorus solubilising bacteria is advised. Undertake sowing of pea. Seed should be treated with fungicides, Captan or Thiram @ 2.0 gm/ kg and after that with crop-specific Rhizobium culture. Sowing of potato should be done as soon as possible. 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. Sowing of garlic can be done in raised bed. Application of FYM and phosphorus fertilizer is recommended. Sowing of carrot can be done in raised bed. Application of FYM, potash and phosphorus fertilizer is recommended. Seed treatment with Captan @ 2 gm per kilogram is advised. This is suitable time for sowing of sarson radish, spinach, fenugreek, coriander, turnip. Weather is suitable for sowing of rabi onion. Seed rate- 10 kg/ha. Before sowing seeds should be treated with Captan @ 2.5 g/ kg of seeds.
- **Rajasthan:**
  - Weather conditions are favourable for sowing of lentil, mustard, gram, isabgol and fenugreek. Therefore, arrange seed, fertilizer and chemicals for seed treatment for sowing.
  - In Arid Western Plain Zone, weather conditions are becoming favourable for sowing of mustard and gram. Therefore, arrange seed, fertilizer and chemicals for seed treatment for sowing. Also, harvest mature groundnut and undertake sowing of garlic.
  - In East Rajasthan, undertake field preparation for sowing of barley. Continue sowing of radish and carrot. Continue nursery preparation for rabi vegetables like chilli, brinjal, tomato, cabbage and cauliflower. Continue sowing of early pea, gram and mustard. Continue planting of fruit crops like mango, plum, pomegranate, aonla etc. Continue harvesting of matured maize, black gram, green gram and soybean.
  - This is the right time for sowing of gram and mustard Sub Humid Southern Plain and Aravali Hill Zone, sowing should be completed before 30 October. Also prepare field for sowing of wheat.
  - Present weather conditions are favourable for attack of painted bug and saw fly in already sown mustard crop, farmers are advised to broadcast Quinalphos 1.5 % or Malathion 2% dust @ 20-25 kg per hectare.
- **Animal Husbandary:**
  - In Jammu & Kashmir, animals should never be allowed to graze in early morning hours as the pastures are laced with frost. Animals should be provided with dry bedding to provide insulation from cold floor. Give salt, mineral and vitamin mixture to animals as dried forage is lacking adequate quantity of these. Provide adequate shelter during night to avoid cold stress.

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