



National Agromet Advisory Service Bulletin



Friday 2nd November 2018
(For the period 2nd to 7th November 2018)



Issued by
India Meteorological Department

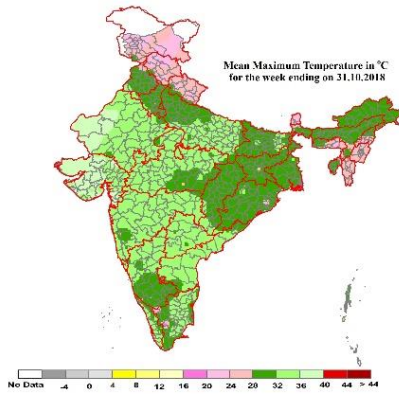
Weblink For

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

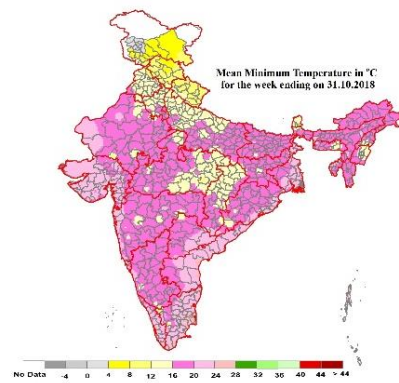
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Spatial distribution of weather parameters for the week ending on 31.10.2018

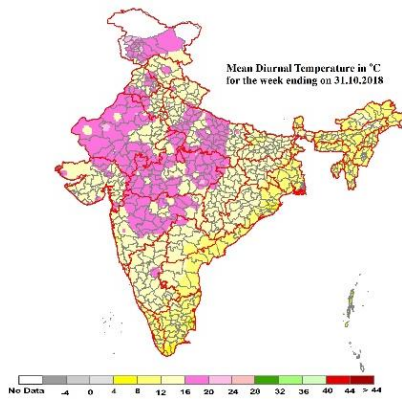
Mean Maximum Temperature (°C) for the week ending on 31.10.2018



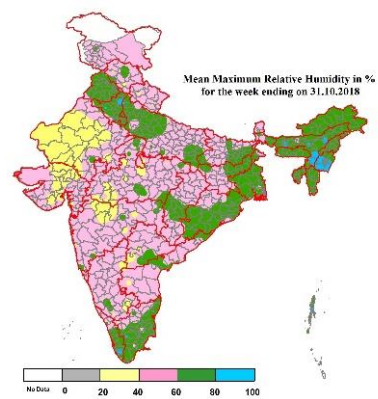
Mean Minimum Temperature (°C) for the week ending on 31.10.2018



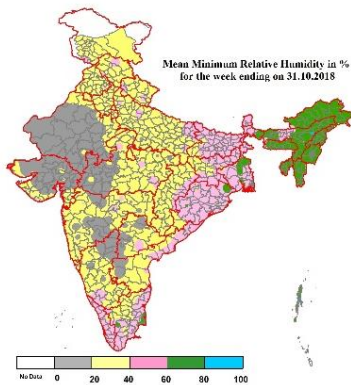
Mean Diurnal Temperature Variation (°C) for the week ending on 31.10.2018



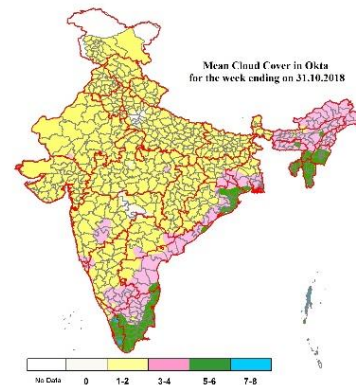
Mean Maximum Relative Humidity (%) for the week ending on 31.10.2018



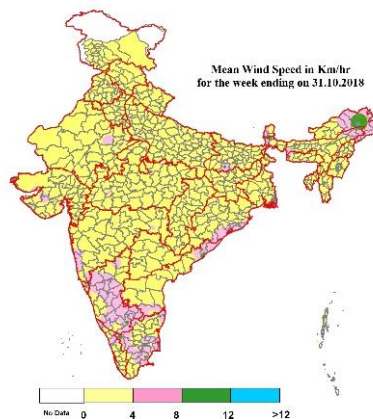
Mean Minimum Relative Humidity (%) for the week ending on 31.10.2018



Mean Cloud Cover (okta) for the week ending on 31.10.2018



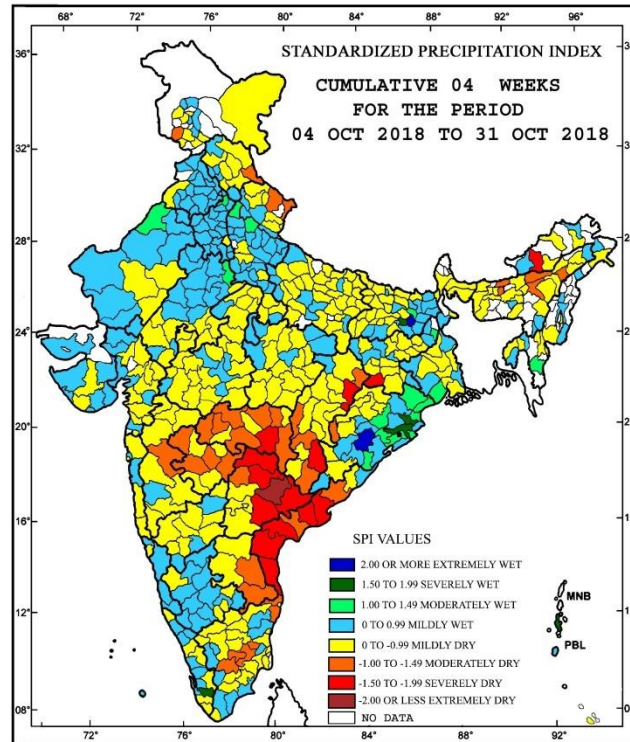
Mean Wind Speed (km/hr) for the week ending on 31.10.2018



Standardised Precipitation Index

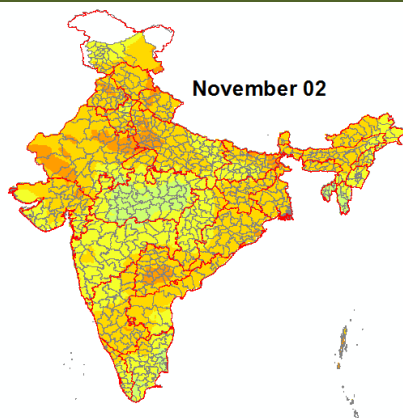
Cumulative 4 weeks for the period 4th October to 31st October 2018

MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE

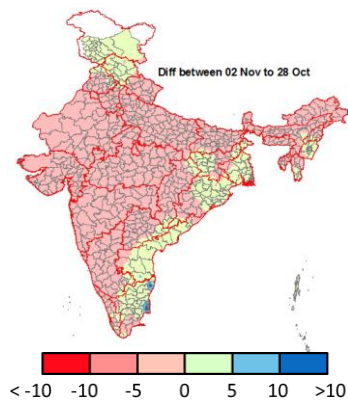
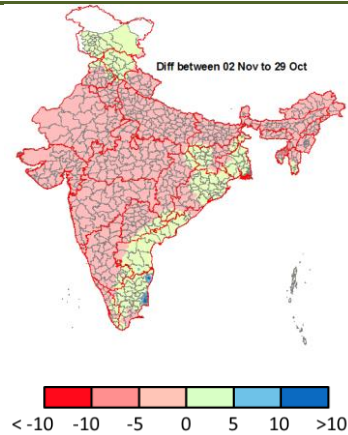
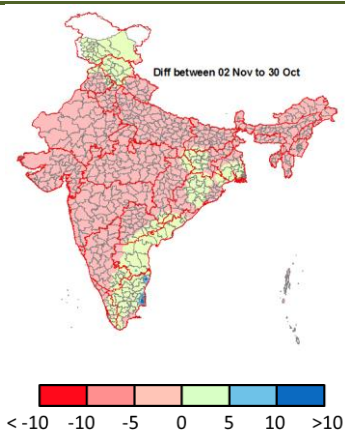
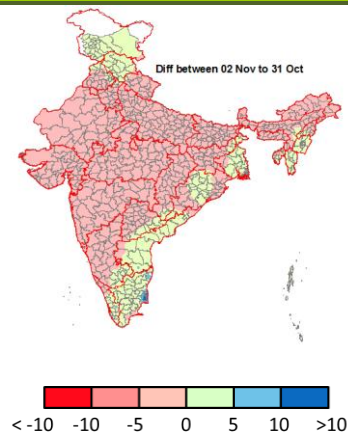
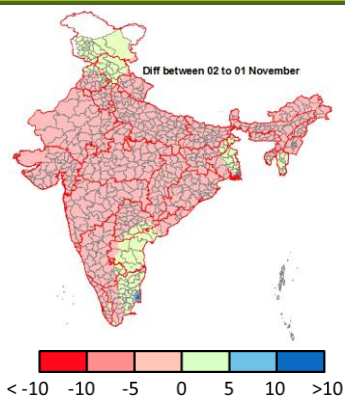


- Extremely/severely wet conditions experienced in Kandhamal, districts of Odisha; Monghyr, districts of Bihar; Sri Ganganagar, districts of Rajasthan; Pathanamthitta, districts of Kerala.
- Extremely/Severely dry conditions experienced in few districts of Maharashtra; Chhattisgarh; East Kameng, districts of Arunachal Pradesh; Cooch Behar, districts of West Bengal; Nawapara, districts of Odisha; Gumla, Simdega, districts of Jharkhand; East Champaran, Sitamarhi, Siwan, districts of Bihar; Chindwara, districts of Madhya Pradesh; East Godavari, Guntur, Vishakhapatnam, districts of Andhra Pradesh; Adilabad, Nalgonda, districts of Telangana.
- Moderately dry conditions experienced in few districts of Assam; Maharashtra; Chhattisgarh; Andhra Pradesh; Telangana; West Tripura, districts of Tripura; South Dinajpur, Hooghly, Howrah, districts of West Bengal; Bargarh, Jharsuguda, Nawarangpur, Sambalpur, districts of Odisha; Lohardaga, Ranchi, Latehar, Khunti, districts of Jharkhand; Bhojpur, Buxar, W Champaran, Darbhanga, Nawada, Patna, Saran, districts of Bihar; Azamgarh, Deoria, Gorakhpur, Jaunpur, Mirzapur, districts of Uttar Pradesh; Chamoli, districts of Uttarakhand; Hoshangabad, Jabalpur, Seoni, Shahdol, Anuppur, districts of Madhya Pradesh; districts of TamilNadu&Puducherry.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

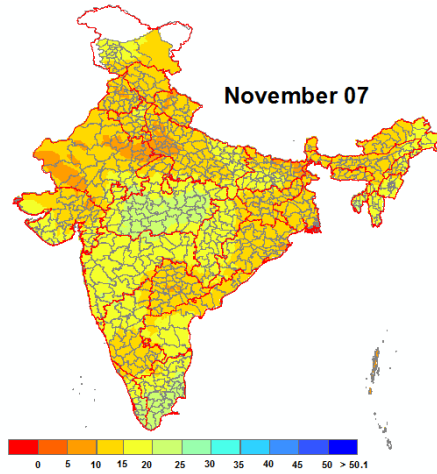
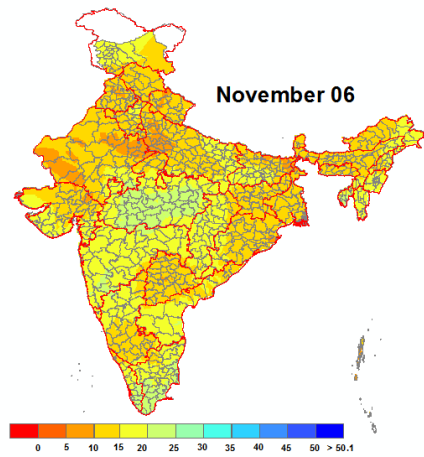
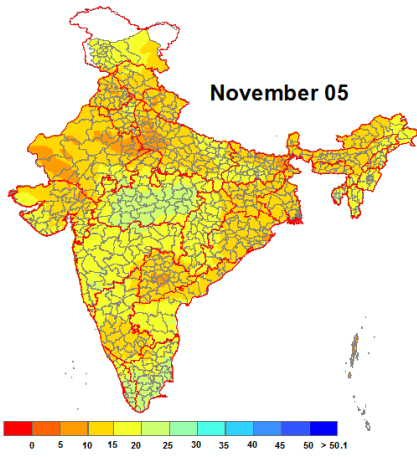
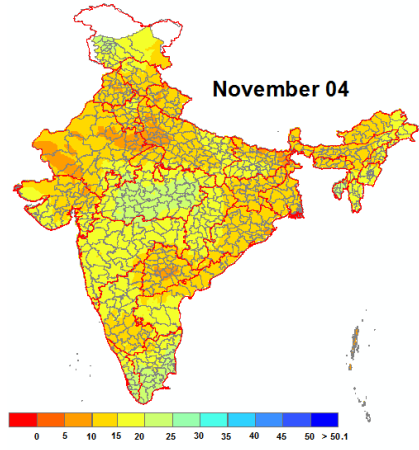
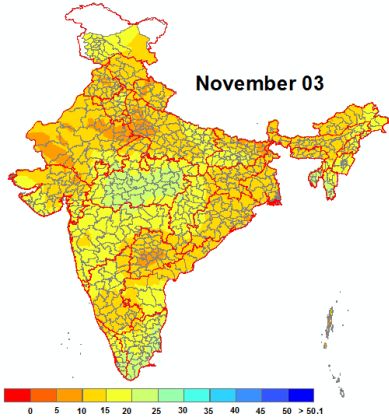
Daily Soil Moisture (mm) for 2nd November 2018 (ending at 0830 IST) for 60 cm depth



Difference of Soil Moisture (mm) for 60 cm depth

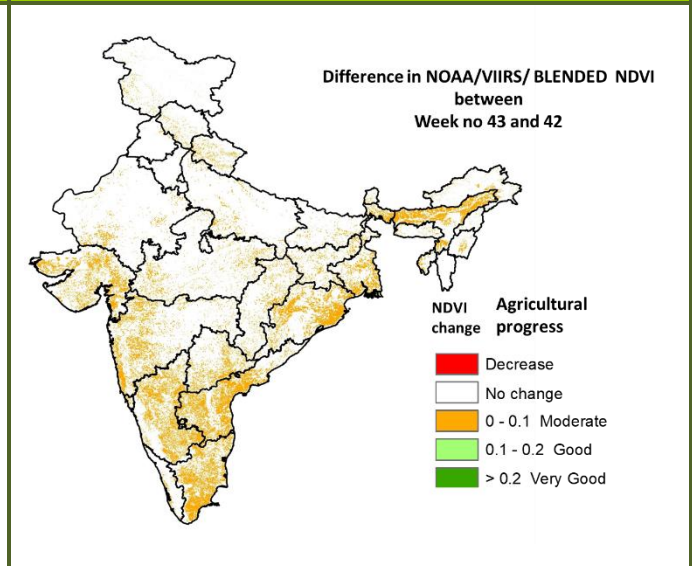
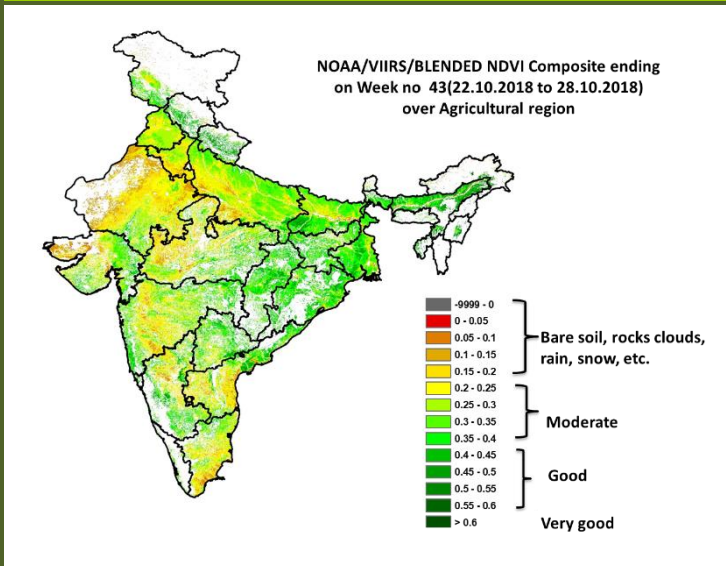


**Forecasted Soil Moisture (mm) from 03rd to 07th November 2018 (ending at 0830 IST)
for 60 cm depth**



NOAA/VIIRS NDVI composite for the week number 43 (22.10.2018 to 28.10.18) over Agricultural regions of India

Difference in NOAA/VIIRS NDVI between week number 43 and 42



Agriculture vigour is good over a few pockets of NE States & West Bengal and isolated pockets over Bihar, Chhattisgarh & North Coastal Andhra Pradesh. It was moderate over rest of the country.

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

Weather Forecast for next 5 days valid upto 0830 hours of 7th November 2018

- Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table below.
- Shallow to moderate fog very likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during next 5 days.
- Night temperatures are very likely to rise by 2-3°C over northwest and adjoining central India during next 2-3 days and no significant change over the rest of the country during next 2-3 days.

5 Day Rainfall Forecast (Mid day)

2nd November 2018

5 Day Rainfall Forecast (MID-DAY)

02-November-2018

Met-Sub-Division	02-Nov Today	03Nov Sat	04Nov Sun	05Nov Mon	06Nov Tue
1. Andaman & Nicobar Islands	SCT	SCT	SCT	SCT	SCT
2. Arunachal Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
3. Assam & Meghalaya	DRY	DRY	DRY	DRY	DRY
4. N. M. M. & T.	DRY	DRY	DRY	DRY	DRY
5. S.H. West Bengal & Sikkim	ISOL	ISOL	ISOL	ISOL	ISOL
6. Gangetic West Bengal	ISOL	DRY	DRY	DRY	DRY
7. Odisha	ISOL	ISOL	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	ISOL	ISOL	DRY	DRY	DRY
12. Uttarakhand	ISOL	SCT	ISOL	DRY	DRY
13. Haryana, Chd & Delhi	ISOL	ISOL	DRY	DRY	DRY
14. Punjab	ISOL	DRY	DRY	DRY	DRY
15. Himachal Pradesh	WS	FWS	ISOL	DRY	DRY
16. Jammu & Kashmir	WS	SCT	DRY	DRY	DRY
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	ISOL	ISOL	DRY	DRY
24. Madhya Maharashtra	DRY	ISOL	ISOL	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	ISOL	ISOL	ISOL	ISOL	ISOL
29. Telangana	ISOL	ISOL	DRY	DRY	DRY
30. Rayalaseema	ISOL	ISOL	ISOL	ISOL	ISOL
31. Tamilnadu & Puducherry	FWS	FWS	SCT	SCT	ISOL
32. Coastal Karnataka	ISOL	SCT	SCT	ISOL	ISOL
33. North Interior Karnataka	ISOL	ISOL	ISOL	ISOL	ISOL
34. South Interior Karnataka	SCT	SCT	ISOL	ISOL	ISOL
35. Kerala	FWS	FWS	SCT	SCT	SCT
36. Lakshadweep	SCT	SCT	SCT	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

- 02 November (Day 1): Heavy rain very likely at isolated places over Tamilnadu&Puducherry and Kerala.
- Thunderstorm accompanied with hail very likely at isolated places over Himachal Pradesh, Uttarakhand, Tamilnadu&Puducherry and Kerala.
- 03 November (Day 2): Heavy rain very likely at isolated places over Tamilnadu&Puducherry.
- 04, 05, 06 November (Day 3, 4,5): No Weather warning.

Weather Outlook for subsequent 2 days from 7th to 9th November 2018

- Scattered to fairly widespread rainfall activity likely over Tamilnadu& Kerala and isolated to scattered rainfall over adjoining sub-divisions.
- Dry weather likely over the rest of the country.

Salient Advisories

- As thunderstorm accompanied with hail likely at isolated places over **Himachal Pradesh, Uttarakhand, Tamil Nadu&Puducherry** and **Kerala** on 2nd November, use hailnet for orchard crops to protect from mechanical damage. Provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds and keep cattle indoor. Keep harvested produce at safer places.
- As rain/thundershowers likely at most places over **Jammu & Kashmir** on 2nd, at most/ many places over **Himachal Pradesh** on 2nd& 3rd, at many places over **Kerala** and **Tamil Nadu & Puducherry** on 2nd and 3rd along with heavy rain likely at isolated places over Kerala on 2nd and over Tamilnadu&Puducherry on 2nd and 3rd November, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation. Keep harvested produce at safe places.
- Continue sowing of *rabimaize*, groundnut and castor under irrigated condition in **South Telangana Zone** and complete sowing of *rabimaize*, groundnut, Bengal gram, coriander, mustard & safflower under irrigated condition in **Northern Telangana Zone**. In **Royalaseema**, continue land preparation and sowing of chickpea. In **South Interior Karnataka**, continue sowing of sunflower, chickpea, safflower and sorghum. In Northern Zone of **Kerala**, undertake nursery preparation for *Mundakan* rice.
- As high cloud cover, light to moderate rainfall is expected in the coming days is conducive for the spreading of yellow mosaic virus in pulses in **Tamil Nadu**. For control, spray Dimethoate 30 EC @ 500 ml / ha or Thiamethoxam 75 WS @ 1 g/ litre of water after current spells of rain.

Detailed Agromet Advisories

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

Realised Rainfall: Rainfall occurred in Pathanamthittadistrict of Kerala, Chennai, Kanyakumari, Ramanathapuram, Toothukudi districts of Tamil Nadu. Weather remained mainly dry over the rest of the region.

Advisories:

- As rain/thundershowers likely at many places over Kerala and Tamil Nadu & Puducherry on 2nd and 3rd along with heavy rain likely at isolated places over Kerala on 2nd and over Tamilnadu&Puducherry on 2nd and 3rd November, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation. Keep harvested produce at safe places.
- As thunderstorm accompanied with hail likely at isolated places over Tamil Nadu & Puducherry and

Kerala on 2nd November, use hailnet for orchard crops to protect from mechanical damage. Provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds and keep cattle indoor.

• **Kerala:**

- In Northern zone, undertake nursery preparation 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, undertake 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 Acephate 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 Chloripyrifos @ 2.0 ml per litre of water or Acephate @ 1.0 g per litre of water.

• **Telangana:**

- Take up sowing of rabi Maize, Groundnut, Bengal gram, coriander, mustard & safflower after harvesting of rice and complete sowing of rabi Red gram under irrigated condition 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:**

- Due to delayed onset of northeast monsoon, farmers are advised to sow sunflower - 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.
- As moderate to high cloud cover and high humidity is expected in the coming days, spray Imidacloprid 200 SL @ 100 ml/ha to control leaf hopper incidence on a non rainy day.
- As high cloud cover, light to moderate rainfall is expected in the coming days 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 inter-cultural operations in already sown crops to conserve soil moisture and to control weeds. Protect the harvested onion from rain.
- In North Interior Karnataka, undertake cotton picking. Complete harvesting / threshing / sun drying of maize and late sown groundnut crops. Complete sowing of sorghum, Bengal gram, sunflower, Dicoccum wheat, chickpea, safflower, irrigated wheat crops. 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. Undertake cotton picking.

- 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 Cachar, Hailakandi district of Assam and Ribhoi district of Meghalaya, Aizwal and Lunglei district of Mizoram, Chandel district of Manipur, Dhalai and North Tripura districts of Tripura during the week. Weather remained mainly dry over rest of the region.

Advisories:

- **Arunachal Pradesh:**
 - Continue harvesting of matured black gram. Continue harvesting of matured kharifrice and Jhum rice. Continue sowing of pea/gram in rice fallow and transplanting of rabi vegetables.
- **Assam:**
 - Light hoeing may be undertaken in maize fields for control of weeds. During seedling stage attack of cut worm may be observed in Maize. To control this pest apply Malathion 5% dust @ 3.4kg per bigha and mix thoroughly in the soil. 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. Undertake land preparation for sowing of wheat in Central Bramhaputra Valley Zone of Assam.
 - If there is attack of hispa in Salirice, spray Chloropyriphos 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 tender 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 foe sheath blight and sheath rot in Sali paddy.
- **Manipur:**
 - Continue harvestin fof rice crop. Drain out water from the crop field 10-15 days before expected date of harvesting. Prepare land for planting of potato. Take up sowing of mustard and rapeseed just after harvesting of rice, soybean, groundnut, black gram, rice bean etc.
- **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 Trycylazole 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 all districts of Andaman & Nicobar Islands, in Latehar district of Jharkhand and in East Midnapore district of Gangetic West Bengal during the week. Weather remained dry/mainly dry over rest of the region.

Advisories:

- **Odisha:**

- Carry out harvesting of matured kharif groundnut and matured early planted medium duration paddy. Go for harvesting of green gram and black gram by picking the pods and dry them under sun to avoid rotting. Harvest mature cobs of maize. Continue harvesting mature vegetables, flowers and fruits. Take up land preparation for sowing of rainfed groundnut, mustard, sunflower and sesame. Take up cropping of lathyrus, green gram, black gram and green pea at saturated condition in field. As no rainfall is expected, it is the ideal time for growing Tomato, Cauliflower, Cabbage, KnolKhol, Broccoli, radish, etc. by taking the advantage of recent rain. Sunflower crop may be sown during this time using high yielding varieties. It is the optimum time for sowing of rainfed groundnut in river bank. Go for land preparation and grow high yielding varieties. Take up land preparation for wheat varieties like Kalyansona, Sonalika and UP 262 with seed rate @ 40kg/acre.
- To control aphids in cowpea, spray 50 ml Imidachlorprid per acre. Harvest the beans 7 days after application. To control fruit and shoot borer in brinjal, release 20,000 Tricogama Parasites per acre or spray 1 litre 300 ppm Neem based pesticides or 1000 g Carbaryl per acre. If there is incidence of sheath blight and BPH infestation in rice, spray Difenconazole OR Thifluzamid OR Propiconazole @ 1 ml/litre of water.

- **Bihar:**

- Continue land preparation for timely sowing of rabi crops such as lentil, pea, onion, garlic, coriander, sunflower, rajma and methi. Farmers are advised to bring soil moisture of their fields to normal level by giving light irrigation to ensure proper germination of Rabi crops. Complete the sowing of Baruna, Pusa bold, Kranti, Pusamahak and Rajendrasuflam varieties of rai at the earliest. Carry out land preparation and sowing of Rabi maize and potato. Take up nursery sowing of rabi onion. Take up land preparation for wheat and gram. 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 there after threshing should be done. Grains should be properly dried to right moisture level before storing.
- Monitor Diamond Back Moth (DBM) in cauliflower. If infestation is observed, spray Spinosad 1ml/ 4 litres of water. Monitor sucking insects/pests such as white fly, leaf hopper and aphid in vegetables crops. For prevention, spray Imidachlorprid 17.8 %SL @ 0.3ml/liter of water.

- **Jharkhand:**

- After the harvest of rice crop, if sufficient moisture is available in the fields, take up sowing of rainfed wheat with improved varieties like C 306, 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. Undertake sowing of rabi crops like chickpea, pea, lentil, mustard/Toria/rai, linseed and potato after necessary seed treatment.

Take up 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 cultivation of Barley, select improved variety like Jyoti, Ratna, D.L.-36, B.R.-32 (all irrigated condition) and B.R.-31, K.-125 (un irrigated condition). Transplant papaya in this month to prevent ring spot virus and mosaic.

- For leaf blight in pulse crop, spray Indofil M 45 @ 2 g per litre 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 liter of water or chemicals like Omites or Rogar @ 2ml per liter of water.

- **West Bengal:**

- In Sub-Himalayan West Bengal, complete the harvesting of mature capsules of large cardamom capsules and thereafter carry out manuring followed by irrigation. Start field preparation for planting of potato, garden pea and cole crops. Take up sowing of lentils after harvesting of Aman rice. Start sowing of winter vegetable seeds in the nursery bed. Before sowing treat the seed bed with fungicide Copper-oxochloride @ 4gram/litre of water.
- In Gangetic West Bengal, keeping weather view in, take up harvesting of mature rice crop in this week. After harvesting, dry the crop in the field for 2-3 days and thereafter threshing should be done. Before storing, grains should be dried to bring down moisture level below 12 %. Complete the sowing of mustard, gram and pea at the earliest. Carry out transplanting of seedlings of cauliflower, cabbage, broccoli and tomato on raised beds. Take up planting of potato and sowing of rabi onion, coriander, fenugreek, turnip, spinach and radish. 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. Provide staking to tomato plants to prevent lodging.
- In Sub-Himalayan West Bengal, for control of mealy bug attack in Aman paddy, spray Chlorpyrifos 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 Imidacloprid 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:**

- In the Andaman Islands, harvest the mature paddy as the weather is likely to be dry during next five days. Prepare raised bed for vegetable nursery and sow the seed of bhindi @ 8 to 10 kg/ha. Apply manure to coconut @ 10 kg/plant, after making basin around the tree.
- In the Nicobar Islands, avoid application of manure in the vegetable garden as good amount of rainfall is expected.

- **Animal Husbandry**

- In Odisha, clean the shed and deworm the animals. Vaccinate cattle against FMD.
- 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. Considering the fall in night temperatures, keep the new born chicks under bulb. Use lime and old news paper in the liter for preventing fungal infection due to cold and damp weather.
- In Andaman & Nicobar Islands, as seasonal outbreak of coccidiosis in 4 weeks of poultry (vanaraja) birds is observed, it is advised to give “super cox” medicine in water.

- **Fisheries**

- In Odisha, according to the acidity, apply lime @ 250-500 Kg/Ha. Administer the feeding in sunny days. Agitate water for better growth of fish. Provide false netting for better growth of fish. As the winter is in the starting phase, there is a possibility of “EUS” disease in fish. Apply ‘Cifax’ @ 400 ml mixed with 40

litre of water in one acre pond area as a preventive measure. Feed the fishes daily with oil cake bran mixture at the rate of 2-3 % of their total biomass. In West Bengal, apply Cow dung @ 100kg/bigha monthly basis in fish culture pond as fish feed.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Realised Rainfall: Weather remained mainly dry/dry over the region.

Advisories:

• Maharashtra:

- In Konkan, continue harvesting of early varieties of rice. Keep the harvested produce in safer place. Continue sowing of kulthi, chavli and wal. There are chances of incidence of Tea mosquito bug on new flush and flowers of cashew. If found spray Monocrotophos 36% EC @ 15 ml or Lambdasayhalothrin 5% EC @ 6 ml in 10 liters of water.
- In Madhya Maharashtra, continue sowing of chick pea where there is good soil moisture is available or with light irrigation if irrigation facility is available. To control sigatoka blight disease in banana, remove and destroy the infested leaves and spray Carbendanzium @ 10 g or Dithane M-45 @ 25 g or Copper Oxochloride @ 25 g along with good sticker per 10 liters of water. Continue harvesting of matured early varieties of rice. Keep the harvested produce in safer place. Under residual soil moisture, continue sowing of chickpea. Undertake planting of pre-seasonal sugarcane. Continue sowing of gram, lakholi and other rabi crops in the harvested paddy fields.
- In Marathwada, under assured irrigation continue sowing of wheat, chickpea and safflower. Apply protective irrigation to vegetables. Apply protective irrigation in sapota and pomegranate orchard. Undertake mulching to maintain soil moisture. Apply protective irrigation with the help of sprinkler irrigation system in rabi groundnut crop. For control of white grub in sugarcane crop, application of Granular Fipronil 0.3 % @ 13 kg per acre or if soil moisture is available application of Metarhiziumanisopliae fungus @ 4 kg per acre should be done.
- In Vidarbha, apply protective irrigation to pigeon pea, chickpea, vegetables and orchards. In cotton undertake light hoeing to provide dust mulch to break soil capillarity reducing evaporative loss of soil moisture. Carry out intercultural operations in irrigated safflower. To reduce fruit drop in mandarin orange (Ambiabhar) spray Gibberellic acid @ 1.5 g + Urea @ 1 kg + Carbendazim 50% WP @ 100 g per 100 litres of water, repeat after 15 days. Undertake sowing of gram, wheat and linseed. Continue harvesting of matured early varieties of rice.
- There are chances of attack of leaf eating caterpillar in pigeonpea, spray Quinalfos 25 EC @ 16 ml or Emamectin Benzoate 5% SG @ 5 g per 10 litres of water.

• Gujarat:

- In Middle Gujarat, continue harvesting of matured groundnut crop. Complete harvesting of matured pearl millet and rice crops. 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, undertake 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 over the region.

Advisories:

• Madhya Pradesh:

- In East Madhya Pradesh, continue harvesting of matured rice. Undertake sowing of gram, lentil and linseed. Undertake land preparation for planting of potato. Undertake nursery Preparation for early season rabi vegetables. Continue sowing of pea. Continue sowing of carrot, beetroot, radish, spinach, fenugreek etc.
- 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. Undertake sowing of gram.
- In Jhabua Hills Zone, to control shoot and fruit borer in tomato, brinjal, chilli, okra, spray Triazofos @ 800 ml/ha. For control of sucking pests, spray Tiomithoxim 5.0-7.5 gm/ pump. (0.35 – 0.5 gm/litre of water).

• 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 gram/ kg seed.
- In Bastar Plateau Zone, continue harvesting of matured rice. Continue nursery preparation for rabi vegetables.
- 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, provide concentrate feed to milch animals mixed with dry and green fodder and insure for enrich diet having protein, carbohydrate, fat, vitamins etc.

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

Realised Rainfall: Weather remained mainly dry over the region.

Advisories:

- As thunderstorm accompanied with hail likely at isolated places over Himachal Pradesh and Uttarakhand on 2nd November, use hailnet for orchard crops to protect from mechanical damage. Provide support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds and keep cattle indoor. Keep harvested produce at safer places.

• Jammu & Kashmir:

- Undertake land preparations for timely sowing of wheat crop in Intermediate zone.
- Carry out weeding and hoeing in toria crop, where sowing has been done almost three to four weeks ago.
- Undertake sowing of RSPR-01, Kranti and Pusa Bold varieties of mustard in lower /plain areas and Kranti, RLM 619, Varuna and RH 30 varieties of mustard in Intermediate areas subject to the availability of moisture.
- Undertake sowing of peas in field where adequate moisture is available for sowing. Start sowing of gram where adequate moisture is available for sowing.
- Undertake nursery sowing of late cauliflower (Snow Ball group). Also undertake nursery sowing of onion crop (N-53, Pusa Red and Agrifound Dark Red) on raised beds.

• 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. Undertake harvesting of matured rice.
- 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, 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.

- **Rajasthan:**

- Weather conditions are optimum for sowing of lentil. Also the upcoming weather conditions are favourable for sowing of 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. Undertake harvesting of matured groundnut.
- 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.

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