



National Agromet Advisory Service Bulletin

Friday 12th October 2018
(For the period 12th to 17th October 2018)



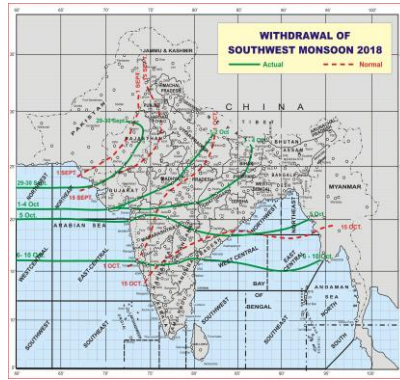
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District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>

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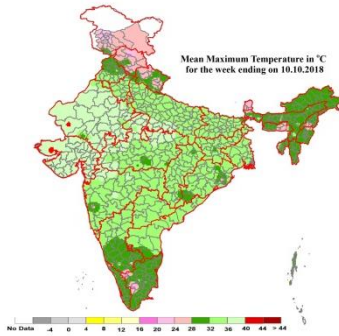
Withdrawal of South West Monsoon 2018



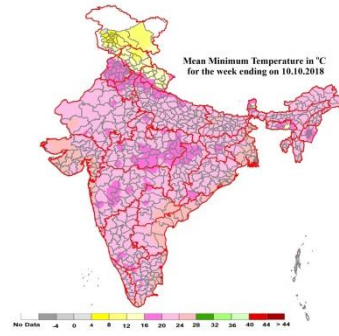
- The withdrawal line of southwest monsoon continues to pass through Lat. 16°N/Long. 94°E, Lat. 15°N/long. 90°E, Machilipatnam, Kurnool, Gadag, Vengurla and Lat. 16°N/ Long. 60°E.

Spatial distribution of weather parameters for the week ending on 10.10.2018

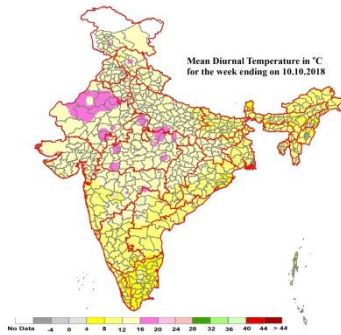
Mean Maximum Temperature (°C) for the week ending on 10.10.2018



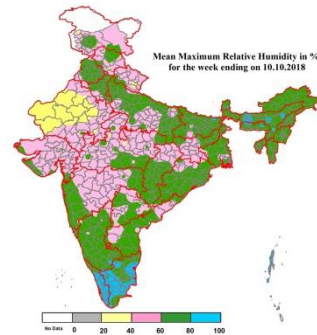
Mean Minimum Temperature (°C) for the week ending on 10.10.2018



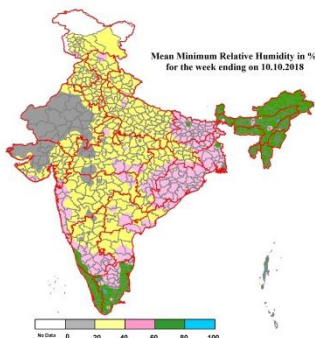
Mean Diurnal Temperature Variation (°C) for the week ending on 10.10.2018



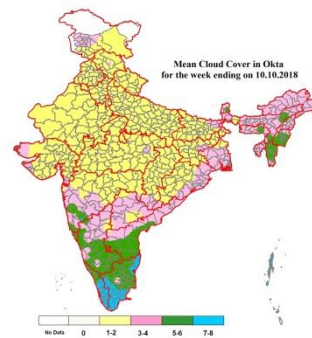
Mean Maximum Relative Humidity (%) for the week ending on 10.10.2018



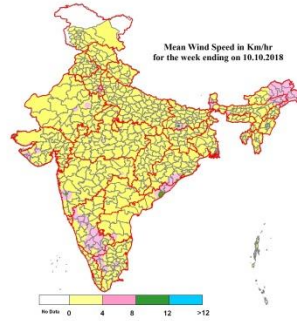
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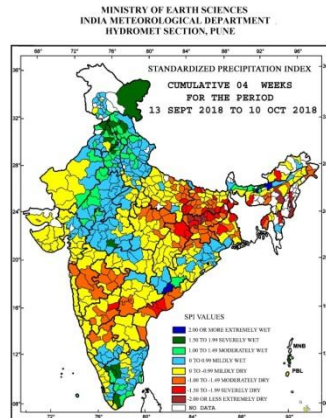
Mean Cloud Cover (okta) for the week ending on 10.10.2018



Mean Wind Speed (km/hr) for the week ending on 10.10.2018

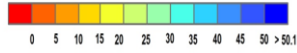
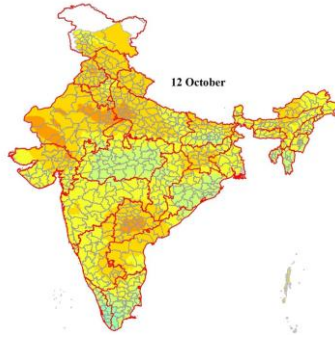


Standardised Precipitation Index Cumulative 4 weeks for the period 13th September to 10th October 2018

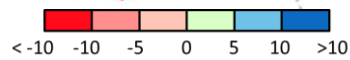
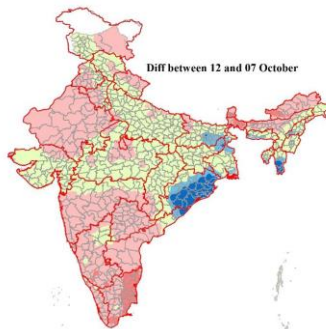
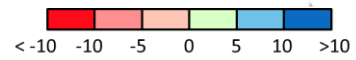
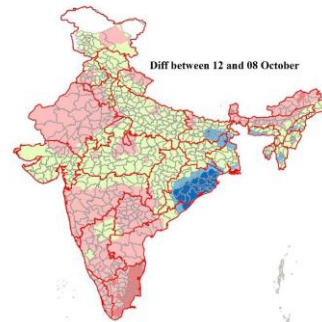
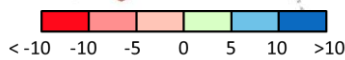
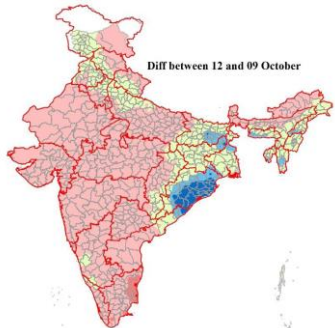
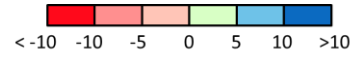
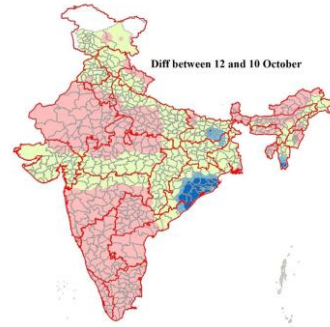
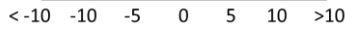
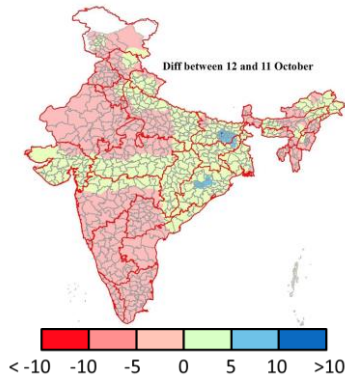


- Extremely/severely wet conditions experienced in few districts of Punjab; Himachal Pradesh; Barpeta, Bongaigaon, Udalguri, Baksa districts of Assam; Malkangiri district of Odisha; Kaithal district of Haryana; Ladakh (Leh) district of Jammu & Kashmir; Khandwa district of Madhya Pradesh; Erode, Nilgiri, Tirunelveli, Tirupur, Karaikal districts of Tamil Nadu & Puducherry.
- Extremely/Severely dry conditions experienced in few districts of Jharkhand; East Kameng district of Arunachal Pradesh; N. C. Hills, Nagaon districts of Assam; West Garo Hills district of Meghalaya; West Tripura district of Tripura; Malda, Bankura, Murshidabad districts of West Bengal; Banka, Bhabua, East Champaran, Jamui, Katihar, Nawada, Rohtas, Saharsa, Sheohar districts of Bihar; Ghazipur district of Uttar Pradesh; Jashpur, Surguja districts of Chhattisgarh; Krishna district of Andhra Pradesh; Yadgir district of Karnataka.
- Moderately dry conditions experienced in many districts of Meghalaya; few districts of Arunachal Pradesh; West Bengal; Jharkhand; Bihar; Maharashtra; Andhra Pradesh; Telangana; Golaghat, Kamrup Metro districts of Assam; South Tripura district of Tripura; Jharsuguda, Sundargarh districts of Odisha; Allahabad, Azamgarh, Ballia, Balrampur, Banda, Basti, Deoria, Gorakhpur, Kushi Nagar, Mau districts of Uttar Pradesh; Chhatarpur, Dindori, Panna, Rewa, Satna, Shahdol, Singrauli districts of Madhya Pradesh; Dadara & Nagar Haveli district of Gujarat Region; Thane district of Konkan & Goa; Janjgir, Koriya, Raigarh districts of Chhattisgarh; Bagalkote, Dharwad, Koppal, Raichur, Bellary, Chitradurga, Shimoga districts of Karnataka.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

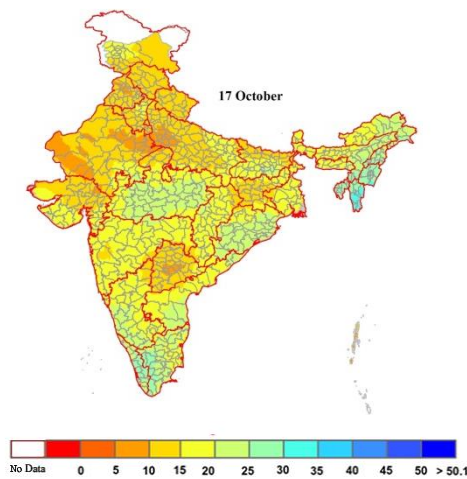
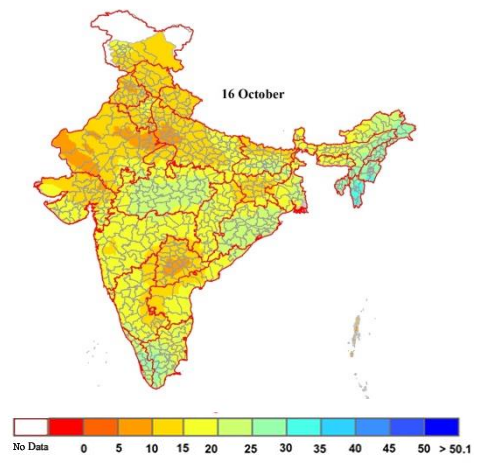
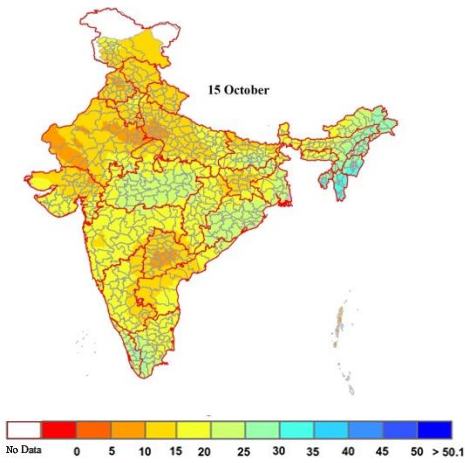
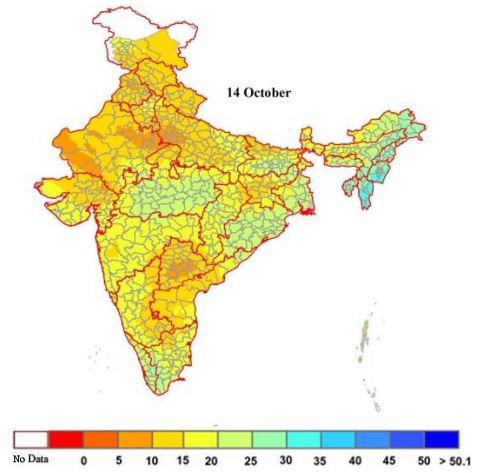
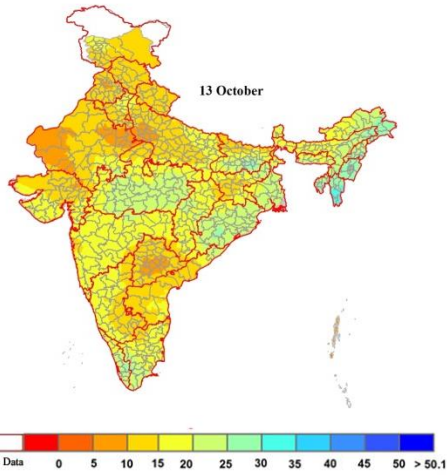
Daily Soil Moisture (mm) for 12th October 2018 (ending at 0830 IST) for 60 cm depth



Difference of Soil Moisture (mm) for 60 cm depth



**Forecasted Soil Moisture (mm) from 13th to 17th October 2018 (ending at 0830 IST)
for 60 cm depth**



Weather Forecast for next 5 days valid upto 0830 hours of 17th October 2018

- Meteorological subdivision wise detailed 5 days rainfall forecast is given in Table below.
- No significant change in temperatures likely over most parts of the country during next 48 hours.

5 Day Rainfall Forecast (Mid day) 12th October 2018

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

- **12 October (Day 1):** Heavy to very heavy rain with extremely heavy falls very likely at isolated places over Odisha; heavy to very heavy rain at isolated places over Gangetic West Bengal, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; heavy rain likely at isolated places over Jharkhand, Sub-Himalayan West Bengal and Arunachal Pradesh. Squally wind speed of 45-55 kmph gusting to 65 kmph very likely along & off Odisha and West Bengal and 35-45 kmph gusting to 55 kmph likely over adjoining areas of north interior

Odisha during next 12 hours. The Sea conditions will be rough to very rough along & off West Bengal and north Odisha Coasts during next 24 hours. The fishermen are advised not to venture into Sea along and off Odisha and West Bengal coasts and north Bay of Bengal during next 24 hours. Gale wind speed reaching 100-110 kmph gusting to 125 prevails over westcentral Arabian Sea around system centre. It will become 110-120 kmph gusting to 135 kmph by 12th October 2018 midnight. The sea condition is very high around the system centre. It will continue to be very high over westcentral Arabian Sea & adjoining Gulf of Aden. The fishermen are advised not to venture into westcentral Arabian Sea & Gulf of Aden.

- **13 October (Day 2):** Heavy to very heavy rain very likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura and heavy rain likely at isolated places over Bihar, West Bengal & Sikkim and Arunachal Pradesh. Gale wind speed reaching 110-120 kmph gusting to 135 kmph around system centre over westcentral Arabian Sea & adjoining Gulf of Aden around system centre. The sea condition will continue to be very high westcentral Arabian Sea & adjoining Gulf of Aden. The fishermen are advised not to venture into westcentral Arabian Sea & Gulf of Aden.
- **14 October (Day 3):** Heavy rain likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Kerala. Gale wind speed reaching 110-120 kmph gusting to 135 kmph around system centre over westcentral Arabian Sea & adjoining Gulf of Aden around system centre. Gale wind speed reaching 110-120 kmph gusting to 135 is very likely along & off Yemen & adjoining south Oman coasts at the time of landfall. The sea condition will continue to be very high over westcentral Arabian Sea & adjoining Gulf of Aden till 14th October evening and improve rapidly thereafter. The fishermen are advised not to venture into westcentral Arabian Sea & Gulf of Aden.
- **15 October (Day 4):** Heavy rain likely at isolated places over coastal Andhra Pradesh, Tamilnadu and Kerala.
- **16 October (Day 5):** Heavy rain likely at isolated places over coastal Andhra Pradesh, Coastal Karnataka, Tamilnadu and Kerala. Thunderstorm accompanied with hailstorm at isolated places over Jammu & Kashmir.

Weather Outlook for subsequent 2 days from 17th to 19th October 2018

- A fresh western disturbance is likely to affect Western Himalayan region from 16th October.
- Scattered to fairly widespread rainfall likely over south peninsula.
- Isolated to scattered precipitation likely over Western Himalayan region, isolated to scattered rainfall likely over northeastern States, and isolated rainfall over Western India. Dry weather likely over the rest of the country.

Salient Advisories

- The Deep Depression over **Odisha** lay centred at 0830 hrs IST of today, the 12th October 2018 over Odisha near latitude 20.6°N and longitude 84.9°E, 60 km eastnortheast of Phulbani and 30 km southwest of Angul. It is very likely to move northeastwards towards **Gangetic West Bengal** and weaken into a depression during next 06 hours. In view of heavy rainfall occurred due to Cyclonic Storm 'Titli', Farmers are advised:
 - To arrange for adequate drainage channels in standing crop fields to remove excess water and keep harvested produce at safer places. Postpone application of fertilizers in rice crop. Arrange for propping in sugarcane, banana, papaya crops to prevent lodging due to strong winds.
- As squally wind speed of 45-55 kmph gusting to 65 kmph very likely along & off **Odisha** and **West Bengal** and 35-45 kmph gusting to 55 kmph likely over adjoining areas of north interior Odisha during next 12 hours. The Sea conditions will be rough to very rough along & off West Bengal and north Odisha Coasts during next 24 hours. The fishermen are advised not to venture into Sea along and off Odisha and West Bengal coasts and north Bay of Bengal during next 24 hours.
- As rain/thundershowers likely at most places over **Nagaland, Manipur, Mizoram & Tripura** from 12th to 14th, over **Odisha** on 12th, over **Gangetic West Bengal** on 12th and 13th, at most/many places over **Kerala** during the period, over **Coastal Karnataka** on 15th and 16th, over **Arunachal Pradesh** and **Assam & Meghalaya** from 12th to 14th, at many places over **Tamil Nadu & Puducherry** and **South Interior Karnataka** on 15th and 16th, over **Sub-Himalayan West Bengal & Sikkim** on 12th and 13th, over **Andaman & Nicobar Islands** and **Jharkhand** on 12th, along with heavy to very heavy rain with extremely heavy falls very likely at isolated places

over Odisha on 12th, heavy to very heavy rain at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 12th and 13th, over Gangetic West Bengal on 12th, heavy rain likely at isolated places over Arunachal Pradesh from 12th to 14th, over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 14th, over Jharkhand, Sub-Himalayan West Bengal on 12th, over Bihar, West Bengal & Sikkim on 13th, over Kerala from 14th to 16th, over Coastal Andhra Pradesh, Tamilnadu on 15th and 16th, over Coastal Karnataka on 16th October, 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 storm likely at isolated places over **Jammu & Kashmir** on 16th October, 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.
- In **Marathwada**, undertake sowing *rabi* chickpea and safflower as per availability of water. Undertake land preparation for sowing of wheat. In **West Vidarbha**, under sufficient residual soil moisture, continue sowing of rainfed linseed and chickpea.
- In **Himachal Pradesh**, continue harvesting of matured rice, maize and pulses. Continue field preparation for sowing of early mustard, gram and lentil in lower regions and planting of potato in lower and mid hill regions.
- In **East Madhya Pradesh**, as dry weather would prevail, continue harvesting of matured soybean and groundnut. Undertake harvesting of matured rice.

Detailed Agromet Advisories

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

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala, all districts of Coastal Karnataka, all districts of South Interior Karnataka except Ballari, Chitradurga, Davangere, Ramanagara and Tumakuru, in Nellore district of Coastal Andhra Pradesh, Chittoor district of Rayalaseema and in all districts of Tamil Nadu during the week. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most/many places over Kerala during the period, over Coastal Karnataka on 15th and 16th, at many places over Tamil Nadu & Puducherry and South Interior Karnataka on 15th and 16th, along with heavy rain likely at isolated places over Kerala from 14th to 16th, over Coastal Andhra Pradesh, Tamilnadu on 15th and 16th, over Coastal Karnataka on 16th October, 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.
 - **Kerala:**
 - Short duration vegetable crops like Amaranthus, Cow pea, etc. can be cultivated in the interspaces of newly planted banana crop. Keep the cardamom field free from weeds. Carry out land preparation for second paddy crop. Get the soil testing done before planting Punched paddy crop. According to soil testing results, add lime or dolomite to correct acidity. Carry out land preparation for cucurbit crops.
 - Monitor cardamom crop against Azhukal disease and coffee plants against berry borer. Clean the bud rot affected parts of coconut palm and apply Bordeaux paste. Apply Tilt @ 1ml per litre of water for sigatoka leaf spot in banana. Apply Indofil M 45 4g per litre of water on tapping panels in rubber. Undertake plant protection measures after current spells of rain.
 - **Andhra Pradesh:**
 - In Coastal Andhra Pradesh, with the help of recent rains, carry out land preparation in upland and procure seeds for sowing of *rabi* pulses. Provide irrigation to bajra and BT cotton crops wherever such facilities are available.
 - In Rayalaseema, take up sowing of *rabi* red gram varieties like LRG 52, ICPL 85063, ICP 8863, PRG 176 in left over fields in the district under assured irrigation. Procure seeds of high yielding Rabi chickpea varieties like NBeG 3, NBeG 47, and NBeG 49. Take up sowing after receiving sufficient rainfall. Carry out harvesting of groundnut when 80% of the leaves turn yellow and the color inside the shell turns black.

- In Coastal Andhra Pradesh, in paddy crop at tillering stage, spray Profenophos 50 EC @400 ml/acre or Chloropyriphos 20 EC @ 500 ml/acre or Monocrotophos 36 SL @ 320ml/acre. For the control of the fall armyworm in maize crop, spray Chlorantriliniprole (coragen) @ 60ml/acre or Emamectin Benzoate @ 80 g/acre. For the control of sucking pests in cotton at flowering stage, spray Monocrotophos 36 SL 320 ml/acre or Acephate 75SP@ 300g/litre or Imida chloprid 17.8 SL@ 80 ml/acre or Fipronil 5SC @ 400 ml/acre
- In Rayalaseema, for stem borer in paddy crop, spray Chloropyriphos 2.5 ml or Cartap Hydrochloride @ 2 g per litre of water. To control late leaf spot in groundnut, spray Hexaconazole @ 2 ml/litre of water.
- **Telangana:**
 - Take up sowing of *rabi* groundnut under irrigated situation.
 - Prevailing weather conditions are congenial for the incidence of pest and diseases in rice. To control hispa, spray Quinalphos or Profenophos @ 2 ml or Chloropyriphos @ 2.5 ml per litre of water; for stem borer apply Cartap Hydrochloride 4g @ 8kg per acre and for leaf folder spray Chlorantriliniprole @ 0.3 ml per liter of water. For pink boll worm in cotton, arrange pheromone traps @ 4 per acre for monitoring the pest; arrange Pheromone traps @ 10 per acre for moth trapping and if more than 8 moths are found in traps consecutively for 3 days, control it by spraying Profenophos @ 2 ml or Thiodicarb @ 1.5 g per litre of water. Prevailing weather conditions are congenial for the incidence of Leaf Blight disease in Tomato. To control, spray Mancozeb @ 2.5 g or Propiconazole @ 1 ml per liter of water twice at 15 days interval. Prevailing weather conditions may be congenial for maruca and helicoverpa in redgram. Spray Chloropyriphos @ 2.5 ml or Novaluron @ 0.75 ml along with Dichlorvos @ 1 ml per litre of water.
- **Tamil Nadu:**
 - By utilizing received and anticipated rainfall, continue the rainfed sowing and do gap filling in already germinated fields. Considering the high wind speed propping may be done in early and mid-season sugarcane and 5 months old banana. Provide adequate drainage against rhizome rot in turmeric. Protect chilli saplings in nursery from rainfall. To improve the yield of banana, give foliar spray with banana booster @ 5 g/litre of water along with sticking agent from third month after planting till bunch formation at one month intervals. Continue planting operations, especially vegetable crops like chilli, brinjal, gourd, banana and perennial crops.
 - Due to the prevailing weather condition, the incense of Fall Army worm seen in Maize fields. To control spray 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 during the non rainy days. For blast disease in paddy at maturity stage, spray Tricyclozole 75 wp @ 500 g/ha. Undertake plant protection measures after current spells of rain.
- **Karnataka:**
 - In North Interior Karnataka, continue sowing of rainfed wheat (Bijga yellow, DWR-137 (kiran), DWD-2006), Bengal gram (JG ICCV-10, JG-11, Annegeri-1,BGD- 103 ,GBM-2), sunflower, sorghum (Maldandi Muguti, DSV-4, DSV-5 or Hybrid- DSH- 4), chickpea (A-1, GBS-964,JG-11, JG-11, BGD-103, GB-1105), safflower (A-1, A-2, S-144, A-300), red gram crops. Complete harvesting of soybean.
 - In Coastal Karnataka, undertake cotton picking after current spells of rain.
 - In South Interior Karnataka, continue harvesting of matured groundnut crop after current spells of rain. Continue land preparation for sowing of *rabi* crops. In rice field, maintain 2.5 to 5 cm water level to reduce the weed infestation. Spray Planofix @ 1 ml /4.5 litres of water against flower drop in cotton after current spells of rain.
 - In Coastal Karnataka, pour 3 liters of Chloropyriphos solution (3 ml per liter of water) to base of of arecanut plant against root grub infestation after current spells of rain.
 - In South Interior Karnataka, due to congenial weather condition rice crop affected by stem borer, leaf roller and sucking insects; to manage spray Chlorophyriphos or Ekalux @ 2 ml/litre of water after current spells of rain. 200 to 250 litres of spraying mixture is required per acre.
- **Animal Husbandry**
 - In Karnataka, keep the animal habitation dry to avoid hoof infection & to prevent fly. Protect animals from rain. Maintain optimum room temperature in silkworm and poultry rearing houses. For milch animals, regularly follow schedule of 1 kg feed + 50 g mineral mixture per 2 litres of milk yield. Feed animals with a mixture of green grass + hay + minerals + dry feed like a khichri.
 - In Kerala, de-worm the animals and birds and vaccinate them against infectious diseases as there are more chances of contagious disease during monsoon season. Take vaccination from nearby veterinary clinics.
 - In Andhra Pradesh, vaccinate cattle against FMD and goat against blue tongue disease.

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

- **Realised Rainfall:** Rainfall occurred in Lohit, Tirap, Upper Siang and West Kameng districts of Arunachal Pradesh, Dibrugarh, Morigaon, Tinsukia and Udalgiri districts of Assam, Ribhoi district of Meghalaya, Lunglei and Serchhip districts of Mizoram, Longleng and Mon districts of Nagaland during the week. Weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain/thundershowers likely at most places over Nagaland, Manipur, Mizoram & Tripura from 12th to 14th, at most/many places over Arunachal Pradesh and Assam & Meghalaya from 12th to 14th, along with heavy to very heavy rain at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 12th and 13th, heavy rain likely at isolated places over Arunachal Pradesh from 12th to 14th, over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 14th October, 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.
- **Arunachal Pradesh:**
 - Avoid harvesting of early transplanted matured *kharif* rice and Jhum rice. Undertake sowing of pea/gram in rice fallow. Take up sowing of *rabi* vegetables preferably in nurseries under polyhouses/ protected cultivation.
 - Install local trap of dead frog/fermented fish etc against gundhi bug in normal transplanted *kharif* rice or spray Triazophos/Chloripyriphos@1-2ml/litre of water. On clear/sunny days, spray Carbendazim @ 2g/litre of water to control infestation of leaf blast & leaf spot. Install methyl eugenol fruit fly trap/spray Spinosad 2.5 SC @ 2ml/10 litre water against fruit fly in citrus. Undertake plant protection measures after current spells of rain.
- **Assam:**
 - Sanitize the field by cleaning bunds, channels, and field roads and removing weeds before sowing *rabi* vegetables. Undertake sowing of pea, rapeseed, mustard and tomato using seeds of recommended varieties. Continue land preparation for onion and toria cultivation. Mid-October to mid- November is the optimum time for planting of potato. Select sandy loam soil rich in organic matter for cultivation of potato. Recommended varieties for potato are Kufri Chandramukhi, Kufri Joyti and Kufri Sindhuri. Complete the sowing of *rabi* maize by 15th of October. Undertake early sowing of seeds of rapeseed and mustard to avoid Aphid infestation during flowering stage. Transplant seedlings of cauliflower, brinjal and radish in the main field at 30-35 DAS. Undertake sowing after current spells of heavy rain.
 - If there is attack of hispa in Sali paddy, 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/l of water followed by Dimethoate @ 2ml/lit of water at 10 days interval. Undertake plant protection measures after current spells of rain.
- **Meghalaya:**
 - Prepare nursery bed for sowing of cole crops, root crops and cucurbits. Continue sowing of French bean and cow pea. Keep ginger and turmeric fields weed-free. Harvest brinjal and chilli regularly. Maintain 5 cm of standing water in rice field. 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 after current spells of rain.
- **Manipur:**
 - Maintain 5-8 cm water level in paddy field. Harvest crop when 80% of spikelets become yellow after current spells of heavy rain. Take up sowing of *rabi* vegetables after rains when optimum soil moisture level is attained. Prepare land for planting potato. Take up sowing of mustard and rapeseed just after harvesting of rice, soybean, groundnut, black gram, rice bean etc. after rains.
- **Mizoram:**
 - Harvest mature cobs of maize and undertake weeding in rice field after current spells of heavy rain.
 - Monitor rice crop against gundhi bug. Install local trap of dead frog/fermented fish etc against gundhi bug in normal transplanted *kharif* rice or spray Triazophos/Chloripyriphos@1-2ml/litre of water. 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. Spray Dimethoate 30 EC @ 3ml/litre of water against aphids in cucurbits. Undertake plant protection measures after current spells of rain.
- **Tripura:**
 - Continue harvesting of maize after current spells of heavy rain. Postpone transplanting of cabbage, cauliflower, radish and brinjal. Maintain good drainage in groundnut field. Kepp 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 Trycyclazole 0.8 gm or Propiconazole 1 ml per litter of water. Repeat the application at 10 to 12 days interval if needed. Undertake plant protection measures after current spells of rain.
- **Nagaland:**
 - Undertake sowing of *rabi* maize, toria and mustard after rains. Take up sowing of vegetable crops like cabbage, tomato, radish and broccoli.
 - For leaf folder management in TRC/WRC paddy, use mechanical methods such as rope method to dislodge the larvae.

- **Animal Husbandry**

- Provide adequate water with added vitamin C to poultry birds. Maintain proper ventilation. Fumigate poultry huts. Maintain hygiene. Protect birds from rain.
- In case of goats affected with contagious ecthyma or ORF, wash the affected area with Potassium Permanganate solution twice daily. Then apply glycerin and boric acid paste. Contact nearest veterinarian for more information.
- Go for normal vaccination schedule against Ranikhet and Gumboro diseases in Broiler. Monitor the flock periodically against any kind of diseases. Vaccinate pigs against FMD & swine fever and cattle/sheep/goat against FMD, Hemorrhagic Septicaemia, Black Quarter, etc.

- **Fishery**

- Maintain water level at a depth of 1.0m to 1.5m. Ensure good quality water in fish culture ponds by liming. - Encircle fish culture ponds using happa net avoid escape of grow-out fishes.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Andaman & Nicobar Islands, Araria district of Bihar, Jagatsingpur district of Odisha, North Sikkim, South Sikkim and West Sikkim districts of Sub-Himalayan West Bengal & Sikkim during the week. Weather remained mainly dry over rest of the region.

- **Advisories:**

- As rain/thundershowers likely at most places over Odisha on 12th, over Gangetic West Bengal on 12th and 13th, at many places over Sub-Himalayan West Bengal & Sikkim on 12th and 13th, over Andaman & Nicobar Islands and Jharkhand on 12th, along with heavy to very heavy rain with extremely heavy falls very likely at isolated places over Odisha on 12th, heavy to very heavy rain at isolated places over Gangetic West Bengal on 12th, heavy rain likely at isolated places over Jharkhand, Sub-Himalayan West Bengal on 12th, over Bihar, West Bengal & Sikkim on 13th October, 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 squally wind speed of 45-55 kmph gusting to 65 kmph very likely along & off Odisha and West Bengal and 35-45 kmph gusting to 55 kmph likely over adjoining areas of north interior Odisha during next 12 hours. The Sea conditions will be rough to very rough along & off West Bengal and north Odisha Coasts during next 24 hours. The fishermen are advised not to venture into Sea along and off Odisha and West Bengal coasts and north Bay of Bengal during next 24 hours.

- **Odisha:**

- In view of heavy rainfall due to Cyclonic Storm 'Titli', arrange for adequate drainage channels in standing crop fields to remove excess water and keep harvested produce at safer places. Postpone application of fertilizers in rice crop. Arrange for propping in sugarcane, banana, papaya crops to prevent lodging due to strong winds. Maintain water level upto 5cm in rice fields.
- In North Central Plateau Zone, undertake harvesting of matured rice, groundnut, green gram and black gram after current spells of heavy rain.
- Cotton crop is at boll formation to boll development (eleven to thirteen week) stage. There is chance of attack of sucking pest like jassids and thrips. Monitor the crops and spray Buprofezin 25% SC 400 ml @ 2ml/litre of water if attack is noticed. For monitoring of infestation of boll worm, fix five pheromone traps per acre in the crop fields. Undertake plant protection measures after current spells of rain.

- **Bihar:**

- Continue harvesting of matured *kharif* maize. Continue sowing of early potato and toria. Undertake sowing of mustard and rapeseed and land preparation for planting of sugarcane. Undertake intercultural operations in pigeon pea. Undertake land preparation for timely sowing of *rabi* crops such as lentil, pea, garlic, coriander, sunflower, rajma and methi. Undertake transplanting of brinjal, tomato, chilli, cauliflower and cabbage.
- Monitoring of gundhi bug is advised in rice crop which is at milk stage. If the number of pest exceeds from ETL value then apply Quinalphos 1.5 % or Methyl Parathion 2% or Folidol dust @ 25 kg per ha to protect the crop. For control of Brown plant hopper in rice crop, spray Bruprofezin @ 1.5 ml per litre of water per hectare on a non rainy day.

- **Jharkhand:**

- Continue sowing of *rabi* crops like toria, rainfed wheat, table pea and potato with assured irrigation facility. Farmers having 3-4 irrigation facility, may proceed for cultivation of rainfed wheat, potato and table pea. And those who have only 2-3 irrigation facility may proceed for toria cultivation. Undertake sowing of gram, mustard, lentil and linseed. Undertake nursery sowing of cabbage, cauliflower and tomato.
- To control gundhi bug in rice apply Quinalphos 1.5% dust @ 25 kg/ha or spray Quinalphos 25 EC @ 1.5 litre/500 litres of water on a non rainy day.
- Due to high humidity and cloudy weather, there is chance of tikka disease in groundnut. Apply Endofil M-45

(4g) + Bavistin 1g in 4 litres of water on a non rainy day.

▪ **West Bengal:**

- In Sub-Himalayan West Bengal, complete the harvesting of mature capsules of large cardamom and continue harvesting round chilli after current spells of rain. Continue preparation of seed bed for early winter vegetables crops. Carry out careful roguing and destruction of infected ginger and turmeric plants.
- In Gangetic West Bengal, arrange weed free drainage channel for quick run off of excess rain water to maintain proper water level in the Aman paddy field. Arrange for tight fencing with bamboo sticks and paddy straw in betel vine garden at growing leaf stage. Provide staking to the seedlings of early winter vegetables and keep nursery beds weed free. Prepare field and plant cuttings of pointed gourd. Prepare nursery bed to raise seedlings of tomato.
- In Sub-Himalayan West Bengal, for management of Gundhi bug in rice apply 10-12 spot/bigha, 50 gram rotten snail or rotten frog with 5 gram Imidachloropid mix it well and prepare 10-12 small cloth bundle, hanging with the stick just above the panicle level. Spray Tricyclazole 75% WP @ 0.5 gm/litre of water (If not sprayed earlier) as a preventive measure to manage the blast disease in rice. Undertake plant protection measures after current spells of rain.
- In Gangetic West Bengal, in Aman paddy, for leaf roller spray Chlorpyrifos 1.5 ml/litre of water; for stem borer attack, apply Triazophos @1.5 ml/litre of water and for sheath blight spray Kopikonazole@0.75ml/liter of water. To control fruit borer in bhindi and brinjal, spray Fipronil 1 ml/ 4 litres of water. Undertake plant protection measures after current spells of rain.

▪ **Andaman & Nicobar Islands:**

- In the Andaman and Nicobar Islands, drain out excess rain water from vegetable fields wherever required.

• **Animal Husbandry**

- In Odisha, keep animals indoor during rainfall period. Stock the feeding materials for three days.
- In Bihar, animals must be vaccinated for FMD, HS and BQ namely Trivac vaccine administered dose @ 2.5-3ml S/C per animal is recommended.
- In West Bengal, for foot and mouth disease in cattle, wash the wound with potassium permanganate solution. Vaccinate cattle against FMD. Keep the cow shed clean and dry. Clean and disinfect the cowshed with bleaching powder. Provide any gut acting antibacterial along with remonetric preparation to cattle suffering from non-specific diarrhoea due to water borne infections. To prevent fungal attack in poultry shed, rearrange the litter with new one, apply lime on litter, avoid wet food and feed only dry food to birds. Vaccinate poultry birds against Ranikhet disease. Restrict the time cattle spends in pastures. Mix essential salts in the feed of the animals.
- In Andaman & Nicobar Islands, keep the animal shed clean to avoid infectious diseases to the firm animal.

• **Fisheries**

- In West Bengal, apply cow dung @ 100kg/bigha monthly basis in fish culture pond as fish feed.
- In Odisha, take precautionary measures to minimize overflow of pisciculture ponds particularly by pumping out water. Keep feedings bags in ponds if the flood water enters the pisciculture tanks.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rainfall occurred in North Goa, Raigad and South Goa districts of Konkan & Goa, Sangli and Satara districts of Madhya Maharashtra during the week. Weather remained mainly dry/dry over rest of the region.

• **Advisories:**

▪ **Maharashtra:**

- In South Konkan, maintain water level of 5-10 cm in rice field. Continue harvesting of early varieties of rice. Do not apply any insecticides/fungicides on the matured rice crop. In North Konkan, apply protective irrigation to vegetables and orchards. Continue harvesting of rice in morning hours and follow immediate threshing of rice; grains may be dried in sun for 3 to 4 days. Undertake harvesting of matured finger millet. Dry produce in the sun for 2-3 days and then undertake threshing. Undertake sowing of okra and watermelon
- In Madhya Maharashtra, undertake sowing of wheat from 15th October to 15th November. Continue harvesting of matured soybean and pearl millet. Apply protective irrigation in tur and cotton. In rice fields, maintain water level of 5 to 10 cm. Continue preparatory tillage operations for *rabi* sorghum, gram and safflower. In Western Ghat Zone, undertake harvesting of early varieties of rice.
- In Marathwada, apply protective irrigation to sugarcane, vegetables and orchards. Irrigate sugarcane using drip irrigation method. Undertake land preparation for sowing of wheat. As per availability of water, undertake sowing of chickpea crop and safflower. Undertake seed treatment with Thiram @ 4 g per kg or Carbendazim @ 2 g per kg before sowing. Continue harvesting of *kharif* soybean, sorghum and pearl millet. Dry soybean for one to two days then undertake threshing.
- In West Vidarbha, apply protective irrigation to vegetables and orchards. To minimize soil moisture stress in cotton (boll development stage), undertake foliar spray of 1% KNO₃ or 1.5% sulphate of potash. Continue

harvesting of short duration matured soybean. Under sufficient residual soil moisture, continue sowing of rainfed linseed, chickpea, *rabi* maize and sorghum up to first fortnight of October. In East Vidrbha, apply protective irrigation to vegetables and orchards. Maintain water level 5 to 10 cm in rice fields.

- In Konkan, to control army worm & gundi bug in late varieties of rice, undertake dusting of 2% powder of Methyl Parathion @ 20 kg/ha.
- **Gujarat:**
 - In Middle Gujarat, continue harvesting of matured pearl millet crop and intercultural operations in cotton, castor, cluster bean and vegetable crops. Apply irrigation in pigeon pea, cluster bean crop.
 - In North Gujarat, undertake land preparation for sowing of mustard, fennel and carrot crops. Complete harvesting of groundnut, sesame, bajra, maize, cow pea and green gram crops.
 - In Saurashtra & Kutch, undertake land preparation for sowing of mustard. Carry out sowing of *rabi* sorghum, garlic, chickpea where irrigation facility is available. Wherever possible, undertake mulching using dry grass, crop residues etc. Apply irrigation to the standing crops as per availability and crop stage. Continue intercultural operations in castor and vegetable crops to conserve soil moisture. Complete harvesting of matured groundnut, sesame, soybean, bajara, green gram and black gram crops.
 - In South Gujarat, continue planting of sugarcane crop. Carry out mulching in vegetable crops using fodder/plastic mulch to conserve moisture.
 - In North Gujarat, present temperature and humidity conditions favour infestation of thrips, jassid and mealy bug in cluster bean crop; to control, spray Imidacloprid 17.8 % @ 5 ml or Thiomethoxam @ 6 g in 10 litres of water in clear weather.
- **Animal Husbandry**
 - In Gujarat, keep the animal shed clean.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Weather remained mainly dry/dry over the region during the week.
- **Advisories:**
 - **Madhya Pradesh:**
 - In West Madhya Pradesh, undertake nursery preparation for *rabi* vegetables. Undertake sowing of pea, garlic and planting of potato. Undertake digging of matured rhizomes of ginger. Undertake field preparation for sowing of wheat, gram and mustard. Undertake sowing of gram and mustard at optimum soil moisture conditions. Continue harvesting of pearl millet, green gram, black gram, soybean and vegetables.
 - In East Madhya Pradesh, continue harvesting of matured soybean and groundnut. Continue sowing of gram, mustard and toria. Undertake nursery preparation for vegetables. Continue planting of horticultural crops like papaya, mango, guava etc. In Bundelkhand Zone, continue transplanting of tomato, chilli, brinjal, cauliflower and cabbage. Continue sowing of radish, fenugreek, spinach, mustard, coriander and turnip. Keep inputs ready for seedbed preparation of onion and planting of potato. Undertake sowing of early varieties of pea.
 - In Kymore Plateau and Satpura Hill Zone, undertake harvesting of matured soybean and rice. Continue nursery preparation for early season *rabi* vegetables. Continue sowing of pea. Undertake sowing of carrot, beetroot, radish, spinach, fenugreek and planting of potato.
 - In Satpura Plateau Zone, to control infection of sucking pest in cotton, spray Thymethoxon @ 0.25 g/litre of water or Imidacloprid @ 0.5 ml/litre of water.
 - **Chhattisgarh:**
 - Continue transplanting of winter vegetables like cauliflower, cabbage, chilli, tomato, brinjal etc. Continue harvesting of matured crops like mung, urad, maize, rice, groundnut, finger millet etc. Continue sowing of *rabi* crops like gram, linseed, lentil, toria, mustard, green pea and potato and arrange seeds & fertilizer for cultivation of rainfed wheat, if having assured irrigation facility. Continue planting of banana, papaya, mango, guava etc. In Plain Zone, continue sowing of carrot and turnip. Continue seed bed preparation for onion.
 - In Bastar Plateau Zone, continue harvesting of early varieties of rice. Continue sowing of toria. Continue nursery preparation for papaya and custard apple. Undertake nursery preparation for *rabi* vegetables. Undertake field preparation for sowing of *rabi* crops.
- **Animal Husbandry**
 - In Madhya Pradesh, provide clean and fresh water two times a day. Vaccinate the cattle for control of FMD and HS disease.
 - 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:** Rainfall occurred in Kupwara district of Punjab during the week. Weather remained mainly

dry/dry over rest of the region.

• **Advisories:**

▪ **Jammu & Kashmir:**

- As rain/thundershowers likely at many places over Jammu & Kashmir on 16th October, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- As thunderstorm accompanied with hail storm likely at isolated places over Jammu & Kashmir on 16th October, use hail net 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.
- Undertake nursery sowing of late cauliflower and onion. Continue harvesting of early maturing varieties of rice and maize. Continue sowing of toria, methi, spinach beet, coriander, radish, carrot, beet root and spinach. Continue planting of potato. Continue picking up of matured pods of green gram. Continue transplanting of cole crops. Continue nursery sowing of *rabi* vegetables. Continue picking up of matured tomato, brinjal, capsicum, okra and broccoli.
- In Valley Temperate Zone, continue harvesting of matured rice crop, green cobs of maize, pulses and matured sunflower, apple and pear. Continue nursery sowing of onion. Complete sowing of leafy vegetables. Undertake sowing of pea and land preparation for sowing of *rabi* crops.
- To control the attack of shoot and fruit borer in brinjal, spray Dimethoate 30 EC @ 1ml/litre of water in clear weather.

▪ **Uttarakhand:**

- Undertake sowing of mustard. Continue harvesting of early and medium varieties of rice. Continue sowing of toria, pea, radish, broccoli and turnip. Continue field preparation for planting of early varieties of potato. Continue transplanting of cabbage and cauliflower. Continue picking up of matured cucurbits. Sowing of winter season sugarcane crop should be done up to 15th October.
- In Hill Zone, continue sowing of pea and toria. Continue harvesting of matured crops. Continue sowing of radish, carrot, turnip, leafy vegetables like mustard, fenugreek, spinach etc. Continue nursery sowing of onion. Continue cultivation of mushroom. Undertake hoeing in vegetable pea, cabbage, fenugreek, spinach etc. Drenching should be done during hoeing using biological agents such as Trichoderma, Pseudomonas, Beauveria etc. Undertake field preparation for sowing of *rabi* crops.
- To control the root and stem joint rot disease in tomato and chilli, irrigate the roots of the crops with the solution of Trichoderma @ 10 g/litre or Carbendazim @ 1g/litre of water.

▪ **Himachal Pradesh:**

- Continue harvesting of matured rice, maize and pulses. Continue field preparation for sowing of early mustard and pea in lower regions and planting of potato in lower and mid hill regions at optimum soil moisture conditions. Prepare the FYM for the sowing of white button mushroom in low and mid hills regions and prepare the medium for the sowing of Dhingri family Mushrooms. Undertake sowing of early varieties of wheat during first fortnight of October. Undertake weeding and hoeing in tomato, brinjal, chilli and capsicum. Continue sowing of turnip and radish in lower rainfed areas. In mid hill region continue nursery sowing of Chinese cabbage and direct sowing of raddish, carrot, broccoli and lettuce.
- In Mid Hills Sub-Humid Zone, continue sowing of pea, garlic, radish, carrot, turnip and nursery preparation for cauliflower and cole crops.
- To control white fly and sucking pest in vegetables spray Imidacloprid @ 1 ml/3litres of water.

▪ **Punjab, Haryana & Delhi:**

- In Punjab, apply irrigation in rice, vegetables and fruit crops. Continue harvesting of matured maize. Continue planting of early varieties of potato and pea and sowing of spinach, radish, turnip and carrot. Continue planting of early varieties of sugarcane. Continue nursery sowing of mid season cauliflower and planting of seedlings of onion. Continue nursery sowing of tomato. Continue picking up of matured cotton bolls. Undertake harvesting of matured rice in Central Plain Zone.
- 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, undertake harvesting of matured rice. Undertake planting of winter sugarcane at optimum soil moisture for better seed germination. Undertake sowing of gram and sowing of garlic on raised bed. Continue sowing early mustard and planting of early potato. Continue sowing of early pea. Continue transplanting of onion. Continue sowing of sarson saag, radish, spinach, coriander. Continue transplanting of cauliflower, cabbage, broccoli and tomato. Continue sowing of carrot on raised bed. Continue field preparation for sowing of *rabi* crops.
- In Haryana, due to favourable weather, there are chances of infestation of paddy blast, spray Tricyclazole (Bim or sivik) 75 WP @ 120g mixed with 200 litres of water per acre.

▪ **Uttar Pradesh:**

- In East Uttar Pradesh, keep inputs ready for sowing of wheat. Continue sowing of toria. Continue field preparation for planting of potato and pea and undertake planting of potato and sowing of pea under optimum soil moisture conditions. Continue harvesting of matured maize, sesame, green gram and black gram. Apply irrigation in rice. Continue transplanting of cauliflower, cabbage, chilli and tomato. Continue sowing of spinach, radish, carrot, turnip, beetroot, fenugreek, coriander, okra and cucurbits. Continue planting of mango, ber, guava, lime etc. in new orchard. Continue picking up of matured brinjal and bottle gourd.
- In West Uttar Pradesh, continue transplanting of cauliflower, cabbage, chilli, broccoli and tomato. Continue sowing of carrot on raised bed. Continue sowing of sarson saag, radish, coriander, spinach and fenugreek. Continue transplanting of onion in prepared fields. Continue sowing of toria and planting of early varieties of potato. Continue harvesting of matured vegetables. Undertake sowing of pea and mustard under optimum soil moisture conditions.

▪ **Rajasthan:**

- In East Rajasthan, continue field preparation for sowing of *rabi* crops. Continue sowing of radish and carrot. Continue nursery preparation for *rabi* vegetables like chilli, brinjal, tomato, cabbage and cauliflower. Undertake 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 and soybean.
- In West Rajasthan, continue sowing of radish, turnip and carrot. Continue field preparation for sowing of Taramira, gram and mustard and undertake sowing at optimum soil moisture condition. Continue transplanting of cauliflower and cabbage. Undertake nursery preparation for onion. Apply irrigation in groundnut and cotton. In Irrigated North Western Plain Zone, continue picking up matured cotton bolls. Continue sowing of mustard. Undertake field preparation for sowing of gram.

• **Animal Husbandry**

- In Jammu & Kashmir, provide supplementary mineral mixture with 50 gm iodized salt regularly to the milking and pregnant animals. Give vaccination against BQ and HS. Ensure green fodder to the livestock.

➤ **Apiculture:**

- In Jammu & Kashmir, prepare colonies for upcoming winter season. Kill wasps with a wooden flap. Provide sugar feeding/artificial diet. Sulphur dusting @ 1g/frame for mite management is recommended. Soak pads in formalin in the ratio of 2:1(water) for mite control. Protect bee hive from ants.

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