



National Agromet Advisory Service Bulletin

Friday 01st November 2019

(For the period 1st to 5th November 2019)



Issued by

India Meteorological Department

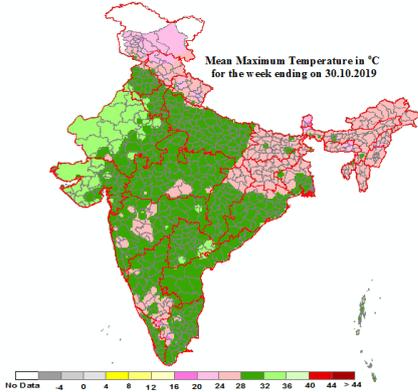
Weblink For

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

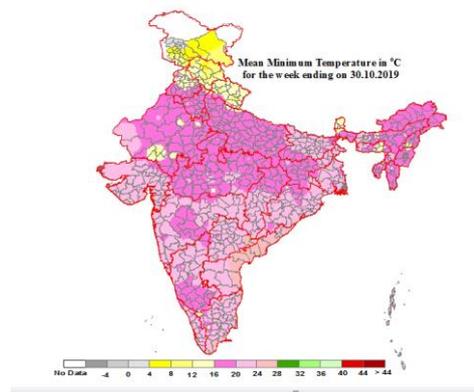
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

spatial distribution of weather parameters for the week ending on 30.10.2019

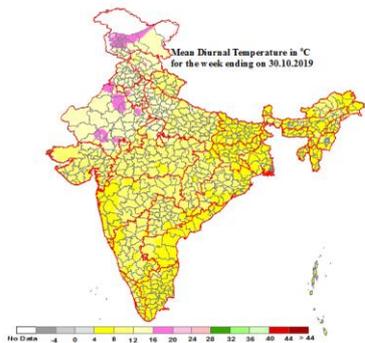
Mean Maximum Temperature (°C) for the week ending on 30.10.2019



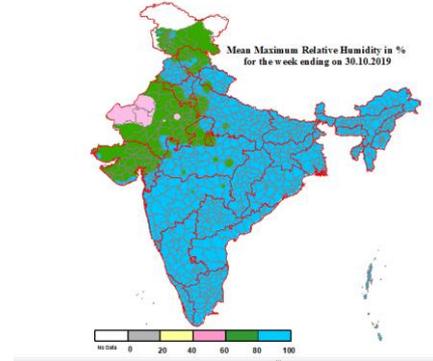
Mean Minimum Temperature (°C) for the week ending on 30.10.2019



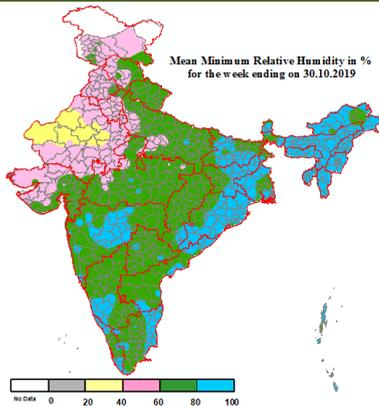
Mean Diurnal Temperature Variation (°C) for the week ending on 30.10.2019



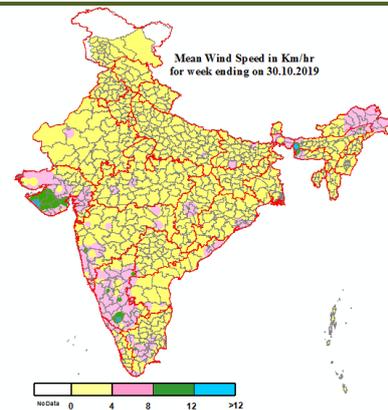
Mean Maximum Relative Humidity (%) for the week ending on 30.10.2019



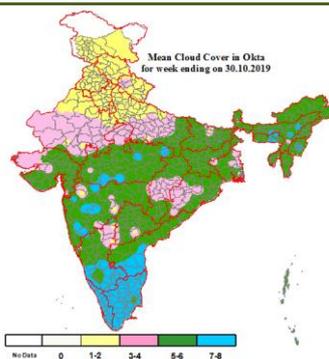
Mean Minimum Relative Humidity (%) for the week ending on 30.10.2019



Mean Wind Speed (km/hr) for the week ending on 30.10.2019

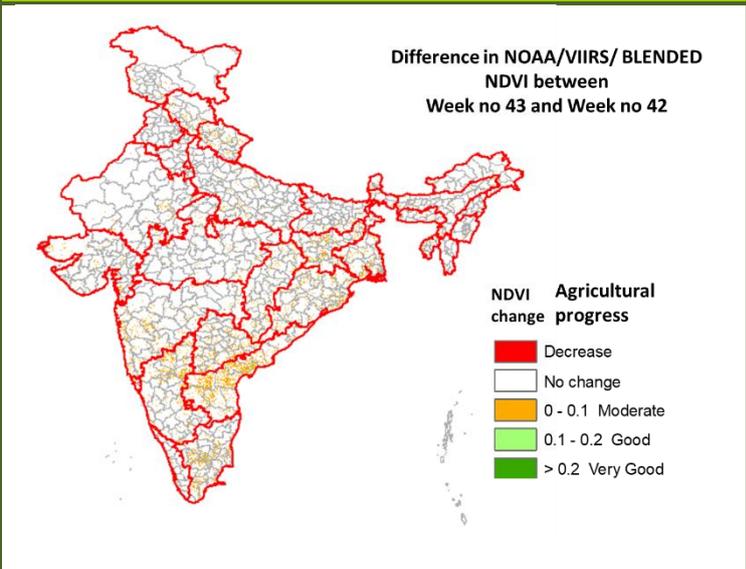
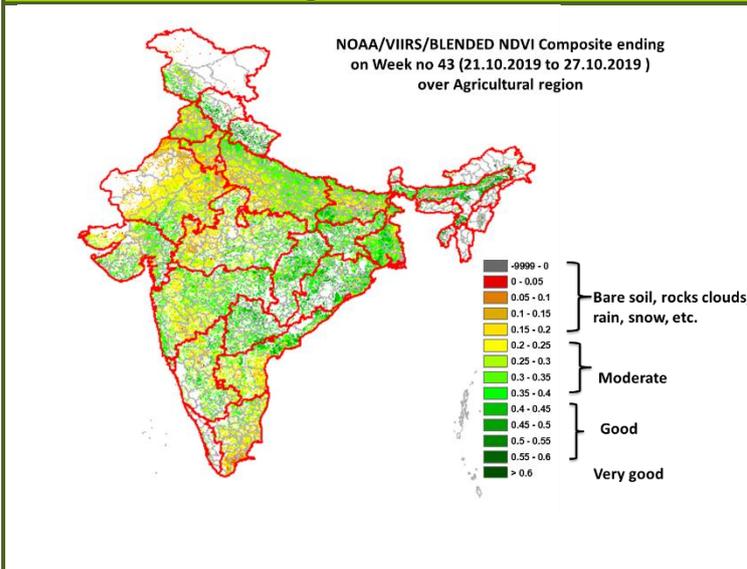


Mean Cloud Cover (okta) for the week ending on 30.10.2019



NOAA/VIIRS/BLENDED NDVI composite for the week number 43 (21.10.2019 to 27.10.2019) over Agricultural regions of India

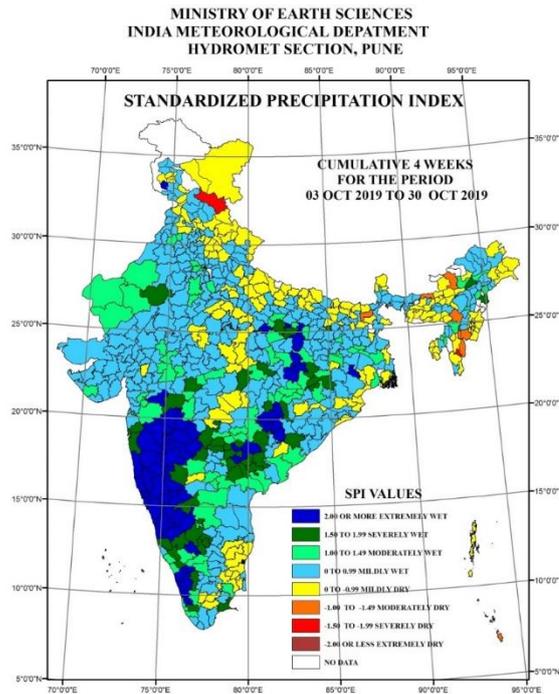
Difference in NOAA/VIIRS/BLENDED NDVI between week number 43 and week number 42



Agriculture vigour was good at most parts of Uttarakhand; many parts of Himachal Pradesh, North Eastern states, North Coastal Andhra Pradesh, Chhattisgarh; at a few places over Jammu division, Jharkhand, West Bengal, Bihar, Odisha, Telangana and at isolated places of South Coastal Andhra Pradesh, Rayalaseema, Karnataka, Vidarbha, Konkan, East Madhya Pradesh, Gujarat, East Rajasthan and Karnataka.

Good difference in agricultural vigour has been observed at isolated places over South Telangana, Gangetic West Bengal, Jharkhand, North Chhattisgarh, Uttarakhand, Himachal Pradesh, Konkan, Tamilnadu and Kerala.

Standardised Precipitation Index Cumulative 4 weeks for the period 03rd Oct to 30th Oct 2019



- Extremely/Severely wet conditions exist in Lakhimpur district of Assam; Jahanabad district of Bihar; Rajouri district of Jammu; Uttar Kannada, Dakshin Kannada, Udupi, Bagalkote, Belgam, Bidar, Bijapur, Dharwad, Gadag, Haveri, Koppal, Bangalore Rural, Bangalore Urban, Bellary, Chikmagalur, Chitradurga, Davangere, Hassan, Kodagu, Mandya, Shimoga, Tumkur, Ramanagara districts of Karnataka; Ernakulam, Kottayam, Malappuram, Palakkad, Thrissur, Pathanamthitta, Wayanad districts of Kerala; Khandwa, Dindori, Seoni districts of West Madhya Pradesh, Mumbai City, Raigad, Ratnagiri, Thane, Sindhudurg, Ahmednagar, Dhule, Jalgaon, Kolhapur, Pune, Sangli, Satara, Sholapur, Aurangabad, Beed, Nanded, Osmanabad, Parbhani, Latur, Jalna districts of Maharashtra; Tuensang districts of Nagaland; Jharsuguda, Koraput, Sundargarh districts of Odisha; Nagaur district of Rajasthan; Coimbatore, Nilgiri, Ramanathapuram districts of Tamilnadu; Allahabad, Chandauli, Mirzapur, Sonbhadra, Sahuji Maharaj Nagar, Sant Ravidas Nagar districts of Uttar Pradesh; Lakshadweep district; East Singhbhum district of Jharkhand; Bastar, Dhamtari, Jashpur, Kanker, Korba, Surguja, Bijapur, Narayanpur, Balod, Gariaband, Surajpur, Kondagaon districts of Chhattisgarh; North Goa, South Goa districts of Goa; Karimnagar, Khammam, Nalgonda, Nizamabad, Warangal, B.Kothagudem, Jangaon, J. Bhupalpally, Kamareddy, Mahabubabad, Peddapalle, Rajanna Sircilla, Siddipet, Suryapet, Warangal_Urban, Y.Bhuvanagiri districts of Telangana.
- Extremely to severely dry conditions exist in Lahual & Spitti district of Himachal Pradesh; Serchhip district of Mizoram.
- Moderately wet to moderately dry conditions were experienced in remaining districts in the country.

Significant Weather Features

- ♦ The **Severe Cyclonic Storm 'Maha'** (Pronounced as M'maha) over eastcentral Arabian Sea and adjoining Lakshadweep area moved northwestwards with a speed of 24 kmph during past 06 hours and lay centered at 0830 hours IST of 1st November, 2019 near Latitude 14.8°N and Longitude 71.0°E over eastcentral Arabian Sea about 450 km north-northwest of Aminidivi (Lakshadweep), 460 km north-northwest of Mangaluru (Karnataka) and 310 km south-southwest of Goa. It is very likely to move northwestwards during next 06 hours and thereafter move west-northwestwards till 5th November morning and recurve northeastwards subsequently. It is very likely to intensify into a **Very Severe Cyclonic Storm** over eastcentral Arabian sea during the next 12 hours.

♦ The **Depression** over westcentral Arabian Sea moved southwestwards with a speed of 11 kmph during past 06 hours and lay centred at 0830 hours IST of today, the 1st November, 2019 over westcentral Arabian Sea near Latitude 16.3°N and Longitude 59.0°E, about 1490 km west-southwest of Mumbai (Maharashtra), 540 km east-northeast of Salalah (Oman) and 480 km south- southeast of Masirah (Oman). It is very likely to move southwestwards across westcentral Arabian Sea and weaken into a **Well Marked Low Pressure Area** during next 12 hours.

Weather Forecast for next 5 days valid upto 0830 hours of 06th November 2019

- ♦ Meteorological sub-division wise detailed 5 days rainfall forecast is given in Table-below.
- ♦ No significant change in minimum temperatures likely over northwest India during next 24 hours and fall by 2-3°C thereafter.

5 Day Rainfall Forecast (MID-DAY)

01st November 2019

Met-Sub-Division	01-Nov Today	02Nov Sat	03Nov Sun	04Nov Mon	05Nov Tue
1. Andaman & Nicobar Islands	FWS	FWS	WS	WS	WS
2. Arunachal Pradesh	DRY	DRY	DRY	DRY	DRY
3. Assam & Meghalaya	DRY	DRY	DRY	ISOL	DRY
4. N. M. M. & T.	DRY	DRY	DRY	DRY	DRY
5. S.H. West Bengal & Sikkim	DRY	DRY	DRY	DRY	DRY
6. Gangetic West Bengal	DRY	DRY	DRY	DRY	DRY
7. Odisha	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	DRY	DRY	DRY	DRY	DRY
12. Uttarakhnad	DRY	ISOL	ISOL	DRY	DRY
13. Haryana, Chd & Delhi	DRY	ISOL	DRY	DRY	DRY
14. Punjab	DRY	ISOL	DRY	DRY	DRY
15. Himachal Pradesh	ISOL	SCT	SCT	DRY	DRY
16. Jammu & Kashmir	SCT	FWS	FWS	DRY	ISOL
17. West Rajasthan	ISOL	ISOL	DRY	DRY	DRY
18. East Rajasthan	ISOL	ISOL	ISOL	DRY	DRY
19. West Madhya Pradesh	ISOL	ISOL	ISOL	DRY	DRY
20. East Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
21. Gujarat Region	ISOL	SCT	ISOL	ISOL	ISOL
22. Saurashtra & Kutch	ISOL	SCT	ISOL	ISOL	ISOL
23. Konkan & Goa	SCT	ISOL	ISOL	ISOL	SCT
24. Madhya Maharashtra	SCT	SCT	ISOL	ISOL	SCT
25. Marathawada	SCT	SCT	ISOL	ISOL	ISOL
26. Vidharbha	SCT	SCT	ISOL	ISOL	DRY
27. Chhattisgarh	ISOL	ISOL	ISOL	DRY	DRY
28. Coastal A. P. & Yanam	ISOL	ISOL	ISOL	ISOL	ISOL
29. Telangana	SCT	SCT	SCT	SCT	ISOL
30. Rayalaseema	ISOL	ISOL	ISOL	ISOL	ISOL
31. T.N.,Puducherry & Karaikal	SCT	SCT	SCT	ISOL	ISOL
32. Coastal Karnataka	SCT	ISOL	SCT	SCT	SCT
33. North Interior Karnataka	SCT	SCT	SCT	SCT	SCT
34. South Interior Karnataka	ISOL	SCT	SCT	SCT	FWS
35. Kerala & Mahe	ISOL	ISOL	SCT	SCT	SCT
36. Lakshadweep	SCT	ISOL	ISOL	ISOL	ISOL

% Station Reporting Rainfall

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

Weather Warning during next 5 days

01 November (Day 1):

- ◆ **Thunderstorm accompanied with lightning** very likely at isolated places over West Madhya Pradesh, Vidarbha, Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Coastal Andhra Pradesh, Telangana, Interior Karnataka and Marathawada.
- ◆ **Gale winds**, speed reaching 100-110 kmph gusting to 125 kmph over eastcentral Arabian Sea, very likely to increase gradually over eastcentral Arabian Sea becoming 115-125 kmph gusting to 140 kmph by evening of 1st November, 45-55 kmph gusting to 65 kmph likely over westcentral Arabian Sea and decrease gradually thereafter; 40-50 Kmph gusting to 60 Kmph likely over westcentral Arabian Sea.
- ◆ **Squally wind** speed reaching 40-50 kmph gusting to 60 kmph likely along & off Karnataka, Goa- Maharashtra coast.
- ◆ **Sea condition** is high to very high over eastcentral Arabian Sea and will become Phenomenal from evening and rough to very rough over Lakshadweep area and adjoining southeast Arabian Sea. Fishermen are advised not to venture along & off into Karnataka-Goa- Maharashtra Coasts and into eastcentral Arabian Sea.

02 November (Day 2):

- ◆ **Thunderstorm accompanied with lightning and hail** very likely at isolated places over Jammu & Kashmir; with **lightning** at isolated places over Himachal Pradesh, West Madhya Pradesh, Gujarat State, Marathawada and Madhya Maharashtra.
- ◆ **Gale winds**, speed reaching 155-165 Kmph gusting to 180 Kmph, likely over eastcentral and adjoining westcentral Arabian Sea.
- ◆ **Sea condition likely to be phenomenal** over eastcentral Arabian Sea. Fishermen are advised not to venture into these areas.

03 November (Day 3):

- ◆ **Heavy rainfall** very likely at isolated places over Andaman & Nicobar Islands.
- ◆ **Thunderstorm accompanied with lightning** very likely at isolated places over West Madhya Pradesh.
- ◆ **Gale winds**, speed reaching 155-165 Kmph gusting to 185 Kmph, likely over eastcentral and adjoining westcentral Arabian Sea. Fishermen are advised not to venture into these areas.
- ◆ **Sea condition likely to be phenomenal** over eastcentral Arabian Sea. Fishermen are advised not to venture into these areas.

04 November (Day 4):

- ◆ **Heavy to very heavy rainfall** likely at isolated places over Andaman & Nicobar Islands.
- ◆ **Gale winds**, speed reaching 155-165 kmph gusting to 185 kmph, likely over eastcentral and adjoining westcentral Arabian Sea; **Squally winds** 115-125 gusting to 140 kmph likely over westcentral Arabian Sea. Fishermen are advised not to venture into these areas.
- ◆ **Sea condition likely to be phenomenal** over eastcentral Arabian Sea. Fishermen are advised not to venture into these areas.

05 November (Day 5):

- ◆ **Heavy to very heavy rainfall likely at isolated places over Andaman & Nicobar Islands.**
- ◆ **Gale winds**, speed reaching 155-165 kmph gusting to 180 kmph, likely over eastcentral and adjoining westcentral Arabian Sea. Fishermen are advised not to venture into these areas.
- ◆ **Sea condition likely to be phenomenal** over eastcentral & adjoining westcentral Arabian Sea. Fishermen are advised not to venture into these areas.

Weather Outlook for subsequent 2 days from 06th November to 08th November, 2019

- ◆ Isolated to scattered light/moderate rainfall along with thunderstorm activity is likely to occur over peninsular India and Andaman & Nicobar Islands.
- ◆ Rainfall at many places with isolated heavy falls likely over Saurashtra & Gujarat region. Squally wind speed 40-50 Kmph gusting to 60 Kmph along & off Gujarat coast.
- ◆ Under the influence of a fresh Western Disturbance & its interaction with easterlies, isolated to scattered precipitation very likely to occur over northwest India.
- ◆ Mainly Dry weather is likely to prevail over rest of the country.

Salient advisories

- **Gale winds**, speed reaching 100-110 kmph gusting to 125 kmph over eastcentral Arabian Sea, very likely to increase gradually over eastcentral Arabian Sea becoming 115-125 kmph gusting to 140 kmph by evening of 1st November, 45-55 kmph gusting to 65 kmph likely over westcentral Arabian Sea and decrease gradually thereafter; 40-50 Kmph gusting to 60 Kmph likely over westcentral Arabian Sea, **Squally wind** speed reaching 40-50 kmph gusting to 60 kmph likely along & off Karnataka, Goa-Maharashtra coast, provide mechanical support to young fruit plants, banana and staking of vegetables to prevent the crops from lodging due to strong winds. Undertake propping up in sugarcane.
- As rain/thundershowers likely at most/many places over **Andaman & Nicobar Islands** during the period along with **Heavy/ Heavy to very heavy rainfall** at isolated places on 3rd to 5th November, avoid irrigation, intercultural operation, 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 safer places.
- Thunderstorm **accompanied** with **lightning and hail** very likely at isolated places over Jammu & Kashmir, thunderstorm **accompanied** with **lightning** very likely at isolated places over west Madhya Pradesh from 1st to 3rd, over Chhattisgarh and Vidarbha on 1st, over Madhya Maharashtra, Marathawada on 1st & 2nd and over Himachal Pradesh on 2nd November, provide mechanical support to young fruit plants, banana and staking of vegetables to prevent the crops from lodging due to strong winds. Provide hail net for orchard crops to protect from mechanical damage in Jammu & Kashmir. Keep harvested produce at safer places. Undertake propping up in sugarcane in Madhya Maharashtra, Marathawada.
- Undertake sowing/ transplanting of following *rabi* crops:
 - Continue sowing of rapeseed/mustard, lentil and planting of potato in **Assam**.
 - In Southern Telangana zone, continue sowing of rabi redgram, groundnut and castor.
 - In South Interior Karnataka, complete sowing of Bengal gram, ragi, maize and cowpea
 - In North Interior Karnataka, continue sowing of sunflower, sorghum, chickpea, niger and safflower
 - In North Gujarat, continue sowing of *Rabi* crops viz. mustard, gram and fennel
 - In **Madhya Maharashtra**, continue land preparation for sowing of rabi jowar, safflower and rainfed gram in fallow lands. In **Marathwada**, undertake sowing of gram, wheat, safflower with assured

irrigation. In **Vidarbha**, continue land preparation of *rabi* crops like safflower, jowar, linseed and gram in fallow lands.

- In **West Uttar Pradesh**, continue sowing of sarson/ rai, gram, lentil, peas, carrot, planting of potato.
- In Sub Humid Southern Plain and Aravali Hill Zone of **Rajasthan**, continue sowing of mustard, gram, pea and garlic.
- Continue sowing of mustard, pea in **Uttarakhand** and **Jammu & Kashmir**.

- As mainly dry/ dry weather would prevail, complete harvesting of matured soybean in **Madhya Pradesh**. Continue harvesting of mature paddy and maize crops in Bihar. In **Chhattisgarh**, continue harvesting of matured mung, urd, maize, groundnut and finger millet in clear weather. In **South Interior Karnataka**, continue harvesting of groundnut in clear weather. Harvest matured rice, maize, green gram, black gram and groundnut in **Odisha**. Undertake harvesting of the rice in Punjab.

Detailed Agromet Advisories

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

Realised Rainfall Significant rainfall occurred in all districts of Andhra Pradesh and Telangana except in Guntur and Krishna districts of Andhra Pradesh and Khammam; M. Malkajiri, Nalgonda and Suryapet districts of Telangana; in all districts of Coastal Karnataka, in all districts of North Interior Karnataka except Gadag and Yadgir districts and in all districts of South Interior Karnataka except Chamarajanagar and Mysuru districts; all the districts of Kerala and all districts in Tamilnadu except Erode, Karur, Salem, Theni, Tirupur.

Advisories:

- **Thunderstorm accompanied with lightning** very likely at isolated places over Coastal Andhra Pradesh, Telangana and Interior Karnataka, **Squally wind** speed reaching 40-50 kmph gusting to 60 kmph likely along & off Karnataka coast on 1st November, provide mechanical support to young fruit plants, banana and staking of vegetables to prevent the crops from lodging due to strong winds. Undertake propping up in sugarcane. Keep harvested produce at safer places.

Kerala

- In Northern Zone, avoid water stagnation in rice fields where the crop is in maturing stage. Undertake sowing/transplanting of vegetables.
- In Problem Area Zone, bud rot incidence can be severe in coconut, so remove the affected portion and apply 10% Bordeaux paste followed by 1% Bordeaux mixture. The high humid and water stagnated condition is highly favourable for the incidence of whitefly attack in coconut, spray organic emulsion Nimbicidine @ 2ml/lit or Verticillium leccani 1x10⁹ ml spore count for the effective control of white fly.
- In Central Zone, undertake sowing of cabbage and cauliflower seeds in the nursery beds. Addition of pseudomonas culture to the soil at the time of planting of cabbage and cauliflower will help to reduce fungal diseases.

Andhra Pradesh

- In Southern Zone of Andhra Pradesh, in view of heavy rain received during last week, farmers are advised to remove the excess stagnated water from the paddy nurseries. Continue harvesting of groundnut in clear weather and keep the produce in safe place.
- In North Coastal Andhra Pradesh, drain out excess water from the field of rice, sugarcane, cotton, banana and Vegetables. Due to rains if the rice crop is lodged, go for lifting and tying of three to four hills and apply Urea @25 kg and MOP @ 10 kg/ acre as booster dose. If the farmers are unable to drain out excess

water from the field, go for spraying with 1 % Potassium Nitrate(KNO₃). High relative humidity is favourable for incidence of tikka leaf spot disease in groundnut. To control spray Carbendazim + Mancozeb @ 2g/ litre of water. If the disease was not controlled with one spraying, go for second spraying after 15 days of 1st spray.

- In Scarce rainfall Zone of Rayalaseema, utilizing the available soil moisture, farmers are advised to sow the Bengalgram, Coriander, Safflower, Groundnut, Tobacco, Maize, Korra, Blackgram in black soils and Groundnut, Castor, Jowar, Korra, Maize, Greengram, Horsegram in red soils.
- In South Coastal Andhra Pradesh undertake land preparation for sowing of blackgram and sowing of Bengal gram, safflower, groundnut, castor with assured irrigation.

Telangana

- In Southern Telangana zone, drain out the excess water from the fields of rainfed crops of cotton, castor and vegetables wherever heavy rainfall received. Take up sowing of safflower and chickpea crops under residual soil moisture conditions.
- In Northern Telangana, continue sowing of Bengal gram, safflower, groundnut, mustard & castor under irrigation situation. Undertake sowing of Mustard upto 1st fortnight of November. Drain out the excess water from the field of rainfed crops cotton, turmeric and red gram wherever heavy rainfall received.

Tamil Nadu

- In South Zone, undertake sowing for sunflower and minor millet.
- In High Rainfall Zone, provide proper drainage in coconut field to avoid fungus root damage.
- In North Western Zone, Small onion crops sown during puratasi pattam are affected by colletotrichum twister disease due to prevalence of rainfall and low temperature. Spray of Profeconazole 25 EC @ 200 ml / acre along with sticking agent at 10 days interval for 3 times.
- In Western Zone, weather is congenial for powdery mildew and downy mildew in grapes, spray 0.3% wettable Sulphur and for controlling downy mildew, spray 1% Bordeaux mixture, during rain free period.
- In Cauvery Delta Zone, weather is congenial for Bacterial Leaf Blight and Bacterial Leaf Streak in *Samba* paddy, spray Streptomycin + Tetracycline 120 g + Copper oxy chloride 500 g mixture/acre or Copper hydroxide at 500 g/ac in 200 litre of water on a non rainy day.

Karnataka

- In Coastal Karnataka, drain out excess rain water from standing crop fields.
- In South Interior Karnataka, complete sowing of Bengal gram, ragi, maize and cowpea crops. Undertake harvesting of matured maize, arecanut and groundnut.
- In North Interior Karnataka, continue sowing of chickpea, sorghum, sunflower, safflower, wheat crops. Continue new planting of sugarcane.
- In North Interior Karnataka, pod borer eggs are noticed in the pigeon pea (flowering stage) crop; take up ovicidal insecticide spray such as Profenophos @ 2ml or Methomyl @0.6 gm /litre of water on a non rainy day.
- In Coastal Karnataka, scrape the bud rot infected part in coconut and apply a mixture of Metalaxyl plus Mancozeb @ 2 g / liter or apply Bordeaux paste on a non rainy day, protect the infected part from rain.

Animal Husbandry:

- In Karaikal and Pondicherry, animals may be vaccinated for Foot and Mouth Diseases and Haemorrhagic Septecemia. Openly grazed animals that are drinking pond water should be dewormed. Also in cattle, as a preventive measure for Babesiasis disease, apply Butox @ 2 ml/l of water on cattle and also spray it on the nearby areas of the cattle shed to control ectoparasites.
- In Karnataka, maintain the optimum room temperature in Sericulture, Poultry and Dairy unit by providing electric bulb for creating warm room temperature.

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

Realised Rainfall : Rainfall occurred in all districts of Arunachal Pradesh and Meghalaya; all districts in Assam except Barpeta, Bongaigaon, Chirang, Dhubri and Kokrajhar districts of Assam; Mamit district of Mizoram; Bishnupur, Imphal East, Imphal West, Senapati, Tamenglong, Thoubal and Ukhrul districts of Manipur; Dimapur, Kephire, Kohima, Mokokchung, Mon, Paren, Phek, Wokha and Zunheboto districts of Nagaland and North Tripura and West Tripura districts of Tripura.

Advisories:

Arunachal Pradesh

- In Arunachal Pradesh, continue transplanting of cole crops and sowing of mustard.

Assam & Meghalaya

- In Lower Brahmaputra Valley Zone, continue sowing of lentil, rapeseed/mustard and transplanting of cole crops. Apply Malathion 5% dust @ 3Kg per bigha against rice bug at milking to dough stage of Sali rice.
- In Central Brahmaputra Valley, continue land preparation for sowing of wheat and sowing of *rabi* maize and cole crops. Continue land preparation and sowing of rapeseed-mustard and *rabi* pulses and oilseeds. Gundhi bug infestation is observed in panicle emergence stage to milk dough stage which may be controlled by applying Malathion 5% dust @ 20 kg/ha based on ETL in Sali rice. Holding fires around the field in the night hours also reduce Gundhi bug population. Farmers are advised to adopt relay cropping with pea in the rice field 20-25 days before harvesting *Sali* rice, suitable varieties of pea such as T-136, bonneville etc.
- In Upper Brahmaputra Valley Zone, continue sowing for toria and transplanting of cole crops. Continue planting of potato. Apply Malathion 5% dust @ 3 Kg per bigha to control gundhi bug infestation in *Sali* rice. Spray Deltamethrin (Decis 2.8 EC) @ 1 ml/litre or Malathion 50EC @ 1.5 ml/litre to control fruit and shoot borer infestation in brinjal. Farmers are advised to adopt relay cropping with pea in *Sali* rice fields at about 20-25 days before harvesting *Sali* paddy. Due to cloudy weather coupled with high humidity during the past few weeks, blister blight disease may be observed in the tea plantations. For control, it is advised to spray Hexaconazole or Propiconazole (1 ml per litre of water) for about 2-3 times at an interval of 15 days. Alternatively, organic tea growers can spray Trichoderma (Bioveer) @ 2 Kg per 100 litres of water for effective control of the disease.
- In Barak Valley Zone of Assam, continue planting of potato and sowing of rapeseed and mustard and nursery sowing of brinjal, mid cauliflower and cabbage. To control rice bug infestation in Sali rice at milky and dough stage, farmers are advised to apply Malathion 5% dust @20 kg/ha. If live burrows of rodent are observed in the rice field, then regular trapping with local bamboo traps are advised. Moreover, poison baiting is also essential for rodent pest management. Pre-bait can be prepared out of 1 kg cereal + 20 gm vegetable oil + 10 gm dried fish may be applied @ 10 gm/live burrow for 3 days. This treatment should be followed by addition of Zinc phosphide @ 25 gm/kg bait on the 4th day.
- In North Bank Plain Zone of Assam, continue land preparation/ sowing of rapeseed-mustard and cole crops and planting of potato. Apply Monocrotophos @3ml/ litre to control rice bug infestation in Sali rice.
- In Hill Zone of Assam, continue harvesting of matured Sali rice. Areas where paddy crop is about to mature, irrigation should be stopped two weeks before harvesting. Continue nursery sowing of chilli and tomato.
- In Meghalaya, continue nursery raising/ transplanting for cole crops (cabbage, cauliflower, broccoli). Prepare uplands for early *rabi* crops. Maintain proper drainage in the field crops/vegetables/fruit crops. Spray Tricy-Biofungicide, *Pseudomonas fluorescens* @ 4g/10 litre against blast in rice. Maintain proper water level up to 5 cm in the rice fields at flowering stage.

Manipur, Mizoram, Tripura and Nagaland

- In Nagaland, continue land preparation/ sowing of toria, maize and nursery sowing/transplanting of vegetables like cabbage, cauliflower, knolkhol, broccoli, radish, tomato. Undertake harvesting of

ginger/turmeric. To control the attack of sucking pest in the vegetable crops farmer are advised to spray neem seed kernel extract 5 percent.

- In Manipur, continue harvesting of matured *kharif* rice, soybean, ground nut and rice bean and land preparation/sowing of rapeseed and field pea. Continue planting of potato, nursery sowing of cole crops, onion and sowing of Broad bean/ pea/French bean.
- In Mizoram, continue harvesting of mature panicles of *Jhum* rice. Continue nursery raising of brinjal, chilli and early crucifer crops. Continue sowing of soybean along with standing maize crop during clear/dry days. Before transplanting of broccoli and cabbage the seedlings, go for root dip in Bavistin solution @ 1 grams per litre of water for ½ hour to check damping off disease.
- In Tripura, continue transplanting of cole crops. Continue planting of potato and sowing of sesame. Continue harvesting of *Aman* rice.

Animal Husbandry

- In Assam, to protect poultry from cold, put gunny bags or plastic sheath curtains on the side walls of shed and bedding material should be increased by six inches. Care should be taken not to restrict ventilation. Care should be taken not to restrict ventilation.
- In Arunachal Pradesh, vaccination against poultry against Ranikhet and infectious bronchitis.
- In Upper Brahmaputra Valley Zone of Assam, undertake vaccination (RDF1) of the one week old chicks against Ranikhet disease and against Gamboro disease in two weeks old chicks after consultation with local veterinarian.

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

Realised Rainfall: Rainfall occurred in Nicobar district of Andaman & Nicobar Islands; in Banka, Bhagalpur and Jamui districts of Bihar; in all districts of Jharkhand except Chatra, Garhwa and Palamu; in all districts of Odisha except Malkangiri and Nawapara; in Malda and South Dinajpur districts of Sub-Himalayan West Bengal & Sikkim and in all districts of Gangetic West Bengal. Weather remained dry/mainly dry over the rest of the region.

Advisories:

Odisha

- In the uplands, continue harvesting of paddy crop. Take up sowing of linseed and gram as paira crop after the harvesting of paddy provided sufficient soil moisture is available. Take up sowing of Rabi groundnut, toria, sesame and nursery raising of tomato, cabbage and cauliflower. Harvest the mature groundnut crop if weather conditions are favourable.
- Employ alternate wetting and drying technique for control of BPH in the paddy field. In Gall Midge affected paddy fields, apply Thiamethoxam 25% WG @ 40gm/acre or Fipronil 5% SC @ 400ml/acre or Chloropyriphos 20EC @ 500 ml/acre.

Bihar

- Transplant brinjal, chilli, cauliflower, cabbage in the field. Carry out weeding in pigeon pea. Continue harvesting of mature paddy and kharif maize crops.
- Regularly monitor attack of insects/pests and diseases in vegetable crops. To protect the vegetable crops from rotting, apply Mancozeb or Carbendazim @ 2.5 g/litre of water

Jharkhand

- Prepare field for cultivation of mustard, wheat, lentil, table pea, field pea, potato, linseed and barley crops. Take up nursery sowing of onion. Transplant 3-4 week old seedlings of cabbage and cauliflower in the main field. In the medium lands, take up harvesting of rice at maturity stage. At the time of harvesting rice, pick the black earhead (affected earhead with false smut disease) and destroy them after burning.

West Bengal

- In Sub-Himalayan West Bengal, take up sowing of spinach after seed treatment with Bavistin or Mancozeb @ 2gram/kg of seeds.
- In Sub-Himalayan West Bengal, to control brown spot in paddy, spray Propiconazole 25% EC @ 1ml/litre of water. Install pheromone traps @ 5 traps/bigha for fruit fly control in all cucurbitaceous vegetables
- In Gangetic West Bengal, remove excess water from Aman paddy field. Undertake transplanting of seedlings of chilli, tomato and brinjal. For the main field preparation for cabbage and cauliflower, bring the soil to a fine tilth and apply 4t FYM per bigha.
- In case of Gundhi bug infestation in paddy, spray Neem oil @ 10ml/litre of water during early hours of the day at clear weather condition.

Andaman & Nicobar Islands

- As rain/thundershowers likely at most/many places over Andaman & Nicobar Islands during the period along with **Heavy/ Heavy to very heavy rainfall** at isolated places on 3rd to 5th November, avoid irrigation, intercultural operation, 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 safer places.
- Keep open the bunds in rice field to remove excess water as moderate rainfall is expected. Harvest the matured rice to avoid lodging due to rain and keep in safe place. Make basins around the trunk of coconut tree and sow the seed of green manure crops like cow pea or daincha in the basins for incorporating into the soil during the month of December.

Animal Husbandry

- In Bihar, vaccinate animals against FMD. Keep the animal shed clean using disinfectants.
- In Jharkhand, de-worm domestic animals under the care of veterinarian. Vaccinate poultry birds against Ranikhet disease. Keep animal sheds and poultry cages clean.
- In Odisha, keep the shed clean and de-worm farm animals.
- In West Bengal, maintain proper temperature in the poultry shed. Protect animals from parasites. Vaccinate lambs against Enterotoxaemia.
- In Andaman & Nicobar Islands, dry the wet poultry litters and clean throughout by adding Calcium Carbonate @ 5-8 kg/100 sq. ft. area.

Fishery

- In Odisha, apply lime @ 250-500 Kg/ha as per pH. Administer feeding on sunny days. Agitate water and provide false netting for better growth of fish.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

Realised Rainfall: Rainfall occurred in North Goa, Ratnagiri, Sindhudurg and South Goa in Konkan & Goa; all districts in Madhya Maharashtra except Nandurbar; all districts in Marathwada; all districts in Vidarbha except Bhandara, Gondia, Wardha and Anand, Aravalli, Bharuch, Dangs, Gandhinagar, Kheda, Navsari, Valsad districts of Gujarat Region and Morbi, Surendranagar districts of Saurashtra & Kutch. Weather remained mainly dry over rest of the districts of Gujarat.

Advisories:

- Thunderstorm **accompanied** with **lightning** very likely at isolated places over Vidarbha on 1st, over Madhya Maharashtra, Marathawada on 1st & 2nd November, provide mechanical support to young fruit plants, banana and staking of vegetables to prevent the crops from lodging due to strong winds. Undertake propping up in sugarcane.

Maharashtra

- In Konkan, undertake sowing of horse gram, cowpea and *wal* in fallow lands and lablab bean in harvested fields of *kharif* rice. Continue harvesting of matured varieties of rice during clear weather. Keep the

harvested produce in safer place. To control hoppers, leaf eating caterpillars, shoot borer and midge fly in new flush of mangoes, spray Dimethoate 25 EC @ 12 ml or Monocrotophos 36 WSC @ 11 ml per 10 litres of water on a non rainy day. In view of high wind speed during next two days, provide mechanical support to newly planted coconut saplings and mango grafts

- In Madhya Maharashtra, drain out excess water from orchards, standing crop and vegetable fields. Continue harvesting of matured and early varieties of rice, soybean and groundnut during clear weather. Keep harvested produce in safer place. Continue land preparation for *rabi* crops like wheat, jowar, gram and safflower in fallow lands. To control thrips and sucking pest in cotton, spray Fipronil 80WG @ 2g with 15 liters of water and spray 5% neemark to white fly. To control bacterial leaf blight in rice, spray Copper oxychloride (COC) @ 30 g + Streptocycline @ 3 g per 10 litres of water with sticker. Undertake plant protection methods on a non rainy day. In view of thunderstorm during next 2 days, provide mechanical support to newly planted mango grafts.
- In Marathawada, undertake sowing of gram, wheat, safflower with assured irrigation. Continue harvesting of matured soybean during clear weather. Keep harvested produce in safer place. Continue sowing of *rabi* jowar, safflower and gram in fallow lands (at *vapsa* condition).
- In Vidharbha, undertake picking of early sown cotton and harvesting of soybean and matured varieties of rice during clear weather. Keep the harvested produce in safer place. Continue sowing of *rabi* crops like safflower, jowar, linseed and gram in fallow lands. To control pink boll worm in cotton, spray Quinalphos 25% EC @ 25 ml per 10 liters of water on a non rainy day.

Gujarat

- In Saurashtra & Kutch, continue sowing of chickpea mustard, garlic and sorghum where irrigation facility is available. Carryout weeding in cotton crop.
- In North Gujarat, undertake sowing of mustard, gram, fennel and carrot crops.
- In South Gujarat, continue sowing of sweet corn crop and nursery preparation for chilli and brinjal. Complete harvesting of pulse crops.
- In Middle Gujarat, continue land preparation for sowing of *rabi* crops. Complete harvesting of rice and pearl millet crops.

CENTRAL INDIA [M.P., CHHATTISGARH]

Realised Rainfall: Rainfall occurred in Chindwara district of East Madhya Pradesh, in Barwani, Betul, Bhopal, Burhanpur, Harda, Khandwa, Khargone and Shajapur districts of West Madhya Pradesh and in Bastar, Janjgir, Jashpurnagar, Kanker, Narayanpur, Raigarh, Raipur and Sukma districts of Chhattisgarh.

Advisories:

- Thunderstorm **accompanied** with **lightning** very likely at isolated places over west Madhya Pradesh from 1st to 3rd and over Chhattisgarh on 1st November, provide mechanical support to young fruit plants, banana and staking of vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.

Madhya Pradesh

- In Madhya Pradesh, complete harvesting of soybean crop. Continue preparation of nursery bed for Rabi vegetable crops. Treated seeds to be sown in line i.e. Tomato, Brinjal, Chilli, Cabbage and cauliflower etc.
- In Gird Zone, continue harvesting of matured bajra, urad and moong. Continue land preparation and sowing of mustard.
- In Nimar Valley Zone, in areas where Jassid & White fly crosses ETL in Cotton crop, apply Imidachloprid 17.8 SL @ 3 ml/10 litre or Thiamethoxam 25 WG @ 2g/ 10 litre or Acetamiprid 20 SP@ 3g/10 litres of water. Install pheromone traps @ 5/ha for monitoring Pink bollworm.

Chhattisgarh

- In Chhattisgarh Plain Zone, undertake harvesting of matured rice crop. Undertake land preparation for

sowing of chickpea. Undertake nursery sowing of Winter vegetables like cauliflower, cabbage and kholchol. Improve varieties should be selected.

- In Northern Hill Zone, continue harvesting of matured mung, urd, maize, rice, groundnut, finger millet etc. Farmers are advised to plough the land immediately after harvesting of different kharif crops and sow rabi crops like toria, mustard, green pea and potato immediately Undertake land preparation for sowing of chickpea. Start transplanting of winter vegetables like cauliflower, cabbage, chilli, tomato, brinjal.
- In Bastar Plateau Zone, in the rice crop, for monitoring of yellow stem borer, install pheromone traps 10 nos. per acre. Undertake sowing of pea.

Animal Husbandry

- In Madhya Pradesh, cattle sheds should be kept dry. Vaccinate the cow and buffaloes for FMD disease and vaccinate goats with ETV vaccine. Vaccinate the chicks at 7 days (F1) and at 6 weeks with R2B.

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

Realised Rainfall : Weather remained mainly dry/dry during the last week in all states of the region.

Advisories:

- Thunderstorm **accompanied** with **lightning and hail** very likely at isolated places over Jammu & Kashmir and thunderstorm **accompanied** with **lightning** over Himachal Pradesh on 2nd November, provide mechanical support to young fruit plants, banana and staking of vegetables to prevent the crops from lodging due to strong winds. Provide hail net for orchard crops to protect from mechanical damage Jammu & Kashmir. Keep harvested produce at safer places.

Jammu & Kashmir

- In Sub Tropical Zone, undertake harvesting of semi-fine rice cultivars which have attained maturity. Stop irrigation in normal sown Basmati rice, as the grains turn golden in colour. Undertake sowing of mustard. Undertake sowing of pea, chickpea and lentil. Undertake sowing of winter potato.
- In Intermediate Zone, undertake land preparation for sowing of wheat. Carry out weeding and hoeing operation in 3 weeks old toria crop. Undertake sowing of mustard. Undertake sowing of early peas. Carry out earthing up in cole crops. Undertake nursery sowing of late cauliflower and onion crops.

Himachal Pradesh

- In Sub-Montane and Low Hills Sub Tropical Zone, continue transplanting of onion, carry out weeding and hoeing operations in vegetable crops like tomato, chilli, capsicum and brinjal. Undertake sowing of turnip and radish. Undertake sowing of potato.
- In High Hill Temperate Dry Zone, carry out ploughing operations in the field after harvesting oats. To prevent aphids on apple trees, spray Malathion 200 ml/200litres of water, 20-25 days before harvesting.
- In Mid Hills Sub Humid Zone, to protect the cole crops from grass hopper; spray Melathian @15ml in 15 litres of water. To protect tomato from late blight disease; spray Redomil Gold & Saimokjnal Mancozeb (Carzate M-8) @37.5 g in 15 litres of water at in interval of 7-10 days. Continue sowing of onion and garlic.

Punjab, Haryana and New Delhi

- In Punjab, undertake sowing of carrot, broccoli, Chinese cabbage, radish, spinach and transplanting of mid-season cauliflower. Harvest matured maize crop. Picking of cotton should be done in dry and sunny day only. Undertake harvesting of the paddy crop.
- In Undulating Plain Zone, due to high humid conditions, attack of brown spot may be noticed in direct seeded rice. Apply recommended fungicides for control. Harvest the mature paddy crop. Borers in sugarcane can be managed by using Tricho-cards having 20,000 eggs of *Corcyra cephalonica* parasitized (seven days old) by *Trichogramma chilonis* and *Tricogramma japonicum* per acre at 10 days interval.
- In Haryana, undertake land preparation for sowing mustard and chickpea crops and prepare field for wheat/barley crops.
- In Delhi, undertake sowing of mustard, gram, transplanting of onion seedling in the prepared fields and

planting of early potato. Undertake transplanting of mature seedlings of cauliflower, cabbage, broccoli and tomato. In present weather conditions, rouging of viral infested crop should be done in chilli and tomato. Infected plants should be uprooted and buried in the soil. If infection is more than spray of Imidacloprid @ 0.3 ml per litre of water is advised for control the vector. In present weather conditions, training and pruning as well as intercultural operations of rose should be done. Apply Bavistin paste in the cut portion to protect the crop against attack of fungal diseases. Undertake transplanting of marigold in raised bed and sowing of gladiolus in prepared fields.

Uttar Pradesh

- **In East Uttar Pradesh**, continue harvesting and threshing of mature paddy crop. Undertake sowing of Berseem, Bengal gram, Mustard and chick pea. Undertake planting of Potato at a row distance of 45-60 cm and 15-20 cm distance from tuber to tuber. Undertake sowing of vegetable pea varieties like Arkel, Azad P-1, Azad P-3. Undertake planting of Turmeric after tuber treated with recommended pesticide to control soil and tuber born diseases.
- **In West Uttar Pradesh**, continue harvesting and threshing of mature crops like urad / moong, maize and paddy etc. Undertake weeding in the rapeseed crop 15-20 days after sowing. Prepare your field for sowing of rabi crops like pea, mustard, chickpea and lentil etc. Continue transplanting of medium duration variety of capsicum, tomato, cabbage, Tomato, Brinjal and Chilli. Continue planting of horticultural crops viz, papaya, mango, guava etc. Continue sowing of raddish, garlic, coriander, spinach, fenugreek etc. Undertake sowing the berseem, oat, rijaka for green fodder use.

Uttarakhand

- In Bhabar and Tarai Zone, continue sowing of wheat. Complete sowing of barley. Undertake harvesting of soybean. Undertake earthing up in potato crop. Undertake transplanting of cabbage and cauliflower seedlings. Mulching should be done to conserve the moisture after hoeing in pea, radish, cabbage and cauliflower crops.
- In Sub-Humid Sub-Tropic Zone, maintain optimum soil moisture in the long duration rice crop during grain formation period. Complete sowing of autumnal sugarcane crop. Complete sowing of mustard crop. Undertake field preparation for transplanting of tomato, brinjal, chilli and capsicum.
- In Hill Zone, continue sowing of wheat, harvesting of matured vegetable pea. Undertake field sanitization before sowing of onion nursery. Use light trap during night to protect cucurbits from pests. Continue sowing of mustard, radish, carrot, fenugreek, coriander and garlic. In red gram, spray Indoxacarb 15.8EC @ 0.5 ml/litre of water to control fruit borer insect.

Rajasthan

- In Flood Prone Eastern Plain Zone, undertake field preparation for sowing of barley and sowing of lentil.
- In Sub Humid Southern Plain Zone, undertake sowing of improved varieties of chickpea viz. Pratap chana-1, GNG 1581, GNG-1958, GNG-9218, JG-14 etc.
- In Arid Western Plain Zone, keep inputs ready and undertake land preparation for sowing of wheat and barley crop.
- In Irrigated North Western Plain Zone, undertake sowing of mustard, gram and barley.

Animal Husbandry

- In East Uttar Pradesh, Balanced feed should be given for milk animal with 50% green fodder. Vaccination should be done to prevent the animals from foot mouth diseases. Vaccinate the goat to control PPR disease.
- In west Uttar Pradesh, cattle sheds should be kept dry as far as possible. Farmers are advised to provide dry fodder with green fodder in (50:50) ratio & 20-30 g mineral mixture and salt for the dairy animal's every day. Vaccinate the goat to control PPR disease. Increase light duration in poultry house.

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