

National Agromet Advisory Service Bulletin

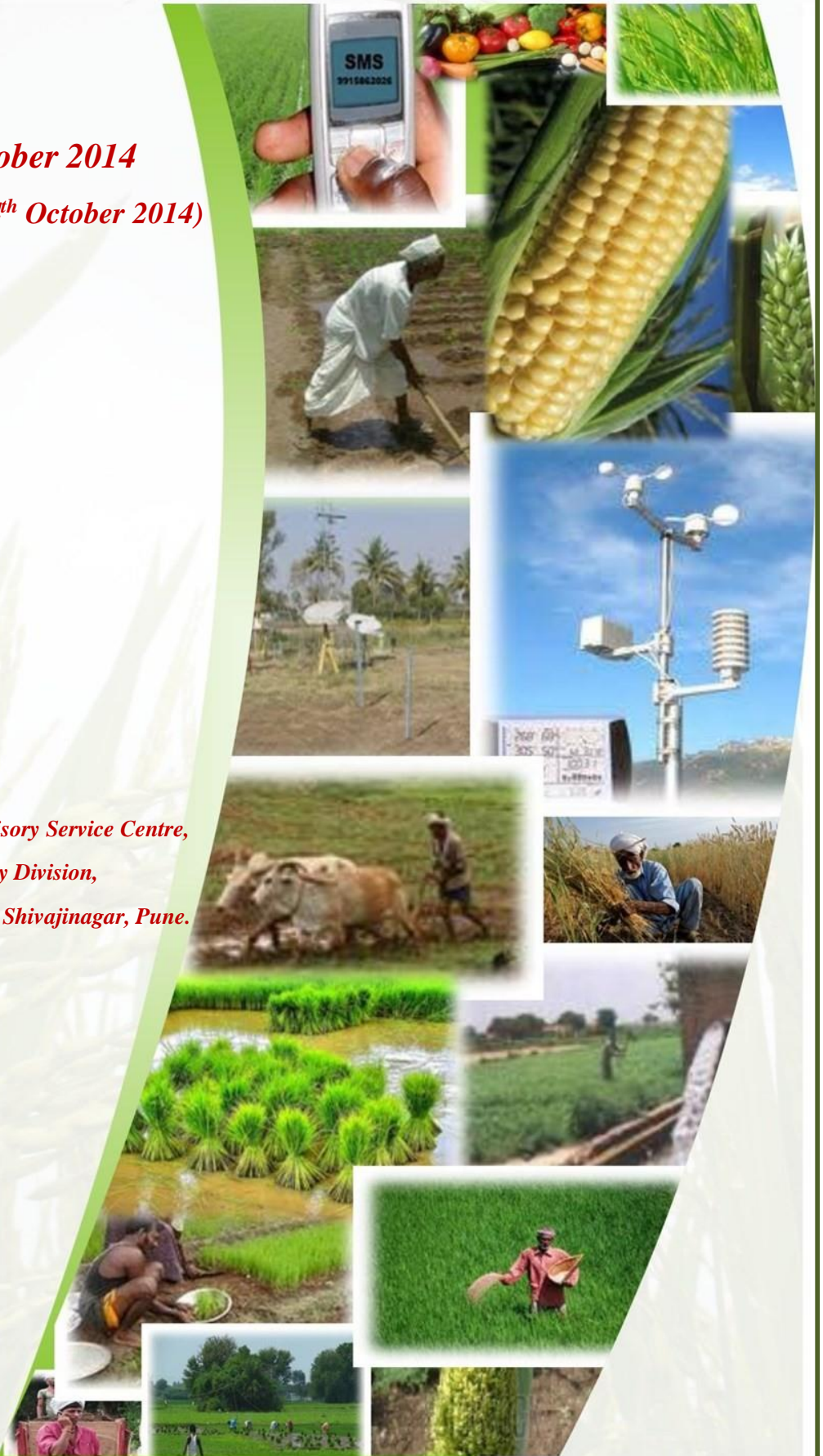
Tuesday 21st October 2014

(For the period 21st to 24th October 2014)



Issued by

**National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division,
India Meteorological Department, Shivajinagar, Pune.**



Salient Advisories

- Undertake sowing of mustard, linseed and field pea, land preparation for sowing of *rabi* vegetables, earthing up in turmeric, ginger and cole crops in Kymore Plateau and Satpura Hill Zone of **MadhyaPradesh**.
- Undertake land preparation and sowing of *rabi* crops like toria, green pea, mustard, gram, linseed etc. and planting of early potato in North Hill Zone of **Chhattisgarh**.
- Undertake sowing of early wheat and potato in lower and mid hills regions of Sub-Montane and Low Hills Sub-Humid Tropical Zone of **Himachal Pradesh**. Undertake nursery preparation for sowing of late season cauliflower (Pusa-snowwall) and cabbage.
- Undertake land preparation for sowing of wheat and planting of potato. Continue transplanting of onion and sowing of garlic, mustard, palak, methi, radish, early toria, pea in Hill Zone of **Uttarakhand**.
- Contingency measures for Hudhud affected districts in **North Coastal Andhra Pradesh**
 - Rice: Drain out excess water from the field as early as possible. Undertake lifting and staking of lodged hills. Apply booster dose of urea @ 25 kg and potash @ 10-15 kg per acre or spray multi K (13-0-45) @ 10 g /litre of water and spray Strepto Cycline @ 0.1 g /litre where BLB noticed (varieties: BPT-5204, MTU-1001, MTU-075).
 - Maize: Drain out excess water from the field and lift the lodged crop and undertake earthing up wherever possible.
 - Cotton: Drain out excess water from the field. Spray with Copper oxy chloride @ 3g+ Strepto cycline @ 0.1 g /litre of water and spray 19:19:19 @ 10 g /litre of water 4 days after Fungicide spray.
 - Sugarcane: Drain out water, lift the cane and undertake propping.
- In 'Hudhud' cyclone affected areas in **East and South Eastern Coastal Plain Zone of Odisha**, harvest the early paddy at physiological maturity stage and keep at dry places.
 - Spray 1% Gibberellic acid at flowering stage to prevent pollen drop. Drain out excess water by providing drainage channel at an interval of every three feet distance in medium duration rice at flowering stage, if lodged.
 - Drain out water and apply N @ 8 kg/ac for quick recovery in late rice or spray 2% urea in the afternoon at flowering stage for better yield. Heavy rainfall may aggravate the infestation of cut worm in late rice. Go for plant protection measures by spraying Chloropyriphos @ 2 ml per liter water.
 - Undertake harvesting of early planted groundnut crops and vegetables.

Realised Weather on 21st October 2014

Significant weather observations: Thunderstorm has been observed at a few places over Kerala & Tamilnadu and at isolated places over Vidarbha, Chhattisgarh, Goa and Karnataka between 1130 hours IST yesterday to 0530 hours IST of today.

Rainfall: (From 0830 to 1730 hours IST of yesterday): Rain/thundershowers occurred at a few places over Tamilnadu and Kerala and at isolated places over Coastal Andhra Pradesh and Karnataka. The amounts of rainfall (1 cm or more) recorded at 1730 hours IST of yesterday were: Kodaikanal 6; Cochin, Nedumbassery 4; Chennai 3; Nagappattinam 2; Raipur, Karaikal & Agathi 1 each.

Temperature: Yesterday Maximum temperatures were above normal by 2-4°C at many places over Maharashtra & Goa; at a few places over Saurashtra & Kutch and West Rajasthan and at isolated places over Coastal Andhra Pradesh and Coastal Karnataka. They were below normal by 3-6°C at many places over Tamilnadu and at isolated places over Gangetic West Bengal, East Madhya Pradesh and Utrakhand and near normal over rest of the country.

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 24th October, 2014)

- Rain/thundershowers would occur at most places over Kerala during next 24 hours; over Lakshadweep during next 48 hours and at many places thereafter.
- Rain/thundershowers would occur at many places over Coastal Karnataka and Tamil Nadu & Puducherry during the period.
- Rain/thundershowers would occur at a few places over Andaman & Nicobar Islands during next 48 hours and at isolated places thereafter.
- Rain/thundershowers would occur at a few places over South Interior Karnataka during the period.
- Rain/thundershowers would occur at isolated places over Konkan & Goa, Coastal Andhra Pradesh and North Interior Karnataka during the period.
- Rain/thundershowers would occur at isolated places over Jammu & Kashmir and Rayalaseema during next 24 hours and dry thereafter.
- Dry weather would prevail over rest of the country during the period.
- No significant change in minimum temperatures over northwest India during next 3 days.

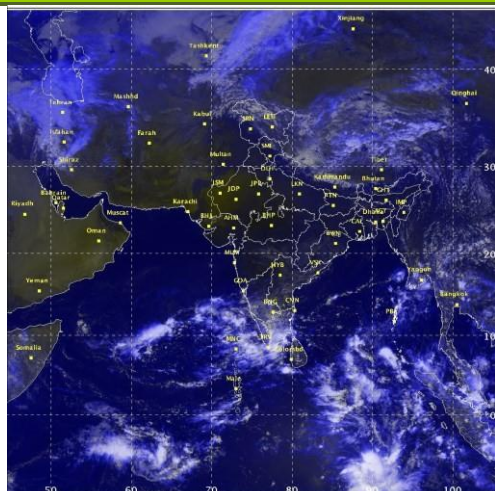
Weather Warning during next 3 days

- 21 October (Day 1):** Heavy rainfall would occur at isolated places over Tamilnadu, Kerala and Lakshadweep.
- 22 October (Day 2):** Heavy rainfall would occur at isolated places over Tamilnadu, Kerala and Lakshadweep.
- 23 October (Day 3):** Heavy rainfall would occur at isolated places over Tamilnadu and Kerala.

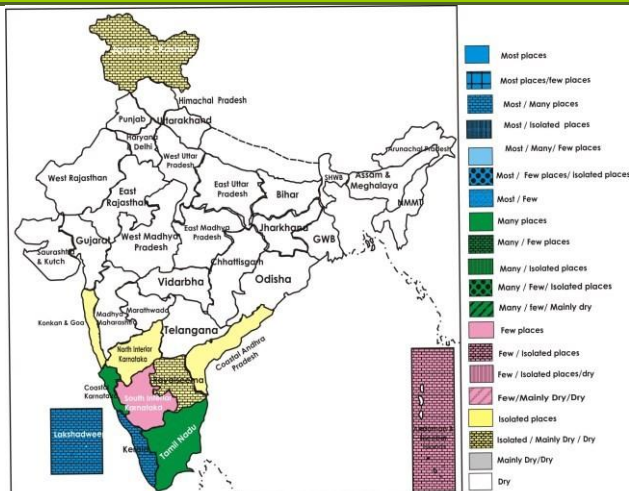
Weather Outlook for subsequent 4 days from 24th Oct. 2014 to 28th Oct. 2014

- The fresh western disturbance as an upper air cyclonic circulation would affect western Himalayan region from 24th and adjoining plains of northwest India from 25th.
- Rain/thundershower would occur at many places over south Peninsular India.
- Rain/thundershower would occur at a few places over Andaman & Nicobar Islands and at isolated places over northeastern States.
- Rain/thundershower would occur at isolated places over western Himalayan region and adjoining places.
- Weather would be dry over rest of the country.

Satellite image dated, 21.10.2014, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 24th October 2014)



Detailed Zonewise Agromet Advisories

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



Rice



Sugarcane



Cotton



Soybean

- **Realised Weather:** Thunderstorm has been observed at a few places over Kerala & Tamilnadu and at isolated places over Karnataka between 1130 hours IST yesterday to 0530 hours IST of today. Rain/thundershowers occurred at a few places over Tamilnadu and Kerala and at isolated places over Coastal Andhra Pradesh and Karnataka. Yesterday Maximum temperatures were above normal by 2-4°C at isolated places over Coastal Andhra Pradesh and Coastal Karnataka. They were below normal by 3-6°C at many places over Tamilnadu and near normal over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at most places over Kerala during next 24 hours and at many places thereafter. Rain/thundershowers would occur at many places over Coastal Karnataka, Tamil Nadu & Puducherry; at a few places over South Interior Karnataka; at isolated places over Coastal Andhra Pradesh and North Interior Karnataka during the period. Rain/thundershowers would occur at isolated places over Rayalaseema during next 24 hours and dry thereafter. Dry weather would prevail over rest of the region during the period.
- **Weather Warning:** Heavy rainfall would occur at isolated places over Tamilnadu and Kerala during the period.
- **Weather Outlook:** Rain/thundershower would occur at many places over south Peninsular India. Weather would be dry over rest of the region.
- **Advisories:**
 - **Andhra Pradesh**
 - Contingency measures for Hudhud affected districts in North Coastal Andhra Pradesh-
 - Rice: Drain out excess water from the field as early as possible. Undertake lifting and staking of lodged hills. Apply booster dose of urea @ 25 kg and potash @ 10-15 kg per acre or spray multi K (13-0-45) @ 10 g /litre of water and spray Strepto Cycline @ 0.1 g /litre where BLB noticed (varieties: BPT-5204, MTU-1001, MTU-075).
 - Maize: Drain out excess water from the field and lift the lodged crop and undertake earthing up wherever possible.
 - Cotton: Drain out excess water from the field. Spray with Copper oxy chloride @ 3g+ Strepto cycline @ 0.1 g /litre of water and spray 19:19:19 @ 10 g /litre of water 4 days after fungicide spray.
 - Sugarcane: Drain out water, lift the cane and undertake propping .
 - Due to prevailing humid weather, sucking pest incidence is observed in some parts of Anantapuram district in Scarce Rainfall Zone of Rayalaseema which is likely to increase. For control, spray /Methyl Dematon+ water @ 1:4 ratio.
 - Present hot weather is congenial for leaf spot attack on groundnut in Southern Zone of Rayalaseema. Spray Hexaconazole @ 2 ml per litre of water.
 - **Telangana:**
 - Prevailing hot and humid weather conditions are congenial for incidence of leaf spot disease on cotton and stem borer on rice in Southern Zone of Telangana. For control, spray Copper oxy chloride @ 30g + Plantamycin @ 2g in 10 litres of water for leaf spot diseases and Cartap Hydrochloride @ 2 g or Chlorantraniliprole @ 0.4 ml per litre of water for stem borer.
 - Present hot and partly cloudy weather conditions are congenial for incidence of stem borer in rice in Northern Telangana Zone. Apply Cartap Hydrochloride 4G @ 8 kg/acre when the adult moths/egg masses @ one/ sq. m are noticed in the fields.
 - **Karnataka:**
 - As rain/thundershowers would occur at many places over Coastal Karnataka during the period, postpone irrigation, inter-cultural operations and application of fertilizers and plant protection measures in standing crops.
 - Continue land preparation for sowing of wheat and undertake sowing of *rabi* crops like sunflower, safflower, horse gram (PHG-9), sesame, cowpea, chickpea, and maize in the North Dry Zone of Karnataka.
 - Continue sowing of *rabi* sunflower in Central Dry Zone; maize, sorghum, Bengal gram and sunflower in North

East Dry Zone and wheat, sorghum and Bengal gram in North East Transition Zone of Karnataka utilizing the realized rainfall.

- Continue harvesting of soybean in North Transition Zone in clear weather.
- In the Southern Dry Zone of Karnataka, ginger crop is severely affected by Rhizome rot disease due to wet and humid conditions. To manage the disease, undertake spraying of Copper oxy Chloride @ 3 g/litre of water.
- **Kerala:**
- As rain/thundershowers would occur at most/many places in Kerala during the period along with isolated heavy falls, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crop fields to remove excess water.
- Continue nursery sowing of rice in the Northern Zone of Kerala.
- Undertake transplanting of rice in the Southern Zone of Kerala.
- **Tamil Nadu:**
- As rain/thundershowers would occur at many places over Tamilnadu along with isolated heavy falls over during the period, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crop fields to remove excess water.
- Continue transplanting of *samba* rice and *thaladi* rice in the Cauvery Delta Zone of Tamil Nadu.
- In the Western Zone of Tamil Nadu, continue sowing of dry land crops like sorghum and ragi and sowing of small onion in the North Western Zone of Tamil Nadu.
- Continue sowing of cotton, maize, pulses and sorghum under dry land conditions in the Southern Zone of Tamil Nadu.
- Due to high humidity, leaf folder incidence is noticed in rice in North Eastern Zone of Tamilnadu which is likely to spread. To control, spray Profenophos @ 2 ml in one liter of water after current spells of rain.
- Suitable varieties are given in Annexure I.
- **Animal Husbandry**
- Provide clean and hygienic water to animals and vaccinate against FMD in the Problem Area Zone of Kerala.

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



Rice



Okra



Cole Crops (Nursery)



Green Gram

- **Realised Weather:** Yesterday Maximum temperatures were near normal over the region.
- **Weather Forecast:** Dry weather would prevail over the region during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over northeast India.
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Lower Bramhaputra Valley Zone of Assam, continue sowing of rapeseed/ mustard and onion and land preparation for planting of potato. Complete transplanting of cole crops.
 - In Hill Zone of Assam, continue nursery raising of winter vegetables. Undertake land preparation and sowing of black gram and green gram.
 - In North Bank Plain Zone of Assam, continue land preparation and sowing of rapeseed and mustard, planting of potato and nursery sowing of cole crops.
 - In Barak Valley Zone, continue transplanting of early cauliflower, cabbage and knol khol.
 - In Central Bramhaputra Valley Zone of Assam, sowing and transplanting of cole crops and early radish may be continued. Continue land preparation for sowing of *rabi* pulses and oilseeds. Undertake land preparation for sowing of wheat and planting of potato.
 - In Arunachal Pradesh, continue harvesting of matured *kharif* rice.
 - In Meghalaya, drain out water from the fields of *Kharif* rice which is at maturity stage and undertake harvesting if 80 % of the spikelets are turned yellow. Undertake harvesting of groundnut. In ginger and turmeric, undertake hand weeding followed by fertilizer application, earthing up and mulching. Land

preparation and sowing of peas, mustard/rapeseed and planting of potato may be continued.

- In North Bank Plain Zone of Assam, prevailing weather is conducive for gundhi bug incidence in *sali* rice at panicle initiation, milk and dough stage; apply Malathion 5% dust @ 20 kg/ha to control.
- In the prevailing hot weather condition, there is chance of attack of rice blast and stem borer in *Sali* rice in Hill Zone of Assam. Spray Hinosan@ 1ml /litre of water against rice blast and spray Chloropyriphos (20%) @ 2 ml/litre against stem borer.
- Due to prevailing humid weather conditions, there is chance of attack of gundhi bug, blast in normal transplanted rice in Arunachal Pradesh. Undertake foliar spray of Hexaconazole 5% EC @ 2 ml/litre of water or Carbendazim 12 % WP+Mancozeb 63% WP @ 2 g/litre of water.
- **Nagaland, Manipur, Mizoram and Tripura:**
- In Manipur, maintain water level of 5 cm upto dough stage in *kharif* rice. Continue harvesting of soybean and groundnut. Undertake sowing of rapeseed/ mustard and land preparation for planting of potato.
- In Mizoram, undertake sowing of pea, mustard and toria.
- In Mild Tropical Plain Zone of Tripura, continue transplanting of winter vegetable particularly cauliflower, cabbage, radish, brinjal. Continue land preparation for planting of potato.
- In Nagaland, continue nursery sowing of cabbage, cauliflower, knolkhol, broccoli, radish, tomato. Continue land preparation for toria and harvesting of matured *jhum* rice and soybean.
- In Mizoram, weather is congenial for attack of stem borer, gundhi bug and leaf blast in rice, spray @ 20 ml/10 litres water or Imidacloprid @ 20 ml/10 litres of water against stem borer. Spray 36 WSC @ 1.5 ml/litre of water against gundhi bug. Spray Triclozole (Beam) @ 0.5 g/litre against leaf blast.
- In Tripura, prevailing humid weather is conducive for attack of gundhi bug in short duration *aman* rice. To manage the attack; apply Cypermethrin + Propenophos @ 1.5 ml per litre of water or Cartap Hydrochloride (Dollar) @ 1.5 g per litre of water. Also there is chance of rice blast in long duration *aman* rice, spray Benlate or Mancozeb @ 0.25%.
- Suitable varieties are given in Annexure I.
- **Animal Husbandry**
- In Nagaland, provide clean drinking water round the clock and water troughs/ feeders should be regularly cleaned. Antibiotics or other stress medications may be added to water if desired.

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



Sugarcane



Groundnut



Onion



Rice

- **Realised Weather:** Yesterday Maximum temperatures were below normal by 3-6°C at isolated places over Gangetic West Bengal and near normal over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Andaman & Nicobar Islands during next 48 hours and at isolated places thereafter. Dry weather would prevail over rest of the region during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershower would occur at a few places over Andaman & Nicobar Islands. Weather would be dry over rest of the region.
- **Advisories:**
 - **West Bengal:**
 - In Laterite and Red Soil Zone, drain out water from the fields of *aman* rice at harvesting stage. Undertake land preparation for nursery sowing of winter vegetables.
 - In Coastal Saline Zone, undertake transplanting of cabbage, cauliflower, tomato and planting of potato. Also prepare land for sowing of early mustard variety like agrani, panchali.

- In New Alluvial Zone and Old Alluvial Zone, undertake sowing of winter vegetables like radish, broccoli.
- In Terai Zone, continue transplanting of early cabbage, cauliflower. Undertake land preparation for planting of potato, nursery sowing of chilli, tomato, radish and broccoli.
- Due hot and humid weather, there is a chance of attack of stem borer in *aman* rice in New Alluvial Zone. Spray Carbosulfan 25 EC @ 2 ml / litre or Profenphos 40% + Cypermethrin 4% @ 1 ml / litre of water against stem borer.
- In Old Alluvial Zone, there are reports of attack of brown plant hopper in *aman* rice. To control the attack, spray Imidachlorpid 200 SL @ 1ml/5litre water or Ethofenprox 10 EC @ 1 ml/litre of water.
- In Terai Zone, due hot and humid weather, there is chance of attack of neck blast in *aman* rice, spray Carbendazim @ 1 g /litre of water.
- **Odisha:**
- In 'Hudhud' cyclone affected areas in East and South Eastern Coastal Plain Zone of Odisha, harvest the early rice at physiological maturity stage and keep at dry places.
 - Spray 1% Gibberellic acid at flowering stage to prevent pollen drop. Drain out excess water by providing drainage channel at an interval of every three feet distance in medium duration rice at flowering stage, if lodged.
 - Drain out water and apply N @ 8 kg/ac for quick recovery in late rice or spray 2% urea in the afternoon at flowering stage for better yield. Heavy rainfall may aggravate the infestation of cut worm in late rice. Go for plant protection measures by spraying Chloropyriphos @ 2 ml per liter water.
 - Undertake harvesting of early planted groundnut crops and vegetables.
- Undertake land preparation and sowing of mustard, sunflower and sesame, nursery sowing of onion and transplanting of cole crops in East and South Eastern Coastal Plain Zone of Odisha.
- In North Eastern Coastal Plain Zone of Odisha, due to high humid weather, there is chance of blast and Sheath rot/blight in rice. To manage blast, apply Tricyclazole @ 0.5 g/litre of water or Kasugamycin @ 1.5 g/litre of water. For control of Sheath rot/blight, alternate application of Hexaconazole @ 400 ml/acre and Thiophanate methyl @ 300 g/acre at two weeks interval is advised.
- In North Eastern Plateau Zone of Odisha, due to cloudy and high humid weather, there is chance of Tikka leaf spot in groundnut. To control, spray Mancozeb @ 2.5 g per liter of water.
- Prevailing humidity and temperature are conducive for incidence of leaf roller and case worm in rice in East and South Eastern Coastal Plain Zone of Odisha. To control, spray Triozophos or Fipronil or Hostathion @ 200 ml in 200 litres of water per acre.
- **Bihar:**
- In North West Alluvial Plain Zone of Bihar, continue field preparation for sowing of *rabi* crops like maize, wheat, pea, gram, sunflower and planting of potato. Continue land preparation in the upland areas for sowing of rapeseed. Continue sowing of rai and coriander.
- In North East Alluvial Plain Zone of Bihar, continue field preparation for sowing of *rabi* crops.
- In South Bihar Alluvial Zone, continue sowing of toria and sowing of fodder crop berseem. Undertake harvesting of matured rice crop.
- Due to prevailing hot weather condition, there is chance of attack of gundhi bug in rice in North West Alluvial Plain Zone and South Bihar Alluvial Zone, apply Folidol dust @ 10-15 kg per hectare in the early morning.
- **Jharkhand:**
- In Western Plateau Zone of Jharkhand, in upland areas, continue sowing of toria. Continue planting of early potato and sowing of green peas. Continue sowing of rainfed wheat. In upland areas after harvesting of *Kharif* crops, immediately plough the land to utilize residual moisture and sow different *rabi* crops like gram, lentil, linseed etc. Also continue sowing of rapeseed and mustard. Undertake harvesting of already matured rice.
- In Central & North Eastern Plateau Zone of Jharkhand, continue sowing of toria, mustard, green pea and potato
- In South Eastern Plateau Zone of Jharkhand, undertake land preparation/sowing of chick pea.
- Suitable varieties are given in Annexure I.
- **Animal Husbandry**
- In East and South Eastern Coastal Plain Zone and North Eastern Coastal Plain Zone of Odisha, provide clean drinking water for animals.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane



Rice



Okra



Onion

- **Realised Weather:** Thunderstorm has been observed at isolated places over Chhattisgarh between 1130 hours IST yesterday to 0530 hours IST of today. Yesterday Maximum temperatures were below normal by 3-6°C at isolated places over East Madhya Pradesh and near normal over rest of the region.
- **Weather Forecast:** Dry weather would prevail over the region during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be dry over the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - Undertake sowing of mustard, linseed and field pea, land preparation for sowing of *rabi* vegetables, earthing up in turmeric, ginger and cole crops in Kymore Plateau and Satpura Hill Zone. Prepare nursery for medium duration cauliflower & cabbage.
 - Undertake sowing of vegetable pea (cv. Arkel) and field preparation for planting of early potato in Kymore Plateau and Satpura Hill Zone and Malwa plateau Zone.
 - Undertake harvesting of soybean under physiological maturity in Nimar Valley Zone and in Malwa plateau Zone.
 - Continue harvesting of matured soybean, green gram, black gram, groundnut and maize in Jhabua Hills Zone. Undertake land preparation for sowing of mustard, gram and wheat and keep inputs ready. Undertake nursery sowing of early winter vegetables (tomato, chilli, brinjal, cauliflower, cabbage, capsicum), sowing of early green pea and planting of early potato. Irrigate the cotton crop (flowering/boll formation stage) under moisture stress condition.
 - Continue harvesting and threshing of matured urad, moong, til and soybean in Bundelkhand Zone. Undertake sowing of sarson saag, radish, spinach and coriander crops utilising available soil moisture. Hoeing and weeding is advised in fruit orchard.
 - Due to cloudy weather there are chances of attack of sucking pest in vegetables in Vindya Plateau Zone of Madhya Pradesh, spray Imidacloprid or Thiamethoxam @ 0.35 g per litre of water.
 - **Chhattisgarh:**
 - Undertake harvesting of matured rice in Chhattisgarh Plain Zone and keep it in the field for proper sun drying for 1-2 days.
 - Undertake land preparation and sowing of *rabi* crops like toria, green pea, mustard, gram, linseed etc. and planting of early potato in North Hill Zone of Chhattisgarh utilising the available soil moisture.
 - Keep inputs ready for sowing of toria, green pea and linseed in Bastar Plateau Zone.
 - Suitable varieties are given in Annexure I.

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



Rice



Sugarcane



Bottle Gourd



Onion

- **Realised Weather:** Yesterday Maximum temperatures were above normal by 2-4°C at a few places over West Rajasthan. They were below normal by 3-6°C at isolated places over Uttarakhand and near normal over rest of the

region.

- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Jammu & Kashmir during next 24 hours and dry thereafter. Dry weather would prevail over rest of the region during the period. No significant change in minimum temperatures over northwest India during next 3 days.
- **Weather Warning:** Nil.
- **Weather Outlook:** The fresh western disturbance as an upper air cyclonic circulation would affect western Himalayan region from 24th and adjoining plains of northwest India from 25th. Rain/thundershower would occur at isolated places over western Himalayan region and adjoining places. Weather would be dry over rest of the region.
- **Advisories:**
 - **Jammu & Kashmir:**
 - Undertake land preparation for sowing of wheat after harvesting of rice and maize in Intermediate Zone of Jammu & Kashmir. Also continue nursery sowing of cauliflower, cabbage, radish and knoll khol.
 - In Sub-Tropical Zone of Jammu & Kashmir, undertake land preparation for sowing of pulses viz. chickpea, pea and lentil and also direct sowing of vegetable crops like radish carrot, fenugreek, spinach and spinach beet, coriander, continue planting of potato and transplanting of tomato seedlings. Also continue sowing of ghobi sarson with toria as mixed or intercrop and nursery raising of cole crops and onion.
 - **Himachal Pradesh:**
 - Undertake sowing of early wheat and potato in lower and mid hills regions of Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. Continue sowing of ghobi sarson, linseed and sowing of berseem, lucerne and oats as fodder crops during *rabi* season and harvesting of rice, soybean mash and cowpea. Complete sowing of gram and lentil.
 - Complete sowing of radish, turnip and spinach in Mid Hills Sub-Humid Zone of Himachal Pradesh. Undertake nursery preparation for sowing of late season cauliflower (Pusa-snowwall) and cabbage. Continue harvesting of onion bulbs, tomato, capsicum and cucumber.
 - Continue nursery sowing of mid-season cauliflower and cabbage in poly house, planting of onion at 30X 10 cm spacing and sowing of potato in mid hill and lower region, transplanting of ageti cauliflower and cabbage in lower region in Sub-Montane and Low Hills Sub-Humid Tropical Zone and Bilaspur district of Mid Hills Sub-Humid Zone of Himachal Pradesh utilizing the realized rainfall. Continue nursery sowing of late varieties of cauliflower, cabbage, knol khol and direct sowing of radish, carrot, turnip, palak and methi and sowing of early varieties of Pea in mid hill areas utilizing the realized rainfall. Undertake sowing of cole crops in polyhouses.
 - Keep inputs ready for plantation of new orchard In Mild Hills Sub- Humid Zone of Himachal Pradesh.
 - As mainly dry weather would prevail, continue harvesting of rajmah and potato in High Hill Temperate Dry Zone of Himachal Pradesh.
 - Continue intercultural operation like weeding in peas in High Hill Temperate Dry Zone of Himachal Pradesh. Spray Glycel @ 5ml per liter of water for weed control.
 - Under prevailing humid weather condition, there are chances of incidence of scab and alternaria leaf spot diseases and canker and mite attack in apple in Mid Hills Sub Humid Zone of Himachal Pradesh. Spray Mancozeb or Ziram @ 700ml per 200 litres of water for control of scab and alternaria leaf spot diseases. Spray Carbendazim or Copper Oxy Chloride @ 600g per 200 litres of water against canker and apply Fenazaquin @ 50 ml or properzite @ 200 ml per 200 litres of water for mite.
 - **Uttarakhand:**
 - Undertake land preparation for sowing of wheat and planting of potato. Continue transplanting of onion and sowing of garlic, mustard, palak, methi, radish, early toria, pea in Hill Zone of Uttarakhand.
 - Temperature conditions are favourable for sowing of mustard and planting of autumn sugarcane in Bhabar and Tarai Zone of Uttarakhand. Continue sowing of pea and toria and planting of potato. Continue land preparation for sowing of radish, fenugreek and spinach. Continue harvesting of matured rice and soybean and planting of potato.
 - Continue harvesting of *kharif* maize and pulses like urad /moong and field preparation for planting of winter sugarcane in Sub Humid Sub Tropical Zone of Uttarakhand.
 - **Punjab, Haryana and Delhi:**
 - In Western Undulating Zone of Punjab, continue nursery sowing of mid-season cauliflower, desi varieties of radish, carrot under irrigation and turnip and planting of mango, litchi and apply irrigation in rice, cotton and maize.
 - In Central Plain Zone of Punjab, continue sowing of desi varieties of carrot, radish and turnip crops and undertake transplanting of tomato under irrigation. Continue sowing of potato, palak and nursery sowing of cauliflower. Continue harvesting of matured maize and groundnut in Ludhiana district. Continue planting of early maturing autumn sugarcane.
 - In Undulating Plain Zone of Punjab, high humidity may lead to sheath blight in rice, spray Tilt @ 0.1% on the disease spots. Present weather condition is congenial for attack of leaf folder and stem borer in rice, spray Monocrophos 36SL @ 560ml in 100 lits of water per acre.
 - In Western Zone of Haryana, continue plantation of new orchard. Prepare the field for sowing of mustard and gram and arrange the certified seeds for mustard and gram. As dry weather would prevail, harvest matured guar,

bajra and continue the picking operation (when there are no dew drops or deposition on opened bolls) in early sown cotton crop.

- Present weather is favourable for attack of top borer in sugarcane in Western Zone of Haryana, apply Carbofuran 3G @13 kg or Phorate 10G @ 8 kg in furrows and apply light irrigation.
- In Delhi, continue transplanting of onion seedlings and planting of early potato. Continue land preparation for sowing of early mustard, pea and early toria and sowing of radish, spinach and coriander.

▪ **Uttar Pradesh:**

- Undertake harvesting of rice Eastern Plain Zone and Central Plain Zone of Uttar Pradesh.
- Undertake sowing of late varieties of rye with a distance of 45x15cm and at 3cm depth and peas in Allahabad, Fatehpur, Pratapgrah, Chitrakoot and Kaushambi districts of Central Plain Zone of Uttar Pradesh with available soil moisture. For mixed cropping, carry out sowing of rye after 3 rows of potato. Continue sowing of potato, lahi and masoor crops with a planting distance of 90 cm and sowing of berseem @ 25-30 kg per hectare mixed with 1-2 kg of linseed with available soil moisture. Complete sowing of late varieties of potato between 15-25 October.
- Undertake land preparation for planting of potato; transplanting of cauliflower, cabbage, tomato, brinjal and chilli and sowing of fenugreek, coriander and garlic in Barabanki, Faizabad, Basti, Ambedkarnagar, Sant Kabir Nagar, Gorakhpur, Deoria and Ballia districts of Eastern Plain Zone of Uttar Pradesh.
- Undertake sowing of rapeseed and mustard in Raibareilly, Amethi and Sultanpur districts of Eastern Plain Zone of Uttar Pradesh with available soil moisture.
- Undertake nursery sowing of tomato, cauliflower, *Tara-mira*, *Alsi*, Berseem, transplanting of onion and planting of sugarcane and potato in Western Plain Zone of Uttar Pradesh with available moisture. To conserve soil moisture in groundnut, spray Malathion 50 E.C. @ 200 mm per 200 litres of water.
- Undertake sowing of peas and gram and planting of potato and keep inputs ready for sowing of rapeseed, mustard and maize in Central Plain Zone of Uttar Pradesh. Complete transplanting of ageti cauliflower, cabbage, chilli, brinjal and tomato. Undertake harvesting of rice, urd and moong.
- Continue transplanting of cauliflower, cabbage, tomato, chilli and brinjal in Jhansi district of Bundelkhand Zone of Uttar Pradesh. Undertake harvesting of matured moong, urd and sesame. Maintain 5 cm water level in rice at panicle initiation and flowering stage. Undertake land preparation for sowing of peas, lentil, mustard and rapeseed.
- Under prevailing humid weather condition, there are chances of attack of stem borer, brown plant hopper, gall midge, leaf folder and jassids in rice in Central Plain Zone of Uttar Pradesh. Spray Quinalphos 25 EC @ 1 litre per hectare.

▪ **Rajasthan:**

- Undertake land preparation for sowing of mustard, barley, nursery sowing of cauliflower, cabbage and planting of potato in Flood Prone Eastern Plain Zone of Rajasthan.
- Undertake land preparation for sowing of lucerne, taramira, methi and mustard in Transitional Plain Zone of Inland Drainage of Rajasthan
- Continue nursery sowing of cauliflower and radish and continue sowing of rainfed taramira, toria and mustard in Semi Arid Eastern Plain Zone of Rajasthan.
- Continue sowing of cummin, rapeseed (sarson) in Arid Western Plain Zone (Jodhpur) of Rajasthan.
- Continue land preparation for sowing of *rabi* crops viz. mustard, gram and fodder crops like lucerne, berseem, in Arid Western Plain Zone (Bikaner) of Rajasthan.
- Continue land preparation and sowing of rapeseed, gram, linseed in irrigated North Western Plain Zone of Rajasthan.
- In Sub Humid Southern Plain and Aravali Hill Zone of Rajasthan, undertake sowing of gram and mustard and continue harvesting of maize and sorghum.
- Suitable varieties are given in Annexure I.

● **Animal Husbandry:**

- Under prevailing humid weather condition, there are chances of attack of ticks and mites on animals also in Flood Prone Eastern Plain Zone of Rajasthan, Sub Montane and Low Hills Sub-Tropical; Zone of Himachal Pradesh and Intermediate zone of Jammu & Kashmir. For control spray Butox @ 2.0 ml per litre of water. Clean the cowshed with phenyl and keep the animal sheds dry and clean.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Rice

Sugarcane

Cotton

Soybean

- **Realised Weather:** Thunderstorm has been observed at isolated places over Vidarbha and Goa between 1130 hours IST yesterday to 0530 hours IST of today. Yesterday Maximum temperatures were above normal by 2-4°C at many places over Maharashtra & Goa; at a few places over Saurashtra & Kutch and near normal over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Konkan & Goa during the period. Dry weather would prevail over rest of the region during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be dry over the region.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan undertake fertilizer application and intercultural operations in vegetable fields and mango and cashew orchards. Mid late and late maturing rice variety is at maturity stage, continue harvesting during morning hours. Keep produce in safer place. Undertake the sowing of brinjal, chilli, cabbage and knol khol on raised beds.
 - In Madhya Maharashtra, apply irrigation to sugarcane, vegetables and grapes, banana and pomegranate orchards and early sown *rabi* jowar. Maintain the water level upto 8 cm in rice fields in grain formation stage. Undertake intercultural operations like weeding and fertilizer application in sugarcane, vegetables, early sown *rabi* jowar and orchards. Utilizing available soil moisture, continue sowing of *rabi* safflower and wheat. Also undertake sowing of irrigated gram and planting of pre-seasonal sugarcane.
 - In Marathwada, apply irrigation to sugarcane, cotton and vegetables. Undertake intercultural operation like weeding and fertilizer application to sugarcane, early sown *rabi* jowar and vegetables. Prepare field for sowing of *rabi* jowar and safflower. As dry weather is prevailing, apply drip irrigation to sugarcane (*suru* and ratoon) and banana orchards. Apply mulch of crop residue and other plant waste products to banana plant. Remove new bottom flush to avoid excessive water loss. Continue harvesting of already matured soybean and start harvesting of matured sunflower.
 - In Vidarbha, apply irrigation to vegetables, cotton and orange, sweet lime orchards. Apply fertilizers and undertake intercultural operations in vegetables. Maintain water level up to 8 cm in rice field in East Vidarbha. Prepare the field and continue sowing of safflower and *rainfed* gram with the help of available soil moisture. Soybean is at maturity stage, complete harvesting of matured crop and prepare harvested field and undertake sowing of safflower and gram. Continue harvesting of early maturing rice crop in East Vidarbha.
 - Due to prevailing weather (Temp. around 30 °C and RH 70-80%), there may be incidence of mango hoppers on new flush and inflorescence in Konkan; spray 25 % Cypermethrin @ 3 ml per 10 litres of water.
 - Due to humid weather in Sub Montane Zone is favourable for attack of white woolly aphids; remove dried leaves and use Thimath @4 kg per acre.
 - **Gujarat:**
 - Continue land preparation for sowing of mustard in Bhal and Coastal Zone. Carry out intercultural operations and apply irrigation in cotton and vegetable crops. Harvest matured vegetables.
 - Continue land preparation and keep inputs ready for sowing of *rabi* mustard, gram and fennel in North Gujarat Zone. Apply irrigation in cotton and castor and carry out weeding and intercultural operations to conserve soil moisture. Taking advantage of dry weather, complete harvesting of groundnut and allow for sun drying for few days under clear sky condition.
 - Undertake land preparation for sowing of mustard and carryout intercultural operations and weeding in castor in North West Zone. Complete harvesting of groundnut.
 - Undertake picking of matured cotton bolls, land preparation for sowing of mustard and procure seeds of recommended varieties for sowing of chick pea in South Gujarat Heavy Rainfall Zone. Apply irrigation in castor.
 - Continue sowing of mustard, gram, peas, carrot (for vegetable purpose) and garlic in North Saurashtra Zone. Apply irrigation in cotton and groundnut to avoid moisture stress condition.
 - Undertake sowing of sweet corn (from 3rd week October to 1st week of November) in South Gujarat Zone. Continue planting of sugarcane.

- Taking advantage of dry weather, undertake harvesting of pearl millet in Middle Gujarat Zone.
- Suitable varieties are given in Annexure I.
 - **Animal Husbandry**
- In Gujarat, keep animal shed hygienic and clean, to avoid flies and mosquitoes.

Annexure I

List of varieties

Tamil Nadu

Late Samba/ Thaladi rice: ADT 38, ADT 46, ADT 49, Improved white Ponni, IR 20, ASD 19, Paiyur1, TRY 1, TRY 3, CO 48, CO 49, BPT 5204 and CO 50

Direct seeded rice: (White Ponni or ADT 39)

Assam

Green gram: T-44, Kopergaon, K-851, ML-56, ML-131 etc.

Black gram : T-9, T-27, Pant U-19, T-122.

Radish : Pusa Deshi, Pusa Chetki, Pusa Himani

Cauliflower : Improved Japanese, Pusa Synthetic, Pusa Snowhall and Main Crop Patna.

Early maturity Cabbage varieties : Golden Acre, Pride of India, Pusa Mukta (Sel – 8).

Early maturity Knol Khol : White Vienna.

Winter brinjal : Pusa Kranti, Pusa Purple Long, Pusa Purple Round, Pusa Vairab, Pant Samrat

Meghalaya

Pigeon pea: short duration : UPAS-120, ICPL 87. long duration WB 20, Pusa 9 & Sarita.

Cabbage: H-139, Pride of India

Cauliflower: Meghalaya Local

Carrot: New Karoda, Nantesh

Radish: Local genotype

Broccoli: Puspa, Aiswarya

French bean: Naga Local

Pea: Arkel (for vegetables), TRC P8, TRC P9, Prakash, Rachna.

Potato: Kufri Joyti, Kufri Megha, Kufri Giriraj, Kufri Girdhari, Kufri Himsona, Kufri Himalini.

Pea: Arkel (for vegetables), TRC P8, TRC P9, Prakash, Rachna.

Tripura

Tomato: Trishul, Allrounder, T- 1408, T- 1458, Anup.

Cauliflower: CFL- 4048, Pusa early synthetic, Kamaya, Suhasi.

Cabbage: BC- 76, Pusa Drum Head, Pusa Synthetic.

Broccoli: Everest, Ayeshwaria.

Odisha

Sesame: Kanak, Kalika, Uma, Usha, Tilotama, Nilima, Prachi

Greengram: K-851, PDM-11, PDM-54, OUM-11-5

Blackgram: T-9, Pant U-11, Pant U-19, Pant U-30

Cowpea: SEB-2, Pusa Barsati Niger: Deomali, Niger-1 and for Okra: Utkal Gourav.

West Bengal

Banana: Mortoman, Chapa, Kathali, Singapuri.

Tomato: Avinash-2, 448.

Cabbage: Pride of India, Pusa early, Kranti.

Cauliflower: Jawhar moti, Bharat Jyoti, Early banaras

Bihar

Shakarkand: Rajendra Shakarkand- 5, Rajendra Shakarkand-35, Rajendra Shakarkand-43, Rajendra Shakarkand-47, Kalmegh and Rajendra Shakarkand-92.

Pigeon Pea: arhar: Bahar, Pusa 9, Narendra Arhar 1

Urd: T-9, Pant U-19, Pant Urd 31, PDU-1

Radish: Pusa Chetki, Pusa Himani, Pusa Rashmi, Japani Saphed

Pointed gourd: Rajendra Parwal-1, Rajendra parwal-2, FP1 and 3

Jharkhand:

Urd:T 9, Pant U 19, 30, 35 and Birsa urd 1

Moong: Pusa Vishal, S M L 668, K 885, P S 16, Pant Moong 2 and P D M 11.

Arhar:Birsa Arhar (210 days), Bahar (240 Days) and ICPH 2671 (210 days),

Maize: short duration variety: Birsa Vikas Maize-2 and medium duration variety: Birsa Maize-1.

Madhya Pradesh

Gram: JG-130, JG-11, JG-315, JG-16

Wheat: Sujata, HW-2004, HI-1500

Winter Sugarcane: KJN 86-572, KJN 86-141

Green Pea: Arkel, PSM-3

Jammu & Kashmir

Berseem: Mescavi, Pusa Giant, BL-1 and Vardan

Uttarakhand

Pea: VL Ageti Mater-7, Vivel Mater-10, Pant Subjee Mater-3, Azad Mater-3 and Arkel

Potato: Kufri- Jyoti, Ashok, Anand

Toria : Pant Toria-30, 303, 507 or local varieties.

Himachal Pradesh

Peas: Palam Triloki, Arkel, VL-7 and Matar Ageta

Late variety of Cauliflower: broccoli

East Uttar Pradesh

Cabbage: Imprabad Japani, Pusa chipali and Pusa kartiki

Radish: Japani white, Pusa chetakij, Hisar Muli No.1 and kalyanpur-1

Toria: T-9, T-36, Pant -30,303, B-9

Potato: Kuferi - Chandramukhi, Bahar

Mustard: Basati, Maya, Kanti, Urvashi, Narendra, Swarna-8, Narendra Ageti-4, Varuna T-59, Rohini, Narendra NDR 850, Vaibhav

Ageti Matar: Kashi - Nandini,Uday, Mukti, Arkel, Azad-3

Rye: Early varieties: Baruna, Narendra Rye 8501,Rohini

Late varieties: Ashirved & Vardan

Pea: Rachana, pant metar-5, Aparna, Malviya-2, Malvia-15, Shikha and Sapna KPMR 144-1, Jay-KPMR 522, Hariyal, Pant P-42, Aman 20019

Gram: Avrodhi, Pusa-256, KWR-108, K-850, DCP 92-3, Adhar RSG-936, WCG-1, 2; KGD-1168

West Uttar Pradesh:

Toria: Sangam, TL-17, 67

Ageti matar: Azad P-3, Arkel

Sugarcane: Kosha- 88230, 8430, 0238,07250,UP-05125

Beseem: VL-1,10

Potato: Kuferi - Ashoka, Surya, Bahar, Satluj, Pukhraj

Maharashtra

Madhya Maharashtra

rabi jowar: Selection-3, Phule Mauli, Phule Anuradha in light soil, Phule Chitra, Maldandi-35-1 in medium soil and Phule Vasudha, Phule Yashodha in black soil

Safflower: Bhima or Phule Kusuma

Wheat: NIAW-301, NIAW-917, NIDW-295.

Gram: Vikas, Vishwas,Vijay, Vishal, Virat or Phule G-12.

Sugarcane: CO-86032, CO-94012, CO-8014, CO-88121 or Phule -265.

Marathwada

Jowar: Parbhani Moti or Parbhani Jyoti.

Vidarbha

Gram: Jaki 9218, AKG-46, Vijay, Vishal, Saki-9516 and Chafa-816.

Gujarat:

Cauliflower: Pusa Early, Pusa Dipali , Pusa Kartiki, Early Kuvari for early maturity and for medium duration select the Pusa synthetic, Early Snowball, Snowball.

Mustard: Gujarat mustard 1 or 2 or 3.

Chick pea: Gujarat Chick pea-1 or 2, Dahod Pila, ICC-4.

Rabi fennel: Gujarat fennel-2, 11 and 12.

Pea: Pusa Pragati.

Carrot: Pusa Rudhira and Pusa Kesar.