

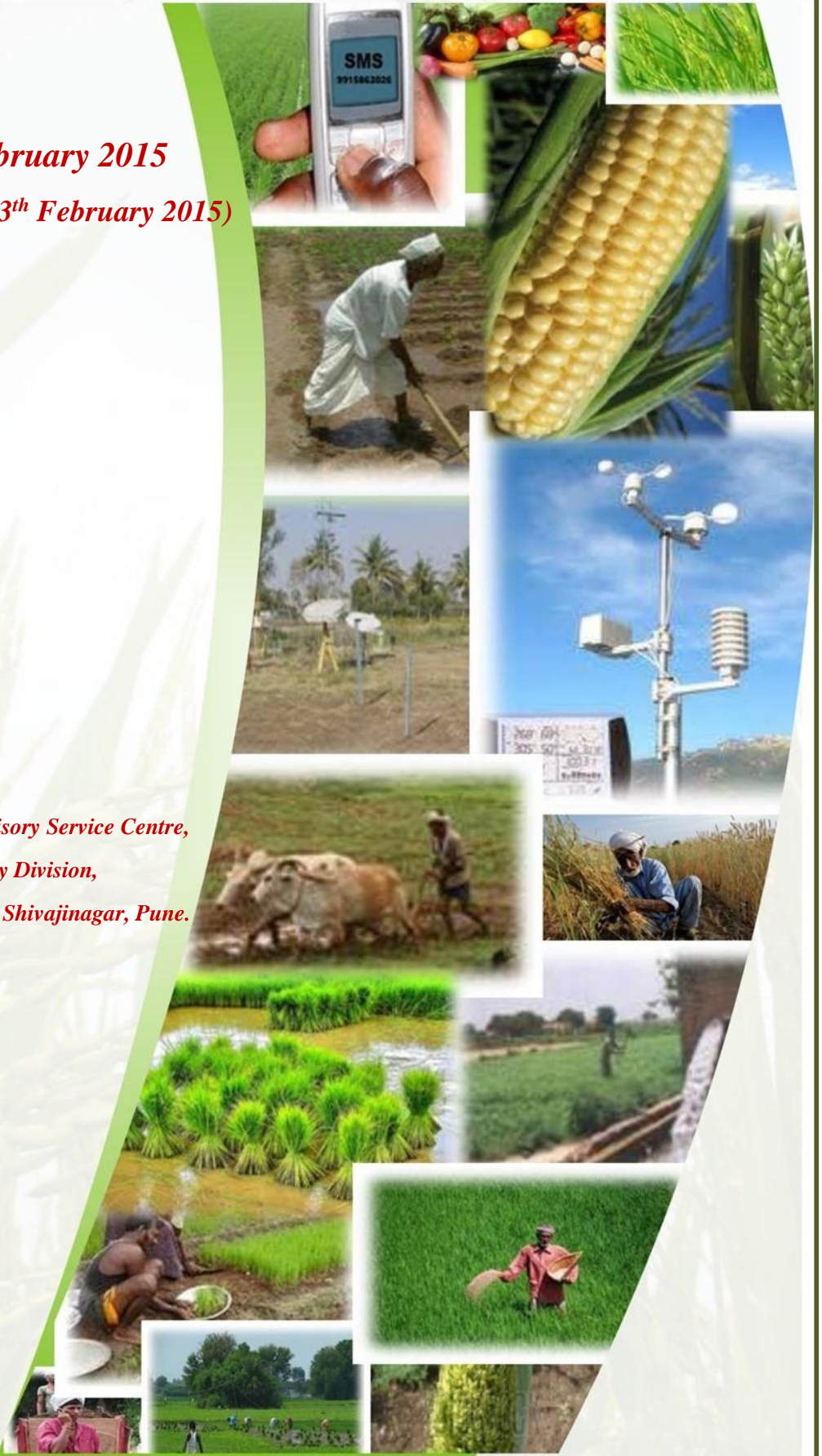
National Agromet Advisory Service Bulletin

Tuesday 10th February 2015
(For the period 10th to 13th February 2015)



Issued by

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



Realised Weather on 10th February 2015

- **Significant weather observations:** Dense/very dense fog has been observed at isolated places over East Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim and East Madhya Pradesh in the morning hours. The visibility (200 m or less) has been recorded at 0830 hours of today are: Gorakhpur, Jalpaiguri and Umaria.
- **Rainfall:** (From 0830 hours IST of yesterday to 0830 hours IST of today): Rain/ thundershowers has occurred at isolated places over Arunachal Pradesh, East Madhya Pradesh, Chhattisgarh and Tamilnadu. Weather remained dry over rest of the country.
- **Temperature: Minimum temperatures** are below normal by 2-3° C at many places over Himachal Pradesh; at a few places over Jammu & Kashmir, Odisha, South Interior Karnataka and Tamilnadu; at isolated places over Madhya Pradesh, Coastal Andhra Pradesh and Rayalaseema. They are above normal by 2-4° C at many places over West Madhya Pradesh, Gujarat and Madhya Maharashtra; at a few places over Assam & Meghalaya, East Rajasthan and Marathwada; at isolated places over West Bengal & Sikkim, West Rajasthan and Telangana and near normal over rest of the country. The Lowest minimum temperature of 4.2°C has been recorded at Amritsar (Punjab) in the plains of the country.

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 13th February, 2015).

- Rain/thundershowers would occur at isolated places over East Madhya Pradesh, Chhattisgarh and Vidarbha during the period.
- Rain/thundershowers would occur at isolated places over Arunachal Pradesh, Assam & Meghalaya during next 24 hours; over Kerala, Lakshadweep and Andaman & Nicobar Islands during next 48 hours and dry weather would prevail thereafter.
- Dry weather would prevail over Jammu & Kashmir during next 24 hours and rain/snow would occur at isolated places thereafter.
- Dry weather would prevail over Odisha and Jharkhand during next 48 hours; over West Madhya Pradesh, Tamil Nadu & Puducherry during next 24 hours and rain/thundershowers would occur at isolated places thereafter.
- Dry weather would prevail over Madhya Maharashtra during next 24 hours and rain/thundershowers would occur at isolated places on 11th and dry weather would prevail thereafter.
- Dry weather would prevail over rest parts of the country during the period.
- Fog would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, north Madhya Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Tripura during morning hours.
- No large change in day and night temperatures over northwest & adjoining central India.

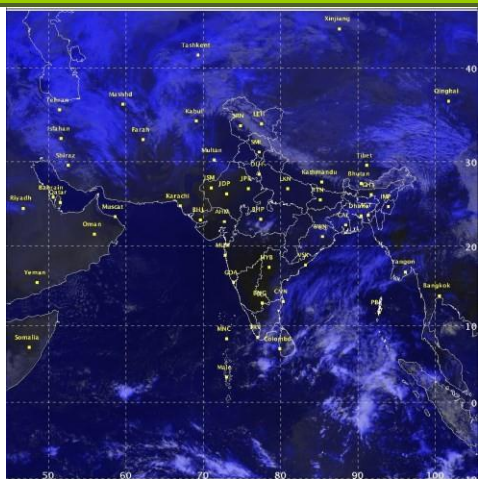
Weather Warning during next 3 days

- **10 February (Day 1):** No Weather Warning.
- **11 February (Day 2):** No Weather Warning.
- **12 February (Day 3):** No Weather Warning.

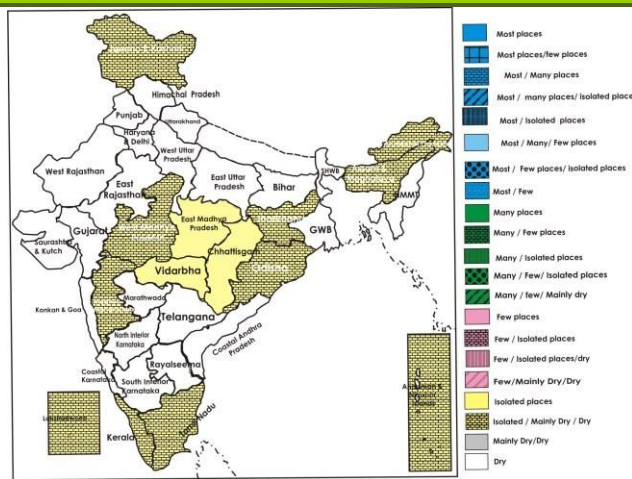
Weather Outlook for subsequent 4 days from 13th to 17th February, 2015

- Rain/ snow would occur at isolated places over western Himalayan region.
- Rain/thundershowers would occur at isolated places over northeastern states, Odisha, Gangetic West Bengal, Jharkhand and extreme south peninsular India.

Satellite image dated, 10.02.2015, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 13th February, 2015)



Detailed Zonewise Agromet Advisories

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



Sorghum



Sugarcane



Chilli



Rice Transplanting

- **Realised Weather:** Rain/ thundershowers occurred at isolated places over Tamil Nadu. Weather remained dry over rest of the region. Minimum temperatures are below normal by 2-3° C at a few places over South Interior Karnataka and Tamil Nadu; at isolated places over Coastal Andhra Pradesh and Rayalaseema. They are above normal by 2-4° C at isolated places over Telangana and near normal over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Kerala during next 48 hours and dry weather would prevail thereafter. Dry weather would prevail over Tamil Nadu & Puducherry during next 24 hours and rain/thundershowers would occur at isolated places thereafter. Dry weather would prevail over rest parts of the region during the period.
- **Weather Warning:** Nil
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over extreme south peninsular India.
- **Advisories:**
 - **Andhra Pradesh:**
 - Complete harvesting of red gram and Bengal gram in Anantapur district of Scarce Rainfall Zone.
 - As dry weather is prevailing, apply light and frequent irrigation to mango crop to get synchronised flowering in the Southern Zone.
 - In the Scarce Rainfall Zone, prevailing dry weather and low temperature conditions are congenial for incidence of stem borer in maize. For control, undertake application of Carbofuran 3 G granules @ 3kg/acre.
 - High temperature during day time is congenial for incidence of sucking pests in cotton in the Krishna Godavari Zone. Undertake stem application of Monochrotophos based on the intensity of pests as control measure.
 - Prevailing dry weather is congenial for incidence of sheath blight in rice in the Southern Zone. To control, spray Hexaconazole @ 2 ml or Tropicconazole @ 1 ml/litre of water.
 - **Telangana:**
 - Prevailing dry weather is congenial for incidence of stem borer in 20-25 days old transplanted rice in the Southern Telangana Zone. To control, spray Cartap Hydrochloride @ 2 g or Acephate @ 1.5 g per litre of water.
 - Prevailing increasing temperature is congenial for the incidence of stem borer in maize in the early stage of the crop in the Northern Telangana Zone. Undertake prophylactic spraying of @ 1.6 ml /litre of water when the crop is 10-12 days old or apply Carbofuran in leaf whorls @ 7.5 kg /ha.

▪ **Karnataka:**

- Continue planting of sugarcane in North Transition and North East Transition Zone after proper set treatment.
- Continue Bengal gram, pigeon pea *rabi* sorghum and safflower in the North East Transition Zone and North East Dry Zone.
- As dry weather is prevailing, apply irrigation in ragi crop which is at ear head emergence stage and continue harvesting of Bengal gram in the Eastern Dry Zone.
- As dry weather is prevailing, apply irrigation to wheat and summer groundnut in the North East Transition Zone.
- As dry weather is prevailing, continue sowing of maize with assured irrigation in the Southern Transition Zone.
- In view of prevailing dry weather, provide irrigation to mango and summer groundnut in the North East Dry Zone.

▪ **Kerala:**

- In the Problem Area Zone, undertake harvesting of pepper, continue mulching with crop residue and dried leaves in coconut, banana and nutmeg fields to reduce evapotranspiration and provide irrigation to nutmeg according to increase in temperature.
- Prevailing dry and humid weather is congenial for incidences of brown spot and sheath blight in rice in the Problem Area Zone. Spray Mancozeb @ 2 kg/ha to manage brown spot and Propiconazole @ 500 ml/ha to manage sheath blight.
- Prevailing high temperature is congenial for attack of white fly, hopper and aphid in vegetables in the Central Zone. Apply Verticillium @ 20 g one litre of water to control the attack.

▪ **Tamil Nadu:**

- Continue harvesting of matured samba rice in the Cauvery Delta Zone.
- Undertake planting of mid-season sugarcane and harvesting of Bengal gram and rice in the Western Zone.
- Undertake land preparation for sowing of summer irrigated sesame and irrigated multi cut fodder sorghum in the Western Zone.
- As mainly dry weather would prevail, undertake sowing of lady's finger under irrigated conditions in the South Zone.
- In rice fallow black gram, powdery mildew disease would be more pronounced due to dew in the morning hours in the Cauvery Delta Zone. For the management of powdery mildew disease, spray Carbendazim 100 g/ac or Wettable Sulphur 1 kg/ac.
- Cloudy weather is congenial for incidence of sucking pests in vegetables in the Southern Zone. For controlling, spray organic solutions @ 100 ml / 10 litre of water or Imidachloprid @ 10 ml / 10 litre of water.
- Moderate cloud cover and humidity is congenial for the incidence of pink boll worm in cotton in the South Zone. Spray Phosalone 35% EC @ 2 l/ ha or Triazophos 40 EC @ 2.5 l/ha to prevent the incidence.
- Suitable varieties are given in Annexure I.

• **Animal Husbandry**

- Undertake preventive measures to protect animals from Anthrax disease and vaccinate sheep and goat against pneumonia & blue tongue disease in the Scarce Rainfall Zone of Andhra Pradesh.
- Undertake de-worming of sheep and goats to control endo-parasites in the Cauvery Delta Zone and vaccinate animals against the foot and mouth disease in the Western Zone of Tamil Nadu.

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



Rice transplanting



Mustard



Potato



Cabbage

- **Realised Weather:** Rain/ thundershowers occurred at isolated places over Arunachal Pradesh. Weather remained dry over rest of the region. Minimum temperatures are above normal by 2-4° C at a few places over Assam & Meghalaya and near normal over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Arunachal Pradesh and Assam & Meghalaya during next 24 hours and dry weather would prevail thereafter. Dry weather would prevail over Nagaland, Manipur, Mizoram and Tripura during the period. Fog would occur at isolated places over Assam & Meghalaya and Tripura during morning hours.
- **Weather Warning:** Nil
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over the region.

- **Advisories:**

- **Assam & Meghalaya, Arunachal Pradesh:**

- In North Bank Plain Zone of Assam, undertake land preparation for direct seeded ahu rice, summer green gram & black gram and sowing of *okra*.
 - In Lower and Central Brahmaputra Valley Zone of Assam, continue transplanting of *boro* rice of about 45 days old (5- 6 leave stage) seedlings. Maintain 6 cm of standing water in the main fields of transplanted *boro* rice. Continue gap filling in *boro* rice after 10-15 days after transplanting.
 - In Lower Brahmaputra Valley Zone of Assam, continue sowing of sunflower and *okra*. Continue land preparation for planting of sugarcane in upland area. Apply irrigation to *rabi* maize, lentil, rapeseed and mustard.
 - In Central Brahmaputra Valley Zone of Assam, continue land preparation and sowing of summer green gram, black gram, summer vegetables, capsularis jute and pointed gourd.
 - In Barak Valley Zone of Assam, continue nursery bed preparation for summer vegetables like brinjal and tomato.
 - In Barak Valley Zone, Central Brahmaputra Valley Zone and Upper Brahmaputra Valley Zone of Assam, undertake harvesting of rape seed/mustard when 75-80% siliquae turn yellow in colour.
 - In Hill Zone of Assam, due to humid weather, late blight and leaf eating caterpillars may be found in tomato and cole crops. Apply Ridomil MZ-72 @2g/ litre of water and Indofil M-45 @2.5g / litre at 15 days interval to protect against late blight and spray Malathion 50 EC @ 1.5 ml/litre against caterpillars.
 - In Central Brahmaputra Valley Zone of Assam, humid weather is congenial for wilt in lentil, linseed and khesari crops. Drench the soil with Bavistin @ 1ml/litre of water.
 - In Meghalaya, due to humid weather, there is chance of attack of blast /brown spot disease in *boro* rice. Spray Carbendazim @ 1g/litre of water against blast/brown spot. Also spray Chlorpyrifos 20 EC or Dimethoate 30 EC @ 2 ml/litre of water against aphid in mustard/ rapeseed.
 - In Barak Valley Zone of Assam, due to foggy weather there is chance of stem borer/leaf folder/leaf tissue scrapped in white parallel line in *boro* rice. Apply Cholorphyriphos 50 EC @ 1.5 ml/ litre of water to control the attack.

- **Nagaland, Manipur, Mizoram and Tripura:**

- In Nagaland, apply light irrigation in pea. Apply mulching in vegetables and cole crops. Continue land preparation and sowing for summer moong /urad and harvesting of toria.
 - In Mild Tropical Plain Zone of Tripura, apply light irrigation on every alternate day in cole crops, banana, mustard, maize and lentil. Undertake mulching after irrigation to conserve moisture. Continue transplanting of summer brinjal and tomato. Maintain 2 to 3cm standing water in the field of *boro* rice at tillering stage.
 - In Tripura, due to humid weather, there is chance of attack of aphids in mustard. Spray or Imidachloprid @ 2ml per litre of water to manage the attack.
 - In Nagaland, humid weather is favourable for occurrence of Pseudostem Weevil in banana. Remove the dried and diseased leaves and kill the weevil.
 - In Mizoram, due to humid weather condition, there is chance of infestation of aphids in pea. For control, apply Imidachloprid @ 1.5 ml/litre of water.
 - Suitable varieties are given in Annexure I.

- **Animal Husbandry**

- In Barak Valley Zone of Assam, prevailing cold weather is favourable for attack of pneumonia in newly born chicks. Special care must be taken against pneumonia.

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



Sugarcane



Wheat



Rice transplanting



Onion

- **Realised Weather:** Dense/very dense fog has been observed at isolated places over Sub-Himalayan West Bengal & Sikkim in the morning hours. Weather remained dry over the region. Minimum temperatures are below normal by 2-3° C at a few places over Odisha. They are above normal by 2-4° C at isolated places over West Bengal & Sikkim and near normal over rest of the region.

- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Andaman & Nicobar Islands during next 48 hours and dry weather would prevail thereafter. Dry weather would prevail over Odisha and Jharkhand during next 48 hours and rain/thundershowers would occur at isolated places thereafter. Dry weather would prevail over rest parts of the region during the period.
Fog would occur at isolated places over Bihar and Sub-Himalayan West Bengal & Sikkim.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over Odisha, Gangetic West Bengal and Jharkhand.
- **Advisories:**
 - **West Bengal:**
 - In Old Alluvial and Terai Zone, continue transplanting of *boro* rice.
 - Due to low temperature and light fog, there is chance of attack of brown spot and blast disease in *boro* rice in Coastal Saline Zone of West Bengal. Apply Bavistin@1g/liter of water for control blast and spray Tricyclozole@5-6g/10liter of water for control brown spot.
 - Due to cloudy weather in Old Alluvial Zone, fungal disease may be problem in wheat and mite may be problem in litchi. Spray Blitox@4g/lit or Bavistine @2g/lit water to prevent fungal diseases and Spray Fenezaquin @1 ml or Dichofol @2 g per liter of water to control mite.
 - In Terai Zone, due to low temperature and foggy weather, there is chance of attack of late blight in potato. For control, spray Mancozeb @ 2 g /litre of water and Blitox @ 4 g/litre of water alternately at 7-10 days interval by completely wetting the leaves.
 - In New Alluvial Zone, Laterite, due to cloudy weather condition, attack of downy-mildew may be prevalent in pointed gourd and leaf blight incidence may be high in chilli. To control downy-mildew, apply Crilexyl or Ridomil@ 2 g/ litre of water during late after-noon and for leaf blight, apply Blitox @ 2.5 to 3 g /litre water at an interval of 20 days.
 - In Laterite and Red Soil Zone of West Bengal, due to low temperature aphids attack may be found in wheat and mustard. Spray Dimethoate (ROGOR) 30 EC @ 1.75 ml/litre of water to control the attack.
 - **Andaman and Nicobar Islands:**
 - In South, North and Middle Andaman districts, due to cloudy weather, there may be possibility of attack of thrips, leaf hopper and other sucking pests in vegetables. Spray Imidacloprid @ 2 ml /litre and Acephate 2 g/litre alternatively once in two weeks.
 - **Odisha:**
 - In Western Undulating Zone of Odisha, as dry weather is prevailing, apply irrigation to vegetables and onion. Undertake harvesting of matured cotton, sugarcane, arhar and niger. Complete nursery sowing for summer rice. Start field preparation for planting of sugarcane.
 - In East and South Eastern Coastal Plain Zone, continue nursery sowing of rice. Continue sowing of sunflower and groundnut. Continue nursery sowing of ragi. Continue planting of sugarcane.
 - In North Eastern Plateau Zone of Odisha, as dry weather is prevailing, apply irrigation in rice nursery. Undertake land preparation for transplanting of rice.
 - In North Eastern Coastal Plain Zone of Odisha, as dry weather is prevailing, apply irrigation to rapeseed and mustard which are at flowering stage.
 - In North Eastern Coastal Plain Zone of Odisha, as temperature is expected to rise, the attack of stem borer will aggravate in rice nurseries. To control it, spray Traizophos or Chloropyriphos @ 2 ml/litre or Cartap Hydrochloride@ 2 g/litre of water.
 - In East and South Eastern Coastal Plain Zone of Odisha, cold and cloudy weather favours the infestation of powdery mildew and aphids in green gram, black gram and pea. To control powdery mildew, spray Sulfex WP @ 1 kg in 200 litres of water per acre and to control aphids, spray Imidacloprid @ 50 ml in 200 litre water per acre.
 - In North Eastern Coastal Plain Zone of Odisha, rise in temperature will favour the growth of stem borer population in rice nurseries. To control it, spray Traizophos or Chloropyriphos @ 2 ml/litre of water.
 - In North Eastern Plateau Zone of Odisha, due to cool weather, there is chance of powdery mildew in pulses, spray wettable Sulphur @ 1 kg per acre.
 - **Bihar:**
 - In South Bihar Alluvial Zone, as dry weather is prevailing, continue plucking of matured pods of pea. Continue harvesting of early sown potato, stop irrigation 15 days before harvesting.
 - In North West Alluvial Plain Zone of Bihar, as dry weather is prevailing, apply irrigation to pea, garlic and vegetables. Complete transplanting of *rabi* onion. Continue land preparation for sowing of summer vegetables. Undertake harvesting of early sown matured mustard crop.
 - In North East Alluvial Zone of Bihar, continue planting of spring sugarcane. Continue transplanting of *boro* rice and nursery sowing of summer rice. Continue harvesting of early sown potato. Continue sowing of cucumber, bottle gourd, muskmelon, watermelon, bitter gourd, ridge gourd and ladies finger. Undertake transplanting of onion.
 - In South Bihar Alluvial Zone, cool and humid weather is favourable for the attack of aphids in mustard/toria, spray Cartap Hydrochloride or Metasystox or rogor @ 1.5 ml/litre of water.

▪ **Jharkhand:**

- In Western Plateau Zone, continue nursery sowing of summer rice and harvesting of potato. Continue sowing of cucurbitaceous vegetables like sponge gourd, bottle gourd, pumpkin, watermelon, muskmelon etc. Farmers, who have already raised the seedlings in polythene bag, may transplant the seedlings in the main field @ 2-3 seedlings per pit. Apply light irrigation after transplanting of seedlings. Continue harvesting of matured rapeseed. Undertake transplanting of 21 days old seedling of rice. Undertake harvesting of mustard.
- In South Eastern Plateau Zone of Jharkhand, apply irrigation in wheat, mustard, and field pea. Continue nursery sowing of summer rice. Continue nursery sowing of vegetables like bottle gourd, khira, kakri, sponge gourd, ridge gourd, bitter gourd, okra, brinjal and Shimla mirch and undertake transplanting of matured seedlings.
- In Central & North Eastern Plateau Zone of Jharkhand, continue land preparation for sowing of vegetables like long gourd, round gourd, bitter gourd, sponge gourd, cucumber, watermelon and muskmelon. Continue nursery sowing of summer rice and undertake transplanting of 12-15 days old rice seedlings. Continue transplanting of onion and harvesting of potato. Undertake harvesting of pigeon pea.
- In Central & North Eastern Plateau Zone of Jharkhand, cool and dry weather is favourable for incidence of powdery mildew disease in pea. To control it, spray Kairathen @ 1 ml or Sulfex @ 3 ml per litre of water.
- Suitable varieties are given in Annexure I.

• **Animal Husbandry**

- In Bihar and Jharkhand it is advised to keep the animals inside the sheds and provide dry bedding and use heaters inside cattle sheds to protect them from cold. Increase protein level and minerals in the feed concentrate to cattle.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane



Wheat



Mustard



Onion

- **Realised Weather:** Dense/very dense fog has been observed at isolated places over East Madhya Pradesh in the morning hours. Rain/ thundershowers occurred at isolated places over East Madhya Pradesh and Chhattisgarh. Weather remained dry over rest of the region. Minimum temperatures are below normal by 2-3° C at isolated places over Madhya Pradesh. They are above normal by 2-4° C at many places over West Madhya Pradesh and near normal over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over East Madhya Pradesh and Chhattisgarh during the period. Dry weather would prevail over West Madhya Pradesh during next 24 hours and rain/thundershowers would occur at isolated places thereafter.
Fog would occur at isolated places over north Madhya Pradesh during morning hours.
No large change in day and night temperatures over central India adjoining to northwest India.
- **Weather Warning:** Nil.
- **Advisories:**
 - **Madhya Pradesh:**
 - Continue picking up of matured vegetables like pea, tomato, brinjal, chilli etc. in Vindya Plateau Zone.
 - Undertake harvesting of matured potato and sowing of summer okra and cowpea in Kymore Plateau and Satpura Hill Zone.
 - Undertake land preparation for sowing of summer moong in Nimar Valley zone.
 - Continue weeding and hoeing in onion and garlic in Bundelkhand Zone. Undertake transplanting of tomato, chilly, brinjal and cucurbitaceous crops in the field.
 - Due to humid weather, there are chances of attack of sucking pests in vegetables in Jhabua Hill Zone; spray Thiomithaxam @ 0.35 g per litre of water.
 - Due to cloudy weather there are chances of attack of semi lopper in cauliflower and cabbage crops in Bundelkhand Zone, spray Melathion 50 E.C. @ 1 ml per litre of water.
 - **Chhattisgarh:**
 - Continue land preparation for sowing of cucurbitaceous crops in Bastar Plateau Zone.
 - Continue land preparation for transplanting of summer rice and sowing of cowpea and okra in North Hill Zone. Continue sowing of cucurbitaceous crops and leafy vegetables.
 - As mainly dry weather is prevailing, apply irrigation in wheat at flowering stage in Plain Zone and North Hill Zone of Chhattisgarh.

- Undertake intercultural operations, followed by irrigation in sugarcane crop at knee height stage in Chhattisgarh Plain Zone.
- Due to humid weather, there are chances of stem borer disease in maize in Bastar Plateau Zone, spray Carbofuran 3G @ 20 kg per hectare.
- **Animal Husbandry**
- Provide green fodder along with mineral mixture and fresh water for milch animals in Madhya Pradesh. Increase light duration in poultry farms.

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



Wheat



Sugarcane



Mustard



Cabbage

- **Realised Weather:** Dense/very dense fog has been observed at isolated places over East Uttar Pradesh in the morning hours. Weather remained dry over the region. Minimum temperatures are below normal by 2-3° C at many places over Himachal Pradesh; at a few places over Jammu & Kashmir. They are above normal by 2-4° C at a few places over East Rajasthan; at isolated places over West Rajasthan and near normal over rest of the region. The Lowest minimum temperature of 4.2°C has been recorded at Amritsar (Punjab) in the plains of the country.
- **Weather Forecast:** Dry weather would prevail over Jammu & Kashmir during next 24 hours and rain/snow would occur at isolated places thereafter. Dry weather would prevail over rest parts of the region during the period. Fog would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi and Uttar Pradesh during morning hours.
No large change in day and night temperatures over northwest India.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/snow would occur at isolated places over western Himalayan region.
- **Advisories:**
 - **Jammu & Kashmir:**
 - In Sub Tropical and Intermediate Zone of Jammu & Kashmir, continue field preparation for nursery sowing of tomato, brinjal and chilli, sowing of beans and cucumber.
 - Due to cloudy and humid weather, there may be attack of yellow rust in wheat crops in Sub Tropical and Intermediate Zone of Jammu & Kashmir. To control spray Propiconazole @ 1 ml/litre of water during clear weather.
 - Due to cloudy weather, there may be attack of aphids in mustard in Intermediate Zone of Jammu & Kashmir. Monitor the aphids population by installing sticky yellow traps @ 2/kanal in mustard and spray Rogor (Dimethoate) 30 EC @ 1 ml/litre of water if the pest population is above ETL at fifteen days interval.
 - **Uttarakhand:**
 - In Bhabar and Tarai Zone of Uttarakhand, undertake sowing of potato at high hills with irrigation facilities. Also continue nursery sowing of tomato and capsicum.
 - In Hill Zone of Uttarakhand, continue nursery sowing of tomato, brinjal, *capsicum* utilising the available moisture.
 - Due to humid weather with low temperature, there is attack of leaf hopper in brinjal, and tomato in Sub humid Sub Tropic Zone of Uttarakhand. To control, apply Dichlorvas @ 1 ml/litre of water.
 - In Bhabar and Tarai Zone of Uttarakhand, due to humid weather conditions, there is chance of incidence of rust diseases in wheat. To control of apply Sulphur dust @ 25 kg/ha or spray Mancozeb @ 2 kg/ha at 15 days interval. The spray or dusting must be done in the morning or evening.
 - **Rajasthan:**
 - Continue field preparation for sowing of summer groundnut in Sub Humid Southern Plain and Aravali Hill Zone of Rajasthan.
 - Due to increase in day temperature aphids may become hyper active in mustard crop in Flood Prone Eastern Plain Zone of Rajasthan. Regularly monitor the field boundaries for aphid and destroy the infested branches/twigs.
 - Due to change in temperature in Semi Arid Eastern Plain Zone of Rajasthan, mustard crop may be affected with white rust & stem rot. To control white rust spray Blitox 50 @ 3 g or Mencozeb @ 2 g per litre of water and to

control stem rot spray fungicide Bavistin @ 1.0 g per litre water. Also *heliolithis* infestation in gram, spray Quinolphos 25 EC @ 1200 ml/ha or Indoxicarb @ 200 ml/ha along with water at the time of flowering.

- Due to cloudy weather condition, there is chance of attack of blight in mustard in Arid Western Plain Zone of Rajasthan. To control, spray Mancozeb @ 2 g/ litre of water.
- Due to cloudy weather conditions may increase the infestation of aphid and sucking pest in gram and mustard crop in Arid Western Plain Zone of Rajasthan. To control, spray Thiomethoxam (25 WG) @ 100 g or Dimethoate 30 EC @ 1200 ml per hectare. To control white rust in mustard, foliar spray of Ridomil MZ @ 2 g/litre of water.

▪ **Himachal Pradesh:**

- In Mid Hills Sub-Humid Zone, continue planting of onion at a distance of 15x10cm.
- Under prevailing temperature and cloudy weather condition, yellow rust are appearing in the wheat crop in the form of yellow powder/stripes on the leaves, to control spray the tilt (Propiconazole) 25 EC/Folicure (Tebuconazole) 25 EC/Bayletan 25 WP @ 0.1% i.e. 30ml or 30 g per 30 litres of water per kanal and repeat the spray after 15 days interval in Sub-Montane and Low Hills Sub-Humid Tropical Zone.
- Under prevailing low temperature and cloudy weather condition, there is chance of attack of aphids in mustard and Gobi sarson. To control spray 750 ml Cypermethrin or Metasystax in 750 litre of water/ha in Mid Hills Sub-Humid Zone. Downy mildew is expected in cruciferous vegetables, for control spray Redomil M-Z @ 25 g per litre of water at 15 days interval.
- Under low temperature condition, there are chances of incidence of collar rot in apple in Mild Hills Sub Humid Zone. For control, spray Ridomil @ 75 g per 20 litres of water or Bavistin @ 15-20 g/20 litres of water or Dithane-M-45 @ 90-100g/15 litres of water.

▪ **Punjab, Haryana and Delhi:**

- Undertake sowing of sugarcane In Western Plain Zone of Punjab.
- In Undulating Plain Zone of Punjab, as dry weather is prevailing, apply irrigation to newly planted plants and mustard.
- Due to foggy weather, constant monitoring of aphids in mustard in Western Semi-Arid Zone of Delhi. If the attack reaches above ETL, spray Dimethoate 30 EC or Quinalphos 25 EC @ 2.0 ml/ litre of water.
- Due to high humidity in Eastern Zone of Haryana, there are chances of incidence of white rust in late sown mustard crop, late blight in potato and tomato and there may be attack of thrips on timely sown onion crop. Undertake constant monitoring to control the pest and diseases.
- Due to high humidity, late blight infestation may occur in potato crop in Undulating Plain Zone of Punjab. To control spray Indofil M45@500-700 per acre.
- Cloudy weather condition is favourable for attack of yellow rust in wheat crop in Central Plain Zone of Punjab. To control spray the crop with tilt 25 EC/Shine 25 EC/Bumper 25 EC or Folicur 25 EC @ 200 ml or Bayletan 25 WP @ 200 g in 200 litres of water/acre.
- Due to humid weather condition, there is chance of aphids in mustard/rapeseed in Western plain Zone of Punjab; spray Actara 25 WG @ 40 g or Metasystox 25 EC @ 400 ml in 80-125 litres of water/acre.
- In Punjab and Western Semi-Arid Zone of Delhi, cloudy weather, there is chance of incidence of yellow rust in wheat in the form of yellow powder/stripes on the leaves. To control, spray the fungicides Tilt (Propiconazole) 25 EC/folicure (Tebuconazole) 25 EC/Bayletan 25 WP @ 0.1% i.e. 30 ml or 30 g per 30 litres of water per kanal and repeat the spray after 15 days interval.

▪ **Uttar Pradesh:**

- Undertake sowing of ladies finger and continue nursery sowing of tomato and chilli, sowing of summer maize in Central plain Zone with available soil moisture.
- Continue land preparation for planting summer sugarcane and transplanting of onion and sowing of urad and moong in Eastern Plain Zone.
- Complete sowing tomato, chilli and brinjal in Bundelkhand Zone. Continue planting of onion.
- Under prevailing foggy weather condition, there is chance of attack of termites and seed borer in sugarcane in Central Plain Zone. For control, spray Gamma B.H.C. @ 5-6 litres in 1000 litres of water. For control of powdery mildew in peas, spray soluble Sulphur @ 3g or Carbendizium @ 500g or Tridemorph 80 EC @ 500 ml/ha at 12-14 days interval.
- Under foggy weather condition, there is chance of powdery mildew in peas in Bundelkhand Zone. For control, apply soluble Sulphur 80EC @2 kg or Tridemorph 80 EC @500ml in 500-600 litres of water per ha. For control of attack of fruit borer and semi-looper in arhar, spray B.T. 5% WP 1.5 kg or Indascarb 14.5 SC @ 400 ml or Quinolphos 25 EC @ 1.5 litres in 500-600 litres of water.
- Under foggy weather condition, there are chances of incidence of *Alternaria* blight in mustard and late blight in potato in North Eastern Plain Zone. Spray Quinalphos @ 1g or Ridomil MZ @ 2 g/litre of water for control of *Alternaria* blight in mustard and for control of late blight in potato, spray Ridomil MZ @ 2 g + Coper Oxichloride @ 1g per litre of water. For control of attack of aphids in potato and mustard, spray Imidachloprid @ 1ml/litre of water. For control of blight disease in wheat, spray Mancozeb @ 2 ml/litre of water.
- Under foggy weather condition, there is chance of attack of fruit borer in gram, peas and lentil. Spray @ 5 ml/litre of water.

- Suitable varieties are given in Annexure I.
- **Floriculture**
- Under prevailing low temperature, red scales are observed in roses in Sub-Montane and Low Hills Sub-Humid Zone of Himachal Pradesh. For control, spray Carbofuran @ 1 teaspoon per plant.
- **Apiculture**
- In view of prevailing low temperature, give winter packing immediately to bee colonies in Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. Check the colonies for nectar and give artificial food to honey bees as there is scarcity of flowers during these days. Keep colonies in sun on clear day.
- **Animal Husbandry**
- Due to prevailing low temperature in Punjab, Haryana & Delhi, East Rajasthan and Uttar Pradesh, keep cattle in cowsheds to protect them from cold. Also give 40-50g mineral mixture with the daily feed. Also make arrangements in poultry houses for protection of birds from cold. Due to light rain, there are chances of spread of H.S. (Haemorrhagic Septicemia or Gall Ghotu) in cattle. Vaccinate the animals.
- Due to prevailing low temperature in Western Zone of Haryana, cover the animal sheds and provide dry bedding during night. New born calves need special care, so provide them dry bedding and clothing (Jhull).

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Banana

Sugarcane

Sorghum

Mango

- **Realised Weather:** Weather remained dry over the region. Minimum temperatures are above normal by 2-4° C at many places over Gujarat and Madhya Maharashtra; at a few places over Marathwada and near normal over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Vidarbha during the period. Dry weather would prevail over Madhya Maharashtra during next 24 hours and rain/thundershowers would occur at isolated places on 11th and dry weather would prevail thereafter. Dry weather would prevail over rest parts of the region during the period.
- **Weather Warning:** Nil.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, as dry weather is likely to prevail, apply irrigation to groundnut (at 10–12 days interval), vegetables. Apply fertilizers and undertake intercultural operations in groundnut, vegetable crops and mango and cashew orchards. Considering day temperature (upto 34°C) and canopy apply 150 to 200 litres of water per mango tree at 15 days interval. Apply grass mulch in lateritic soil to avoid water loss. To avoid fruit dropping spray *Amrashakti* @ 1 litre per four trees in 25 litres of water on inflorescence. Maintain 2-3 cm water level in transplanted rice and finger millet field for first 8-10 days and maintain water level upto 5 cm at vegetative stage.
 - In Madhya Maharashtra, as dry weather prevailed, apply irrigation to vegetables, sugarcane, wheat, gram and pomegranate, banana orchards. Continue intercultural operations like weeding and apply fertilizers in sugarcane and vegetables. Complete preparatory tillage and continue planting of *suru* sugarcane. Continue sowing of summer groundnut and summer sunflower. Continue harvesting of already matured *rabi* jowar and keep the harvested produce in safer place.
 - In Marathwada, as dry weather prevailed during last week and dry weather is likely to prevail, apply irrigation in gram (pod development stage), wheat (milking stage) and vegetables. Apply irrigation to sugarcane by drip irrigation or by alternate furrow method due to water stress condition also apply mulch of crop residue or sugarcane trash to preserve moisture. To reduce moisture loss from the soil dust mulching may be done in late sown jowar. Undertake intercultural operations in vegetables and sugarcane. Continue planting of *suru* sugarcane and summer okra.
 - In Vidarbha, as dry weather is prevailing, apply irrigation to vegetables, gram (pod development stage) and wheat (booting stage). Complete transplanting of 30 -35 days old summer rice seedlings. Maintain 2-3 cm water level in transplanted rice field. As minimum temperature (above 16°C) is favourable for germination, continue sowing of summer groundnut. Continue planting of watermelon, muskmelon and summer okra. Undertake sowing of summer sesame.
 - Due to cloudy weather in Pune region there may be attack of pod borer in late sown gram, spray Heliokill @500 ml per hectare in 500 litres of water. Also install 5 Pheromone traps per hectare.

- Due to rise in temperature in Marathwada region there may be attack of red mite in wheat, spray Chloropyriphos 20 EC @ 20 ml in 10 litres of water.
- **Gujarat:**
- Undertake sowing of groundnut and continue transplanting of summer paddy in South Gujarat Heavy Rainfall Zone. Continue land preparation for sowing of summer crops (green gram and pearl millet). Harvest the matured spikes of castor.
- As dry weather is prevailing and there is increase in temperatures apply irrigation to vegetables at an interval of 3 to 4 days in South Gujarat Zone.
- Undertake sowing of summer groundnut, summer sesame, vegetable crops (lady's finger, cluster bean, bottle gourd, sponge gourd, ridge gourd and bitter gourd), watermelon and transplanting of tomato and brinjal in North Saurashtra Zone and land preparation for sowing of sesame and green gram and keep inputs ready. Apply irrigation in wheat (grain development stage), garlic and onion (bulb development stage).
- Undertake land preparation for sowing of groundnut and sesame in North Gujarat Zone. As dry weather would prevail, apply irrigation in wheat (milk/grain development stage), mustard (pod development stage), and cotton, continue harvesting of matured spikes of castor and continue picking of matured bolls of cotton during early morning hours in North Gujarat and North West Zone.
- Continue land preparation for sowing of summer crops in Middle Gujarat Zone. Harvest the matured spikes of castor. As dry weather is prevailing apply irrigation in wheat crop (milk/grain formation stage), potato, mustard and vegetables.
- Apply irrigation in mustard (pod development stage) and wheat (milk stage) in Bhal and Coastal Zone of Gujarat. Undertake harvesting of matured spikes of castor and continue picking of matured bolls of cotton during early morning hours.
- Suitable varieties are given in Annexure I.
- **Animal Husbandry**
- Keep young calves indoors during night time in Gujarat. Cover the poultry house with cloth/plastic sheets to protect the poultry birds from cold wind.

Annexure I

List of varieties

Karnataka

Sunflower: Morden, K.B.S.H-1, 41, 42 and 44

Maize: Ganga-11, Deccan-103, N.A.C-6002 & 6004, Nityashree

Groundnut: ICGS-11, K-134, Chintamani-2(KCH-2)

Ragi: Indaf-5, GPU-26 and 48

Sugar-cane: Co-86032, Co-94012

Assam

Boro rice: Mahsuri, IR-50, Dinanath, Bishnuprasad, Jyotiprasad, Kanaklata and Dinanat, Boro-1, -2, -3, Kalinga-3, Joymati, Dinanath, Swarnav.

Sunflower: Jwalamukhi.

Green gram: Pratap, T-44, Kopergaon, AAU-39, K-851 and ML-55.

Black gram: T-9, Pant-U-19, UG-157.

Odisha

Sunflower: Morden, Sunrise, Surya and Hybrid varieties like KBSH-1, KBSH-3 and MSFH.

Groundnut: Smruti, TAG-27, TAG – 24 and JL-24

Onion: Nasik Red, Patna Red, Pune Red, Bellary Red, Pusa Ratnar, Pusa Madhavi, Arka Niketan ,Arka Pragati

Ragi: HYVs. like Subhra, Vairabi, Dibyasingh, Nilachala, Subhra, Godavari and Chilka.

Bihar

Boro rice: Gutum, Prabhat, Richaria, Dhanlaxmi, Saroj Rajendra Bhagvati, and R.A.U

Jharkhand:

Summer Rice: IR-36, IR-64, Naveen, lalat, Parijat (80-85 days).

Jammu & Kashmir

Onion: Agrifound Parvati, Pusa red, N-53.

Uttarakhand

Tomato: VL Tomato-3, Pant T-3, Him Sona, Him Shikhar.

Capsicum: California Vander, Pus Dipti, Anupam. Heera, Indira, Supriya & Bharat.

Potato: Kufri- Jyoti, Ashok, Anand

Himachal Pradesh

Wheat: HPW-155, HPW-89, HPW-147, HPW-236, HPW-211 in low and mid hill and HPW-155, HPW-236, HPW-42 in high hill

Late variety of Cauliflower: broccoli

Cauliflower: Pusa-snowwall

Radish: Japanese white, Chinese pink and mino early white

Turnip: PTWG-1

Carrot: Pusa kesar

Fenugreek: I.C. 74, Kasoori

East Uttar Pradesh

Wheat: Narendra-1012, HD-2824, 2733, HP-1731, UP-2382, PWD-343, CVW-38, DBW-39, UO-2382, HUW-510

Wheat (Late varieties): Malaveey-234, HP-1633, H-1744, Narendra-1014, UP-2425

Onion: Pusa red, Kalynpur red, light red

Lentil: T-8, Pant L-406, 234

Chilli: Patasi-1, Jwala, Sadabahar

West Uttar Pradesh:

Wheat (non-irrigated): K-9644, Maghar(K-8027), Mandakini(K-9351), Indra(K-8962), Gomati(K-9465), HDR-77, HD-2888

Wheat (Irrigated): K-307, DBW-17, PBW-343,502,550, GW-366, K-1006, 607,402, DVW-39

KRL-210, 213, 19, K-8434(Prasad), NW-1067

Lentil: Narendra-1, DPL-62, Pant-5, L-4076, K-75, HUL-57, Shekhar-3, 2, IPL-81

Sunflower: No.1, PAC- 302, SH-322

Rajasthan

Groundnut: T.A.G.24, T.G.37A, G.G.2, D.H.86.

Maharashtra

Madhya Maharashtra

Groundnut: SB-11, JL-286, Phule Unati, TPG-41, TG-26 or JL-501.

Sunflower: SS-56, Modern, EC-68414 or bhanu and hybrid varieties like KBSH-1 or phule Raviraj or MSFH-17.

Marathwada

Jowar: Parbhani Moti or Parbhani Jyoti.

suru Sugarcane: CO-86032, COM- 7125, CO-8014 or CO-740

Okra: Parbhani Kranti

Vidarbha

Groundnut: TAG-24, TG-26 or SB-11.

Water Melon: Sugar baby, Arka Jyoti or Arka Manik.

Okra: Arka Anamika, Parbhani Kranti, Akola Bahar or Phule Utkarsha.

Sesamum: AKT-101 or NT-11-99.

Gujarat

Groundnut: GG-2, 5 and 7, TAG-24, TG-37-A, TPG-41, GG-2, GJG-3.

Sesamum: G.Til-2, G.Til-3.