

National Agromet Advisory Service Bulletin

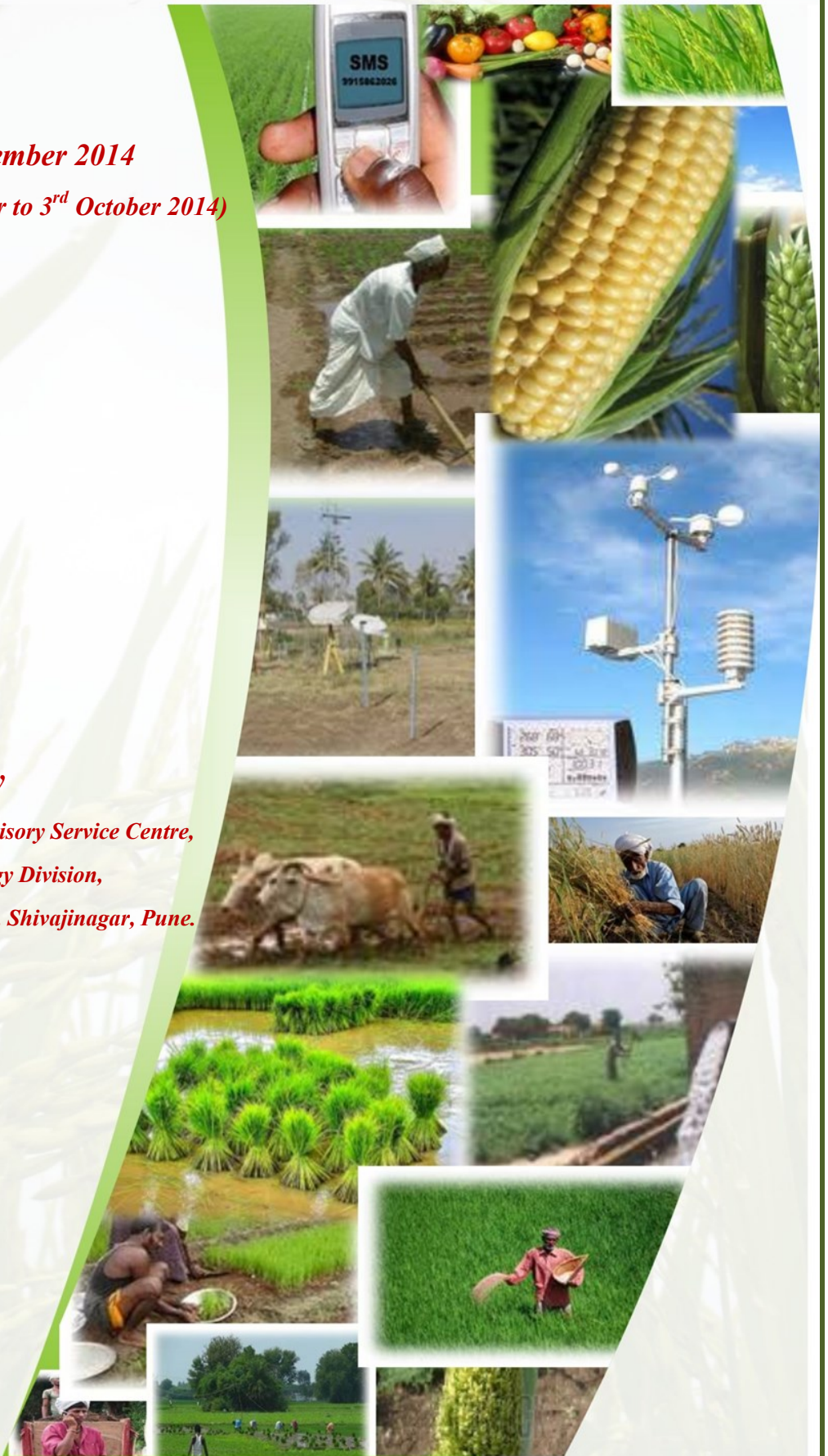
Tuesday 30th September 2014

(For the period 30th September to 3rd October 2014)

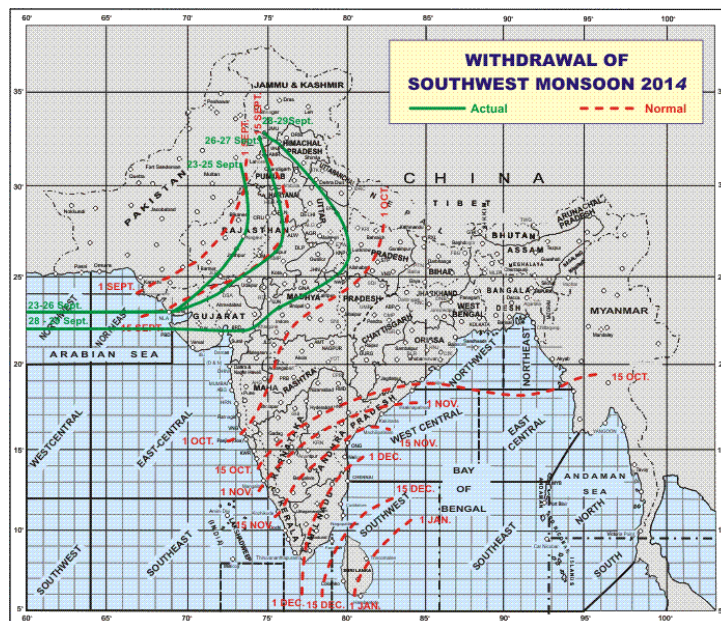


Issued by

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



Monsoon Watch



- The withdrawal line of southwest monsoon continues to pass through Jammu, Una, Bareilly, Kanpur, Nowgong, Ujjain, Vadodara, Porbandar, Lat.22°N/Long.65°E and Lat.22°N/Long.60°E.
- Southwest Monsoon was vigorous over South Interior Karnataka on 29th September 2014.

Realised Weather on 30th September 2014

- Rainfall: (From 0830 to 1730 hours IST of yesterday): Rain/thundershowers occurred at isolated places over Uttarakhand, East Uttar Pradesh, Bihar, West Bengal & Sikkim, Coastal Andhra Pradesh, Konkan & Goa, Coastal Karnataka, Tamilnadu and Andaman & Nicobar Islands. Weather remained mainly dry / dry over rest parts of the country. The amounts of rainfall (1 cm or more) recorded at 1730 hours IST of yesterday were: Kottayam 3; Ballia 2 and Goa (Panjim), Atiramapattinam, Palayankottai and Valprai leach.
- Temperature: Yesterday, the maximum temperatures were above normal by 2-3°C at many places over East Uttar Pradesh, Gangetic West Bengal, Jharkhand, Odisha, Madhya Pradesh, Maharashtra and at a few places over northeastern States and Andhra Pradesh. They were near normal over rest parts of the country.

Weather Forecast

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

- Rain/thundershowers would occur at many places over South Interior Karnataka during next 24 hours; over Coastal Karnataka and Kerala during next 48 hours and at a few places thereafter.
- Rain/thundershowers would occur at a few places over Tamil Nadu & Puducherry, Andaman & Nicobar Islands during the period.
- Rain/thundershowers would occur at isolated places over Uttarakhand, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura, Konkan & Goa, Madhya Maharashtra, Coastal Andhra Pradesh and Rayalaseema during the period.
- Rain/thundershowers would occur at a few places over Sub-Himalayan West Bengal during next 24 hours; over North Interior Karnataka and Lakshadweep during next 48 hours and at isolated places thereafter.

Weather Warning during next 3 days

- **30 September (Day 1):** Heavy rainfall would occur at isolated places over Interior Tamilnadu, South Interior Karnataka and Kerala.
- **01 October (Day 2):** Heavy rainfall would occur at isolated places over Interior Tamilnadu.
- **02 October (Day 3):** No weather warning.

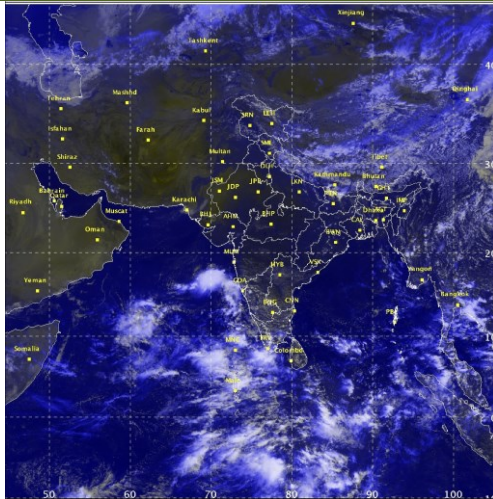
Weather Outlook for subsequent 4 days from 03rd to 07th October 2014.

- Rain/thundershowers would occur at many places along west coast and over South Interior Karnataka and at a few places over Madhya Maharashtra, interior Karnataka, Tamilnadu and Andaman & Nicobar Islands.
- Rain/thundershowers would occur at isolated places over east & northeastern states and rest peninsular India.

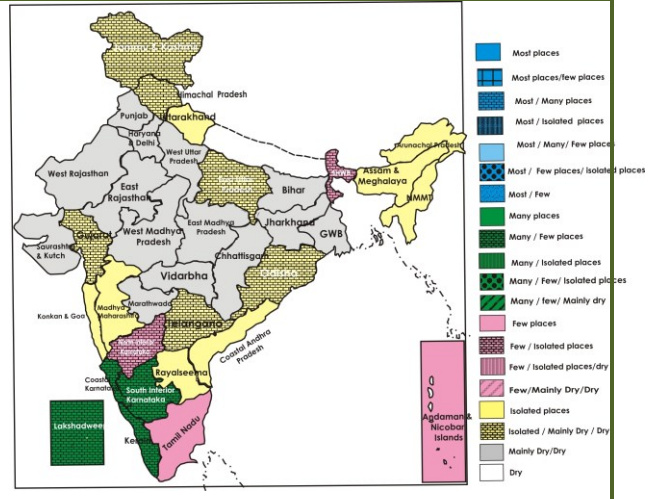
- Rain/thundershowers would occur at isolated places over Jammu & Kashmir, Gujarat Region and Telangana during next 24 hours; Himachal Pradesh during next 48 hours and mainly dry thereafter.
- Mainly dry weather would prevail over Odisha and East Uttar Pradesh during next 48 hours and rain/thundershowers would occur at isolated places thereafter.
- Mainly dry weather would prevail over rest parts of the country.

- Weather would be mainly dry over rest of the country.

Satellite image dated, 30.09.2014, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 3rd October 2014)



Salient Advisories

- As rain/thundershowers would occur at many places during next 48 hours over Coastal Karnataka and at many places along with heavy rainfall at isolated places during next 24 hours over South Interior Karnataka, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water in **South Interior Karnataka**.
- Continue land preparation for sowing of *rabi* crops like sunflower, horse gram (PHG-9), sesame, cowpea and maize utilizing the realized rainfall in the **North Dry Zone of Karnataka** utilizing the realized rainfall.
- Continue sowing and transplanting of *samba* rice and nursery sowing of *Thaladi* rice in the Cauvery Delta Zone of **Tamil Nadu**.
- In Central Brahmaputra Valley Zone of **Assam**, continue nursery sowing of cole crops and brinjal and undertake land preparation for sowing of *rabi* pulses and oilseeds.
- In **Madhya Maharashtra**, maintain the water level of 5-8 cm in rice field. Undertake intercultural operations like weeding and fertilizer application in sugarcane, vegetables, cotton and red gram. In fallow and already harvested fields of green gram and black gram, undertake field preparation and sowing of *rabi* jowar and safflower. Apply irrigation to sugarcane and vegetables.
- As mainly dry weather would prevail, continue harvesting of maize in Intermediate Zone of **Jammu & Kashmir**. Continue harvesting of mash and moong crops in Sub-tropical Zone.

Detailed Zonewise Agromet Advisories

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



Rice



Sugarcane



Cotton



Soybean

- **Realised Weather:** Rain/thundershowers occurred at isolated places over Coastal Andhra Pradesh, Coastal Karnataka and Tamilnadu. Weather remained mainly dry / dry over rest parts of the region. Yesterday, the maximum temperatures were above normal by 2-3°C at a few places over Andhra Pradesh and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over South Interior Karnataka during next 24 hours; over Coastal Karnataka and Kerala during next 48 hours and at a few places thereafter. Rain/thundershowers would occur at a few places over Tamil Nadu & Puducherry; at isolated places over Coastal Andhra Pradesh and Rayalaseema during the period. Rain/thundershowers would occur at isolated places over Telangana during next 24 hours and mainly dry thereafter. Rain/thundershowers would occur at a few places over North Interior Karnataka during next 48 hours and at isolated places thereafter.
- **Weather Warning:** Heavy rainfall would occur at isolated places over Interior Tamilnadu on 30th September and 1st October and over South Interior Karnataka and Kerala on 30th September.
- **Weather Outlook:** Rain/thundershowers would occur at many places over South Interior Karnataka and at a few places over interior Karnataka and Tamilnadu. Rain/thundershowers would occur at isolated places over rest peninsular India.
- **Advisories:**
 - **Karnataka:**
 - As rain/thundershowers would occur at many places during next 48 hours over Coastal Karnataka and at many places along with heavy rainfall at isolated places during next 24 hours over South Interior Karnataka, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water in South Interior Karnataka.
 - Continue land preparation for sowing of *rabi* crops like sunflower, horse gram (PHG-9), sesame, cowpea and maize utilizing the realized rainfall in the North Dry Zone of Karnataka.
 - Continue land preparation for *rabi* sowing in the North Transition Zone of Karnataka utilizing the realized rainfall. Apply 50 kg of Urea and 15 Kg of MOP per acre as a top dressing in maize at silking stage.
 - Cotton crop is at square formation to flowering stage in the Hill Zone of Karnataka, to reduce the square/flower bud/flower drop, undertake spraying of Planofix @0.25 ml/litre of water after current spells of rain.
 - In the Southern Dry Zone of Karnataka, due to cloudy weather, thrips and case worm attack may increase in rice. To manage, spray Roger @ 1.5ml per litre of water for thrips and to manage case worm, spray Chloropyriphos 20EC @ 2ml/litre of water after current spells of rain.
 - **Kerala:**
 - As rain/thundershowers would occur at many places over Kerala during next 48 hours along with heavy rainfall at isolated places, postpone irrigation, intercultural operations, application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water.
 - Continue nursery sowing of rice in the Northern, Central and in Southern Zone of Kerala. Continue planting of *Nendran* banana in the Southern Zone of Kerala.
 - Present humid weather condition is congenial for incidence of false smut and grain discolouration in rice and gray blight disease in coconut in the Problem Area Zone of Kerala. Apply Mancozeb 2kg/ha to manage false smut and grain discolouration and Propiconazole @ 0.025% to manage gray blight after current spells of rain.
 - Humid weather is congenial for incidence of Sigatoka disease in banana in the Central Zone of Kerala. Spray Pseudomonas @10-15 g in 1 litre of water to control the disease in the initial stage and apply SAAF @ 2 g in 1 litre of water if the attack is severe. Apply plant protection measures after current spells of rain.
 - **Telangana and Andhra Pradesh:**
 - In Scarce Rainfall Zone of Rayalaseema, continue intercultural operations and weeding in standing crops to conserve soil moisture. Continue sowing of *Maghi* sorghum in the districts of Cuddapah and Kurnool utilising the realised rainfall.

- As mainly dry weather would prevail, undertake intercultural operations and fertilizer applications in the standing crops like cotton, pulses and rice in Krishna Godavari Zone of Andhra Pradesh.
- Prevailing high humidity is congenial for incidence of leaf folder attack in rice in North Coastal Zone of Andhra Pradesh. Spray Chlorpyrifos @ 2.5 ml/litre of water.
- Present hot weather is congenial for brown plant hopper attack on rice in Nellore district of Southern Zone of Rayalaseema. Drain out the water from the field and spray Ethoprophos @ 2.0 ml or Monochrotophos @ 2.2 ml along with Dichlorophos @ 1 ml per litre of water.
- In the prevailing humid weather conditions, incidence of tobacco streak virus in cotton is noticed in Southern Telangana Zone which is likely to continue. To manage the vector (thrips), spray Thiamethoxam @ 0.2 g/litre or Acetamiprid @ 0.2 g /litre of water. Remove weeds like *Parthenium*, *Achiranthus* in and around the field to prevent both the virus & vector.
- Present hot and partly cloudy weather conditions are congenial for incidence of stem borer in rice in Northern Telangan Zone of Andhra Pradesh. Spray Chlorpyrifos @ 2.5ml or Esiphat @ 1.5 g per litre of water.
- **Tamil Nadu:**
- Continue sowing and transplanting of *samba* rice / nursery sowing of *thaladi* rice in the Cauvery Delta Zone of Tamil Nadu.
- In the Western Zone of Tamil Nadu, undertake harvesting of groundnut and jowar /millets on a non rainy day. Undertake, land preparation for sowing of crops by utilizing realized/ expected rainfall.
- Undertake sowing of cotton under dry land conditions in the South Zone of Tamil Nadu.
- Undertake cultivation of maize in the North Western Zone of Tamil Nadu using the realized and expected rainfall.
- 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.
- Provide drainage in and around cattle and poultry sheds may be provided to avoid water stagnation in the Western Zone of Tamil Nadu. Safeguard feeds and fodder material from rain soaking.

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



Rice



Okra



Cole Crops (Nursery)



Green Gram

- **Realised Weather:** Weather remained mainly dry / dry over the region. Yesterday, the maximum temperatures were above normal by 2-3°C at a few places over northeastern States.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over northeastern states.
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Lower Brahmaputra Valley Zone of Assam, drain out excess water from standing crop fields.
 - In Hill Zone of Assam, complete sowing of green gram, black gram, sesame and nursery sowing of cole crops. Undertake transplanting of early cauliflower.
 - In Barak Valley Zone, undertake transplanting of early cauliflower and cabbage, knol khol.
 - In Central Brahmaputra Valley Zone of Assam, sowing of cole crops and early radish may be continued. Continue weeding and thinning in sesame. Nursery sowing of winter brinjal (Pusa Kranti, Pusa Purple Long, Pusa Purple Cluster, Pusa Bhairav, JC-2, BWR-12) may be continued. Undertake land preparation for sowing of *rabi* pulses and oilseeds.
 - In Upper Brahmaputra Valley Zone of Assam, continue nursery sowing of *rabi* vegetables.
 - In Meghalaya, continue nursery preparation/ sowing of vegetables like cabbage, cauliflower, carrot, radish, broccoli and French bean and planting of potato and continue sowing of pea in high altitude areas of East Khasi Hills.
 - Due to cloudy and humid weather, there is chance of attack of rice hispa in *sali* rice at tillering stage in Hill Zone

of Assam, spray with Quinalphos @ 10 ml /5 litre of water.

- Due to prevailing humid weather conditions, there is chance of attack of stem borer, caseworm, sheath blight, blast and leaf folder in *Sali* rice in Barak Valley Zone, North Bank Plain Zone, Central Brahmaputra Valley Zone and Lower Brahmaputra Valley of Assam. Spray 0.02% Chloropyriphos 20 EC or Quinalphos 25 EC @ 2.5 ml per litre of water against pests.
- 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.
- In Meghalaya, maintain water level of 3-5 cm in transplanted *Sali* rice. Conserve water by repairing bunds. Transplanting of cabbage, cauliflower and broccoli and sowing of carrot, radish and French bean may be completed. In ginger and turmeric, undertake hand weeding followed by fertilizer application, earthing up and mulching. Land preparation for sowing peas and planting of potato and peas may be continued.
- Due to cloudy weather & high humidity, there is chance of incidence of blast in *kharif* rice in Meghalaya. Spray Mancozeb @ 2g/litre or Carbendazim @ 1g/litre. Also humid weather is congenial for development of late leaf spot in groundnut. Spray apply Bordeaux mixture (5:5:50) after 4 – 5 weeks of sowing or Captan @ 1.5 g/litre of water.
- **Nagaland, Manipur, Mizoram and Tripura:**
 - In Manipur, maintain water level of 5-8cm in *kharif* rice. Continue main field preparation for transplanting of cole crops.
 - In Mizoram, continue nursery preparation for cole crops like cabbage, cauliflower, broccoli and knolkhol.
 - In Mild Tropical Plain Zone of Tripura, continue harvesting of *jhum* rice and groundnut and nursery sowing of winter vegetable particularly tomato, cauliflower, cabbage, broccoli. Undertake land preparation for planting of potato.
 - In Nagaland, continue nursery sowing of cabbage.
 - In Mizoram, due to continuous wet condition, there is chance of leaf spot on ginger & turmeric; spray Dithane M-45 @ 2.5 g/litre of water or Bavistin @ 1 g/litre of water or Blitox @ 3 g/litre of water. Also weather is congenial for attack of stem borer, gundhi bug and leaf blast in rice, spray Monocrotophos @ 20 ml/10 litres water or Imidacloprid @ 20 ml/10 litres of water against stem borer. Spray Monocrotophos 36 WSC @ 1.5 ml/litre of water against gundhi bug. Spray Triclozole (Beam) @ 0.5 g/litre against leaf blast.
 - In Tripura, drain out excess water from the fields of short duration *aman* rice. Prevailing humid weather is conducive for attack of gundhi bug in short duration *aman* rice . To manage the attack by applying Cypermethri + Propenophos @1.5ml per liter of water or Cartap Hydrochloride (Dollar) @1.5 g per litre of water.
 - Suitable varieties are given in Annexure I.
- **Animal Husbandry**
 - In Meghalaya, avoid water stagnation around pig shed to avoid mosquito breeding.
 - In Tripura, provide good ventilation in poultry sheds.
 - In Manipur, provide clean drinking water to livestock. Avoid water logging around the sheds as it may help in mosquito breeding.

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



Sugarcane



Groundnut



Onion



Rice

- **Realised Weather:** Rain/thundershowers occurred at isolated places over Bihar, West Bengal & Sikkim and Andaman & Nicobar Islands. Weather remained mainly dry / dry over rest parts of the region. Yesterday, the maximum temperatures were above normal by 2-3°C at many places over Gangetic West Bengal, Jharkhand, Odisha and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Sub-Himalayan West Bengal during next 24 hours and at isolated places thereafter. Rain/thundershowers would occur at a few places over Andaman & Nicobar Islands during the period. Mainly dry weather would prevail over Odisha during next 48 hours and rain/thundershowers would occur at isolated places thereafter. Mainly dry weather would prevail over Gangetic West Bengal, Bihar and Jharkhand during the period.

- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at a few places over Andaman & Nicobar Islands and at isolated places over east India.
- **Advisories:**
 - **West Bengal:**
 - In New Alluvial Zone of West Bengal, keep 5-7 cm water in *aman* rice fields at the time of panicle initiation stage. Continue seedbed / land preparation for early winter vegetables like radish, broccoli etc. and sowing of onion, cabbage, cauliflower etc. in the nursery bed.
 - In Terai Zone, undertake transplanting of early cabbage, cauliflower.
 - In Laterite and Red Soil Zone continue harvesting of maize. In *aman* rice field, maintain 3-5 cm standing water at panicle initiation stage.
 - In Old Alluvial Zone, due to cloudy and humid weather, there is chance of occurrence of stem borer, leaf folder and sheath blight in *aman* rice, apply Chloropyriphos @ 2.5 ml/litre of water or Cartap Hydrochloride 50 WP @ 1 g/litre of water against stem borer and leaf folder. To control sheath blight, spray Validamycin @ 2.5ml or Carbendazim 50% WP @ 1g per litre of water. Apply the chemicals on a non rainy day.
 - In Laterite and Red Soil Zone, due to cloudy and humid weather, there is chance of occurrence of blast disease in *aman* rice. Apply Carbendazim + Mancozeb @ 2.5 g/litre of water.
 - In Coastal Saline Zone, there is chance of leaf roller in *aman* rice (high yielding variety) due to prevailing high humidity. Spray Chlorpyriphos@2ml/litre of water.
 - In Terai Zone, due to humid weather there is chance of sheath blight, stem borer and gall midge in *aman* rice. Spray Propiconazole @ 1 ml/litre of water against sheath blight and spray Fipronil 8% WDG @ 2 g per 1.5 litre of water against stem borer and gall midge.
 - **Odisha:**
 - Continue nursery raising for early *rabi* vegetables in North Eastern Coastal Plain Zone and Ghat Zone of Odisha.
 - In North Central Plateau Zone of Odisha, continue planting of lemon and mango utilizing the realized rainfall.
 - In North Central Plateau Zone of Odisha, complete sowing of green gram black gram and cowpea in fallow up and medium up lands.
 - In North Eastern Plateau Zone of Odisha, due to high humidity and cloudy weather, there is chance of infestation of aphids in maize. To manage, spray Imidacloprid 17.8 SL @ 50 ml in 200 liters of water per acre.
 - In North Eastern Plateau Zone of Odisha, due to continuous cloudy and high humid weather, there is chances of Tikka leaf spot in groundnut. To control, spray Mancozeb@ 2.5g per liter of water.
 - Due to high humidity and temperature, infestation of hairy caterpillar in groundnut and stem borer in maize has been found in North Central Plateau Zone of Odisha which is likely to increase, apply Chloropyriphos @ 10-12 kg/ ha for hairy caterpillar and for stem borer, apply Furadan @ 1 g in the leaf whorl. Otherwise spray Chloropyriphos @ 2 ml or Phosphamidon @ 1.5 ml in 1 litre water for control of stem borer. Repeat the spraying after 15 days of first spray.
 - 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 transplanting of tomato, cauliflower and nursery sowing of cabbage. Undertake top-dressing of nitrogen @ 30 Kg/ha in rice which is in booting stage and apply 40 kg N per hectare in the late transplanted rice which is in tillering stage. Undertake field preparation for sowing of rai.
 - In North East Alluvial Plain Zone of Bihar, maintain optimum water level in rice. Complete transplanting of early autumn vegetable *viz.* cauliflower, cabbage and brinjal etc.
 - In South Bihar Alluvial Zone, maintain 5 cm water in rice fields.
 - Due to humid weather, there are chances of attack of brown plant hopper in rice crop in North East Alluvial Plain Zone of Bihar; spray Imidacloprid 17.8% EC @ 0.5 ml/L of water in the evening.
 - **Jharkhand:**
 - In Western Plateau Zone of Jharkhand, in upland areas, continue sowing toria. Continue planting of early potato and sowing of green peas. Continue field preparation for sowing of mustard and wheat.
 - In South Eastern Plateau Zone of Jharkhand, continue land preparation for the cultivation of short duration early potato. In fallow land continue sowing of green pea and toria.
 - In Central & North Eastern Plateau Zone of Jharkhand, continue sowing of toria, green pea and potato. Continue nursery sowing of tomato, cabbage and cauliflower in raised seed bed.
 - Suitable varieties are given in Annexure I.
 - **Animal Husbandry**
 - In Coastal Saline Zone of West Bengal, keep the cattle under proper shade and stop free grazing for avoiding worm infection due to rain.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane

Rice

Okra

Onion

- **Realised Weather:** Weather remained mainly dry / dry over the region. Yesterday, the maximum temperatures were above normal by 2-3°C at many places over Madhya Pradesh and near normal over rest parts of the region.
- **Weather Forecast:** Mainly dry weather would prevail over the region during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be mainly dry over the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - Continue sowing of sarson saag, radish, spinach and coriander in Bundelkhand Zone of Madhya Pradesh.
 - Continue nursery sowing of winter vegetables like tomato, chilli, brinjal, cauliflower, cabbage, capsicum and planting of early varieties of potato and green peas in Jhabua Hill Zone and Vindhya Plateau Zone of Madhya Pradesh.
 - As mainly dry weather would prevail, undertake harvesting of early variety of soybean in Malwa Plateau Zone and continue harvesting of matured urad, moong and vegetables in Jhabua Hill Zone, Vindhya Plateau Zone and Nimar Valley Zone of Madhya Pradesh.
 - As mainly dry weather would prevail, apply irrigation in maize and cotton in Jhabua Hill Zone and in rice in Grid Zone of Madhya Pradesh.
 - Due to humid weather there are chances of attack of fruit borer in urad and moong in Grid Zone of Madhya Pradesh, spray Dimethoate @ 1.5ml per litre of water.
 - Due to humid weather, there is possibility of attack of yellow mosaic virus in urad and soybean in Nimar Valley Zone of Madhya Pradesh, spray Methyl Demeton @ 2.0 ml or Imedachloprid @ 0.5 ml per litre of water.
 - **Chhattisgarh:**
 - In North Hill Zone and Bastar Plateau Zone of Chhattisgarh, continue nursery raising of cauliflower, cabbage, chilli, tomato, brinjal etc.
 - Due to cloudy weather, there are chances of incidence of stem borer in rice in North Hill Zone and Plain Zone of Chhattisgarh, apply Carbofuran @ 33 kg/ha or Fartera @ 10 kg/ha.
 - Due to hot and humid weather, there are chances of tobacco caterpillar infestation in soybean in Plain Zone of Chhattisgarh. Spray Prophenophos + Cypermethrin (Poletrin C) @1.25 litre per ha or Spynosad @ 250 ml/ha.
 - Due to humid weather there are chances of incidence of leaf blast in maize in Bastar Plateau Zone of Chhattisgarh, spary Mencozeb or Redomil @ 2g per litre of water.
 - Suitable varieties are given in Annexure I.
- **Animal Husbandry**
 - In Madhya Pradesh, provide clean water and concentrate feed mixed with dry and green fodder to cattle.
 - In Chhattisgarh, provide concentrated feed to milch animals by mixing dry and green fodder and enrich feed with protein, carbohydrate, fat, vitamins etc.

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



Rice

Sugarcane

Bottle Gourd

Onion

- **Realised Weather:** Rain/thundershowers occurred at isolated places over Uttarakhand and East Uttar Pradesh.

Weather remained mainly dry / dry over rest parts of the region. Yesterday, the maximum temperatures were above normal by 2-3°C at many places over East Uttar Pradesh and near normal over rest parts of the region.

- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Uttarakhand during the period. Rain/thundershowers would occur at isolated places over Jammu & Kashmir during next 24 hours; over Himachal Pradesh during next 48 hours and mainly dry thereafter. Mainly dry weather would prevail over East Uttar Pradesh during next 48 hours and rain/thundershowers would occur at isolated places thereafter. Mainly dry weather would prevail over rest parts of the region.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be mainly dry over the region.
- **Advisories:**
 - **Jammu & Kashmir:**
 - As mainly dry weather would prevail, undertake harvesting of maize in Intermediate Zone of Jammu & Kashmir. Sowing of berseem as fodder crop may be continued. Weeding may be carried out in vegetables.
 - In Sub-Tropical Zone of Jammu & Kashmir, continue sowing of ghobi sarson (Var. GSL-1,GSL-2,DGS-1) with toria (RSPT-1 and local toria) as mixed or intercrop and nursery raising of cole crops and onion. Sowing of root crops like radish, carrot, turnip etc. may also be undertaken. Monitor maize crop for the incidence of stalk rot and apply Blitox @ 2 g/ litre of water. Undertake harvesting of matured cob.
 - Due to humid weather, there may be incidence of brown spot and sheath blight disease on rice in Sub-Tropical Zone of Jammu & Kashmir, to control apply Propaconazole @ 0.1 % and for control of sheath blight, give foliar application of Carbendazim @ 0.1%.
 - Under prevailing humid weather condition, there are chances of incidence of sheath blight and blast in rice in Intermediate Zone of Jammu & Kashmir. Apply Bavistin @ 2 g per litre of water or Propiconazole 25 EC @ 1ml per litre of water.
 - **Himachal Pradesh:**
 - As mainly dry weather would prevail, undertake harvesting of maize and prepare for harvesting of rice and pulses in Sub-Montane and Low Hills Sub-Humid Tropical Zone and Bilaspur district of Mid Hills Sub-Humid Zone of Himachal Pradesh. Also undertake harvesting of peas, cabbage and cauliflower in high hill region.
 - 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 with available soil moisture. 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 with available soil moisture.
 - Complete sowing of radish, turnip and spinach and undertake nursery preparation for cauliflower (Pusa-snow ball) and cabbage in Mid Hills Sub-Humid Zone of Himachal Pradesh. Undertake harvesting of onion, tomato capsicum, cucumber and apple.
 - As mainly dry weather would prevail, undertake harvesting of rajmah 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.
 - Due to prevailing humid weather condition, there are chances of incidence of rice hispa in rice in Sub-Montane and Low Hills Sub-Humid Tropical Zone and Bilaspur district of Mid Hills Sub-Humid Zone of Himachal Pradesh. Spray Cypermethrin 10EC @ 1ml per litre or Chloropyrifos 20 EC @ 2.5 ml per litre of water.
 - 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 @ 50ml or properzite @ 200 ml per 200 litres of water for mite.
 - Due to prevailing humid weather conditions, there are chances of attack of aphids in cabbage and cauliflower in High Hill Temperate Dry Zone of Himachal Pradesh. Spray Cypermethrin @ 1ml per litre of water.
 - **Uttarakhand:**
 - Undertake land preparation for transplanting of onion and sowing of garlic. Also continue sowing of mustard, palak, methi, raddish, early toria, pea in Hill Zone of Uttarakhand.
 - In Bhabar and Tarai Zone of Uttarakhand, undertake sowing of pea and toria and planting of potato. Undertake land preparation for sowing of peas, radish, fenugreek and spinach. Undertake harvesting of matured rice.
 - In Sub humid Sub Tropical Zone of Uttarakhand, undertake weeding in pulses like urad and moong to control weeds and undertake earthing up in sugarcane. Apply second dose of urea in maize at flowering stage.
 - Under humid weather condition, there are chances of attack of gundhi bug in rice in Sub humid Sub Tropical Zone of Uttarakhand. Spray Malathion or Carbaryl @ 30 kg per hectare.
 - **Punjab, Haryana and Delhi:**
 - In Punjab, in view of deficit rainfall, adopt moisture conservation practices like hoeing, weeding, mulching in crops like sugarcane, maize, cotton to reduce the evapotranspiration losses and to conserve moisture for *rabi*

crops. De-tasselling in maize is advised to reduce transpiration losses.

- 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 and litchi.
- 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.
- Under hot and humid conditions, whitefly incidence may increase in cotton in Western Plain Zone of Punjab, spray Triazophos 40 EC @ 600ml/acre or Ethion 50 EC @ 800 ml/acre.
- 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 very congenial for attack of fruit rot in chilli, spray Indofil M45 @ 390 g/acre in 100-200 litres of water. Due to intermittent rainfall during previous week, false smut infection in rice heads may occur, spray Blitox @ 500 g/acre to prevent. Present weather condition is congenial for attack of fungal diseases in vegetables, spray Indofil M45 @ 390 g per acre in 100-200 litres of water to control fungal diseases.
- In Western Zone of Haryana, complete sowing of fodder crop jowar mixed with cowpea to increase the nutritive value for continuous supply of green fodder. Continue plantation of new orchard.
- In Delhi, continue transplanting of onion seedlings and planting of early potato. Continue land preparation for sowing of early toria and sowing of radish, spinach and coriander. In the present weather conditions, false smut may appear in rice, apply Blitox @ 500 g per acre at 10 days interval (2-3 times).
- **Uttar Pradesh:**
 - Undertake nursery sowing/transplanting of cabbage, cauliflower, tomato and chilli and planting of potato in Central Plain Zone of Uttar Pradesh.
 - As mainly dry weather would prevail, apply irrigation in rice at flowering and grain formation stages and in moong and urad at flowering and pod formation stages in Central Plain Zone of Uttar Pradesh. Complete weeding and thinning in pigeonpea.
 - Undertake second top dressing of nitrogen in maize at knee high stage and third during tasselling stage in Western Plain Zone of Uttar Pradesh.
 - Complete sowing of toria in Central Plain Zone and continue sowing in Eastern Plain Zone of Uttar Pradesh.
 - Undertake land preparation for planting of potato in Ambedkarnagar, Deoria and Ballia districts of Eastern Plain Zone of Uttar Pradesh.
 - Undertake sowing of Ageti Matar in Deoria and Ballia districts of Eastern Plain Zone and Jhansi district of Bundelkhand Zone of Uttar Pradesh.
 - Continue transplanting of cauliflower, cabbage, tomato, chilli and brinjal, sowing of palak, cucumber, methi, ageti carrot in Jhansi district of Bundelkhand Zone of Uttar Pradesh. Undertake harvesting of matured moong. Maintain 5cm water level in rice at panicle initiation and flowering stage.
 - Due to prevailing humid weather condition, there are chances of attack of Gundhi bug in rice in Central Plain Zone and Eastern Plain Zone of Uttar Pradesh. Spray Methyl Parathion 2% @ 20 kg or Malathion 5% @ 20-25 kg per hectare.
 - Due to prevailing humid weather condition, there are chances of attack of beetle in banana in Central Plain Zone of Uttar Pradesh. Spray Monocrotophos @ 125 ml per litre of water or add 3-4 g Carbofuron in soil.
- **Rajasthan:**
 - Continue nursery raising of tomato, brinjal, chillies, cabbage etc. in Transitional Plain Zone of Inland Drainage of Rajasthan.
 - Continue nursery sowing of cauliflower (Japanese, Pusa hybrid-2 and Himjoyti) and radish (Pusa Chetki) and continue sowing of rainfed Taramira, Toria and Mustard in Semi Arid Eastern Plain Zone of Rajasthan.
 - Continue nursery sowing of mid season cauliflower (Japanese, Pusa hybrid-2 and Himjoyti) and sowing radish (Pusa Chetki) in Arid Western Plain Zone of Rajasthan. Apply remaining half dose of nitrogen *i. e.* 30 kg/ha through urea in 25-30 days old pearl millet crop.
 - In Arid Western Plain Zone of Rajasthan, undertake hoeing and weeding to create dust mulch for checking evaporation losses and also for control of weeds in rainfed crop like pearl millet, guar, moth bean. If water stress persists for longer time, spray thiourea @ 0.1%.
 - In Southern Humid Plain Zone of Rajasthan, in the present temperature conditions, there are chance of attack of grass hopper on maize. To control, dusting of Methyl Parathion 2% @ 25 kg/ha is advised.
 - 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 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:** Rain/thundershowers occurred at isolated places over Konkan & Goa. Weather remained mainly dry / dry over rest parts of the region. Yesterday, the maximum temperatures were above normal by 2-3°C at many places over Maharashtra and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Konkan & Goa and Madhya Maharashtra during the period. Rain/thundershowers would occur at isolated places over Gujarat Region during next 24 hours and mainly dry thereafter. Mainly dry weather would prevail over rest parts of the region.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at many places along west coast. Rain/thundershowers would occur at a few places over Madhya Maharashtra. Weather would be mainly dry over rest of the region.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, maintain water level upto 5-8 cm in rice fields. Undertake fertilizer application and intercultural operations in rice, finger millet, vegetable fields and mango and cashew orchards. Early maturing rice variety is at maturity stage in South Konkan, continue harvesting during morning hours.
 - In Madhya Maharashtra, maintain the water level of 5-8 cm in rice field. Continue intercultural operations like weeding and fertilizer application in sugarcane, vegetables, cotton and red gram. In fallow and already harvested fields of green gram and black gram, undertake sowing of *rabi* jowar and safflower utilizing the available soil moisture. Undertake October pruning in grapes for better growth of fruit bunch. Apply phosphorous (P₂O₅) @ 250 kg/ha after pruning. Apply irrigation to sugarcane, vegetables and grapes, banana and pomegranate orchards except Pune district.
 - In Marathwada, undertake intercultural operations in cotton, red gram and vegetables. Complete plucking of already matured green gram and black gram pods. Taking benefit of available soil moisture, undertake sowing of rainfed jowar. Apply irrigation to sugarcane, soybean and vegetables.
 - In Vidarbha, apply fertilizers and undertake intercultural operations in cotton and red gram. Maintain water level up to 7 cm in rice field in East Vidarbha. Prepare the field for sowing of safflower in the harvested field of green gram and black gram. Apply irrigation to vegetables, soybean (at pod development stage), cotton and orange, sweet lime orchards. Early sown soybean is at maturity stage in Central Vidarbha Zone, start harvesting of matured crop and prepare harvested field sowing of rainfed gram.
 - Light rain and humid weather in Pune region is favourable for infestation of downy mildew in grapes, spray Metalaxyl-Mancozeb (0.2 %) for 5 times at 12 days interval after pruning.
 - Due to cloudy weather there may be attack of sap sucking pest in cotton in Marathwada region; spray Triazophos 40% @ 3 ml per 10 litres of water.
 - Due to uneven rains and high relative humidity in South Konkan, there may be attack of aphids, leaf hoppers, red pumpkin beetle, leaf eating caterpillars, leaf miner in gourd vegetables; apply Malathion @ 20 ml or Dimethoate @ 15 ml per 10 litres of water at 10 to 15 days interval.
 - **Gujarat:**
 - Continue harvesting of matured pulse crops. Carry out intercultural and weeding operation in cotton and castor crops and gap filling in late sown castor in Bhal and Coastal Zone.
 - Continue nursery raising for *rabi* vegetables (chilli, tomato and brinjal) and intercultural operations in pigeon pea (before flowering) in South Gujarat Zone.
 - Taking advantage of mainly dry weather, continue harvesting of matured pearl millet and pulse crops (green gram, cow pea) in North Gujarat Zone. Continue sowing of *rabi* castor. Under vasma condition prepare land for sowing of *rabi* fennel. Carry out weeding, hoeing and intercultural operations and mulching in cluster bean and standing castor crops for effective weed control and to conserve the soil moisture. Apply supplementary dose of nitrogen @ 40 kg/ha through urea in castor.
 - As mainly dry weather would prevail, continue harvesting of matured pearl millet in North West Zone of Gujarat.
 - Carry out intercultural operations, weeding and mulching in pulses, maize and cotton in Middle Gujarat zone and in late sown castor and vegetables (July-August transplanted) in South Gujarat Heavy Rainfall Zone. Carry

out gap filling in castor in South Gujarat Heavy Rainfall Zone.

- Continue land preparation for sowing of pea and carrot (for vegetable purpose) in North Saurashtra Zone. As mainly dry weather is likely to continue, apply irrigation in vegetables and cotton crops.
- Due to humid weather conditions infestation of jassid is observed in cotton in North Gujarat Zone and in cotton and groundnut in North Saurashtra Zone and North West Zone; spray Imidacloprid 17.8 % @ 5 ml or Thiomethoxam @ 6 g in 10 liters of water for control.
- Due to warm weather conditions, there is chance of attack of thrips in cotton in South Saurashtra Zone, for control, spray Imidacloprid 17.8 % @ 10 ml or Thiomethoxam 8 g or Acephate @ 20 g in 10 liters of water.
- Due to humid weather, there is chance of incidence of powdery mildew disease in sesame in North Gujarat Zone and in North Saurashtra Zone; spray Hexaconazole 5 % EC @ 20 ml in 10 liters of water to prevent it.
- Suitable varieties are given in Annexure I.
- **Animal Husbandry**
- In Gujarat, maintain proper nutrient supplement in animal's diet.

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, Suhasihi.

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

Green gram: K-851, Jawahar Mung -721, Pant Mung- 4, T.J. M 3

Black gram: Pant U-30, R.B.U.-38, Jawahar Urd-3, J. U-37

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

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

West Uttar Pradesh:

Toria: Sangam, TL-17, 67

Ageti matar: Azad P-3, Arkel

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

Marathwada

Jowar: Parbhani Moti or Parbhani Jyoti.

Gujarat:

Pea: Pusa Pragati.

Carrot: Pusa Rudhira and Pusa Kesar.