

National Agromet Advisory Service Bulletin

Tuesday 23rd September 2014
(For the period 23rd to 26th September 2014)



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



Monsoon Watch

- Conditions continue to be favourable for the withdrawal of southwest monsoon from some parts of northwest India during next 24 hours.
- The southwest monsoon was vigorous over Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya and active over Gangetic West Bengal, Arunachal Pradesh and Jharkhand.

Realised Weather on 23rd September 2014

- **Rainfall:** (From 0830 hours IST to 1730 hours IST of yesterday): Rain/thundershowers occurred at many places over Assam & Meghalaya and Odisha; at a few places over Sub-Himalayan West Bengal & Sikkim and at isolated places over East Uttar Pradesh, Bihar, Coastal Andhra Pradesh and Andaman & Nicobar Islands. Weather remained mainly dry / dry over rest parts of the country. The amounts of rainfall (2 cm or more) recorded at 1730 hours IST of yesterday were: Cherrapunji 16; Guwahati 9; Shillong 7; Majbat 6; Passighat 5; Kailashahar 4; Vishakhapatnam, Gaya, Nancowry, Tezpur and Wardha 3 each; Sambalpur, Cuttack and Dhubri 2 each.
- **Temperature:** Yesterday, maximum temperatures were above normal by 2-4°C at many places over North Madhya Pradesh, Coastal Andhra Pradesh, Tamilnadu, Kerala and Andaman & Nicobar Island; at a few places over Himachal Pradesh, Uttarakhand and Uttar Pradesh and at isolated places over Jammu & Kashmir and Rayalaseema. They were below normal by 2-4°C at many places over West Bengal & Sikkim and Assam & Meghalaya and at isolated places over East Bihar, Odisha and East Madhya Pradesh and near normal over rest parts of the country.

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 26th September, 2014)

- Rain/thundershowers would occur at most places over Arunachal Pradesh during next 24 hours; over Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura, during next 48 hours and at many places thereafter.
- Rain/thundershowers would occur at many places over Sub-Himalayan West Bengal & Sikkim, Tamil Nadu & Puduchery, South Interior Karnataka and Kerala during the period.
- Rain/thundershowers would occur at many places over Gangetic West Bengal during next 24 hours and at a few places thereafter.
- Rain/thundershowers would occur at isolated places over Coastal Karnataka during next 24 hours and at many places thereafter.
- Rain/thundershowers would occur at a few places over Odisha, North Interior Karnataka and Lakshadweep during the period.
- Rain/thundershowers would occur at isolated places over Rayalaseema during next 24 hours and over Andaman & Nicobar Islands during next 48 hours and at a few places thereafter.
- Rain/thundershowers would occur at isolated places over Bihar, Jharkhand, Konkan & Goa, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh and Telangana during the period.
- Rain/thundershowers would occur at isolated places over East Madhya Pradesh and Chhattisgarh during next 24 hours; over Vidarbha during next 48 hours and mainly dry thereafter.
- Mainly dry weather would prevail over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Punjab, Haryana & Delhi, Rajasthan, West Madhya Pradesh and Gujarat State during the period.

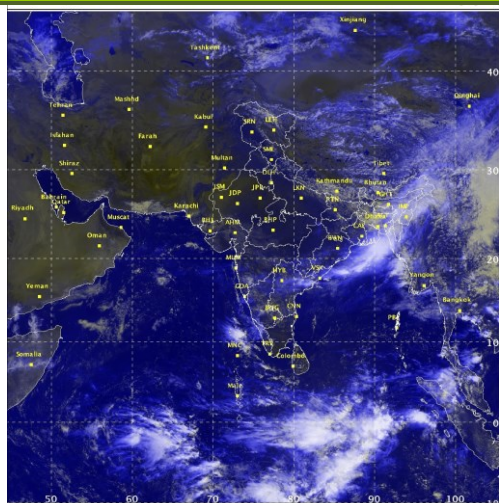
Weather Warning during next 3 days

- **23 September (Day 1):** Heavy to very heavy rainfall would occur at a few places with extremely heavy falls at isolated places over Assam & Meghalaya.
Heavy to very heavy rainfall would occur at a few places over Nagaland, Manipur, Mizoram & Tripura and at isolated places over Arunachal Pradesh.
Heavy rainfall would occur at isolated places over South Interior Karnataka.
- **24 September (Day 2):** Heavy to very heavy rainfall would occur at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
Heavy rainfall would occur at isolated places over Interior Tamilnadu and South Interior Karnataka.
- **25 September (Day 3):** Heavy rainfall would occur at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, South Interior Karnataka, Kerala and Tamilnadu.

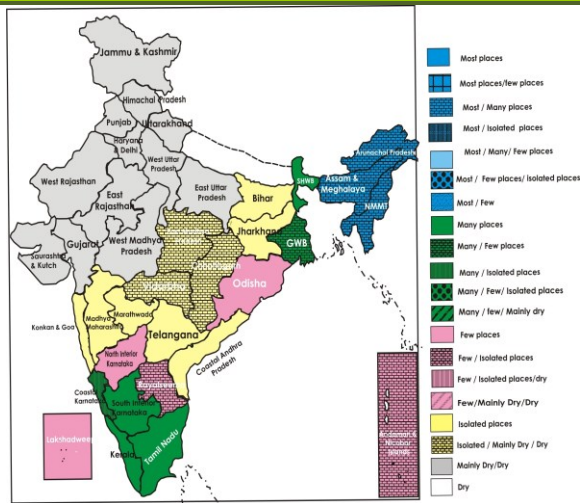
Weather Outlook for subsequent 4 days from 26th to 30th September 2014

- Rain/thundershowers would occur at many places over northeastern states and peninsular India.
- Rain/thundershowers would occur at isolated places over Western Himalayan region, West, Central and East India.
- Weather would be mainly dry over rest of the country.

Satellite image dated, 23.09.2014, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 26th September 2014)



Salient Advisories

- In **Jammu & Kashmir**, arrange drainage facilities to remove excess water from fields wherever feasible and then apply top dressing of nitrogen @ 3.25 kg urea per kanal in rice and in maize. Monitor maize crop for the incidence of stalk rot and apply Blitox @ 2g/ litre of water. Drain out excess water from pulses and vegetable fields in Valley Temperate Zone, Sub-Tropical and Intermediate Zone of Jammu & Kashmir. Continue harvesting of mash and moong crops immediately in Sub-tropical Zone to avoid shattering and other losses.
- Continue land preparation for *rabi* sowing utilizing the realized rainfall. Nipping of shoot tip of cotton is advised in 90 days old crop to check excess vegetative growth and spray 2% DAP along with 1% MgSO₄ and Planofix (0.25 ml/lit of water) on a non rainy day to manage leaf reddening and square dropping in the North Transition Zone of **Karnataka**.
- Continue nursery preparation for *Mundakan* rice in the Southern Zone of **Kerala**.
- In **Madhya Maharashtra**, maintain the water level of 5-8 cm in rice field. In fallow and already harvested fields of green gram and black gram, undertake field preparation and sowing of *rabi* jowar and safflower utilizing the available soil moisture.
- In **Marathwada** in Maharashtra, complete plucking of already matured green gram and black gram pods. Taking benefit of available soil moisture, undertake sowing of rainfed jowar.
- As rain/thundershowers would occur at many/most places over **Assam, Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram** and **Tripura** along with heavy to very heavy spells at few /isolated places during the period, 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. Postpone harvesting of crops and keep harvested produce at safe places.
- In North Central Plateau Zone of **Odisha**, complete sowing of green gram black gram and cowpea in fallow up and medium up land.

Detailed Zonewise Agromet Advisories

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



Rice



Sugarcane



Okra



Soybean

- **Realised Weather:** Rain/thundershowers occurred at isolated places over Coastal Andhra Pradesh. Weather remained mainly dry / dry over rest parts of the region. Yesterday, maximum temperatures were above normal by 2-4° C at many places over Coastal Andhra Pradesh, Tamilnadu and Kerala; at isolated places over Rayalaseema and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Tamil Nadu & Pudduchery, South Interior Karnataka and Kerala during the period. Rain/thundershowers would occur at isolated places over Coastal Karnataka during next 24 hours and at many places thereafter. Rain/thundershowers would occur at a few places over North Interior Karnataka during the period. Rain/thundershowers would occur at isolated places over Rayalaseema during next 24 hours and at a few places thereafter. Rain/thundershowers would occur at isolated places over Coastal Andhra Pradesh and Telangana during the period.
- **Weather Warning:** Heavy rainfall would occur at isolated places over South Interior Karnataka during the period; over interior Tamil Nadu on 24th September and over Kerala and Tamil Nadu on 25th September.
- **Weather Outlook:** Rain/thundershowers would occur at many places over peninsular India.
- **Advisories:**
 - **Karnataka:**
 - As rain/thundershowers would occur at many places over South Interior Karnataka during the period along with heavy rainfall at isolated places and rain/thundershowers would occur at many places over Coastal Karnataka on 24th & 25th September, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops in South Interior Karnataka to remove excess water.
 - Continue sowing of sunflower and fodder crops in some areas and continue land preparation for *rabi* sowing utilizing the realized rainfall in the North Dry Zone of Karnataka.
 - In Eastern Dry Zone of Karnataka, continue sowing of ragi, cow-pea and field-bean.
 - Undertake land preparation for *rabi* sowing utilizing the realized rainfall. Nipping of shoot tip of cotton is advised in 90 days old crop to check excess vegetative growth and spray 2% DAP along with 1% MgSO₄ and Planofix (0.25 ml/lit of water) on a non rainy day to manage leaf reddening and square dropping in the North Transition Zone of Karnataka.
 - 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 on a non rainy day.
 - In the Southern Dry Zone of Karnataka, ginger crop is severely affected by Rhizome rot disease which is likely to spread due to moist conditions. Provide adequate drainage and spray Copper Oxychloride @ 3 g/litre of water after current spells of rain to manage the disease.
 - **Kerala:**
 - As rain/thundershowers would occur at many places over Kerala during the period along with heavy rainfall at isolated places on 25th, 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.
 - Undertake harvesting of *Viruppu* rice after current spells of rain and continue nursery preparation for *Mundakan* rice in the Southern Zone of Kerala. Undertake crown cleaning in coconut and ploughing of fields before onset of Northeast monsoon for more retention of rain water and control of weeds.
 - Present humid weather condition is congenial for incidence of rice bug in rice and leaf fall disease in rubber plant in the Problem Area Zone of Kerala. Avoid overlapping of cultivation, keep the field and bunds free of weeds and grasses and when bugs are seen in large numbers spray Malathion @ 2ml/litre of water or DDVP@ 2ml/litre of water after current spells of rain. For one hectare rubber plantation, apply COC 8kg +40litres of water to manage leaf fall disease.
 - High humidity is congenial for incidence of sheath blight disease in rice and leaf fall disease in nutmeg in the Central Zone of Kerala. Apply Propiconazole 25 EC @ 500 ml per ha to control sheath blight and apply 1% Bordeaux mixture to nutmeg to control leaf fall after current spells of rain.

- In the present weather condition, bacterial wilt disease is seen on a large scale in brinjal and tomato in the Southern Zone of Kerala. Remove and destroy the affected plants and drench the base of the plants with Copper oxy chloride @ 4g/litre of water after current spells of rain to manage the disease.
- **Telangana and Andhra Pradesh:**
- In Scarce Rainfall Zone of Rayalaseema, undertake sowing of jowar and lay out dead furrows across the slope for every 3.6mts / 12 rows in groundnut fields for moisture conservation in groundnut.
- Prevailing moisture conditions are congenial for the incidence of blast in rice and likely to be more severe in BPT variety in the Southern Telangana Zone. Spray Tricyclazole @ 0.6 g per litre of water on a non rainy day. Also incidence of black arm disease is noticed in cotton and is likely to spread. Spray Copper-Oxy-Chloride @30g + Plantamycin @ 2g in 10 litres of water.
- Continue direct seeding of chilli and gap filling in direct seeded rice. Apply biogyme, micronutrients and mineral mixture to overcome from slow growth due to micro nutrients deficiencies and excess moisture in the Krishna Godavari Zone of Andhra Pradesh.
- Due to cloudy and humid conditions, fruit and flower drop incidence was observed in cotton and botrytis grey rot is observed in castor in the Scarce Rainfall Zone of Rayalaseema. Spray Acetamiprid @0.2g/litre of water to manage fruit and flower drop incidence and Carbedazim @1g/litre of water to manage botrytis grey rot on a non rainy day.
- **Tamil Nadu:**
- As rain/thundershowers would occur at many places over Tamil Nadu during the period along with heavy rainfall at isolated places on 24th over Interior Tamil Nadu and over Tamil Nadu on 25th September, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops in South Interior Karnataka to remove excess water.
- Continue sowing and transplanting of *samba* rice and nursery sowing of *Thaladi* rice in the Cauvery Delta Zone of Tamil Nadu.
- In the Western Zone of Tamil Nadu, continue harvesting of groundnuts and jowar/millet after current spells of rain. Undertake sowing of cotton after seed treatment in the South Zone of Tamil Nadu.
- Prevailing temperature with humid weather is congenial for incidence of brown plant hopper in rice in the Western Zone of Tamil Nadu. Dust Malathion 5% @ 25 kg per ha towards the basal portion of the stem after current spells of rain.
- **Animal Husbandry**
- Prevailing weather conditions are congenial for foot and mouth disease in livestock in the Scarce Rainfall Zone of Andhra Pradesh. Vaccinate the animals to prevent the diseases.

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



Rice



Okra



Jute



Green Gram

- **Realised Weather:** Rain/thundershowers occurred at many places over Assam & Meghalaya. Weather remained mainly dry / dry over rest parts of the region. Yesterday, maximum temperatures were below normal by 2-4° C at many places over Assam & Meghalaya and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at most places over Arunachal Pradesh during next 24 hours; over Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura during next 48 hours and at many places thereafter.
- **Weather Warning:** Heavy to very heavy rainfall would occur at a few places with extremely heavy falls at isolated places over Assam & Meghalaya and heavy to very heavy rainfall would occur at a few places over Nagaland, Manipur, Mizoram & Tripura and at isolated places over Arunachal Pradesh on 23rd September. Heavy to very heavy rainfall would occur at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 24th September. Heavy rainfall would occur at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 25th September.
- **Weather Outlook:** Rain/thundershowers would occur at many places over northeastern states.
- **Advisories:**
 - As rain/thundershowers would occur at many/most places over Assam, Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram and Tripura along with heavy to very heavy spells at few /isolated places during the period,

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. Postpone harvesting of crops and keep harvested produce at safe places.

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

- In Assam, continue sowing of green gram, black gram, sesame and nursery sowing of cole crops after spells of heavy rain.
- In Upper Brahmaputra Valley Zone of Assam, continue nursery raising of cole crops after spells of heavy rain.
- In Hill Zone of Assam, replanting of dead hills or gap filling with seedlings of *sali* rice of similar age should be done within 7-10 days of transplanting.
- In Sub Tropical Hill Zone of Arunachal Pradesh, continue harvesting of *jhum* rice after current spells of rain.
- In Meghalaya, continue sowing/ transplanting 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 after spells of heavy rain. Avoid water logging in ginger/turmeric to avoid rhizome rot and fungal disease.
- Due to cloudy and humid weather, there is chance of attack of rice hispa in *sali* rice at tillering stage in in Hill Zone of Assam, spray with Quinalphos @ 10 ml /5 litre of water. Also in cloudy weather, there is chance of attack of stem borer in maize, spray Fenitrothion @ 1 litre in 200-250 litre of water per ha. Apply chemicals after current spells of rain.
- Due to prevailing humid weather conditions, there is chance of attack of stem borer, hispa, blast and leaf folder in *Sali* rice in Barak Valley Zone, Upper Brahmaputra Valley, North Bank Plain Zone and Lower Brahmaputra Valley of Assam. Spray 0.02% Chloropyrifos 20 EC or Quinalphos 25 EC @ 2.5 ml per litre of water against pests. Apply chemicals after current spells of rain.
- In Central Brahmaputra Valley Zone of Assam, stem borer and caseworm infestation may occur in *sali* rice which may be controlled by draining out of excess water or spraying Chloropyrifos (20%) @ 2 ml/litre of water after current spells of rain.
- In Meghalaya, due to cloudy weather & high humidity, there is chance of incidence of blast in *kharif* rice. Spray Mancozeb @ 2g/litre or Carbendazim @ 1g/litre. Also present weather is congenial for development of late leaf spot in groundnut. Spray Carbendazim (0.05%) + Mancozeb (0.2 %). Apply plant protection measures after current spells of rain.

▪ **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 after current spells of heavy rain.
- In Mizoram, continue nursery preparation for cole crops like cabbage, cauliflower, broccoli and knolkhol after current spells of heavy rain.
- In Mild Tropical Plain Zone of Tripura, continue harvesting of *jhum* rice and groundnut and sowing of winter vegetable particularly tomato, cauliflower, cabbage, broccoli after current spells of rain.
- 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 after current spells of rain.
- Due to prevailing cloudy and humid weather, there is chance of attack stem borer in *aman* rice (short duration) and gundhi Bug in *aman* rice (long duration) in Mild Tropical Plain Zone of Tripura. Apply Novacron @ 2ml per litre of water to control stem borer and Cypermethri + Propanophos @1.5ml per litre or Cartap Hydrochloride (Dollar) @1.5 g per litre of water to manage the attack of gundhi Bug. Apply the chemicals after current spells of rain.

• **Animal Husbandry**

- In Northeastern States, keep cattle in sheds during heavy rainfall periods.
- In Meghalaya, in rainy season, litter should be changed periodically to avoid dampness and prevent disease development like coccidiosis in poultry. During day time sufficient ventilation should be provided to reduce the humidity inside the sheds.
- In Tripura, damp litter and high moisture may cause Coccidiosis in the chicken, so avoid dampness in the deep litter. Prevailing high humidity may cause ammonia fumes which irritate the respiratory tract and eyes in poultry. 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

Jute

Onion

Rice

- **Realised Weather:** Rain/thundershowers occurred at many places over Odisha; at a few places over Sub-Himalayan West Bengal & Sikkim and at isolated places over Bihar and Andaman & Nicobar Islands. Weather remained mainly dry / dry over rest parts of the region. Yesterday, maximum temperatures were above normal by 2-4° C at many places over Andaman & Nicobar Island. They were below normal by 2-4° C at many places over West Bengal & Sikkim and at isolated places over East Bihar, Odisha and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Sub-Himalayan West Bengal & Sikkim; at a few places over Odisha; at isolated places over Bihar and Jharkhand during the period. Rain/thundershowers would occur at many places over Gangetic West Bengal during next 24 hours and at a few places thereafter. Rain/thundershowers would occur at isolated places over Andaman & Nicobar Islands during next 48 hours and at a few places thereafter.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over East India.
- **Advisories:**
 - **West Bengal:**
 - As rain/thundershowers would occur at many places over Sub Himalayan West Bengal during the period and at many places over Gangetic West Bengal on 23rd September, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops.
 - 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 Laterite and Red Soil Zone continue harvesting of maize after current spells of rain. In *aman* rice field, maintain 3-5 cm standing water at panicle initiation stage.
 - In Old Alluvial Zone of West Bengal, continue sowing of black gram and land preparation for transplanting of 4-6 weeks old seedlings of cole crops like cauliflower and cabbage.
 - In Terai Zone, avoid water stagnation to prevent rhizome rot in turmeric & ginger. Undertake transplanting in cole crops.
 - 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 after current spells of rain.
 - 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 after current spells of rain.
 - In Coastal Saline Zone, stem rot or blunt rot in vegetables due to prevailing high humidity. Spray a mixture of Bavitin@1g/litre of water and Diethane against stem rot or blunt rot in vegetables after current spells of rain.
 - **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 land.
 - In Western Undulating Zone of Odisha, there is chance of red rot disease in sugarcane at grand growth stage. Bunding of affected field should be done to avoid movement of rain or floodwater from affected field to non affected fields. Destroy trashes from the infected plant by burning and spray Carbendazim @2g/litre of water on a non rainy day. Severely affected plants or canes should be uprooted and destroyed.
 - In North Eastern Coastal Plain Zone and Ghat Zone of Odisha, prevailing temperature and humidity favours attack of stem borer on rice. Install pheromone traps to monitor the adult population. If the damage is above ETL, spray Lambda-Cyhalothrin or Triazophos @ 400 ml/acre or apply Cartap hydrochloride SP @ 400g/acre on a non rainy day.
 - In North Central Plateau Zone of Odisha, due to humid weather, bud necrosis has been found in groundnut. Spray Imidacloprid @ 4ml /10 litre water to control the vector. Also tikka disease has been occurred. Spray 30 g

Mancozeb in 10 litre water on a non rainy day.

- 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 on a non rainy day.
- 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 on a non rainy day.
- **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.
- In North East Alluvial Plain Zone of Bihar, maintain optimum water level in rice. Complete sowing of September arhar and transplanting of early autumn vegetable viz. cauliflower, cabbage and brinjal etc.
- In South Bihar Alluvial Zone, complete sowing of kulthi and *rabi* pigeon pea in upland areas. 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 field preparation for cultivation of early potato and green peas. Maintain optimum water level in rice. Undertake field preparation for sowing of mustard.
- In South Eastern Plateau Zone of Jharkhand, continue land preparation for the cultivation of short duration early potato. In fallow land undertake sowing of green pea and toria.
- In Central & North Eastern Plateau Zone of Jharkhand, continue sowing of toria, green pea and potato. Continue sowing of tomato, cabbage and cauliflower in raised seed bed.
- In South Eastern Plateau Zone of Jharkhand, due to high humidity and extended leaf wetness, there are chances of Blast in rice crop, spray Tricyclazole @ 6 g per litre of water.
- Due to prevailing humid weather conditions, there is chance of attack of gundhi bug in timely sown rice in Western Plateau Zone of Jharkhand. To control the insects, dusting of Chlorpyrifos / Quinolphos / Methyl parathion dust @ 10 kg per acre. As an alternative method (in the case of unavailability of the insecticides), dusting of coal / wood ash mixed with kerosene.
- 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



Green Gram

- **Realised Weather:** Weather remained mainly dry / dry over rest parts of the region. Yesterday, maximum temperatures were above normal by 2-4° C at many places over North Madhya Pradesh. They were below normal by 2-4° C at isolated places over East Madhya Pradesh and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over East Madhya Pradesh and Chhattisgarh during next 24 hours and mainly dry thereafter. Mainly dry weather would prevail over West Madhya Pradesh during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - In Vindhya Plateau Zone of Madhya Pradesh, if *kharif* crops are damaged due to heavy rain, farmers may undertake nursery sowing of onion, garlic and planting of short duration varieties of potato. The sowing may be done upto 15th October. Sowing of 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)) by ridge furrow method is recommended.

- Continue sowing of sarson saag, radish, spinach and coriander in Bundelkhand Zone of Madhya Pradesh utilising the realised rainfall.
- Undertake 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 of Madhya Pradesh.
- As mainly dry weather would prevail, continue harvesting of matured urad and moong in Bundelkhand Zone and vegetables in Vindhya Plateau Zone and Nimar Valley Zone of Madhya Pradesh.
- Due to cloudy weather, there are chances of attack of semilooper, tobacco caterpillar and girdle beetle in soybean, moong and urad in Jhabua Hill Zone of Madhya Pradesh, Spray Profenophos @ 2 ml per litre of water.
- Due to humid weather, there is possibility of attack of yellow mosaic virus in urad and soybean in Bundelkhand Zone and Nimar Valley Zone of Madhya Pradesh, spray Methyldameton @ 2.0 ml. or Imedachloprid @ 0.5 ml. per litre of water.
- **Chhattisgarh:**
 - In Plain Zone and North Hill Zone of Chhattisgarh, in fallow upland, sowing of horse gram and Niger may be completed.
 - In North Hill Zone of and Bastar Plateau Zone of Chhattisgarh, raise the seedlings of winter vegetables like 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.
- **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 East Uttar Pradesh. Weather remained mainly dry / dry over rest parts of the region. Yesterday, maximum temperatures were above normal by 2-4° C at a few places over Himachal Pradesh, Uttarakhand and Uttar Pradesh and at isolated places over Jammu & Kashmir and near normal over rest parts of the region.
- **Weather Forecast:** Mainly dry weather would prevail over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Punjab, Haryana & Delhi, Rajasthan during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over Western Himalayan region. Weather would be mainly dry over rest of the region.
- **Advisories:**
 - **Jammu & Kashmir:**
 - Arrange drainage facilities to remove excess water from fields wherever feasible and then apply top dressing of nitrogen @ 3.25 kg urea per kanal in rice and in maize. Monitor maize crop for the incidence of stalk rot and apply Blitox @ 2 g/ litre of water.
 - Continue harvesting of mash and moong crops immediately in Sub-tropical Zone to avoid shattering and other losses.
 - Drain out excess water from pulses and vegetable fields in Valley Temperate Zone and Intermediate Zone of Jammu & Kashmir.
 - Undertake sowing of ghobi sarson (Var. GSL-1,GSL-2,DGS-1) with toria(RSPT-1 and local toria) as mixed or intercrop and nursery bed preparation for winter vegetables and nursery raising of cole crops and onion. Sowing of root crops like radish, carrot, turnip etc. may also be undertaken in Sub-Tropical Zone of Jammu & Kashmir.
 - Due to humid weather, there may be incidence of brown spot disease on rice in Sub-Tropical Zone of Jammu & Kashmir, to control apply Propaconazole @ 0.1 % .
 - **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. Continue nursery sowing of late varieties of cauliflower broccoli, cabbage, knol khol and direct sowing of radish, carrot, turnip, palak and methi and sowing of early varieties of Pea (Palam Triloki, Arkel, VL-7 and Matar Ageta) at a spacing of 30 x 7.5 cm in mid hill areas with available soil moisture.
- As mainly dry weather would prevail, undertake harvesting of rajmah in High Hill Temperate Dry Zone of Himachal Pradesh.
- Undertake 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, spray Cypermethrin 10EC @ 1ml per litres or Chloropyriphos 20 EC @ 2.5 ml per litre of water. For control of rice leaf folder, spray Chloropyriphos 20 EC @ 2.5 ml per litre of water.
- Due to prevailing humid weather condition, there are chances of attack of white fly in tomato in Mid Hills Sub-Humid Zone of Himachal Pradesh. Use yellow trap one trap/100 m² to prevent the attack and spray Imidacloprid (Confidor) @ 7.5 ml or Malathion @ 22.5 ml or Metasystox @ 15 ml in 15 litres of water.
- 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.
- Weather is congenial for attack of anar butter fly and incidence of fruit rot in anar in Mild Hills Sub Humid Zone of Himachal Pradesh. Spray Quinalphos @ 500 ml per 200 litres of water against attack of anar butter fly and Captan @ 600g per 200 litres of water to prevent fruit rot in anar.

▪ **Uttarakhand:**

- Continue sowing of mustard, palak, methi, raddish and continue sowing of early toria, pea in Hill Zone of Uttarakhand. In Bhabar and Tarai Zone, undertake sowing of toria.
- In Sub humid Sub Tropical Zone of Uttarakhand, as rice crop is at active tillering stage, maintain 5cm water level and apply second dose of Urea at this stage.
- Under present weather conditions, there may be attack of leaf hopper on vegetables like brinjal and okra in Sub humid Sub Tropical Zone of Uttarakhand. To control, apply Dichlorvas @ 1ml/liter of water.
- Due to rise in temperature, there are chances of attack of leaf folder and stem borer on rice in Bhabar and Tarai Zone of Uttarakhand. If the incidence is more than 10 % then spray Cartap Hydrochloride 50 WP @ 250 g dissolved in 200 to 250 liters of water per acre.

▪ **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 and turnip and planting of mango and litchi utilising the available moisture.
- In Central Plain Zone of Punjab, continue sowing of desi varieties of carrot, radish and turnip crops and undertake transplanting of rainy season tomato. Continue sowing of potato, palak and nursery sowing of cauliflower utilising the available moisture.
- Under hot and humid conditions, whitefly incidence may increase in cotton in Western Plain Zone of Punjab, when whitefly population exceeds ETL level, spray Triazophos 40 EC @ 600ml/acre or Ethion 50 EC @ 800 ml/acre.
- In Undulating Plain Zone of Punjab, higher humidity due to intermittent rainfall 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 gm/acre to prevent. Grain discoloration in rice may occur due to rainfall during flowering stage, spray Tilt @ 200 ml/acre to prevent fungal infection in the unfilled grains. Present weather condition is very congenial for attack of fungal diseases in vegetable crops, spray Infofil 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. Undertake plantation of new orchard.
- In Delhi, continue transplanting of onion seedling in the prepared fields and continue planting of early potato. In the present weather conditions, false smut may appear in rice crop, Apply Blitox @ 500 grams per acre at 10 days interval (2-3 times).

▪ **Uttar Pradesh:**

- Undertake nursery sowing of cabbage (Imprabad Japani, Pusa chipali and Pusa kartiki), sowing of Asiatic varieties of Radish (Japani white, Pusa chetakij, Hisar Muli No.1 and kalyanpur-1) and methi in Central Plain Zone of Uttar Pradesh utilizing available soil moisture.
- As mainly dry weather is likely to prevail, apply irrigation in soybean at flowering and pod formation stages Central Plain Zone of Uttar Pradesh. Undertake second top dressing of nitrogen in maize in Western Plain Zone of Uttar Pradesh.

- Undertake sowing of toria @ 4kg seed per ha in Fatehpur, Pratapgarh, Allahabad, Chitrakut, Kaushambi, Agra, Mathura, Lucknow and Kanpur districts of Central Plain Zone; varieties like Sangam, TL-17, 67 in Western Plain Zone of Uttar Pradesh utilizing available soil moisture.
- Continue sowing of toria (T-9, T-36, Pant -30,303, B-9) in Raibareilly, Amethi, Sultanpur districts of Eastern Plain Zone of Uttar Pradesh. Undertake sowing of potato (Kuferi - Chandramukhi, Bahar) utilizing available soil moisture. For sowing of mustard (Basati, Maya, Kanti, Urvashi, Narendra, Swarna-8, Narendra Ageti-4) during last week of September, keep the inputs ready.
- Keep the inputs ready or sowing of Ageti Matar (Kashi - Nandini,Uday, Mukti, Arkil, Azad-3) during first week of October in Deoria and Ballia districts of Eastern Plain Zone of Uttar Pradesh.
- Continue transplanting of cauliflower, cabbage, tomato, chilli and brinjal and sowing of palak, cucumber, methi, ageti carrot and planting of fruit crops like mango, papaya, lemon, amla, etc. in Jhansi district of Bundelkhand Zone of Uttar Pradesh. Undertake sowing of Ageti matar (Azad P-3, Arkil) utilizing available soil moisture. Undertake harvesting of matured Moong. Maintain 5cm. level of water in rice.
- Under prevailing humid weather condition, there are chances of incidence brown mildew spot disease in rice, Apply Zinc Manganese Carbonate 75% @ 2 kg per hectare in Central Plain Zone of Uttar Pradesh.
- Due to prevailing humid weather condition, there are chances of attack of stem borer in maize in Central Plain Zone of Uttar Pradesh. Apply Carbofuran 3G or Phorate 10 G @ 20 kg/ha or Cloropyriphos 25 EC @ 1.5 litre + 600 litre water/ha.
- Under prevailing humid weather, there are chances of attack of leaf roller in Arhar in Eastern Plain Zone of Uttar Pradesh. Spray Monocrotophos 36 EC @ 800 ml per hectare.
- **Rajasthan:**
 - As mainly dry weather would prevail, continue harvesting of matured bajra and jowar in Flood Prone Eastern Plain Zone of Rajasthan.
 - Continue nursery raising of tomato, brinjal, chillies, cabbage etc. in Transitional Plain Zone of Inland Drainage of Rajasthan, utilizing realized rainfall.
 - Continue nursery sowing of cauliflower (Japanese, Pusa hybrid-2 and Himjoyti) and radish (Pusa Chetki) and undertake sowing of rainfed Taramira, Toria and Mustard in Semi Arid Eastern Plain Zone of Rajasthan utilizing realised rainfall.
 - 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, in the present weather conditions there may be increased attack of pod borer in moong and moth crops at flowering/pod formation stage. To control spray Quinalphose 25EC @ one litre/ha.
 - In Southern Humid Plain Zone of Rajasthan, in the present temperature conditions, there are is chance of attack of grass hopper on maize. To control, dusting of Methyl Parathion 2% @ 25 kg/ha is advised.
 - Due to humid and cloudy conditions, there are incidence of bollworm and jassids in cotton in Sub Humid Southern Plain and Aravali Hill Zone of Rajasthan, to control apply Karberil 50% dust @ 2.5 kg/ha.
- **Floriculture**
 - Undertake field preparation for sowing of Gladiolus by applying mixture of 10kg. Cow-dung manure/Compost 200gm+ Murate of Potach mix. 15 days before sowing and apply @ 1m² in Central Plain Zone of Uttar Pradesh. Also undertake training and pruning of Rajanigandha spike.
- **Horticulture**
 - In Sub-Montane and Low Hills Sub-Humid Tropical Zone and Bilaspur district of Mid Hills Sub-Humid Zone of Himachal Pradesh, for control of peach gum coming out from tree trunk, apply bordeaux paint in the affected area. Keep the basins of the plants free from weeds, For control of the attack of leaf minor in new growth of citrus, spray Matasystox or Malathion @ 10 ml per 10 litres of water. Make preparations for planting of strawberry during last week of September.
- **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. For control spray Butox @ 2.0 ml per litre of water. Clean the cowshed with phenyl and keep the animal sheds dry and clean.
 - Under prevailing humid weather condition, there are may be attack of parasite diseases like Babesia & Thelaria in animals in Semi Arid Eastern Plain Zone of Rajasthan. Treat the animals immediately.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Rice



Sugarcane



Okra



Soybean

- **Realised Weather:** Weather remained mainly dry / dry over the region. Yesterday, maximum temperatures were near normal over the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Konkan & Goa, Madhya Maharashtra and Marathwada during the period. Rain/thundershowers would occur at isolated places over Vidarbha during next 48 hours and mainly dry thereafter. Mainly dry weather would prevail over Gujarat State during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over 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.
 - 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 and in late sown 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 utilizing the available soil moisture. Apply irrigation to sugarcane and vegetables.
 - 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 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. Complete plucking of already matured green gram and black gram pods in West Vidarbha. Prepare the field for sowing of safflower in the harvested field of green gram and black gram. Apply irrigation to vegetables and orange, sweet lime orchards.
 - Due to subdued rains in South Konkan, there may be attack of blue beetle and earhead bug in rice; spray Monocrotophos 36 WSC @ 12 ml or Carbaryl 50 WP @ 20 g or Cypermethrin 25 EC @ 2.4 ml per 10 litres of water or dust 2% Methyl parathion dust @ 20 kg/ha during calm wind.
 - Prevailing high humid and cloudy weather in Pune region is congenial for incidence of powdery mildew in chilli, guar, okra, tomato and cucumber; spray WS Sulphur 80 % @ 20 g per 10 litres water. Spray Dinocap or Tridemorph @ 10 ml per 10 litres water in cucumber class vegetables instead of Sulphur.
 - Due to humid weather and prevailing temperature (around 28 °C) there may be incidence of grey mildew in cotton in Central Vidarbha Zone, spray WS Sulphur @25 g or Tridemorph @7 ml per 10 litres water.
 - Suitable varieties are given in Annexure I.
 - **Gujarat:**
 - As mainly dry weather would prevail, carry out intercultural operations and mulching in castor to conserve soil moisture; undertake harvesting of matured pearl millet in North West Zone of Gujarat..
 - Taking advantage of mainly dry weather, undertake harvesting of matured pearl millet and pulse crops in North Gujarat Zone. Carry out weeding, hoeing and intercultural operations and mulching in castor, cotton and sesame for effective weed control and to conserve the soil moisture.
 - Carry out intercultural operations and weeding in rice, castor, pulses and cotton in Middle Gujarat zone, in castor in South Gujarat Zone and in late sown castor and pulses in South Gujarat Heavy Rainfall Zone.
 - Carry out gap filling in germinated castor in South Gujarat Heavy Rainfall Zone.
 - As mainly dry weather is prevailing apply irrigation in vegetable and cotton in North Saurashtra Zone.
 - 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; spray Imidacloprid 17.8 % @5 ml or Thiomethoxam @ 6 g in 10 liters of water for control.
 - In the prevailing humid weather conditions, there are chances of sucking pests in cotton in North West Zone, spray Imidacloprid or Thiomethoxam @ 4 ml/10 liters of water for control.
 - Due to humid weather, there is chance of infestation 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. In brinjal and tomato constant monitoring of fruit borers by using pheromone traps 4-6 per acre is advised. If insect

population is above ETL, spray Spinosad 3.0 ml/10 litre of water for control.

- **Animal Husbandry**

- In Gujarat, spraying of Neon @ 1 to 1.5 ml per liter water in cattle shed is advised for controlling ticks.

Annexure I

List of varieties

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, Japoni 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.

Mustard: Shiwani, Varuna, Pusa Bold, BR-40

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.