

National Agromet Advisory Service Bulletin

Tuesday 07th October 2014

(For the period 07th to 10th October 2014)

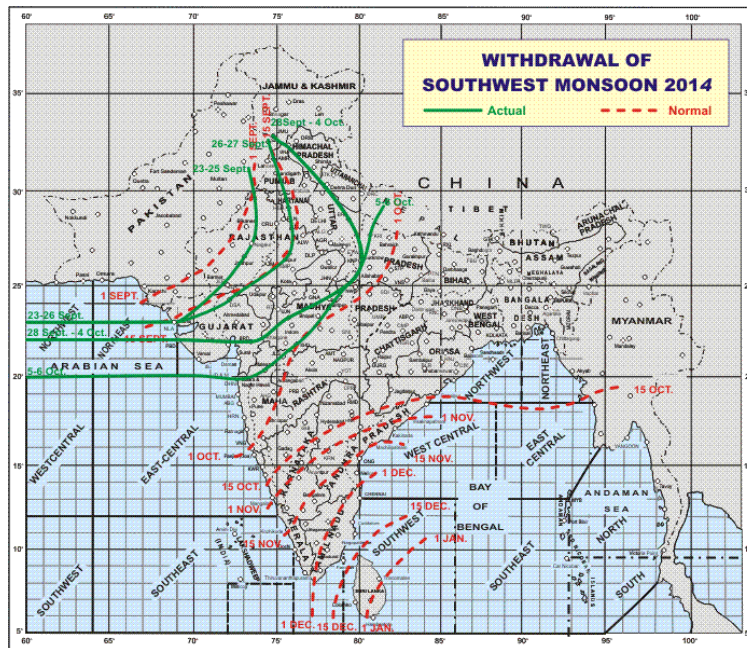


Issued by

***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 Lat.28°N/Long.82°E, Kheri, Kanpur, Nowgong, Khandwa, Malegaon, Dahanu, Lat.20°N/Long.70°E and Lat.20°N/Long.60°E.

Realised Weather on 7th October 2014

- Rainfall:** (From 0830 hours IST to 1730 hours IST of yesterday): Rain/thundershowers occurred at many places over Andaman & Nicobar Islands; at a few places over Karnataka and at isolated places over Uttarakhand, West Madhya Pradesh, Chhattisgarh, Odisha, Konkan & Goa, Madhya Maharashtra, Coastal Andhra Pradesh, Rayalaseema and Kerala. Weather remained dry over rest of the country. The amounts of rainfall (1 cm or more) recorded at 1730 hours IST of yesterday were: Agumbe 3; Hassan and Belgaum 2 each; Umaria, Pendra, Chandbali, Chandrapur, Car Nicobar and Nancowry 1 each.
- Temperature:** Yesterday, maximum temperatures were above normal by 2-5°C at many places over Himachal Pradesh, Madhya Pradesh, Maharashtra, Andhra Pradesh, Tamilnadu, Assam & Meghalaya; at a few places over Jammu & Kashmir, Rajasthan, West Bengal & Sikkim, North Interior Karnataka and Kerala and at isolated places over Haryana & Delhi, Gujarat state and Jharkhand. They were below normal by 2-4°C at a few places over Andaman & Nicobar Islands and near normal over rest parts of the country.

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 10th October, 2014)

- Rain/thundershowers would occur at most places over Andaman & Nicobar Islands during the period.
- Rain/thundershowers would occur at many places over Tamil Nadu & Puducherry, South Interior Karnataka and Kerala during the period.
- Rain/thundershowers would occur at many places over Lakshadweep during next 24 hours and at a few places thereafter.
- Rain/thundershowers would occur at a few places over Coastal Karnataka and Rayalaseema during the period.
- Rain/thundershowers would occur at a few places over Himachal Pradesh during next 24 hours; over

Weather Warning during next 3 days

- 07 October (Day 1):** Heavy to very heavy rainfall would occur at a few places with isolated extremely heavy falls over Andaman & Nicobar Islands. Squally winds speed reaching 50-60 kmph would prevail over and around Andaman & Nicobar Islands. Fishermen are advised not to venture into the sea. Isolated heavy rainfall would occur over South Interior Karnataka, Kerala and Tamilnadu & Pudducherry.
- 08 October (Day 2):** Heavy to very heavy rainfall would occur at a few places with isolated extremely heavy falls over Andaman & Nicobar Islands. Gale force winds speed reaching 60-70 kmph would prevail over and around Andaman & Nicobar Islands. Fishermen are advised not to venture into the sea. Isolated heavy rainfall would occur over Kerala and

Jammu & Kashmir and Coastal Andhra Pradesh during next 48 hours and at isolated places thereafter.

- Rain/thundershowers would occur at isolated places over Uttarakhand and Punjab during next 24 hours; over Jharkhand during next 48 hours and dry thereafter.
- Rain/thundershowers would occur at isolated places over Gangetic West Bengal, Odisha, Madhya Pradesh, Chhattisgarh, Gujarat State, Maharashtra, Telangana and North Interior Karnataka during the period.
- Dry weather would prevail over rest parts of the country.

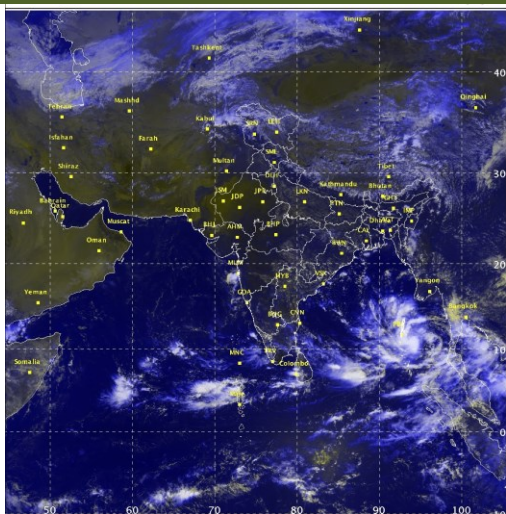
Tamilnadu & Pudducherry.

- **09 October (Day 3):** Heavy to very heavy rainfall would occur at isolated places over Andaman Islands and isolated heavy rainfall over Nicobar Islands. Gale force winds speed reaching 60-70 kmph would prevail over and around Andaman Islands and squally winds speed reaching 50-60 kmph over Nicobar Islands. Fishermen are advised not to venture into the sea. Isolated heavy rainfall would occur over Kerala and interior Tamilnadu.

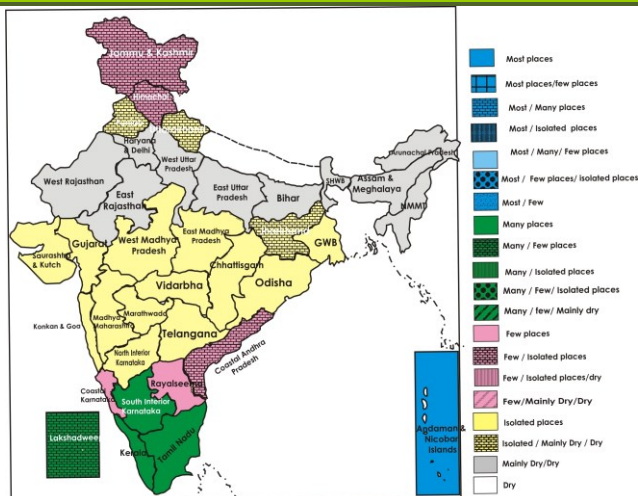
Weather Outlook for subsequent 4 days from 10th to 14th October 2014.

- Rain/thundershower would occur at many places over south peninsular India and Andaman & Nicobar Islands.
- Rain/thundershowers would occur at a few places over rest peninsular India.
- Rain/thundershowers would occur at isolated places over northeastern states.
- Rain/thundershowers would occur at isolated places over east India and increase over Andhra Pradesh, Odisha and Gangetic West Bengal from 12th October.
- Weather would be mainly dry over rest of the country.

Satellite image dated, 07.10.2014, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 10th October 2014)



Salient Advisories

- As rain/thundershowers would occur at most places over **Andaman & Nicobar Islands** during the period along with heavy to very heavy rainfall would occur at a few places with isolated extremely heavy falls over Andaman & Nicobar Islands on 7th and 8th October, 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.
- As squally winds speed /gale force winds speed reaching 50-60 /60-70 kmph would prevail over and around **Andaman & Nicobar Islands** on 7th - 9th October, arrange mechanical support to banana and staking in vegetables, to prevent the crops from lodging due to strong winds.
- As rain/thundershowers would occur at many places over **Kerala** and **Tamil Nadu** during the period along with heavy rainfall at isolated places and rain/thundershowers at many places over **South Interior Karnataka** during the period along with heavy rainfall at isolated places on 7th October, 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.

- Continue land preparation for sowing of *rabi* crops like sunflower, horse gram, sesame, cowpea and maize in the **North Interior Karnataka**.
- 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**.
- In **Maharashtra**, continue sowing of *rabi* jowar and safflower in **Madhya Maharashtra**, undertake field preparation for sowing of *rabi* jowar and safflower and apply irrigation in sugarcane, soybean and vegetables in **Marathwada** and in **Vidarbha**, prepare field for sowing of safflower in the harvested fields of green gram and black gram.

Detailed Zonewise Agromet Advisories

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



Rice

Sugarcane

Cotton

Soybean

- **Realised Weather:** Rain/thundershowers occurred at a few places over Karnataka and at isolated places over Coastal Andhra Pradesh, Rayalaseema and Kerala. Weather remained dry over rest of the region. Yesterday, maximum temperatures were above normal by 2-5°C at many places over Andhra Pradesh and Tamilnadu; at a few places over North Interior Karnataka and Kerala and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Tamil Nadu & Puducherry, South Interior Karnataka and Kerala during the period. Rain/thundershowers would occur at a few places over Coastal Karnataka and Rayalaseema during the period. Rain/thundershowers would occur at a few places over Coastal Andhra Pradesh during next 48 hours and at isolated places thereafter. Rain/thundershowers would occur at isolated places over Telangana and North Interior Karnataka during the period.
- **Weather Warning:** Isolated heavy rainfall would occur over Kerala during the period and over Tamilnadu & Pudducherry on 7th and 8th October; over interior Tamilnadu on 9th October and over South Interior Karnataka on 7th October.
- **Weather Outlook:** Rain/thundershower would occur at many places over south peninsular India. Rain/thundershowers would occur at a few places over rest peninsular India. Rain/thundershowers would increase over Andhra Pradesh from 12th October.
- **Advisories:**
 - As rain/thundershowers would occur at many places over Kerala and Tamil Nadu during the period along with heavy rainfall at isolated places and rain/thundershowers at many places over South Interior Karnataka during the period along with heavy rainfall at isolated places on 7th October, 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.
 - **Karnataka:**
 - Continue land preparation for sowing of *rabi* crops like sunflower, horse gram (PHG-9), sesame, cowpea and maize in the North Dry Zone of Karnataka.
 - Continue land preparation for sowing of *rabi* sunflower in Central Dry Zone and maize and sunflower in North East Dry Zone of Karnataka utilizing the realized rainfall.
 - In the Southern Dry Zone of Karnataka, maintain 3 to 5 cm water in rice fields to reduce the weed infestation
 - 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.
 - Due to prevailing cloudy weather conditions, leaf minor attack may occur on groundnut and soybean in North Transition Zone, spray Carbaryl 50WP @ 0.2% or Dimethoate 30 EC @2 ml per litre of water.
 - In the Southern Transition Zone of Karnataka, in the prevailing temperature, blast and sheath blight is noticed on rice and likely to spread. Spray Tricyclozole @ 0.6 g/litre of water or Carbandazim @ 1g/litre of water for control of blast and spray Hexaconozol @ 1 ml/litre of water for sheath blight.

▪ **Kerala:**

- Continue nursery sowing of rice in the Northern and in Southern Zone of Kerala. Continue planting of *Nendran* banana in the Southern Zone of Kerala after spells of heavy rain.
- In the prevailing weather conditions, there is chance of sheath blight occurrence on the rice fields where the plant population is high in the Problem Area Zone of Kerala. Remove the severely affected plants and provide air circulation into the crop canopy to reduce the spread of the disease to the nearby plants.

▪ **Andhra Pradesh:**

- Continue intercultural operations and fertilizer applications in cotton, pulses and rice in Krishna Godavari Zone of Andhra Pradesh on a non rainy day.
- 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 on a non rainy day.
- In Scarce Rainfall Zone of Rayalaseema, due to attack of thrips, fruit and flower drop incidence was observed on cotton in few mandals of Anantapuram district. For the control spray of Acetamiprid @ 0.2g/litre of water on a non rainy day.
- Present hot weather is congenial for leaf spot attack on groundnut in Southern Zone of Rayalaseema. Spray Hexaconazole @ 2 ml per litre of water on a non rainy day.

▪ **Telangana:**

- Prevailing hot and humid weather conditions are congenial for incidence of leaf spot diseases on cotton and stem borer on rice in Southern Zone of Telangana. For control, spray Copper-Oxy-Chloride @ 30g + Plantamycin @ 2g in 10 litres of water for leaf spot diseases and Cartap Hydrochloride @ 2 g or Chlorantraniliprole @ 0.4 ml per litre of water for stem borer.
- Present hot and partly cloudy weather conditions are congenial for incidence of stem borer in rice in Northern Telangana Zone. Apply Cartap Hydrochloride 4G @ 8 kg/acre when the adult moths/egg masses @ one/ sq. m are noticed in the fields.

▪ **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 sowing of dry land crops like sorghum and ragi and sowing of small onion in the North Western Zone of Tamil Nadu.
- Undertake sowing of cotton, maize, pulses and sorghum under dry land conditions in the South Zone of Tamil Nadu.
- Due to high humidity, leaf folder incidence is noticed in rice in North Eastern Zone of Tamilnadu which is likely to spread. To control, spray Profenophos @ 2ml in one liter of water after current spells of rain.
- Suitable varieties are given in Annexure I.

• **Animal Husbandry**

- In North Transition Zone of Karnataka, for milch animals regularly follow schedule of 1 kg feed + 50 g mineral mixture per 2 litres of milk yield. Feed animals with a mixture of green grass + hay + minerals + dry feed, keep the cattle shed clean and proper ventilation should be maintained for free circulation of air in the sheds.
- Provide clean and hygienic water to animals and vaccinate against FMD in the Problem Area Zone of Kerala.
- Calves above 3 months and sheep and goat above 2 months should be vaccinated against Foot and Mouth disease. Sheep and Goats should be dewormed by using broad spectrum antihelmintics in North Eastern Zone of Tamilnadu.
- Present weather conditions are favorable for respiratory infections affecting mainly sheep and goat in North Western Zone of Tamilnadu. To prevent such illness, keep the sheds clean and dry. To prevent cold wind entering into the animal's house, place curtains on the open sided wall of the house. Do not allow any water stagnation around the farm and protect young kids from wetting due to rain.

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



Rice



Okra



Cole Crops (Nursery)



Green Gram

- **Realised Weather:** Weather remained dry over the region. Yesterday, maximum temperatures were above normal by 2-5°C at many places over Assam & Meghalaya and near normal over rest parts of the region.

- **Weather Forecast:** Dry weather would prevail over northeastern states during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over northeastern states.
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - 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, continue 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 Arunachal Pradesh, continue harvesting of early transplanted *kharif* rice
 - 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 and 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 Carbendazim (0.05%) + Mancozeb (0.2%).
 - **Nagaland, Manipur, Mizoram and Tripura:**
 - In Manipur, maintain water level of 5cm upto dough stage in *kharif* rice. Continue 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. Continue land preparation for planting of potato.
 - In Nagaland, continue nursery sowing of cabbage.
 - In Mizoram, 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 Manipur, prevailing hot weather is conducive for tikka disease in groundnut, spray Carbendazim @ 0.5g / litre of water for control.
 - 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 + Propanophos @ 1.5 ml 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 Tripura, provide good ventilation in poultry sheds.
 - In Manipur, provide clean drinking water to livestock.

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



Sugarcane



Groundnut



Onion



Rice

- **Realised Weather:** Rain/thundershowers occurred at many places over Andaman & Nicobar Islands; at a few places over Odisha. Weather remained dry over rest of the region. Yesterday, maximum temperatures were above normal

by 2-5°C at a few places over West Bengal & Sikkim and at isolated places over Jharkhand. They were below normal by 2-4°C at a few places over Andaman & Nicobar Islands and near normal over rest parts of the region.

- **Weather Forecast:** Rain/thundershowers would occur at most places over Andaman & Nicobar Islands during the period. Rain/thundershowers would occur at isolated places over Gangetic West Bengal and Odisha during the period. Rain/thundershowers would occur at isolated places over Jharkhand during next 48 hours and dry thereafter. Dry weather would prevail over rest parts of the region.
- **Weather Warning:** Heavy to very heavy rainfall would occur at a few places with isolated extremely heavy falls over Andaman & Nicobar Islands on 7th and 8th October. Heavy to very heavy rainfall would occur at isolated places over Andaman Islands and isolated heavy rainfall over Nicobar Islands on 9th October. Squally winds speed reaching 50-60 kmph would prevail over and around Andaman & Nicobar Islands on 7th and gale force winds speed reaching 60-70 kmph would prevail over and around Andaman & Nicobar Islands on 8th October. Gale force winds speed reaching 60-70 kmph would prevail over and around Andaman Islands and squally winds speed reaching 50-60 kmph over Nicobar Islands on 9th October.
- **Weather Outlook:** Rain/thundershower would occur at many places over Andaman & Nicobar Islands. Rain/thundershowers would occur at isolated places over east India and increase over Odisha and Gangetic West Bengal from 12th October. Weather would be mainly dry over rest of the region.
- **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.
 - **Andaman & Nicobar Islands:**
 - As rain/thundershowers would occur at most places over Andaman & Nicobar Islands during the period along with heavy to very heavy rainfall would occur at a few places with isolated extremely heavy falls over Andaman & Nicobar Islands on 7th and 8th October, 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.
 - As squally winds speed /gale force winds speed reaching 50-60 /60-70 kmph would prevail over and around Andaman & Nicobar Islands on 7th - 9th October, arrange mechanical support to banana and staking in vegetables, to prevent the crops from lodging due to strong winds.
 - **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 chance 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 Chloropyriphs @ 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. Undertake sowing of rainfed wheat. In upland most of the crops are at harvesting stage, after harvesting, immediately plough the land to utilize residual moisture and sow different *rabi* crops like gram, lentil, linseed etc. Start sowing of rape seed and mustard after harvesting of kharif crops.
- 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:** Rain/thundershowers occurred at isolated places over West Madhya Pradesh and Chhattisgarh. Weather remained dry over rest of the region. Yesterday, maximum temperatures were above normal by 2-5°C at many places over Madhya Pradesh and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Madhya Pradesh and Chhattisgarh 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 continue harvesting of early variety of soybean in Malwa Plateau Zone and of matured soybean, 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, in rice in Grid Zone and in vegetables in Kymore Plateau 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 hot and humid weather there are chances of attack of sucking pest in vegetables in Vindya Plateau Zone of Madhya Pradesh, spray Imidacloprid or Thiamethoxam @ 0.35 gm 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 humid weather, there are chances of leaf curling disease in chilli in Chhattisgarh Plain Zone, for control spray Methyl Dematon or Karathone @ 1ml 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. Weather remained dry over rest of the region. Yesterday, maximum temperatures were above normal by 2-5°C at many places over Himachal Pradesh; at a few places over Jammu & Kashmir and at isolated places over Haryana & Delhi and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Himachal Pradesh during next 24 hours; over Jammu & Kashmir during next 48 hours and at isolated places thereafter. Rain/thundershowers would occur at isolated places over Uttarakhand and Punjab during next 24 hours and dry thereafter. 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:**
 - Undertake harvesting of rice, when 80% of grains in the panicle are of golden color and maize in Intermediate Zone of Jammu & Kashmir. Also undertake nursery sowing of cauliflower, cabbage, radish and knol khol in Intermediate lower zone of the region
 - In Sub-Tropical Zone of Jammu & Kashmir, undertake harvesting of maize and 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. Continue sowing of root crops like radish, carrot, turnip.
 - In Intermediate Zone of Jammu & Kashmir, due to hot weather conditions, there are chances of canker in citrus fruits, for control, spray Malathion @ 10 ml or Metasystox @ 10 ml per 10 liter water on a non rainy day.
 - **Himachal Pradesh:**
 - Complete sowing of radish, turnip and spinach in Mid Hills Sub-Humid Zone of Himachal Pradesh. Undertake nursery preparation for sowing of late season cauliflower (Pusa-snowwall) and cabbage. Undertake harvesting of onion bulbs, tomato capsicum and cucumber.
 - Continue nursery sowing of mid season cauliflower and cabbage in poly house, planting of onion at 30X 10 cm spacing and sowing of potato in mid hill and lower region, transplanting of ageti cauliflower and cabbage in lower region in Sub-Montane and Low Hills Sub-Humid Tropical Zone and Bilaspur district of Mid Hills Sub-Humid Zone of Himachal Pradesh 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.
 - 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.
 - Under prevailing humid weather condition, there are chances of incidence of scab and alternaria leaf spot diseases and canker and mite attack in apple in Mid Hills Sub Humid Zone of Himachal Pradesh. Spray

Mancozeb or Ziram @ 700ml per 200 litres of water for control of scab and alternaria leaf spot diseases. Spray Carbendazim or Copper Oxy Chloride @ 600g per 200 litres of water against canker and apply Fenazaquin @ 50 ml or properzite @ 200 ml per 200 litres of water for mite.

- 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:**

- Continue 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, continue sowing of pea and toria and planting of potato. Continue land preparation for sowing of radish, fenugreek and spinach. Undertake harvesting of matured rice and soybean.
- 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 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. Start sowing of early maturing autumn sugarcane.
- In Undulating Plain Zone of Punjab, high humidity may lead to sheath blight in rice, spray Tilt @ 0.1% on the disease spots. Present weather condition is congenial for attack of leaf folder and stem borer in rice, spray Monocrophos 36SL @ 560ml in 100 lits of water per acre.
- In Western Zone of Haryana, continue plantation of new orchard. Prepare the field for sowing of mustard and gram and arrange the certified seeds for mustard and gram. As dry weather would prevail harvest the matured guar and bajra crop.
- Present weather is favourable for attack of top borer in sugarcane in Western Zone of Haryana, apply Carbofuran 3G @13 kg or Phorate 10G @ 8 kg in furrows and apply light irrigation.
- In Delhi, continue transplanting of onion seedlings and planting of early potato. Continue land preparation for sowing of early mustard, pea and early toria and sowing of radish, spinach and coriander. 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 with available moisture in Central Plain Zone of Uttar Pradesh.
- As 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.
- 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 land preparation for sowing of mustard.
- 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, due to dry weather conditions there may be water stress in rainfed crops like pearl millet, guar, moth bean. To avoid stress, spray Thiourea @ 0.1%.
- 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 and Madhya Maharashtra. Weather remained dry over rest of the region. Yesterday, maximum temperatures were above normal by 2-5°C at many places over Maharashtra and at isolated places over Gujarat state and near normal over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Gujarat State and Maharashtra during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at a few places over rest peninsular India. 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 and orchards. In already harvested fields continue sowing of *rabi* jowar and safflower utilizing the available soil moisture. Undertake October pruning in grapes for better growth of fruit bunch. Apply phosphorous (P_2O_5) @ 250 kg/ha after pruning. Apply irrigation to sugarcane, vegetables and grapes, banana and pomegranate orchards and early sown *rabi* jowar.
 - In Marathwada, undertake intercultural operations in cotton, red gram and vegetables. Taking benefit of available soil moisture, undertake sowing of rainfed jowar. Undertake field preparation for sowing of *rabi* jowar and safflower. Apply irrigation to sugarcane, soybean and vegetables.
 - In Vidarbha, apply fertilizers and undertake intercultural operations in cotton, red gram and vegetables. 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 8% +Mancozeb 64% @ 20g per 10 litres water for 5 times at 12 days interval after pruning.
 - Due to subdued rains in South Konkan, there may be attack of ear head bug in rice; spray Monocrotophos 36 WSC @ 12 ml or Cypermethrin 25 EC @ 2.4 ml per 10 litres water OR dust 2% Methyl parathion dust @ 20 kg/ha during calm wind.
 - **Gujarat:**
 - Continue harvesting of matured pulse crops, carry out intercultural and weeding operation in castor, cluster bean 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, complete harvesting of matured pearl millet and pulse crops (green gram, cow pea) and undertake harvesting of groundnut and sesame crops in North Gujarat Zone. Under vasma condition continue land preparation for sowing of *rabi* fennel. Carry out weeding and intercultural operations and mulching in cluster bean and standing castor crops for effective weed control and to conserve the soil moisture. To reduce dropping of flowers and immature balls in early sown cotton, spray Nephthalic acetic acid @ 7 ml in 10 liters of water in North Gujarat and North Saurashtra Zone.
 - As mainly dry weather would prevail, complete harvesting of matured pearl millet in North West Zone of Gujarat.

- Carry out intercultural operations, weeding and mulching in pulses and rice in Middle Gujarat zone and in vegetables to conserve the soil moisture in South Gujarat Heavy Rainfall Zone.
- Undertake sowing of mustard, gram, carrot (for vegetable purpose) and garlic in North Saurashtra Zone. Continue harvesting of matured sesame. Apply irrigation in vegetable, cotton and groundnut to avoid moisture stress condition.
- Due to hot and humid weather condition in North Saurashtra Zone, jassid and white fly attack is likely to increase in cotton, groundnut and vegetable crops; spray Flonicamid @ 4 g/10 liters of water to control the pest.
- 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, Suhasi.

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

Broccoli: Everest, Ayeshwaria.

Odisha

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

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

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

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

West Bengal

Banana: Mortoman, Chapa, Kathali, Singapuri.

Tomato: Avinash-2, 448.

Cabbage: Pride of India, Pusa early, Kranti.

Cauliflower: Jawhar moti, Bharat Jyoti, Early banaras

Bihar

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

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

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

Radish: Pusa Chetki, Pusa Himani, Pusa Rashmi, Japani Saphed
Pointed gourd: Rajendra Parwal-1, Rajendra parwal-2, FP1 and 3

Jharkhand:

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

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

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

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

Madhya Pradesh

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.