

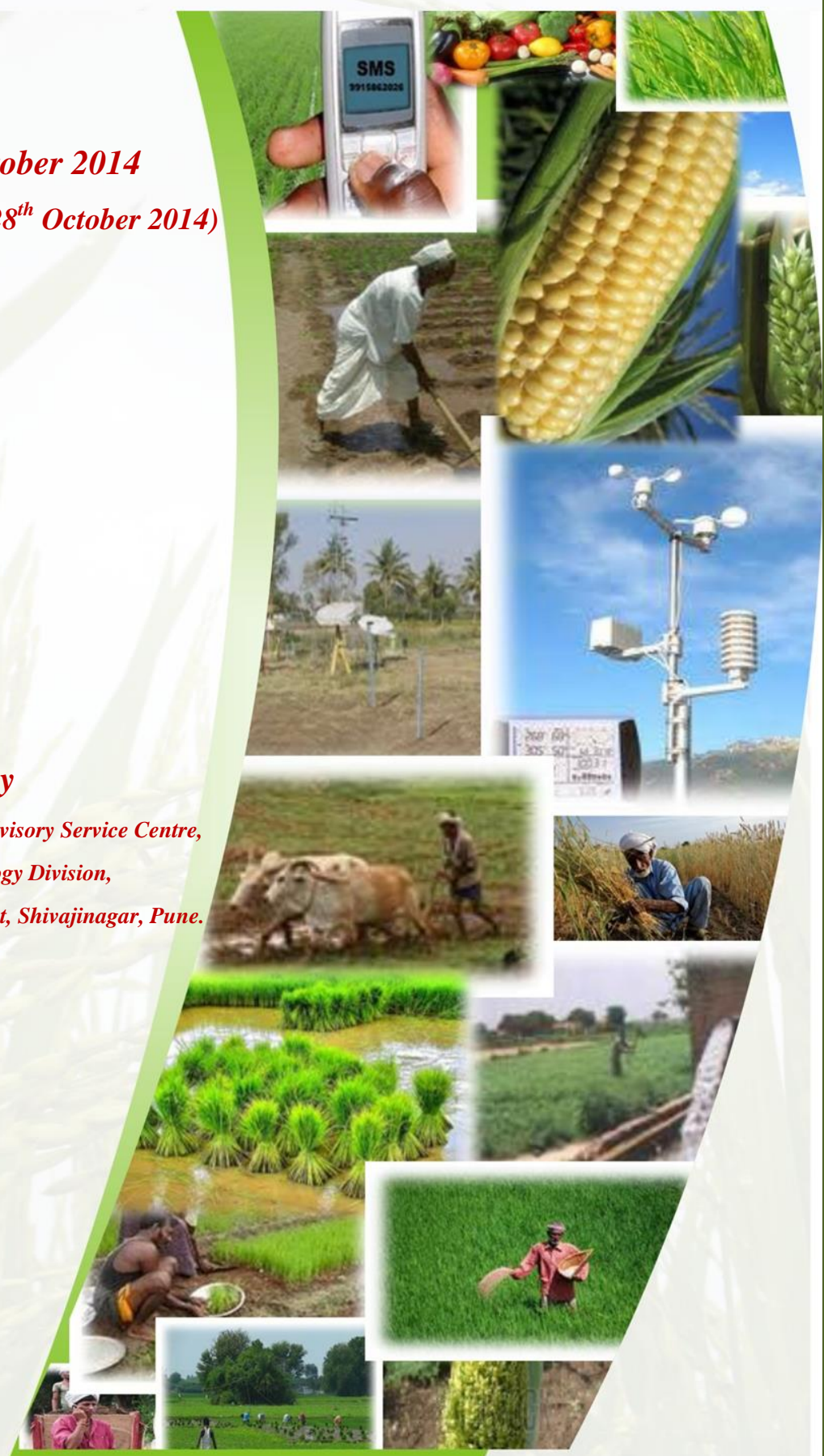
National Agromet Advisory Service Bulletin

Friday 24th October 2014
(For the period 24th to 28th October 2014)



Issued by

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

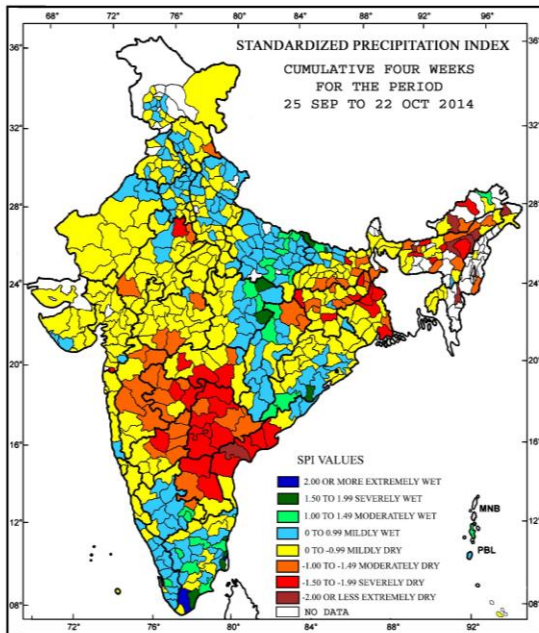


Standardised Precipitation Index

Four Weekly

for the Period 25th September to 22nd October 2014

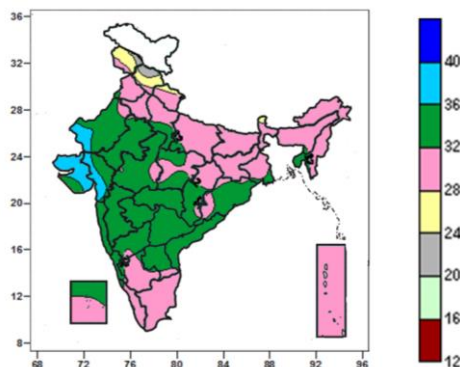
MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE



- Extremely/severely wet conditions experienced in Sheohar and W.Champaran districts of Bihar; Gajapati district of Odisha; Tirunelveli, Tuticorin, Nagapattinam, Tiruvarur districts of Tamilnadu; Karaikal, Puducherry districts of Puducherry.
- Extremely/ moderately/ severely dry conditions experienced in most district of Maharashtra, Andhra Pradesh, Telangana; few districts of Arunachal Pradesh, Assam & Meghalya, Gangetic West Bengal, Bihar, Jharkhand, Khargone, Burhanpur, Khadwa, Vidisha districts of Madhya Pradesh, Bharatpur, Udaipur districts of Rajasthan, Kinnaur district of Himachal Pradesh, Chandel district of Mizoram, Bagalkote, Bidar, Bijapur, Gulbarga, Raichur, Yadgir, Chickballapur districts of Interior Karnataka.
- Rest of the country experienced moderately wet, mild wet/dry conditions.

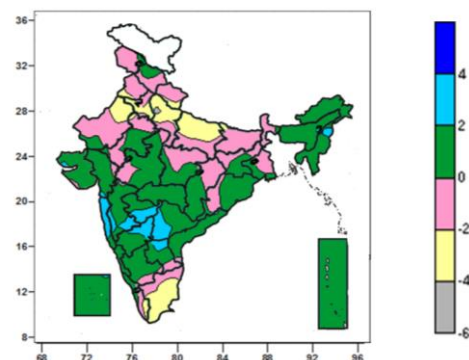
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 22.10.2014

Actual Mean Maximum Temperature (°C) in India for the week ending 22.10.2014



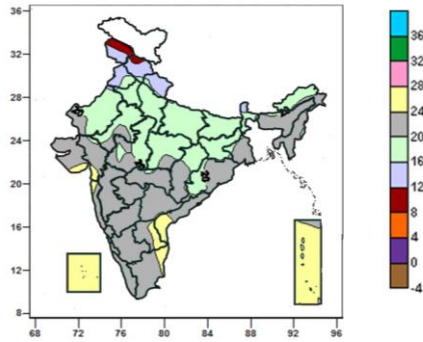
- 36 to 40°C over many parts of Saurashtra & Kutch, some parts of West Rajasthan, Gujarat region.
- 28 to 36°C over entire country except many parts of Jammu & Kashmir, Himachal Pradesh, Sikkim, Saurashtra & Kutch, some parts of West Rajasthan, Gujarat region.
- 24 to 28°C over many parts of Jammu & Kashmir, Sikkim, some parts of Himachal Pradesh.
- 20 to 24°C over some parts of Jammu & Kashmir, Himachal Pradesh.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 22.10.2014



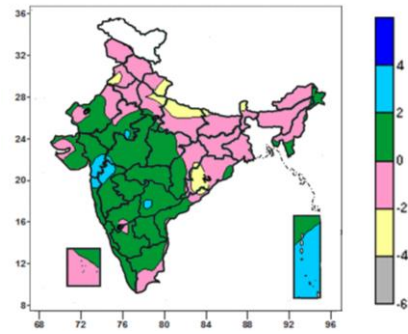
- 2 to 4°C over many parts of Konkan & Goa, some parts of Gujarat region, Nagaland, Madhya Maharashtra, Marathwada, Telangana, Rayalaseema and North Interior Karnataka.
- -2 to 2°C over entire country except many parts of Uttar Pradesh, Haryana, Delhi, Konkan & Goa, Tamil Nadu, some parts of Uttarakhand, Rajasthan, Bihar, Gujarat region, Nagaland, Madhya Maharashtra, Marathwada, Telangana, Rayalaseema, Kerala and North Interior Karnataka.
- -4 to -2°C over many parts of Tamil Nadu, Uttar Pradesh, Haryana, Delhi, some parts Uttarakhand, Rajasthan, Bihar and Kerala.

Actual Mean Minimum Temperature (°C) in India for the week ending 22.10.2014



- 24 to 28⁰C over many parts of Lakshadweep, Andaman & Nicobar Islands, some parts of Gujarat, Konkan, Coastal Andhra Pradesh, Telangana and Tamil Nadu.
- 20 to 24 ⁰C over many parts of Gangetic West Bengal, Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura, Odisha, West Madhya Pradesh, Chhattisgarh, Gujarat, Maharashtra, Andhra Pradesh, Karnataka, Tamil Nadu, Kerala, some parts of Arunachal Pradesh, Rajasthan, East Madhya Pradesh and Andaman & Nicobar Islands.
- 16 to 20⁰C over many parts of Haryana, Delhi, Uttar Pradesh, Bihar, Jharkhand, Madhya Pradesh, West Rajasthan, Arunachal Pradesh, Sub-Himalayan West Bengal, some parts of Punjab, Himachal Pradesh, Uttarakhand, Assam, Odisha, Chhattisgarh, Gujarat region.
- 12 to 16⁰C over many parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Sikkim, some parts of West Rajasthan.
- 8 to 12⁰C over some parts of Jammu & Kashmir, Himachal Pradesh.

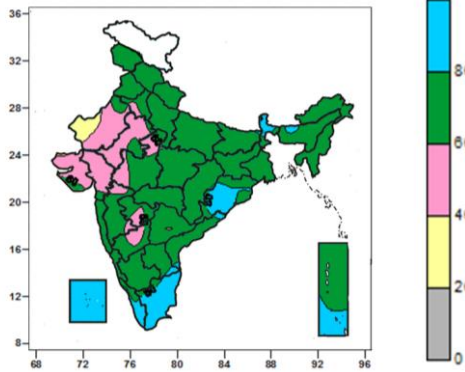
Mean Minimum Temperature (°C) Anomaly in India for the week ending 22.10.2014



- 2 to 4⁰C over many parts of Andaman & Nicobar Islands, some parts Gujarat region, Konkan, Madhya Maharashtra, East Rajasthan, Telangana.
- 0 to 2⁰C over entire country except many parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh, East India, North East India, Lakshadweep, Andaman & Nicobar Islands, some parts Gujarat region, Konkan, Madhya Maharashtra, Chhattisgarh, East Madhya Pradesh, Rajasthan, Coastal Andhra Pradesh, Telangana, Interior Karnataka and Tamil Nadu.
- -4 to 0⁰C over many parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh, East India, North East India, Lakshadweep Islands, some parts of Chhattisgarh, East Madhya Pradesh, Rajasthan, Saurashtra & Kutch, Coastal Andhra Pradesh, Interior Karnataka and Tamil Nadu.

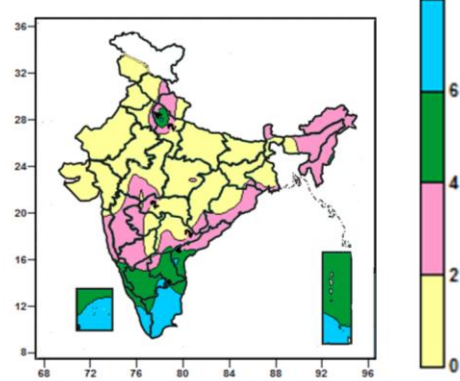
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 22.10.2014

Relative Humidity (%) over India for the week ending 22.10.2014



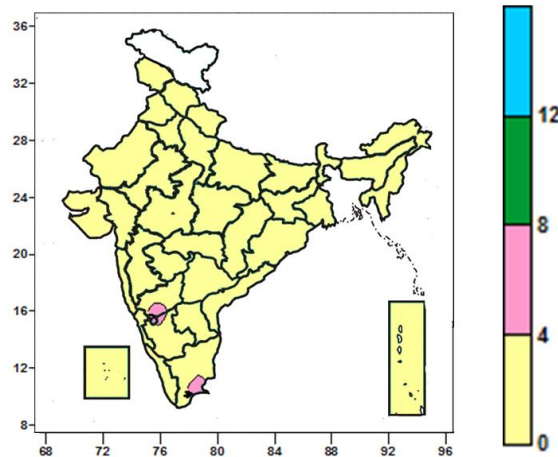
- 80 to 100% over many parts of Sub-Himalyan West Bengal & Sikkim, Odisha, Kerala, Tamil Nadu, Lakshadweep Islands, some parts of Assam & Meghalaya, Coastal Andhra Pradesh, Rayalaseema and Andaman & Nicobar Islands.
- 60 to 80% over entire country except many parts of Rajasthan, Sub-Himalyan West Bengal & Sikkim, Odisha, Gujarat, Kerala, Tamil Nadu, Lakshadweep Islands, some parts of Haryana, West Madhya Pradesh, Madhya Maharashtra, Marathwada, North Interior Karnataka, Assam & Meghalaya, Coastal Andhra Pradesh, Rayalaseema and Andaman & Nicobar Islands.
- 40 to 60% over many parts of Rajasthan, Gujarat, some parts of Haryana, West Madhya Pradesh, Madhya Maharashtra, Marathwada and North Interior Karnataka.
- 20 to 40% over some parts of West Rajasthan.

Cloud amount (okta) over India for the week ending 22.10.2014



- 6 to 8 okta over many parts of Tamil Nadu, Kerala, Lakshadweep Islands, some parts of South Interior Karnataka and Andaman & Nicobar Islands.
- 4 to 6 okta over many parts of Coastal & South Interior Karnataka, Rayalaseema, Andaman & Nicobar Islands, some parts of West Uttar Pradesh, Coastal Andhra Pradesh, Telangana and Lakshadweep Islands.
- 0 to 4 okta over entire country except many parts of Coastal & South Interior Karnataka, Rayalaseema, Tamil Nadu, Kerala, Lakshadweep, Andaman & Nicobar Islands, some parts of South Interior Karnataka, West Uttar Pradesh, Coastal Andhra Pradesh, Telangana and Lakshadweep Islands.

Wind speed (knots) over India for the week ending 22.10.2014



- 4 to 8 knots over some parts of Coastal Tamil Nadu and Interior Karnataka.
- 0 to 4 knots over entire country except some parts of Coastal Tamil Nadu and Interior Karnataka.

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 27th October, 2014)

- Rain/thundershowers would occur at many places over Tamil Nadu & Puducherry, Coastal Karnataka and South Interior Karnataka; at a few places over Coastal Andhra Pradesh and at isolated places over Andaman & Nicobar Islands and North Interior Karnataka during the period.
- Rain/thundershowers would occur at most places over Kerala during next 48 hours and at many places thereafter.
- Rain/thundershowers would occur at most places over Lakshadweep during next 24 hours and decrease thereafter.
- Rain/thundershowers would occur at a few places over Jammu & Kashmir during next 48 hours and at isolated places thereafter.
- Rain/thundershowers would occur at isolated places over Rayalaseema during next 24 hours and increase thereafter.
- Rain/thundershowers would occur at isolated places over Konkan & Goa during next 24 hours and at a few places thereafter.
- Rain/thundershowers would occur at isolated places over Himachal Pradesh during next 24 hours; at a few places on 25th and at isolated places thereafter.
- Rain/thundershowers would occur at isolated places over Punjab and Rajasthan during next 48 hours and dry weather would prevail thereafter.
- Dry weather would prevail over Haryana & Delhi during next 24 hours; rain/thundershowers would occur at isolated places on 25th and dry weather would prevail thereafter.
- Dry weather would prevail over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura, Chhattisgarh and Telangana during next 48 hours and over Uttarakhand, Gujarat State, Madhya Maharashtra and Marathwada during next 24 hours and rain/thundershowers would occur at isolated places thereafter.
- Dry weather would prevail over West Bengal & Sikkim, Odisha, Jharkhand, Bihar, Uttar Pradesh, Madhya Pradesh and Vidarbha during the period.

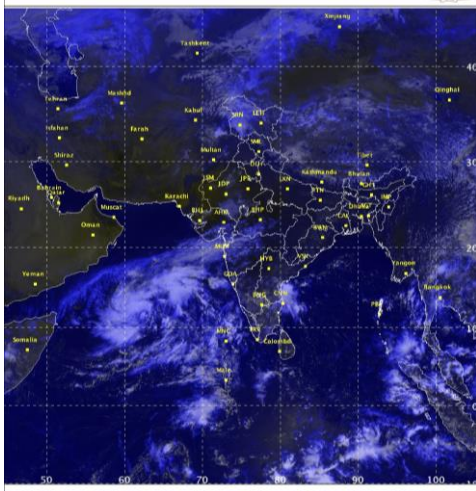
Weather Warning during next 3 days

- **24 October (Day 1):** Heavy rainfall would occur at isolated places over Tamilnadu and Kerala.
- **25 October (Day 2):** Heavy rainfall would occur at isolated places over Tamilnadu and Kerala.
- **26 October (Day 3):** Heavy rainfall would occur at isolated places over Tamilnadu, Kerala and South interior Karnataka.

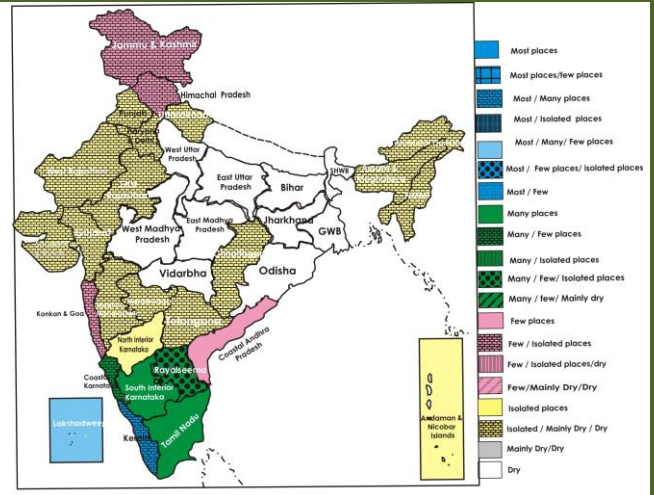
Weather Outlook for subsequent 4 days from 27th to 31st October 2014.

- Rain/snow would occur at isolated places over western Himalayan region.
- Rain/thundershower would occur at many places over Konkan & Goa and south Peninsular India.
- Rain/thundershower would occur at a few places over Andaman & Nicobar Islands, Madhya Maharashtra & south Gujarat and at isolated places over northeastern states, plains of northwest India and rest peninsular India.
- Weather would be dry over rest of the country.

Satellite image dated, 24.10.2014, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 27th October 2014)



Salient Advisories

- In view of the anticipated rainfall due to the well marked low pressure area in the Arabian sea, undertake harvesting of already matured rice in **Konkan** and harvesting of rice, groundnut, pearl millet and picking of cotton in **Gujarat** immediately. Keep harvested produce in safe places.
- Continue sowing of mustard, linseed and field pea, land preparation for sowing of *rabi* vegetables, earthing up in turmeric, ginger and cole crops in Kymore Plateau and Satpura Hill Zone of **Madhya Pradesh**.
- Continue land preparation and sowing of *rabi* crops like toria, green pea, mustard, gram, linseed etc. and planting of early potato in North Hill Zone of **Chhattisgarh**.
- Continue sowing of early wheat and potato in lower and mid hills regions of Sub-Montane and Low Hills Sub-Humid Tropical Zone of **Himachal Pradesh**. Undertake nursery preparation for sowing of late season cauliflower (Pusa-snowwall) and cabbage.
- Continue land preparation for sowing of wheat and planting of potato. Continue transplanting of onion and sowing of garlic, mustard, palak, methi, radish, early toria, pea in Hill Zone of **Uttarakhand**.
- Continue transplanting of samba rice and thaladi rice in the Cauvery Delta Zone of **Tamil Nadu**.
- In **Madhya Maharashtra**, continue sowing of *rabi* safflower and wheat. Also continue sowing of irrigated gram and planting of pre-seasonal sugarcane.
- As rain/thundershowers would occur at many places over **Tamilnadu** along with isolated heavy falls over during the period, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crop fields to remove excess water.

Detailed Zonewise Agromet Advisories

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



Rice



Sugarcane



Cotton



Soybean

- **Realised Rainfall:** Rainfall occurred in all districts of Tamil Nadu and Kerala; Krishna, Nellore, Vizianagram districts of Coastal Andhra Pradesh; Chittoor district of Rayalaseema; Dakshin Kannada and Udupi districts of Coastal Karnataka; Bangalore (urban), Chamarajnagar, Hassan, Mandya, Mysore and Ramnagara districts of South

Interior Karnataka.

- **Weather Forecast:** Rain/thundershowers would occur at many places over Tamil Nadu & Puducherry, Coastal Karnataka and South Interior Karnataka; at a few places over Coastal Andhra Pradesh and at isolated places over North Interior Karnataka during the period. Rain/thundershowers would occur at most places over Kerala during next 48 hours and at many places thereafter. Rain/thundershowers would occur at isolated places over Rayalaseema during next 24 hours and increase thereafter. Dry weather would prevail over Telangana during next 48 hours and rain/thundershowers would occur at isolated places thereafter.
- **Weather Warning:** Heavy rainfall would occur at isolated places over Tamilnadu and Kerala during the period and over South interior Karnataka on 26th October.
- **Weather Outlook:** Rain/thundershower would occur at many places over south Peninsular India. Rain/thundershower would occur at isolated places over rest peninsular India.
- **Advisories:**
 - **Andhra Pradesh**
 - As rain/thundershowers would occur at many places over Rayalaseema on 26th October, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops.
 - Undertake sowing of *rabi* groundnut and Bengal gram in Scarce Rainfall Zone of Rayalaseema.
 - In the prevailing humid weather, due to thrips attack, fruit and flower drop incidence was observed in few mandals of Anantapuram district in Scarce Rainfall Zone of Rayalaseema which is likely to continue. For control, spray Acetamiprid @0.2g/litre of water after current spells of rain.
 - Present hot weather is congenial for leaf spot attack on groundnut in Southern Zone of Rayalaseema. Spray Hexaconazole @ 2 ml per litre of water after current spells of rain.
 - **Telangana:**
 - Prevailing hot and humid weather conditions are congenial for incidence of leaf spot disease on cotton and stem borer on rice in Southern Zone of Telangana. For control, spray Copper oxy chloride @ 30g + Plantamycin @ 2g in 10 litres of water for leaf spot diseases and Cartap Hydrochloride @ 2 g or Chlorantraniliprole @ 0.4 ml per litre of water for stem borer.
 - Present hot and partly cloudy weather conditions are congenial for incidence of stem borer in rice in Northern Telangana Zone. Apply Cartap Hydrochloride 4G @ 8 kg/acre when the adult moths/egg masses @ one/ sq. m are noticed in the fields.
 - **Karnataka:**
 - As rain/thundershowers would occur at many places over Coastal Karnataka during the period and over South Interior Karnataka during the period along with isolated heavy spells on 26th October, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crop fields to remove excess water in South Interior Karnataka. Postpone harvesting of soybean, black gram and green gram and keep already harvested produce at safe places.
 - Continue land preparation for sowing of wheat and undertake sowing of *rabi* crops like sunflower, safflower, horse gram (PHG-9), sesame, cowpea, chickpea, and maize in the North Dry Zone of Karnataka.
 - Continue sowing of *rabi* sunflower in Central Dry Zone; maize, sorghum, Bengal gram and sunflower in North East Dry Zone and wheat, sorghum and Bengal gram in North East Transition Zone of Karnataka utilizing the realized rainfall.
 - In the Southern Dry Zone of Karnataka, ginger crop is severely affected by Rhizome rot disease due to wet and humid conditions. To manage the disease, undertake spraying of Copper Oxy Chloride @ 3 g/litre of water.
 - **Kerala:**
 - As rain/thundershowers would occur at most/many places in Kerala during the period along with isolated heavy falls, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crop fields to remove excess water.
 - Continue nursery sowing of rice in the Northern Zone of Kerala and transplanting of rice in the Southern Zone of Kerala.
 - **Tamil Nadu:**
 - As rain/thundershowers would occur at many places over Tamilnadu along with isolated heavy falls over during the period, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crop fields to remove excess water.
 - Continue transplanting of *samba* rice and *thaladi* rice in the Cauvery Delta Zone of Tamil Nadu.
 - In the Western Zone of Tamil Nadu, continue sowing of dry land crops like sorghum and ragi and sowing of small onion in the North Western Zone of Tamil Nadu after current spells of heavy rain.
 - Continue sowing of cotton, maize, pulses and sorghum under dry land conditions in the Southern Zone of Tamil Nadu after current spells of heavy rain.
 - Due to high humidity, leaf folder incidence is noticed in rice in North Eastern Zone of Tamilnadu which is likely to spread. To control, spray Profenophos @ 2 ml in one liter of water after current spells of rain.
 - Suitable varieties are given in Annexure II.

- **Animal Husbandry**
- Provide clean and hygienic water to animals and vaccinate against FMD in the Problem Area Zone of Kerala.

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



Rice



Okra



Cole Crops (Nursery)



Green Gram

- **Realised Rainfall:** Rainfall occurred in East Siang, Lower Dibang Valley, Papumpara, Upper Siang districts of Arunachal Pradesh; Dhemaji, Hailakandi, Kamrup (rural), Karimganj, Lakhimpur and Sibsagar districts of Assam; Saiha district of Mizoram; Thoubal district of Manipur; Kohima district of Nagaland and west Tripura district of Tripura. Mainly dry weather prevailed over rest part of the region.
- **Weather Forecast:** Dry weather would prevail over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during next 48 hours and rain/thundershowers would occur at isolated places thereafter.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershower would occur at isolated places over northeastern states.
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Lower Brahmaputra Valley Zone of Assam, continue sowing of rapeseed/ mustard and onion and land preparation for planting of potato. Complete transplanting of cole crops.
 - In Hill Zone of Assam, continue nursery raising of winter vegetables. Undertake land preparation and sowing of black gram and green gram.
 - In North Bank Plain Zone of Assam, continue sowing of rapeseed and mustard, planting of potato and nursery sowing of cole crops.
 - In Barak Valley Zone, continue transplanting of early cauliflower, cabbage and knol khol.
 - In Central Brahmaputra Valley Zone of Assam, transplanting of cole crops and sowing of early radish may be continued. Continue land preparation and sowing of *rabi* pulses and oilseeds. Continue land preparation for sowing of wheat and planting of potato.
 - In Arunachal Pradesh, continue harvesting of matured *kharif* rice.
 - In Meghalaya, drain out water from the fields of *Kharif* rice which is at maturity stage and undertake harvesting if 80 % of the spikelets are turned yellow. Undertake harvesting of groundnut. In ginger and turmeric, undertake hand weeding followed by fertilizer application, earthing up and mulching. Land preparation and sowing of peas, mustard/rapeseed and planting of potato may be continued.
 - In North Bank Plain Zone of Assam, prevailing weather is conducive for gundhi bug incidence in *sali* rice at panicle initiation, milk and dough stage; apply Malathion 5% dust @ 20 kg/ha to control.
 - In the prevailing hot weather condition, there is chance of attack of rice blast and stem borer in *Sali* rice in Hill Zone of Assam. Spray Hinosan@ 1ml /litre of water against rice blast and spray Chloropyriphos (20%) @ 2 ml/litre against stem borer.
 - Due to prevailing humid weather conditions, there is chance of attack of gundhi bug, blast in normal transplanted rice in Arunachal Pradesh. Undertake foliar spray of Hexaconazole 5% EC @ 2 ml/litre of water or Carbendazim 12 % WP+Mancozeb 63% WP @ 2 g/litre of water.
 - **Nagaland, Manipur, Mizoram and Tripura:**
 - In Manipur, maintain water level of 5 cm upto dough stage in *kharif* rice. Continue harvesting of soybean and groundnut. Undertake sowing of rapeseed/ mustard and land preparation for planting of potato.
 - In Mizoram, continue sowing of pea, mustard and toria.
 - In Mild Tropical Plain Zone of Tripura, continue transplanting of winter vegetable particularly cauliflower, cabbage, radish, brinjal. Continue land preparation for planting of potato.
 - In Nagaland, continue nursery sowing of cabbage, cauliflower, knolkhol, broccoli, radish, tomato. Continue land preparation for toria and harvesting of matured *jhum* rice and soybean.
 - In Mizoram, weather is congenial for attack of stem borer, gundhi bug and leaf blast in rice, spray Monocrotophos @ 20 ml/10 litres water or Imidacloprid @ 20 ml/10 litres of water against stem borer. Spray Monocrotophos 36 WSC @ 1.5 ml/litre of water against gundhi bug. Spray Triclozole (Beam) @ 0.5 g/litre

against leaf blast.

- In Tripura, prevailing humid weather is conducive for attack of gundhi bug in short duration *aman* rice. To manage the attack; apply Cypermethrin + Propanophos @ 1.5 ml per litre of water or Cartap Hydrochloride (Dollar) @ 1.5 g per litre of water. Also there is chance of rice blast in long duration *aman* rice, spray Benlate or Mancozeb @ 0.25%.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- In Nagaland, provide clean drinking water round the clock and water troughs/ feeders should be regularly cleaned. Antibiotics or other stress medications may be added to water if desired.

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



Sugarcane

Groundnut

Onion

Rice

- **Realised Rainfall:** Rainfall occurred in Cuttack, Gajapati, Koraput, Malkangiri and Puri districts of Odisha and Simdega district of Jharkhand. Mainly dry weather prevailed over rest part of the region.
- **Weather Forecast:** Rain/thundershower would occur at isolated places over Andaman & Nicobar Islands during the period and dry weather would prevail over rest of the region.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershower would occur at a few places over Andaman & Nicobar Islands. Weather would be dry over rest of the region.
- **Advisories:**
 - **West Bengal:**
 - In Laterite and Red Soil Zone, drain out water from the fields of *aman* rice at harvesting stage. Undertake land preparation for nursery sowing of winter vegetables.
 - In Coastal Saline Zone, continue transplanting of cabbage, cauliflower, tomato and planting of potato. Also prepare land for sowing of early mustard variety like agrani, panchali.
 - In New Alluvial Zone and Old Alluvial Zone, continue nursery sowing/ sowing of winter vegetables like radish, broccoli.
 - In Terai Zone, continue transplanting of early cabbage, cauliflower. Continue land preparation for planting of potato, nursery sowing of chilli, tomato, radish and broccoli.
 - Due hot and humid weather, there is a chance of attack of stem borer in *aman* rice in New Alluvial Zone. Spray Carbosulfan 25 EC @ 2 ml / litre or Profenphos 40% + Cypermethrin 4% @ 1 ml / litre of water against stem borer.
 - In Old Alluvial Zone, there are reports of attack of brown plant hopper in *aman* rice. To control the attack, spray Imidachlorpid 200 SL @ 1ml/5litre water or Ethofenprox 10 EC @ 1 ml/litre of water.
 - In Terai Zone, due hot and humid weather, there is chance of attack of neck blast in *aman* rice, spray Carbendazim @ 1 g /litre of water.
 - **Odisha:**
 - Continue land preparation and sowing of mustard, sunflower and sesame, nursery sowing of onion and transplanting of cole crops in East and South Eastern Coastal Plain Zone of Odisha.
 - In North Eastern Coastal Plain Zone of Odisha, due to high humid weather, there is chance of blast and Sheath rot/blight in rice. To manage blast, apply Tricyclazole @ 0.5 g/litre of water or Kasugamycin @ 1.5 g/litre of water. For control of Sheath rot/blight, alternate application of Hexaconazole @ 400 ml/acre and Thiophanate methyl @ 300 g/acre at two weeks interval is advised.
 - In North Eastern Plateau Zone of Odisha, due to cloudy and high humid weather, there is chance of Tikka leaf spot in groundnut. To control, spray Mancozeb @ 2.5 g per liter of water.
 - Prevailing humidity and temperature are conducive for incidence of leaf roller and case worm in rice in East and South Eastern Coastal Plain Zone of Odisha. To control, spray Triozophos or Fipronil or Hostathion @ 200 ml in 200 litres of water per acre.

- **Bihar:**

- In North West Alluvial Plain Zone of Bihar, continue field preparation and sowing of *rabi* crops like maize, wheat, pea, gram, sunflower and planting of potato. Continue land preparation in the upland areas for sowing of rapeseed. Continue sowing of coriander.
- In North East Alluvial Plain Zone of Bihar, continue field preparation for sowing of *rabi* crops.
- In South Bihar Alluvial Zone, continue sowing of toria and sowing of fodder crop berseem. Continue harvesting of matured rice.
- Due to prevailing hot weather condition, there is chance of attack of gundhi bug in rice in North West Alluvial Plain Zone and South Bihar Alluvial Zone, apply Folidol dust @ 10-15 kg per hectare in the early morning.

- **Jharkhand:**

- In Western Plateau Zone of Jharkhand, continue planting of early potato and sowing of green peas. Continue sowing of rainfed wheat. In upland areas after harvesting of *Kharif* crops, immediately plough the land to utilize residual moisture and sow different *rabi* crops like gram, lentil, linseed etc. Also continue sowing of toria, rapeseed and mustard. Continue harvesting of already matured rice.
- In Central & North Eastern Plateau Zone of Jharkhand, continue sowing of toria, mustard, green pea and potato
- In South Eastern Plateau Zone of Jharkhand, continue land preparation/sowing of chick pea.
- Suitable varieties are given in Annexure II.

- **Animal Husbandry**

- In East and South Eastern Coastal Plain Zone and North Eastern Coastal Plain Zone of Odisha, provide clean drinking water for animals.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane



Rice



Okra



Onion

- **Realised Rainfall:** Mainly dry weather prevailed over the region.
- **Weather Forecast:** Dry weather would prevail over Chhattisgarh during next 48 hours and rain/thundershowers would occur at isolated places thereafter. Dry weather would prevail over Madhya Pradesh during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be mainly dry over the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - Continue sowing of mustard, linseed and field pea, land preparation for sowing of *rabi* vegetables, earthing up in turmeric, ginger and cole crops in Kymore Plateau and Satpura Hill Zone. Prepare nursery for medium duration cauliflower & cabbage.
 - Continue sowing of vegetable pea (cv. Arkel) and field preparation for planting of early potato in Kymore Plateau and Satpura Hill Zone and Malwa plateau Zone.
 - Continue harvesting of soybean under physiological maturity in Nimar Valley Zone and in Malwa plateau Zone.
 - Continue harvesting of matured soybean, green gram, black gram, groundnut and maize in Jhabua Hills Zone. Undertake land preparation for sowing of mustard, gram and wheat and keep inputs ready. Continue nursery sowing of early winter vegetables (tomato, chilli, brinjal, cauliflower, cabbage, capsicum), sowing of early green pea and planting of early potato. Irrigate the cotton crop (flowering/boll formation stage) under moisture stress condition.
 - Continue harvesting and threshing of matured urad, moong, til and soybean in Bundelkhand Zone. Undertake sowing of sarson saag, radish, spinach and coriander crops utilising available soil moisture. Hoeing and weeding is advised in fruit orchard.
 - Due to cloudy weather there are chances of attack of sucking pest in vegetables in Vindya Plateau Zone of Madhya Pradesh, spray Imidacloprid or Thiamethoxam @ 0.35 g per litre of water.
 - **Chhattisgarh:**
 - Continue harvesting of matured rice in Chhattisgarh Plain Zone and keep it in the field for proper sun drying for 1-2 days.

- Continue land preparation and sowing of *rabi* crops like toria, green pea, mustard, gram, linseed etc. and planting of early potato in North Hill Zone of Chhattisgarh utilising the available soil moisture.
- Keep inputs ready for sowing of toria, green pea and linseed in Bastar Plateau Zone.
- Suitable varieties are given in Annexure II.

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



Rice



Sugarcane



Bottle Gourd



Onion

- **Realised Rainfall:** Mainly dry/dry weather prevailed over the region.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Jammu & Kashmir during next 48 hours and at isolated places thereafter. Rain/thundershowers would occur at isolated places over Himachal Pradesh during next 24 hours; at a few places on 25th and at isolated places thereafter. Rain/thundershowers would occur at isolated places over Punjab and Rajasthan during next 48 hours and dry weather would prevail thereafter. Dry weather would prevail over Uttarakhand during next 24 hours and rain/thundershowers would occur at isolated places thereafter. Dry weather would prevail over Haryana & Delhi during next 24 hours; rain/thundershowers would occur at isolated places on 25th and dry weather would prevail thereafter. Dry weather would prevail over Uttar Pradesh during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/snow would occur at isolated places over western Himalayan region. Rain/thundershower would occur at isolated places over plains of northwest India. Weather would be dry over rest of the region.
- **Advisories:**
 - **Jammu & Kashmir:**
 - Undertake land preparation for sowing of wheat after harvesting of rice and maize in Intermediate Zone of Jammu & Kashmir. Also continue nursery sowing of cauliflower, cabbage, radish and knoll khol.
 - In Sub-Tropical Zone of Jammu & Kashmir, continue land preparation for sowing of pulses viz. chickpea, pea and lentil and also direct sowing of vegetable crops like radish carrot, fenugreek, spinach and spinach beet, coriander, continue planting of potato and transplanting of tomato seedlings. Also continue sowing of ghobi sarson with toria as mixed or intercrop and nursery raising of cole crops and onion.
 - **Himachal Pradesh:**
 - Continue sowing of early wheat and potato in Lower and Mid Hills regions of Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. Continue sowing of gobhi sarson, linseed and sowing of berseem, lucerne and oats as fodder crops during *rabi* season and harvesting of rice, soybean mash and cowpea. Complete sowing of gram and lentil.
 - Complete sowing of radish, turnip and spinach in Mid Hills Sub-Humid Zone of Himachal Pradesh. Undertake nursery preparation for sowing of late season cauliflower (Pusa-snowwall) and cabbage. Continue harvesting of onion, tomato, capsicum and cucumber.
 - Continue nursery sowing of mid-season cauliflower and cabbage in poly house, planting of onion at 30X 10 cm spacing and sowing of potato in mid hill and lower region, transplanting of ageti cauliflower and cabbage in lower region in Sub-Montane and Low Hills Sub-Humid Tropical Zone and Bilaspur district of Mid Hills Sub-Humid Zone of Himachal Pradesh utilizing the realized rainfall. Continue nursery sowing of late varieties of cauliflower, cabbage, knol khol and direct sowing of radish, carrot, turnip, palak and methi and sowing of early varieties of Pea in mid hill areas utilizing the realized rainfall. Undertake sowing of cole crops in polyhouses.
 - As mainly dry weather would prevail, continue harvesting of rajmah and potato in High Hill Temperate Dry Zone of Himachal Pradesh.
 - Under prevailing humid weather condition, there are chances of incidence of scab and alternaria leaf spot diseases and canker and mite attack in apple in Mid Hills Sub Humid Zone of Himachal Pradesh. Spray Mancozeb or Ziram @ 700ml per 200 litres of water for control of scab and alternaria leaf spot diseases. Spray Carbendazim or Copper Oxy Chloride @ 600g per 200 litres of water against canker and apply Fenazaquin @ 50 ml or properzite @ 200 ml per 200 litres of water for mite.
 - **Uttarakhand:**
 - Continue land preparation for sowing of wheat and planting of potato. Continue transplanting of onion and sowing of garlic, mustard, palak, methi, radish, early toria, pea in Hill Zone of Uttarakhand.

- As temperature conditions are favourable, undertake sowing of mustard and planting of autumn sugarcane in Bhabar and Tarai Zone of Uttarakhand. Continue sowing of pea and toria and planting of potato. Continue land preparation for sowing of radish, fenugreek and spinach. Continue harvesting of matured rice and soybean and planting of potato.
- Continue harvesting of *kharif* maize and pulses like urad /moong and field preparation for planting of winter sugarcane in Sub Humid Sub Tropical Zone of Uttarakhand.
 - **Punjab, Haryana and Delhi:**
 - In Western Undulating Zone of Punjab, continue nursery sowing of mid-season cauliflower, desi varieties of radish, carrot under irrigation and turnip and planting of mango, litchi and apply irrigation in rice, cotton and maize.
 - In Central Plain Zone of Punjab, continue sowing of desi varieties of carrot, radish and turnip crops and undertake transplanting of tomato under irrigation. Continue sowing of potato, palak and nursery sowing of cauliflower. Continue harvesting of matured maize and groundnut in Ludhiana district. Continue planting of early maturing autumn sugarcane.
 - In Undulating Plain Zone of Punjab, hot and humid conditions may lead to sheath blight in rice, spray Tilt @ 0.1% on the disease spots. Present weather condition is congenial for attack of leaf folder and stem borer in rice, spray Monocrophos 36SL @ 560ml in 100 lits of water per acre.
 - In Western Zone of Haryana, continue plantation of new orchard. Prepare the field for sowing of mustard and gram and arrange the certified seeds for mustard and gram. As dry weather would prevail, harvest matured guar, bajra and continue the picking operation (when there are no dew drops or deposition on opened bolls) in early sown cotton crop.
 - Present weather is favourable for attack of top borer in sugarcane in Western Zone of Haryana, apply Carbofuran 3G @13 kg or Phorate 10G @ 8 kg in furrows and apply light irrigation.
 - In Delhi, continue transplanting of onion seedlings and planting of early potato. Continue land preparation for sowing of early mustard, pea and early toria and sowing of radish, spinach and coriander.
 - **Uttar Pradesh:**
 - Continue harvesting of rice Eastern Plain Zone and Central Plain Zone of Uttar Pradesh.
 - Continue sowing of late varieties of rye with a distance of 45x15cm and at 3cm depth and peas in Allahabad, Fatehpur, Pratapgrah, Chitrakoot and Kaushambi districts of Central Plain Zone of Uttar Pradesh. For mixed cropping, carry out sowing of rye after 3 rows of potato. Continue sowing of potato, lahi and masoor crops with a planting distance of 90 cm and sowing of berseam @ 25-30 kg per hectare mixed with 1-2 kg of linseed with available soil moisture. Complete sowing of late varieties of potato.
 - Continue land preparation for planting of potato; transplanting of cauliflower, cabbage, tomato, brinjal and chilli and sowing of fenugreek, coriander and garlic in Barabanki, Faizabad, Basti, Ambedkarnagar, Sant Kabir Nagar ,Gorakhpur, Deoria and Ballia districts of Eastern Plain Zone of Uttar Pradesh.
 - Continue sowing of rapeseed and mustard in Raibareilly, Amethi and Sultanpur districts of Eastern Plain Zone of Uttar Pradesh.
 - Continue nursery sowing of tomato, cauliflower, *Tara-mira*, *Alsi*, Berseem, transplanting of onion and planting of sugarcane and potato in Western Plain Zone of Uttar Pradesh with available moisture. To conserve soil moisture in groundnut, spray Malathion 50 E.C. @ 200 mm per 200 litres of water.
 - Continue sowing of peas and gram and planting of potato and keep inputs ready for sowing of rapeseed, mustard and maize in Central Plain Zone of Uttar Pradesh. Complete transplanting of ageti cauliflower, cabbage, chilli, brinjal and tomato. Continue harvesting of rice, urd and moong.
 - Continue transplanting of cauliflower, cabbage, tomato, chilli and brinjal in Jhansi district of Bundelkhand Zone of Uttar Pradesh. Undertake harvesting of matured moong, urd and sesame. Maintain 5 cm water level in rice at panicle initiation and flowering stage. Undertake land preparation for sowing of peas, lentil, mustard and rapeseed.
 - Under prevailing humid weather condition, there are chances of attack of stem borer, brown plant hopper, gall midge, leaf folder and jassids in rice in Central Plain Zone of Uttar Pradesh. Spray Quinalphos 25 EC @ 1 litre per hectare.
 - **Rajasthan:**
 - Continue land preparation for sowing of mustard, barley, nurse sowing of cauliflower, cabbage and planting of potato in Flood Prone Eastern Plain Zone of Rajasthan.
 - Continue land preparation for sowing of lucerne, taramira, methi and mustard in Transitional Plain Zone of Inland Drainage of Rajasthan
 - Continue nursery sowing of cauliflower and radish and continue sowing of rainfed taramira, toria and mustard in Semi Arid Eastern Plain Zone of Rajasthan.
 - Continue sowing of cummin, rapeseed (sarson) in Arid Western Plain Zone (Jodhpur) of Rajasthan.
 - Continue land preparation for sowing of *rabi* crops viz. mustard, gram and fodder crops like lucerne, berseem, in Arid Western Plain Zone (Bikaner) of Rajasthan.
 - Continue land preparation and sowing of rapeseed, gram, linseed in irrigated North Western Plain Zone of Rajasthan.
 - In Sub Humid Southern Plain and Aravali Hill Zone of Rajasthan, undertake sowing of gram and mustard and

continue harvesting of maize and sorghum.

➤ Suitable varieties are given in Annexure II.

● **Animal Husbandry:**

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

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Rice

Sugarcane

Cotton

Soybean

- **Realised Rainfall:** Rainfall occurred in Nagpur district of Vidarbha. Mainly dry weather prevailed over rest part of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Konkan & Goa during next 24 hours and at a few places thereafter. Dry weather would prevail over Gujarat State, Madhya Maharashtra and Marathwada during next 24 hours and rain/thundershowers would occur at isolated places thereafter. Dry weather would prevail over Vidarbha during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershower would occur at many places over Konkan & Goa. Rain/thundershower would occur at a few places over Madhya Maharashtra & south Gujarat. Weather would be dry over rest of the region.
- **Advisories:**
 - **Maharashtra:**
 - In view of the anticipated rainfall due to the well marked low pressure area in the Arabian sea, undertake harvesting of already matured rice in Konkan immediately. Keep harvested produce in safe places. Continue nursery sowing of brinjal, chilli, cabage and knol khol on raised beds.
 - In Madhya Maharashtra, maintain the water level upto 8 cm in rice fields in grain formation stage. Undertake intercultural operations like weeding and fertilizer application in sugarcane, vegetables, early sown *rabi* jowar and orchards. Utilizing available soil moisture, continue sowing of *rabi* safflower and wheat. Also continue sowing of irrigated gram and planting of pre-seasonal sugarcane.
 - In Marathwada, apply irrigation to sugarcane, cotton and vegetables. Undertake intercultural operation like weeding and fertilizer application to sugarcane, early sown *rabi* jowar and vegetables. Prepare field for sowing of *rabi* jowar and safflower. As mainly dry weather is prevailing, apply drip irrigation to sugarcane (*suru* and ratoon) and banana orchards. Apply mulch of crop residue and other plant waste products to banana plant. Remove new bottom flush to avoid excessive water loss. Continue harvesting of already matured soybean and start harvesting of matured sunflower.
 - In Vidarbha, as dry weather is prevailing, apply irrigation in vegetables, cotton and orange, sweet lime orchards. Apply fertilizers and undertake intercultural operations in vegetables. Maintain water level up to 8 cm in rice fields in East Vidarbha. Prepare the field and continue sowing of safflower and *rainfed* gram with the help of available soil moisture. Soybean is at maturity stage, complete harvesting of matured crop and prepare harvested field and undertake sowing of safflower and gram. Continue harvesting of early maturing rice crop in East Vidarbha.
 - Due to prevailing weather (Temp. around 30 °C and RH 70-80%), there may be incidence of mango hoppers on new flush and inflorescence in Konkan; spray 25 % Cypermethrin @ 3 ml per 10 litres of water on a non rainy day.
 - Due to humid weather, there is chance of attack of white woolly aphids in sugarcane in Sub Montane Zone; remove dried leaves and use Thimete @4 kg per acre on a non rainy day.
 - **Gujarat:**
 - In view of the anticipated rainfall due to the well marked low pressure area in the Arabian sea, undertake harvesting of already matured rice, groundnut, pearl millet and picking of cotton in **Gujarat** immediately. Keep harvested produce in safe places.
 - Continue land preparation for sowing of mustard in Bhal and Coastal Zone. Harvest matured vegetables

immediately .

- Continue land preparation and keep inputs ready for sowing of *rabi* mustard, gram and fennel in North Gujarat Zone.
- Continue land preparation for sowing of mustard and carryout intercultural operations and weeding in castor in North West Zone.
- Continue picking of matured cotton bolls, land preparation for sowing of mustard and procure seeds of recommended varieties for sowing of chick pea in South Gujarat Heavy Rainfall Zone. Apply irrigation in castor.
- Continue sowing of mustard, gram, peas, carrot (for vegetable purpose) and garlic in North Saurashtra Zone..
- Continue sowing of sweet corn (from 3rd week October to 1st week of November) in South Gujarat Zone. Continue planting of sugarcane.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- In Gujarat, keep animal shed hygienic and clean, to avoid flies and mosquitoes.

Districtwise realised rainfall and % departure for past three weeks is given below in Annexure I.

Annexure I
Week by week Rainfall Distribution

Sub-Divisions	08.10.14		15.10.14		22.10.14	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	0.0	-100	19.2	-71	18.3	-72
Dibang Valley	0.0	-100	**	**	**	**
East Kameng	0.0	-100	0.0	-100	0.6	-99
East Siang	0.0	-100	34.7	-1	26.7	-35
Kurung Kumey	0.0	-100	**	**	**	**
Lohit	0.0	-100	4.1	-87	8.5	-77
Lower Dibang Valley	0.0	-100	9.3	-78	48.6	33
Lower Subansari	**	**	**	**	**	**
Papumpara	0.0	-100	10.3	-85	22.6	-53
Tawang	0.0	-100	6.0	-91	0.0	-100
Tirap	0.0	-100	4.2	-90	9.8	-81
Upper Siang	15.0	-79	23.8	-66	45.2	-27
Upper Subansari	0.0	-100	0.0	-100	9.8	-68
West Kameng	0.0	-100	0.0	-100	14.6	-68
West Siang	**	**	1.5	-95	14.0	-47
Assam&Meghalaya						
Assam						
Baksa	0.0	-100	0.0	-100	0.0	-100
Barpeta	0.0	-100	13.0	-66	0.0	-100
Bongaigaon	0.0	-100	16.6	-68	0.0	-100
Cachar	0.0	-100	63.9	38	6.4	-80
Chirang	0.0	-100	38.0	-26	16.2	-45
Darrang	**	**	0.0	-100	0.0	-100
Dhemaji	**	**	0.0	-100	45.0	53
Dhubri	0.0	-100	9.1	-75	0.0	-100

Dibrugarh	0.0	-100	1.1	-97	17.6	-31
Goalpara	0.0	-100	17.1	-68	0.3	-99
Golghat	0.0	-100	9.4	-70	12.1	-33
Hailakandi	0.0	-100	66.4	43	36.2	34
Jorhat	0.0	-100	5.7	-83	12.4	-39
Kamrup(Rural)	0.0	-100	0.0	-100	36.0	68
Kamrup(Metro)	22.6	-30	52.9	65	1.5	-93
Karbi Anglong	0.0	-100	2.9	-88	0.0	-100
Karimganj	0.0	-100	39.7	-44	41.0	137
Kokrajhar	0.0	-100	26.7	-51	0.0	-100
Lakhimpur	0.0	-100	5.8	-85	28.2	-4
Morigaon	0.0	-100	21.8	-58	0.0	-100
N.C.Hills	0.0	-100	0.0	-100	4.3	-50
Nowgong	0.0	-100	7.9	-74	0.9	-96
Nalbari	0.0	-100	0.0	-100	13.0	-31
Sonitpur	0.0	-100	0.6	-98	7.8	-69
Sibsagar	0.0	-100	24.1	-8	32.2	105
Tinsukia	0.0	-100	23.7	-10	15.5	-53
Udalgiri	0.0	-100	7.3	-71	1.5	-90
Meghalaya						
East Garo Hills	10.4	-87	10.5	-51	9.0	-43
East Khasi Hills	0.5	-99	34.9	-53	0.3	-99
Jaintia Hills	**	**	38.0	-73	0.0	-100
Ribhoi	4.2	-87	51.7	42	2.6	-93
South Garo Hills	**	**	17.0	-54	1.0	-94
West Garo Hills	0.0	-100	11.8	-68	0.2	-99
West Khasi Hills	**	**	40.0	-50	0.0	-100
NMMT						
Mizoram						
Aizwal	4.8	-95	43.5	-25	1.1	-97
Champhai	8.7	-90	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	0.0	-100	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	**	**	104.0	180	58.0	93
Serchhip	0.0	-100	84.4	120	14.6	-60
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	0.0	-100	38.0	-26	7.0	-71
Churachandpur	**	**	**	**	**	**
Imphal east	0.0	-100	17.7	-49	2.8	-78
Imphal west	0.0	-100	32.5	12	0.0	-100
Senapati	**	**	14.0	-65	3.0	-79
Tamenglong	**	**	**	**	**	**
Thoubal	**	**	26.0	33	36.0	334
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	0.0	-100	77.3	89	1.0	-93

Kephire	**	**	**	**	**	**
Kohima	2.8	-94	39.0	17	29.0	33
Longleng	**	**	**	**	**	**
Mokokchung	0.0	-100	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	**	**	60	80	8	-63
Tuensang	**	**	**	**	**	**
Wokha	**	**	**	**	**	**
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	4.9	-92	56.0	25	0.0	-100
North tripura	0.0	-100	43.0	-14	3.3	-87
South tripura	10.4	-81	49.7	-8	7.6	-72
West tripura	7.5	-88	39.7	-22	25.1	8
Himachal Pradesh						
Bilaspur	1.9	-82	1.6	-71	0.0	-100
Chamba	12.0	-48	1.6	-78	2.7	-71
Hamirpur	36.5	138	1.2	-92	0.0	-100
Kangra	24.7	2	4.3	-63	0.1	-98
Kinnaur	0.1	-99	0.0	-100	0.7	-91
Kullu	11.2	34	5.9	-12	2.4	-79
Lahaul and Spiti	8.0	-54	0.0	-100	0.0	-100
Mandi	14.1	0	5.0	-41	1.7	-75
Shimla	6.1	-42	9.8	3	0.0	-100
Sirmaur	15.3	-9	10.3	-36	0.2	-97
Solan	7.2	-55	13.5	-16	0.0	-100
Una	40.6	103	7.1	12	0.0	-100
Punjab						
Amritsar	0.0	-100	1.6	-79	0.0	-100
Barnala	0.0	-100	6.5	44	0.0	-100
Bhatinda	0.0	-100	1.3	-65	0.0	-100
Faridkot	0.0	-100	0.0	-100	0.0	-100
Fatehgarh Saheb	0.0	-100	4.5	-13	0.0	-100
Ferozpur	0.1	-98	0.0	-100	0.0	-100
Gurdaspur	16.9	-7	4.5	-53	0.0	-100
Hoshiarpur	0.5	-97	0.7	-92	0.0	-100
Jalandhar	0.7	-94	9.4	42	0.0	-100
Kapurthala	0.0	-100	16.5	90	0.0	-100
Ludhiana	2.2	-84	2.3	-56	0.0	-100
Mansa	0.0	-100	0.0	-100	0.0	-100
Moga	0.0	-100	0.0	-100	0.0	-100
Muktesar	0.0	-100	1.6	14	0.0	-100
Nawashahar	0.0	-100	2.5	-71	0.0	-100
Patiala	0.4	-96	7.6	36	0.0	-100
Ropar	4.2	-46	3.5	-40	0.0	-100
Sangrur	0.0	-100	9.2	67	0.0	-100
Mohali	0.0	-100	9.3	20	0.0	-100
TarnTaran	0.3	-96	4.1	-31	0.0	-100

Haryana,Chd,Delhi						
Haryana						
Ambala	9.6	-45	16.0	63	0.0	-100
Bhiwani	0.0	-100	13.8	453	0.0	-100
Chandigarh	1.9	-89	10.3	40	0.0	-100
Faridabad	0.0	-100	0.3	-96	0.0	-100
Fatehabad	0.0	-100	20.7	1116	0.2	-95
Gurgaon	0.0	-100	4.3	47	0.0	-100
Hissar	0.0	-100	4.4	267	0.0	-100
Jhajar	0.9	-77	1.9	-31	0.0	-100
Jind	0.0	-100	9.4	310	0.0	-100
Katihah	4.8	-25	16.3	317	0.0	-100
Karnal	9.8	-2	33.3	266	0.0	-100
Kurukshetra	0.0	-100	8.9	33	0.0	-100
Mahendragarh	0.0	-100	8.4	146	11.4	442
Mewat	0.0	-100	0.0	-100	0.0	-100
Palwal	0.0	-100	0.0	-100	0.0	-100
Panchkkula	4.3	-34	5.5	-2	0.0	-100
Panipat	2.3	-72	3.7	-52	0.0	-100
Rewari	0.0	-100	0.0	-100	0.3	-84
Rohtak	0.0	-100	0.0	-100	0.0	-100
Sirsa	0.0	-100	0.8	-60	0.0	-100
Sonepat	0.0	-100	0.1	-98	0.0	-100
Yamunanagar	2.0	-84	43.0	214	0.0	-100
Delhi						
Central Delhi	0.0	-100	0.0	-100	0.0	-100
East Delhi	0.0	-100	0.0	-100	0.0	-100
New Delhi	0.0	-100	1.1	-84	0.0	-100
North Delhi	0.0	-100	0.0	-100	0.0	-100
North East Delhi	0.0	-100	0.0	-100	0.0	-100
North West Delhi	0.0	-100	0.3	-95	0.0	-100
South Delhi	0.0	-100	4.6	-33	0.0	-100
South West Delhi	0.0	-100	0.0	-100	0.0	-100
West Delhi	0.0	-100	0.0	-100	0.0	-100
Jammu & Kashmir						
Anantnag	26.0	333	0.9	-92	0.4	-96
Badgam	22.0	307	1.0	-86	0.0	-100
Bandipore	**	**	**	**	**	**
Baramula	12.3	66	6.2	-7	3.4	-78
Doda	21.2	149	1.4	-89	0.0	-100
Ganderbal	15.0	163	9.4	49	3.2	-58
Jammu	12.8	41	1.7	-62	0.0	-100
Kargil	**	**	**	**	**	**
Kathua	17.6	5	0.0	-100	0.0	-100
Kistwar	**	**	**	**	**	**
Kulgam	24.0	300	1.6	-86	1.5	-83
Kupwara	15.6	41	6.0	-55	0.8	-92
Ladakh(Leh)	0.0	-100	0.0	-100	0.0	-100
Poonch	0.0	-100	12.5	150	0.0	-100

Pulwama	27.4	427	0.3	-91	7.0	-11
Rajouri	0.0	-100	7.1	42	0.0	-100
Ramban	28.8	238	2.7	-79	0.0	-100
Reasi	58.1	334	1.0	-93	0.0	-100
Samba	11.2	23	1.0	-78	0.0	-100
Shopian	30.0	477	1.0	-74	2.0	-75
Srinagar	19.7	245	4.0	-36	1.6	-79
Udhampur	10.2	-24	0.6	-96	0.0	-100
East Madhya Pradesh						
Anuppur	0.5	-98	185.3	1539	0.0	-100
Balaghat	3.9	-83	34.0	170	0.0	-100
Chhatarpur	0.4	-98	15.6	55	0.8	-83
Chindwara	0.0	-100	11.3	-9	1.9	-59
Damoh	0.0	-100	16.2	84	2.0	-50
Dindori	0.0	-100	97.4	1102	0.0	-100
Jabalpur	9.3	-35	16.5	79	0.0	-100
Katni	0.0	-100	50.0	390	0.0	-100
Mandla	12.9	-9	58.6	486	0.0	-100
Narsingpur	8.2	-51	5.0	-37	0.0	-100
Panna	0.0	-100	37.7	550	0.0	-100
Rewa	11.7	-34	142.1	2582	0.0	-100
Sagar	0.0	-100	8.5	-14	0.5	-84
Satna	1.7	-91	81.2	1168	0.0	-100
Seoni	1.0	-94	13.3	0	9.0	95
Shahdol	0.0	-100	114.0	1627	0.0	-100
Sidhi	0.0	-100	191.2	2593	0.0	-100
Singrauli	0.0	-100	20.5	377	0.0	-100
Tikamgarh	0.0	-100	0.0	-100	0.0	-100
Umaria	9.6	-49	65.2	586	0.0	-100
West Madhya Pradesh						
Alirajpur	1.9	-84	2.3	-80	0.0	-100
Asoknagar	0.0	-100	0.0	-100	0.0	-100
Badwani	0.0	-100	2.5	-84	0.0	-100
Betul	13.2	-26	3.5	-81	2.4	-54
Bhind	0.0	-100	0.3	-99	0.0	-100
Bhopal	0.0	-100	4.3	-57	8.1	88
Burhanpur	0.0	-100	0.0	-100	0.0	-100
Datia	0.0	-100	12.9	-23	0.0	-100
Dewas	7.2	-47	1.2	-90	0.0	-100
Dhar	4.2	-72	0.0	-100	0.0	-100
Guna	1.0	-91	13.6	46	0.0	-100
Gwalior	0.0	-100	0.1	-99	0.0	-100
Harda	0.0	-100	0.0	-100	0.0	-100
Hosangabad	16.7	3	8.3	-32	0.5	-87
Indore	3.8	-79	11.0	3	2.9	-44
Jhabua	12.9	13	1.0	-92	0.0	-100
Khandwa	0.0	-100	0.0	-100	0.0	-100
Khargone	1.7	-89	0.0	-100	0.0	-100
Mandsaur	0.0	-100	0.0	-100	0.0	-100

Morena	0.0	-100	0.0	-100	0.0	-100
Neemuch	2.0	-87	1.7	-80	0.0	-100
Raisen	3.2	-79	4.2	-59	1.2	-50
Rajgarh	0.0	-100	0.0	-100	0.0	-100
Ratlam	5.8	-66	4.3	-71	0.0	-100
Sehore	0.0	-100	0.0	-100	17.8	456
Shajapur	3.0	-76	1.3	-90	0.0	-100
Sheopur Kalani	0.0	-100	0.0	-100	0.0	-100
Shivpuri	0.0	-100	0.5	-96	0.0	-100
Ujjain	3.9	-74	0.1	-99	0.0	-100
Vidisha	0.6	-94	0.4	-94	0.0	-100
Chhattisgarh						
Bastar	0.0	-100	90.0	397	1.4	-87
Bijapur	0.6	-98	66.9	170	3.6	-74
Bilaspur	7.3	-65	126.7	1356	0.1	-99
Dantewara	3.8	-89	80.3	265	16.2	-3
Dhamtari	0.0	-100	69.8	540	2.0	-81
Durg	2.0	-91	89.9	696	8.4	-13
Janjgir	0.0	-100	60.8	641	0.0	-100
Jashpurnagar	0.1	-99	20.6	30	0.0	-100
Kanker	0.0	-100	70.3	323	0.0	-100
Korba	3.3	-83	115.8	1295	4.1	-56
Koriya	2.0	-83	120.8	1676	0.0	-100
Kawardha	7.2	-71	140.8	1083	0.0	-100
Mahasumund	1.1	-94	43.4	221	0.4	-94
Narayanpur	2.1	-93	124.3	401	1.2	-89
Raigarh	0.0	-100	36.9	167	0.0	-100
Raipur	0.8	-96	44.7	252	0.0	-100
Rajandgaon	5.4	-77	35.1	160	0.0	-100
Surguja	0.3	-98	22.0	110	0.0	-100
East Uttar Pradesh						
Allahabad	4.3	-77	110.2	1212	0.0	-100
Ambedkar Nagar	0.0	-100	105.0	881	0.0	-100
Azamgarh	0.0	-100	95.7	1176	0.0	-100
Bahraich	0.0	-100	48.5	199	0.0	-100
Ballia	0.0	-100	47.6	376	0.0	-100
Balrampur	0.0	-100	80.1	445	0.0	-100
Banda	0.0	-100	57.8	345	0.0	-100
Barabanki	0.1	-99	64.9	247	0.0	-100
Basti	0.0	-100	130.4	793	0.0	-100
Chandauli	0.0	-100	107.2	2002	0.0	-100
Deoria	1.0	-97	99.3	720	0.0	-100
Faizabad	0.0	-100	100.4	865	0.0	-100
Farrukhabad	5.5	-78	8.2	-49	0.0	-100
Fatehpur	0.0	-100	43.7	172	0.0	-100
Gazipur	0.0	-100	71.4	651	0.0	-100
Gonda	0.0	-100	81.7	417	0.0	-100
Gorakhpur	0.0	-100	122.5	498	0.0	-100
Hardoi	0.0	-100	22.7	-3	0.0	-100

Jaunpur	0.0	-100	69.3	653	0.0	-100
Kannauj	17.1	-45	15.2	-29	0.0	-100
Kanpur City	0.0	-100	54.7	132	0.0	-100
Kanpur Dehat	0.4	-98	3.2	-78	0.0	-100
Kaushambi	0.0	-100	40.5	232	0.0	-100
Kheri	1.9	-95	68.1	224	0.0	-100
Kushi nagar	0.0	-100	73.0	284	0.0	-100
Lucknow	0.7	-97	53.1	184	0.0	-100
Maharajganj	0.0	-100	165.0	682	0.0	-100
Mau	0.0	-100	92.7	679	0.0	-100
Mirzapur	0.0	-100	58.3	611	0.0	-100
Pratapgarh	1.3	-91	133.3	1002	0.0	-100
RaiBareilly	0.0	-100	40.6	89	0.0	-100
Sahuji Maharajnagar	0.0	-100	75.5	655	0.0	-100
Sant Kabirnagar	0.0	-100	133.0	857	0.0	-100
Sant Ravidas Nagar	0.0	-100	117.0	2194	0.0	-100
Shrawasti	0.0	-100	64.3	297	0.0	-100
Sidharthnagar	0.0	-100	135.9	794	0.0	-100
Sitapur	1.3	-96	54.2	175	0.0	-100
Sonbhadra	0.0	-100	39.8	398	0.0	-100
Sultanpur	1.8	-91	66.1	301	0.0	-100
Unnao	0.0	-100	57.5	129	0.0	-100
Varanasi	11.3	-44	83.5	971	0.0	-100
West Uttar Pradesh						
Agra	0.0	-100	4.3	-44	0.0	-100
Aligarh	0.0	-100	11.7	7	10.4	197
Auraiya	5.0	-79	0.5	-97	0.0	-100
Badaun	4.4	-85	26.0	29	0.0	-100
Baghpat	0.0	-100	0.0	-100	0.0	-100
Bareilly	0.2	-99	16.3	-18	0.0	-100
Bijnor	0.0	-100	19.0	43	0.0	-100
Bulandsahar	0.0	-100	11.0	20	0.5	-86
Etah	0.0	-100	8.1	-49	0.0	-100
Etawah	0.0	-100	0.3	-98	0.0	-100
Firozabad	0.0	-100	17.8	52	0.0	-100
GBNagar	0.0	-100	9.0	-41	0.0	-100
Ghaziabad	0.0	-100	0.0	-100	0.0	-100
Hamirpur	0.0	-100	23.0	180	0.0	-100
Jalaun	0.0	-100	7.0	-51	0.0	-100
Jhansi	0.0	-100	15.0	22	0.0	-100
Jotiba Phule Nagar	0.0	-100	18.0	28	0.0	-100
Kanshiramnagar	0.0	-100	30.0	36	0.0	-100
Lalitpur	0.0	-100	0.5	-95	1.0	-86
Mahamaya Nagar	0.0	-100	0.0	-100	0.0	-100
Mahoba	0.0	-100	7.6	0	0.0	-100
Mainpuri	0.0	-100	0.5	-97	0.0	-100
Mathura	0.0	-100	0.0	-100	0.0	-100
Meerut	0.0	-100	1.4	-87	0.0	-100
Moradabad	3.4	-84	27.1	91	0.0	-100

Muzaffarnagar	5.2	-64	7.0	-38	0.0	-100
Pilibhit	0.0	-100	20.5	27	0.0	-100
Rampur	0.0	-100	32.6	189	0.0	-100
Saharanpur	0.0	-100	32.7	175	0.0	-100
Shahjahanpur	0.0	-100	25.1	27	0.0	-100
Uttarakhand						
Almora	1.9	-92	27.5	37	2.4	-55
Bageshwar	3.0	-87	29.0	44	12.0	126
Chamoli	3.3	-71	24.4	50	2.3	-69
Champawat	0.0	-100	56.0	54	19.5	76
Dehradun	9.5	-64	7.7	-64	0.0	-100
Garhwal Pauri	0.3	-99	5.7	-75	0.0	-100
Garhwal Tehri	1.2	-93	3.9	-78	0.1	-99
Haridwar	5.9	-44	6.1	-53	0.0	-100
Nainital	3.6	-89	52.8	48	2.9	-51
Pithorgarh	9.9	-56	28.8	22	3.0	-59
Rudraprayag	7.8	-64	15.2	-14	0.0	-100
Udham Sing Nagar	11.2	-66	42.3	66	0.0	-100
Uttarkashi	5.9	-71	2.2	-89	0.1	-99
Bihar						
Araria	0.0	-100	30.6	101	0.0	-100
Arwal	0.0	-100	10.8	28	0.0	-100
Aurangabad	7.3	-59	18.6	95	0.0	-100
Banka	0.0	-100	30.4	81	0.0	-100
Begusarai	0.0	-100	38.7	249	0.0	-100
Bhabua	0.0	-100	36.1	335	0.0	-100
Bhagalpur	0.6	-99	8.4	-57	0.0	-100
Bhojpur	0.0	-100	34.1	337	0.0	-100
Buxar	0.0	-100	8.2	-4	0.0	-100
Darbhanga	3.9	-90	94.3	872	0.0	-100
East Champaran	0.0	-100	94.4	565	0.0	-100
Gaya	1.1	-96	7.7	0	0.0	-100
Gopalganj	0.0	-100	83.0	669	0.0	-100
Jahanabad	0.0	-100	14.4	41	0.0	-100
Jamui	8.6	-75	16.2	16	0.0	-100
Kathihar	4.5	-89	25.9	109	0.0	-100
Khagadia	3.8	-91	14.1	11	0.0	-100
Kishanganj	0.0	-100	13.1	-41	0.0	-100
Lakhisarai	0.0	-100	26.1	80	0.0	-100
Madhepura	6.7	-82	10.7	-31	0.0	-100
Madhubani	0.0	-100	78.4	485	0.0	-100
Monghyar	0.0	-100	38.0	162	0.0	-100
Muzaffarpur	0.2	-99	34.3	129	0.0	-100
Nalanda	2.0	-92	2.4	-75	0.0	-100
Nawada	1.8	-94	2.8	-70	0.0	-100
Patna	3.1	-90	21.4	87	0.0	-100
Purnea	11.0	-75	10.4	-32	0.0	-100
Rohtas	3.7	-84	24.7	184	0.0	-100
Saharsha	0.0	-100	6.0	-57	0.0	-100

Samstipur	3.4	-92	38.8	234	0.0	-100
Saran	4.2	-86	52.4	394	0.0	-100
Sheikpura	0.0	-100	14.8	37	0.0	-100
Sheohar	0.0	-100	180.2	1308	0.0	-100
Sitamarhi	0.0	-100	119.0	829	0.0	-100
Siwan	0.0	-100	66.4	672	0.0	-100
Supaul	0.0	-100	45.2	270	0.0	-100
Vaishali	0.3	-99	23.3	60	0.0	-100
West Champaran	0.0	-100	167.2	883	0.0	-100
Jharkhand						
Bokaro	2.2	-93	28.6	46	0.0	-100
Chatra	0.0	-100	28.5	138	0.0	-100
Deoghar	3.2	-90	27.9	126	0.0	-100
Dhanbad	0.8	-98	25.9	34	0.0	-100
Dumka	0.0	-100	49.9	101	0.0	-100
East Singbhum	37.2	52	123.9	674	0.4	-97
Garhwa	0.0	-100	0.0	-100	0.0	-100
Giridih	4.2	-89	34.5	114	0.0	-100
Godda	0.0	-100	18.7	9	0.0	-100
Gumla	25.1	-4	31.9	89	0.0	-100
Hazaribagh	1.7	-95	67.7	450	0.0	-100
Jamtara	0.3	-99	10.3	-44	0.0	-100
Khunti	0.0	-100	14.0	-33	0.0	-100
Koderrna	0.0	-100	10.9	-19	0.0	-100
Latehar	0.0	-100	13.0	5	0.0	-100
Lohardagga	0.0	-100	15.8	39	0.0	-100
Pakur	4.7	-92	38.8	6	0.0	-100
Palamau	4.1	-77	11.5	-19	0.0	-100
Ramgarh	1.8	-94	90.0	582	0.0	-100
Ranchi	0.0	-100	37.7	131	0.0	-100
Sahebganj	0.0	-100	27.0	18	3.6	-67
Saraikela	0.5	-98	77.0	378	0.0	-100
Simdega	13.1	-43	26.6	84	27.5	116
West Singbhum	19.4	-15	20.2	20	4.2	-66
East Rajasthan						
Ajmer	0.0	-100	0.0	-100	0.1	-95
Alwar	0.0	-100	0.0	-100	0.0	-100
Banswara	0.8	-91	0.0	-100	0.0	-100
Baran	0.0	-100	0.0	-100	0.0	-100
Bharatpur	0.0	-100	0.0	-100	0.0	-100
Bhilwara	0.0	-100	0.0	-100	0.0	-100
Bundi	0.0	-100	7.5	9	0.0	-100
Chittorgarh	0.0	-100	0.0	-100	0.0	-100
Dausa	0.0	-100	0.0	-100	0.0	-100
Dholpur	0.0	-100	0.0	-100	0.0	-100
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	0.0	-100	4.8	45	9.9	1138
Jhalawar	0.0	-100	0.0	-100	0.0	-100
Jhunjhunu	0.0	-100	16.2	603	0.0	-100

Karauli	0.0	-100	0.0	-100	0.0	-100
Kota	0.0	-100	0.0	-100	0.0	-100
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
Rajsamand	0.0	-100	0.0	-100	0.0	-100
Sawai Madhopur	0.0	-100	0.0	-100	0.0	-100
Sikar	0.0	-100	4.4	142	0.0	-100
Sirohi	0.0	-100	0.0	-100	0.0	-100
Tonk	0.0	-100	0.0	-100	8.4	664
Udaipur	0.0	-100	0.1	-98	0.0	-100
West Rajasthan						
Barmer	0.0	-100	0.0	-100	0.0	-100
Bikaner	0.0	-100	0.0	-100	0.0	-100
Churu	0.0	-100	0.9	-5	0.0	-100
Hanumangarh	0.0	-100	6.9	1271	0.0	-100
Jaisalmer	0.0	-100	0.0	-100	0.0	-100
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.0	-100	0.0	-100	0.0	-100
Nagaur	0.0	-100	0.0	-100	0.0	-100
Pali	0.0	-100	0.0	-100	0.0	-100
Sri Ganganagar	0.0	-100	2.2	80	0.0	-100
Gujarat Region						
Ahmedabad	0.0	-100	0.0	-100	0.0	-100
Anand	0.0	-100	0.0	-100	0.0	-100
Banaskantha	0.0	-100	0.0	-100	0.0	-100
Baroda	0.0	-100	1.2	-88	0.0	-100
Broach	0.0	-100	0.0	-100	0.0	-100
DNH	0.7	-91	0.9	-93	0.0	-100
Dahod	1.6	-85	1.4	-85	0.0	-100
Daman	2.0	-75	0.0	-100	0.0	-100
Dangs	0.5	-98	40.0	113	12.0	-12
Gandhinagar	0.0	-100	0.0	-100	0.0	-100
Kheda	0.0	-100	0.0	-100	0.0	-100
Mehsana	0.0	-100	0.2	-97	0.0	-100
Narmada	0.0	-100	2.1	-82	0.0	-100
Navsari	0.0	-100	4.1	-73	0.0	-100
Panchmahal	0.6	-92	0.4	-96	0.0	-100
Patan	0.7	-80	0.0	-100	0.0	-100
Sabarkantha	0.2	-97	2.0	-73	0.0	-100
Surat	0.0	-100	3.0	-69	3.2	17
Tapi	0.0	-100	6.2	-10	0.0	-100
Valsad	0.5	-97	6.2	-60	0.0	-100
S K & Diu region						
Amreli	4.6	-36	1.1	-82	0.0	-100
Bhavnagar	4.1	-43	0.0	-100	0.0	-100
Diu	0.0	-100	0.0	-100	0.0	-100
Jamnagar	2.6	-46	1.1	-65	0.0	-100
Junagarh	15.2	105	0.0	-100	0.0	-100
Kutch	1.0	-67	0.0	-99	0.0	-100
Porbandar	2.0	-66	10.6	171	0.0	-100

Rajkot	10.1	30	0.0	-100	0.0	-100
Suredranagar	0.2	-98	0.0	-100	0.0	-100
Maharashtra & Goa						
Konkan & Goa						
Mumbai City	2.2	-94	0.0	-100	0.0	-100
Mumbai Suburban	4.6	-87	0.0	-100	0.1	-99
North Goa	12.2	-81	40.2	34	14.8	-55
Raigad	35.7	-25	11.6	-64	0.0	-100
Ratnagiri	22.1	-63	13.3	-61	5.4	-78
Sindhudurg	37.6	-33	45.8	42	11.5	-54
South Goa	17.8	-65	34.3	21	18.2	-43
Thane	19.1	-40	12.6	-52	1.1	-92
Madhya Maharashtra						
Ahmednagar	8.5	-65	7.5	-66	9.5	-25
Dhule	0.8	-95	1.0	-93	0.8	-84
Jalgaon	0.1	-99	0.3	-98	1.4	-66
Kolhapur	28.7	-38	11.7	-56	4.9	-79
Nandurbar	0.6	-95	5.5	-65	5.7	61
Nasik	7.3	-71	15.3	-23	4.8	-54
Pune	18.0	-41	4.5	-78	4.2	-73
Sangli	20.3	-50	9.0	-63	11.2	-42
Satara	21.9	-38	16.1	-18	8.9	-53
Solapur	4.7	-85	7.4	-69	8.0	-53
Marathwada						
Aurangabad	0.9	-95	3.4	-84	7.7	-17
Beed	4.0	-83	3.1	-84	5.6	-59
Hingoli	0.6	-98	2.7	-87	1.8	-80
Jalna	1.0	-95	6.8	-69	5.9	-32
Latur	3.3	-89	12.8	-30	8.2	-34
Nanded	0.6	-98	4.5	-72	0.1	-99
Usmanabad	5.3	-82	4.3	-80	7.0	-59
Parbhani	0.5	-98	1.1	-95	0.8	-94
Vidarbha						
Akola	1.0	-95	0.0	-100	0.0	-99
Amraoti	6.9	-66	1.6	-91	2.4	-58
Bhandara	0.0	-100	5.9	-60	0.4	-94
Buldhana	0.0	-100	0.3	-98	11.9	74
Chandrapur	1.0	-96	3.3	-73	0.1	-99
Gadchiroli	0.1	-99	27.7	76	0.0	-100
Gondia	0.0	-100	43.3	290	7.5	2
Nagpur	3.4	-84	2.2	-84	21.1	284
Wardha	1.6	-93	9.1	-1	10.0	24
Washim	1.1	-95	6.2	-70	13.3	93
Yeotmal	0.0	-99	0.4	-97	2.2	-78
Odisha						
Angul	11.3	-60	86.8	254	9.0	-61
Balasore	10.1	-81	101.1	126	3.2	-89
Bargarh	1.7	-91	27.5	127	2.3	-81
Bhadrak	3.7	-90	115.0	149	9.8	-72

Bolangir	1.3	-94	16.2	12	3.7	-74
Boudh	1.3	-97	33.1	1	8.9	-52
Cuttack	3.8	-91	131.0	322	50.2	104
Deogarh	0.0	-100	52.4	322	0.0	-100
Dhenkanal	10.1	-72	74.5	135	13.1	-48
Gajapati	21.4	-48	322.7	730	23.7	-41
Ganjam	9.4	-84	149.6	270	12.5	-76
Jagatsingpur	9.0	-79	104.5	209	7.0	-81
Jajpur	5.6	-87	113.3	217	17.6	-40
Jharsuguda	9.5	-55	27.4	37	0.5	-96
Kalahandi	4.8	-84	21.8	82	4.6	-70
Kandhamal	4.3	-90	148.3	351	16.7	-9
Kendrapara	10.0	-85	106.0	160	6.0	-83
Keonjhar	11.4	-65	82.8	185	8.1	-71
Khurda	1.7	-97	116.7	207	19.9	-39
Koraput	3.3	-93	177.4	423	21.2	-43
Malkangiri	0.0	-100	188.4	588	35.4	44
Mayurbhanj	13.0	-65	87.3	213	8.6	-65
Nawapara	0.0	-100	43.5	285	12.0	10
Nawarangpur	3.7	-91	87.5	233	5.9	-64
Nayagarh	9.8	-81	132.6	233	15.0	-36
Puri	20.9	-63	60.2	51	20.6	-46
Rayagada	11.9	-67	97.2	231	7.7	-73
Sambalpur	6.0	-70	40.0	223	0.0	-100
Sonepur	4.7	-76	18.4	84	0.0	-100
Sundargarh	6.4	-59	27.3	75	1.8	-80
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	155.1	72	72.9	-11	17.0	-73
North & Middle Andaman	349.4	311	78.7	32	9.7	-76
South Andaman	306.8	249	71.1	0	1.5	-97
GWB						
Bankura	49.7	23	19.0	-7	0.0	-100
Birbhum	1.0	-97	7.5	-67	0.8	-96
Burdwan	2.6	-93	15.1	-30	2.7	-86
East Midnapore	7.4	-87	86.0	94	0.7	-97
Hooghly	27.6	-23	19.6	-5	0.0	-100
Howrah	0.0	-100	16.8	-41	0.0	-100
Kolkata	39.5	-21	17.1	-50	0.0	-100
Murshidabad	1.0	-98	10.2	-67	0.0	-100
Nadia	14.3	-52	37.3	27	0.0	-100
24 Pargana (N)	17.0	-55	23.7	-14	0.0	-100
Purulia	10.0	-70	41.4	107	0.3	-99
24 Pargana (S)	25.8	-60	78.9	54	0.0	-100
West Midnapore	3.0	-92	52.8	153	10.5	-39
SHWB & Sikkim						
Cooch Behar	0.0	-100	21.5	-38	0.0	-100
Darjeeling	5.7	-89	39.3	41	1.1	-94
East Sikkim	0.0	-100	14.8	-75	0.0	-100

Jalpaiguri	0.0	-100	29.4	-29	0.2	-99
Malda	0.2	-99	12.2	-48	0.0	-100
North Dinajpur	**	**	2.2	-95	0.0	-100
North Sikkim	1.0	-99	25.2	-68	0.7	-98
South Dinajpur	0.0	-100	28.5	3	0.0	-100
South Sikkim	0.0	-100	28.6	-52	0.0	-100
West Sikkim	4.5	-95	47.0	-40	3.0	-92
Karnataka						
Coastal Karnataka						
Dakshin Kannada	59.7	-15	33.5	-36	72.7	52
Udupi	62.9	-14	35.7	-20	50.9	22
Uttar Kannada	24.7	-54	28.7	-17	3.7	-86
N I Karnataka						
Bagalkote	8.8	-78	16.6	-31	1.2	-94
Belgaum	28.9	-29	13.3	-43	5.2	-78
Bidar	0.3	-99	12.1	-38	1.4	-91
Bijapur	14.4	-65	3.5	-85	0.1	-99
Dharwad	20.7	-45	18.7	-33	4.4	-84
Gadag	32.8	-20	12.3	-55	1.8	-93
Gulbarga	16.9	-61	4.0	-79	1.2	-92
Haveri	39.2	16	24.7	-21	0.5	-98
Koppal	8.2	-77	3.2	-87	6.1	-65
Raichur	22.9	-41	0.4	-98	1.4	-92
Yadgir	23.7	-45	3.2	-87	0.4	-98
S I Karnataka						
Bangalore Rural	84.0	50	53.2	35	18.7	-38
Bangalore Urban	62.7	24	74.2	117	26.9	-12
Bellary	0.0	-100	12.3	-50	3.6	-82
Chamarajnagar	39.1	-8	21.2	-36	21.6	-37
Chichballapur	20.3	-60	6.4	-83	17.8	-33
Chickmagalur	34.5	-27	15.8	-57	14.7	-58
Chitradurga	18.3	-52	22.8	-16	3.7	-81
Davangere	35.0	-12	48.5	61	1.6	-93
Hassan	24.0	-45	25.3	-27	29.5	-6
Kodagu	43.2	-20	16.0	-67	19.1	-54
Kolar	35.9	-20	19.7	-44	8.4	-67
Mandya	52.8	21	40.6	12	27.1	-10
Mysore	28.9	-27	45.0	20	32.2	0
Ramnagara	52.1	1	43.2	5	23.5	-28
Shimoga	28.0	-36	17.4	-46	2.0	-92
Tumkur	40.3	-20	17.4	-45	17.0	-31
Kerala						
Alappuzha	70.3	-9	38.6	-49	119.3	60
Kannur	19.2	-66	35.7	-33	103.3	117
Ernakulam	79.3	18	51.8	-26	139.5	120
Idukki	65.4	-18	65.2	-20	90.7	2
Kasaragod	24.1	-64	80.0	39	110.7	169
Kollam	134.6	78	46.4	-47	116.1	33
Kottayam	92.6	24	70.5	-7	154.1	133

Kozhikode	22.2	-62	106.1	73	117.4	132
Malappuram	99.4	62	65.3	-10	107.9	48
Palakkad	53.2	-3	69.0	14	65.0	3
Pathanamthitta	93.5	29	55.8	-32	138.0	61
Thiruvananthapuram	70.4	39	29.2	-53	138.5	90
Thrissur	66.1	-8	106.8	60	100.0	49
Wynad	49.5	3	40.4	-14	62.5	29
Tamil Nadu						
Ariyalur	11.3	-76	30.5	-5	108.1	106
Chennai	3.0	-93	4.9	-84	288.8	238
Coimbatore	25.6	4	29.4	-9	88.3	123
Cuddalore	3.8	-90	12.3	-69	237.3	282
Dharmapuri	103.0	120	24.3	-40	27.8	-32
Dindigul	15.5	-57	25.5	-38	161.2	215
Erode	35.4	2	25.3	-21	76.7	91
Kanchipuram	9.8	-72	2.2	-93	132.5	97
Kanyakumari	8.0	-80	27.8	-39	123.6	78
Karikal	0.0	-100	6.6	-84	347.1	439
Karur	7.2	-78	6.2	-81	78.8	102
Krishnagiri	56.1	15	23.5	-38	37.6	-2
Madurai	39.0	-4	27.7	-37	42.0	-29
Nagapattinam	7.4	-80	29.0	-13	336.6	344
Namakkal	60.7	69	6.6	-82	40.9	2
Nilgiris	29.3	-31	50.5	12	153.6	185
Perambalur	48.3	18	19.7	-57	57.0	11
Puducherry	11.2	-70	21.4	-44	261.7	301
Pudukottai	13.2	-61	42.9	29	65.6	54
Ramanathapuram	20.0	-14	21.8	-38	183.1	234
Salem	70.7	57	27.1	-38	61.8	32
Sivaganga	40.6	22	34.2	-21	116.6	138
Thanjavur	16.7	-55	38.2	22	130.7	153
Theni	32.3	38	32.7	-13	92.5	99
Tirunelveli	33.5	90	25.4	-15	246.0	389
Tirupur	14.7	-48	24.5	-22	94.7	140
Tiruvallur	10.0	-74	2.5	-92	138.1	143
Tiruvannamalai	34.5	-21	9.7	-76	37.3	-26
Tiruvarur	23.2	-33	24.5	-25	238.1	291
Toothukudi	22.9	36	17.5	-43	208.9	322
Trichy	12.3	-71	7.7	-80	61.4	39
Vellore	15.0	-64	15.7	-55	30.7	-18
Villupuram	37.4	-9	5.2	-84	104.5	107
Virudhunagar	37.0	25	4.6	-88	35.2	-34
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	22.3	-63	46.0	9	11.7	-77
Guntur	12.3	-68	2.2	-91	7.0	-82
Krishna	26.7	-41	3.1	-91	21.3	-54
Nellore	2.2	-94	8.6	-74	52.6	-35
Prakasam	10.7	-75	2.6	-91	19.3	-61

Sirkakulam	23.7	-61	185.6	363	5.6	-89
Visakhapatnam	23.7	-64	147.3	261	15.3	-69
Vizianagram	14.3	-74	224.7	484	23.5	-55
West Godavari	21.1	-64	19.2	-57	7.8	-84
Rayalaseema						
Anantapur	18.7	-53	11.2	-54	1.5	-92
Chittoor	12.7	-69	14.3	-53	41.5	7
Cuddapah	15.2	-62	2.8	-88	9.1	-74
Kurnool	10.6	-70	1.0	-95	6.2	-71
Telangana						
Adilabad	2.2	-92	3.0	-80	2.2	-89
Hyderabad	4.8	-85	3.5	-80	0.0	-100
Karimnagar	1.1	-97	4.0	-71	0.2	-99
Khammam	7.1	-82	15.1	-39	17.5	-12
Mehabubnagar	8.8	-73	2.2	-87	1.4	-91
Medak	0.0	-100	9.2	-37	2.1	-86
Nalgonda	18.3	-51	1.2	-95	3.6	-84
Nizamabad	1.9	-94	3.9	-68	1.4	-93
Rangareddy	3.6	-90	8.9	-52	5.7	-64
Warangal	2.5	-92	4.8	-71	6.6	-59

Legends

	(20% or more) excess rainfall		(-60 to -99 %) scanty rainfall
	(-19 to +19%) normal rainfall		(-100%) no rainfall
	(-20 to -59%) deficient rainfall	**	Data not available

Annexure II List of varieties

Tamil Nadu

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

Direct seeded rice: (White Ponni or ADT 39)

Assam

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

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

Radish : Pusa Deshi, Pusa Chetki, Pusa Himani

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

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

Early maturity Knol Khol : White Vienna.

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

Meghalaya

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

Cabbage: H-139, Pride of India

Cauliflower: Meghalaya Local

Carrot: New Karoda, Nantesh

Radish: Local genotype

Broccoli: Puspa, Aiswarya

French bean: Naga Local

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

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

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

Tripura

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

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

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

Broccoli: Everest, Ayeshwaria.

Odisha

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

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

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

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

West Bengal

Banana: Mortoman, Chapa, Kathali, Singapuri.

Tomato: Avinash-2, 448.

Cabbage: Pride of India, Pusa early, Kranti.

Cauliflower: Jawhar moti, Bharat Jyoti, Early banaras

Bihar

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

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

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

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

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

Jharkhand:

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

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

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

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

Madhya Pradesh

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

Wheat: Sujata, HW-2004, HI-1500

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

Green Pea: Arkel, PSM-3

Jammu & Kashmir

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

Uttarakhand

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

Potato: Kufri- Jyoti, Ashok, Anand

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

Himachal Pradesh

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

Late variety of Cauliflower: broccoli

East Uttar Pradesh

Cabbage: Imprabad Japani, Pusa chipali and Pusa kartiki

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

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

Potato: Kuferi - Chandramukhi, Bahar

Mustard: Basati, Maya, Kanti, Urvashi, Narendra, Swarna-8, Narendra Ageti-4

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.