

National Agromet Advisory Service Bulletin

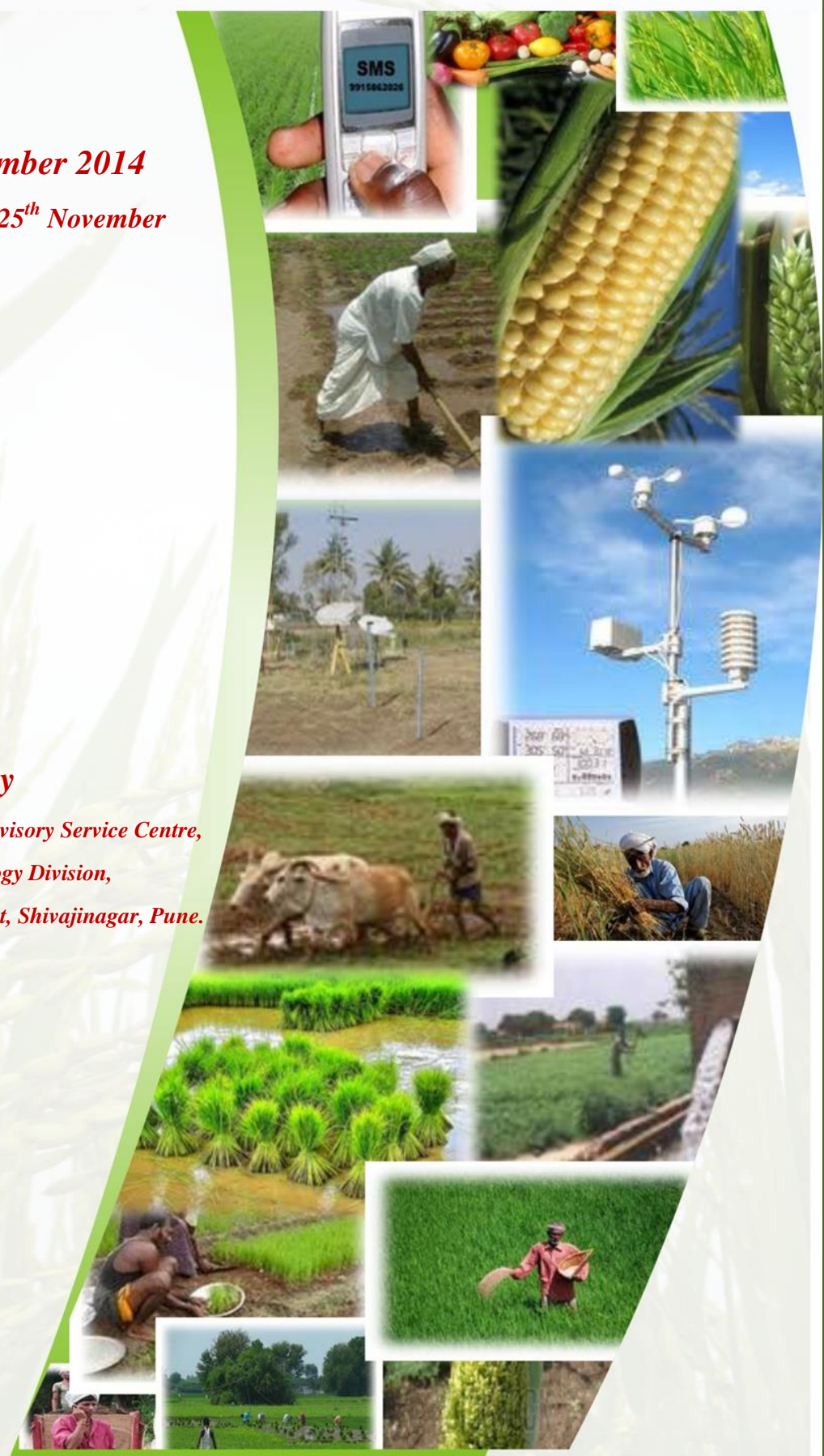
Friday 21st November 2014

(For the period 21st to 25th November)



Issued by

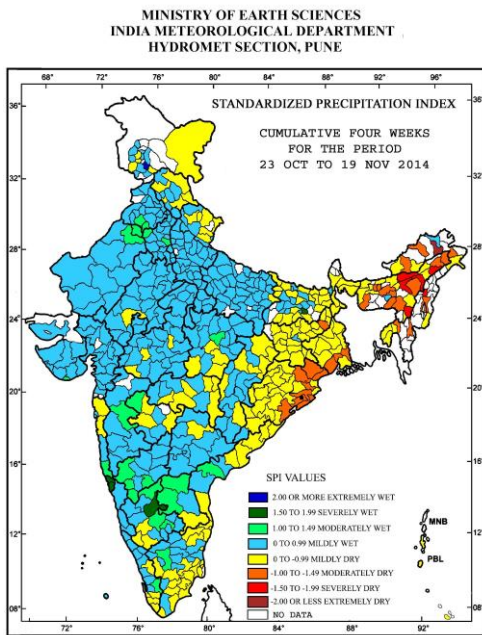
**National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division,
India Meteorological Department, Shivajinagar, Pune.**



Standardised Precipitation Index

Four Weekly

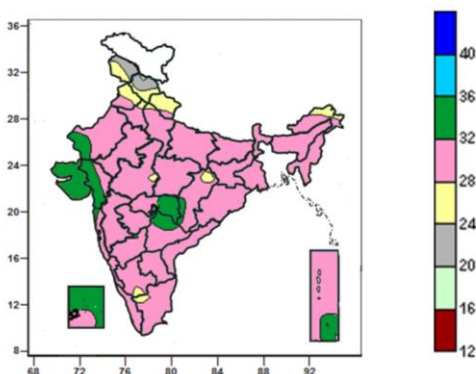
for the Period 23rd October to 19th November 2014



- Extremely/severely wet conditions experienced in North and South Goa; Chitradurg district of Karnataka; Lakhisarai district of Bihar; Ramban district of Jammu & Kashmir.
- Extremely/ moderately/ severely dry conditions experienced in many districts of North East India few districts of Odisha; Dumka district of Jharkhand; North 24 paraganas, South 24 paraganas, East Midnapore district of West Bengal
- Rest of the country experienced moderately wet, mild wet/dry conditions.

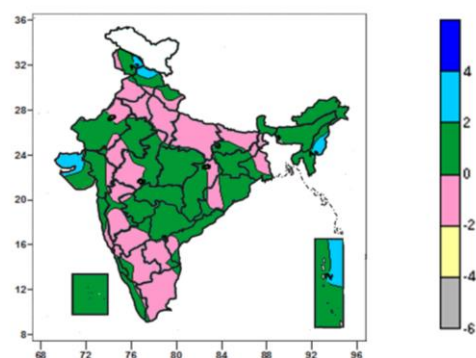
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 19.11.2014

Actual Mean Maximum Temperature ($^{\circ}\text{C}$) in India for the week ending 19.11.2014



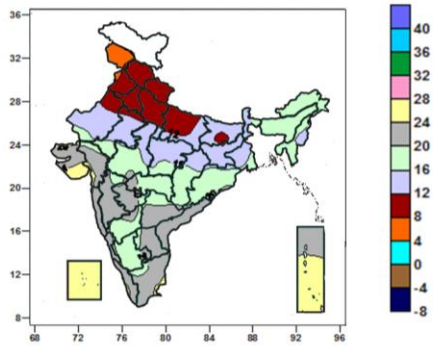
- 32 to 36 $^{\circ}\text{C}$ over many parts of Gujarat, Vidarbha, Lakshadweep Islands, some parts of West Rajasthan, Chhattisgarh, Telangana and Andaman & Nicobar Islands.
- 28 to 32 $^{\circ}\text{C}$ over entire country except many parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Gujarat, Vidarbha, Lakshadweep Islands, some parts of West Rajasthan, Chhattisgarh, Telangana, Punjab, Haryana, Arunachal Pradesh, West Madhya Pradesh, South Interior Karnataka, Kerala and Andaman & Nicobar Islands.
- 24 to 28 $^{\circ}\text{C}$ over many parts of Uttarakhand, some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Arunachal Pradesh, West Madhya Pradesh, Chhattisgarh, South Interior Karnataka and Kerala.
- 20 to 24 $^{\circ}\text{C}$ over many parts of Jammu & Kashmir, Himachal Pradesh.

Mean Maximum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 19.11.2014



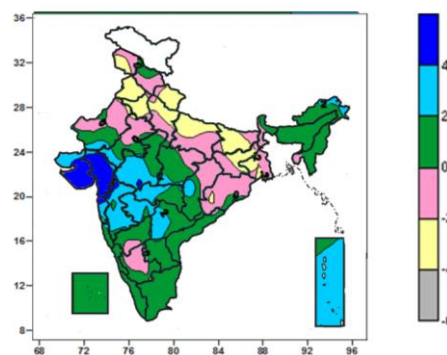
- 2 to 4 $^{\circ}\text{C}$ over some parts of Jammu & Kashmir, Himachal Pradesh, Manipur, Saurashtra & Kutch and Andaman & Nicobar Islands.
- 0 to 2 $^{\circ}\text{C}$ over many parts of Jammu & Kashmir, North East India, Sikkim, Jharkhand, Rajasthan, Central India, Odisha, Telangana, Coastal Andhra Pradesh, Gujarat, Marathwada, Konkan, Kerala, Lakshadweep, Andaman & Nicobar Islands, some parts of Himachal Pradesh, Punjab, Bihar, West Bengal, Madhya Maharashtra, Rayalaseema and South Interior Karnataka.
- 2 to 0 $^{\circ}\text{C}$ over many parts of Punjab, Haryana, Delhi, Uttar Pradesh, Bihar, West Madhya Pradesh, Madhya Maharashtra, Goa, Interior Karnataka, Rayalaseema, Tamil Nadu, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, West Bengal, Odisha, Coastal Andhra Pradesh, Marathwada, Konkan and Coastal Karnataka.

Actual Mean Minimum Temperature (°C) in India for the week ending 19.11.2014



- 4 to 8°C over many parts of Jammu & Kashmir.
- 8 to 12°C over many parts of Punjab, Haryana, Delhi, Himachal Pradesh, Uttarakhand, Uttar Pradesh, some parts of Rajasthan and Bihar.
- 12 to 16°C over many parts of Rajasthan, East Madhya Pradesh, Bihar, Jharkhand, West Bengal & Sikkim, some parts of Uttar Pradesh, Manipur, Mizoram, Odisha, West Madhya Pradesh and Chhattisgarh.
- 16 to 20°C over many parts of West Madhya Pradesh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Tripura, Chhattisgarh, Odisha, Interior Karnataka, Vidarbha, some parts of Rajasthan, East Madhya Pradesh, West Bengal, Madhya Maharashtra, Marathwada, Telangana, Rayalaseema and Tamil Nadu.
- 20 to 24°C over many parts of Gujarat, Konkan & Goa, Madhya Maharashtra, Marathwada, Andhra Pradesh, Coastal Karnataka, Tamil Nadu, Kerala, some parts of Vidarbha, West Madhya Pradesh, Interior Karnataka and Andaman & Nicobar Islands.
- 24 to 28°C over many parts of Lakshadweep and Andaman & Nicobar Islands, some parts Gujarat.

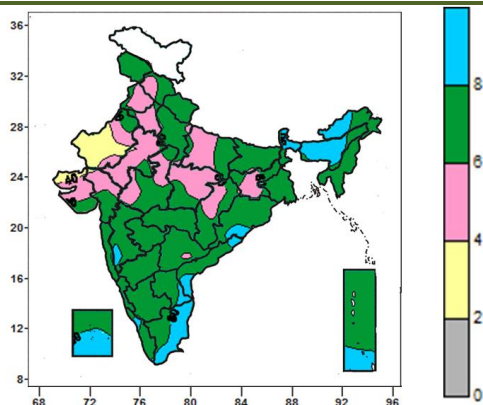
Mean Minimum Temperature (°C) Anomaly in India for the week ending 19.11.2014



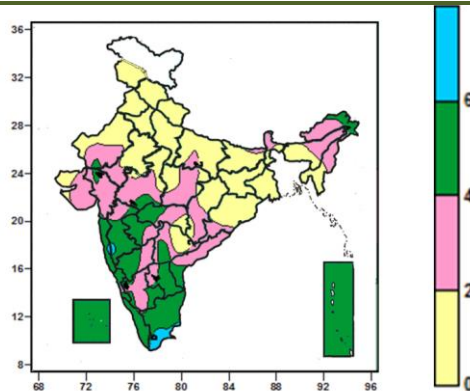
- 4 to 6°C over many parts of Gujarat.
- 2 to 4°C over many parts of West Madhya Pradesh, Madhya Maharashtra, Marathwada, Andaman & Nicobar Islands, some parts of Rajasthan, East Madhya Pradesh, Gujarat, Chhattisgarh, Arunachal Pradesh, Konkan and Telangana.
- -2 to 2°C over entire country except many parts of Uttarakhand, Punjab, Haryana, Delhi, Bihar, Jharkhand, West Madhya Pradesh, Madhya Maharashtra, Marathwada, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Uttar Pradesh, Gangetic West Bengal, Odisha, Rajasthan, East Madhya Pradesh, Gujarat, Chhattisgarh, Arunachal Pradesh, Konkan and Telangana.
- -4 to -2°C over many parts of Uttarakhand, Punjab, Haryana, Delhi, Bihar, Jharkhand, some parts of Jammu & Kashmir, Uttar Pradesh, Gangetic West Bengal and Odisha.

Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 19.11.2014

Relative Humidity (%) over India for the week ending 19.11.2014



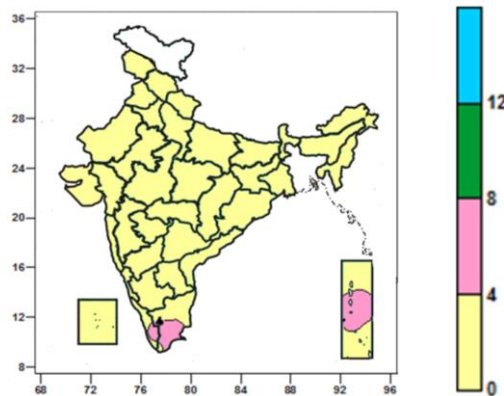
Cloud amount (okta) over India for the week ending 19.11.2014



- 80 to 100% over many parts of Assam & Meghalaya, some parts of Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Madhya Maharashtra, Odisha, Coastal Andhra Pradesh, Rayalaseema, Tamil Nadu, Kerala, Lakshadweep, Andaman & Nicobar Islands, some parts of Bihar and Odisha.
- 60 to 80% over entire country except many parts of Punjab, Haryana, Delhi, East Uttar Pradesh, Rajasthan, Gujarat, Jharkhand, East Madhya Pradesh, Assam & Meghalaya, some parts of Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Madhya Maharashtra, Odisha, Andhra Pradesh, Tamil Nadu, Kerala, Himachal Pradesh, West Uttar Pradesh, West Madhya Pradesh, Chhattisgarh, Bihar, Odisha Lakshadweep and Andaman & Nicobar Islands.
- 20 to 60% over many parts of Punjab, Haryana, Delhi, East Uttar Pradesh, Rajasthan, Gujarat, Jharkhand, East Madhya Pradesh, some parts of Himachal Pradesh, West Uttar Pradesh, West Madhya Pradesh, Chhattisgarh and Telangana.

- 6 to 8 okta over some parts of Coastal Tamil Nadu, Konkan and Madhya Maharashtra.
- 4 to 6 okta over many parts of Konkan & Goa, Madhya Maharashtra, Marathwada, Coastal & North Interior Karnataka, Rayalaseema, Tamil Nadu, Kerala, Lakshadweep, Andaman & Nicobar Islands, some parts of Arunachal Pradesh, West Rajasthan, Gujarat region, West Madhya Pradesh, Vidarbha, South Interior Karnataka and Coastal Andhra Pradesh, Telangana.
- 0 to 4 okta over entire country except many parts of Konkan & Goa, Madhya Maharashtra, Marathwada, Coastal & North Interior Karnataka, Rayalaseema, Tamil Nadu, Kerala, Lakshadweep, Andaman & Nicobar Islands, some parts of Arunachal Pradesh, West Rajasthan, Gujarat region, West Madhya Pradesh, Vidarbha, South Interior Karnataka and Coastal Andhra Pradesh, Telangana.

Wind speed (knots) over India for the week ending 19.11.2014



- 4 to 8 knots over some parts of Tamil Nadu, Kerala and Andaman & Nicobar Islands.
- 0 to 4 knots over entire country except some parts of Tamil Nadu, Kerala and Andaman & Nicobar Islands.

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 24th November, 2014)

- Rain/thundershowers would occur at a few places over Tamil Nadu & Puducherry, Andaman & Nicobar Islands and Lakshadweep during the period.
- Rain/thundershowers would occur at a few places over Kerala during next 48 hours and at many places thereafter.
- Rain/thundershowers would occur at isolated places over Jammu & Kashmir during next 24 hours and Assam & Meghalaya during next 48 hours and dry weather would prevail thereafter.
- Rain/thundershowers would occur at isolated places over Arunachal Pradesh during the period.
- Dry weather would prevail over rest parts of the country during the period.
- No significant change in minimum temperatures over northwest and adjoining central India during next 2-3 days.
- Fog/shallow fog would occur at isolated places over Punjab during next 2 days.

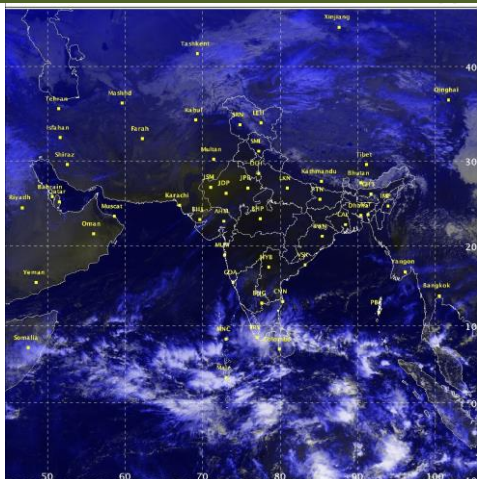
Weather Warning during next 3 days

- **21 November (Day 1)** : No weather warning.
- **22 November (Day 3)** : Heavy rain would occur at isolated places over south Tamilnadu.
- **23 November (Day 2)** : No weather warning

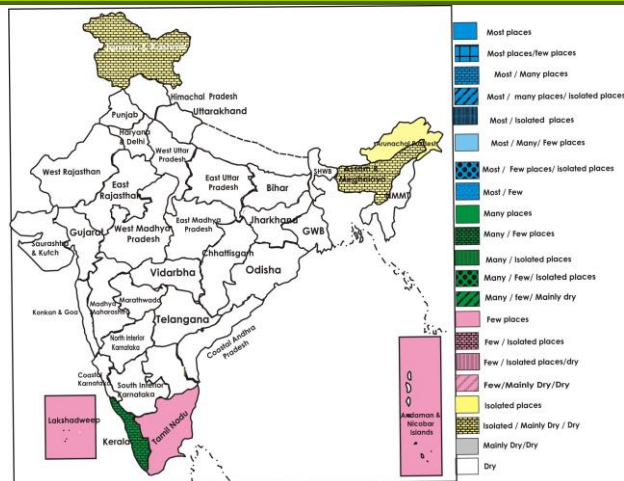
Weather Outlook for subsequent 4 days from 24th November to 28th November 2014

- Rain/thundershowers would occur at many places over Andaman & Nicobar Islands and extreme south peninsular India.
- Rain/ thundershowers would occur at isolated places over Arunachal Pradesh, Assam & Meghalaya and rest south peninsular India.
- A fresh western disturbance would affect western Himalayan region from 24th onwards.
- Weather would be dry over rest of the country.

Satellite image dated, 21.11.2014, 0530 UTC



Weather Forecast Map (Valid upto 0830 hours of 24th November 2014)



Detailed Zonewise Agromet Advisories

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



Land preparation

Sugarcane

Cotton

Rice Transplanting

- Realised Rainfall:** Rainfall occurred in Guntur, Krishna, Nellore, Prakasam, Chittoor and Cuddappah in Andhra Pradesh; Hyderabad in Telangana; all districts of Tamil Nadu except Coimbatore, Madurai, Theni, Tiruppur and Virudunagar; all districts of Kerala except Kasaragod, Palakkad and Wynad; all districts of Coastal Karnataka; Belgaum, Dharwad, Gadag, Gulbarga and Haveri districts of North Interior Karnataka; Bangalore Rural & Urban, Chickmagalur, Chitradurga, Davangere, Kolar and Shimoga districts of South Interior Karnataka. Weather remained dry over rest of the region.
- Weather Forecast:** Rain/thundershowers would occur at a few places over Tamil Nadu & Puducherry during the period. Rain/thundershowers would occur at a few places over Kerala during next 48 hours and at many places thereafter. Dry weather would prevail over rest parts of the region during the period.
- Weather Warning:** Heavy rain would occur at isolated places over south Tamilnadu on 22nd November.
- Weather Outlook:** Rain/thundershowers would occur at many places over extreme south peninsular India. Rain/thundershowers would occur at isolated places over rest south peninsular India.
- Advisories:**
 - Andhra Pradesh**
 - Complete sowing of *rabi* groundnut and Bengal gram in Scarce Rainfall Zone of Rayalaseema.
 - Due to hot and humid weather, black arm disease is noticed in cotton in the Scarce Rainfall Zone of Rayalaseema. Spray Plantomycin 1g/10lit of water followed by Copper oxy chloride 3g/lit to manage the disease.
 - Temperature of 30-31^oc with high relative humidity and dew is congenial for incidence of bacterial leaf blight in *kharif* rice in the Southern Zone of Andhra Pradesh. Draining out the water once or twice from the fields is advised.
 - Telangana:**
 - Continue sowing of maize, groundnut, sunflower, chickpea and safflower in the Southern Telangana region utilizing the realized rainfall.
 - Prevailing humid weather conditions are congenial for the incidence of leaf spot diseases in cotton in Southern Telangana Zone. To control, spray Copper-Oxy-Chloride @ 30g + Plantamycin @ 2g in 10 litres of water.

- **Karnataka:**
 - Continue sowing of wheat and chickpea in the North Dry Zone of Karnataka.
 - Continue sowing of *rabi* sunflower in Central Dry Zone of Karnataka.
 - Undertake harvesting of groundnut in the Eastern Dry Zone of Karnataka.
 - As dry weather would prevail, undertake harvesting of rice, continue picking of cotton ; Continue sowing *rabi* sorghum, sunflower, maize, wheat, Bengal gram and planting of sugarcane in the North East Dry Zone of Karnataka.
 - As dry weather would prevail, undertake harvesting of rice, maize and groundnut in the Southern Transition Zone of Karnataka.
 - Continue harvesting of rice and picking of cotton in the Hill Zone of Karnataka.
- **Kerala:**
 - As rain/thundershowers would occur at many places over Kerala on 23rd November, postpone irrigation intercultural operations, application of fertilizers and plant protection measures in standing crops.
 - Continue land preparation for nursery sowing of *puncha* rice in the Problem Area Zone of Kerala.
 - Intermittent dry spell is congenial for incidence of fungus disease and downy mildew in cucurbits in the Northern Zone of Kerala. If found, apply Potassium Phosphonate @3 ml per litre of water + Propiconazole @ 1 ml per litre of water after current spells of rain.
 - Due to humid weather, there is a chance of sigatoka disease in banana in the Central Zone of Kerala. Spray Pseudomonas @10- 20g per 1 litre of water. In case of severe attack apply SAAF @ 2 g in 1 litre of water after current spells of rain.
- **Tamil Nadu:**
 - As heavy rain would occur at isolated places over south Tamilnadu on 22nd November, postpone irrigation intercultural operations, application of fertiliser and plant protection measures in standing crops. Provide adequate drainage in crop fields to remove excess water.
 - Continue transplanting of *thaladi* rice in the Cauvery Delta Zone of Tamil Nadu.
 - Undertake sowing of Bengal gram under rainfed conditions in the Western Zone of Tamil Nadu using the realized rainfall.
 - Due to prevailing humid weather conditions, leaf folder infestation is likely to intensify in *thaladi* rice in the Cauvery Delta Zone of Tamil Nadu. Undertake spraying with Profenophos 50 EC @ 400 ml/acre using high volume sprayer to prevent spread of the infestation on a non rainy day.
 - Continuous wet condition is congenial for blast incidence in rice in the Western Zone of Tamil Nadu. Monitor the crops and spray Tricyclozone @ 1g / litre of water initially followed by second spray with Carbendazim @ 1g / litre of water on a non rainy day.
 - Prevailing high cloud cover and humidity is congenial for the incidence of viral disease spread by vector leaf hopper in maize in the South Zone of Tamil Nadu. Spray Dimethoate 30 EC 500 ml/ha or Methyl Demeton 25 EC 500 ml/ ha to manage the disease on a non rainy day.
 - Prevailing high humidity is congenial for the incidence of yellow mosaic disease transmitted by white fly in rainfed green gram and black gram in the North Western Zone of Tamil Nadu. Spray Monocrotophos or Methyl Demeton @ 200 ml/100 litre /acre on a non rainy day.
 - Suitable varieties are given in Annexure II.
- **Animal Husbandry**
 - Prevailing weather conditions are congenial for Pneumonia & Blue Tongue disease in sheep and goat in the Scarce Rainfall Zone of Andhra Pradesh. Vaccinate the animals to prevent the disease.
 - In Western Zone of Tamil Nadu, animals may be given vaccination against foot and mouth disease if not given earlier. Also provide drainage in cattle and poultry sheds.

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



Rice



Okra



Cole Crops (Nursery)



Green Gram

- **Realised Rainfall:** Weather remained dry over the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Arunachal Pradesh during the period. Rain/thundershowers would occur at isolated places over Assam & Meghalaya during next 48 hours and dry weather

would prevail thereafter. Dry weather would prevail over rest parts of the region during the period.

- **Weather Warning:** Nil
- **Weather Outlook:** Rain / thundershowers would occur at isolated places over Arunachal Pradesh, Assam & Meghalaya. Weather would be dry over rest of the region.
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Upper Bramhaputra Valley Zone and Lower Bramhaputra Valley Zone of Assam, continue sowing of rapeseed/ mustard, maize, wheat and nursery sowing of winter tomato and planting of potato.
 - In Hill Zone, North Bank Plain Zone and Lower Bramhaputra Valley Zone of Assam, continue nursery raising and sowing of *boro* rice.
 - In Upper Bramhaputra Valley Zone, North Bank Plain Zone, Lower Bramhaputra Valley Zone and Central Bramhaputra Valley Zone of Assam, continue harvesting of matured *sali* rice.
 - In Hill Zone of Assam, continue nursery raising of winter vegetables. Continue land preparation and sowing of lentil, planting of potato. Complete sowing rapeseed and mustard at earliest.
 - In Central Bramhaputra Valley Zone and North Bank Plain Zone of Assam, continue transplanting of cole crops, land preparation and sowing of *rabi* pulses like lentil, rajmah, pea, lathyrus and oilseeds, wheat and planting of potato.
 - In Meghalaya, continue harvesting of *Kharif* rice. Continue sowing of pea, toria & lentil after harvesting of rice under zero tillage condition for utilization of residual moisture. Continue harvesting of groundnut. Continue sowing of mustard/rapeseed, maize. Apply mulching in ginger/ turmeric and potato with locally available weed biomass, maize stalk, etc.
 - In Hill Zone of Assam, there is chance of Cercospora leaf spot/ YMV in black gram and green gram, spray with Bavistin @ 0.5 g / litre of water on clear weather.
 - **Nagaland, Manipur, Mizoram and Tripura:**
 - In Manipur, continue sowing of rapeseed/ mustard, planting of potato, transplanting of onion.
 - In Mizoram, continue sowing of pea, mustard and toria, nursery raising of tomato.
 - In Mild Tropical Plain Zone of Tripura, undertake sowing of toria, sesame, lentil etc. and planting of potato.
 - In Nagaland, continue nursery sowing of winter vegetables. Continue sowing of toria, pea and harvesting of matured lowland rice.
 - 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.
 - Suitable varieties are given in Annexure II.
- **Animal Husbandry**
 - In Meghalaya, provide poultry birds (day old to 25 days old) artificial heating through lighting of electric bulb to protect from low temperature.

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



Sugarcane



Groundnut



Onion



Rice

- **Realised Rainfall:** Rainfall occurred in Nicobar district of Andaman & Nicobar Islands. Weather remained mainly dry/dry over Jharkhand, Bihar, Odisha and West Bengal.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Andaman & Nicobar Islands during the period. Dry weather would prevail over rest parts of the region during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at many places over Andaman & Nicobar Islands. Weather would be dry over rest of the region.
- **Advisories:**
 - **West Bengal:**
 - Continue field preparation and sowing of wheat, mustard and planting of potato in Laterite and Red Soil Zone.

Also undertake seed bed preparation for nursery sowing of *boro* rice

- In New Alluvial Zone, continue land preparation for sowing of mustard and planting of potato. Continue harvesting of *aman* rice.
- In Coastal Saline Zone, continue harvesting of *aman* rice and land preparation for planting of potato. Complete sowing of lentil at the earliest.
- In Old Alluvial Zone, continue harvesting of matured *aman* rice. Continue land preparation and sowing of mustard, lentil, wheat and planting potato.
- In Terai Zone, continue planting of potato and sowing of wheat. As temperature is decreasing thatching of betel vine should be renovated with new straw or kuch grass to make it dense to protect from cold.
- Due to light foggy weather during early morning hours, there is chance of root rot in winter vegetables like cabbage, cauliflower, tomato etc. in Coastal Saline Zone. Spray Diethane M-45 @2.5g/litre of water.
- **Andaman and Nicobar**
- Undertake land preparation for sowing vegetables, pulses and raised nursery beds for sowing of brinjal, chilli and tomato in North and Middle Andaman.
- **Odisha:**
- In Western Undulating Zone of Odisha, continue land preparation and sowing of groundnut. Prepare the land for sowing of mustard in residual moisture immediately after harvesting of rice. Apply irrigation to transplanted cabbage, cauliflower and tomato which are at two to three week stage.
- In North Central Plateau Zone of Odisha, continue land preparation for sowing of wheat, mustard and groundnut. Complete sowing of green gram, black gram and pea. Undertake sowing of carrot, radish and transplanting of cabbage, cauliflower and onion.
- In East and South Eastern Coastal Plain Zone of Odisha, present weather is optimum for sowing of rainfed groundnut, green pea and mustard. Also continue nursery raising of onion. Medium duration rice is at maturity stage. Harvest on 85% maturity of the panicles. The current temperature and weather is favourable for pyra cropping. Go for pyra cropping of green gram, black gram, lentil, mustard etc. Undertake planting of banana and cole crops. Undertake sowing of garlic in irrigated upland and medium land. Complete sowing of sunflower. Undertake sowing of sesame.
- In North Eastern Plateau Zone of Odisha, continue sowing of wheat, groundnut, gram, peas and onion. Continue harvesting of rice. As dry weather is prevailing apply irrigation to potato. Undertake transplanting of chilli.
- In North Eastern Coastal Plain Zone of Odisha, undertake sowing of rapeseed and mustard.
- In Mid Central Table Land Zone of Odisha, undertake harvesting of rice.
- **Bihar:**
- In North West Alluvial Plain Zone of Bihar, continue sowing of gram and fodder crop like barseem, oat etc. Complete sowing of maize, garlic, carrot and planting of potato. Complete nursery bed for onion crop. Undertake sowing of wheat. Carry Out intercultural operations like thinning and weeding in timely sown mustard.
- In North East Alluvial Zone of Bihar, complete sowing of lentil and continue transplanting of vegetables. Continue harvesting of matured rice. Continue sowing of wheat, maize and mustard. Undertake harvesting of matured sugarcane and prepare the field for planting of autumn sugarcane.
- In South Bihar Alluvial Zone, continue sowing of mustard and planting of potato, continue sowing of fodder crop berseem. Prepare the field for sowing of wheat. Complete sowing of rajmah, lentil, and gram.
- **Jharkhand:**
- In Western Plateau Zone of Jharkhand, continue sowing of gram, lentil, linseed. Also continue sowing of mustard and rainfed wheat. Continue planting of early potato and sowing of green peas. Continue harvesting of already matured rice. Continue sowing of barley.
- In South Eastern Plateau Zone of Jharkhand, continue land preparation/sowing of chick pea. Continue nursery raising of onion. After harvesting of rice, undertake sowing of rainfed wheat. Continue sowing of field pea and linseed. Undertake transplanting of cole crops.
- In Central & North Eastern Plateau Zone of Jharkhand, continue sowing of mustard, wheat, lentil, linseed. Continue harvesting of rice.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- In North West Alluvial Plain Zone of Bihar, low temperature condition may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched diet to the animals. Do not keep the animal in the open.
- **Fishery**
- In Terai Zone of West Bengal, as temperature is decreasing, do not apply cow dung or any other organic manure in the fish ponds and lesser quantity application of supplementary feed should be done. Apply lime @ 60kg/bigha with 2.5 m water level.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane

Land preparation

Okra

Onion

- **Realised Rainfall:** Rainfall occurred in Dantewada district of Chhattisgarh. Weather remained mainly dry over rest of the region.
- **Weather Forecast:** Dry weather would prevail over the region during the period. No significant change in minimum temperatures over central India adjoining to northwest India during next 2-3 days.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be dry over the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - Continue sowing of wheat in Bundelkhand Zone. Also continue transplanting of tomato, chilli, brinjal, cauliflower and cabbage on raised beds. Complete sowing of chickpea and linseed. As dry weather is prevailing, apply irrigation in mustard crop. Undertake transplanting of onion in the main fields.
 - Continue sowing of wheat, green pea and nursery sowing of tomato, chilli, brinjal, cauliflower, cabbage, capsicum, onion, early planting of potato and ginger in Vindhya Plateau Zone of Madhya Pradesh.
 - Continue sowing of vegetable pea, mustard, toria and field preparation for planting of potato, undertake nursery sowing of cabbage, cauliflower and sowing of carrot and radish in Kymore Plateau and Satpura Hill Zone.
 - Continue sowing of pea and planting of potato in Malwa Plateau Zone. Also undertake transplanting of onion, tomato, brinjal, chilli, cabbage and cauliflower on the prepared beds. Continue sowing of wheat.
 - Continue harvesting of matured soybean and continue land preparation and sowing of wheat, gram in Nimar Valley Zone.
 - Due to cloudy weather there are chances of attack of sucking pest in vegetables in Vindhya Plateau Zone of Madhya Pradesh, spray Imidacloprid or Thiamethoxam @ 0.35 g per litre of water.
 - Due to cloudy weather there are chances of attack of semi looper in cauliflower crop in Bundelkhand Zone, for control spray Malathion 50 E.C. @ 2ml/L of water.
 - **Chhattisgarh:**
 - Continue harvesting of matured rice in North Hill Zone. Continue land preparation and sowing of *rabi* crops and transplanting of vegetables like cauliflower, tomato, brinjal, chilli etc. Undertake planting of potato, garlic and raising seedlings of onion. Undertake sowing of wheat.
 - Continue sowing of gram, wheat, peas, lentil, chickpea and linseed, transplanting of cauliflower, tomato, brinjal, chilli etc. and continue sowing of leafy vegetables like coriander, fenugreek and palak and in Chhattisgarh Plain Zone. Undertake sowing of garlic, planting of potato and raising seedlings of onion. Continue harvesting of matured rice.
 - Undertake sowing of toria, green pea, linseed, gram, wheat and nursery sowing of vegetables like, chilli, cauliflower, tomato etc. in Bastar Plateau Zone.
 - Suitable varieties are given in Annexure II.

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



Land preparation

Sugarcane

Bottle Gourd

Onion

- **Realised Rainfall:** Weather remained mainly dry over the region.

- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Jammu & Kashmir during next 24 hours and dry weather would prevail thereafter. Dry weather would prevail over rest parts of the region during the period. No significant change in minimum temperatures over northwest India during next 2-3 days. Fog/shallow fog would occur at isolated places over Punjab during next 2 days.
- **Weather Warning:** Nil
- **Weather Outlook:** A fresh western disturbance would affect western Himalayan region from 24th onwards.
- **Advisories:**
 - **Jammu & Kashmir:**
 - Complete sowing of mustard, toria and continue sowing of wheat, barley, pulses (gram, lentil, pea) in Intermediate Zone of Jammu & Kashmir.
 - In Sub-Tropical Zone of Jammu & Kashmir, undertake nursery sowing of *rabi* onion and continue sowing of wheat, barley, oilseeds crops (toria, mustard), *rabi* pulses (peas, gram, lentil), and planting of potato and garlic.
 - In Cold and Arid zone of Jammu & Kashmir, undertake field preparation for sowing of cereal crops and direct sowing of spinach, turnip and radish in greenhouses. Also continue harvesting of Chinese cabbage, palak, pakchoi and lettuce from protected structures.
 - Continue land preparation for sowing of peas, wheat and complete sowing of vegetables *viz.* spinach, methi and planting of garlic in Valley Temperate Zone of Jammu & Kashmir.
 - **Himachal Pradesh:**
 - Continue sowing of early wheat, planting of potato and sowing of early varieties of pea and onion in Lower and Mid Hills regions of Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. Continue direct sowing of radish, turnip, carrot and fenugreek, sowing of gobhi sarson, linseed and transplanting of cabbage, cauliflower and broccoli. Also undertake sowing of berseem, lucerne and oats as fodder crops. Continue sowing of barley in high altitude areas.
 - Complete sowing of radish, turnip, spinach and peas in Mid Hills Sub-Humid Zone of Himachal Pradesh. Undertake transplanting of late season cauliflower (Pusa-snowball) and cabbage and planting of onion at a distance of 15X10cm.
 - Continue harvesting of apple and sowing of Chinese cabbage, cabbage and coriander in High Hill Dry Temperate Zone of Himachal Pradesh.
 - Under prevailing humid weather condition, there are chances of attack of blister blight in tea in Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. Spray Calixin @ 0.2% or folicure 0.1% and if attack is severe then repeat spray at 15 days with alternate spray of Blitox 0.3% at seven days interval.
 - Under prevailing low temperature condition, there are chances of attack of cut worm in cauliflower in Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. Chloropyriphos 20 EC @ 80ml mixed in 1kg of sand can be spread in the fields.
 - Under prevailing dry weather condition, there are chances of aphids attack in vegetables in Mid Hills Sub-Humid Zone of Himachal Pradesh. Spray Methyl Demeton (Metasystox) @ 10ml per 10 litres of water.
 - **Uttarakhand:**
 - Continue land preparation for sowing of wheat and planting of potato in Hill Zone. Complete transplanting of onion and sowing of garlic, mustard, palak, methi, radish, early toria, pea.
 - After harvesting of matured rice and soybean, continue land preparation and sowing of wheat, mustard and complete sowing of vegetables *viz.* pea, coriander, spinach, radish and planting of autumn sugarcane in Bhabar and Tarai Zone of Uttarakhand.
 - As dry weather would prevail, apply a light irrigation in mustard, chickpea and pea. Complete sowing of mustard, chickpea, pea, nursery sowing of vegetables like brinjal, tomato and planting of potato and 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. Complete planting of potato, sowing of peas, leafy vegetables and nursery sowing of cauliflower. Continue harvesting of matured maize and groundnut in Ludhiana district. Continue planting of early maturing autumn sugarcane. Undertake sowing of early wheat under irrigated condition, African sarson, raya, gobhi sarson, nursery of chilli, *capsicum*, brinjal, tomato and onion.
 - In Undulating Plain Zone of Punjab, continue sowing of long duration wheat, lentil and continue sowing of gram. Undertake sowing of mustard.
 - In Western Plain Zone of Punjab, undertake nursery sowing of tomato and onion. Apply light irrigation to early sown wheat and weather is favourable for sowing of wheat under delayed and late conditions. Also apply irrigation to sugarcane at monthly interval.
 - Present foggy weather is favourable for incidence of late blight in potato in Western Zone of Punjab, spray Indofil-M-45/Kavach/Antracol @ 500-700g/acre or Blitox @ 750-1000g/ 250-350 litre of water/acre at weekly

interval.

- In Western Zone of Punjab, continue sowing of raya, gobhi sarson, *rabi* onion, carrot, tomato. Prepare the field for planting of potato and undertake sowing of wheat. Complete the sowing of gram under rainfed conditions by this week.
- In Western Zone of Haryana, continue sowing of mustard and gram. As dry weather would prevail, harvest rice crop and continue the picking of matured cotton bolls of early sown cotton.
- 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, winter sugarcane. Continue land preparation for sowing of early mustard, pea and early toria and sowing of radish, spinach, sarson, *rabi* onion, carrot and coriander.
- **Uttar Pradesh:**
 - Undertake sowing of barley crop upto November in Eastern and western U.P. and under irrigated condition in Bundelkhand region of Uttar Pradesh.
 - Undertake sowing of wheat in Central Plain Zone of Uttar Pradesh. Complete planting of potato and harvesting of rice.
 - Complete harvesting of rice, sowing of rapeseed, gram, peas, matar and maize and planting of potato in Central Plain Zone of Uttar Pradesh. Undertake sowing of wheat with available soil moisture. Complete transplanting of cauliflower, cabbage, chilli, brinjal and tomato and continue sowing of spinach, fenugreek, radish, carrot and garlic.
 - Complete sowing of normal wheat and undertake sowing of late varieties of wheat in Eastern Plain Zone of Uttar Pradesh. Also undertake sowing of gram, lentil, matar and flax seed.
 - Continue sowing of wheat, gram, peas, lentil, rajma in Bundelkhand Zone of Uttar Pradesh. Complete sowing of linseed.
- Due to hot and humid weather condition, there are chances of attack of fruit fly and fruit borer in ageti arhar in Eastern Plain Zone of Uttar Pradesh. Spray Imadichlorpid @ 1ml per litre of water.
- **Rajasthan:**
 - In Southern Humid Plain Zone continue sowing of wheat, gram and *rabi* maize. In Flood Prone Eastern Plain Zone of Rajasthan, cluster bean- wheat is the most profitable cropping sequence and continue sowing of gram, carrot, lucerne and irrigate potato crop within 15 days interval. Also continue sowing of wheat and barley in Semi Arid Eastern Plain Zone of Rajasthan.
 - Continue field preparation for the sowing of wheat and barley and complete sowing of isabgoal, cumin and fenugreek in Arid Western Plain Zone of Rajasthan (Bikaner) and continue sowing of wheat, cumin in Arid Western Plain Zone of Rajasthan (Jodhpur).
 - Continue land preparation and sowing of wheat, lentil, gram in South Eastern Humid Plain Zone, Irrigated North Western Plain Zone of Rajasthan.
 - Undertake land preparation for sowing of wheat, barley, fenugreek, lucerne in Transitional Plain Zone of Inland Drainage of Rajasthan.
 - In Sub Humid Southern Plain and Aravali Hill Zone of Rajasthan, continue sowing of wheat gram and mustard. Undertake seed bed preparation for nursery sowing of chilli, brinjal and tomato.
 - Due to low temperature condition, there is chance of attack of leaf minor in mustard in Flood Prone Eastern Plain Zone of Rajasthan. To control spray Dimethoate 30 EC or Monocrotophos @ 1 litre in 600- 800 ml of water.
 - Suitable varieties are given in Annexure II.
- **Floriculture**
 - Continue nursery raising of winter flowers in poly houses in Sub Montane and Low Hills Sub-Tropical; Zone of Himachal Pradesh. For the control of blue beetle in roses and balsam, spray Cypermythrin @0.05%. Present weather is conducive for attack of mites in carnation. For control, spray Cypermythrin @0.05% at 15 days interval.
- **Animal Husbandry:**
 - Due to fall in night temperature, keep cows in their cowshed to protect them from cold in High Hill Temperate Dry Zone of Himachal Pradesh. Also give 40-50g minerals mixture with the daily.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Onion

Sugarcane

Cotton

Mango

- **Realised Rainfall:** Rainfall occurred in Kolhapur, Nasik, Pune, Satara, Solapur, Aurangabad and Buldhana districts of Maharashtra. Weather remained mainly dry over rest of the region.
- **Weather Forecast:** Dry weather would prevail over the region during the period.
- **Weather Warning:** Nil
- **Weather Outlook:** Weather would be dry over the region.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, apply irrigation, fertilizers and intercultural operations in vegetable crops and mango and cashew orchards. Utilizing the residual moisture in the harvested rice field, continue sowing of *wal*, *kulthi* and cow pea.
 - In Madhya Maharashtra, continue intercultural operations like weeding and fertilizer application in sugarcane, vegetables, rabi jowar, gram, wheat and safflower. Complete sowing of irrigated wheat and gram. Continue picking fully opened cotton bolls during morning hours. Complete the planting of banana (Kandebaug).
 - In Marathwada, as dry weather would prevail, apply irrigation to red gram and vegetables. Considering the water stress condition, apply micro irrigation like drip and sprinkle irrigation in sugarcane except in Aurangabad district and orchards like banana, pomegranate, sweet lime and orange. Continue intercultural operation like weeding and fertilizer application to sugarcane, rabi jowar, gram, wheat and vegetables. Complete sowing irrigated gram and wheat. Continue picking fully opened cotton bolls during morning hours.
 - In Vidarbha, as dry weather is prevailing, apply irrigation to vegetables and orange, sweet lime orchards. Apply fertilizers and continue intercultural operations in vegetables. Continue picking fully opened cotton bolls in West Vidarbha. Complete sowing of irrigated wheat. Undertake sowing of linseed in east Vidarbha & continue sowing of irrigated gram.
 - Due to cloudy and humid weather, there may be attack of sap sucking pest in pomegranate in Marathwada; spray Monochrotophos @ 15 ml per 10 litres of water.
 - **Gujarat**
 - In North Gujarat Zone, undertake sowing of wheat and cumin. Complete sowing of gram and planting of potato. As dry weather would prevail, undertake harvesting of matured sorghum. Apply irrigation to castor.
 - In South Gujarat and Middle Gujarat Zone, undertake sowing of wheat and planting of potato.
 - Continue sowing of wheat in Bhal and Coastal Zone. As dry weather would prevail, apply irrigation in castor. Undertake sowing of cumin.
 - Undertake land preparation and sowing of wheat and chickpea in South Saurashtra Zone. Complete picking of matured cotton bolls.
 - Suitable varieties are given in Annexure II.
- **Animal Husbandry**
 - In Gujarat, increase the green fodder quantity for feeding. Arrange adequate amount of fresh drinking water for cattle.

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

Annexure I
Week by week Rainfall Distribution

Sub-Divisions	05.11.14		12.11.14		19.11.14	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Karnataka						
Coastal Karnataka						
Dakshin Kannada	6.7	-74	5.9	-78	33.4	67
Udupi	0.3	-99	0.6	-98	31.4	114
Uttar Kannada	0.0	-100	0.0	-100	27.3	122
N I Karnataka						
Bagalkote	0.0	-100	0.0	-100	11.9	147
Belgaum	0.0	-100	0.1	-99	42.1	510
Bidar	0.0	-100	3.1	-51	17.0	295
Bijapur	0.0	-100	0.0	-100	18.7	223
Dharwad	0.0	-100	0.0	-100	40.8	410
Gadag	0.0	-100	0.0	-100	30.5	228
Gulbarga	0.0	-100	4.0	-4	27.8	355
Haveri	0.0	-100	0.0	-100	45.8	214
Koppal	0.0	-100	0.0	-100	14.8	79
Raichur	0.0	-100	0.8	-79	3.1	-53
Yadgir	0.0	-100	1.2	-74	8.2	15
S I Karnataka						
Bangalore Rural	2.7	-89	0.0	-100	32.5	206
Bangalore Urban	0.5	-98	2.4	-83	22.9	112
Bellary	0.0	-100	0.0	-100	15.0	75
Chamarajnagar	1.5	-94	1.2	-93	7.7	-38
Chichballapur	0.1	-99	0.0	-100	19.4	96
Chickmagalur	0.0	-100	1.2	-93	22.1	49
Chitradurga	0.0	-100	0.0	-100	35.6	245
Davangere	0.0	-100	0.0	-100	34.2	124
Hassan	0.0	-100	1.0	-95	8.7	-19
Kodagu	4.0	-83	8.0	-66	11.6	-13
Kolar	0.7	-97	0.0	-100	29.9	141
Mandya	0.3	-98	0.0	-100	5.0	-41
Mysore	1.2	-93	0.0	-100	2.8	-72
Ramnagara	0.0	-100	7.0	-53	19.9	105
Shimoga	0.0	-100	0.1	-99	20.9	52
Tumkur	0.1	-99	1.9	-85	17.0	83
Kerala						
Alappuzha	27.9	-62	9.3	-82	43.4	14
Kannur	38.3	-5	9.5	-62	27.1	48
Ernakulam	45.2	-21	16.1	-62	54.7	95
Idukki	86.0	23	19.4	-62	28.1	-10
Kasaragod	0.6	-98	11.2	-57	15.2	-22
Kollam	58.9	-35	39.5	-38	27.5	-44
Kottayam	53.4	-26	44.4	-17	59.5	80
Kozhikode	76.6	51	0.3	-99	24.8	-12

Malappuram	56.2	-1	34.4	-1	28.1	-5
Palakkad	27.2	-55	16.1	-58	7.7	-69
Pathanamthitta	39.8	-49	16.9	-71	57.3	12
Thiruvananthapuram	53.5	-30	5.7	-89	30.8	-21
Thrissur	36.0	-36	11.3	-75	49.7	110
Wynad	8.7	-69	11.2	-64	11.3	-40
Tamil Nadu						
Ariyalur	12.0	-74	2.8	-96	54.4	9
Chennai	63.8	-36	18.2	-81	100.4	9
Coimbatore	2.9	-93	7.2	-81	6.9	-72
Cuddalore	39.7	-43	6.6	-92	139.7	95
Dharmapuri	6.8	-79	2.9	-90	39.8	98
Dindigul	25.4	-47	2.4	-95	25.7	-25
Erode	2.9	-93	16.1	-49	30.8	44
Kanchipuram	30.2	-61	10.6	-86	92.5	67
Kanyakumari	40.0	-45	11.4	-81	39.1	-13
Karikal	45.2	-64	21.3	-85	154.1	73
Karur	8.2	-76	0.4	-99	34.9	36
Krishnagiri	2.4	-92	1.7	-91	29.5	80
Madurai	73.0	30	1.8	-96	11.1	-58
Nagapattinam	56.3	-38	14.9	-87	152.8	70
Namakkal	6.3	-82	3.6	-86	35.8	71
Nilgiris	0.6	-99	41.5	-26	82.6	116
Perambalur	7.8	-83	14.3	-61	32.3	-10
Puducherry	48.6	-51	2.1	-98	121.8	98
Pudukottai	9.8	-73	5.0	-87	60.3	78
Ramanathapuram	38.0	-41	1.7	-97	71.2	100
Salem	8.9	-77	4.6	-85	39.4	39
Sivaganga	30.8	-36	1.5	-97	21.9	-25
Thanjavur	17.2	-69	8.2	-86	93.5	119
Theni	42.7	-14	12.3	-70	13.5	-53
Tirunelveli	47.0	-27	25.5	-58	65.0	45
Tirupur	2.9	-93	13.5	-63	13.2	-43
Tiruvallur	37.9	-51	14.5	-79	104.9	68
Tiruvannamalai	8.9	-80	0.9	-98	56.1	39
Tiruvarur	21.6	-67	5.2	-94	134.7	98
Toothukudi	37.8	-35	6.0	-88	23.9	-36
Trichy	12.2	-69	13.1	-66	40.3	31
Vellore	6.9	-80	1.3	-97	43.6	54
Villupuram	23.1	-51	3.6	-93	84.5	92
Virudhunagar	92.6	63	7.9	-84	6.6	-82
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	0.0	-100	19.4	43	4.6	-63
Guntur	0.0	-100	17.1	-12	34.0	131
Krishna	0.0	-100	3.4	-79	24.9	135
Nellore	15.1	-85	16.8	-76	98.9	52
Prakasam	0.0	-100	17.4	-40	62.8	140
Sirkakulam	0.0	-100	0.3	-98	6.6	-34

Visakhapatnam	0.0	-100	1.7	-86	7.5	-37
Vizianagram	0.0	-100	0.0	-100	9.6	19
West Godavari	0.0	-100	0.8	-95	9.2	-27
Rayalaseema						
Anantapur	0.0	-100	0.1	-99	13.5	78
Chittoor	13.8	-69	1.1	-97	43.5	30
Cuddapah	0.0	-100	0.0	-100	26.7	78
Kurnool	0.1	-99	17.2	132	6.1	-5
Telangana						
Adilabad	0.0	-100	1.1	-60	5.5	73
Hyderabad	0.0	-100	0.0	-100	53.3	759
Karimnagar	0.0	-100	1.0	-79	3.1	-38
Khammam	0.0	-100	4.2	-21	7.5	176
Mehabubnagar	0.0	-100	7.6	91	6.0	14
Medak	0.0	-100	4.4	-15	12.7	211
Nalgonda	0.0	-100	7.3	0	6.6	1
Nizamabad	0.0	-100	7.0	79	5.6	43
Rangareddy	0.0	-100	2.4	-50	13.7	141
Warangal	0.0	-100	1.3	-72	9.6	135
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	5.4	-66	0.0	-100	0.3	-95
Dibang Valley	**	**	**	**	**	**
East Kameng	0.0	-100	0.0	-100	0.0	-100
East Siang	0.0	-100	0.0	-100	0.3	-91
Kurung Kumey	**	**	**	**	**	**
Lohit	0.6	-94	0.0	-100	3.3	-54
Lower Dibang Valley	2.6	-84	0.0	-100	0.7	-92
Lower Subansari	**	**	**	**	**	**
Papumpara	1.0	-94	6.4	-17	14.6	508
Tawang	2.0	-71	0.0	-100	16.0	98
Tirap	3.0	-73	0.0	-100	0.0	-100
Upper Siang	35.2	34	4.3	-83	0.0	-100
Upper Subansari	3.2	-33	3.0	-47	2.8	-49
West Kameng	0.0	-100	0.0	-100	0.0	-100
West Siang	1.0	-90	4.0	-56	3.0	-9
Assam&Meghalaya						
Assam						
Baksa	0.0	-100	0.0	-100	0.0	-100
Barpeta	0.0	-100	0.0	-100	0.1	-97
Bongaigaon	0.0	-100	0.0	-100	0.0	-100
Cachar	0.0	-100	0.1	-99	0.0	-100
Chirang	0.0	-100	0.0	-100	0.0	-100
Darrang	0.0	-100	0.0	-100	0.0	-100
Dhemaji	2.0	-78	6.0	2	12.0	150
Dhubri	0.0	-100	0.0	-100	0.0	-100
Dibrugarh	2.1	-80	0.1	-98	0.5	-88
Goalpara	0.0	-100	0.0	-100	0.0	-100
Golghat	0.0	-100	0.0	-100	0.0	-100

Hailakandi	0.0	-100	2.7	-83	0.0	-100
Jorhat	0.0	-100	0.0	-100	2.7	-40
Kamrup(Rural)	0.0	-100	0.0	-100	0.0	-100
Kamrup(Metro)	0.0	-100	0.0	-100	0.0	-100
Karbi Anglong	0.0	-100	0.0	-100	0.0	-100
Karimganj	0.0	-100	0.0	-100	0.0	-100
Kokrajhar	0.0	-100	0.0	-100	4.4	47
Lakhimpur	3.4	-64	1.7	-71	13.3	178
Morigaon	0.0	-100	0.0	-100	0.4	-87
N.C.Hills	0.0	-100	0.0	-100	0.0	-100
Nowgong	0.0	-100	0.0	-100	0.0	-100
Nalbari	0.0	-100	0.0	-100	0.0	-100
Sonitpur	0.0	-100	0.0	-100	0.0	-100
Sibsagar	0.0	-100	0.0	-100	0.0	-100
Tinsukia	0.9	-93	1.0	-85	0.2	-90
Udalgiri	0.0	-100	0.0	-100	0.0	-100
Meghalaya						
East Garo Hills	0.0	-100	0.0	-100	0.0	-100
East Khasi Hills	0.1	-99	0.0	-100	0.0	-100
Jaintia Hills	0.0	-100	0.0	-100	1.0	-84
Ribhoi	9.0	125	4.8	-9	0.4	-89
South Garo Hills	0.0	-100	0.0	-100	0.0	-100
West Garo Hills	0.0	-100	0.0	-100	0.0	-100
West Khasi Hills	0.0	-100	0.0	-100	0.0	-100
NMMT						
Mizoram						
Aizwal	1.2	-96	0.9	-97	0.0	-100
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	20.0	-25	0.0	-100
Mamit	**	**	**	**	**	**
Saiha	3.0	-86	2.0	-92	0.0	-100
Serchhip	2.0	-87	3.8	-87	0.0	-100
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	0.0	-100	0.0	-100	0.0	-100
Churachandpur	**	**	**	**	**	**
Imphal east	3.9	-85	0.0	-100	0.0	-100
Imphal west	0.0	-100	0.0	-100	0.0	-100
Senapati	0.0	-100	0.0	-100	0.0	-100
Tamenglong	**	**	**	**	**	**
Thoubal	0.0	-100	0.0	-100	0.0	-100
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	0.0	-100	0.0	-100	0.0	-100
Kephire	**	**	**	**	**	**
Kohima	0.0	-100	0.0	-100	0.0	-100
Longleng	**	**	**	**	**	**

Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	1	-93	0	-100	0	-100
Tuensang	**	**	**	**	**	**
Wokha	**	**	**	**	**	**
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	0.0	-100	2.0	-89	0.0	-100
North tripura	0.0	-100	0.0	-100	0.0	-100
South tripura	0.0	-100	6.1	-70	0.0	-100
West tripura	0.0	-100	0.7	-96	0.0	-100
Himachal Pradesh						
Bilaspur	0.0	-100	0.0	-100	0.0	-100
Chamba	0.1	-97	10.7	347	0.0	-100
Hamirpur	0.0	-100	0.1	-92	0.0	-100
Kangra	0.0	-100	0.7	-62	0.0	-100
Kinnaur	0.0	-100	0.2	-94	0.0	-100
Kullu	0.0	-100	4.8	17	0.0	-100
Lahaul and Spiti	0.0	-99	5.3	-2	0.0	-100
Mandi	0.0	-100	2.3	-27	0.0	-100
Shimla	0.0	-100	0.6	-83	0.0	-100
Sirmaur	0.0	-100	0.0	-100	0.0	-100
Solan	0.0	-100	0.0	-100	0.0	-100
Una	0.0	-100	0.0	-100	0.0	-100
Punjab						
Amritsar	0.0	-100	0.5	-79	0.0	-100
Barnala	0.0	-100	0.0	-100	0.0	-100
Bhatinda	0.0	-100	4.8	4733	0.0	-100
Faridkot	0.0	-100	0.0	-100	0.0	-100
Fatehgarh Saheb	0.0	-100	0.0	-100	0.0	-100
Ferozpur	0.0	-100	0.0	-100	0.0	-100
Gurdaspur	0.0	-100	0.7	-68	0.0	-100
Hoshiarpur	0.0	-100	0.0	-100	0.0	-100
Jalandhar	0.0	-100	0.0	-100	0.0	-100
Kapurthala	0.0	-100	0.2	-88	0.0	-100
Ludhiana	0.0	-100	0.0	-100	0.0	-100
Mansa	0.0	-100	2.0	233	0.0	-100
Moga	0.0	-100	0.0	-100	0.0	-100
Muktesar	0.0	-100	0.0	-100	0.0	-100
Nawashahar	0.0	-100	0.0	-100	0.0	-100
Patiala	0.0	-100	1.0	138	0.0	-100
Ropar	0.0	-100	1.0	-60	0.0	-100
Sangrur	0.0	-100	1.7	109	0.0	-100
Mohali	0.0	-100	0.0	-100	0.0	-100
TarnTaran	0.0	-100	0.0	-100	0.0	-100
Haryana,Chd,Delhi						
Haryana						
Ambala	0.0	-100	0.2	-82	0.0	-100

Bhiwani	0.0	-100	0.0	-100	0.0	-100
Chandigarh	0.0	-100	0.1	-95	0.0	-100
Faridabad	0.0	-100	0.0	-100	0.0	-100
Fatehabad	0.0	-100	0.0	-100	0.0	-100
Gurgaon	0.0	-100	0.0	-100	0.0	-100
Hissar	0.0	-100	0.0	-100	0.0	-100
Jhajar	0.0	-100	0.0	-100	0.0	-100
Jind	0.0	-100	0.0	-100	0.0	-100
Katihah	0.0	-100	1.2	200	0.0	-100
Karnal	0.0	-100	0.0	-100	0.0	-100
Kurukshetra	0.0	-100	0.0	-100	0.0	-100
Mahendragarh	0.0	-100	0.0	-100	0.0	-100
Mewat	0.0	-100	0.0	-100	0.0	-100
Palwal	0.0	-100	0.0	-100	0.0	-100
Panchkkula	0.0	-100	0.0	-100	0.0	-100
Panipat	0.0	-100	0.0	-100	0.0	-100
Rewari	0.0	-100	0.0	-100	0.0	-100
Rohtak	0.0	-100	0.0	-100	0.0	-100
Sirsa	0.0	-100	1.5	150	0.0	-100
Sonepat	0.0	-100	0.0	-100	0.0	-100
Yamunanagar	0.0	-100	0.0	-100	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	0.0	-100	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	0.0	-100	0.0	-100
South Delhi	0.0	-100	0.0	-100	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	0.2	-98	20.6	164	0.0	-100
Badgam	0.0	-100	13.4	179	0.0	-100
Bandipore	**	**	**	**	**	**
Baramula	10.5	-27	25.8	387	0.0	-100
Doda	0.0	-100	13.6	123	0.0	-100
Ganderbal	1.4	-77	20.8	230	0.0	-100
Jammu	0.0	-100	7.1	542	0.0	-100
Kargil	**	**	**	**	**	**
Kathua	0.0	-100	0.5	-72	0.0	-100
Kistwar	**	**	**	**	**	**
Kulgam	0.0	-100	14.9	91	0.0	-100
Kupwara	12.7	28	37.5	213	0.0	-100
Ladakh(Leh)	0.0	-100	0.0	-100	0.0	-100
Poonch	0.0	-100	16.3	200	0.0	-100
Pulwama	0.0	-100	11.8	211	0.0	-100
Rajouri	0.0	-100	10.8	200	0.0	-100
Ramban	0.0	-100	40.8	568	0.0	-100

Reasi	0.0	-100	9.5	171	0.0	-100
Samba	0.0	-100	2.6	136	0.0	-100
Shopian	0.0	-100	7.0	84	0.0	-100
Srinagar	0.0	-100	12.8	102	0.0	-100
Udhampur	0.0	-100	4.2	20	0.0	-100
East Madhya Pradesh						
Anuppur	0.0	-100	0.0	-100	0.0	-100
Balaghat	0.0	-100	0.0	-100	0.0	-100
Chhatarpur	0.0	-100	0.0	-100	0.0	-100
Chindwara	0.0	-100	0.0	-100	0.0	-100
Damoh	0.0	-100	0.0	-100	0.0	-100
Dindori	0.0	-100	0.0	-100	0.0	-100
Jabalpur	0.0	-100	0.0	-100	0.0	-100
Katni	0.0	-100	0.0	-100	0.0	-100
Mandla	0.0	-100	0.0	-100	0.0	-100
Narsingpur	0.0	-100	0.0	-100	0.0	-100
Panna	0.0	-100	0.0	-100	0.0	-100
Rewa	0.0	-100	0.0	-100	0.0	-100
Sagar	0.0	-100	0.0	-100	0.0	-100
Satna	0.0	-100	0.0	-100	0.0	-100
Seoni	0.0	-100	23.4	767	0.8	-81
Shahdol	0.0	-100	0.0	-100	0.0	-100
Sidhi	0.0	-100	0.0	-100	0.0	-100
Singrauli	0.0	-100	0.0	-100	0.0	-100
Tikamgarh	0.0	-100	0.0	-100	0.0	-100
Umaria	0.0	-100	0.0	-100	0.0	-100
West Madhya Pradesh						
Alirajpur	0.0	-100	0.0	-100	0.0	-100
Asoknagar	0.0	-100	0.0	-100	0.0	-100
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	0.0	-100	4.4	76	0.1	-97
Bhind	0.0	-100	0.0	-100	0.0	-100
Bhopal	0.0	-100	0.0	-100	0.0	-100
Burhanpur	0.0	-100	14.1	236	0.0	-100
Datia	0.0	-100	0.0	-100	0.0	-100
Dewas	0.0	-100	0.0	-100	0.0	-100
Dhar	0.0	-100	0.0	-100	0.2	-88
Guna	0.0	-100	0.0	-100	0.0	-100
Gwalior	0.0	-100	0.0	-100	0.0	-100
Harda	0.0	-100	0.0	-100	0.0	-100
Hosangabad	0.0	-100	0.5	-81	5.0	178
Indore	0.0	-100	0.0	-100	0.1	-96
Jhabua	0.0	-100	0.0	-100	0.8	-70
Khandwa	0.0	-100	27.0	694	0.0	-100
Khargone	0.0	-100	14.0	639	0.0	-100
Mandsaur	0.0	-100	0.0	-100	0.0	-100
Morena	0.0	-100	0.0	-100	0.0	-100
Neemuch	0.0	-100	0.0	-100	0.0	-100
Raisen	0.0	-100	0.0	-100	0.0	-100

Rajgarh	0.0	-100	0.0	-100	0.0	-100
Ratlam	0.0	-100	0.0	-100	0.0	-100
Sehore	0.0	-100	0.2	-96	0.0	-100
Shajapur	0.0	-100	0.0	-100	0.0	-100
Sheopur Kalani	0.0	-100	0.0	-100	0.0	-100
Shivpuri	0.0	-100	0.0	-100	0.0	-100
Ujjain	0.0	-100	0.0	-100	6.0	132
Vidisha	0.0	-100	0.0	-100	0.0	-100
Chhattisgarh						
Bastar	0.0	-100	0.0	-100	1.0	-37
Bijapur	0.0	-100	0.0	-100	10.5	515
Bilaspur	0.0	-100	0.0	-100	0.0	-100
Dantewara	0.0	-100	0.0	-100	21.4	5258
Dhamtari	0.0	-100	0.0	-100	0.0	-100
Durg	0.0	-100	0.0	-100	0.0	-100
Janjgir	0.0	-100	0.0	-100	0.0	-100
Jashpurnagar	0.0	-100	0.0	-100	0.0	-100
Kanker	0.0	-100	0.0	-100	0.0	-100
Korba	0.0	-100	0.0	-100	0.0	-100
Koriya	0.0	-100	0.0	-100	0.0	-100
Kawardha	0.0	-100	0.0	-100	0.0	-100
Mahasumund	0.0	-100	0.0	-100	0.0	-100
Narayanpur	0.0	-100	0.0	-100	12.0	991
Raigarh	0.0	-100	0.0	-100	0.0	-100
Raipur	0.0	-100	0.0	-100	0.0	-100
Rajandgaon	0.0	-100	0.0	-100	0.0	-100
Surguja	0.0	-100	0.0	-100	0.0	-100
East Uttar Pradesh						
Allahabad	0.0	-100	0.0	-100	0.0	-100
Ambedkar Nagar	0.0	-100	0.0	-100	0.0	-100
Azamgarh	0.0	-100	0.0	-100	0.0	-100
Bahraich	0.0	-100	0.0	-100	0.0	-100
Ballia	0.0	-100	0.0	-100	0.0	-100
Balrampur	0.0	-100	0.0	-100	0.0	-100
Banda	0.0	-100	0.0	-100	0.0	-100
Barabanki	0.0	-100	0.0	-100	0.0	-100
Basti	0.0	-100	0.0	-100	0.0	-100
Chandauli	0.0	-100	0.0	-100	0.0	-100
Deoria	0.0	-100	0.0	-100	0.0	-100
Faizabad	0.0	-100	0.0	-100	0.0	-100
Farrukhabad	0.0	-100	0.0	-100	0.0	-100
Fatehpur	0.0	-100	0.0	-100	0.0	-100
Gazipur	0.0	-100	0.0	-100	0.0	-100
Gonda	0.0	-100	0.0	-100	0.0	-100
Gorakhpur	0.0	-100	0.0	-100	0.0	-100
Hardoi	0.0	-100	0.0	-100	0.0	-100
Jaunpur	0.0	-100	0.0	-100	0.0	-100
Kannauj	0.0	-100	0.0	-100	0.0	-100
Kanpur City	0.0	-100	0.0	-100	0.0	-100

Kanpur Dehat	0.0	-100	0.0	-100	0.0	-100
Kaushambi	0.0	-100	0.0	-100	0.0	-100
Kheri	0.0	-100	0.0	-100	0.0	-100
Kushi nagar	0.0	-100	0.0	-100	0.0	-100
Lucknow	0.0	-100	0.0	-100	0.0	-100
Maharajganj	0.0	-100	0.0	-100	0.0	-100
Mau	0.0	-100	0.0	-100	0.0	-100
Mirzapur	0.0	-100	0.0	-100	0.0	-100
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
RaiBareilly	0.0	-100	0.0	-100	0.0	-100
Sahuji Maharajnagar	0.0	-100	0.0	-100	0.0	-100
Sant Kabirnagar	0.0	-100	0.0	-100	0.0	-100
Sant Ravidas Nagar	0.0	-100	0.0	-100	0.0	-100
Shrawasti	0.0	-100	**	**	**	**
Sidharthnagar	0.0	-100	0.0	-100	0.0	-100
Sitapur	0.0	-100	0.0	-100	0.0	-100
Sonbhadra	0.0	-100	0.0	-100	0.0	-100
Sultanpur	0.0	-100	0.0	-100	0.0	-100
Unnao	0.0	-100	0.0	-100	0.0	-100
Varanasi	0.0	-100			0.0	-100
West Uttar Pradesh						
Agra	0.0	-100	0.0	-100	0.0	-100
Aligarh	0.0	-100	0.0	-100	0.0	-100
Auraiya	0.0	-100	0.0	-100	0.0	-100
Badaun	0.0	-100	0.0	-100	0.0	-100
Baghpat	0.0	-100	0.0	-100	0.0	-100
Bareilly	0.0	-100	0.0	-100	0.0	-100
Bijnor	0.0	-100	0.0	-100	0.0	-100
Bulandsahar	0.0	-100	0.0	-100	0.0	-100
Etah	0.0	-100	0.0	-100	0.0	-100
Etawah	0.0	-100	0.0	-100	0.0	-100
Firozabad	0.0	-100	0.0	-100	0.0	-100
GBNagar	0.0	-100	0.0	-100	0.0	-100
Ghaziabad	0.0	-100	0.0	-100	0.0	-100
Hamirpur	0.0	-100	0.0	-100	0.0	-100
Jalaun	0.0	-100	0.0	-100	0.0	-100
Jhansi	0.0	-100	0.0	-100	0.0	-100
Jotiba Phule Nagar	0.0	-100	0.0	-100	0.0	-100
Kanshiramnagar	0.0	-100	0.0	-100	0.0	-100
Lalitpur	0.0	-100	0.0	-100	0.0	-100
Mahamaya Nagar	0.0	-100	0.0	-100	0.0	-100
Mahoba	0.0	-100	0.0	-100	0.0	-100
Mainpuri	0.0	-100	0.0	-100	0.0	-100
Mathura	0.0	-100	0.0	-100	0.0	-100
Meerut	0.0	-100	0.0	-100	0.0	-100
Moradabad	0.0	-100	0.0	-100	0.0	-100
Muzaffarnagar	0.0	-100	0.0	-100	0.0	-100
Pilibhit	0.0	-100	0.0	-100	0.0	-100
Rampur	0.0	-100	0.0	-100	0.0	-100

Saharanpur	0.0	-100	0.0	-100	0.0	-100
Shahjahanpur	0.0	-100	0.0	-100	0.0	-100
Uttarakhand						
Almora	0.0	-100	0.0	-100	0.0	-100
Bageshwar	0.0	-100	0.0	-100	0.0	-100
Chamoli	0.0	-100	0.0	-100	0.0	-100
Champawat	0.0	-100	0.0	-100	0.0	-100
Dehradun	0.0	-100	0.0	-100	0.0	-100
Garhwal Pauri	0.0	-100	0.0	-100	0.0	-100
Garhwal Tehri	0.0	-100	0.0	-100	0.0	-100
Haridwar	0.0	-100	0.0	-100	0.0	-100
Nainital	0.0	-100	0.0	-100	0.0	-100
Pithorgarh	2.0	-68	0.0	-100	0.0	-100
Rudraprayag	0.0	-100	0.0	-100	0.0	-100
Udham Sing Nagar	0.0	-100	0.0	-100	0.0	-100
Uttarkashi	0.0	-100	0.0	-100	0.0	-100
Bihar						
Araria	0.0	-100	0.0	-100	0.0	-100
Arwal	0.0	-100	0.0	-100	0.0	-100
Aurangabad	0.0	-100	0.0	-100	0.0	-100
Banka	0.0	-100	0.0	-100	**	**
Begusarai	0.0	-100	0.0	-100	0.0	-100
Bhabua	0.0	-100	0.0	-100	0.0	-100
Bhagalpur	0.0	-100	0.0	-100	0.0	-100
Bhojpur	0.0	-100	0.0	-100	0.0	-100
Buxar	0.0	-100	0.0	-100	**	**
Darbhanga	12.0	243	0.0	-100	0.0	-100
East Champaran	0.0	-100	0.0	-100	0.0	-100
Gaya	0.0	-100	0.0	-100	0.0	-100
Gopalganj	0.0	-100	0.0	-100	0.0	-100
Jahanabad	0.0	-100	0.0	-100	0.0	-100
Jamui	0.0	-100	0.0	-100	0.0	-100
Kathihar	0.0	-100	0.0	-100	0.0	-100
Khagadia	0.0	-100	0.0	-100	0.0	-100
Kishanganj	0.0	-100	0.0	-100	0.0	-100
Lakhisarai	0.0	-100	0.0	-100	0.0	-100
Madhepura	0.0	-100	0.0	-100	0.0	-100
Madhubani	0.0	-100	0.0	-100	0.0	-100
Monghyar	0.0	-100	0.0	-100	**	**
Muzaffarpur	0.0	-100	0.0	-100	0.0	-100
Nalanda	0.0	-100	0.0	-100	0.0	-100
Nawada	0.0	-100	0.0	-100	0.0	-100
Patna	0.0	-100	0.0	-100	0.0	-100
Purnea	0.0	-100	0.0	-100	0.0	-100
Rohtas	0.0	-100	0.0	-100	0.0	-100
Saharsha	0.0	-100	0.0	-100	0.0	-100
Samstipur	0.0	-100	0.0	-100	0.0	-100
Saran	0.0	-100	0.0	-100	0.0	-100
Sheikpura	0.0	-100	0.0	-100	0.0	-100

Sheohar	0.0	-100	0.0	-100	0.0	-100
Sitamarhi	0.0	-100	0.0	-100	0.0	-100
Siwan	0.0	-100	0.0	-100	0.0	-100
Supaul	0.0	-100	0.0	-100	0.0	-100
Vaishali	0.0	-100	0.0	-100	0.0	-100
West Champaran	0.0	-100	0.0	-100	0.0	-100
Jharkhand						
Bokaro	0.0	-100	0.0	-100	0.0	-100
Chatra	0.0	-100	0.0	-100	0.0	-100
Deoghar	0.0	-100	0.0	-100	0.0	-100
Dhanbad	0.0	-100	0.0	-100	0.0	-100
Dumka	0.0	-100	0.0	-100	0.0	-100
East Singbhum	0.0	-100	0.0	-100	0.0	-100
Garhwa	0.0	-100	0.0	-100	0.0	-100
Giridih	0.0	-100	0.0	-100	0.0	-100
Godda	0.0	-100	0.0	-100	0.0	-100
Gumla	0.0	-100	0.0	-100	0.0	-100
Hazaribagh	0.0	-100	0.0	-100	0.0	-100
Jamtara	0.0	-100	0.0	-100	0.0	-100
Khunti	0.0	-100	0.0	-100	0.0	-100
Koderna	0.0	-100	0.0	-100	0.0	-100
Latehar	0.0	-100	0.0	-100	0.0	-100
Lohardagga	0.0	-100	0.0	-100	0.0	-100
Pakur	0.0	-100	0.0	-100	0.0	-100
Palamau	0.0	-100	0.0	-100	0.0	-100
Ramgarh	0.0	-100	0.0	-100	0.0	-100
Ranchi	0.0	-100	0.0	-100	0.0	-100
Sahebganj	0.0	-100	0.0	-100	0.0	-100
Saraikela	0.0	-100	0.0	-100	0.0	-100
Simdega	0.0	-100	0.0	-100	0.0	-100
West Singbhum	0.0	-100	0.0	-100	0.0	-100
East Rajasthan						
Ajmer	0.0	-100	0.0	-100	0.0	-100
Alwar	0.0	-100	0.0	-100	0.0	-100
Banswara	0.0	-100	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	0.0	-100	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	0.0	-100	0.0	-100
Jhalawar	0.0	-100	0.0	-100	0.0	-100
Jhunjhunu	0.0	-100	0.0	-100	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	0.0	-100	0.0	-100
Sirohi	0.0	-100	0.0	-100	0.0	-100
Tonk	0.0	-100	0.0	-100	0.0	-100
Udaipur	0.0	-100	0.0	-100	0.0	-100
West Rajasthan						
Barmer	0.0	-91	0.0	-100	0.0	-100
Bikaner	0.0	-100	0.0	-100	0.0	-100
Churu	0.0	-100	0.0	-100	0.0	-100
Hanumangarh	0.0	-100	4.0	567	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	-98	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	0.0	-100	0.0	-100
Gujarat Region						
Ahmedabad	0.0	-97	0.0	-100	8.7	200
Anand	0.0	-100	0.0	-100	0.4	-84
Banaskantha	0.0	-100	0.0	-100	0.0	-100
Baroda	0.0	-100	0.0	-100	1.5	-53
Broach	0.0	-100	0.0	-100	0.2	-56
DNH	0.0	-100	**	**	0.0	-100
Dahod	0.0	-100	0.0	-100	0.0	-100
Daman	0.0	-100	0.0	-100	0.0	-100
Dangs	0.0	-100	0.0	-100	0.0	-100
Gandhinagar	0.0	-100	0.0	-100	0.0	-100
Kheda	0.0	-100	0.0	-100	0.0	-100
Mehsana	0.0	-100	0.0	-100	0.0	-100
Narmada	0.0	-100	0.0	-100	0.5	400
Navsari	0.0	-100	0.0	-100	0.7	-74
Panchmahal	0.0	-100	0.0	-100	0.0	-100
Patan	0.0	-100	0.0	-100	0.0	-100
Sabarkantha	0.0	-100	0.0	-100	0.0	-100
Surat	0.0	-100	0.0	-100	0.5	-83
Tapi	0.0	-100	0.0	-100	3.8	81
Valsad	0.0	-100	0.0	-100	8.0	100
S K & Diu region						
Amreli	0.0	-100	0.0	-100	11.8	307
Bhavnagar	0.0	-100	0.0	-100	5.9	30
Diu	0.0	-100	0.0	-100	9.2	188
Jamnagar	0.1	-97	0.0	-100	1.3	-57
Junagarh	0.0	-100	0.0	-100	16.1	1050
Kutch	0.7	-82	0.0	-100	0.0	-100
Porbandar	0.0	-100	0.0	-100	0.0	-100
Rajkot	0.0	-100	0.0	-100	2.3	-2
Surendranagar	0.0	-100	0.0	-100	0.0	-100
Maharashtra & Goa						

Konkan & Goa						
Mumbai City	0.0	-100	0.0	-100	4.2	31
Mumbai Suburban	0.0	-100	0.0	-100	2.9	-9
North Goa	0.0	-100	0.0	-100	4.0	-58
Raigad	0.0	-100	0.0	-100	6.0	43
Ratnagiri	0.0	-100	0.0	-100	12.9	102
Sindhudurg	0.0	-100	0.0	-100	9.9	14
South Goa	0.0	-100	0.2	-98	9.3	-14
Thane	0.0	-100	0.0	-100	2.8	17
Madhya Maharashtra						
Ahmednagar	0.0	-100	0.3	-96	62.9	984
Dhule	0.0	-100	22.5	733	**	**
Jalgaon	0.0	-100	4.7	50	2.4	-8
Kolhapur	0.0	-100	0.0	-100	23.3	228
Nandurbar	0.0	-100	1.9	18	5.3	382
Nasik	0.0	-100	4.8	-4	25.5	442
Pune	0.0	-100	0.0	-100	22.7	354
Sangli	0.0	-100	6.8	15	10.6	45
Satara	0.0	-100	0.0	-100	25.8	180
Solapur	0.0	-100	10.4	31	22.8	348
Marathwada						
Aurangabad	0.0	-100	3.8	-41	43.6	1182
Beed	0.0	-100	1.7	-72	0.8	-83
Hingoli	0.0	-100	0.0	-100	**	**
Jalna	0.0	-100	0.0	-100	2.2	-55
Latur	0.0	-100	8.2	17	13.5	182
Nanded	0.0	-100	0.0	-100	8.0	86
Usmanabad	0.0	-100	21.6	204	19.9	564
Parbhani	0.0	-100	0.6	-85	11.7	172
Vidarbha						
Akola	0.0	-100	3.7	18	11.6	215
Amraoti	0.0	-100	11.2	220	0.4	-87
Bhandara	0.0	-100	0.0	-100	0.0	-100
Buldhana	0.0	-100	0.0	-100	27.8	1223
Chandrapur	0.0	-100	0.1	-94	0.9	-69
Gadchiroli	0.0	-100	0.0	-100	0.0	-100
Gondia	0.0	-100	0.0	-100	0.0	-100
Nagpur	0.0	-100	1.0	-56	6.4	148
Wardha	0.0	-100	3.8	17	0.0	-100
Washim	0.0	-100	0.0	-100	0.3	-84
Yeotmal	0.0	-100	0.0	-100	0.0	-100
Odisha						
Angul	0.0	-100	0.0	-100	0.0	-100
Balasore	0.0	-100	0.0	-100	0.0	-100
Bargarh	0.0	-100	0.0	-100	0.0	-100
Bhadrak	0.0	-100	0.0	-100	0.0	-99
Bolangir	0.0	-100	0.0	-100	0.0	-100
Boudh	0.0	-100	0.0	-100	0.0	-100
Cuttack	0.0	-100	0.0	-100	0.0	-100

Deogarh	0.0	-100	0.0	-100	0.0	-100
Dhenkanal	0.0	-100	0.0	-100	0.0	-100
Gajapati	0.0	-100	11.4	-38	5.9	-38
Ganjam	0.0	-100	0.0	-100	0.0	-100
Jagatsingpur	0.0	-100	0.0	-100	0.0	-100
Jajpur	0.0	-100	0.0	-100	0.0	-100
Jharsuguda	0.0	-100	0.0	-100	0.0	-100
Kalahandi	0.0	-100	0.0	-100	0.9	-69
Kandhamal	0.0	-100	0.0	-100	0.0	-100
Kendrapara	0.0	-100	0.0	-100	0.0	-100
Keonjhar	0.0	-100	0.0	-100	0.0	-100
Khurda	0.0	-100	0.0	-100	0.0	-100
Koraput	0.0	-100	0.0	-100	4.3	-60
Malkangiri	0.0	-100	24.4	662	0.6	-86
Mayurbhanj	0.0	-100	0.0	-100	0.0	-100
Nawapara	0.0	-100	0.0	-100	0.0	-100
Nawarangpur	0.0	-100	0.0	-100	0.0	-100
Nayagarh	0.0	-100	0.0	-100	0.0	-100
Puri	0.0	-100	0.0	-100	0.0	-100
Rayagada	0.0	-100	2.5	-59	8.6	58
Sambalpur	0.0	-100	0.0	-100	0.0	-100
Sonepur	0.0	-100	0.0	-100	0.0	-100
Sundargarh	0.0	-100	0.0	-100	0.0	-100
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	89.6	22	53.2	-22	28.1	-63
North & Middle Andaman	87.0	66	57.6	-1	0.0	-100
South Andaman	86.1	40	27.6	-57	12.4	-84
GWB						
Bankura	0.0	-100	0.0	-100	0.0	-100
Birbhum	0.0	-100	0.0	-100	0.0	-100
Burdwan	0.0	-100	0.0	-100	0.0	-100
East Midnapore	0.0	-100	0.0	-100	0.0	-100
Hooghly	0.0	-100	0.0	-100	0.0	-100
Howrah	0.0	-100	0.0	-100	0.0	-100
Kolkata	0.0	-100	0.0	-100	0.0	-100
Murshidabad	0.0	-100	0.0	-100	0.0	-100
Nadia	0.0	-100	0.0	-100	0.0	-100
24 Pargana (N)	0.0	-100	0.0	-100	0.0	-100
Purulia	0.0	-100	0.0	-100	0.0	-100
24 Pargana (S)	0.0	-100	0.0	-100	0.5	-96
West Midnapore	0.0	-100	0.0	-100	0.0	-100
SHWB & Sikkim						
Cooch Behar	0.0	-100	0.0	-100	0.0	-100
Darjeeling	0.8	-91	0.0	-100	0.0	-100
East Sikkim	0.1	-98	0.0	-100	0.6	-91
Jalpaiguri	0.1	-98	0.0	-100	1.4	-69
Malda	0.0	-100	0.0	-100	0.0	-100

North Dinajpur	0.0	-100	0.0	-100	0.0	-100
North Sikkim	5.0	-61	0.0	-100	0.0	-100
South Dinajpur	0.0	-100	0.0	-100	0.0	-100
South Sikkim	1.7	-80	0.0	-100	0.0	-100
West Sikkim	0.0	-100	0.0	-100	0.5	-96

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, Suhasihi.

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

Broccoli: Everest, Ayeswaria.

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, Jawahar Pea 1, Jawahar Pea 2

Chickpea: J.G-11, J.G-74

Chhattisgarh

Gram: JG-16, JG-11, JG-74, Vaibhav,

Linseed: RLC-92, Indira-32

Wheat: GW-273, Lok-1

Mustard: Pusa Bold

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.