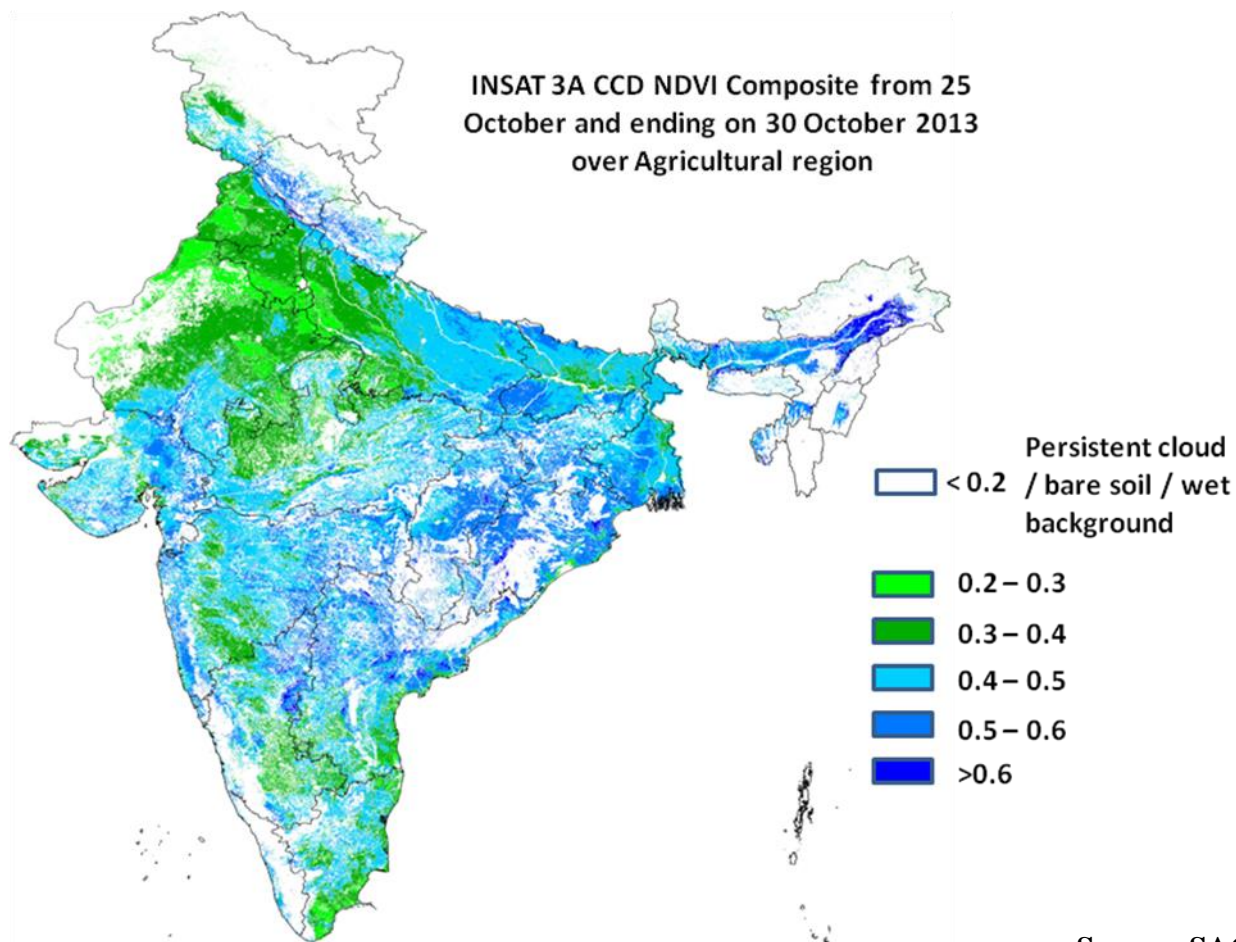
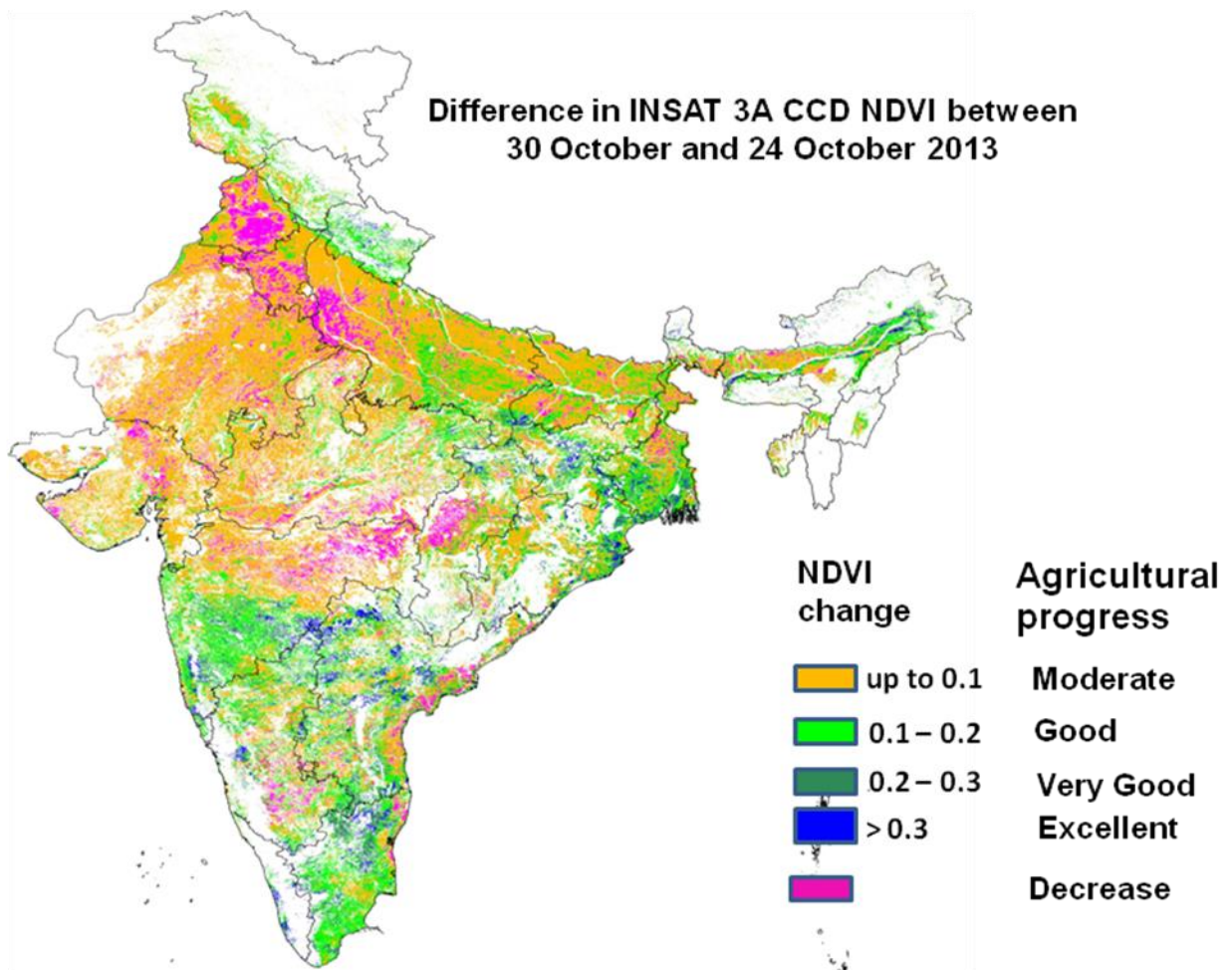


Crop condition based on Rainfall and INSAT 3A CCD NDVI **



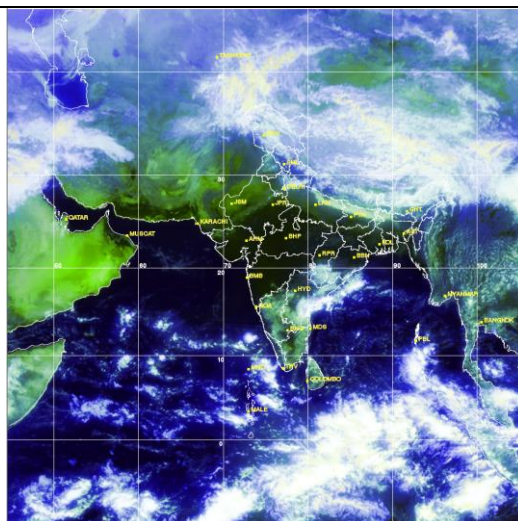
Source: SAC,
Ahmedabad

Overall Agricultural Situation: Agricultural conditions is in general good over eastern UP, south-west Bihar, pockets of central West Bengal and parts of middle Chhattisgarh, western MP, pockets of north and central Gujarat and adjoining Rajasthan and eastern Maharashtra, north Karnataka and AP as NDVI vigour showed the range from 0.4 to 0.6 upto 30th October.



Source: SAC, Ahmedabad

Progress of crop performance during last week: Agricultural progress between 30th October and 24th October 2013 was found to be moderate to good over north AP and adjoining Maharashtra, north Tamil Nadu and few pockets of costal Orissa. Rest of India showed decrease in NDVI which may be due to start of crop ripening.



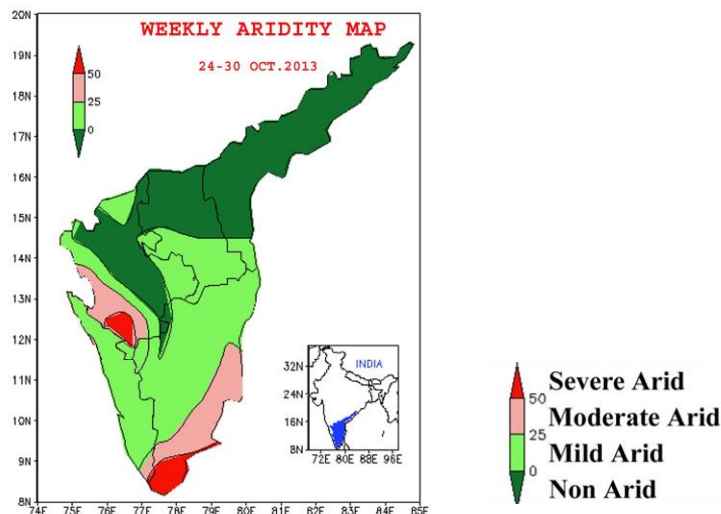
Satellite image dated 01.11.2013, 0600 UTC

Aridity Anomaly Map for the week ending 30.10.2013

भारत मौसम विज्ञान विभाग
अनावृष्टि अनुसंधान अनुभाग - पुणे
INDIA METEOROLOGICAL DEPARTMENT
DROUGHT RESEARCH UNIT - PUNE

स्टडीय ऑफिस, रायलसेमा, दक्षिण अंतर्गत कर्नाटका,
केरल, तमिऴनाडू और पॉन्डिचेरी के लिए

FOR
COASTAL ANDHRA PRADESH, RAYALASEEMA, SOUTH INTERIOR KARNATAKA,
KERALA, TAMIL NADU AND PONDICHERRY



During the week (24 to 30 October 2013) the aridity anomaly map indicated the following aridity conditions over the five Meteorological sub-divisions viz. Coastal Andhra Pradesh, Rayalaseema, South Interior Karnataka, Tamil Nadu & Pondicherry and Kerala.

1. Areas having severe and moderate arid conditions are indicated below:

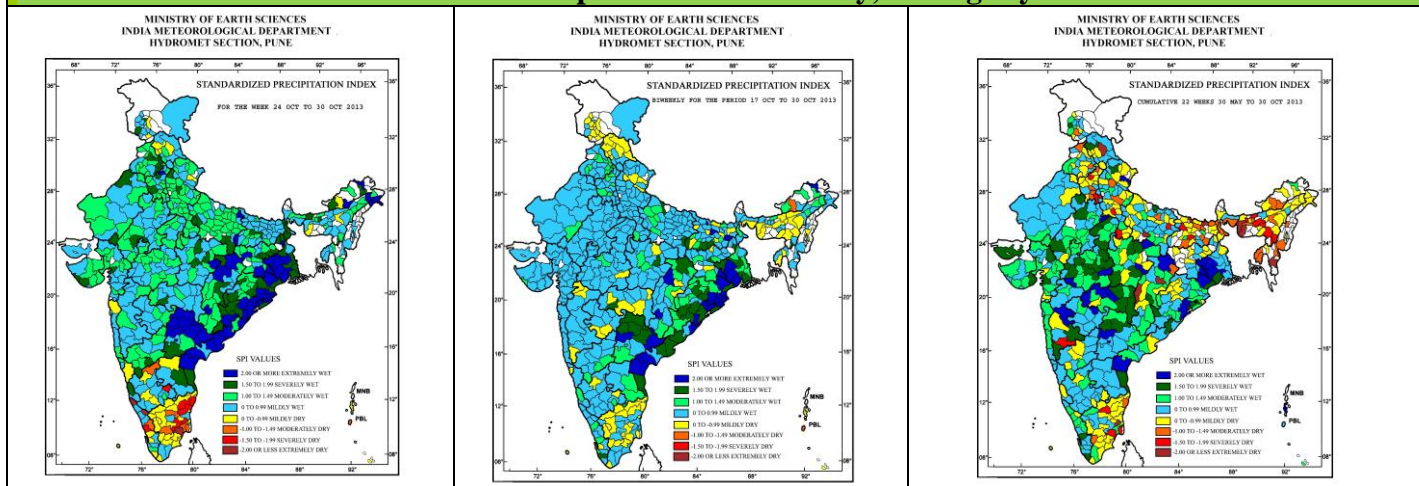
1.1 Areas affected by severe arid conditions :

- Southeastern parts of Tamil Nadu.
- Isolated area around Mysore (South Interior Karnataka).

1.2 Areas affected by moderate arid conditions :

- Southwestern parts of South Interior Karnataka; southeastern and eastern parts of Tamil Nadu.

Standardised Precipitation Index weekly, fortnightly and seasonal



Weekly SPI values:

- Extremely wet/severely wet conditions over many places over Gangetic West Bengal, Coastal Andhra Pradesh, Orissa, Telangana, North Chattisgarh, some parts of North West India, Arunachal Pradesh, Assam, Bihar, Jharkhand, Madhya Pradesh, Raylaseema.
- Extremely dry/severely dry conditions were observed some parts of Tamil Nadu, Coastal & South Interior Karnataka, Kerala.

Cumulative SPI values (bi-weekly):

- Extremely wet/severely wet conditions over many parts of Gangetic West Bengal, Orissa, Coastal Andhra Pradesh, Telangana, some parts of Bihar, Jharkhand, East Uttar Pradesh, East Madhya Pradesh, Vidarbha, Raylaseema, Kerala.

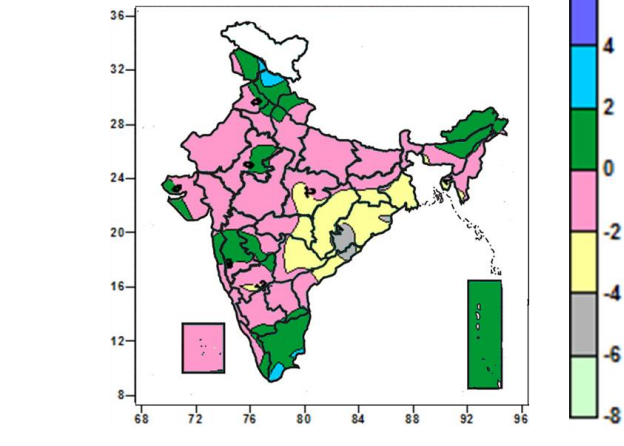
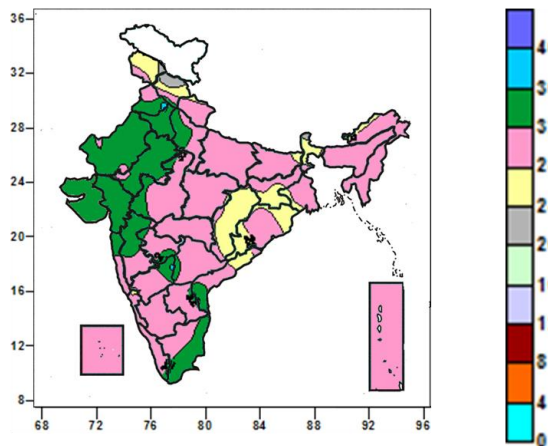
Cumulative SPI values of 22nd weeks form 30th May to 30th Oct. 13) (i.e. since the beginning of southwest monsoon:

- Extremely wet/severely wet conditions over many part of Central India and some parts of Jammu & kaqshmir, Himachal Pradesh, Uttarakhand, East Rajsthan, East Uttar Pradesh, Gangetic West Bengal, West India, Andhra Pradesh, Kerala.
- Extremely dry/ severely dry conditions were observed over some parts of Assam & meghalaya, Tripura, Himachal Pradesh Uttar Pradesh, Haryana, Delhi, Northeast Madhya Pradesh, Bihar, Chhattisgarh, South Madhya Maharashtra, Tamil Nadu .

Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 30.10.2013

Actual Mean Maximum Temperature (°C) in India for the week ending 30.10.2013

Mean Maximum Temperature (°C) Anomaly in India for the week ending 30.10.2013

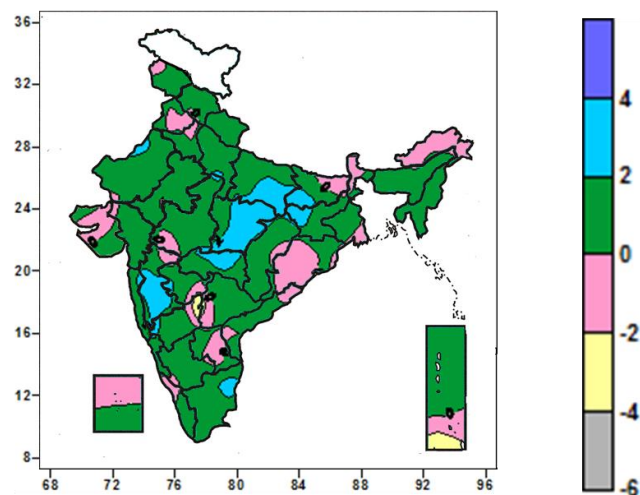
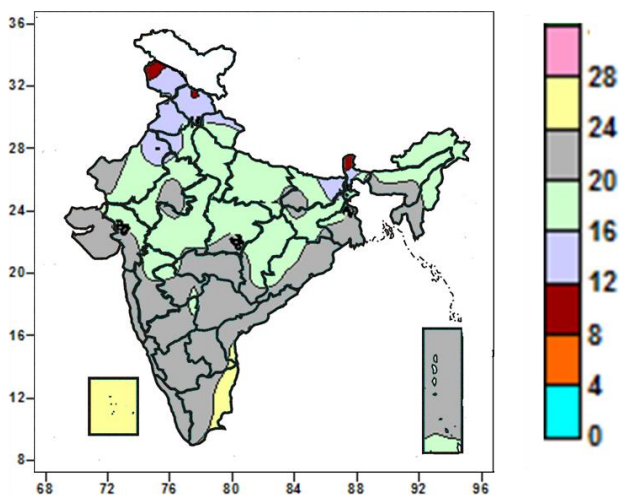


- 28 to 36°C over entire country (except Jammu & Kashmir, Himachal Pradesh, Chattisgarh, Sub-Himalayan West Bengal, Jharkhand, some parts of Bihar, Orissa, Arunachal Pradesh, Coastal Andhra Pradesh).
- 20 to 28°C over many parts of Jammu & Kashmir, Himachal Pradesh, Chattisgarh, Sub-Himalayan West Bengal, Jharkhand, some parts of Bihar, Orissa, Arunachal Pradesh, Coastal Andhra Pradesh.

- 2 to 4°C over some parts of Jammu & Kashmir, Himachal Pradesh.
- -2 to 2°C over all parts of country (except many parts of Jharkhand, Gangetic West Bengal, Orissa, Chattisgarh, Telangan, some parts of Jammu & Kashmir, Himachal Pradesh, East Madhya Pradesh Coastal Andhra Pradesh, North Interior Karnataka).
- -4 to -2°C over many parts of Jharkhand, Gangetic West Bengal, Orissa, Chattisgarh, Telangan, some parts of East Madhya Pradesh Coastal Andhra Pradesh, North Interior Karnataka.

Actual Mean Minimum Temperature (°C) in India for the week ending 30.10.2013

Mean Minimum Temperature (°C) Anomaly in India for the week ending 30.10.2013

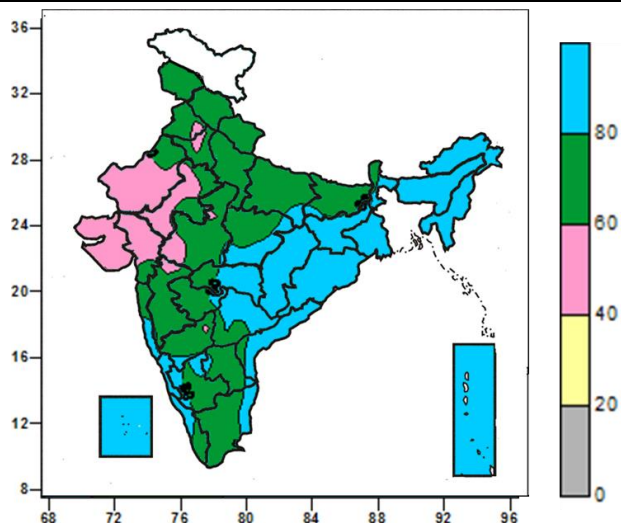


- 24°C over many parts of Lakshadweep, some parts of Coastal Andhra Pradesh, Coastal Tamil Nadu.
- 16 to 24°C all over the country (except Lakshadweep Jammu & Kashmir, Himachal Pradesh, Punjab, Gangetic West Bengal, some parts of Uttarakhand, Haryana, West Rajasthan, Gujarat, Coastal Andhra Pradesh, Coastal Tamil Nadu).
- 8 to 16°C over many parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Gangetic West Bengal, some parts of Uttarakhand, Haryana, West Rajasthan, Gujarat.

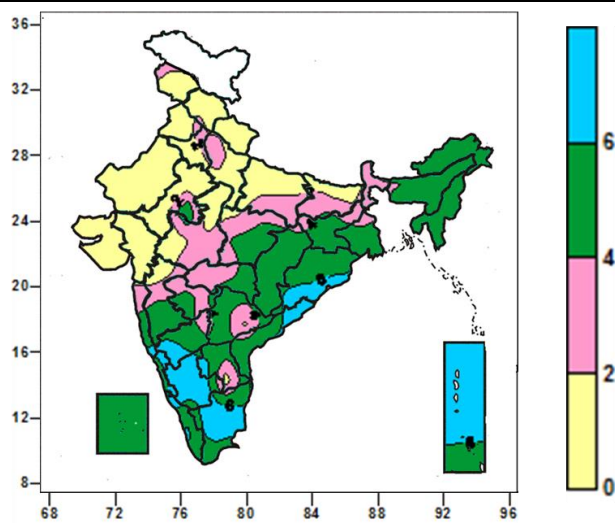
- 2 to 4°C over many places of East Uttar Pradesh, East Madhya Pradesh, Konkan, West Madhya Pradesh, Madhya Maharashtra, some parts of West Rajasthan, Bihar, Jharkhand, Marathwada, Tamil Nadu.
- -2 to 2°C over all parts of country (except many places of East Uttar Pradesh, East Madhya Pradesh, Konkan, West Madhya Pradesh, Madhya Maharashtra, some parts of West Rajasthan, Bihar, Jharkhand, Marathwada, Tamil Nadu North Interior Karnataka, Telanagana, Andaman & Nicobar Islands).
- -4 to -2°C over some parts of North Interior Karnataka, Telanagana, Andaman & Nicobar Islands.

Relative Humidity (%) over India for the week ending 30.10.2013

Cloud amount (okta) over India for the week ending 30.10.2013

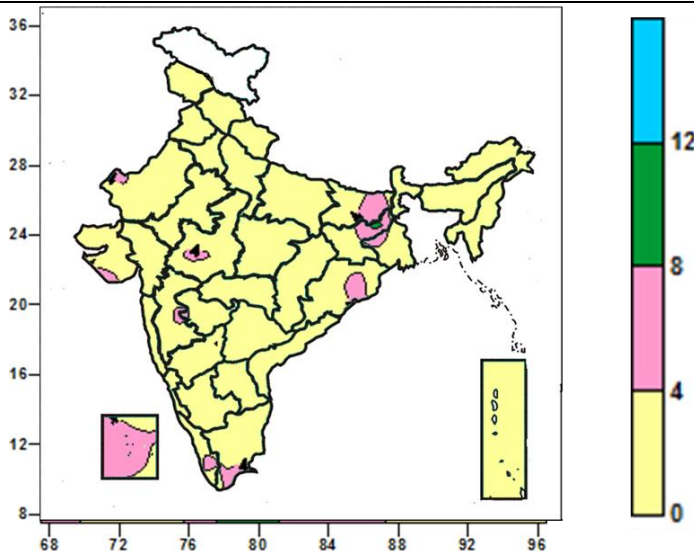


- 60 to 100% over entire country (except Rajasthan, Gujarat, Saurashtra & Kutch, some parts Punjab, Haryana, West Madhya Pradesh, South Madhya Maharashtra, North Interior Karnataka).
- 40 to 60% over many parts of Rajasthan, Gujarat, Saurashtra & Kutch, some parts Punjab, Haryana, West Madhya Pradesh, South Madhya Maharashtra, North Interior Karnataka.



- 6 to 8 okta over many parts of Goa, South Interior Karnataka, Tamil Nadu, Andaman & Nicobar Islands, some parts of Coastal Orissa, North Coastal Andhra Pradesh, Raylaseema, Coastal & North Interior Karnataka, Kerala, Lakshadweep.
- 2 to 6 okta over entire country (many parts of North India, Gujarat, Saurashtra & Kutch, Goa, South Interior Karnataka, Tamil Nadu, Andaman & Nicobar Islands, some parts of Bihar, West Madhya Pradesh, Madhya Maharashtra, Raylaseema Coastal Orissa, North Coastal Andhra Pradesh, North Interior Karnataka, Kerala, Lakshadweep).
- 0 to 2 okta over many parts of North India, Gujarat, Saurashtra & Kutch, some parts of Bihar, West Madhya Pradesh, Madhya Maharashtra, Raylaseema.

Wind speed (knots) over India for the week ending 30.10.2013



- 8 to 12 knots over some parts of Jharkhand.
- 4 to 8 knots over many parts of Lakshadweep, some parts of Bihar, Jharkhand, Saurashtra, West Rajasthan, Konkan, Gangetic West Bengal, Orissa, Coastal Tamil Nadu, Kerala.
- 0 to 4 knots over entire country (except many parts of Lakshadweep, some parts of Bihar, Jharkhand, Saurashtra, West Rajasthan, Konkan, Gangetic West Bengal, Orissa, Coastal Tamil Nadu, Kerala).

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 04th November, 2013)

- Rain/snow would occur at a few places over Jammu & Kashmir during next 24 hours and decrease thereafter. Rain/snow would also occur at isolated places over Himachal Pradesh and Uttarakhand during next 48 hours and mainly dry thereafter.
- Rain/thundershowers would occur at isolated places over Haryana and west Uttar Pradesh during next 24 hours and mainly dry thereafter.
- Rain/thundershowers would occur at a few places over Tamilnadu and Kerala during next 24 hours and at many places thereafter. Rain/thundershowers would occur at isolated places over Rayalaseema, coastal Andhra Pradesh and Karnataka during next 24 hours and increase thereafter.
- Rain/thundershowers would occur at isolated places over Andaman & Nicobar Islands during next 48 hours and increase thereafter.
- Rain/thundershowers would occur at isolated places over Assam & Meghalaya, Telangana and Lakshadweep.
- Rain/thundershowers would occur at a few places over Arunachal Pradesh during next 24 hours and decrease thereafter.
- Fog may occur at isolated places over east Uttar Pradesh and north Bihar during next 48 hours.
- Fog may occur at isolated places over Punjab, Haryana & Delhi and west Uttar Pradesh from 02nd November.
- Weather would be mainly dry/dry over rest of the country.

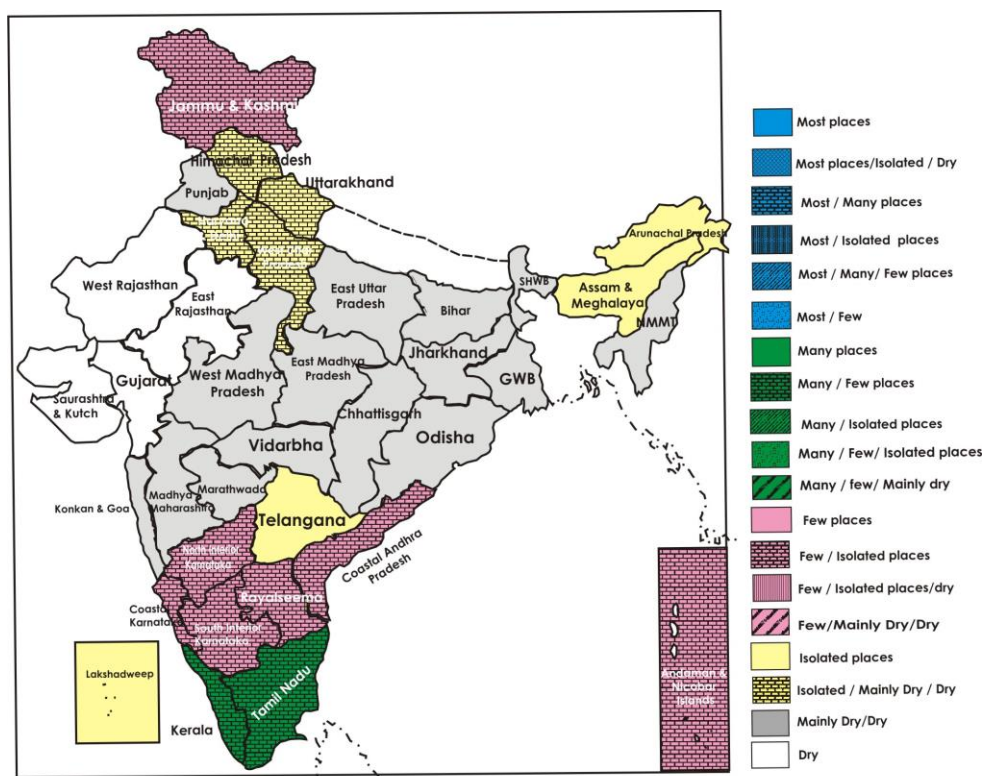
Weather Warning during next 3 days

- 01 November:** No weather warning
02 November: No weather warning.
03 November: No weather warning.

Weather Outlook for subsequent 4 days from 04th to 07th November, 2013

- Rain/thundershowers would occur at many places over Tamilnadu and Kerala and at a few places over Andhra Pradesh, Karnataka, south Konkan & Goa and south Madhya Maharashtra.
- Rain/snow would occur at few places over Jammu & Kashmir and at isolated places over Himachal Pradesh from 5th November onwards.
- Fall in minimum temperatures by 2-3^oC over northwest India.
- Weather would be mainly dry/dry over rest parts of the country.

Weather Forecast Map (Valid upto 0830 hours of 04th November, 2013)



Salient Advisories

East Region:

- In Odisha, drain out excess water from standing crop fields. Undertake harvesting of matured rice, maize and groundnut and picking of cotton. Sun dry harvested produce and keep in safe places.
- In North Eastern Plateau Zone of Odisha, continue sowing of mustard, green pea, groundnut and *rabi* vegetable crops, *pyra* crops.
- In Laterite and Red Soil Zone of West Bengal, harvest matured *aman* rice and chilli crops. Undertake transplanting of cabbage and cauliflower. After the harvest of *aman* rice, prepare land for planting of potato.
- In North West Alluvial Plain Zone of Bihar, continue sowing of pea, lentil, gram, rajmah and planting of potato. Continue harvesting of matured rice crop. Prepare land for sowing of *rabi* maize. Undertake inter-cultural operations in the tobacco, September pigeon pea, sweet potato and vegetable crops.
- In Western Plateau Zone of Jharkhand, continue sowing of pea, green pea, mustard, gram, wheat, linseed and lentil. Continue planting of potato.
- In Central & North Eastern Plateau Zone of Jharkhand, continue sowing of toria, green pea and mustard, planting of potato and marigold, nursery sowing of tomato, cabbage and cauliflower.

South Region

- In rice crop, apply 15-20 kg urea + 10 kg Muriate of Potash (MOP) as booster dose soon after draining of water and spray multi K (enriched Potassium Nitrate) or KNO_3 (Potassium nitrate) @ 10 g per litre of water in North Coastal Andhra Pradesh. Undertake propping in lodged sugarcane and apply 50 kg urea and 25 kg MOP / acre as booster dose. If wilting symptoms are observed in cotton and red gram crops, spray/drench with Copper oxy chloride @ 3g/ per litre of water at the base of the affected plants. Due to inundation of water in the rice fields there is chance of pest and diseases attack like sheath blight, blast, neck blast and sheath rot. If observed undertake appropriate plant protection measures. Application of fertilizers and chemicals may be undertaken on a non-rainy day
- Undertake harvesting of groundnut in clear weather. Undertake nursery sowing of *rabi* rice and sowing of *rabi* pulses in Nellore district in the Southern Zone of Andhra Pradesh.
- Continue sowing of *rabi* jowar and Bengal gram; undertake sowing of wheat and planting of sugarcane in North East Transition Zone of Karnataka.
- Continue sowing of puncha rice in the Problem Area Zone in Kerala. Complete transplanting of *Mundakan* rice in Northern and Southern zone of Kerala.
- In Western Zone of Tamil Nadu, undertake intercultural operations and thinning in cotton and maize after current spells of rain.

Northeast Region

- In Lower Brahmaputra Valley Zone of Assam, continue sowing of niger, transplanting of brinjal, mid cauliflower, cabbage and knolkhol and land preparation for nursery sowing of onion and sowing pumpkin, spinach and beet.
- In Barak Valley Zone of Assam, complete transplanting of cabbage, cauliflower, knolkhol. Continue planting of potato and sowing of rapeseed and mustard.
- In Central Brahmaputra Valley Zone of Assam, continue field preparation and sowing of mustard and wheat. Undertake transplanting of the seedlings of cole crops, which are 30-35 days old. Undertake field preparation and planting of potato.
- In Sub Tropical Hill Zone of Arunachal Pradesh, continue field preparation and sowing of pea and planting of potato.
- In Meghalaya, continue nursery raising and transplanting of cauliflower and winter vegetables, land preparation and planting of potato and sowing of rapeseed and mustard. Also continue harvesting of matured groundnut.
- In Sub Tropical Plain Zone of Manipur, continue nursery raising of cole crops and planting of potato. Drain out water from rice fields 10 days before harvesting of rice. Undertake land preparation and sowing of rapeseed, mustard and pea.
- In Mild Tropical Hill Zone of Mizoram, continue nursery raising and transplanting of cole crops and tomato.
- In Mild Tropical Hill Zone of Nagaland, continue nursery raising and transplanting of cabbage and planting of potato. Complete sowing of mustard at the earliest.
- In Mid Tropical Plain Zone of Tripura, continue land preparation and planting of potato and sowing of *rabi* maize. Undertake sowing of toria, sesame and lentil. Continue harvesting of *aman* rice.

West Region

- In Vidarbha continue intercultural operation and application of fertilizers in vegetables. Continue harvesting of already matured *kharif* rice. Continue sowing of gram with the help of residual moisture in Central Vidarbha Zone and undertake sowing of gram, safflower and linseed in Eastern Vidarbha zone.
- In Konkan continue intercultural operations and application of fertilizers in vegetable fields and mango, cashew and sapota orchards. Continue harvesting of mid late rice varieties and start the harvesting of late maturing varieties in morning hours.
- In Madhya Maharashtra continue intercultural operations and application of fertilizers in sugarcane and vegetable crops like onion, brinjal, tomato, okra and guar. Complete harvesting of groundnut and jowar. Continue harvesting of already matured *adsali* and pre-seasonal sugarcane. Complete sowing of *rabi* jowar and safflower and planting of pre seasonal sugarcane. Continue sowing of gram, wheat and green pea. Complete preparatory tillage in Western Ghat region for transplanting of tomato, brinjal, chilli and undertake nursery sowing of *rabi* onion.
- In Marathwada continue intercultural operations and application of fertilizers in vegetables, orchards and sugarcane. Complete harvesting of groundnut and jowar. Continue harvesting of already matured *adsali* and pre-seasonal sugarcane. Start picking of fully opened cotton bolls. Complete sowing of *rabi* jowar, safflower, wheat and gram. Continue planting of pre seasonal sugarcane. Do not apply irrigation during boll opening.
- Carryout land preparation and sowing of wheat, gram and mustard in Bhal and Coastal Zone of Gujarat, mustard in North West Zone of Gujarat and for sowing of *rabi* crops like wheat and mustard and planting of potato in Middle Gujarat Zone.
- Continue sowing of chickpea, mustard and garlic in North Saurashtra Zone and sweet corn in South Gujarat Zone, Middle Gujarat and South Gujarat Heavy Rainfall Zone. Complete transplanting of cabbage, cauliflower and onion in Middle Gujarat Zone. Undertake transplanting of cabbage and cauliflower in Bhal and Coastal Zone of Gujarat

Central Region

- In Bundelkhand Zone of Madhya Pradesh, complete sowing of safflower and undertake sowing of mixed crops of chickpea, mustard, lentil, pea and linseed and local and early maturing variety of wheat.
- In Central Narmada Valley Zone, Jhabua Hill Zone of Madhya Pradesh, continue land preparation and sowing of wheat till 15th November under semi-irrigated condition and from 10th to 25th November in irrigated situation. Continue sowing of safflower and linseed in rainfed condition and planting of potato.
- In Northern Hill Zone of Chattisgarh, continue harvesting of matured rice crop, continue sowing of toria, mustard, green peas and planting of potato and winter sugarcane.
- In Chattisgarh Plain Zone, continue harvesting of matured rice crop and upland soybean and undertake sowing of gram in upland area after harvesting of soybean crop

North Region

- In Sub Tropical Zone of Jammu & Kashmir, undertake sowing of wheat and chickpea. Complete sowing of mustard / toria and harvesting of rice, maize, bajra and moong. Undertake transplanting of mature seedlings of cauliflower, cabbage and tomato.
- In Bhabar and Tarai Zone of Uttarakhand, continue sowing of wheat, barley, oat, barseem in mid and high hills. Temperature is favourable for sowing of pulses viz. chickpea, pea, rajmah in this week. Complete sowing of mustard, rai, coriander, spinach, radish, fenugreek and nursery raising of onion, tomato and planting of autumn sugarcane.
- In Hill Zone of Uttarakhand, undertake land preparation and sowing of wheat and continue sowing of barley, garlic, vegetables like turnip, radish, palak, rai and planting of onion.
- In Mid Hills Sub-Humid Zone of Himachal Pradesh continue sowing of winter season green vegetable crops and preparation of nursery of onion and cole crops.
- In Semi Arid Eastern Plain Zone of Rajasthan continue sowing of gram and complete sowing of irrigated gram. In Southeastern Humid Plain Zone of Rajasthan, undertake sowing of wheat, gram, sarson.
- In Sub Humid Southern Plain and Aravali Hill Zone of Rajasthan undertake sowing of wheat, continue sowing of barley, mustard, gram and nursery raising of chilli, brinjal and tomato.
- In Punjab, complete harvesting of rice and undertake sowing of wheat desi varieties of radish and turnip. It is the best time for planting of potato and garlic.
- In Western Zone of Haryana complete sowing of mustard/ raya crop and harvesting of rice.
- In West Uttar Pradesh, undertake sowing of wheat and gram in non-irrigated areas, undertake planting of potato and winter season sugarcane and maize. Undertake sowing of gram, pea lentil, barley and barseem.
- In East Uttar Pradesh, undertake sowing of wheat, mustard and prepare land for early potato.

Detailed Zonewise Agromet Advisories

NORTH INDIA [Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh & Rajasthan]



Rice



Groundnut



Sugarcane



Maize



Jowar

- **Realised Rainfall:** No significant rainfall occurred over the states of the region during last week.
- **Weather Forecast:** Rain/snow would occur at a few places over Jammu & Kashmir during next 24 hours and decrease thereafter. Rain/snow would also occur at isolated places over Himachal Pradesh, Uttarakhand, during next 48 hours. Rain/thundershowers would occur at isolated places over Haryana and West Uttar Pradesh during next 24 hours and mainly dry thereafter. Fog may occur at isolated places over east Uttar Pradesh during next 48 hours and over isolated places over Punjab, Haryana, Delhi, West Uttar Pradesh from 2nd November.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/snow would occur at a few places over Jammu & Kashmir, isolated places over Himachal Pradesh from 5th November onwards. Fall in minimum temperatures by 2-3°C over plains of northwest India.
- **Advisory :**
 - In Sub Tropical Zone of Jammu & Kashmir, undertake sowing of wheat and chickpea. Complete sowing of mustard / toria and harvesting of rice, maize, bajra, moong and mash. Undertake transplanting of mature seedlings of cauliflower, cabbage and tomato.
 - In Intermediate zone of Jammu & Kashmir, undertake sowing of wheat, continue sowing of toria, gobhi sarson, oat, mustard, barley, field pea.
 - In Bhabar and Tarai Zone of Uttarakhand, continue sowing of wheat, barley, oat, barseem in mid and high hills. Temperature is favourable for sowing of pulses (viz. chickpea, pea, rajmah in this week. Complete sowing of mustard, rai, coriander, spinach, radish, fenugreek and nursery raising of onion, tomato and planting of autumn sugarcane.
 - In Hill Zone of Uttarakhand, undertake land preparation and sowing of wheat and continue sowing of barley, garlic, vegetables like turnip, radish, palak, rai and planting of onion.
 - In Mid Hills Sub-Humid Zone of Himachal Pradesh continue sowing of winter season green vegetable crops and preparation of nursery of onion and cole crops.
 - In Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh, continue sowing of barley at high altitude, transplanting of cauliflower, sowing of Gobhi sarson and early peas.
 - In Semi Arid Eastern Plain Zone of Rajasthan continue sowing of gram and complete sowing of irrigated gram. In Southeastern Humid Plain Zone of Rajasthan, undertake sowing of wheat, gram, sarson.
 - In Sub Humid Southern Plain and Aravali Hill Zone of Rajasthan undertake sowing of wheat, continue sowing of barley, mustard, gram and nursery raising of chilli, brinjal and tomato.
 - In Irrigated North Western Plain Zone of Rajasthan, undertake sowing of sarson, gram, barley upto 5th November.
 - In West Uttar Pradesh, undertake sowing of wheat and gram in non-irrigated areas, undertake planting of potato and winter season sugarcane and maize. Apply irrigation in toria and mustard. Undertake sowing of gram, pea lentil, barley and barseem.
 - In East Uttar Pradesh, undertake sowing of wheat, mustard and prepare land for early potato.
 - In Delhi undertake harvesting of mature rice crop and sowing of wheat crop. Undertake sowing of gram, lentil, pea, mustard, carrot, oat and barseem. may be done in this week. Weather is suitable for nursery sowing of *rabi* onion, planting of potato and garlic. Transplanting of mature seedlings of cauliflower, cabbage, broccoli and tomato may also be done in raised beds.
 - In Punjab and Haryana it is advised to complete harvesting of paddy crop and undertake sowing of wheat crop.
 - In Sub Montane Undulating Zone of Punjab, undertake sowing of gobhi sarson, taramira and African

sarson.

- In Central Plain Zone of Punjab, it is the right time for nursery sowing of *rabi* onion and tomato. Start sowing of desi varieties of radish and turnip. It is the best time for planting of potato and garlic.
- In Western Zone of Haryana complete sowing of mustard/raja crop with certified seeds.
- In Sub Tropical Zone of Jammu & Kashmir, prevailing weather conditions are favourable for the incidences of flea beetle in toria crop under such situation, it is advised to spray the crop with Carbaryl 50 WP @ 30 gm /15 litres of water or Malathion @ 7.5ml in 15 litres of water on a non rainy day.
- Stages of major crops are mentioned in Annexure I.
- Varieties are mentioned in Annexure III.

- **Floriculture**

- **Animal Husbandry**

- In Mid Hills Sub-Humid Zone and Sub-Montane & Low-Hills Sub-Tropical Zone of Himachal Pradesh, vaccinate animals against Foot and Mouth disease.

CENTRAL INDIA [M.P., CHHATTISGARH]



Rice



Sugarcane



Maize

- **Realised Rainfall:** Significant rainfall occurred in all districts of Chhattisgarh except Jashpurnagar, Mahasumud, Raigarh, Raipur and Surguja and no significant rainfall occurred in Madhya Pradesh except in Anuppur and Dindori districts of east Madhya Pradesh during the week.
- **Weather forecast:** Weather would be mainly dry/dry over the region.
- **Weather Warning:** Nil
- **Weather Outlook:** Weather would be mainly dry over the region
- **Advisories:**
- In Bundelkhand Zone of Madhya Pradesh, complete sowing of safflower and undertake sowing of mixed crops of chickpea, mustard, lentil, pea and linseed and local and early maturing variety of wheat.
- In Central Narmada Valley Zone, Jhabua Hill Zone of Madhya Pradesh, continue land preparation and sowing of wheat till 15th November under semi-irrigated condition and from 10th to 25th November in irrigated situation. Continue sowing of safflower and linseed in rainfed condition and planting of potato.
- In Kymore Plateau Zone and Satpura Hill Zone, Gird Zone and Malwa Plateau Zone of Madhya Pradesh, continue sowing of peas, sarson, masoor and toria and nursery preparation for cauliflower and cabbage.
- In Northern Hill Zone of Chattisgarh, continue harvesting of matured rice crop, continue sowing of toria, mustard, green peas and planting of potato and winter sugarcane.
- In Chattisgarh Plain Zone, continue harvesting of matured rice crop and upland soybean and undertake sowing of gram in upland area after harvesting of soybean crop.
- In Kymore Plateau Zone and Satpura Hill Zone of Madhya Pradesh, weather conditions are favourable for the attack of leaf curl disease in chilli and tomato crops; If found, it is advised to spray Methyl Demeton 2.0 ml. or Imidachloprid 1/2 ml. per litre of water for their control.
- Stages of major crops are mentioned in Annexure I.
- Varieties are mentioned in Annexure III
- **ANIMAL HUSBANDRY & POULTRY**
- In Madhya Pradesh, vaccinate the catles against H.S., B.Q. and FMD diseases and also deworming in cattles and goats. Use potassium permanganate @ 5 ml per liter of water for infected animals.

EAST INDIA [JHARKHAND, BIHAR, ORISSA, WEST BENGAL & SIKKIM]



Rice



Sugarcane



Maize



Groundnut



Turmeric

- **Realised Rainfall:** Significant rainfall occurred in all districts of Odisha except Bargarh districts, in all districts of Gangetic West Bengal and Sikkim and in many district of Jharkhand except Garhwa, Giridh, Hazaribaug, Koderma, Latehar, Palamau and Ramgarh diatricts. Significant rainfall also occurred in Banka and Bhagalpur districts of Bihar and in Jalpaiguri and Malda districts of Sub Himalayan West Bengal during last week.
- **Weather Forecast:** Weather would be mainly dry over the region. Fog may occur at isolated places over North Bihar during next 48 hours.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be dry or mainly dry over the region.
- **Advisories:**
 - In Odisha, drain out excess water from standing crop fields. Undertake harvesting of matured rice, maize and groundnut and picking of cotton. Dry harvested produce and keep in safe places.
 - In East and South Eastern Coastal Plain Zone of Odisha, undertake nursery raising and transplanting of cabbage, cauliflower and tomato and nursery raing of onion and sowing of mustard, groundnut, green pea, beans and cluster beans.
 - In North Eastern Plateau Zone of Odisha, continue sowing of mustard, green pea, groundnut and *rabi* vegetable crops, pyra crops.
 - In Laterite and Red Soil Zone of West Bengal, harvest matured *aman* rice and chilli crops. Undertake nursery preparation and transplanting of cabbage and cauliflower. After the harvest of *aman* rice, prepare land for planting of potato.
 - In New Alluvial Zone of West Bengal, harvest *aman* rice. Undertake nursery raising and transplanting of cauliflower and cabbage and sowing of mustard.
 - In Coastal Saline Zone of West Bengal, undertake transplanting of cabbage, cauliflower and tomato and sowing of early variety mustard.
 - In North West Alluvial Plain Zone of Bihar, continue sowing of pea, lentil, gram, rajmah and planting of potato. Continue harvesting of matured rice crop. Prepare land for sowing of *rabi* maize. Undertake inter-cultural operations in the tobacco, September pigeon pea, sweet potato and vegetable crops.
 - In North East Alluvial Plain Zone of Bihar, continue harvesting of rice crop and undertake land preparation for sowing of *rabi* maize. Prepare field and undertake sowing of *rabi* crops like gram, lentil, lathyrus, peas and autumn sugarcane. Continue harvesting of sugarcane, sowing of mustard and fodder crop like berseem. Undertake intercultural operations in September sown toria, arhar, yam bean and tobacco. Start transplanting of winter vegetables like cauliflower, cabbage, chilli, tomato and brinjal etc.
 - In South Bihar Alluvial Zone, continue harvesting of matured rice crop. Complete sowing of winter maize, sunflower, mustard, toria etc. and planting of potato. Continue transplanting of cauliflower and nursery raising of late variety of cauliflower. Undertake sowing of fodder crop like barseem, lucern and oat.
 - In Western Plateau Zone of Jharkhand, continue sowing of pea, green pea, mustard, gram, wheat, linseed and lentil. Continue planting of potato.
 - In Central & North Eastern Plateau Zone of Jharkhand, continue planting of potato and marigold, nursery sowing of tomato, cabbage and cauliflower, sowing of bell pepper, toria, green pea and mustard.
 - In South Eastern Plateau Zone of Jharkhand, continue sowing of green pea, mustard, nursery raising and transplanting of winter season vegetables like brinjal, cabbage, cauliflower, tomato, capsicum etc. Undertake intercultural operations in toria and pigeon pea. Undertake nursery raising of onion.
 - In South Eastern Plateau Zone of Jharkhand, timely transplanted rice crop is at milk to soft dough stage. Due to probability of high humidity in coming days, occurrence and spreading of False Smut disease is likely to be more intense in rice; spray Tilt @ 1 ml per liter of water during morning time.

- Due to hot and humid weather, there is a chance of spread of sheath blight in New alluvial Zone of West Bengal. As a control spray Carbendazim @1.5 g / litre of water.
- Due to present temperature and humidity conditions in Terai zone, there is a possibility of downy mildew in cucumber. To manage the disease, spray Metalaxyl 8% + Mancozeb 64% @ 1-1.5 g / litre of water.
- In Western Undulating Zone of Odisha, there is chance of stem borer attack in rice; spray monocrotophos / chloropyriphos @ 2 ml / litre of water. To control BPH, spray Buprofezin 25% SC @ 800 ml / ha.
- In Mid Central Table Land Zone of Odisha, Sheath rot has been noticed in patches on paddy crop. The current high humidity is favourable for spreading to more areas. Apply MOP @ 25 kg / ha after draining the water.
- In North East Alluvial Plain Zone of Bihar, present weather condition is congenial for attack of leaf eating caterpillar and cut worm; manually collect and destroy the larvae. If the attack is severe, spray Imidacloprid 17.8% SL @ 0.05%.
- Stages of major crops are mentioned in Annexure I.
- Varieties are mentioned in Annexure III.

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



Sugarcane



Rice



Groundnut



Maize



Cucurbits

- **Realised Rainfall:** Significant rainfall occurred in all districts of Arunachal Pradesh except East kameng, in all districts of Assam except Darrang, Dhubri, Goalpara, Kamrup, Morigaon, Nagaon, Sonitpur, Udalgiri and Karbi Anglong districts. Significant rainfall also occurred in Ribhoi, South Garo Hills and West Garo Hills districts of Meghalaya, Aizwal, Lunglei, Champhai, Kolasib and Saiha districts of Mizoram, Churachandapur district of Manipur, Kohima district of Nagaland and Dhalai district of Tripura during last week.
- **Weather Forecast:** Rain / thundershowers would occur at a few places over Arunachal Pradesh during next 24 hours and decrease thereafter. Rain / thundershowers would occur at isolated places over Assam and Meghalaya. Weather would be mainly dry / dry over rest part of the region.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be mainly dry / dry over the States of the region.
- **Advisories:**
 - Maintain standing water in *sali* rice in Assam and Meghalaya, regular WRC rice in Arunachal Pradesh and low land rice in Nagaland, wherever crops are at flowering / grain formation stage. Drain out water from the fields of *aman* rice in Tripura 10-15 days before harvesting.
 - In Hill Zone of Assam, continue transplanting of winter vegetables and continue land preparation and sowing of rapeseed and mustard.
 - In Lower Bramhaputra Valley Zone of Assam, continue sowing of niger, transplanting of brinjal, mid cauliflower, cabbage and knolkhol and land preparation for nursery sowing of onion, pumpkin, spinach beet.
 - In Barak Valley Zone of Assam, complete transplanting of cabbage, cauliflower, knolkhol. Continue planting of potato and sowing of rapeseed and mustard.
 - In Central Bramhaputra Valley Zone of Assam, continue field preparation and sowing of mustard and wheat. Undertake transplanting of the seedlings of cole crops, which are 30-35 days old. Undertake field preparation and planting of potato.
 - In North Bank Plain Zone of Assam, continue land preparation and sowing of rapeseed and mustard, planting of potato and nursery sowing and transplanting of cole crops.
 - In Sub Tropical Hill Zone of Arunachal Pradesh, continue field preparation and sowing of pea and planting of potato.
 - In Meghalaya, continue nursery raising and transplanting of cauliflower and winter vegetables, land preparation and planting of potato and sowing of rapeseed and mustard. Also continue harvesting of matured groundnut.

- In Sub Tropical Plain Zone of Manipur, continue nursery raising of cole crops and planting of potato. Drain out water from rice fields 10 days before harvesting of rice. Undertake land preparation and sowing of rapeseed, mustard and pea.
- In Mild Tropical Hill Zone of Mizoram, continue nursery raising and transplanting of cole crops and tomato.
- In Mild Tropical Hill Zone of Nagaland, continue nursery raising and transplanting of cabbage and planting of potato. Complete sowing of mustard at the earliest.
- In Mid Tropical Plain Zone of Tripura, continue land preparation and planting of potato and sowing of *rabi* maize. Undertake sowing of toria, sesame and lentil. Continue harvesting of *aman* rice. Provide mulching in the field of winter vegetables.
- In Upper Brahmaputra Valley Zone of Assam, there is chance of attack of gundhi bug in *sali* rice; to control, spray Malathion 5% dust @ 20 kg / ha.
- In Central Brahmaputra Valley Zone of Assam, there is chance of rat infestation in *sali* rice. To control these rats, apply Aluminium Phosphide (Celphos / Phostoxin / Quickphos) @ 2-3 tablets / burrow and block the entire burrow with soil.
- In Sub Tropical Hill Zone of Arunachal Pradesh, under present weather condition, large scale attack of Gundhi bug has been reported in WRC rice and likely to continue; for control, apply Malathion dust 5% @ 20 kg / ha on a non rainy day.
- In Mild Tropical Hill Zone of Mizoram, there is chance of occurrence of leaf blotch in turmeric; spray Carbendazim @ 1 g / litre of water or Mancozeb @ 2.5 g / litre of water + 1 ml Sandovit.
- Stages of major crops are mentioned in Annexure I.
- Varieties are mentioned in Annexure III.

• Animal Husbandry

- In Sub Tropical Hill Zone of Arunachal Pradesh, maintain warmth by lighting with filament bulb in the shed of poultry, pigs and cattle.
- In Mild Tropical Hill Zone of Nagaland, for brooder chicks, provide artificial lighting in the shed so as to minimize their mortality.
- The present weather condition in Mild Tropical Plain Zone of Tripura is favourable for infestation of round worm, flukes and tapeworms in cattle. De-worming may be done.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Rice



Groundnut



Cotton



Sugarcane



Cotton

- **Realised Rainfall:** Raigad district in Konkan, Kolhapur and Sangli districts in Madhya Maharashtra, Latur and Osmanabad districts in Marathwada and Chandrapur and Gadchiroli districts in Vidarbha received significant rainfall during last week. No significant rainfall occurred in Gujarat State during last week.
- **Weather Forecast:** Weather would be mainly dry / dry over the region.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain / thundershowers would occur at a few places over south Konkan and Goa and south Madhya Maharashtra. Weather would be mainly dry / dry over remaining parts of the region.

Advisories:

- In Vidarbha continue intercultural operation and application of fertilizers in vegetables. Continue harvesting of already matured kharif rice. Continue sowing of gram with the help of residual moisture in Central Vidarbha Zone and undertake sowing of gram, safflower and linseed in Eastern Vidarbha zone.
- In Konkan continue intercultural operations and application of fertilizers in vegetable fields and mango, cashew and sapota orchards. Continue harvesting of mid late rice varieties and start the harvesting of late maturing varieties in morning hours.
- In Madhya Maharashtra continue intercultural operations and application of fertilizers in sugarcane and vegetable crops like onion, brinjal, tomato, okra and guar. Complete harvesting of groundnut and jowar.

Continue harvesting of already matured adsali and pre-seasonal sugarcane. Complete sowing of rabi jowar and safflower and planting of pre seasonal sugarcane. Continue sowing of gram, wheat and green pea. Complete preparatory tillage in Western Ghat region for transplanting of tomato, brinjal, chilli and undertake nursery sowing of rabi onion.

- In Marathwada continue intercultural operations and application of fertilizers in vegetables, orchards and sugarcane. Complete harvesting of groundnut and jowar. Continue harvesting of already matured adsali and pre-seasonal sugarcane. Start picking of fully opened cotton bolls. Complete sowing of rabi jowar, safflower, wheat and gram. Continue planting of pre seasonal sugarcane. Do not apply irrigation during boll bursting.
- Carryout land preparation and sowing of wheat, gram and mustard in Bhal and Coastal Zone of Gujarat, mustard in North West Zone of Gujarat and for sowing of rabi crops like wheat and mustard and planting of potato in Middle Gujarat Zone.
- Continue sowing of chickpea, mustard and garlic in North Saurashtra Zone and sweet corn in South Gujarat Zone, Middle Gujarat and South Gujarat Heavy Rainfall Zone. Complete transplanting of cabbage, cauliflower and onion in Middle Gujarat Zone. Undertake transplanting of cabbage and cauliflower in Bhal and Coastal Zone of Gujarat.
- Carry out picking of cotton in South Saurashtra Zone and picking of capsules of castor in South Gujarat Zone during early morning hours. Complete harvesting and threshing of early varieties of kharif rice in South Gujarat Heavy Rainfall Zone and sun-dry the harvested rice. Undertake intercultural operations in brinjal and tomato.
- Carry out intercultural operations and hand weeding in castor in South Gujarat Heavy Rainfall Zone. Apply irrigation in castor to avoid moisture stress. Continue planting of sugarcane and transplanting of cauliflower.
- Due to humid weather, there may be infestation of purple blotch and attack of thrips in onion in Pune region; spray Dithane M 45 @ 30 g and Profenofos @ 10 ml at 15 days interval.
- Under prevailing temperature (32-34OC) and humid weather in South Konkan, there may be incidence of mango hopper on new flush and inflorescence; spray Cypermethrin 25 % @ 3 ml per 10 litres of water.
- Weather conditions are favourable for occurrence of mealy bug in cotton in South Gujarat Zone; spray Profenophos 50 EC @ 20 ml / 10 liters of water.
- Stages of major crops are mentioned in Annexure I.

Animal Husbandry

- In Gujarat, spray Deltamethrin or Amitraz @ 2 ml / litre of water for the control of tick and for prevention of foot & mouth disease in animals, do vaccination with FMD vaccine. Maintain proper nutrient supplements in animal's diet.

SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS]



Rice



Sugarcane



Groundnut



Black gram



Cotton

- **Realized rainfall:** Significant rainfall occurred in all the districts of Andhra Pradesh; Coastal Karnataka and North Interior Karnataka; most of the districts in South Interior Karnataka except Chamarajnar, Chickmagalur, Chitradurga, Hassan, Kodagu and Mysore; most of the districts in Kerala except Alapuzha, Kozhikode, Pathanamthitta and Thiruvananthapuram; and Dharmapuri, Kancheepuram, Nilgiris, Perambalur, Thiruvallur, Vellore and Villupuram districts of Tamil Nadu. No significant rainfall occurred in the remaining parts of the region during the week.
- **Rainfall Forecast:** Rain/thundershowers would occur at a few places over Tamilnadu and Kerala during next 24 hours and at many places thereafter. Rain/thundershowers would occur at isolated places over Rayalaseema, coastal Andhra Pradesh and Karnataka during next 24 hours and increase thereafter.
- **Weather Outlook 4 days from 4th November to 8th November:** Rain/thundershowers would occur at many places over Tamilnadu and Kerala and at a few places over Andhra Pradesh and Karnataka

- **Advisory:**

- In Andhra Pradesh, drain out excess water from the standing crops like cotton, chilli, sugarcane, red gram, jowar and Bengal gram. Maintain 5-7 cm standing water in rice crop. Apply 20 kg urea + 10 kg Muriate of potash per acre to rejuvenate cotton and sugarcane crops after draining out excess water. Excess moisture in the fields may lead to pest and disease incidence in the standing crops. If observed undertake appropriate plant protection measures.
- In rice crop, apply 15-20 kg urea + 10 kg Muriate of Potash (MOP) as booster dose soon after draining of water and spray multi K (enriched Pottassium Nitrate) or KNO_3 (Potassium nitrate) @ 10 g per litre of water North Coastal Andhra Pradesh. Undertake propping in lodged sugarcane and apply 50 kg urea and 25 kg MOP / acre as booster dose. If wilting symptoms are observed in cotton and red gram crops, spray/drench with Copper oxy chloride @ 3g/ per litre of water at the base of the affected plants. Due to inundation of water in the rice fields there is chance of pest and diseases attack like sheath blight, blast, neck blast and sheath rot. If observed undertake appropriate plant protection measures. Application of fertilizers and chemicals may be undertaken on a non-rainy day
- Undertake harvesting of groundnut in clear weather. Undertake nursery sowing of *rabi* rice and sowing of *rabi* pulses in Nellore district in the Southern Zone of Andhra Pradesh.
- Continue sowing of *rabi* jowar and Bengal gram; undertake sowing of wheat and planting of sugarcane in North East Transition Zone of Karnataka.
- Undertake harvesting of groundnut and after groundnut harvesting, undertake sowing of pulses in the Southern Transition Zone of Karnataka.
- Undertake sowing of *rabi* jowar, Bengal gram and horse gram in North East Dry Zone of Karnataka.
- Continue new planting of banana and sowing of *puncha* rice in Kottayam district in the Problem Area Zone in Kerala.
- Undertake sowing of *Mundakan* rice in the Central Zone of Kerala. Complete transplanting of *Mundakan* rice in Northern and Southern zone of Kerala. Plough the coconut fields for conserving moisture and undertake planting of banana, vegetables and fodder grass in coconut gardens as intercrops in the Southern Zone of Kerala.
- In Western Zone of Tamil Nadu, undertake interculture operation and thinning in cotton and maize after current spells of rain.
- Spray 1% Bordeaux mixture and undertake mulching in the pepper field, to control quick wilt disease since high relative humidity is congenial for the disease in the Central Zone of Kerala after spells of rain.
- Provide proper drainage in already sown *rabi* Bengal gram fields, as there is chance of incidence of Colletotricum blight in the Scarce rainfall zone of Andhra Pradesh.
- Stages of major crops are mentioned in Annexure I.
- Varieties are mentioned in Annexure III.
- **Animal Husbandry**
- Avoid water leakage in cattle and poultry sheds and protect feeds of animals and poultries from rain to avoid spreading of diseases in the Western Zone of Tamil Nadu. Vaccinate animals to prevent spread of foot and mouth disease in cattle.
- De-worm the animals for round worm and tape worm during the season in the North Western Zone of Tamil Nadu.

Annexure I Stages of Major Crops

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

- Tomato, brinjal, chilli (fruiting/picking), French bean, okra (fruiting/ harvesting), rice (grain formation), maize (harvesting), peas (maturity/harvesting), cauliflower (transplanting), cucurbits viz. khira, bitter gourd, tori (fruiting/maturity), radish, carrot, turnip, beet leaf and fenugreek (direct sowing), gobhi sarson, early peas (sowing), onion (planting), potato (tuber maturity/harvesting), apple (harvesting) in Himachal Pradesh.
- Wheat, barley, oat(sowing), ginger (vegetative), sugarcane (vegetative / active vegetative), sesame in low land area (early vegetative / vegetative), vegetable pea (sowing / germination), toria, chickpea, lentil (sowing/germination), garlic, tomato, mustard (nursery sowing / transplanting), potato(planting / transplanting), Autumn sugarcane(planting), sarson, masoor(field preparation for sowing/sowing), coriander, spinach, radish, fenugreek (sowing/germination) in Uttarakhand.
- Rice (harvesting), wheat (sowing), toria, gobi sarson, mustard (sowing /germination), brown sarson, oat, lentil, berseem (land preparation/sowing), potato(planting), palak, radish, carrot, turnip, garlic, methi, spinach (sowing / germination), pole type beans (vegetative), radish, spinach (transplanting / early vegetative), carrot, turnip (sowing), onion, cole crops (nursery sowing / transplanting), fruit crops (planting) in Jammu & Kashmir.
- Wheat, barley (sowing), sesame(capsule maturity/harvesting), rainfed taramira, toria, gram and mustard, potato (sowing/seedling), tomato, brinjal, chilli (nursery sowing / transplanting), Shimla mirch (early vegetative / vegetative), new sugarcane (early vegetative / vegetative), castor (flowering), cucurbits (sowing), radish, Desi carrot (sowing), cabbage and cauliflower (nursery sowing/transplanting), onion(nursery raising/ transplanting) in Rajasthan.
- Rice (grain maturity/ harvesting), wheat(sowing), *Kharif* maize (maturity), fodder maize, bajra, sorghum and other fodder crops(vegetative / cutting), Lady's finger, chilli and cucurbits crop (flowering / fruiting / picking),brinjal, tomato, chilli, cauliflower and cabbage(vegetative / flowering), soybean (flower initiation/maturity), radish, spinach and coriander (vegetative), guar, bajra (flowering / grain filling), *rabi* onion (nursery sowing), Cucurbitaceous crops (flowering / fruiting / picking), mustard, pea, carrot (land preparation / sowing) in Delhi.
- Jowar, bajra, (flowering/grain filling/ milking/maturity), pigeon pea (vegetative/branching) rice (flowering/early grain formation/maturity/harvest), groundnut, arhar, moong and urad (vegetative/ branching), tomato, brinjal, chilli (fruiting/picking), black gram, green gram (flowering/pod formation), spring sugarcane (active vegetative/grand growth), toria, potato (sowing / sprouting/early vegetative) in Uttar Pradesh.
- New sugarcane (tillering / vegetative), cotton (picking), cucurbits, cowpea (sowing), rice (grain formation / harvesting), black gram, green gram, soybean, arhar (vegetative/pod formation), moong, mash (vegetative) maize (cob formation / cob maturity) sesamum (vegetative), cauliflower (transplanting), potato(land preparation / planting) in Punjab.
- New sugarcane (vegetative), cotton (picking), rice (grain formation/maturity) in Haryana.

CENTRAL INDIA [M.P., CHHATTISGARH]

- *Kharif* rice (grain maturity/harvesting), onion (maturity/harvesting), jowar (grain maturity/harvesting), arhar (flowering/ pod formation), groundnut (pod formation/ maturity), sesame (capsule maturity/ harvesting), sugarcane (grand growth), vegetables (flowering/ fruiting), wheat, chick pea, safflower (sowing) in Madhya Pradesh.
- Sugarcane (elongation), *kharif* rice (grain maturity/harvesting), maize, jowar, (vegetative/flowering), groundnut (pod formation/ maturity), ragi and kodomillet (vegetative), ginger, turmeric, papaya (vegetative), onion (vegetative), vegetable crops (flowering/ fruiting), wheat, chick pea, safflower (sowing) in Chhattisgarh.

EAST INDIA [JHARKHAND, BIHAR, ORISSA, WEST BENGAL &SIKKIM]

- *Kharif* rice (grain maturity / harvesting), maize (cob maturity / harvesting), sugarcane (cane maturity / harvesting), onion (transplanting), urad (grain formation), yam (vegetative), arhar (vegetative), winter maize, sunflower, mustard, toria, pea, lentil, gram, rajmah (sowing), cauliflower, cabbage, chilli, tomato, brinjal (transplanting) in Bihar.
- *Kharif* rice (milk / dough / maturity), maize (cob maturity / harvesting), urad, marua (grain maturity / harvesting), arhar (vegetative), groundnut (grain hardening), onion (vegetative), ginger and turmeric (late vegetative), *kharif* vegetables viz. bhindi, bean, French bean (vegetative / flowering), tomato, cauliflower, cabbage (nursery sowing / transplanting), niger, horse gram (maturity / harvesting), sweet potato (stem elongation), green peas, potato, bell pepper (sowing) in Jharkhand.
- Rice (grain maturity / harvesting), pigeon pea (pod formation / pod maturity), maize (cob formation), groundnut (pod maturity / harvesting), green gram, black gram, cowpea, soybean (flowering / pod formation), cotton (boll maturity / picking), turmeric, ginger, yam (vegetative), *kharif* vegetables (flowering / fruiting), sugarcane (grand growth), banana (vegetative), mustard (sowing / seedling), marigold (planting / early vegetative) and fruit crops (planting) in Odisha.
- *Aman* rice (maturity / harvesting), ginger, turmeric (tuber formation), pigeon pea (vegetative), *kharif* vegetables

(harvesting), brinjal, okra, tomato and chilli (flowering / fruiting / maturity), pointed gourd (fruiting / maturity), tomato (nursery sowing / transplanting), early cabbage & cauliflower (seedbed preparation / sowing / transplanting), winter flower (seedbed preparation) in West Bengal.

- Ginger (vegetative), large cardamom (secondary flowering), *kharif* vegetables (vegetative) in Sikkim.

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

- Sugarcane (Autumn) (planting), *sali* rice (flowering / grain formation), rapeseed and mustard (sowing / early vegetative), sesame (flowering / capsule formation), pigeon pea (flowering / pod formation), green gram and black gram (pod formation / maturity), ginger, turmeric (vegetative), early cauliflower, cabbage, knol-khol, brinjal (transplanting / early vegetative), wheat, niger (sowing), winter vegetables (nursery raising / transplanting), radish, carrot, spinach, beet (seedling), potato (planting) in Assam.
- Regular WRC rice (grain formation / grain maturity), turmeric, ginger (vegetative), cauliflower and cabbage (transplanting / vegetative), radish, (maturity / harvesting), spinach, carrot (vegetative) mustard (vegetative), pea (sowing) and potato (planting / early vegetative) in Arunachal Pradesh.
- *Kharif* rice (grain maturity / harvesting), rapeseed and mustard, pea (sowing), *rabi* vegetables, cole crops (nursery preparation / transplanting), black gram and rice bean (active flowering / pod formation), potato (planting), onion (nursery raising) in Manipur.
- *Sali* rice (grain filling / grain maturity), turmeric and ginger (rhizome formation / rhizome maturity), green gram and black gram (vegetative), groundnut (pod maturity), potato (planting), rapeseed and mustard (sowing), cauliflower and other winter vegetables (transplanting) in Meghalaya.
- Ginger and turmeric (vegetative / rhizome formation), banana (fruiting / maturity / harvesting), cole crops (transplanting) in Mizoram.
- Lowland rice (grain filling / grain maturity), maize (sowing / early vegetative), mustard (sowing), ginger (vegetative), cabbage (transplanting), tomato (early vegetative), potato (planting) in Nagaland.
- *Aman* rice (long duration) (grain maturity / harvesting), *rabi* maize (sowing), toria, sesame, lentil (sowing), winter vegetables (transplanting), early cauliflower, brinjal and radish (vegetative) in Tripura.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- *Kharif* rice (grain maturity / harvesting in mid late varieties and grain maturity in late maturing varieties in Konkan and grain formation / grain maturity/ harvesting in Kolhapur, Nasik (ghat), Pune (west) region and East Vidarbha), cotton (boll development / ball maturity in Madhya Maharashtra, Marathwada and Vidarbha), jowar (grain maturity / harvesting in Madhya Maharashtra, Marathwada and Vidarbha), red gram (flowering / pod formation in Madhya Maharashtra, Vidarbha and Marathwada), groundnut (pod maturity / harvesting in Madhya Maharashtra, Marathwada and Vidarbha), sugarcane (*adsali* and pre seasonal) (maturity / harvesting), *suru* sugarcane (elongation), New *adsali* sugarcane (early tillering in Marathwada and Madhya Maharashtra), pre-seasonal sugarcane (planting in Marathwada and Madhya Maharashtra), *rabi* jowar (germination / early vegetative in Madhya Maharashtra and Marathwada), safflower (sowing / germination in Madhya Maharashtra and Marathwada), rainfed gram (sowing / germination in Madhya Maharashtra and Marathwada), rainfed wheat (land preparation / sowing in Madhya Maharashtra and Marathwada) in Maharashtra.
- *Kharif* rice (maturity / harvesting), castor (spike formation / maturity / harvesting), cotton (boll development / boll maturity / harvesting), vegetables (flowering / fruiting), sugarcane (vegetative / elongation), new sugarcane (planting), wheat, sweet corn, chickpea, mustard, garlic (sowing), cabbage, cauliflower, onion (transplanting) in Gujarat.

SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS]

- *Kharif* crops: early sown groundnut (harvesting), maize (cob development/ harvesting), Bt.cotton (boll maturity), late sown groundnut (pod maturity/harvest), cotton (boll development), pulses (flowering to pod formation in Krishna Godavari Zone of Andhra Pradesh and harvesting in North Coastal Zone), sugarcane (Jan-March planted) (grand growth), late sown *kharif* rice (panicle initiation / emergence to grain formation), castor (capsule development), banana (vegetative), onion (vegetative), *rabi* rice (nursery sowing), *rabi* groundnut and pulses (land preparation/sowing), red gram (vegetative/flowering), bengal gram and jowar (sowing to early vegetative), chillies (fruiting) and vegetables (vegetative) in Andhra Pradesh.
- Sugarcane (grand growth), late samba rice (transplanting/ tillering), thaladi rice (nursery sowing/ transplanting to vegetative), direct sown rice (vegetative), cotton(vegetative), and maize (cob formation/ cob maturity), onion (vegetative), sunflower (flowering/head formation), winter cotton (vegetative), groundnut (pod development / harvesting), vegetables (vegetative) and rainfed cotton, maize, sorghum and pulses (seedling) in Tamil Nadu.
- *Virippu* rice (harvesting), *Mundakan* rice (sowing) in Central Zone, *Puncha* rice (sowing in Kottayam district), arecanut (harvesting), sugarcane (grand growth), Nendran banana (harvesting/ planting), rubber (tapping), *kharif* vegetables (fruiting), pepper (berry maturity), cardamom (harvesting), in Kerala.
- Sugarcane (grand growth), *kharif* crops: ragi (grain formation/maturity), maize (cob maturity/ harvesting), red gram (flowering/pod formation), groundnut (maturity), rice (grain formation), cotton (flowering/boll formation), vegetable crops (flowering/ fruiting), *Rabi* Crops: Bengal gram, sunflower, sorghum, safflower and wheat (sowing) in Karnataka.

Annexure11

• Week by week Rainfall Distribution

| State/Districts | 02.10.13 | | 09.10.13 | | 16.10.13 | | 23.10.13 | | 30.10.13 | |
|--------------------------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
| | Actual | % dep. | Actual | % dep. | Actual | % dep. | Actual | % dep. | Actual | % dep. |
| Arunachal Pradesh | | | | | | | | | | |
| Anjaw | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| Changlang | 17.5 | -77 | 73.7 | -25 | 3.1 | -96 | 24.6 | -58 | 54.3 | 239 |
| Dibang Valley | 3.0 | -96 | 78.0 | 36 | 5.0 | -91 | 92.0 | 238 | 105.0 | 919 |
| East Kameng | 41.5 | -6 | 73.0 | 107 | 0.0 | -100 | 1.2 | -97 | 0.0 | -100 |
| East Siang | 13.1 | -87 | 117.2 | 35 | 4.2 | -87 | 65.7 | 63 | 59.6 | 308 |
| Kurung Kumey | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| Lohit | 11.4 | -79 | 46.5 | -40 | 2.0 | -93 | 23.6 | -31 | 44.5 | 298 |
| Lower Dibang Valley | 20.9 | -70 | 96.1 | 68 | 0.0 | -100 | 78.5 | 189 | 136.2 | 1222 |
| Lower Subansari | ** | ** | ** | ** | ** | ** | 0.0 | -100 | ** | ** |
| Papumpara | 158.7 | 68 | 70.2 | -18 | 0.0 | -100 | 16.1 | -66 | 63.8 | 224 |
| Tawang | 7.0 | -93 | 67.0 | -21 | 9.0 | -84 | 7.0 | -83 | 47.0 | 139 |
| Tirap | 27.4 | -69 | 64.5 | -21 | 0.0 | -100 | 24.3 | -51 | 78.1 | 637 |
| Upper Siang | 59.0 | -50 | 35.0 | -49 | 16.1 | -80 | 76.3 | 32 | 112.2 | 302 |
| Upper Subansari | 9.2 | -78 | 19.2 | 32 | 0.0 | -100 | 34.2 | 9 | 26.8 | 253 |
| West Kameng | 89.3 | -11 | 90.6 | 7 | 0.0 | -100 | 37.7 | -11 | 79.2 | 302 |
| West Siang | 14.7 | -69 | 11.9 | -59 | 6.0 | -81 | 25.2 | -15 | 51.0 | 99 |
| Assam | | | | | | | | | | |
| Baksa | 32.2 | -56 | 20.6 | -64 | 0.0 | -100 | 9.7 | -65 | 34.7 | 224 |
| Barpeta | 29.5 | -60 | 74.0 | 28 | 1.0 | -97 | 15.2 | -46 | 30.2 | 182 |
| Bongaigaon | 3.4 | -96 | 147.4 | 130 | 5.2 | -88 | 2.9 | -91 | 28.6 | 118 |
| Cachar | 12.3 | -82 | 103.5 | 42 | 2.0 | -96 | 8.1 | -69 | 59.8 | 222 |
| Chirang | 17.6 | -79 | 132.1 | 106 | 4.5 | -90 | 11.3 | -64 | 28.4 | 117 |
| Darrang | 37.0 | -3 | 56.0 | 91 | 0.0 | -100 | 5.0 | -70 | 18.0 | 67 |
| Dhemaji | 31.0 | -58 | 22.0 | -57 | 0.0 | -100 | 8.5 | -69 | 21.0 | 67 |
| Dhubri | 61.1 | -14 | 89.2 | 15 | 12.3 | -57 | 0.5 | -97 | 10.2 | -7 |
| Dibrugarh | 63.2 | 12 | 96.5 | 112 | 0.1 | -99 | 39.9 | 72 | 31.4 | 132 |
| Goalpara | 54.9 | -30 | 83.5 | 46 | 4.1 | -91 | 0.0 | -100 | 6.8 | -54 |
| Golghat | 31.2 | 0 | 84.2 | 199 | 2.8 | -92 | 4.9 | -69 | 45.9 | 155 |
| Hailakandi | 7.9 | -87 | 83.3 | 26 | 5.1 | -89 | 16.9 | -5 | 67.2 | 585 |
| Jorhat | 52.3 | 4 | 79.6 | 108 | 0.0 | -100 | 18.6 | 8 | 39.1 | 140 |
| Kamrup(Rural) | 27.5 | -36 | 104.1 | 188 | 0.0 | -100 | 0.1 | -99 | 10.1 | -17 |
| Kamrup(Metro) | 45.3 | 5 | 120.9 | 234 | 0.4 | -98 | 16.5 | -22 | 5.3 | -56 |
| Karbi Anglong | 11.8 | -68 | 62.6 | 66 | 1.9 | -92 | 1.2 | -96 | 9.8 | 60 |
| Karimganj | 52.0 | -23 | 108.3 | -4 | 0.0 | -100 | 9.6 | -39 | 36.0 | 22 |
| Kokrajhar | 41.7 | -56 | 98.0 | 116 | 29.5 | -34 | 1.1 | -98 | 56.0 | 559 |
| Lakhimpur | 40.6 | -45 | 53.1 | 4 | 0.2 | -99 | 24.7 | -10 | 26.9 | 113 |
| Morigaon | 63.8 | 57 | 84.4 | 157 | 2.6 | -94 | 2.3 | -92 | 5.4 | -50 |
| N.C.Hills | 30.0 | -38 | 54.8 | 56 | 0.0 | -100 | 2.3 | -76 | 28.4 | -75 |
| Nowgong | 64.1 | 48 | 102.0 | 165 | 5.9 | -80 | 0.0 | -100 | 4.1 | -78 |
| Nalbari | 26.9 | -41 | 96.2 | 148 | 1.1 | -94 | 5.1 | -74 | 36.7 | 174 |
| Sonitpur | 53.8 | 33 | 53.7 | 112 | 0.0 | -100 | 6.7 | -74 | 14.2 | 2 |
| Sibsagar | 55.5 | 84 | 48.1 | 58 | 0.0 | -100 | 9.4 | -40 | 36.5 | 157 |
| Tinsukia | 37.8 | -22 | 70.0 | 75 | 0.0 | -100 | 29.8 | -9 | 55.7 | 406 |

| | | | | | | | | | | |
|----------------------------|-------|------|-------|-----|------|------|------|------|-------|------|
| Udalgiri | 73.8 | 94 | 46.7 | 59 | 0.3 | -99 | 2.6 | -85 | 13.2 | 22 |
| Meghalaya | | | | | | | | | | |
| East Garo Hills | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| East Khasi Hills | 59.1 | -47 | 274.8 | 184 | 2.4 | -96 | 11.8 | -75 | 24.2 | -36 |
| Jaintia Hills | 96.0 | -42 | 147.0 | -37 | 0.0 | -100 | 14.0 | -79 | 15.0 | -72 |
| Ribhoi | 20.0 | -62 | 71.6 | 110 | 2.7 | -92 | 59.2 | 83 | 51.1 | 202 |
| South Garo Hills | 21.0 | -66 | 81.0 | 13 | 16.0 | -52 | 0.0 | -100 | 23.0 | 65 |
| West Garo Hills | 86.4 | 40 | 50.8 | -29 | 0.4 | -99 | 4.4 | -78 | 0.6 | -96 |
| West Khasi Hills | 12.0 | -84 | 5.0 | -92 | 6.0 | -91 | 0.0 | -100 | ** | ** |
| Mizoram | | | | | | | | | | |
| Aizwal | 49.0 | -41 | 44.8 | -53 | 7.7 | -85 | 38.2 | 10 | 31.6 | -25 |
| Champhai | 43.0 | -22 | 47.0 | -46 | 1.0 | -98 | 12.0 | -64 | 84.0 | 95 |
| Kolasib | ** | ** | 13.0 | -86 | 1.0 | -98 | 47.0 | 60 | 26.0 | -13 |
| Lawngtlai | ** | ** | 56.0 | -40 | 1.0 | -98 | ** | ** | 0.0 | -100 |
| Lunglei | 90.0 | 12 | 55.0 | -42 | 8.0 | -85 | 10.5 | -72 | 106.0 | 215 |
| Mamit | 41.0 | -50 | 50.0 | -48 | 12.0 | -77 | 8.0 | -77 | 12.0 | -71 |
| Saiha | 138.0 | 88 | 65.0 | -33 | 15.0 | -50 | 48.5 | 55 | 119.0 | 289 |
| Serchhip | 9.0 | -87 | 50.0 | -23 | 23.0 | -40 | 1.5 | -94 | 9.0 | -52 |
| Manipur | | | | | | | | | | |
| Bishnupur | 0.0 | -100 | 69.0 | -15 | 0.0 | -100 | 9.0 | -44 | 19.0 | -48 |
| Chandel | 14.0 | -88 | 31.0 | -60 | 0.0 | -100 | 12.0 | -59 | 7.0 | -82 |
| Churachandpur | 24.0 | -66 | 52.0 | -11 | 1.0 | -97 | 6.0 | -62 | 24.0 | -32 |
| Imphal east | 43.4 | 10 | 46.8 | -9 | 0.2 | -99 | 10.1 | -24 | 18.9 | -32 |
| Imphal west | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| Senapati | 14.0 | -72 | 75.0 | 32 | 6.0 | -83 | 2.0 | -88 | 14.0 | -30 |
| Tamenglong | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| Thoubal | 47.0 | 74 | 46.0 | 94 | 3.0 | -84 | 3.5 | -56 | 15.0 | -36 |
| Ukhrul | 104.0 | 85 | 94.0 | 173 | 5.0 | -85 | 4.0 | -65 | 10.5 | -42 |
| Nagaland | | | | | | | | | | |
| Dimapur | 25.5 | 158 | 102.3 | 77 | 0.0 | -100 | 0.0 | -100 | 34.1 | 245 |
| Kephire | 9.0 | -86 | 6.0 | -88 | 2.0 | -93 | 2.5 | -75 | 8.0 | -13 |
| Kohima | 36.9 | -11 | 50.5 | 11 | 5.5 | -82 | 28.6 | 28 | 15.3 | -27 |
| Longleng | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| Mokokchung | 33.0 | 48 | 55.0 | -23 | 9.0 | -50 | 12.0 | -49 | 8.0 | -35 |
| Mon | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| Paren | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| Phek | 45.0 | 9 | 119.0 | 161 | 1.0 | -97 | 18.0 | -20 | 11.5 | -45 |
| Tuensang | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| Wokha | 50.0 | 66 | 117.0 | 127 | 11.0 | -55 | 3.0 | -89 | 4.0 | -75 |
| Zunheboto | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| Tripura | | | | | | | | | | |
| Dhalai | 21.8 | -66 | 68.4 | 10 | 0.0 | -100 | 16.5 | -44 | 5.5 | -81 |
| North tripura | 14.5 | -77 | 65.8 | 7 | 3.0 | -93 | 29.4 | 28 | 58.6 | 142 |
| South tripura | 75.7 | 21 | 109.6 | 93 | 5.7 | -88 | 16.3 | -42 | 15.3 | -37 |
| West tripura | 45.1 | -16 | 138.8 | 114 | 10.1 | -76 | 13.7 | -44 | 11.5 | -51 |
| East Madhya Pradesh | | | | | | | | | | |
| Anuppur | 16.2 | -36 | 115.8 | 460 | 17.8 | 100 | 0.0 | -100 | 36.0 | 634 |
| Balaghat | 5.1 | -81 | 50.2 | 134 | 31.4 | 202 | 0.0 | -100 | 7.2 | -9 |
| Chhatarpur | 9.7 | -28 | 122.7 | 593 | 8.5 | 27 | 0.0 | -100 | 0.0 | -100 |

| | | | | | | | | | | |
|----------------|-------|------|-------|-----|-------|------|------|------|-------|------|
| Bastar | 113.8 | 264 | 10.2 | -65 | 15.2 | -11 | 38.2 | 232 | 60.1 | 401 |
| Bijapur | 21.6 | -37 | 33.3 | 0 | 45.0 | 107 | 7.8 | -46 | 126.3 | 1229 |
| Bilaspur | 102.3 | 306 | 174.1 | 717 | 19.2 | 199 | 3.7 | -69 | 30.3 | 283 |
| Dantewara | 24.6 | -24 | 10.3 | -69 | 36.0 | 79 | 42.4 | 165 | 110.3 | 931 |
| Dhamtari | 56.6 | 214 | 115.8 | 459 | 5.6 | -49 | 25.4 | 142 | 39.4 | 418 |
| Durg | 83.4 | 242 | 65.6 | 208 | 52.1 | 460 | 1.0 | -90 | 19.8 | 164 |
| Janjgir | 128.0 | 406 | 78.8 | 501 | 30.5 | 349 | 1.8 | -81 | 20.9 | 227 |
| Jashpurnagar | 79.9 | 121 | 43.6 | 74 | 103.8 | 631 | 2.6 | -77 | 3.8 | -69 |
| Kanker | 81.1 | 162 | 74.0 | 226 | 45.7 | 213 | 16.3 | 14 | 38.8 | 234 |
| Korba | 66.9 | 157 | 98.0 | 508 | 18.5 | 146 | 0.0 | -100 | 22.1 | 427 |
| Koriya | 18.1 | -14 | 44.0 | 368 | 31.8 | 412 | 5.0 | -18 | 41.2 | 1548 |
| Kawardha | 45.0 | 75 | 63.0 | 151 | 74.0 | 663 | 0.0 | -100 | 58.0 | 695 |
| Mahasumund | 80.6 | 444 | 42.3 | 127 | 23.3 | 97 | 0.5 | -93 | 8.7 | 21 |
| Narayanpur | 61.4 | 146 | 33.7 | 20 | 31.2 | 38 | 7.3 | -34 | 35.1 | 200 |
| Raigarh | 78.2 | 194 | 87.3 | 439 | 21.9 | 81 | 0.0 | -100 | 3.8 | -55 |
| Raipur | 74.2 | 242 | 62.2 | 255 | 10.4 | -14 | 17.9 | 84 | 10.9 | 60 |
| Rajandgaon | 25.3 | 6 | 52.6 | 119 | 32.9 | 210 | 12.8 | 3 | 46.7 | 484 |
| Surguja | 33.4 | 23 | 39.7 | 132 | 35.5 | 299 | 1.3 | -87 | 14.0 | 129 |
| Bihar | | | | | | | | | | |
| Araria | 49.4 | -18 | 62.4 | 79 | 169.2 | 944 | 0.0 | -100 | 0.0 | -100 |
| Arwal | 0.0 | -100 | 11.4 | 2 | 143.2 | 1810 | 0.0 | -100 | 0.0 | -100 |
| Aurangabad | 5.7 | -74 | 43.8 | 170 | 71.2 | 748 | 0.0 | -100 | 2.3 | -54 |
| Banka | 28.8 | -53 | 81.8 | 126 | 184.6 | 1083 | 14.0 | 57 | 21.4 | 219 |
| Begusarai | 49.1 | 23 | 20.0 | -7 | 199.7 | 1838 | 3.0 | -79 | 0.0 | -100 |
| Bhabua | 114.5 | 312 | 28.8 | 50 | 52.6 | 611 | 0.7 | -85 | 0.0 | -100 |
| Bhagalpur | 47.5 | -11 | 15.1 | -55 | 235.0 | 1143 | 44.3 | 195 | 42.6 | 847 |
| Bhojpur | 3.2 | -88 | 55.9 | 144 | 173.4 | 2308 | 66.6 | 1181 | 0.0 | -100 |
| Buxar | 3.8 | -79 | 43.2 | 29 | 105.2 | 1518 | 0.4 | -92 | 0.0 | -100 |
| Darbhanga | 28.5 | -35 | 62.4 | 90 | 143.5 | 1349 | 4.8 | -36 | 0.0 | -100 |
| East Champaran | 4.6 | -88 | 92.4 | 137 | 112.8 | 667 | 22.4 | 220 | 0.0 | -100 |
| Gaya | 9.8 | -70 | 33.2 | 51 | 111.6 | 1495 | 1.0 | -89 | 6.1 | 1 |
| Gopalganj | 14.9 | -52 | 95.3 | 278 | 81.5 | 758 | 53.5 | 430 | 0.0 | -100 |
| Jahanabad | 6.8 | -78 | 8.1 | -48 | 99.5 | 1099 | 0.0 | -100 | 0.0 | -100 |
| Jamui | 20.1 | -64 | 14.9 | -50 | 153.9 | 1215 | 26.1 | 129 | 17.1 | 287 |
| Kathihar | 59.9 | -14 | 14.9 | -58 | 282.1 | 2193 | 20.8 | 70 | 6.7 | 110 |
| Khagadia | 44.8 | -10 | 21.6 | -34 | 124.1 | 848 | 0.4 | -98 | 0.2 | -95 |
| Kishanganj | 58.6 | -7 | 22.8 | -32 | 98.6 | 309 | 0.0 | -100 | 0.0 | -100 |
| Lakhisarai | 35.0 | -30 | 5.0 | -83 | 75.0 | 440 | 0.0 | -100 | 0.0 | -100 |
| Madhepura | 68.9 | 31 | 41.7 | 19 | 259.9 | 1692 | 0.0 | -100 | 0.4 | -83 |
| Madhubani | 17.6 | -52 | 74.8 | 117 | 108.6 | 634 | 7.5 | -56 | 0.0 | -100 |
| Monghyar | 17.7 | -65 | 5.5 | -81 | 167.8 | 1107 | 0.0 | -100 | 2.8 | -53 |
| Muzaffarpur | 6.5 | -83 | 80.5 | 145 | 123.4 | 828 | 26.9 | 327 | 0.0 | -100 |
| Nalanda | 41.6 | 33 | 23.0 | 0 | 123.3 | 1544 | 16.9 | 94 | 0.0 | -100 |
| Nawada | 3.4 | -92 | 25.0 | -5 | 95.7 | 1067 | 2.5 | -70 | 15.3 | 104 |
| Patna | 9.8 | -76 | 27.1 | 0 | 129.1 | 1042 | 32.5 | 460 | 0.0 | -100 |
| Purnea | 42.0 | -41 | 8.0 | -79 | 203.2 | 1211 | 1.8 | -88 | 12.6 | 688 |
| Rohtas | 26.2 | 25 | 36.9 | 65 | 72.7 | 870 | 0.0 | -100 | 0.0 | -100 |
| Saharsha | 26.7 | -58 | 10.4 | -70 | 132.2 | 818 | 0.0 | -100 | 0.0 | -100 |
| Samstipur | 16.8 | -67 | 26.5 | -24 | 169.5 | 1595 | 18.3 | 358 | 0.0 | -100 |

| | | | | | | | | | | |
|---------------------------|-------|------|-------|-----|-------|------|-------|------|-------|------|
| Saran | 12.1 | -70 | 62.9 | 145 | 103.3 | 903 | 86.0 | 1079 | 0.0 | -100 |
| Sheikpura | 26.3 | -18 | 11.0 | -58 | 113.3 | 930 | 7.7 | -35 | 0.7 | -76 |
| Sheohar | 0.0 | -100 | 89.6 | 195 | 59.2 | 345 | 13.6 | 19 | 0.0 | -100 |
| Sitamarhi | 3.0 | -92 | 36.3 | 19 | 97.2 | 631 | 17.0 | 49 | 0.0 | -100 |
| Siwan | 22.5 | -35 | 133.2 | 770 | 102.0 | 1278 | 147.7 | 1723 | 0.0 | -100 |
| Supaul | 23.4 | -52 | 45.0 | 22 | 126.4 | 920 | 0.0 | -100 | 0.0 | -100 |
| Vaishali | 11.4 | -77 | 50.4 | 49 | 97.8 | 743 | 24.5 | 158 | 0.0 | -100 |
| West Champaran | 13.4 | -66 | 25.6 | 7 | 110.5 | 542 | 5.9 | -39 | 0.0 | -100 |
| Jharkhand | | | | | | | | | | |
| Bokaro | 97.4 | 98 | 38.1 | 16 | 221.8 | 1182 | 15.2 | 48 | 39.1 | 483 |
| Chatra | 56.7 | 31 | 71.2 | 175 | 67.3 | 774 | 7.7 | -5 | 23.4 | 655 |
| Deoghar | 60.4 | -4 | 19.2 | -32 | 0.0 | -100 | 3.9 | -74 | 24.9 | 168 |
| Dhanbad | 131.1 | 89 | 49.0 | 25 | 151.4 | 877 | 3.3 | -79 | 41.5 | 400 |
| Dumka | 37.4 | -53 | 68.8 | 35 | 0.0 | -100 | ** | ** | ** | ** |
| East Singbhum | 128.0 | 194 | 34.7 | 53 | 155.7 | 873 | 15.8 | 18 | 102.1 | 1757 |
| Garhwa | 70.8 | 155 | 28.0 | 43 | 46.9 | 178 | 6.0 | 28 | 5.0 | 72 |
| Giridih | 58.3 | -4 | 82.0 | 152 | 136.4 | 1086 | 3.0 | -76 | 18.0 | 210 |
| Godda | 30.7 | -45 | 24.8 | -22 | 194.8 | 1125 | 14.9 | -22 | 27.3 | 876 |
| Gumla | 59.6 | 53 | 88.8 | 267 | 136.7 | 951 | ** | ** | ** | ** |
| Hazaribagh | 73.2 | 77 | 54.9 | 109 | 124.8 | 1035 | 14.9 | -38 | 8.1 | 1 |
| Jamtara | 40.8 | -48 | 60.2 | 15 | 112.9 | 689 | 2.8 | -87 | 44.0 | 358 |
| Khunti | 57.5 | 39 | 17.5 | -35 | 137.0 | 735 | 30.0 | 216 | 56.0 | 657 |
| Koderrna | 65.6 | 29 | 38.8 | 6 | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Latehar | 180.1 | 329 | 98.5 | 316 | 80.5 | 730 | 0.0 | -100 | 16.5 | 162 |
| Lohardagga | 160.1 | 306 | 49.5 | 110 | 79.5 | 803 | 7.6 | -42 | 22.0 | 323 |
| Pakur | 109.3 | 46 | 70.4 | 25 | 196.8 | 484 | 8.0 | -65 | 142.5 | 1150 |
| Palamau | 71.6 | 138 | 63.3 | 286 | 113.7 | 864 | 2.0 | -67 | 13.7 | 217 |
| Ramgarh | 203.0 | 422 | 64.4 | 110 | 123.4 | 964 | 1.0 | -92 | 13.2 | 181 |
| Ranchi | 189.0 | 324 | 43.3 | 81 | 120.3 | 697 | 6.2 | -59 | 23.6 | 136 |
| Sahebganj | 170.8 | 73 | 72.6 | 103 | 0.0 | -100 | 0.0 | -100 | 32.8 | 315 |
| Saraikela | 117.3 | 157 | 17.3 | -30 | 3.0 | -78 | 0.0 | -100 | 59.4 | 1349 |
| Simdega | 64.9 | 66 | 53.5 | 143 | 119.6 | 813 | 0.0 | -100 | ** | ** |
| West Singbhum | 36.9 | -4 | 71.5 | 215 | 224.8 | 1222 | 0.0 | -100 | 63.5 | 1196 |
| Maharashtra | | | | | | | | | | |
| Konkan & Goa | | | | | | | | | | |
| Goa | 100.8 | 44 | 98.6 | 74 | 22.2 | -3 | 18.9 | -43 | 41.6 | 94 |
| Mumbai | 76.5 | 26 | 23.5 | -34 | 34.1 | 97 | 8.6 | -9 | 0.0 | -100 |
| Raigad | 70.7 | -14 | 46.5 | 2 | 30.9 | 16 | 5.6 | -65 | 22.6 | 179 |
| Ratnagiri | 87.3 | 5 | 190.9 | 252 | 35.1 | 20 | 12.5 | -47 | 16.5 | 36 |
| Sindhudurg | 82.2 | 11 | 80.1 | 52 | 16.4 | -37 | 17.4 | -31 | 12.0 | -33 |
| Thane | 28.1 | -56 | 47.3 | 46 | 45.3 | 98 | 9.2 | -19 | 0.0 | -100 |
| Madhya Maharashtra | | | | | | | | | | |
| Ahmednagar | 6.6 | -83 | 26.6 | 9 | 41.5 | 113 | 0.6 | -95 | 3.2 | -61 |
| Dhule | 35.6 | 34 | 8.5 | -51 | 48.5 | 301 | 0.0 | -99 | 0.0 | -100 |
| Jalgaon | 8.6 | -62 | 20.7 | 27 | 33.6 | 133 | 0.1 | -97 | 0.0 | -100 |
| Kolhapur | 27.9 | -45 | 15.6 | -65 | 4.7 | -79 | 5.7 | -75 | 37.9 | 113 |
| Nandurbar | 31.8 | 4 | 28.0 | 124 | 18.2 | 32 | 0.7 | -80 | 0.0 | -100 |
| Nasik | 4.7 | -89 | 30.0 | 27 | 48.8 | 170 | 2.1 | -78 | 0.0 | -99 |
| Pune | 8.8 | -82 | 12.2 | -58 | 5.3 | -70 | 9.0 | -44 | 6.0 | -47 |

| | | | | | | | | | | |
|-------------------|-------|-----|-------|-----|-------|-----|-------|------|-------|------|
| Sangli | 5.8 | -87 | 2.1 | -95 | 6.6 | -68 | 9.0 | -55 | 34.9 | 139 |
| Satara | 12.2 | -73 | 11.9 | -65 | 3.5 | -78 | 5.0 | -76 | 15.1 | 19 |
| Solapur | 13.9 | -70 | 7.5 | -77 | 13.4 | -32 | 5.8 | -67 | 10.5 | -21 |
| Marathwada | | | | | | | | | | |
| Aurangabad | 7.4 | -78 | 44.2 | 166 | 40.7 | 118 | 0.0 | -100 | 0.2 | -97 |
| Beed | 19.4 | -47 | 30.5 | 34 | 18.6 | 6 | 1.7 | -89 | 15.1 | 74 |
| Hingoli | 4.9 | -82 | 111.6 | 407 | 22.4 | 18 | 0.0 | -100 | 2.8 | -69 |
| Jalna | 9.4 | -65 | 55.3 | 192 | 38.2 | 97 | 0.0 | -100 | 2.6 | -60 |
| Latur | 16.3 | -49 | 45.2 | 43 | 23.5 | 55 | 0.3 | -98 | 34.2 | 198 |
| Nanded | 1.5 | -95 | 72.8 | 157 | 18.5 | 26 | 0.3 | -99 | 18.0 | 71 |
| Usmanabad | 13.4 | -66 | 15.6 | -45 | 14.2 | -28 | 2.4 | -87 | 22.9 | 144 |
| Parbhani | 7.5 | -74 | 60.2 | 135 | 21.3 | 3 | 0.0 | -100 | 4.2 | -42 |
| Vidarbha | | | | | | | | | | |
| Akola | 1.3 | -93 | 79.7 | 292 | 70.3 | 417 | 0.1 | -97 | 3.5 | -54 |
| Amraoti | 3.4 | -84 | 62.2 | 214 | 33.9 | 120 | 0.4 | -94 | 1.8 | -69 |
| Bhandara | 24.5 | -14 | 80.2 | 286 | 8.4 | -40 | 0.0 | -100 | 12.9 | 38 |
| Buldhana | 1.2 | -94 | 39.9 | 127 | 27.7 | 71 | 0.3 | -96 | 3.5 | -35 |
| Chandrapur | 27.5 | 1 | 125.3 | 475 | 25.0 | 123 | 0.1 | -99 | 34.5 | 291 |
| Gadchiroli | 24.0 | -19 | 110.9 | 393 | 28.6 | 91 | 3.4 | -71 | 38.3 | 378 |
| Gondia | 19.7 | -33 | 58.6 | 173 | 17.4 | 66 | 0.0 | -100 | 6.7 | -23 |
| Nagpur | 2.3 | -89 | 87.4 | 343 | 17.8 | 45 | 0.6 | -93 | 2.4 | -79 |
| Wardha | 6.5 | -72 | 83.8 | 286 | 23.6 | 191 | 0.7 | -94 | 2.9 | -68 |
| Washim | 1.9 | -91 | 89.2 | 300 | 24.9 | 39 | 0.0 | -100 | 0.0 | -100 |
| Yeotmal | 3.0 | -89 | 85.3 | 318 | 33.9 | 171 | 0.2 | -98 | 9.0 | 3 |
| Odisha | | | | | | | | | | |
| Angul | 101.0 | 245 | 26.2 | -6 | 137.3 | 390 | 39.7 | 117 | 96.1 | 512 |
| Balasore | 239.8 | 219 | 87.3 | 62 | 235.1 | 467 | 58.4 | 101 | 198.2 | 533 |
| Bargarh | 81.7 | 304 | 73.5 | 340 | 44.3 | 285 | 6.5 | -39 | 13.9 | 162 |
| Bhadrak | 125.6 | 175 | 69.8 | 64 | 219.6 | 340 | 125.5 | 408 | 183.3 | 725 |
| Bolangir | 98.7 | 238 | 19.4 | -10 | 63.6 | 361 | 21.6 | 61 | 43.4 | 302 |
| Boudh | 108.3 | 197 | 11.5 | -74 | 41.8 | 28 | 35.8 | 138 | 64.7 | 426 |
| Cuttack | 99.1 | 143 | 52.8 | 16 | 220.7 | 656 | 108.2 | 408 | 224.4 | 1416 |
| Deogarh | 92.7 | 255 | 15.1 | -26 | 97.9 | 766 | 30.1 | 162 | 53.4 | 529 |
| Dhenkanal | 114.6 | 184 | 33.3 | -11 | 151.4 | 345 | 44.5 | 114 | 162.5 | 645 |
| Gajapati | 57.3 | 48 | 12.5 | -73 | 157.9 | 297 | 51.4 | 63 | 303.8 | 3898 |
| Ganjam | 68.3 | 33 | 32.2 | -45 | 226.4 | 454 | 110.5 | 123 | 348.4 | 1028 |
| Jagatsingpur | 27.2 | -35 | 32.2 | -27 | 158.7 | 368 | 63.4 | 101 | 223.2 | 1161 |
| Jajpur | 77.3 | 70 | 56.5 | 17 | 240.0 | 515 | 78.7 | 312 | 200.9 | 1276 |
| Jharsuguda | 53.9 | 96 | 42.3 | 69 | 66.5 | 344 | 5.9 | -44 | 29.9 | 368 |
| Kalahandi | 87.3 | 169 | 21.8 | -26 | 75.2 | 453 | 36.0 | 161 | 39.5 | 490 |
| Kandhamal | 66.7 | 83 | 33.6 | -23 | 166.3 | 409 | 58.5 | 290 | 86.4 | 603 |
| Kendrapara | 48.7 | -13 | 90.2 | 27 | 145.3 | 249 | 96.2 | 234 | 275.0 | 1395 |
| Keonjhar | 66.1 | 73 | 46.4 | 45 | 188.7 | 445 | 26.1 | 17 | 72.4 | 479 |
| Khurda | 111.2 | 144 | 26.1 | -56 | 242.6 | 556 | 110.0 | 241 | 225.9 | 829 |
| Koraput | 72.2 | 68 | 35.0 | -26 | 26.0 | -24 | 28.7 | -14 | 73.9 | 371 |
| Malkangiri | 18.2 | -44 | 64.4 | 89 | 3.0 | -90 | 28.5 | 31 | 62.6 | 256 |
| Mayurbhanj | 160.7 | 182 | 83.6 | 130 | 263.3 | 787 | 22.1 | 14 | 166.8 | 1019 |
| Nawapara | 106.2 | 342 | 17.0 | -30 | 24.9 | 106 | 7.5 | -27 | 45.0 | 552 |
| Nawarangpur | 117.5 | 288 | 47.1 | 31 | 17.5 | -36 | 38.1 | 154 | 95.4 | 601 |

| | | | | | | | | | | |
|--------------------------|-------|-----|-------|-----|-------|------|-------|-----|-------|------|
| Nayagarh | 61.7 | 40 | 27.1 | -49 | 244.8 | 521 | 96.1 | 329 | 324.3 | 1361 |
| Puri | 42.6 | -29 | 60.3 | 8 | 245.7 | 494 | 102.4 | 192 | 162.1 | 387 |
| Rayagada | 49.2 | 45 | 28.1 | -29 | 63.9 | 123 | 47.1 | 100 | 96.5 | 1362 |
| Sambalpur | 57.7 | 121 | 42.6 | 109 | 100.3 | 787 | 36.6 | 218 | 26.4 | 211 |
| Sonepur | 70.7 | 110 | 31.6 | 52 | 80.0 | 900 | 18.2 | 102 | 25.9 | 146 |
| Sundargarh | 74.6 | 232 | 38.6 | 124 | 73.1 | 397 | 17.6 | 117 | 21.7 | 294 |
| West Bengal | | | | | | | | | | |
| GWB | | | | | | | | | | |
| Bankura | 174.6 | 197 | 59.7 | 81 | 121.6 | 511 | 66.6 | 294 | 93.4 | 502 |
| Birbhum | 86.4 | 24 | 113.3 | 243 | 90.0 | 323 | 30.2 | 58 | 57.1 | 376 |
| Burdwan | 90.9 | 46 | 83.3 | 180 | 110.1 | 419 | 48.1 | 157 | 83.1 | 604 |
| East Midnapore | 225.9 | 140 | 78.2 | 44 | 70.5 | 64 | 53.1 | 96 | 171.5 | 472 |
| Hooghly | 102.9 | 94 | 99.0 | 165 | 84.5 | 347 | 25.5 | 34 | 71.5 | 438 |
| Howrah | 100.5 | 14 | 72.6 | 88 | 80.0 | 270 | 47.8 | 167 | 65.3 | 920 |
| Kolkata | 109.0 | 24 | 114.2 | 134 | 157.0 | 429 | 28.6 | -6 | 184.0 | 868 |
| Murshidabad | 139.9 | 97 | 19.8 | -53 | 69.0 | 132 | 18.0 | 4 | 24.0 | 88 |
| Nadia | 99.5 | 86 | 47.2 | 107 | 85.1 | 191 | 15.4 | 48 | 70.5 | 317 |
| 24 Pargana (N) | 102.0 | 46 | 91.3 | 141 | 77.7 | 232 | 45.5 | 93 | 101.6 | 308 |
| Purulia | 139.1 | 118 | 74.0 | 153 | 197.8 | 1011 | 13.9 | -31 | 107.9 | 1320 |
| 24 Pargana (S) | 150.0 | 86 | 73.3 | 11 | 83.5 | 86 | 28.0 | -25 | 133.1 | 261 |
| West Midnapore | 165.0 | 136 | 96.5 | 179 | 80.8 | 262 | 26.4 | 59 | 137.2 | 1114 |
| SHWB | | | | | | | | | | |
| Cooch Behar | 42.8 | -54 | 51.9 | -8 | 113.0 | 241 | 3.7 | -87 | 0.5 | -91 |
| Darjeeling | 26.1 | -74 | 36.0 | -19 | 146.2 | 446 | 16.9 | -8 | 13.8 | 57 |
| East Sikkim | 31.0 | -54 | 18.3 | -64 | 109.2 | 109 | 29.5 | 181 | 55.1 | 206 |
| Jalpaiguri | 36.8 | -61 | 78.2 | 33 | 78.1 | 97 | 16.7 | -49 | 29.3 | 257 |
| Malda | 98.5 | 21 | 23.9 | -39 | 148.1 | 633 | 4.3 | -75 | 26.5 | 372 |
| North Dinajpur | 55.0 | -49 | 29.0 | 2 | 52.0 | 41 | 31.0 | 97 | 9.0 | 1025 |
| North Sikkim | 38.0 | -52 | 63.2 | -28 | 65.8 | -13 | 38.5 | 4 | 34.1 | 0 |
| South Dinajpur | 83.4 | 41 | 58.9 | 3 | 137.7 | 494 | 6.0 | -52 | 8.2 | -9 |
| South Sikkim | 13.5 | -80 | 16.3 | -68 | 90.7 | 73 | 9.6 | -9 | 21.4 | 19 |
| West Sikkim | 41.0 | -48 | 9.0 | -90 | 93.7 | 24 | 23.3 | -37 | 27.0 | -21 |
| Karnataka | | | | | | | | | | |
| Coastal Karnataka | | | | | | | | | | |
| Dakshin Kannada | 42.0 | -48 | 78.4 | 13 | 49.7 | 0 | 94.1 | 97 | 39.9 | -14 |
| Udupi | 55.1 | -46 | 82.0 | 24 | 65.6 | 60 | 61.6 | 45 | 41.6 | -5 |
| Uttar Kannada | 36.0 | -42 | 82.3 | 62 | 25.3 | -20 | 20.4 | -24 | 65.3 | 144 |
| N I Karnataka | | | | | | | | | | |
| Bagalkote | 10.6 | -75 | 5.6 | -86 | 19.6 | 3 | 19.0 | -6 | 74.1 | 274 |
| Belgaum | 10.8 | -76 | 10.1 | -73 | 9.0 | -56 | 6.7 | -73 | 51.4 | 185 |
| Bidar | 11.7 | -68 | 51.0 | 62 | 7.2 | -63 | 0.1 | -99 | 58.8 | 250 |
| Bijapur | 11.9 | -75 | 9.5 | -75 | 13.9 | -30 | 17.4 | -3 | 45.0 | 114 |
| Dharwad | 3.7 | -91 | 7.7 | -79 | 12.1 | -53 | 15.3 | -44 | 34.2 | 93 |
| Gadag | 11.4 | -76 | 3.3 | -92 | 16.7 | -25 | 12.7 | -51 | 42.8 | 147 |
| Gulbarga | 7.5 | -84 | 17.6 | -55 | 4.9 | -72 | 11.5 | -28 | 37.0 | 91 |
| Haveri | 2.1 | -95 | 9.1 | -73 | 6.4 | -77 | 8.9 | -65 | 44.8 | 136 |
| Koppal | 22.9 | -50 | 17.8 | -47 | 22.5 | 19 | 28.2 | 50 | 75.4 | 297 |
| Raichur | 6.7 | -85 | 22.1 | -40 | 12.0 | -52 | 25.7 | 36 | 63.7 | 311 |
| Yadgir | 11.3 | -76 | 11.3 | -71 | 18.1 | -21 | 36.2 | 98 | 71.2 | 142 |

South Interior Karnataka

| | | | | | | | | | | |
|--------------------|------|------|------|-----|-------|-----|-------|-----|-------|-----|
| Bangalore Rural | 1.5 | -97 | 55.0 | 6 | 14.2 | -62 | 25.5 | -13 | 40.2 | 49 |
| Bangalore Urban | 0.1 | -99 | 28.6 | -41 | 22.8 | -25 | 20.6 | -35 | 22.3 | -9 |
| Bellary | 23.2 | -48 | 13.5 | -63 | 5.5 | -74 | 46.3 | 120 | 45.6 | 113 |
| Chamarajnaragar | 1.0 | -97 | 20.2 | -49 | 1.6 | -95 | 77.6 | 128 | 4.7 | -86 |
| Chichballapur | 2.7 | -94 | 42.8 | -14 | 14.4 | -59 | 37.1 | 37 | 33.3 | 36 |
| Chickmagalur | 6.5 | -88 | 17.8 | -60 | 17.4 | -49 | 16.2 | -54 | 17.6 | -47 |
| Chitradurga | 4.5 | -90 | 0.5 | -98 | 5.5 | -77 | 27.5 | 27 | 14.0 | -26 |
| Davangere | 3.9 | -91 | 5.2 | -86 | 4.1 | -86 | 23.2 | 5 | 34.9 | 70 |
| Hassan | 6.1 | -86 | 12.9 | -69 | 13.9 | -58 | 34.2 | 9 | 15.3 | -54 |
| Kodagu | 29.5 | -49 | 16.0 | -69 | 17.9 | -61 | 80.2 | 94 | 13.5 | -66 |
| Kolar | 2.8 | -94 | 71.1 | 65 | 25.0 | -29 | 26.3 | 4 | 26.4 | 2 |
| Mandya | 2.0 | -95 | 9.6 | -77 | 11.1 | -69 | 50.4 | 69 | 26.8 | -7 |
| Mysore | 7.7 | -79 | 9.1 | -76 | 13.8 | -61 | 80.1 | 145 | 12.0 | -62 |
| Ramnagara | 4.2 | -93 | 2.5 | -95 | 11.4 | -70 | 55.2 | 63 | 39.1 | 33 |
| Shimoga | 16.5 | -62 | 37.3 | -10 | 22.8 | -26 | 39.2 | 55 | 32.3 | 34 |
| Tumkur | 3.5 | -93 | 5.7 | -87 | 14.7 | -51 | 44.3 | 76 | 27.9 | 5 |
| Kerala | | | | | | | | | | |
| Alappuzha | 19.4 | -74 | 41.5 | -50 | 16.0 | -76 | 100.2 | 28 | 11.6 | -84 |
| Kannur | 26.6 | -63 | 71.4 | 29 | 44.5 | -7 | 107.2 | 104 | 75.0 | 58 |
| Ernakulam | 23.5 | -71 | 66.4 | -4 | 32.7 | -51 | 131.7 | 102 | 72.1 | 4 |
| Idukki | 17.0 | -83 | 34.1 | -55 | 40.3 | -49 | 111.8 | 24 | 40.0 | -38 |
| Kasaragod | 25.5 | -61 | 47.7 | -25 | 33.7 | -35 | 59.1 | 25 | 30.8 | -36 |
| Kollam | 17.3 | -73 | 56.8 | -30 | 36.0 | -55 | 158.8 | 74 | 31.3 | -62 |
| Kottayam | 8.3 | -90 | 47.9 | -35 | 33.1 | -53 | 214.1 | 215 | 35.1 | -53 |
| Kozhikode | 9.9 | -87 | 56.9 | -6 | 128.0 | 131 | 62.6 | 16 | 17.7 | -73 |
| Malappuram | 14.6 | -80 | 20.4 | -67 | 30.7 | -56 | 86.4 | 17 | 49.9 | -11 |
| Palakkad | 13.5 | -78 | 10.2 | -81 | 21.6 | -64 | 139.1 | 119 | 56.0 | -8 |
| Pathanamthitta | 10.4 | -87 | 14.2 | -81 | 28.6 | -65 | 209.2 | 139 | 2.7 | -97 |
| Thiruvananthapuram | 19.2 | -63 | 12.1 | -79 | 3.6 | -94 | 114.7 | 56 | 6.7 | -89 |
| Thrissur | 20.4 | -76 | 73.1 | 6 | 52.6 | -20 | 153.3 | 121 | 113.7 | 75 |
| Wyanad | 14.6 | -77 | 36.0 | -27 | 11.0 | -72 | 96.2 | 75 | 30.6 | -36 |
| Tamil Nadu | | | | | | | | | | |
| Ariyalur | 0.0 | -100 | 7.3 | -84 | 27.3 | -20 | 23.5 | -55 | 15.5 | -65 |
| Chennai | 11.1 | -71 | 17.5 | -58 | 24.0 | -35 | 128.7 | 50 | 15.9 | -79 |
| Coimbatore | 1.9 | -92 | 6.5 | -75 | 26.9 | -13 | 107.9 | 152 | 10.3 | -75 |
| Cuddalore | 0.3 | -99 | 9.3 | -76 | 51.4 | 27 | 43.2 | -32 | 10.9 | -82 |
| Dharmapuri | 0.0 | -100 | 88.9 | 98 | 22.2 | -43 | 56.9 | 39 | 33.3 | -6 |
| Dindigul | 3.1 | -91 | 17.7 | -52 | 26.3 | -34 | 67.7 | 30 | 10.7 | -75 |
| Erode | 4.3 | -87 | 12.7 | -61 | 23.7 | -25 | 84.9 | 104 | 6.7 | -82 |
| Kanchipuram | 20.6 | -55 | 17.5 | -54 | 25.2 | -31 | 51.2 | -26 | 36.6 | -41 |
| Kanyakumari | 4.1 | -88 | 1.9 | -95 | 2.7 | -94 | 56.7 | -21 | 10.5 | -81 |
| Karikal | 0.0 | -100 | 25.2 | -31 | 23.1 | -50 | 48.1 | -28 | 17.8 | -84 |
| Karur | 3.6 | -88 | 52.9 | 70 | 22.3 | -30 | 31.4 | -20 | 7.0 | -77 |
| Krishnagiri | 0.8 | -99 | 62.3 | 35 | 17.3 | -51 | 43.5 | 14 | 19.7 | -39 |
| Madurai | 7.9 | -80 | 13.4 | -66 | 45.4 | 3 | 116.8 | 97 | 18.2 | -59 |
| Nagapattinam | 0.0 | -99 | 1.5 | -96 | 36.9 | -5 | 53.7 | -31 | 14.7 | -79 |
| Namakkal | 1.3 | -96 | 26.4 | -28 | 17.7 | -48 | 69.7 | 80 | 11.6 | -64 |
| Nilgiris | 1.3 | -97 | 24.5 | -43 | 45.5 | 2 | 83.7 | 51 | 46.2 | -19 |

| | | | | | | | | | | |
|-------------------------------|------|------|-------|-----|-------|-----|-------|-----|-------|------|
| Perambalur | 3.0 | -90 | 23.8 | -46 | 22.0 | -49 | 57.0 | 6 | 22.5 | -40 |
| Puducherry | 0.3 | -99 | 7.3 | -82 | 0.2 | -99 | 49.2 | -36 | 7.3 | -92 |
| Pudukottai | 0.6 | -98 | 35.3 | 9 | 16.8 | -51 | 39.4 | -12 | 11.3 | -68 |
| Ramanathapuram | 1.9 | -89 | 5.1 | -78 | 1.4 | -96 | 74.4 | 34 | 0.0 | -100 |
| Salem | 0.6 | -99 | 33.8 | -25 | 9.8 | -76 | 59.0 | 30 | 20.0 | -50 |
| Sivaganga | 0.0 | -100 | 14.7 | -56 | 13.4 | -70 | 114.6 | 129 | 2.0 | -96 |
| Thanjavur | 0.0 | -100 | 11.7 | -66 | 14.5 | -57 | 50.0 | -2 | 14.5 | -70 |
| Theni | 0.5 | -98 | 5.2 | -80 | 24.3 | -34 | 107.7 | 127 | 3.8 | -92 |
| Tirunelveli | 0.2 | -99 | 1.3 | -93 | 4.2 | -86 | 49.4 | -3 | 2.0 | -96 |
| Tirupur | 0.0 | -100 | 3.3 | -88 | 20.7 | -32 | 77.9 | 82 | 0.0 | -100 |
| Tiruvallur | 13.3 | -68 | 44.6 | 13 | 31.5 | -13 | 65.9 | 15 | 44.8 | -21 |
| Tiruvannamalai | 26.8 | -37 | 79.5 | 76 | 41.5 | 2 | 37.1 | -29 | 9.0 | -77 |
| Tiruvarur | 0.0 | -100 | 7.0 | -78 | 8.1 | -78 | 50.7 | -19 | 2.2 | -96 |
| Toothukudi | 0.0 | -100 | 6.3 | -67 | 3.5 | -89 | 56.2 | 14 | 5.5 | -87 |
| Trichy | 3.9 | -89 | 20.8 | -49 | 14.5 | -61 | 37.1 | -16 | 13.1 | -65 |
| Vellore | 15.9 | -62 | 41.0 | -2 | 31.9 | -12 | 35.5 | -4 | 27.4 | -13 |
| Villupuram | 15.2 | -59 | 30.2 | -27 | 25.1 | -28 | 44.4 | -13 | 22.7 | -48 |
| Virudhunagar | 0.0 | -100 | 13.5 | -59 | 20.8 | -44 | 101.8 | 94 | 0.8 | -98 |
| Andhra Pradesh | | | | | | | | | | |
| Coastal Andhra Pradesh | | | | | | | | | | |
| East Godavari | 22.9 | -54 | 38.8 | -36 | 30.0 | -31 | 127.4 | 156 | 293.9 | 965 |
| Guntur | 24.3 | -43 | 39.0 | 1 | 37.3 | 46 | 74.8 | 96 | 196.6 | 639 |
| Krishna | 22.2 | -54 | 35.9 | -20 | 45.1 | 30 | 72.5 | 69 | 221.6 | 783 |
| Nellore | 7.0 | -82 | 11.4 | -72 | 9.1 | -75 | 143.4 | 78 | 59.1 | -15 |
| Prakasam | 3.0 | -93 | 24.0 | -45 | 29.8 | -3 | 102.7 | 120 | 189.3 | 348 |
| Sirkakulam | 50.1 | 6 | 27.1 | -57 | 102.9 | 164 | 152.0 | 198 | 366.6 | 845 |
| Visakhapatnam | 25.4 | -50 | 30.9 | -52 | 27.5 | -31 | 104.4 | 107 | 280.1 | 900 |
| Vizianagram | 27.5 | -41 | 13.2 | -76 | 43.4 | 11 | 86.2 | 66 | 219.4 | 760 |
| West Godavari | 20.0 | -60 | 52.9 | -9 | 27.6 | -36 | 87.6 | 88 | 173.8 | 506 |
| Telangana | | | | | | | | | | |
| Adilabad | 23.2 | -18 | 93.8 | 257 | 34.2 | 169 | 2.8 | -87 | 30.2 | 144 |
| Hyderabad | 1.5 | -96 | 10.8 | -64 | 78.3 | 326 | 26.5 | 39 | 110.7 | 492 |
| Karimnagar | 18.2 | -42 | 109.1 | 280 | 27.3 | 133 | 7.0 | -64 | 99.8 | 540 |
| Khammam | 49.1 | 29 | 42.8 | 10 | 51.5 | 133 | 21.7 | 15 | 110.2 | 698 |
| Mehabubnagar | 3.6 | -91 | 30.4 | 0 | 25.2 | 70 | 33.9 | 108 | 151.0 | 1127 |
| Medak | 5.9 | -81 | 43.4 | 54 | 39.1 | 188 | 9.2 | -48 | 84.7 | 392 |
| Nalgonda | 11.4 | -70 | 35.5 | -1 | 44.1 | 98 | 42.9 | 108 | 237.3 | 1412 |
| Nizamabad | 6.2 | -81 | 55.3 | 84 | 33.4 | 191 | 3.7 | -83 | 38.8 | 111 |
| Rangareddy | 1.9 | -94 | 31.5 | -9 | 43.0 | 144 | 22.6 | 43 | 116.7 | 620 |
| Warangal | 23.5 | -21 | 37.6 | 24 | 32.7 | 110 | 12.1 | -26 | 149.3 | 845 |
| Rayalaseema | | | | | | | | | | |
| Anantapur | 8.3 | -78 | 14.0 | -64 | 2.4 | -89 | 31.0 | 48 | 31.8 | 83 |
| Chittoor | 4.6 | -89 | 60.0 | 42 | 6.0 | -80 | 63.8 | 62 | 50.8 | 37 |
| Cuddapah | 4.4 | -87 | 47.3 | 17 | 5.7 | -75 | 94.3 | 178 | 36.2 | 37 |
| Kurnool | 3.4 | -91 | 15.2 | -54 | 6.4 | -68 | 44.5 | 106 | 52.4 | 229 |

| | | | |
|--|----------------------------------|----|--------------------------------|
| | (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 III
List of Varieties

Jammu & Kashmir

Toria : local toria, RSPT-1 & RSPT-2

Potato: (Kufri Chandramukhi), K Badshah, K.Sinduri, K.Chipsona&K.Sona.

Mustard :- Pusa Sarson-25, Pusa Sarson-26, PusaAgrmi, PusaTaraka, PusaMahak, NPJ 112, EJ17, PusaMahak and Kanti, Maya, Rohini, PusaJaikisan, Varuna, RGN13, RGN73, Bharat Sarson-1 (NRCD-2), Bharat Sarson-2 (NRCHB 101), Bharat Sarson-3,(NRCHB 506), Arawali, RGN48, Geeta and PBR 97, CS52, CS54, NarendraRai 1, Karan Tara, Narendra, - NRCYS-05-02, YSH401Tara, RSPR-01, RLM-514, RLM-619, Kranti, P. Gold, P. Basant.

Cabbage : Golden Acre, Pride of India and PusaMukta,

Carrot :PusaKesar,P.Yamdagani.

Turnip :PTWG).

Garlic :yamunasafedagrifoundparvati

Methi :pusa early bunching and kasurimethi.

Radish (var. P. Reshmi), carrot (var. Pusa Kesar, P.Yamdagani).

Wheat: PBW-550, PBW-502, DPW-621-50,DBW-17,Raj-3077,HD-2967, HD-2687 and RSP-303.

Chickpea: C-235,K-468,Gourav and PBG-1;Pea- AP-1, Bonnevillea, Rachna and Arkel; Chickpea-K-468, Gourav; Lentil- L-4147, L-9/12,PL-406

Rajasthan

Onion:Pusa Red, ArkaNiketan, Pusa White & Local Red

Deshi carrot:PusaKeshar:

Tomato: Pusa Rubi, Pusa Early and Vihar, T-27, RTM 314

Brinjal: Pusa Summer Prolific Round, Pusa Summer Prolific Long, Meghdoot and Arka Bahar

Cauliflower: Pusa Snowball 1 and Hissar 1

Cabbage: Pusa Drum Head and Hybrid 10

Potato: Kufri-Ashok and Chandramukhi, Mid var.-Kufri-Anand, Chipsona-1, 2, Jyoti and Pukhraj.

Gram : RSG 44, Dahod yellow, GNG 16, ICCV 10, RSG 888, GNG 469 and Pratap chana 1, RSG-888 (Anubhav), CSJD-884 (Aakash), RSG-44, Pusa-209, C-235, H-208.

Barley: RD- 2052, RD 2035,,RD 2660, RD 2552, RD 2592, RD2503.

Toria :T-9, Sangam, TL-15.

Mustard: PR 48, T-59, Bio-902, Laxmi, Aravali, Swarna Jyoti and Vasundhara, Bio- 902, Laxmi, RH 30, Pusa bold , T 59

Lucerne: T-9, Anand-2, LLC-3, RL-88.

Uttarakhand

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

Toria : Type -9, Pant Toria-30, Pant Toria-303, Uttara, Pant Toria-507, P.T.-303, P.T.-507,

Garlic : VL-Garlic or DARL-52.

Sugarcane : Co-238, Co-241, Co Pant, 3220, Co Pant 84211, COS-8436, COS-88230 etc. and medium to late sown varieties like Co Pant 90223, Co Pant-96219, COS-97222, COS-767, COS-1148 etc.

Wheat: VL-829, 802, 804, 892, 738, 719, HL-272, UP 2572., VL-421, HS-240, UP-1109, VL-616, HS-277, VL-829, HD 2687, PBW 343, UP 2338, HD 2329, Raj 3077, etc.

Sarson:Varun, Kanti

Masoor:Masoor-4, 5, VL masoor-1, 4, 203, pant masoor-5, VL masoor-1, VL masoor-4, VLmasoor-203

Uttar Pradesh

Toria-T-1, T-303, T-9, T-36, PT-506, PT-507, Bhawani, Pant-303,

Potato: Kuphari Chanramukhi, Kuphari Ashoka, Kuphari Bahar, Kuphari Surya, Kuphari Sutlaj, Kuphari Pukharaj

Peas: Pant-5, Aparna, Malaviya-2, Malaviya-15, Shikha, Sapana, Ta.- 163, Rachana, Malviya matar,-2

Bengal gram: Pusa, Shubhra

Mustard- Pussa-25

Sugarcane: Kosha-88230, Kosha-8436, Kosha-0238, Kosha-07250, UP-05125

Wheat : VL-829, VL-802,VL-804,VL-892, VL-738, VL-719, HS-277, UP-2572

Gram: Ta-3, Radhe, K-850, Pant, Kabuli, PDG-3, GPF-2, C-235, Gurav

Lentil: Ta.-8, Pant L- 406 & 234

Alsi- L.C.2023, L.C. 74

Onion- Pusa Red, Pusa White.

Himachal Pradesh

Cauliflower : Patna snowball and joint snowball.

Pea: Ageta-6 and ArkalMatar.

Raddish: Japanese white, Chinese pink and mino early white

Turnip :PTWG-1

Carrot :Pusakesar

Fenugreek: I.C. 74, kasoori

Punjab

Radish: Punjab Pasand & Punjab Safed,

Turnip: L-1 & 4-white

Carrot: PC-34), potato and palak (Punjab Green).

Cauliflower: Pusa Snow ball 1 & Pusa Snow ball K-1.

Pea: Punjab 87, Punjab 88, Punjab 89 and Mithi Phali.

Raya: RLC-1, PBR-210, RLM-619, PBR-91 under irrigated conditions and PBR-97 under rainfed conditions.

Garlic: PG-17 .

Wheat: PBW 621, HD 2967, DBW-17, PBW-502, PBW-343, WH-542, and durum wheat WHD 943, PDW 291 and PDW-233 under irrigated conditions and PBW-644, PBW-527, PBW-175 under rainfed conditions.

Gram: L 552, L 550 & BG-1053.

Delhi

Wheat: H.D. 2687, H.D. 2851, H.D. 2894, H.D. 2967, D.B.W.-17

Gram: Kabuli type - Pusa 267, Pusa 1003, Pusa Chamatkar; local type – C235, Pusa 246, P.B.G. 1, Pusa 372.

Oat: J.H.O-822, O.L.-9, Pusa oat-5 and for barseem – Vardan, Buland Barseem-1, Masakavi, J.B-3

Lentil: Pusa Masoor -5 (L-4594).

Pea: Pusa Pragati, Arkel, Azad Matar-3, Pant Matar-3 and Bournville

Potato: Kufri Badshah (Late blight tolerant), Kufri Jyoti (Short duration), Kufri Alankar, Kufri Chandramukhi.

Garlic: G-1, G-41, G-50, G-282.

Odisha

Banana: Hampa, Patakpara, Bantal, Robusta and Kabuli etc.

Raddish: Pusa chetaki, Pusa Rashmi and Pusa Himani.

Cauliflower: Pusa Ketaki and Pusa Deepali.

Cabbage: Pride of India.

Beans: Pusa Parvati and Arka Komal.

Tomato: BT 2, BT 10, BT 12 Neeladri, Sada Bahar, Madhuri, Maharathi, Rashmi and Navin.

Mustard: Parbhathi, Anuradha, TS-29 & M-27.

Onion: Nasik Red, Patna Red, Pune Red, Bellary Red, Pusa Ratnar, Pusa Madhavi, Arka Niketan, Arka Pragati, Agrifound Light Red, Agrifound Dark, Punjab Selection, Patna White, Bombay White, Pusa White Round etc.

Sesame: Kanak, Kalika, Uma, Usha, Tilottama, Neelima and Prachi.

Green gram: K-851, PDM-54, PDM-11, OUM 11-5.

Balck gram: T-9, Pant-U-19, Pant-U-30, Pant-U-11.

West Bengal

Banana: Mortoman, Chapa, Kathali, Singapuri.

Vadu Kalai: Kalindi, Sarada.

Cabbage: Pride Of India, Pusa Early, Kranti.

Cauliflower: Jawhar Moti, Bharat Jyoti, Early Banaras.

Mustard: Agrani (B-54), Panchali (TWC-3), B-9, Rai-5 and Bhagirothi (RW-351) etc.

Jharkhand

Potato: Kufri Ashok, Kufri Kanchan.

Green Peas: Arkel, Kashi Nandini, P.E.-6, Birsa Matar.

Horse Gram: Birsa Kulthi-1, G.H.G.-20.

Sweet Potato: Birsa Sakarkand-1 and Sri Bhadra.

Toria: T-9, B.R.-23 or P.T.-303.

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

Onion: N-53, Agrifound Dark Red and Basant- 780N 53, Pusa Red, Arka Niketan, Arka Kalian, Agrifound Dark Red, Pusa White Round and Flat, Pusa Madhavi, Bombay Selection, Patna White and Bellary Red.

Bihar

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

Onion: N-53, Agrifound Dark Red and Basant- 780.

Sweet potato (Shakarkand): Rajendra Shakarkand 5, Rajendra Shakarkand 35, Rajendra Shakarkand 43, Rajendra Shakarkand 47, Kalmegh, Shree Bhadra and Rajendra Shakarkand 92.

Potato: Kufri Chandramukhi, Kufri Ashoka, Kufri Pukharaj, Kufri Badhsha, Kufri Lalima, Kufri Jyoti, and Rajendra Alu 2.

Pea: Malviya Mator 15, Harbhajan, Arpana and Pusa Prabhat.

Berseem: Vardan-1 and skavi.

Oat: Kent.

Mustard: Varuna, Pusa bold, Kranti.

Assam

Wheat: Sonalika, UP 262, K 7410, WH 291 and HDR-77.

Rabi maize: HQPM- 1.

Early cauliflower: Early Kunwari, Pusa Katki, Pusa Deepali, CFL- 4048, Pusa Early Synthetic, Kamaya, Suhasihi.

Mid Cauliflower: Improved Japanese, Pusa Synthetic, Pusa Snowball.

Tomato: Punjab Chuhara, S-12, Punjab Kesri, Pusa Early Dwarf, Sioux, Pusa Ruby, VC- 48-1, Arka Abha (BWR-1), Arka Alok (BWR-5), BT-1, Bilahi-1, Bilahi-2, Trishul, Allrounder, T- 1408, T- 1458, Anup.

Cabbage: Golden Acre, Pride of India, BC- 76, Pusa Drum Head, Pusa Synthetic.

Knolkhol: White Vienna, Purple Vienna.

Potato: Kufri Chandramukhi, Kufri Jyoti and Kufri Sindhuri, Kufri Megha, Kufri Badshah, Pukhraj.

Rapeseed and mustard: M-27, TS-36, TS-38.

Pumpkin: Arka Suryamukhi, Arka chandan and local varieties.

Spinach beet: Jobner Green, All Green, S-23, Pusa Jyoti.

Manipur

Rapeseed and mustard: M-27.

Pea: Rachana.

Potato: Kufri Megha and Kufri Jyoti.

Tripura

Rabi maize: HQPM- 1.

Madhya Pradesh:

Wheat: MP 1142, GW 273, GW 322, GW 190, MP 1106, Sujata, HW- 2004, HI-1500, MP 1142, GW 273, GW 322, GW 190, MP 1106.

Black Gram: JG-130, JG-315, JG-16, Jaki-9218, JG 6 and JG11.

Chickpea: KAK-2, JGK-1, J.G-11, J.G-315.

Pulse (Masoor): RVL-31, JL-2, Jawahar Lentil 1 & 2.

Potato: K. surya, K.khyati.

Pea: Arkel, PSM3 arkil, PUSA Pragati, Jawahar Pea 1, Jawahar Pea 2, Jawahar Pea 5 and Bonville etc.

Maize: JVM 421, JM 16.

Linseed: R.L.C.92, Deepika, Indira Als- 32, Kartika.

Safflower: J.S.F. -1, A-1 (Sweta), D.S.H.- 129, J.S.I.- 7, Nari- 6, M.K.H.-II, D.S.H.- 129.

Andhra Pradesh

(Rabi pulses)

Blackgram: LBG-20, T-9, LBG:623, WBG:26, PU:31, BG:752

Greengram: LGG:407, LGG:410, LGG:450, WGG:2, WGG:37, LGG:460, ML:267, Pusa:105, MGG:348, TM-96-2

Bengal gram: Kranthi (ICCC:37), Svetha (ICCC:2), Annegiri, Jyothi, ICCV:10 KAK:2, JG:1, Lamsanga:7

Redgram: Laksmi (ICCP85063), LRG-38, LRG-41, WRG-27

Rice : SLR 145, 3041, 3449, MTU 1010, 1001, BPT 5204, CR 1009, JGL 1798, SDLR8

Karnataka:

Bengal gram: JG-11, Annegeri-1, ICCV-10, GBS-964, ICCV-2.

Maharashtra

Gram (Rainfed): Vijay, Digvijay in Madhya Maharashtra, Phule G-12, Phule G-5 and Vijay for Marathwada.

Gram (Irrigated): Vikas, Vishwas, Phule G 12, Vijay, Vishal, Virat for Madhya Maharashtra and Akash, Vikas, Vishwas and Vijay for Marathwada.

Pre-seasonal sugarcane: CO 740, CO 7219 (Sanjivani), CO 88121 (Krishna), CO 8014 (Mahalaxmi), CO 86032 (Nira), CO 94012 (Phule Savitri), CO M 0265 (Phule 265), CO V.S.I.9805, CO.C.671 for Madhya Maharashtra and CO 94012, CO 86032, CO V.S.I.9805, CO C-671, Co 8014 for Marathwada.

Rainfed wheat: NIDW-15, N-5439, N-8223.

Wheat: NIAW-301, NIAW-917 and NIDW-295 (for Madhya Maharashtra).

Jowar: DSH-4, M-35-1, Muguti (5-4-1), DSV-4, DSV-5

Horse gram: GPM-6.

Gujarat

Chick pea (unirrigated): Gujarat Chana-2.

Chick pea (irrigated): Gujarat Chana-3, Gujarat Chick Pea-1, Dahod Pila, ICC-4.

Mustard: Varuna, Gujarat Mastard 1 or 2 or 3.

Garlic: Gujarat Garlic-4 or Local.

Cabbage: Kranti, Golden Acre, Pride of India, Coppin Market.

Cauliflower: Pusa Early, Pusa Dipali, Pusa Kartiki, Early Kuvari (for early maturity), Pusa Synthetic, Early Snowball, Snowball (for medium duration).

Brinjal: Guj. Brinjal-6, P.L.R. 1, Junagadh Lambagoal, Mahicco- 11, 16.

Onion: Pusa Red, Nashik Lal, N 53 & H 48.

Raddish: Pusa Hemadri, White ICL, Japanees White, Pusa Rashmi, Pusa Chetaki.