

National Agromet Advisory Service Bulletin

Friday 14th August 2014

(For the period 14th to 19th August 2014)



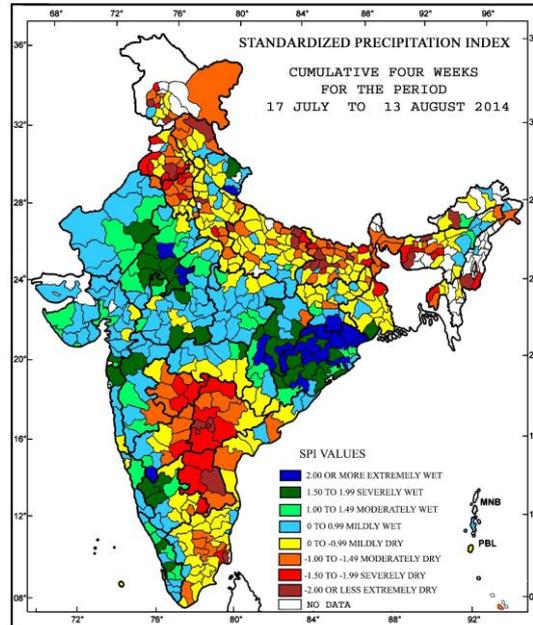
Issued by

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



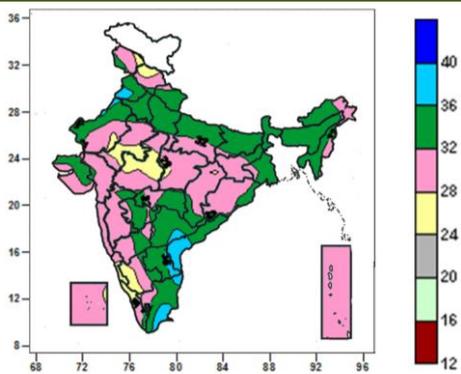
**Standardised Precipitation Index
Four Weekly
for the Period 17th July to 13th August 2014**

MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE



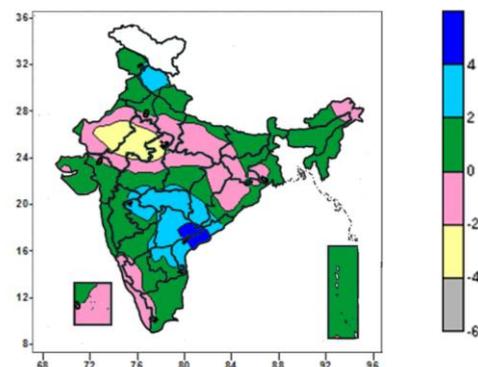
**Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on
13.08.2014**

Actual Mean Maximum Temperature (°C) in India for the week ending 13.08.2014

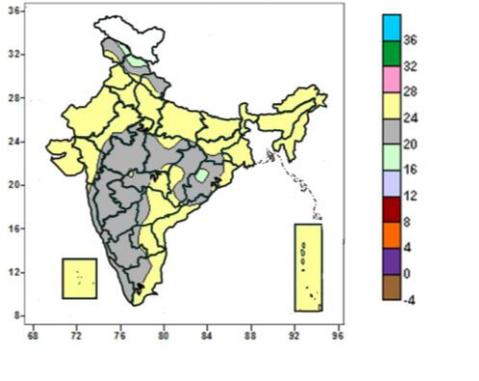
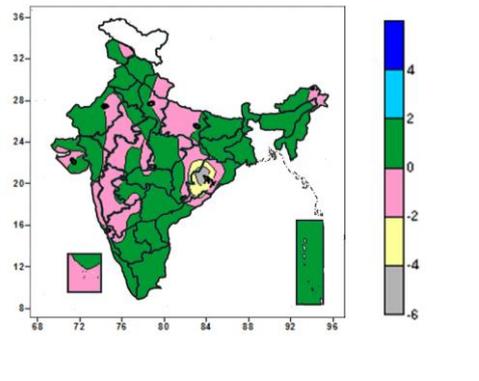


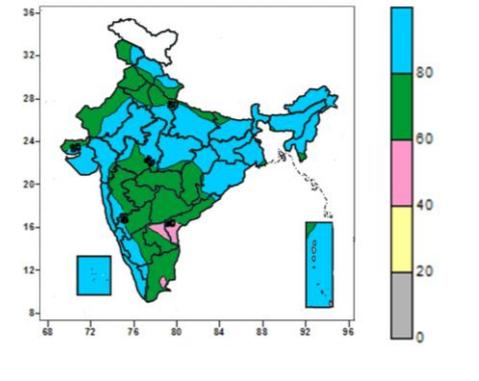
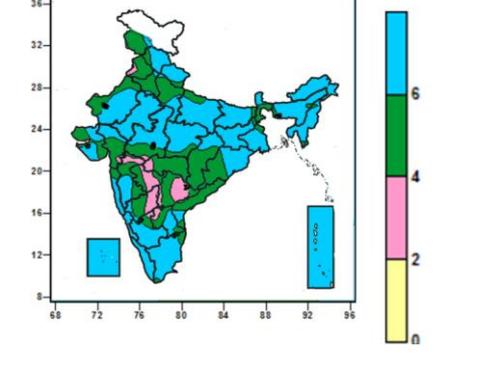
- 36 to 40°C over many parts of Coastal Andhra Pradesh, some parts of Punjab, West Rajasthan, Telangana, Rayalaseema and Coastal Tamil Nadu.
- 28 to 36°C over entire country except many parts of Coastal Andhra Pradesh, West Madhya Pradesh, Coastal Karnataka, some parts of Jammu & Kashmir, Himachal Pradesh, Rajasthan, Punjab, West Rajasthan, Telangana, Rayalaseema, Coastal Tamil Nadu. East Madhya Pradesh, South Interior Karnataka, Kerala and Lakshadweep Islands.
- 24 to 28°C over many parts of West Madhya Pradesh, Coastal Karnataka, some parts of Jammu & Kashmir, Himachal Pradesh, Rajasthan, East Madhya Pradesh, South Interior Karnataka, Kerala and Lakshadweep Islands.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 13.08.2014



- 4 to 6°C over some parts of Coastal Andhra Pradesh, Telangana.
- 2 to 4°C over many parts of Himachal Pradesh, Vidarbha, Andhra Pradesh, Marathwada, some parts of Jammu & Kashmir, Central India, Odisha, Madhya Maharashtra and North Interior Karnataka.
- -2 to 2°C over entire country except many parts of Himachal Pradesh, Rajasthan, Vidarbha, Andhra Pradesh, Marathwada, some parts of Jammu & Kashmir, Central India, Odisha, Madhya Maharashtra and North Interior Karnataka.
- -4 to -2°C over many Parts of Rajasthan, some parts of West Madhya Pradesh.

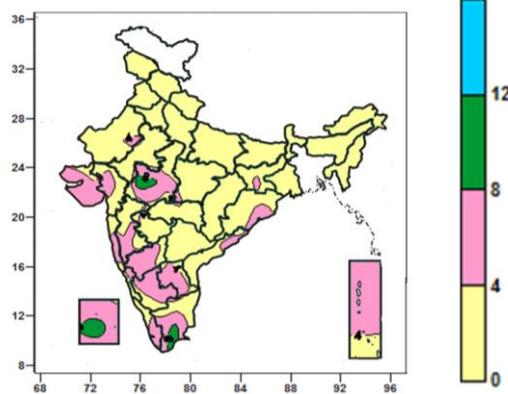
Actual Mean Minimum Temperature (°C) in India for the week ending 13.08.2014	Mean Minimum Temperature (°C) Anomaly in India for the week ending 13.08.2014
	
<ul style="list-style-type: none"> • 24 to 28⁰C over many parts of Punjab, Haryana, Delhi, Uttar Pradesh, Bihar, Jharkhand, West Bengal & Sikkim, North East India, Rajasthan, Gujarat, Andhra Pradesh, Lakshadweep, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Odisha, Central India, Vidarbha, Konkan and Tamil Nadu. • 20 to 24⁰C over many parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Central India, Odisha, Maharashtra, Karnataka, Kerala, some parts of East Rajasthan, Jharkhand, Gujarat region, Andhra Pradesh and Tamil Nadu. • 16 to 20⁰C over some parts of Jammu & Kashmir, Himachal Pradesh and Odisha. 	<ul style="list-style-type: none"> • 0 to 2⁰C over entire country except many parts of Uttarakhand, East Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, North Interior Karnataka, some parts of Jammu & Kashmir, West Rajasthan, West Uttar Pradesh, Arunachal Pradesh, East Madhya Pradesh, Chhattisgarh, , Odisha, Coastal Andhra Pradesh, Vidarbha, Marathwada and Coastal & South Interior Karnataka. • -2 to 0⁰C over many parts of Uttarakhand, East Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, North Interior Karnataka, some parts of Jammu & Kashmir, West Rajasthan, West Uttar Pradesh, Arunachal Pradesh, East Madhya Pradesh, Chhattisgarh, Odisha, Coastal Andhra Pradesh, Vidarbha, Marathwada and Coastal & South Interior Karnataka. • -6 to -2⁰C over many parts of Odisha, some parts of Chhattisgarh.

Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 13.08.2014	
Relative Humidity (%) over India for the week ending 13.08.2014	Cloud amount (okta) over India for the week ending 13.08.2014
	
<ul style="list-style-type: none"> • 80 to 100% over many parts of Himachal Pradesh, East Uttar Pradesh, East India, North East India, West Rajasthan, Gujarat, Coastal Karnataka, Kerala, some parts of Jammu & Kashmir, Uttarakhand, West Uttar Pradesh, Coastal Andhra Pradesh, Madhya Maharashtra, Interior Karnataka and Tamil Nadu. • 60 to 80% over entire country except many parts of Himachal Pradesh, East Uttar Pradesh, East India, North East India, West Rajasthan, Gujarat, Coastal Karnataka, Kerala, some 	<ul style="list-style-type: none"> • 4 to 8 okta over entire country some parts of Telangana, Rayalaseema, West Madhya Pradesh, Madhya Maharashtra, Marathwada, Interior Karnataka. • 2 to 4 okta over some parts of Telangana, Rayalaseema, West Madhya Pradesh, Madhya Maharashtra, Marathwada, Interior Karnataka.

parts of Jammu & Kashmir, Uttarakhand, West Uttar Pradesh, Coastal Andhra Pradesh, Madhya Maharashtra, Interior Karnataka and Tamil Nadu.

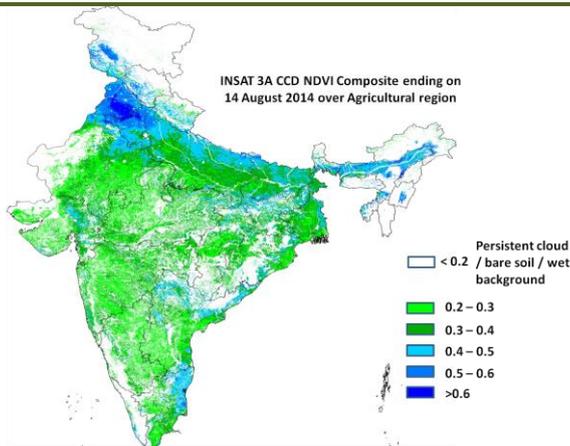
- 40 to 60% over some parts of Coastal Andhra Pradesh, Rayalaseema and Tamil Nadu.

Wind speed (knots) over India for the week ending 13.08.2014



- 8 to 12 knots over some parts of West Madhya Pradesh, Tamil Nadu and Lakshadweep Islands.
- 0 to 8 knots over entire country except some parts of West Madhya Pradesh, Tamil Nadu and Lakshadweep Islands.

INSAT 3A CCD NDVI COMPOSITE OVER AGRICULTURAL REGION ending on 14th August 2014



Source: SAC, Ahmedabad

- Agricultural vigour is good over few pockets of Punjab, Haryana, central Gujarat and MP and parts of UP and east Rajasthan as NDVI varied between 0.4 to 0.5 upto 14th August 2014. The NDVI remained within the range of 0.3 to 0.4 over rest of India. There is further increase in NDVI as compared to last week in rest part of India.

Monsoon Watch

- Southwest monsoon was vigorous over Arunachal Pradesh and active over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 17th August, 2014)

- Rain/thundershowers would occur at a few places over Andaman & Nicobar Islands during next 48 hours and at many places thereafter.
- Rain/thundershowers would occur at most places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura, Sub-

Weather Warning during next 3 days

- **14 August (Day 1):** Heavy to very heavy rainfall would occur at a few places with extremely heavy falls at isolated places over Assam & Meghalaya and Sub-Himalayan West Bengal & Sikkim. Heavy to very rainfall would also occur at a few places over Bihar and Arunachal Pradesh. Heavy rainfall would occur at isolated places over Himachal Pradesh, Uttarakhand, East Uttar Pradesh,

Himalayan West Bengal & Sikkim during the period.

- Rain/thundershowers would occur at many places over Himachal Pradesh, East Uttar Pradesh, Gangetic West Bengal and Konkan & Goa during the period.
- Rain/thundershowers would occur at many places over Uttarakhand during next 24 hours; at most places on 15th August and at many places thereafter.
- Rain/thundershowers would occur at many places over Odisha during next 24 hours; at a few places on 15th August and at many places thereafter.
- Rain/thundershowers would occur at most places over Bihar during next 48 hours and at many places thereafter.
- Rain/thundershowers would occur at most places over Coastal Karnataka during the period.
- Rain/thundershowers would occur at many places over Jharkhand and Kerala during next 24 hours and at a few places thereafter.
- Rain/thundershowers would occur at isolated places over Coastal Andhra Pradesh during next 24 hours and at a few places thereafter.
- Rain/thundershowers would occur at a few places over West Uttar Pradesh, Jammu & Kashmir, Chhattisgarh, South Interior Karnataka, Tamil Nadu & Pudducherry and Lakshadweep during the period.
- Rain/thundershowers would occur at isolated places over East Rajasthan, Madhya Pradesh, Gujarat State, Madhya Maharashtra, Marathwada, Vidarbha, Telangana, Rayalaseema and North Interior Karnataka during the period.
- Mainly dry weather would prevail over Haryana & Delhi, Punjab and West Rajasthan during the period.

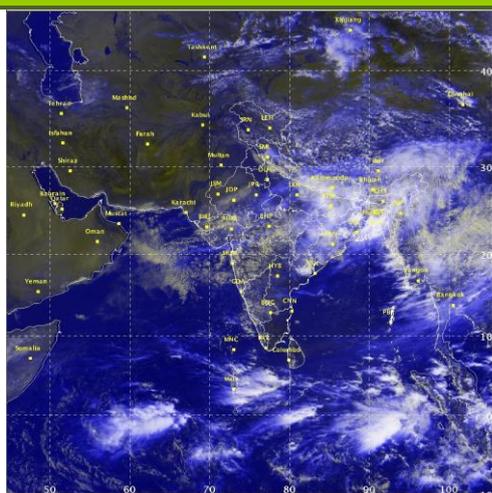
Jharkhand and Nagaland, Manipur, Mizoram & Tripura.

- **15 August (Day 2):** Heavy to very heavy rainfall would occur at a few places with extremely heavy falls at isolated places over Assam & Meghalaya and Sub-Himalayan West Bengal & Sikkim. Heavy to very rainfall would also occur at isolated places over Uttarakhand, Bihar and Arunachal Pradesh. Heavy rainfall would occur at isolated places over Himachal Pradesh, East Uttar Pradesh and Nagaland, Manipur, Mizoram & Tripura.
- **16 August (Day 3):** Heavy to very heavy rainfall would occur at a few places over Assam & Meghalaya and Sub-Himalayan West Bengal & Sikkim. Heavy to very rainfall would also occur at isolated places over Arunachal Pradesh. Heavy rainfall would occur at isolated places over Himachal Pradesh, Uttarakhand and Nagaland, Manipur, Mizoram & Tripura.

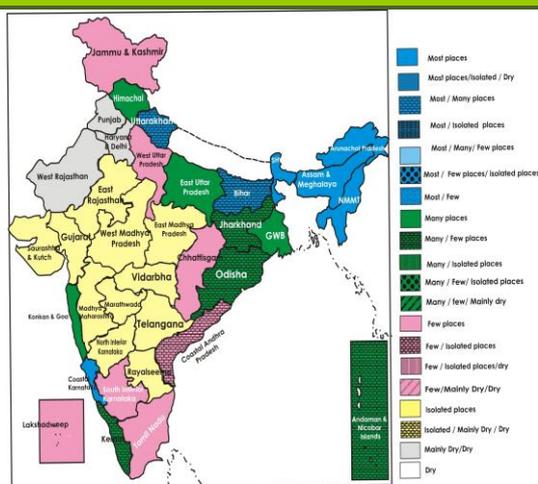
Weather Outlook for subsequent 4 days from 17th August 2014 to 21st August 2014

- Rain/thundershowers would occur at most places over Sub-Himalayan West Bengal & Sikkim and northeastern states.
- Rain/thundershowers would occur at many places over western Himalayan region and along west coast.
- Rain/thundershowers would occur at a few places over east, central and peninsular India.
- Subdued rainfall activity over plains of northwest India.

Satellite image dated, 14.08.2014, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 17th August, 2014)



Salient Advisories

- In **Karnataka**, continue sowing of rice, ragi, desi cotton, cowpea, soybean and horse gram in the Southern Dry Zone and continue sowing of groundnut, horse gram, sunflower and fodder crops in the North Dry Zone.
- In Scarce Rainfall Zone of **Royalaseema**, continue sowing contingency crops like sorghum, bajra, foxtail millet, cowpea, sunflower, green gram, field bean, castor, horse gram. Moisture stress was observed in groundnut in Anantpur and maize in Kurnool district due to deficient rainfall. To avoid moisture stress, spray 2% urea at 25-30 DAS.
- Due to heavy rains during last two weeks, there was flood in some districts of East, South Eastern and North Eastern Coastal Plain Zone of **Odisha**. Rice crops were completely submerged for three to five days. In the flood affected areas, the following contingent measures may be taken up after recession of flood water.
 - In direct seeded rice, if the entire crop is damaged, wet seeding with sprouted seeds may be undertaken with 120-130 days duration varieties.
 - Apply 50% N & K₂O and full dose of P₂O₅ at the time of sowing and rest dose at tillering stage.
 - If loss in seedlings is less than 50%, go for distribution of clonal tillers with application of 50 % N and 50 % K₂O.
 - In transplanted rice, in case of silt deposit, go for water spray in nursery areas.
 - Avoid application of urea and go for spraying of 1% K₂SO₄.
 - Go for clonal propagation if the loss in plant stand is less than 50%.
- In Ahmednagar and Solapur districts of **Madhya Maharashtra** in Maharashtra, apply supplementary irrigation to standing crops and undertake hoeing to preserve soil moisture. Also undertake mulching with crop residue or polythene mulch. In **Marathwada**, as no significant rainfall is expected, avoid sowing of contingency crops during the period. Also considering the subdued rainfall activity, avoid the planting of adsali sugarcane. Apply mulch in suru and ratoon sugarcane and apply drip irrigation. Undertake hoeing in cotton and soybean to preserve soil moisture.
- In areas where sowing was not undertaken in Central **Vidarbha** in Maharashtra, continue sowing of sunflower (TAS 82, PKV SF-9, PKVSH-27, KBSH 1 and KBSH 44) and sesame (AKT-64 and JLT-7). Intercropping of sunflower + pigeon pea (2:1), sesame + pigeon pea (4:1) may be undertaken.

Detailed Zonewise Agromet Advisories

SOUTH INDIA [TN, AP, KERALA, KARNATAKA]



Transplanting of Rice



Sugarcane



Okra



Soybean

- **Realised Rainfall:** Rainfall occurred in all districts of Coastal Karnataka; Dharwad district of North Interior Karnataka; Chikmagalur, Hassan, Kodagu, Ramanagara and Shimoga districts of South Interior Karnataka; all districts of Kerala; Nellore, Srikakulam, Vishakapatnam, Vizianagaram and West Godavari districts of Andhra Pradesh; Chittoor district of Rayalaseema; Chennai, Coimbatore, Cuddalore, Kancheepuram, Kanyakumari, Nagapattinam, Nilgiris, Puducherry, Pudukkotai, Sivaganga, Tiruvallur, Tiruvannamalai, Vellore and Villupuram districts of Tamil Nadu. Mainly dry weather prevailed over remaining parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at most places over Coastal Karnataka; at a few places over South Interior Karnataka, Tamil Nadu & Pudducherry and Lakshadweep and at isolated places over Telangana, Rayalaseema and North Interior Karnataka during the period. Rain/thundershowers would occur at many places over Kerala and at isolated places over Coastal Andhra Pradesh during next 24 hours and at a few places thereafter.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at a few places over peninsular India.
- **Advisories:**

▪ **Karnataka:**

- As rain/thundershowers would occur at most places over Coastal Karnataka during the period, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops.
- Continue sowing of rice, ragi, desi cotton, cowpea, soybean and horse gram in the Southern Dry Zone of Karnataka.
- Continue transplanting of lowland and upland rice in the Hill Zone of Karnataka.
- Continue planting of banana, continue transplanting of rice in the Southern Transition Zone of Karnataka.
- Continue sowing of short duration varieties of ragi and sunflower after proper seed treatment, in the Central Dry Zone of Karnataka.
- Continue sowing of groundnut, horse gram, sunflower and fodder crops utilising the realized rainfall in the North Dry Zone of Karnataka.
- Continue sowing of fodder crops like sorghum, maize (African tall), cowpea and short-duration bajra in the North East Dry and North East Transition Zone of Karnataka and continue transplanting of rice in the North East Dry of Karnataka.

▪ **Kerala:**

- As rain/thundershowers would occur at many places on 14th August, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water.
- High humidity condition is conducive for increase in sucking insects in vegetables in the Central Zone of Kerala. Apply 2% neem oil-garlic-soap emulsion to manage the pest after current spells of rain.
- Present cloudy weather with high humidity and low minimum temperature condition is congenial for the incidences of black bug, stem borer and leaf roller attack in rice crop in the Problem Area Zone of Kerala. Monitor the crop and spray Asataf @ 2 g/litre at the basal part of the plant after current spells of rain and after draining out water from the field.
- High humidity and moist conditions are congenial for the incidence of leaf folder and rice bug in rice in the Southern Zone of Kerala. Open the rolled leaves using a thorny twig and spray Ekalux to manage leaf folder and spray Carbaryl (Sevin) @ 600g in 200 litre of water to control rice bug after current spells of rain.

▪ **Andhra Pradesh:**

- In the Krishna Godavari Zone of Andhra Pradesh, continue sowing of maize, cotton, red gram and green gram. Provide sprinkler irrigation in rice to avoid drying due to shortage of water.
- In the Southern Telangana Zone of Andhra Pradesh, complete sowing of cotton, maize, groundnut, pulses, castor etc. Continue nursery sowing and transplanting of tomato, brinjal and chilli and direct sowing of cucurbit, beans and bhendi utilizing the realized and expected rainfall. Under prevailing dry weather conditions frequently undertake intercultural activities in the fields of irrigated and rainfed crops to conserve soil moisture and control weeds.
- In Scarce Rainfall Zone of Rayalaseema, continue sowing contingency crops like sorghum, bajra, foxtail millet, cowpea, sunflower, green gram, field bean, castor and horse gram. Moisture stress was observed in groundnut in Anantpur and maize in Kurnool due to deficient rainfall. To avoid moisture stress, spray 2% urea at 25-30 DAS.
- Weevil attack in red gram and sucking pest incidence in cotton is observed in some parts of the Anantpur district and likely to increase in the Scarce Rainfall Zone of Rayalaseema. Dust 2% Methyl Parathion to manage of weevil attack and spray Monochrotophos @2ml/lit to manage sucking pest.
- Incidence of sugarcane mosaic virus was found in all varieties of sugarcane (March planted crop) on a large scale and likely to spread in the North Coastal Zone of Andhra Pradesh. Spray Monocrotophos @ 1.6 ml/l or Acephate @ 1.5 g/l and apply Urea @ 25 kg + MOP @ 25 kg per acre for the control of virus transmitting vector on a non rainy day.

▪ **Tamil Nadu:**

- Continue land preparation and nursery sowing of *samba* rice in Nagapattinam, Thanjavur and Trichy districts in the Cauvery Delta Zone of Tamil Nadu.
- Undertake sowing of irrigated cotton and sowing of medium duration varieties of *samba* rice in the Western Zone of Tamil Nadu.
- Prevailing cloud cover with moderate humidity is conducive for the incidence of spotted boll worm in cotton in the South Zone of Tamil Nadu. Spray 5% neem seed kernel extract or Phasalone 35% EC @ 1.5 ml/ litre to manage the pest on a non rainy day.
- Suitable varieties are given in Annexure II.

• **Animal Husbandry**

- Prevailing weather conditions are congenial for Anthrax and Enterotoxaemia in livestock in the Scarce Rainfall Zone of Andhra Pradesh. Vaccinate the animals to prevent the diseases.

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



Transplanting of Rice

Okra

Jute

Green Gram

- **Realised Rainfall:** Rainfall occurred in all districts of Arunachal Pradesh; all districts of Assam except Hailakandi, Kamrup (Metro) and Karbi Anglong; East Garo Hills, East Khasi Hills, Ribhoi and South Garo Hills district of Meghalaya; Aizwal, Saiha and Serchhip districts of Mizoram; Imphal West district of Manipur; Dimapur and Kohima districts of Nagaland and Dhalai, South Tripura and West Tripura districts of Tripura.
- **Weather Forecast:** Rain/thundershowers would occur at most places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura during the period.
- **Weather Warning:** Heavy to very heavy rainfall would occur at a few places with extremely heavy falls at isolated places over Assam & Meghalaya on 14th and 15th August. Heavy to very heavy rainfall would occur at a few places over Arunachal Pradesh on 14th August and over Assam & Meghalaya on 16th August. Heavy to very rainfall would also occur at isolated places over Arunachal Pradesh on 15th and 16th August. Heavy rainfall would occur at isolated places over Nagaland, Manipur, Mizoram & Tripura during the period.
- **Weather Outlook:** Rain/thundershowers would occur at most places over northeastern States.
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - As rain/thundershowers would occur at most places over Assam, Meghalaya and Arunachal Pradesh during the period, along with heavy to very heavy rainfall at a few places with isolated extremely heavy falls over Assam and Meghalaya and heavy to very heavy rainfall at a few places over Arunachal Pradesh during the period, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water.
 - In Assam, continue transplanting of *sali* rice. The proper age of seedling for transplanting is 21 days for short duration varieties, 30-35 days for medium duration varieties. Replanting of dead hills or gap filling with seedlings of similar age should be done within 7-10 days of transplanting.
 - In flood affected areas of Lower Brahmaputra Valley Zone of Assam, the following contingency measures may be adopted for *sali* rice:
 - Raising of community nursery for late planting with old seedlings of the varieties like Profulla and Gitesh (If more than 50% damaged).
 - Nursery raising of the photo insensitive short duration variety like Luit for replanting (in case of total damage)
 - Wet seeding of sprouted seeds (@75-80 kg/ha) of short to medium duration varieties like Disang, Luit, (100 days) Kapili and Kalong (120 days)
 - Direct seeding with the photo insensitive short duration variety like Luit.
 - Adoption of submergence tolerance varieties like Jalashree and Jalkuwari for repeat flood prone areas
 - In partially affected fields, drain out excess water and apply 1/2 N + 50% K₂O as top dressing during the tillering stage.
 - In Central Brahmaputra Valley Zone of Assam, continue transplanting of *sali* rice. Continue sowing of green gram, black gram and sesame after current spells of heavy rain.
 - In Meghalaya, maintain water level of 2-5 cm in transplanted *sali* rice. 1st top dressing of 1/4 Urea (44Kg/ha) should be done after 1st hand weeding at 25-30 DAT. In high upland fields, continue planting of tuber crops like sweet potato, colocassia, tapioca, etc. after current spells of heavy rain.
 - Cloudy and humid weather is favourable for attack of leaf folder and rice hispa in *sali* rice at tillering stage in North Bank Plain Zone of Assam. Monitor the crop and when there is one damaged leaf per hill due to attack of leaf folder or appearance of one adult hispa per hill is observed, spray Chloropyriphos 20EC or Monocrotophos 40EC @ 1.5ml per litre of water after current spells of rain.
 - Due to prevailing humid weather conditions, there is chance of attack of gundhi bug in early transplanted rice in Arunachal Pradesh. Dust with Malathion 5D @ 20 kg/ha after current spells of rain. Repeat after one week. Also in the present weather, there is chance of collar rot/wilting in green gram. Spray Carbandazim @ 1g per litre of water or Endofil M45 @ 2.5g per litre of water after current spells of rain.
 - **Nagaland, Manipur, Mizoram and Tripura:**
 - As rain/thundershowers would occur at most places over Nagaland, Manipur, Mizoram and Tripura during the

period, along with heavy rainfall at isolated places, postpone irrigation, inter-cultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water.

- In Mizoram, drain out excess water from cucurbits and pineapples fields.
- In Mild Tropical Plain Zone of Tripura, in areas where transplanting was not done due deficit rain, it is advised to undertake direct seeding by choosing short duration variety or undertake sowing of short duration pulses.
- In Nagaland, provide good drainage in ginger fields to avoid rhizome rot.
- Due to humid weather conditions there is chance of attack of leaf eating caterpillars in soybean and groundnut in Manipur. For control of red hairy caterpillars, dust 5% Malathion @ 20 kg/ ha or spray Dichlorovos 7.6 EC 0.05% (0.6ml/ lit of water) after current spells of rain.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- In Nagaland, high humidity is favourable for occurrence of coccidial disease in poultry, provide anti-coccidial drugs.
- In Meghalaya, due to prevailing high relative humidity & warm temperature, there is chance for growth of molds (especially *Aspergillus* spp.) in animal feeds. So always keep animal feeds in dry and clean place and avoid direct contact with ground/soil.
- **Fisheries**
- In flood affected areas of Lower Brahmaputra Valley Zone of Assam, protect the fish ponds by putting nylon net or bamboo net around the ponds. Due to heavy rainfalls & muddy water influx from the surrounding areas, the ponds may result reduction of dissolved oxygen. Stirring the water with a bamboo pole will help in increasing the oxygen and protect the fishes from suffocation.

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



Sugarcane



Jute



Onion



Transplanting of Rice

- **Realised Rainfall:** Rainfall occurred in all districts of Jharkhand except Sahibganj; all districts of Bihar except Banka, Begusarai, Bhagalpur, Bhojpur, Buxar, Gopalganj, Katihar, Khagaria, Madhepura, Purnea, Saharsa, Saran and Siwan; all districts of Gangetic West Bengal except Nadia; all districts of Sub-Himalayan West Bengal & Sikkim except South Dinajpur; all districts of Odisha except Angul, Deogarh, Gajapati, Ganjam, Kandhamal, Khurda and Nayagarh; all districts of Andaman & Nicobar Islands.
- **Weather Forecast:** Rain/thundershowers would occur at most places over Sub-Himalayan West Bengal & Sikkim and at many places over Gangetic West Bengal during the period. Rain/thundershowers would occur at most places over Bihar during next 48 hours and at many places thereafter. Rain/thundershowers would occur at many places over Jharkhand during next 24 hours and at a few places thereafter. Rain/thundershowers would occur at many places over Odisha during next 24 hours; at a few places on 15th August and at many places thereafter. Rain/thundershowers would occur at a few places over Andaman & Nicobar Islands during next 48 hours and at many places thereafter.
- **Weather Warning:** Heavy to very heavy rainfall would occur at a few places with extremely heavy falls at isolated places over Sub-Himalayan West Bengal & Sikkim on 14th and 15th August. Heavy to very heavy rainfall would occur at a few places over Sub-Himalayan West Bengal & Sikkim on 16th August. Heavy to very heavy rainfall would occur at a few places over Bihar on 14th and at isolated places on 15th August. Heavy rainfall would occur at isolated places over Jharkhand on 14th August.
- **Weather Outlook:** Rain/thundershowers would occur at most places over Sub-Himalayan West Bengal & Sikkim. Rain/thundershowers would occur at a few places over east India.
- **Advisories:**
 - **West Bengal:**
 - As rain/thundershowers would occur at most places over Sub-Himalayan West Bengal and Sikkim and at many places over Gangetic West Bengal during the period along with heavy to very heavy rainfall at a few places with extremely heavy rainfall at isolated places over Sub-Himalayan West Bengal and Sikkim, postpone irrigation, inter-cultural operations, application of plant protection measures and fertilizers in the standing crops. Provide adequate drainage in crop fields to avoid water stagnation.

- In Sub Himalayan West Bengal, continue transplanting of *aman* rice utilizing the realised and expected rainfall.
- Continue transplanting of *aman* rice in New Alluvial and Laterite and Red Soil Zone of West Bengal utilizing the realised and expected rainfall. In Bankura and Purulia districts, follow dry nursery/adopt dry seeding or drum seeding of rice.
- In New Alluvial Zone of West Bengal, due to cloudy weather and humid conditions fungal and bacterial diseases are prevalent in maize and likely to continue. For fungal attack, spray Mancozeb @ 2.5g per litre of water and in case of bacterial rot, spray Streptocycline @ 0.1g per litre of water after current spells of rain.
- In Terai Zone, due to humid and wet weather there is chance of *Phytophthora* in betel vine and there is possibility of fruit and branch rotting in pointed gourd. To manage *Phytophthora*, spray Mancozeb 64% + Matalaxyl 8% @ 1.5 g/litre of water and to prevent fruit and branch rotting, spray Metalaxyl 8% + Mancozeb 64% @ 1.5 g per litre of water after current spells of rain.
- **Andaman & Nicobar Islands:**
- In North and Middle Andaman & Nicobar Islands, provide support to the fruit bearing banana plants to protect from high winds.
- **Odisha:**
- Due to heavy rains during last week there was flood in some districts of East, South Eastern and North Eastern Coastal Plain Zone of Odisha. Rice crops were completely submerged for three to five days. In the flood affected areas, the following contingent measures may be taken up after the flood water recedes;
 - In direct seeded rice, if the entire crop is damaged, wet seeding with sprouted seeds should be done by taking 120-130 days duration varieties.
 - Apply 50% N & K₂O and full dose of P₂O₅ at the time of sowing and rest dose at tillering stage.
 - If loss in seedlings is less than 50%, go for distribution of clonal tillers with application of 50 % N and 50 % K₂O.
 - In transplanted rice, in case of silt deposit, go for water spray in nursery areas.
 - Avoid application of urea and go for spraying of 1% K₂SO₄.
 - Go for clonal propagation if the loss in plant stand is less than 50%.
- In Western Undulating Zone of Odisha, complete transplanting of rice. Continue sowing of maize, arhar and cotton in upland areas taking the advantage of the realised and expected rainfall.
- In North Central Plateau Zone of Odisha, complete the sowing of green gram and black gram in fallow uplands. Grow high yielding varieties such as for green gram- K-851, PDM-54, PDM-11, OUM-11-5, black gram- T9, Pant-U-11, Pant-U-19 or Pant-U-30.
- In East and South Eastern Coastal Plain Zone of Odisha, prevailing temperature may favour the egg laying of stem borer in rice. To attract the stem borer butterflies, place 4 Pheromon Traps/acre, collect the adults and destroy them by burying them under soil or by burning. Also spray Prophenophos @ 2 ml per litre water.
- In North Eastern Ghat Zone of Odisha, infestation of early shoot borer in sugarcane has been reported and likely to spread. Release 50,000 *Trychogramma chilonis* parasite to control the borer. Otherwise install 4 to 5 Pheromone traps per acre to attract the borer or spray Monocrotophos @400 ml in 200 litres of water.
- In East and South Eastern Coastal Plain Zone of Odisha, due to cloudy and humid weather, there is chance of sucking insects like leaf hopper in cotton. Monitor the crops and in case of severe attack, spray Methyl demiton @ 2 ml/litre of water.
- **Bihar:**
- As rain/thundershowers would occur at most/many places over Bihar, along with heavy to very heavy rainfall at a few places on 14th and at isolated places on 15th August, postpone irrigation, inter-cultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water.
- In Bihar, in upland areas, complete sowing of urad (cv. Navin) and arhar up to middle of August. Direct seeding of short duration paddy varieties (Shabhagi, Riccharya, Turanta, Prabhat, NDR-97, Pusa 834) may be taken up in medium lands. If transplantings are delayed in low lands, farmers may use 45 days old seedlings of medium duration paddy varieties (Sita, Rajshree, Subhasini, Rajendra Kasturi, Rajendra Bhagwati) and 40-50 days old seedling of long duration paddy varieties (Swarna Sub-1, Rajendra Manasuri, Sambha Sub- 1 (BPT 5204), Kasturi, Vaidahi, Sudha, Rajshree).
- In North West Alluvial Plain Zone of Bihar, continue planting of onion and sowing of radish, pointed guard. Continue sowing of yam bean, pigeon pea, sunflower, maize and vegetable crops in the upland areas in place of rice.
- In North East Alluvial Plain Zone of Bihar, continue planting of mango, litchi, guava and papaya. In transplanted rice crop do top dressing of 1/3rd urea (44 kg/ha) after 1st hand weeding at 25-30 days after transplanting and apply remaining 1/3rd urea (44 kg/ha) after 2nd hand weeding at 40-45 days after transplanting. Continue transplanting of chilli, brinjal and cauliflower in raised bed.
- In South Bihar Alluvial Zone, complete transplanting of short duration and scented rice variety which is 20-22 days old. Also complete transplanting of *kharif* onion after current spells of rain and sowing of *kharif* brinjal, chilli, early tomato, mid season cauliflower. Continue planting of Mango, Litchi, Guava and Papaya.

▪ **Jharkhand:**

- As rain/thundershowers would occur at many places over Jharkhand along with heavy rainfall at isolated places on 14th August, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water.
- In South Eastern Plateau Zone of Jharkhand, complete transplanting of rice. Undertake planting of custard apple, banana, papaya and guava. In fallow upland, undertake sowing of pulses like horse gram, moong, urad, niger, safflower and short duration maize.
- In Western Plateau Zone of Jharkhand, complete transplanting of rice in low and medium land areas. In the upland areas, undertake sowing of kulthi and niger by selecting improved varieties.
- In Central & North Eastern Plateau Zone of Jharkhand, continue sowing of urad, til and groundnut and planting of mango, guava and litchi. Continue sowing of horse gram and sweet potato.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- Keep cattle indoors during very heavy rainfall periods in Sub-Himalayan West Bengal.
- **Poultry**
- In Nicobar Islands, South, North and Middle Andaman, newly hatched chicks should be provided warm condition with electric bulbs under enclosed dry area with sufficient feeding and watering facility.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane



Transplanting of Rice



Okra



Green Gram

- **Realised Rainfall:** Rainfall occurred in Annupur, Balaghat, Dindori, Mandla, Nasinghpur, Panna, Sagar, Siddhi, Singrauli and Tikamgarh districts of East Madhya Pradesh; Ashoknagar, Bhopal, Datia, Guna, Hoshangabad, Mandsaur, Neemuch, Raisen, Rajgarh, Ratlam, Shajapur, Sheopur, Shivpuri and Vidisha districts of West Madhya Pradesh; all districts of Chhattisgarh. Mainly dry weather prevailed over remaining parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Madhya Pradesh and at a few places over Chhattisgarh during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at a few places over central India.
- **Advisories:**
 - **Madhya Pradesh:**
 - Complete transplanting of rice and vegetables in east Madhya Pradesh.
 - In West Madhya Pradesh, complete sowing of early maturing varieties of maize (JVM 421, JM 12), red gram (UPAS 120, Pusa 9, TJT 501), sunflower (Modern, sesame variety TKG-8) and black gram (T 9, JU 86).
 - As mainly dry weather would prevail, undertake weed control in soybean, urad and moong in Jhabua Hill Zone of Madhya Pradesh. Spray Emizatapar @ 750 ml per hectare with 600-700 litre of water.
 - Due to humid weather, there is possibility of attack of red pumpkin beetle and fruit fly in cucurbit crops in Bundelkhand Zone of Madhya Pradesh; spray Trizophas 40 E.C. @ 2.0 ml per litre of water.
 - Due to humid weather there are chances of attack of sucking pest in cotton in Jhabua Hill Zone of Madhya Pradesh, spray Thiomithaxam @ 0.35 g per litre of water.
 - Due to cloudy weather, there are chances of incidence of leaf spot in urad crop in West Madhya Pradesh, spray Mancozeb @ 2.5 g per litre of water.
 - **Chhattisgarh:**
 - In Chhattisgarh Plain Zone, complete sowing of maize, moong and urad. Maintain 5 cm water in the transplanted rice fields.
 - Complete transplanting of rice and continue planting of horticultural crops like papaya, mango, guava etc. in North Hill Zone of Chhattisgarh.
 - Undertake intercultural operations for control of weeds in rice, maize, arhar, urad and soybean, after weeding broadcast urea as per requirement in North Hill Zone of Chhattisgarh.
 - In Bastar Plateau Zone of Chhattisgarh due to cloudy weather there are chances of swarming caterpillar in rice, spray DDVP @ 1ml per litre of water on a non rainy day.
 - Suitable varieties are given in Annexure II.

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



Transplanting of Rice

Sugarcane

Bottle Gourd

Onion

- **Realised rainfall:** Rainfall occurred in Jammu, Kathua, Reasai and Rajouri districts of Jammu & Kashmir; all districts of Himachal Pradesh except Kinnaur, Lahul & Spiti, Shimla and Kullu; all districts of Uttarakhand except Almora, Garwal Pauri, Haridwar and Udham Singh Nagar; Gurdaspur, Kapurthala, Nawashar, Mohali and Ropar districts of Punjab; Ambala and Panchakkula districts of Haryana; East Delhi, New Delhi, South Delhi and South West Delhi districts of Delhi; Allahabad, Ambedkar Nagar, Bahraich, Balrampur, Barabanki, Chandoli, Faizabad, Gazipur, Gonda, Jaunpur, Lucknow, Mirzapur, Pratapgarh, Sant Ravidas Nagar, Sitapur, Sonbhadra, Sultanpur and Varanasi districts of East Uttar Pradesh; Kashiramnagar, Etawah, and Lalitpur districts of West Uttar Pradesh; all districts of East Rajasthan except Banswara; Jodhpur, Nagaur and Pali districts of West Rajasthan. Mainly dry weather prevailed over remaining parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over East Uttar Pradesh and Himachal Pradesh; at a few places over West Uttar Pradesh and Jammu & Kashmir and at isolated places over East Rajasthan during the period. Rain/thundershowers would occur at many places over Uttarakhand during next 24 hours; at most places on 15th August and at many places thereafter. Mainly dry weather would prevail over Haryana and Delhi, Punjab and West Rajasthan during the period.
- **Weather Warning:** Heavy to very rainfall would occur at isolated places over Uttarakhand on 15th August. Heavy rainfall would occur at isolated places over Himachal Pradesh and Uttarakhand on 14th and 16th August and over East Uttar Pradesh on 14th and 15th August.
- **Weather Outlook:** Rain/thundershowers would occur at many places over western Himalayan region. Subdued rainfall activity over plains of northwest India.
- **Advisories:**
 - As rain/thundershowers would occur at many places in Uttarakhand, Himachal Pradesh and East Uttar Pradesh during the period along with heavy rainfall at isolated places on 14th and 16th August and isolated heavy to very heavy rainfall on 15th August over Uttarakhand, heavy rainfall at isolated places over Himachal Pradesh during the period and over East Uttar Pradesh on 14th & 15th August, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in crop fields to remove excess water
 - **Jammu & Kashmir:**
 - In Valley Temperate Zone of Jammu & Kashmir, continue transplanting of cole crops and apply second top dressing of nitrogen @ 3.25 kg urea per kanal in rice after 38-42 days of transplanting and complete second top dressing of nitrogen @ 3.25 kg urea per kanal in maize.
 - Due to prevailing humid weather conditions, there are chances of stem borer and sheath blight, blast on rice crops in Intermediate Zone of Jammu & Kashmir. For control of stem borer, apply Carbofuron 3 G in standing water @ 1 Kg/Kanal and to control sheath blight and blast, apply Bavistin @ 2 g per litre of water on a non rainy day.
 - **Himachal Pradesh:**
 - Undertake nursery sowing of Chinese cabbage and direct sowing of radish, carrot and lettuce in Sub-Montane & Low Hills Sub-Tropical Zone and in Bilaspur district of Mid-Hills Sub-Humid Zone of Himachal Pradesh, utilizing realized and expected rainfall. Apply second dose of urea @40-50 kg per hectare to tomato, brinjal, capsicum, chilli and cucurbits after current spells of rain.
 - Under prevailing humid weather condition, there are chances of attack of stem borer in maize. For control put pinch of Thimate granules in affected plants after current spells of rain.
 - Under prevailing humid weather condition, there are chances of incidence of attack of rice blast in paddy fields in Sub-Montane & Low Hills Sub-Tropical Zone and in Bilaspur district of Mid-Hills Sub-Humid Zone of Himachal Pradesh. Spray bavistin 0.01 or beam 75 WP 0.06% in 10-15 days interval in mid hills. There are chances of attack of rice hispa in rice. For management, clear the grasses from bunds or spray Cypermethrin 10EC @ 1ml per litre or Chloropyriphos 20 EC @ 2.5ml and for control of rice leaf folder, spray Chloropyriphos 20 EC @ 2.5ml per litre of water.
 - In view of humid weather condition, there are chances of attack of fruit and stem borer in brinjal and ladies finger

in Mid Hills Sub-Humid Zone of Himachal Pradesh. Spraying of neem based insecticides @ 2ml per litre or Lambda-cyhalothrin @ 1ml per litre of water along with sticker prior to flowering in brinjal and Cyhalothrin (Ripcard 10 EC) @ 5ml per litre in ladies finger is advised after current spells of rain.

- Under prevailing humid weather condition, there are chances of incidence of fruit rot in Anar in Mild Hills Sub-Humid Zone of Himachal Pradesh. Spray Captan @ 600g per 200 litres of water.

- **Uttarakhand:**

- In Sub humid Sub Tropic Zone of Uttarakhand, maintain 5cm water in rice.
- Complete sowing of urd in Bhabar and Tarai Zone after current spells of heavy rain.
- Due to high humidity (above 80%), there are chances of late blight in potato in Hill Zone of Uttarakhand. Spray of Carbendazim or Diathem M-45 @ 2g per litre of water dissolved with sticker after current spells of rain.
- Due to high humid condition, there are chances of incidence of leaf folder in rice in Bhabar and Tarai Zone of Uttarakhand. Monitor the crop, if the damage is > 5 % spray Diamathoate 30 EC @ 400 ml dissolved in 400 litres of water per acre after current spells of rain

- **Punjab, Haryana and Delhi:**

- In Western Zone of Punjab, continue nursery sowing of tomato and transplanting of brinjal utilising the realised rainfall.
- In Undulating Plain Zone of Punjab, there are chances of fungal diseases in vegetables due to cloudy weather. Spray Infofil M 45 @ 390 g per acre in 100-200 litres of water.
- Due to cloudy weather, there are chances of occurrence of sucking pests viz. white fly and Jassids in cotton in Western Zone of Punjab. Monitor the crops and spray the Oberon @ 200ml/acre for white fly and Ulala 80g/acre for the management of Jassids.
- In Western Zone of Haryana, complete sowing of guar, bajra, pulses, fodder crops such as jowar mixed with cowpea to increase the nutritive value for continuous supply of green fodder. Undertake alternate wetting and drying in rice fields and irrigate in alternate rows in sugarcane in case of shortage of water for irrigation. Undertake field preparation for planting of new orchard crops.
- In Delhi, continue sowing of sweet corn and baby corn during the week with realised rainfall. Also undertake transplanting of tomato, brinjal, chilli, cabbage and cauliflower.

- **Uttar Pradesh:**

- Complete sowing of jowar in Central Plain Zone of Uttar Pradesh.
- Continue sowing of sesame (T-4, 12, 13, 18, Shekhar, Pragati, Tarun) and planting of mango, lemon, guava, litchi and amla in Eastern Plain Zone of Uttar Pradesh utilizing the realized and expected rainfall.
- Undertake planting of fruit crops like mango, litchi, guava, amla, papaya, etc in Western Plain Zone of Uttar Pradesh, utilizing the realized and expected rainfall.
- Continue transplanting of cauliflower, tomato and chilli and undertake nursery sowing of cabbage and in Central Plain Zone of Uttar Pradesh utilizing the realized and expected rainfall.
- Under prevailing humid weather condition, there are chances of incidence of mould and red rust disease in mango and litchi in Central Plain Zone of Uttar Pradesh. Spray Blytox 0.3% @ 3 g per litre of water after current spells of rain.
- Under prevailing humid weather condition, there are chances of attack of stem borer and shoot fly in maize in Central Plain Zone of Uttar Pradesh. Spray Dimethioate 30 EC @ 1litre or Quinolphos 25 EC @ 1.5 litre in 700-800 litre of water per hectare after current spells of rain.
- Under prevailing humid weather condition, there are chances of incidence of rice blast disease in rice in Western Plain Zone of Uttar Pradesh. For control, spray Beem @ 120 g per 200 litre of water on a non rainy day.

- **Rajasthan:**

- In Semi-Arid Eastern Plain Zone of Rajasthan, complete planting of fruit crops like mango, pomegranate and aonla and transplanting of papaya seedlings. Also undertake sowing of radish and nursery sowing of mid-season cauliflower.
- Due to warm and humid weather condition, there are incidences of small brown spots on leaves of green gram, moth bean and cowpea are the symptoms of bacterial blight disease. Spray Streptocyclin @ 1 gm and copper fungicide @ 20 gm per 10 litre water.
- Due to warm and humid weather condition, there is chance of attack of pod borer in *kharif* pulses in Arid Western Plain Zone of Rajasthan. To control spray Quinolphos 25 EC 1 litre / ha.
- As cloudy weather conditions prevailed during last week, there is chance of sucking pests in legumes and mealy bug in okra in Flood Prone Eastern Plain Zone of Rajasthan. To control spray Dimethoate 30 EC @ 1 litre/ ha and to control mealy bug, spray a solution of Acephate 70 SP @ 1 g or Profenophos @ 3 ml per litre of water.
- Due to cloudy weather condition, there is chance of spotted bollworm/boll worm on cotton in Irrigated North Western Plain Zone. To control apply Fenvalerate or Indoxacarb @ 1ml per litre of water.

- **Floriculture**

- Due to prevailing humid weather condition there are chances of attack of blue beetle in balsam, zenia, cleome and rose in Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh. For control, spray Cypermethrin @ 20 ml in 10 litres of water. In poly houses attack of thrips and mites is also expected. For control spray Rogor @ 20 ml

in 10 litres of water for thrips and for beetle spray Diclofol @ 20 ml in 10 litres of water.

- **Horticulture**

- Due to prevailing humid weather condition, there are chances of attack of citrus canker in peach in Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh. Spray Malathion @ 10 ml or Metasystox @ 10 ml per 10 litres after current spells of rain. Keep the basins of the plants free from weeds and arrange for drainage.
- Under prevailing hot and humid weather condition, there are chances of attack of fruit fly in guava in Central Plain Zone of Punjab. Spray Fenvulrate @ 2.5 ml per litre of water and repeat at weekly interval. Fix fruit fly traps in orchards at the rate of 16 traps per acre.

- **Animal Husbandry:**

- Under prevailing humid weather condition, there are chances of attack of ticks and mites on animals in Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh and also in Flood Prone Eastern Plain Zone of Rajasthan. For control spray Butox @ 2.0 ml per litre of water. Clean the cowshed with phenyl and keep the animal sheds dry and clean.
- Keep cattle indoors during heavy rainfall periods in Uttarakhand, East Uttar Pradesh and Himachal Pradesh.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Transplanting of Rice

Sugarcane

Okra

Soybean

- **Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa, Kolhapur, Nashik and Pune districts in Madhya Maharashtra; Bhandara, Gadchiroli and Gondia districts of Vidarbha; Broach, Dangs, Kheda, Mehsana, Navsari and Valsad districts in Gujarat Region and Porbandar district in Saurashtra and Kutch region. Mainly dry weather prevailed over remaining parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Konkan & Goa and at isolated places over Gujarat State, Madhya Maharashtra, Marathwada and Vidarbha during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at many places along west coast.
- **Advisories:**
 - **Maharashtra:**
 - As rain would occur at many places over Konkan & Goa during the period, postpone irrigation, intercultural operations, application of plant protection measures and fertilizers in the standing crops.
 - In Konkan, maintain water level upto 5 cm in main rice field.
 - In Madhya Maharashtra, in Ahmednagar and Solapur districts, apply supplementary irrigation to standing crops and undertake hoeing to preserve soil moisture. Also undertake mulching with crop residue or polythene mulch.
 - In Marathwada, as no significant rainfall is expected, avoid sowing of contingency crops during the period. Also considering the subdued rainfall activity, avoid the planting of adsali sugarcane. Apply mulch in suru and ratoon sugarcane and apply drip irrigation. Undertake hoeing in cotton and soybean to preserve soil moisture
 - In Central Vidarbha, in areas where sowing was not undertaken, continue sowing of sunflower (TAS 82, PKV SF-9, PKVSH-27, KBSH 1 and KBSH 44) and sesame (AKT-64 and JLT-7). Intercropping of sunflower + pigeon pea (2:1), sesame + pigeon pea (4:1) may be undertaken.
 - Due to subdued rain in Ahmednagar, Jalgaon and Dhule districts in Madhya Maharashtra, there may be wilting in cotton, drenching of 150 – 200 ml solution of 1.5 kg Urea + 1.5 kg Potash per 100 litres water per plant may be done to the affected plants.
 - Prevailing cloudy weather in Central Vidarbha is favourable for incidence of powdery mildew in green gram; spray Dinocap @ 10 ml per 10 litres of water.
 - **Gujarat:**
 - Continue intercultural operations and weeding in cotton, pulses and sesame in North Gujarat Zone and in rice in South Gujarat Heavy Rainfall Zone. Complete planting of new orchards. Undertake transplanting of seedling of fennel (40 days old) in main field in North Gujarat Zone and Bhal and Coastal Zone of Gujarat.
 - Undertake transplanting of tomato, brinjal and chilli in Middle Gujarat Zone. Undertake transplanting of rice, continue sowing of cluster bean (GC-2) and planting of horticultural crops, carry out gap filling and thinning in already sown crops in Bhal and Coastal Zone of Gujarat.
 - Complete nursery preparation for vegetable crops like brinjal, tomato and chilli in South Saurashtra Zone and transplanting of these vegetables in North Gujarat Zone and North Saurashtra Zone. Apply Carbofuran 3G @ 1.5

kg/ha at the time of transplanting.

- Continue sowing of certified hybrid varieties of castor crop (GAUCH-2, GCH-5,6 and GCH-7) in North Gujarat Zone, Bhal and Coastal Zone of Gujarat and South Gujarat Heavy Rainfall Zone.
- In Saurashtra region, complete sowing of contingent crops like black gram (T-9, Guj. Udid-1), green gram (GM-4, K-851, Meha), pigeon pea (cv. BDN-2, ICPL-87, GT-100, GT-101, Vaishali), sesame (cv. Purva-1) and cotton (G. cot-13, 21, 23, V-797). For fodder purpose take sorghum cv. CSH-6 and CFS-4.
- In North Gujarat Region, complete sowing of contingency crop sunflower (Modern, EC 68414 and bajra (GHB-538,732).
- Cloudy weather condition is favourable for incidence of aphids and jassids in cotton in South Gujarat Zone; spray Dimethoate 30 EC @10 ml or Imidachloprid 17.5SL 4 ml per 10 litres of water.
- Due to cloudy and humid weather, heavy attack of thrips is noticed in cotton in North Saurashtra Zone and likely to continue; spray Imidachloprid 17.8 % 5 ml or Thiomethoxam @6 g or Acephate 15 g in 10 litres of water.
- **Animal Husbandry**
- In Gujarat, keep fodder in safe place to avoid spoilage due to rainfall, spray phenyl in the animal sheds to avoid flies, mosquitoes.

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

Annexure I
Week by week Rainfall Distribution

Sub-Divisions	30.07.14		06.08.14		13.08.14	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	43.3	-54	29.3	-48	87.5	34
Dibang Valley	**	**	**	**	**	**
East Kameng	1.4	-98	5.1	-90	33.4	-49
East Siang	41.2	-82	187.0	4	379.4	173
Kurung Kumey	**	**	**	**	**	**
Lohit	62.4	-59	59.6	-35	208.2	136
Lower Dibang Valley	83.8	43	154.4	423	451.2	1483
Lower Subansari	**	**	**	**	**	**
Papumpara	217.5	114	98.5	-12	172.5	38
Tawang	119.0	-22	24.0	-81	56.0	-63
Tirap	25.4	-87	42.2	-58	106.0	-3
Upper Siang	105.8	-23	32.6	-59	144.6	61
Upper Subansari	43.8	26	10.4	-56	35.6	-20
West Kameng	26.4	-83	12.6	-90	121.2	-19
West Siang	25.0	-82	48.0	-9	120.0	174
Assam&Meghalaya						
Assam						
Baksa	24.2	-83	6.5	-93	38.2	-62
Barpeta	67.1	-53	47.6	-51	68.7	-31
Bongaigaon	29.6	-79	19.8	-77	94.2	9
Cachar	190.5	61	121.0	20	95.7	-22
Chirang	65.4	-54	141.9	64	200.6	133
Darrang	21.0	-66	6.0	-91	70.0	10
Dhemaji	21.0	-83	113.0	23	93.0	-27
Dhubri	19.2	-87	24.8	-73	51.0	-33
Dibrugarh	58.4	-48	106.3	14	81.9	-11
Goalpara	9.3	-92	54.2	-16	30.5	-56
Golghat	198.7	209	57.0	24	52.7	-27

Hailakandi	172.3	59	63.4	-27	17.4	-82
Jorhat	133.7	70	17.2	-78	98.6	16
Kamrup(Rural)	38.1	-38	69.7	32	48.1	-8
Kamrup(Metro)	12.1	-80	61.2	16	14.7	-72
Karbi Anglong	121.8	83	49.9	-6	21.2	-58
Karimganj	158.8	18	163.3	74	149.7	34
Kokrajhar	19.2	-87	56.5	-64	184.7	8
Lakhimpur	79.4	-37	136.9	49	109.3	-15
Morigaon	27.2	-69	39.2	-46	162.2	110
N.C.Hills	111.4	71	46.3	50	70.4	29
Nowgong	70.3	-3	24.1	-62	103.4	62
Nalbari	25.2	-74	18.3	-77	39.5	-36
Sonitpur	111.9	38	16.4	-74	51.7	-35
Sibsagar	172.1	118	35.5	-54	85.0	-3
Tinsukia	27.6	-77	87.7	17	109.5	15
Udalgiri	7.8	-87	7.8	-88	49.3	-23
Meghalaya						
East Garo Hills	14.7	-88	40.3	-63	223.4	258
East Khasi Hills	52.4	-82	106.9	-59	344.7	86
Jaintia Hills	**	**	**	**	**	**
Ribhoi	21.2	-78	50.6	-39	35.3	-67
South Garo Hills	28.0	-75	70.0	-29	73.0	0
West Garo Hills	25.2	-77	19.4	-80	11.2	-85
West Khasi Hills	**	**	**	**	**	**
NMMT						
Mizoram						
Aizwal	158.2	52	33.3	-68	55.4	-48
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	28.0	-75	30.0	-66	123.0	53
Serchhip	63.3	-49	45.5	-48	72.0	-24
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	22.0	-83	42.0	-62	16.0	-88
Churachandpur	3.0	-97	22.0	-70	0.0	-100
Imphal east	3.5	-95	57.5	19	6.5	-92
Imphal west	138.9	185	75.4	61	213.3	190
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	**	**	**	**	**	**
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	134.2	186	55.5	22	66.2	-25
Kephire	**	**	**	**	**	**
Kohima	108.3	20	46.6	-39	73.5	-20
Longleng	**	**	**	**	**	**

Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	22	-76	55	-28	25	-73
Tuensang	**	**	**	**	**	**
Wokha	**	**	**	**	**	**
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	124.7	65	32.9	-62	49.2	-34
North tripura	164.7	88	53.3	-25	24.2	-74
South tripura	61.0	-33	12.0	-88	99.4	27
West tripura	49.5	-41	23.2	-69	56.8	-13
Himachal Pradesh						
Bilaspur	37.3	-56	65.9	-23	62.7	-22
Chamba	49.7	-68	36.7	-71	54.2	-63
Hamirpur	89.7	-15	39.4	-56	43.4	-57
Kangra	127.4	-20	85.4	-49	123.4	-33
Kinnaur	2.1	-88	3.3	-79	2.5	-89
Kullu	61.8	42	22.5	-50	11.4	-74
Lahaul and Spiti	3.0	-93	0.0	-100	0.5	-99
Mandi	139.2	19	54.5	-49	80.9	-17
Shimla	102.7	89	23.0	-55	25.8	-47
Sirmaur	48.4	-62	29.9	-75	132.3	5
Solan	36.5	-55	20.8	-76	42.6	-52
Una	41.9	-41	63.6	-21	43.8	-47
Punjab						
Amritsar	17.4	-69	11.2	-79	7.7	-86
Barnala	1.0	-97	6.6	-79	0.0	-100
Bhatinda	28.4	19	2.3	-94	0.0	-100
Faridkot	77.5	312	0.0	-100	13.0	-48
Fatehgarh Saheb	15.7	-70	5.7	-88	23.7	-51
Ferozpur	15.2	-46	4.9	-87	0.0	-100
Gurdaspur	56.3	-31	38.7	-55	85.1	-15
Hoshiarpur	54.5	-11	25.2	-66	16.2	-77
Jalandhar	34.7	-20	12.4	-75	17.5	-67
Kapurthala	43.8	22	68.6	84	48.0	29
Ludhiana	35.4	-19	18.3	-59	13.6	-72
Mansa	9.6	-62	4.0	-89	0.0	-100
Moga	40.7	33	1.5	-96	3.5	-90
Muktesar	1.0	-95	0.0	-100	0.0	-100
Nawashahar	78.8	20	15.0	-80	30.5	-49
Patiala	2.7	-94	7.2	-88	10.1	-81
Ropar	21.5	-71	37.7	-52	57.1	-6
Sangrur	8.3	-78	17.6	-57	6.9	-81
Mohali	18.3	-69	5.5	-92	62.5	21
TarnTaran	11.3	-68	4.7	-86	5.1	-80
Haryana,Chd,Delhi						
Haryana						
Ambala	20.8	-70	56.5	-23	81.0	-9

Bhiwani	14.8	-54	16.7	-44	1.7	-95
Chandigarh	13.1	-81	16.7	-79	15.9	-79
Faridabad	17.8	-63	12.3	-81	27.3	-41
Fatehabad	1.2	-95	4.3	-85	0.8	-96
Gurgaon	9.0	-76	9.8	-79	1.3	-97
Hissar	12.2	-60	11.7	-59	0.0	-100
Jhajar	4.3	-88	34.4	-20	13.8	-57
Jind	7.7	-69	12.7	-69	0.0	-100
Katihai	3.0	-90	3.0	-91	0.0	-100
Karnal	8.7	-78	15.0	-65	13.1	-73
Kurukshetra	3.1	-92	4.7	-90	1.0	-98
Mahendragarh	12.5	-65	24.1	-31	16.7	-61
Mewat	5.9	-84	28.9	-39	9.8	-81
Palwal	19.0	-49	17.5	-58	9.5	-78
Panchkkula	5.8	-93	22.2	-76	52.9	-42
Panipat	3.4	-90	14.0	-70	20.7	-54
Rewari	15.2	-54	29.8	-44	4.0	-92
Rohtak	11.8	-72	10.0	-78	1.0	-98
Sirsa	9.5	-57	5.8	-67	0.0	-100
Sonepat	10.4	-78	22.8	-59	7.2	-84
Yamunanagar	81.0	6	63.8	-20	23.7	-69
Delhi						
Central Delhi	3.0	-94	19.0	-74	27.0	-55
East Delhi	12.0	-78	65.0	-13	44.0	-27
New Delhi	2.7	-95	28.5	-62	89.0	47
North Delhi	18.6	-65	14.3	-81	27.2	-55
North East Delhi	40.0	-25	46.0	-38	2.0	-97
North West Delhi	1.0	-98	17.7	-76	17.7	-71
South Delhi	61.0	14	15.9	-79	58.0	-4
South West Delhi	52.8	-1	21.4	-71	39.2	-35
West Delhi	1.0	-98	0.0	-100	8.0	-87
Jammu & Kashmir						
Anantnag	10.3	-54	12.4	-39	10.6	-48
Badgam	2.9	-86	3.8	-72	0.0	-100
Bandipore	**	**	**	**	**	**
Baramula	11.0	-42	3.4	-86	1.2	-95
Doda	20.5	-33	8.4	-72	2.4	-90
Ganderbal	18.1	15	2.6	-86	3.2	-80
Jammu	72.5	-24	85.5	-11	105.3	12
Kargil	**	**	**	**	**	**
Kathua	43.4	-61	12.8	-89	110.8	7
Kistwar	**	**	**	**	**	**
Kulgam	17.9	-20	15.1	-26	3.9	-81
Kupwara	0.0	-100	0.4	-98	0.0	-100
Ladakh(Leh)	0.0	-100	0.0	-100	0.0	-100
Poonch	0.0	-100	10.3	-88	10.8	-86
Pulwama	3.9	-78	20.3	7	0.9	-96
Rajouri	11.5	-82	1.0	-99	72.3	20
Ramban	4.9	-84	11.1	-63	8.5	-65

Reasi	45.3	-70	47.8	-71	126.3	-8
Samba	26.6	-72	55.0	-43	29.4	-69
Shopian	0.0	-100	0.0	-100	6.0	-71
Srinagar	4.7	-70	2.9	-84	0.0	-100
Udhampur	7.4	-95	28.3	-83	15.7	-89
East Madhya Pradesh						
Anuppur	27.3	-67	263.3	189	43.1	-53
Balaghat	52.5	-53	123.4	26	65.6	-39
Chhatarpur	32.0	-58	147.2	50	19.0	-80
Chindwara	36.4	-39	65.6	-13	6.0	-90
Damoh	17.5	-79	235.0	87	6.1	-93
Dindori	25.8	-70	245.4	150	143.2	45
Jabalpur	52.0	-36	190.0	66	22.8	-76
Katni	22.8	-71	276.0	138	6.1	-93
Mandla	45.0	-55	199.7	88	76.0	-31
Narsingpur	24.8	-70	169.0	72	32.0	-61
Panna	35.2	-56	140.5	49	135.3	32
Rewa	5.6	-93	123.1	56	23.5	-72
Sagar	43.5	-42	172.9	45	50.8	-48
Satna	37.5	-53	89.2	3	4.2	-95
Seoni	39.6	-53	106.6	29	17.2	-77
Shahdol	28.0	-56	240.0	169	7.0	-92
Sidhi	23.2	-72	354.4	408	37.8	-52
Singrauli	95.0	25	81.4	13	85.1	45
Tikamgarh	17.0	-73	284.5	278	57.0	-34
Umaria	7.4	-90	300.4	207	20.1	-76
West Madhya Pradesh						
Alirajpur	206.1	203	108.1	58	14.2	-74
Asoknagar	40.8	-42	191.3	138	98.8	42
Barwani	145.2	216	7.7	-85	20.2	-55
Betul	151.2	102	42.6	-48	7.6	-89
Bhind	30.6	-43	98.8	87	21.2	-72
Bhopal	91.2	3	66.2	-29	32.2	-56
Burhanpur	160.9	160	12.5	-82	1.7	-97
Datia	32.8	-44	113.4	60	36.5	-53
Dewas	104.5	23	25.3	-72	6.0	-91
Dhar	135.7	89	45.8	-39	4.5	-92
Guna	73.2	-10	197.5	120	177.7	130
Gwalior	6.9	-89	227.6	247	13.1	-84
Harda	200.2	126	22.8	-76	4.5	-95
Hosangabad	133.2	34	103.6	-17	30.8	-70
Indore	140.1	87	91.1	29	4.6	-92
Jhabua	163.9	177	58.3	-13	15.2	-73
Khandwa	159.0	123	34.7	-54	4.3	-93
Khargone	165.5	183	35.5	-48	5.0	-90
Mandsaur	69.9	-16	102.4	29	195.7	235
Morena	37.0	-44	136.3	104	25.5	-68
Neemuch	111.3	32	68.7	5	272.9	387
Raisen	33.1	-64	130.3	25	59.2	-34

Rajgarh	54.6	-30	123.2	33	167.1	140
Ratlam	110.5	24	41.6	-53	47.5	-19
Sehore	126.4	34	62.6	-41	27.8	-64
Shajapur	60.5	-31	77.7	-21	83.0	32
Sheopur	48.5	-28	107.0	87	143.5	80
Shivpuri	96.8	48	199.8	180	87.0	18
Ujjain	93.6	15	41.7	-49	24.4	-53
Vidisha	57.1	-35	165.3	62	86.5	18
Chhattisgarh						
Bastar	87.1	3	158.8	79	47.5	-47
Bijapur	68.2	-47	40.2	-67	76.3	-46
Bilaspur	28.9	-64	266.7	246	47.9	-43
Dantewara	93.8	5	60.3	-39	30.9	-70
Dhamtari	38.0	-55	239.8	190	39.8	-43
Durg	33.6	-52	176.5	129	84.8	7
Janjgir	113.5	30	93.2	-2	96.5	-12
Jashpurnagar	29.7	-71	131.2	45	35.7	-66
Kanker	53.9	-48	164.1	37	34.5	-62
Korba	123.1	42	313.1	187	79.4	-29
Koriya	42.4	-49	287.7	221	92.9	-11
Kawardha	36.9	-48	245.6	285	41.0	-35
Mahasumund	33.7	-57	335.9	261	76.0	13
Narayanpur	101.0	9	196.8	89	34.8	-68
Raigarh	83.7	10	262.6	194	39.8	-55
Raipur	53.2	-31	147.8	95	54.3	-31
Rajandgaon	45.8	-49	102.3	23	30.4	-60
Surguja	24.4	-73	172.3	89	101.3	4
East Uttar Pradesh						
Allahabad	28.1	-56	102.4	75	40.7	-50
Ambedkar Nagar	0.0	-100	31.3	-57	32.0	-56
Azamgarh	17.1	-73	53.7	-22	22.6	-70
Bahraich	54.8	-30	50.5	-25	47.3	-32
Ballia	34.3	-43	29.1	-53	28.1	-59
Balrampur	28.2	-69	36.7	-43	50.9	-34
Banda	44.7	-31	92.3	34	28.3	-69
Barabanki	55.1	-22	21.6	-67	36.2	-48
Basti	30.5	-57	19.7	-73	26.1	-60
Chandauli	19.2	-71	34.2	-39	75.0	-2
Deoria	26.5	-61	55.5	-14	6.5	-91
Faizabad	22.5	-68	37.3	-54	30.5	-59
Farrukhabad	16.5	-72	0.7	-99	7.1	-92
Fatehpur	15.6	-72	35.9	-47	10.9	-87
Gazipur	11.8	-80	40.7	-46	76.9	-11
Gonda	18.2	-75	66.3	-24	47.1	-36
Gorakhpur	52.1	-39	23.7	-75	18.5	-81
Hardoi	43.8	-28	21.1	-60	10.7	-85
Jaunpur	5.6	-91	35.2	-30	52.6	-30
Kannauj	28.5	-54	62.5	4	8.1	-91
Kanpur City	36.1	-39	49.5	-12	12.4	-83

Kanpur Dehat	25.8	-61	44.4	-24	11.9	-85
Kaushambi	12.5	-78	79.3	61	13.1	-85
Kheri	26.7	-61	92.0	29	17.9	-72
Kushi nagar	6.5	-92	6.5	-92	14.5	-83
Lucknow	13.0	-79	35.9	-41	31.8	-49
Maharajganj	29.5	-69	6.5	-92	6.5	-93
Mau	38.0	-50	31.0	-52	1.5	-98
Mirzapur	1.7	-97	35.1	-48	101.2	15
Pratapgarh	13.0	-80	81.3	45	46.7	-41
RaiBareilly	18.1	-68	33.1	-39	17.3	-75
Sahuji Maharajnagar	43.3	-20	133.8	116	7.3	-91
Sant Kabirnagar	34.0	-55	57.0	-24	4.0	-94
Sant Ravidas Nagar	0.0	-100	0.0	-100	93.0	22
Shrawasti	122.4	57	116.6	74	25.8	-63
Sidharthnagar	48.4	-43	63.1	-6	15.1	-81
Sitapur	46.5	-32	37.5	-25	34.3	-50
Sonbhadra	58.1	-5	65.6	-7	151.0	106
Sultanpur	28.4	-55	43.7	-24	45.5	-37
Unnao	6.4	-89	76.6	16	9.3	-88
Varanasi	6.2	-90	39.7	-35	149.7	125
West Uttar Pradesh						
Agra	10.4	-81	93.9	47	15.1	-81
Aligarh	7.4	-87	23.4	-64	20.6	-69
Auraiya	31.5	-45	27.5	-54	15.6	-78
Badaun	46.6	-34	73.6	11	7.8	-89
Baghpat	9.3	-80	43.8	-18	10.1	-81
Bareilly	31.9	-60	17.6	-76	10.5	-86
Bijnor	67.3	-31	36.5	-57	10.0	-87
Bulandsahar	7.4	-87	22.8	-63	6.5	-89
Etah	39.4	-16	38.8	-24	24.7	-65
Etawah	8.3	-86	31.1	-56	40.3	-53
Firozabad	10.7	-74	19.3	-66	22.4	-66
GBNagar	0.0	-100	8.0	-87	17.0	-71
Ghaziabad	2.8	-95	16.6	-74	1.0	-98
Hamirpur	26.3	-60	82.8	24	13.0	-86
Jalaun	74.8	27	53.8	-16	6.9	-94
Jhansi	15.3	-77	82.3	22	22.9	-76
Jotiba Phule Nagar	118.5	66	10.0	-85	0.0	-100
Kanshiramnagar	83.0	50	112.0	93	58.0	-16
Lalitpur	7.0	-91	196.5	148	51.5	-48
Mahamaya Nagar	49.5	-9	57.0	1	9.5	-86
Mahoba	5.4	-91	54.2	-27	29.6	-69
Mainpuri	45.6	-11	18.8	-63	11.4	-84
Mathura	35.5	-26	39.6	-28	18.8	-69
Meerut	23.7	-64	24.0	-65	4.3	-94
Moradabad	24.3	-69	30.2	-61	22.5	-71
Muzzaffarnagar	8.4	-87	46.6	-27	0.0	-100
Pilibhit	24.9	-72	18.2	-78	18.6	-75
Rampur	36.8	-61	18.7	-76	20.9	-72

Saharanpur	22.3	-65	49.7	-31	8.0	-88
Shahjahanpur	62.8	-13	25.9	-62	9.6	-87
Uttarakhand						
Almora	76.0	-3	14.2	-80	7.6	-90
Bageshwar	141.3	80	65.8	-5	49.0	-33
Chamoli	124.5	82	111.3	31	151.3	59
Champawat	72.5	-32	27.0	-72	61.5	-39
Dehradun	90.5	-46	119.2	-35	206.4	25
Garhwal Pauri	104.7	-10	68.5	-44	16.0	-85
Garhwal Tehri	73.0	-23	36.4	-66	34.4	-61
Haridwar	21.7	-76	97.3	4	26.0	-73
Nainital	139.2	15	82.5	-30	51.0	-47
Pithorgarh	103.4	-29	83.6	-39	57.2	-55
Rudraprayag	116.4	-26	106.3	-32	110.2	-32
Udham Sing Nagar	16.7	-84	41.0	-50	24.0	-71
Uttarkashi	126.7	39	115.5	17	51.2	-50
Bihar						
Araria	12.6	-87	27.5	-69	52.7	-30
Arwal	10.2	-82	14.7	-69	39.6	-41
Aurangabad	6.9	-90	32.3	-39	50.2	-9
Banka	70.2	30	17.4	-72	19.2	-65
Begusarai	29.6	-53	25.5	-64	0.0	-100
Bhabua	6.3	-91	23.0	-67	215.6	215
Bhagalpur	100.4	70	14.3	-80	12.3	-76
Bhojpur	0.0	-100	9.4	-86	24.6	-56
Buxar	1.0	-98	1.4	-97	8.8	-87
Darbhanga	47.1	-36	41.2	-36	32.8	-52
East Champaran	37.4	-56	52.3	-18	33.5	-49
Gaya	7.4	-89	44.2	-32	134.5	128
Gopalganj	12.8	-81	90.3	46	0.0	-100
Jahanabad	30.9	-42	24.2	-63	74.8	33
Jamui	69.9	15	37.4	-38	55.6	-7
Kathihar	77.9	8	3.3	-96	15.6	-70
Khagadia	76.8	30	16.4	-79	18.7	-72
Kishanganj	27.2	-76	35.4	-65	119.8	3
Lakhisarai	43.0	-37	29.0	-60	34.0	-38
Madhepura	118.2	60	11.0	-85	23.4	-66
Madhubani	35.0	-59	25.5	-60	40.0	-49
Monghyar	36.9	-46	16.8	-77	72.9	32
Muzaffarpur	42.1	-41	41.2	-38	45.5	-30
Nalanda	22.4	-67	13.6	-76	78.0	27
Nawada	15.3	-73	20.2	-69	89.7	36
Patna	3.4	-95	10.8	-81	55.8	-11
Purnea	14.9	-81	6.5	-93	28.4	-64
Rohtas	12.3	-82	39.8	-38	45.4	-27
Saharsha	24.0	-76	6.0	-93	3.0	-97
Samstipur	42.1	-40	47.6	-22	55.2	-23
Saran	3.1	-96	68.2	7	25.9	-61
Sheikpura	75.6	32	34.7	-36	71.1	39

Sheohar	16.2	-85	0.0	-100	63.6	-7
Sitamarhi	57.4	-46	6.0	-92	74.0	8
Siwan	13.6	-83	81.7	31	11.7	-83
Supaul	52.7	-31	36.7	-36	42.3	-25
Vaishali	45.8	-50	77.7	28	42.4	-42
West Champaran	63.9	-49	39.8	-44	68.1	-9
Jharkhand						
Bokaro	29.4	-59	46.0	-45	138.1	116
Chatra	31.1	-54	70.0	4	105.1	25
Deoghar	22.8	-63	71.4	15	34.7	-47
Dhanbad	19.6	-76	53.5	-35	117.4	58
Dumka	57.4	-17	70.5	-5	78.6	17
East Singbhum	46.7	-28	95.5	11	88.4	14
Garhwa	7.3	-91	72.6	-10	61.9	-14
Giridih	46.8	-42	37.1	-47	95.5	60
Godda	61.5	-1	23.1	-59	32.0	-37
Gumla	77.3	-11	113.6	40	55.9	-32
Hazaribagh	31.9	-56	67.8	-4	204.5	173
Jamtara	49.3	-33	38.3	-47	76.6	-8
Khunti	2.0	-98	70.2	-19	100.5	8
Koderrna	37.3	-19	21.0	-67	178.3	179
Latehar	32.9	-63	57.2	-24	114.0	61
Lohardagga	27.9	-63	72.3	-20	72.4	5
Pakur	27.5	-64	28.6	-63	32.8	-56
Palamau	5.3	-93	77.7	5	95.8	32
Ramgarh	25.4	-65	39.4	-49	144.0	120
Ranchi	35.9	-51	64.1	-25	64.2	-26
Sahebganj	63.8	-21	45.6	-25	26.8	-61
Saraikela	34.1	-54	98.4	13	95.7	32
Simdega	34.3	-68	152.4	61	80.2	-16
West Singbhum	80.2	14	135.8	53	213.8	164
East Rajasthan						
Ajmer	58.3	48	54.0	50	192.5	470
Alwar	38.4	-18	56.2	4	44.4	-21
Banswara	95.4	22	85.2	3	29.8	-53
Baran	71.4	-3	160.3	114	323.3	319
Bharatpur	42.9	-6	84.2	47	46.3	-17
Bhilwara	101.1	100	45.3	-12	293.7	527
Bundi	49.2	-28	158.7	168	257.5	367
Chittorgarh	158.4	125	69.6	15	234.1	323
Dausa	30.4	-42	119.8	124	184.2	176
Dholpur	19.7	-62	181.3	193	34.3	-53
Dungarpur	74.7	31	49.8	-16	30.4	-32
Jaipur	42.5	-11	68.9	49	150.0	213
Jhalawar	64.5	-14	152.2	77	210.4	203
Jhunjhunu	62.1	114	31.6	-17	61.5	69
Karauli	61.3	5	109.7	103	45.0	-53
Kota	113.1	51	115.9	86	235.9	244
Pratapgarh	101.0	37	85.6	4	101.0	94

Rajsamand	70.9	61	47.4	16	133.0	224
Sawai Madhopur	48.7	-25	184.0	222	182.7	121
Sikar	86.3	156	42.4	30	53.6	54
Sirohi	198.5	114	58.2	-36	71.2	7
Tonk	89.1	72	120.3	140	296.5	523
Udaipur	126.7	152	46.5	-15	61.9	43
West Rajasthan						
Barmer	11.3	-47	26.2	12	24.6	29
Bikaner	49.5	169	24.5	33	6.5	-59
Churu	79.0	204	29.7	15	12.9	-48
Hanumangarh	36.2	68	22.6	-1	0.0	-100
Jaisalmer	15.7	17	40.3	210	3.9	-69
Jalore	37.4	-19	39.4	5	27.8	5
Jodhpur	40.9	56	19.1	-23	77.3	272
Nagaur	64.2	160	44.3	80	101.8	290
Pali	86.7	99	33.0	-21	140.8	318
Sri Ganganagar	50.4	219	4.3	-74	0.9	-94
Gujarat Region						
Ahmedabad	229.5	380	63.4	32	24.3	-54
Anand	311.4	357	97.1	56	22.5	-64
Banaskantha	67.3	15	57.3	7	19.4	-48
Baroda	166.3	110	66.3	-12	18.3	-76
Broach	178.6	162	67.9	14	33.5	-37
DNH	580.4	191	409.8	123	60.7	-63
Dahod	105.1	33	46.5	-42	13.6	-80
Daman	439.0	120	394.4	115	35.6	-78
Dangs	311.5	46	149.5	-13	58.0	-59
Gandhinagar	218.2	245	37.3	-46	17.2	-68
Kheda	207.0	180	73.1	10	47.3	-24
Mehsana	145.2	173	93.7	56	30.5	-38
Narmada	168.8	71	71.3	-27	23.3	-74
Navsari	314.7	86	165.0	23	43.7	-65
Panchmahal	158.6	83	67.3	-18	12.6	-84
Patan	68.3	36	81.6	82	28.3	-27
Sabarkantha	105.0	43	79.5	11	22.1	-65
Surat	199.7	84	125.3	41	17.3	-80
Tapi	213.2	34	109.6	-12	20.2	-82
Valsad	546.3	221	327.0	114	56.7	-55
S K & Diu region						
Amreli	59.7	51	67.1	117	16.4	-46
Bhavnagar	114.3	170	40.0	28	27.9	-15
Diu	35.8	-33	246.2	457	25.2	-33
Jamnagar	65.3	67	154.5	450	24.9	-35
Junagarh	81.2	34	233.4	407	29.7	-33
Kutch	76.4	123	32.2	24	26.2	-10
Porbandar	86.6	99	164.3	383	81.5	66
Rajkot	75.9	52	56.9	55	28.3	-33
Surendranagar	111.5	199	74.6	107	5.5	-84
Maharashtra & Goa						

Konkan & Goa						
Mumbai City	145.3	-9	199.2	38	59.7	-53
Mumbai Suburban	349.7	119	248.5	72	91.2	-28
North Goa	179.1	-34	340.3	49	168.2	-20
Raigad	379.8	37	435.2	81	141.1	-33
Ratnagiri	292.4	5	272.5	9	139.8	-37
Sindhudurg	174.1	-33	206.3	1	131.8	-29
South Goa	142.4	-39	292.4	47	215.9	14
Thane	519.7	154	430.3	119	105.7	-43
Madhya Maharashtra						
Ahmednagar	43.8	77	25.0	21	4.9	-71
Dhule	121.2	210	18.4	-55	3.2	-88
Jalgaon	99.4	108	25.4	-52	7.0	-84
Kolhapur	192.9	25	221.0	58	80.0	-39
Nandurbar	168.4	134	65.6	-7	18.9	-66
Nasik	183.1	140	123.8	65	40.5	-35
Pune	146.1	106	174.1	164	42.5	-28
Sangli	64.4	95	58.0	83	16.8	-40
Satara	94.5	68	123.8	130	29.4	-37
Solapur	12.2	-57	8.3	-66	4.5	-78
Marathwada						
Aurangabad	41.1	-7	25.3	-31	5.0	-85
Beed	17.7	-55	12.0	-55	4.5	-85
Hingoli	21.2	-66	28.9	-52	6.8	-88
Jalna	20.4	-56	15.5	-58	2.4	-93
Latur	17.1	-75	17.5	-65	8.7	-81
Nanded	22.8	-66	28.9	-48	14.2	-75
Usmanabad	14.1	-69	19.4	-40	9.2	-70
Parbhani	14.5	-76	20.8	-57	3.6	-91
Vidarbha						
Akola	55.3	14	30.0	-44	20.8	-61
Amraoti	99.4	66	10.3	-85	1.3	-98
Bhandara	59.5	-32	106.7	12	43.1	-58
Buldhana	40.3	-10	73.2	34	5.0	-89
Chandrapur	43.4	-50	55.5	-43	17.9	-79
Gadchiroli	39.6	-63	111.8	0	32.5	-70
Gondia	42.9	-55	151.4	55	56.5	-45
Nagpur	39.2	-41	37.8	-50	11.0	-81
Wardha	57.8	-10	8.6	-88	5.8	-91
Washim	34.8	-29	25.3	-63	2.6	-96
Yeotmal	43.1	-27	30.9	-52	4.0	-94
Odisha						
Angul	75.2	16	323.8	331	21.7	-75
Balasore	87.2	21	267.4	281	116.4	36
Bargarh	121.8	37	410.6	414	76.3	-13
Bhadrak	41.5	-27	198.7	127	80.4	1
Bolangir	104.4	26	151.2	84	75.1	-11
Boudh	124.3	79	393.0	389	79.2	-15
Cuttack	94.2	9	194.8	149	61.6	-22

Deogarh	80.4	-15	299.9	180	13.8	-89
Dhenkanal	64.6	-10	231.2	177	39.6	-57
Gajapati	65.3	4	75.2	60	20.5	-67
Ganjam	60.5	4	97.9	100	26.0	-50
Jagatsingpur	46.7	-39	130.7	29	51.1	-20
Jajpur	31.5	-55	173.9	107	64.0	-22
Jharsuguda	39.4	-49	326.6	225	80.3	-26
Kalahandi	167.0	108	229.6	176	71.2	-24
Kandhamal	64.7	-7	188.1	134	29.7	-68
Kendrapara	32.7	-39	141.8	79	55.3	-40
Keonjhar	43.9	-33	230.0	181	46.5	-41
Khurda	47.9	-35	182.7	131	29.4	-64
Koraput	278.3	209	150.4	61	32.6	-70
Malkangiri	115.8	12	118.2	20	41.0	-63
Mayurbhanj	87.7	30	232.9	170	87.9	-5
Nawapara	63.5	-9	232.9	246	30.3	-52
Nawarangpur	102.7	14	187.6	148	61.9	-42
Nayagarh	59.7	-17	198.4	187	14.2	-82
Puri	92.0	25	152.2	125	30.1	-62
Rayagada	90.6	14	154.1	188	42.7	-29
Sambalpur	75.4	-20	503.8	370	46.6	-62
Sonepur	160.4	87	396.2	262	94.1	-9
Sundargarh	35.0	-58	242.8	172	78.5	-7
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	28.2	-60	18.8	-64	81.6	27
North & Middle Andaman	170.0	54	77.9	-20	159.2	47
South Andaman	115.5	17	45.7	-46	81.1	-26
GWB						
Bankura	43.4	-36	68.4	4	113.8	59
Birbhum	56.3	-10	56.6	-23	54.0	-30
Burdwan	62.1	3	48.7	-38	44.1	-30
East Midnapore	35.2	-44	243.7	179	161.9	158
Hooghly	51.7	-25	60.3	-18	47.6	-7
Howrah	43.1	-38	116.5	6	80.1	20
Kolkata	32.2	-61	106.4	17	71.2	0
Murshidabad	44.7	-34	32.3	-52	39.3	-19
Nadia	18.2	-65	70.7	20	14.0	-70
24 Pargana (N)	79.2	17	58.2	-31	46.9	-23
Purulia	64.6	12	59.5	-21	61.2	-14
24 Pargana (S)	59.7	-43	114.9	7	109.3	16
West Midnapore	51.9	-39	63.4	-18	88.5	20
SHWB & Sikkim						
Cooch Behar	51.3	-67	15.6	-91	141.1	-34
Darjeeling	110.4	-38	81.5	-45	117.0	-23
East Sikkim	103.3	-18	67.8	-41	100.7	-3
Jalpaiguri	58.9	-66	80.5	-48	145.0	-8
Malda	22.1	-70	14.6	-78	53.7	-5

North Dinajpur	45.3	-41	5.6	-89	37.5	-49
North Sikkim	115.4	1	86.0	-12	77.5	-7
South Dinajpur	38.1	-54	0.5	-99	8.1	-83
South Sikkim	98.7	-22	106.5	-7	116.4	12
West Sikkim	54.0	-53	100.0	2	55.5	-34
Karnataka						
Coastal Karnataka						
Dakshin Kannada	211.0	-22	474.2	98	286.9	39
Udupi	170.9	-43	537.4	123	377.9	62
Uttar Kannada	248.0	16	492.2	151	229.4	26
N I Karnataka						
Bagalkote	10.4	-51	8.8	-51	13.4	-21
Belgaum	67.4	67	82.2	111	28.9	-17
Bidar	17.3	-66	12.0	-70	20.4	-51
Bijapur	13.8	-54	4.6	-78	3.7	-80
Dharwad	51.8	70	61.5	106	32.4	28
Gadag	22.6	22	14.8	-22	9.6	-46
Gulbarga	25.1	-44	9.4	-74	6.2	-82
Haveri	80.8	153	134.7	303	20.5	-29
Koppal	5.8	-77	4.2	-76	11.4	-46
Raichur	9.4	-73	4.8	-82	3.9	-86
Yadgir	23.8	-50	5.8	-83	13.7	-59
S I Karnataka						
Bangalore Rural	14.4	-42	8.9	-64	24.6	7
Bangalore Urban	13.1	-44	7.1	-75	15.0	-45
Bellary	19.5	-19	19.4	-3	5.5	-72
Chamarajnagar	4.6	-70	14.1	-15	14.8	26
Chichballapur	11.8	-51	10.4	-53	14.1	-37
Chickmagalur	159.7	22	314.0	143	85.3	-25
Chitradurga	31.4	104	24.7	69	6.5	-49
Davangere	48.2	93	51.8	127	14.6	-33
Hassan	44.6	6	71.0	86	31.7	7
Kodagu	193.6	10	299.6	87	113.3	-16
Kolar	11.3	-45	0.0	-99	3.0	-86
Mandya	5.4	-57	10.8	-15	9.6	3
Mysore	21.5	13	30.1	74	18.6	55
Ramnagara	9.1	-58	6.9	-71	33.0	71
Shimoga	261.5	120	543.9	337	150.2	47
Tumkur	8.4	-54	8.7	-55	13.2	-16
Kerala						
Alappuzha	58.6	-41	246.3	180	70.2	-15
Kannur	206.3	-1	472.7	185	182.6	37
Ernakulam	114.9	-15	402.4	265	185.3	72
Idukki	177.6	-1	407.2	181	110.7	-13
Kasaragod	110.4	-51	470.7	144	273.7	72
Kollam	37.6	-55	160.9	151	43.7	-21
Kottayam	94.0	-14	349.5	243	117.3	22
Kozhikode	242.7	20	352.2	127	140.3	9
Malappuram	182.2	11	345.6	191	99.5	10

Palakkad	155.5	22	317.9	268	62.0	-27
Pathanamthitta	69.5	-34	270.3	210	62.9	-27
Thiruvananthapuram	20.0	-55	100.0	168	45.0	38
Thrissur	117.9	-25	289.9	133	121.0	13
Wayanad	204.8	-13	339.9	90	141.0	-4
Tamil Nadu						
Ariyalur	0.0	-100	0.0	-100	21.8	-13
Chennai	11.8	-61	38.0	36	78.8	160
Coimbatore	51.7	335	105.7	1255	36.3	353
Cuddalore	12.2	-45	3.3	-83	54.6	94
Dharmapuri	0.9	-96	0.0	-100	21.2	24
Dindigul	1.5	-89	2.9	-78	25.4	108
Erode	0.5	-95	5.4	-40	5.3	-48
Kanchipuram	3.5	-87	5.4	-79	103.0	185
Kanyakumari	2.0	-90	24.7	36	31.6	77
Karikal	0.0	-100	1.4	-92	5.6	-54
Karur	0.0	-100	2.2	-56	0.0	-100
Krishnagiri	6.6	-67	1.4	-92	21.9	27
Madurai	0.1	-99	2.9	-79	23.6	43
Nagapattinam	9.1	-48	1.5	-89	34.8	78
Namakkal	1.1	-94	2.5	-85	19.3	-16
Nilgiris	68.5	22	112.4	142	62.1	46
Perambalur	0.0	-100	0.0	-100	27.3	112
Puducherry	31.8	1	0.3	-99	52.9	84
Pudukottai	1.5	-92	17.0	18	30.4	38
Ramanathapuram	0.1	-99	1.3	-77	15.2	71
Salem	1.6	-93	7.8	-59	25.5	2
Sivaganga	4.3	-80	9.2	-46	33.2	74
Thanjavur	0.1	-99	1.3	-91	13.0	-36
Theni	10.0	25	36.0	445	10.5	62
Tirunelveli	1.9	-78	2.1	-68	0.0	-100
Tirupur	0.2	-96	2.1	-58	12.0	90
Tiruvallur	5.6	-79	23.1	-7	63.0	123
Tiruvannamalai	3.8	-84	1.3	-95	88.0	212
Tiruvarur	0.0	-100	1.9	-86	6.7	-67
Toothukudi	0.0	-100	0.0	-100	2.6	-1
Trichy	0.0	-100	0.3	-97	5.1	-60
Vellore	2.1	-92	2.1	-91	52.1	97
Villupuram	7.5	-72	0.1	-99	70.6	207
Virudhunagar	0.0	-100	0.0	-100	6.0	-48
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	50.3	7	8.7	-78	28.3	-46
Guntur	74.9	101	1.0	-97	7.3	-79
Krishna	92.0	67	6.6	-85	10.0	-80
Nellore	17.4	-24	9.6	-50	32.8	50
Prakasam	31.2	23	1.1	-94	1.6	-91
Sirkakulam	57.1	31	42.4	-2	51.4	18
Visakhapatnam	35.0	-17	27.3	-24	30.3	-28

Vizianagram	25.1	-36	25.8	-32	41.2	3
West Godavari	159.5	183	19.1	-60	39.7	-39
Rayalaseema						
Anantapur	6.8	-63	1.7	-88	4.1	-71
Chittoor	2.8	-88	6.2	-73	36.4	38
Cuddapah	7.1	-74	1.1	-96	5.4	-77
Kurnool	20.4	-41	2.6	-91	7.0	-72
Telangana						
Adilabad	47.3	-40	31.1	-54	14.0	-81
Hyderabad	26.7	-44	9.5	-78	3.8	-91
Karimnagar	69.3	10	29.2	-46	5.2	-91
Khammam	110.5	50	35.1	-47	20.3	-70
Mehabubnagar	30.6	-33	7.7	-78	9.8	-71
Medak	30.5	-51	11.4	-79	12.6	-73
Nalgonda	29.4	-25	3.8	-88	6.9	-80
Nizamabad	62.8	-18	31.2	-55	8.5	-88
Rangareddy	20.9	-60	10.2	-72	7.8	-79
Warangal	69.9	7	21.8	-59	12.6	-79

Legends

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

Annexure II List of varieties

Andhra Pradesh:

Castor: PCH-111, PCH-222, Kranti, GCH-4, Haritha

Irrigated groundnut: Kadiri-6, Kadiri-9, Narayani and dharani

Red gram: black soils LRG-41, ICPL-85063 and for red soils PRG-158, PRG-100.

Tamil Nadu:

Samba rice : CR 1009/Savithri/Ponmani and ADT 50

Karnataka:

Redgram : TTB -7, BRG -01, BRG- 02, HYD -3C, BSMR 736, TS-3R

Medium to Long Duration Varieties of redgram: PT-221, GS-1, ICP-8863 (Maruti), ICPL-87119 (Asha) WRP-1, **Short**

Duration Varieties of redgram: ICPL-87(Pragati), Selection-31(irrigated areas), GCS-11-39

Ragi: GPU- 28,MR -01, 02 and 06, KMR-301

Green gram : Selection – 4, BGS-9, China mung, Pusa bisaki

Black gram : TAU – 1, DU – 1

Soybean : JS – 335

Jowar : DSV – 2, CSV-15, DSV-3, and DSV-6

Maize: Hybrid – DMH-2 and Arjun

Groundnut:

Bunch type – GPBD-4, JL-24 and TMV-2

Spreading type – DSG-1 and JSP-39

Cotton: DHH-11, NCH-145, NHH-44, DHB-105 and Sahana

Irrigated green gram: VBN 2, VBN 3 and CO (Gg) 7

Assam:

Sali rice: Ranjit, Bahadur, Vasundhara, Kushal, Piyoli, Moniram, Rangali, Bhogali, Ketkijah

Long duration varieties: Pankaj, Mashuri, Manohar Sali and other tall varieties.

Short duration varieties : Vivek Dhan 82

Groundnut : TG-1A, JL-24

Pigeon pea : T-21

Seasame : SP1181, GOURI, VINAYAK

Meghalaya:

Red gram : UPAS-120, ICPL 87 (short duration), WB 20, Pusa 9 & Sarita (long duration)

Odisha

Rice: Heera, ZHU-11-26, Pathara, Vandana, Khandagiri and Parijat

Ragi: Dibyasingh, Godavari, Subhra, Vairabi, Neelachala, Chilika

Maize: Navjot, Sakti-1, Decan-103, Ganga-5, Kargil

Groundnut: Smruti, TAG-26, TAG-24, ICGS-11, JL-24

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

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

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

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

West Bengal

Aman rice: BCC-17, BCC-33, BCC-02, BCC-01, BCC-09

Banana : Mortoman, Chapa, Kathali, Singapuri

Tomato: Avinash-2, 448

Bihar

Khari Maize: Shaktiman 1, 2. Pusa agat sankar makka-3and ganga, hybrid: Shaktiman-1, Shaktiman-2, Pusa early hybrid maize-3, Ganga-11, and composite: Suawan and Devki.

Rice:short duration rice:Turanta, Prabhat, Richhariya, Saroj, Dhanlakshmi, Saketwork. Scented rice var. Sugandha, Kamini, Rajendra suwasini, Rajendra kasturi and Rajendra bhagwati

Khari finger millet: GPU 45, 67, 28 and RAU 8

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

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

Jharkhand:

Rice: short duration: Birsa Dhan - 108, Birsa Vikas Dhan 109 & 110, Vandana etc.

Maize: short duration: Birsa maize-1, Birsa Vikas maize-2 etc

Pigeon Pea: Birsa Arhar-1, Narendra Arhar-1, Bahar, ICPH-2671

Groundnut: short duration: A.K.-12-24, Birsa Bol

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

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

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

Soybean:Birsa soybean 1, Birsa safed soybean 2;

Madhya Pradesh

Rice: Short duration-JR-201, JRH -4, JRH-5, JRH -8

Medium- IR-36, IR-64, Pusa sugandha-5, MTU-1001, MTU-1010, MTU-81, Mahamaya

Late-Mahsuri, Safari-17, Syamla, Swarna

Maize: Short duration-JVM- 421, JM-12, JM-13, JM- 216, JS-20-29, JS-20-34.

Medium- Navjot, Arun, H-216, JM-13, Sartaj, Daccan 107

Late-Ganga-11, Prabhat, Trisulta, Daccan 103, Daccan 105

Soybean: Short duration-JS 95-60 (85 days), JS- 93-05(95 days), JS-97-52, JS-335,JS-20-29, JS-20-34

Medium-JS 335 (105 days), NRC 37(110 days)

Black gram: JU 86, JU- 3, T- 9

Jowar: Jawahar- 741, Jawahar -938, Jawahar- 1022

Arhar: Early: TJT-501, JKM-189,

Medium : ICPL-87-119, ICPL88039

Chhattisgarh

Rice - MTU 1010, Mahamaya, IR 36, IR 64

Maize - Pusa early, Navjot 3, Chandana 3

Ragi - JPU 28, JPU 45, JK 155

Uttar Pradesh

Urd: Uttara, Narendra urd-1, Pant Urd-30, Type-27,66, Shekhar-1,2,3, Azad-1,2,3, WBU-108

Moong: Pant-1,3,4, Samrat, Narendra Moong-1, Malaveey- Jyoti,-Janchetana, Janpriya, Jagruti, Jankalyani, Samrat, Asha, Neha, Shweta, MH-215, IPM-23

Groundnut: TG-37A, Kaushal, Amber

Jowar: Bundela, CSV-13, 15,17; CSH-14, 16, 18, 23

Bajra: WCC-75, Raj-171, ICMB-155, Pusa-322, 23, ICMH-451

Maize: Azad Uttam, Shweta

Arhar: Upas-120, Narendra-1A, Bahar

Soybean:PK-472, JS-335, MAUS-47, NRC-37

Lobia: UPC-4200

Rice:Saket-4, Ratna, Givind, Narendra-97, Narendra-80

Jammu & Kashmir:

Mash : Pant U-19, Uttra, T-9

Moong : ML-131,PDM-54,SML-668, PS-16.

Maize : Vivek-25,Vivek QPM-9 HM-5 and HQPM-1