

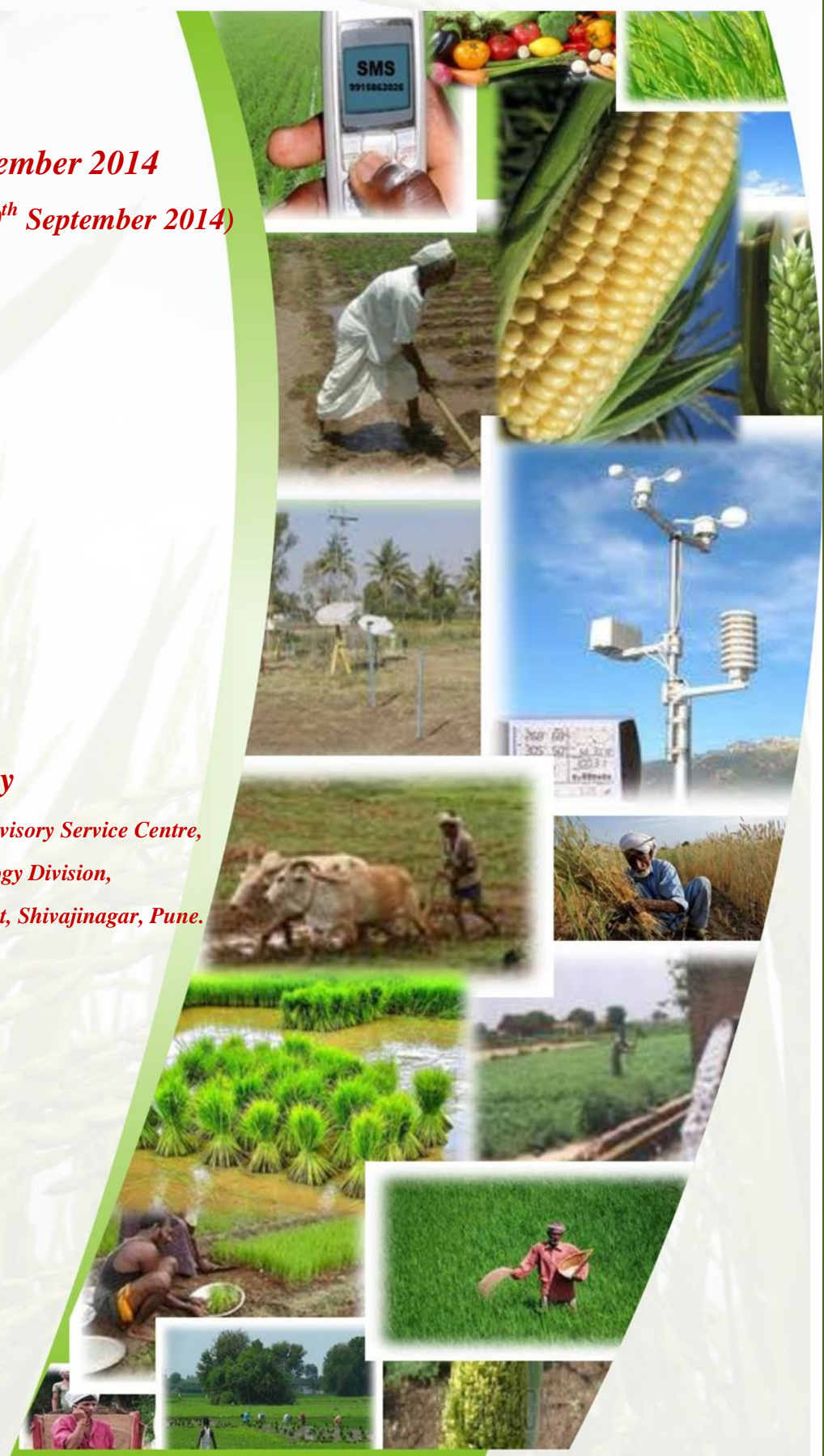
National Agromet Advisory Service Bulletin

Friday 26th September 2014
(For the period 26th to 30th September 2014)

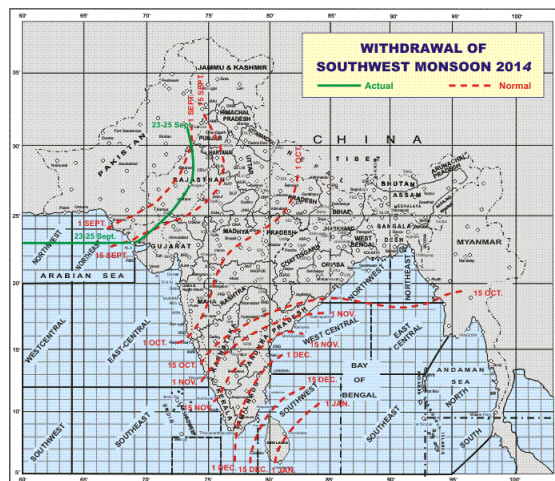


Issued by

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



Monsoon Watch



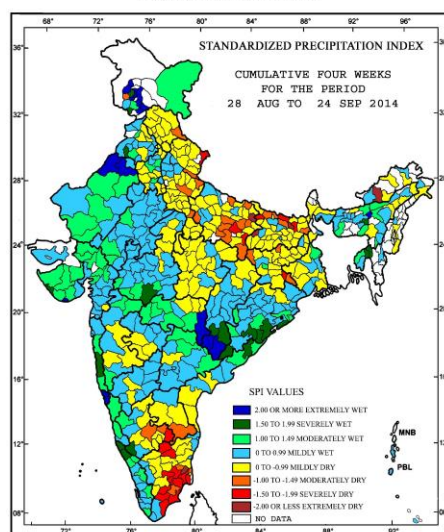
- The withdrawal line of southwest monsoon continues to pass through Ganganagar, Nagaur, Jodhpur, Naliya, 23.0°N/65.0° E and 23.0°N/60.0° E. Condition are favourable for further withdrawal of southwest monsoon from some more parts of northwest India during next 2-3 days.
- Southwest monsoon was vigorous over South Interior Karnataka on 25th September 2014.

Standardised Precipitation Index

Four Weekly

for the Period 28th August to 24th September 2014

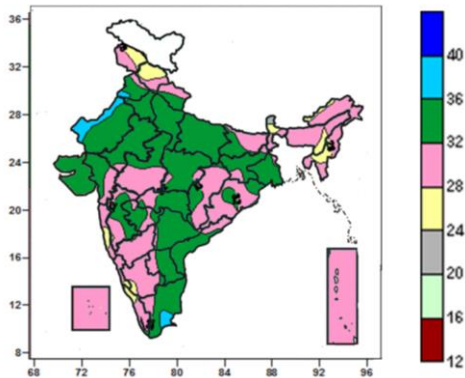
MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE



- Extremely/severely wet conditions experienced in few districts of Jammu & Kashmir; Sriganganagar and Hanumangarh district of West Rajasthan; Morigaon and Kamrup Metropolitan districts of Assam; North Tripura and Dhalai districts of Tripura; Muktsar district of Punjab; Porbandar district of Gujarat; Khandwa district of West Madhya Pradesh; Bastar, Narayanpur, Dantewada and Bijapur district of Chattisgarh; Puri, Rayagada, Gajapati, Malkangiri and Ganjam districts of Odisha; Ratnagiri and Gadchiroli districts of Maharashtra; North and South Goa; Diu; Vizianagaram district of Andhra Pradesh; Kodagu district of Karnataka; Kasargod and Kannur districts of Kerala.
- Extremely/ moderately/ severely dry conditions experienced in few districts of Uttar Pradesh, Bihar and Tamil Nadu; Koderma, Seraikela, East Singhbhum and Garhwa districts of Jharkhand, East Kameng district of Arunachal Pradesh; Poonch district of Jammu & Kashmir; Kinnaur district of Himachal Pradesh; Udham Singh Nagar and Pithoragarh districts of Uttarakhand; Katni, Chittoor district of Andhra Pradesh; Kolar, Chickballapur and Tumkur districts of Karnataka.
- Rest of the country experienced moderately wet, mild wet/dry conditions.

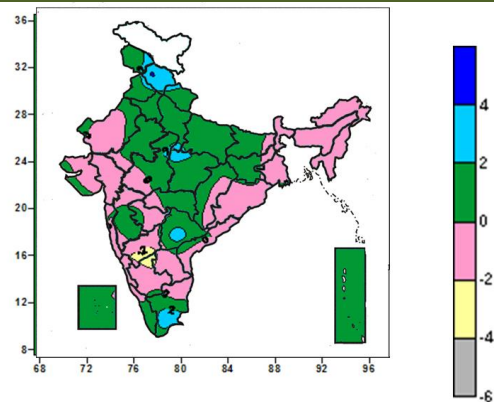
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 24.09.2014

Actual Mean Maximum Temperature (°C) in India for the week ending 24.09.2014



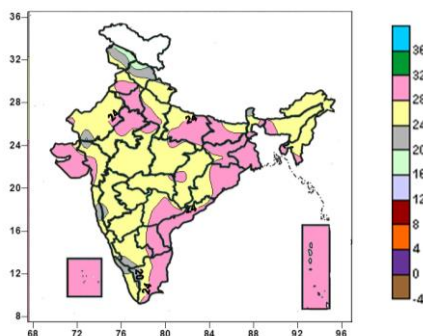
- 36 to 40°C over some parts of East Rajasthan and Tamil Nadu.
- 28 to 36°C over entire country except many parts of Jammu & Kashmir, Himachal Pradesh, some parts of Sub-Himalayan West Bengal, Arunachal Pradesh, Assam & Meghalaya, Manipur, Mizoram, Konkan, Coastal & South Interior Karnataka, Tamil Nadu and Kerala.
- 24 to 28°C over many parts of Jammu & Kashmir, Himachal Pradesh, some parts of Sub-Himalayan West Bengal, Arunachal Pradesh, Assam & Meghalaya, Manipur, Mizoram, Konkan, Coastal & South Interior Karnataka and Kerala.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 24.09.2014



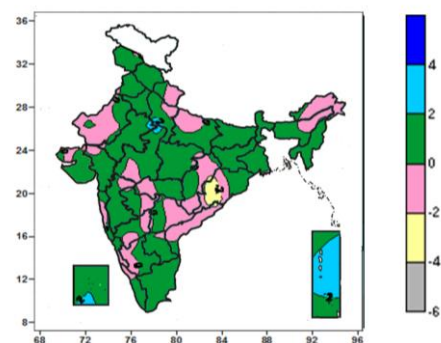
- 2 to 4°C over many parts of Himachal Pradesh, some parts of Jammu & Kashmir, Uttar Pradesh, Madhya Pradesh, Telangana and Tamil Nadu.
- 0 to 2°C over many parts of Jammu & Kashmir, Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh, East Rajasthan, Bihar, Jharkhand, Central India, Vidarbha, Madhya Maharashtra, Telangana, Tamil Nadu, Kerala, Lakshadweep, Andaman & Nicobar Islands, some parts of West Rajasthan, Gangetic West Bengal, Coastal Andhra Pradesh, Marathwada, Konkan, North Interior Karnataka.
- -2°C to 0°C over entire country except Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh, East Rajasthan, Bihar, Jharkhand, Central India, Vidarbha, Madhya Maharashtra, Telangana, Tamil Nadu, Kerala, Lakshadweep, Andaman & Nicobar Islands, some parts of Uttar Pradesh, Madhya Pradesh, West Rajasthan, Gangetic West Bengal, Coastal Andhra Pradesh, Marathwada, Konkan, North Interior Karnataka, Telangana and Tamil Nadu.
- -4 to -2°C over some parts of Interior Karnataka.

Actual Mean Minimum Temperature (°C) in India for the week ending 24.09.2014



- 28 to 32°C over many parts of Punjab, Haryana, Delhi, East Uttar Pradesh, Bihar, Jharkhand, Gangetic West Bengal, Odisha, East Rajasthan, Saurashtra & Kutch, Andhra Pradesh, Coastal Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands, some parts of West Uttar

Mean Minimum Temperature (°C) Anomaly in India for the week ending 24.09.2014



- 2 to 4°C over many parts of Andaman & Nicobar Islands and some parts of East Uttar Pradesh, East Rajasthan West Madhya Pradesh and Lakshadweep Islands.
- -2 to 2°C over entire country except many parts of

Pradesh, Sub-Himalayan West Bengal, Assam, Tripura, Central India and Gujarat region.

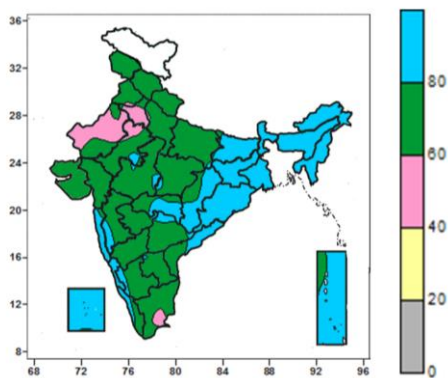
- 24 to 28⁰C over entire country except many parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Delhi, East Uttar Pradesh, Bihar, Jharkhand, Gangetic West Bengal, Odisha, East Rajasthan, Saurashtra & Kutch, Andhra Pradesh, Coastal Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands, some parts of West Uttar Pradesh, Sub-Himalayan West Bengal, Assam, Tripura, Central India and Gujarat region.
- 16 to 24⁰C over many parts of Jammu & Kashmir and Himachal Pradesh.

Andaman & Nicobar Islands and some parts of East Uttar Pradesh, East Rajasthan West Madhya Pradesh, Chhattisgarh, Odisha and Lakshadweep Islands.

- -4 to -2⁰C over some parts of Chhattisgarh, Odisha.

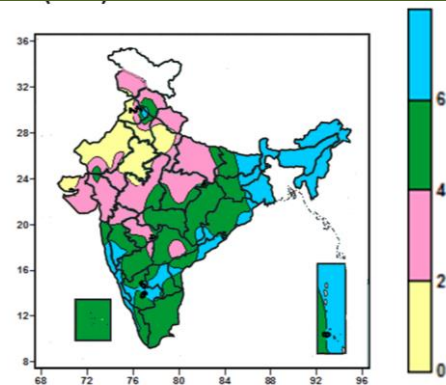
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 24.09.2014

Relative Humidity (%) over India for the week ending 24.09.2014



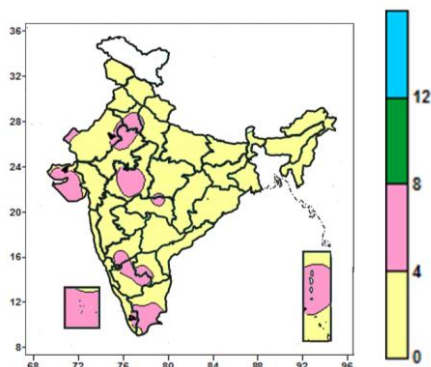
- 80 to 100% over many parts of North East & East India Chhattisgarh, Vidarbha, Konkan & Goa, Coastal Karnataka, Lakshadweep, Andaman & Nicobar Islands, some parts of Rajasthan, East Uttar Pradesh, Madhya Pradesh, Madhya Maharashtra, South Interior Karnataka and Kerala.
- 60 to 80% over entire country except many parts of North East & East India, Chhattisgarh, Vidarbha, Konkan & Goa, Coastal Karnataka, West Rajasthan, Haryana, Delhi, Lakshadweep, Andaman & Nicobar Islands, some parts of Punjab, Rajasthan, East Uttar Pradesh, Madhya Pradesh, Madhya Maharashtra, South Interior Karnataka, Tamil Nadu and Kerala
- 40 to 60% over many parts of West Rajasthan, Haryana, Delhi, some parts of Punjab, East Rajasthan and Tamil Nadu.

Cloud amount (okta) over India for the week ending 24.09.2014



- 6 to 8 okta over many parts of North East India, West Bengal & Sikkim, Coastal Karnataka, Konkan & Goa, Andaman & Nicobar Islands, some parts of Himachal Pradesh, Haryana, Bihar, Jharkhand, Chhattisgarh, Coastal Andhra Pradesh, Telangana, South Interior Karnataka, Kerala and Madhya Maharashtra.
- 2 to 6 okta over entire country except many parts of Punjab, Haryana, Delhi, West Uttar Pradesh, Rajasthan, North East India, West Bengal & Sikkim, Coastal Karnataka, Konkan & Goa, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Himachal Pradesh, Haryana, Bihar, Jharkhand, Chhattisgarh, Coastal Andhra Pradesh, Telangana, South Interior Karnataka, Kerala, Madhya Maharashtra, West Madhya Pradesh and Saurashtra & Kutch.
- 0 to 2 okta over many parts of Punjab, Haryana, Delhi, West Uttar Pradesh, Rajasthan, some parts of Jammu & Kashmir, West Madhya Pradesh, Saurashtra & Kutch.

Wind speed (knots) over India for the week ending 24.09.2014



- 4 to 8 knots over many parts of Haryana, Delhi, Saurashtra & Kutch, West Madhya Pradesh, Tamil Nadu, Kerala, Lakshadweep, Andaman & Nicobar Islands, some parts of Rajasthan, West Uttar Pradesh, East Madhya Pradesh, Rayalaseema, Kerala and Interior Karnataka.
- 0 to 4 knots over entire country except many parts of Haryana, Delhi, Saurashtra & Kutch, West Madhya Pradesh, Tamil Nadu, Kerala, Lakshadweep, Andaman & Nicobar Islands, some parts of Rajasthan, West Uttar Pradesh, East Madhya Pradesh, Rayalaseema, Kerala and Interior Karnataka.

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 29th September, 2014)

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

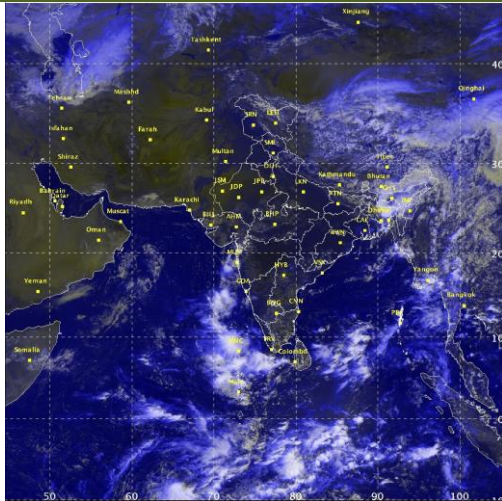
Weather Warning during next 3 days

- **26 September (Day 1):** Heavy rainfall would occur at isolated places over Assam & Meghalaya, Arunachal Pradesh, Coastal Karnataka, South Interior Karnataka, Kerala and Lakshadweep.
- **27 September (Day 2):** Heavy rainfall would occur at isolated places over Coastal Karnataka, South Interior Karnataka, Kerala and Lakshadweep.
- **28 September (Day 3):** Heavy rainfall would occur at isolated places over Kerala.

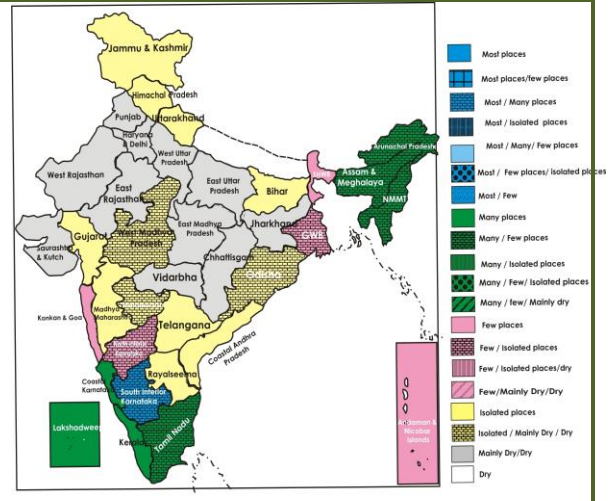
Weather Outlook for subsequent 4 days from 29th September to 3rd October 2014

- Rain/thundershowers would occur at many places along west coast and over South Interior Karnataka and Tamilnadu.
- Rain/thundershowers would occur at a few places over northeastern states, Sub-Himalayan West Bengal & Sikkim, Madhya Maharashtra and North Interior Karnataka.
- Rain/thundershowers would occur at isolated places over Western Himalayan region and rest peninsular India.
- Weather would be mainly dry over rest of the country.

Satellite image dated, 26.09.2014, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 29th September 2014)



Salient Advisories

- As rain/thundershowers would occur at most/many places over **South Interior Karnataka** and at many places over **Coastal Karnataka** during the period along with heavy rainfall at isolated places on 26th & 27th September, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water.
- Continue land preparation for *rabi* sowing in the **North Transition Zone of Karnataka** utilizing the realized rainfall. Nipping of shoot tip of cotton is advised in 90 days old crop to check excess vegetative growth and spray 2% DAP along with 1% MgSO₄ and Planofix (0.25 ml/lit of water) on a non rainy day to manage leaf reddening and square dropping.
- Continue sowing and transplanting of *samba* rice and nursery sowing of *Thaladi* rice in the Cauvery Delta Zone of **Tamil Nadu**.
- As rain/thundershowers would occur at many places over **Assam, Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram** and **Tripura** on 26th & 27th September along with heavy spells at isolated places on 26th September, 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. Postpone harvesting of crops and keep harvested produce at safe places.
- In Lower Brahmaputra Valley Zone of **Assam**, drain out excess water from standing crop fields.
- In **Madhya Maharashtra**, maintain the water level of 5-8 cm in rice field. Undertake intercultural operations like weeding and fertilizer application in sugarcane, vegetables, cotton and red gram. In fallow and already harvested fields of green gram and black gram, undertake field preparation and sowing of *rabi* jowar and safflower. Apply irrigation to sugarcane and vegetables.
- In **Jammu & Kashmir**, drain out excess water from standing crop fields wherever feasible. Apply top dressing of nitrogen @ 3.25 kg urea per kanal in rice and in maize. Monitor maize crop for the incidence of stalk rot and apply Blitox @ 2 g/ litre of water. As mainly dry weather would prevail, undertake harvesting of maize in Intermediate Zone of Jammu & Kashmir. Continue harvesting of mash and moong crops immediately in Sub-tropical Zone to avoid shattering and other losses.

Detailed Zonewise Agromet Advisories

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



Rice



Sugarcane



Okra



Soybean

- **Realised Rainfall:** Rainfall occurred in Cannur, Kasargod and Waynad districts of Kerala; Dakshin Kannada and Udupi districts of Coastal Karnataka; Bijapur, Dharwad, Gadag and Gulbarga districts of North Interior Karnataka; all the districts of South Interior Karnataka except Bellary, Chickballpur, Chikmagalur, Chitradurga, Hassan, Kolar and Tumkur; all the districts of Andhra Pradesh except Nellore, Anantapur, Chittoor, Cuddapah and Kurnool; Khammam district of Telangana; Coimbatore, Cuddalore, Dharmapuri, Dindigul, Erode, Krishnagiri, Namakkal, Puducherry, Salem, Tiruppur, 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 many places over Coastal Karnataka and Kerala and at isolated places over Coastal Andhra Pradesh, Rayalaseema and Telangana during the period. Rain/thundershowers would occur at most places over South Interior Karnataka during next 48 hours and at many places thereafter. Rain/thundershowers would occur at many places over Tamil Nadu & Puducherry during next 24 hours and at a few places thereafter. Rain/thundershowers would occur at a few places over North Interior Karnataka during next 48 hours and at isolated places thereafter.
- **Weather Warning:** Heavy rainfall would occur at isolated places over Kerala during the period and over Coastal Karnataka, South Interior Karnataka and Lakshadweep on 26th and 27th September.
- **Weather Outlook:** Rain/thundershowers would occur at many places over South Interior Karnataka and Tamilnadu. Rain/thundershowers would occur at a few places over North Interior Karnataka. Rain/thundershowers would occur at isolated places over rest peninsular India.
- **Advisories:**
 - **Karnataka:**
 - As rain/thundershowers would occur at most/many places over South Interior Karnataka and at many places over Coastal Karnataka during the period along with heavy rainfall at isolated places on 26th & 27th September, 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.
 - Complete sowing of sunflower and fodder crops and continue land preparation for sowing of *rabi* crops like sunflower, horse gram (PHG-9), sesame, cowpea and maize utilizing the realized rainfall in the North Dry Zone of Karnataka.
 - Continue land preparation for *rabi* sowing in the North Transition Zone of Karnataka utilizing the realized rainfall. Nipping of shoot tip of cotton is advised in 90 days old crop to check excess vegetative growth and spray 2% DAP along with 1% MgSO₄ and Planofix (0.25 ml/lit of water) on a non rainy day to manage leaf reddening and square dropping.
 - Cotton crop is at square formation to flowering stage in the Hill Zone of Karnataka, to reduce the square/flower bud/flower drop undertake spraying of Planofix @0.25 ml/litre of water after current spells of rain.
 - In the Southern Dry Zone of Karnataka, due to cloudy weather, thrips and case worm attack is noticed in rice which is likely to increase. To manage spray Roger @ 1.5ml per litre of water for thrips and to manage case worm, spray Chloropyriphos 20EC @ 2ml/litre of water after current spells of rain.
 - **Kerala:**
 - As rain/thundershowers would occur at many places over Kerala during the period along with heavy rainfall at isolated places, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crops to remove excess water.
 - Continue nursery preparation for rice in the Northern, Central and Southern Zone of Kerala. Undertake planting of *Nendran* banana in the Southern Zone of Kerala.
 - Present humid weather condition is congenial for incidence of false smut and grain discolouration in rice and gray blight disease in coconut in the Problem Area Zone of Kerala. Apply Mancozeb 2kg/ha to manage false smut and grain discolouration and Propiconazole @ 0.025% to manage gray blight after current spells of rain.
 - Humid weather is congenial for incidence of Sigatoka disease in banana in the Central Zone of Kerala. Spray Pseudomonas @10-15 g in 1 litre of water to control the disease in the initial stage and apply SAAF @ 2 g in 1 litre

of water if the attack is severe. Apply plant protection measures after current spells of rain.

▪ **Telangana and Andhra Pradesh:**

- In Scarce Rainfall Zone of Rayalaseema, continue intercultural operations and weeding in standing crops to conserve soil moisture. Sowing of contingency crops like sorghum, pearl millet, foxtail millet, cowpea, sunflower, green gram, field bean, castor and horse gram may be completed. Continue sowing of *Maghi* sorghum in the districts of Cuddapah and Kurnool utilising the realised rainfall.
- In the prevailing humid weather conditions, incidence of tobacco streak virus in cotton is noticed in Southern Telangana Zone which is likely to continue. To manage the vector (thrips), spray Thiamethoxam @0.2g/litre or Acetamiprid @ 0.2g /litre of water. Remove weeds like *Parthenium*, *Achiranthus* in and around the field to prevent both the virus & vector.
- Continue gap filling in direct seeded rice. Apply biogyme, micronutrients and mineral mixture to overcome from slow growth due to micro nutrients deficiencies in the Krishna Godavari Zone of Andhra Pradesh.

▪ **Tamil Nadu:**

- Continue sowing and transplanting of *samba* rice and nursery sowing of *Thaladi* rice in the Cauvery Delta Zone of Tamil Nadu.
- In the Western Zone of Tamil Nadu, undertake harvesting of groundnuts and jowar /millets on a non rainy day. By utilizing realized/ expected rainfall, land preparation may be undertaken for sowing of North east monsoon crops.
- Undertake sowing of cotton under dry land conditions in the South Zone of Tamil Nadu and undertake field preparation for direct seeding of rice in Karaikal and Puducherry districts. Nursery of rice may also be raised in areas having supplemental irrigation facilities and select long duration rice varieties.
- Undertake cultivation of maize in the North Western Zone of Tamil Nadu using the realized and expected rainfall.
- Suitable varieties are given in Annexure II.

• **Animal Husbandry**

- Provide clean and hygienic water to animals and vaccinate against FMD in the Problem Area Zone of Kerala.
- Provide drainage in and around cattle and poultry sheds may be provided to avoid water stagnation in the Western Zone of Tamil Nadu. Safeguard feeds and fodder material from rain soaking.

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



Rice



Okra



Jute



Green Gram

- **Realised Rainfall:** Rainfall occurred Changlang, East Kameng, East Siang, Lohit, Lower Dibang Valley, Papumpara, Tawang, Tirap, Upper Siang, Upper Subansari, West Kameng and West Siang districts of Arunachal Pradesh; all districts of Assam; all districts of Meghalaya except West Khasi Hills; Aizwal, Saiha and Serchhip districts of Mizoram; Chandel, Imphal East, Imphal West and Senapati district of Manipur; Dimapur, Kohima and Phek districts of Nagaland and all districts of Tripura. Mainly dry weather prevailed over remaining parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during next 48 hours and at a few places thereafter.
- **Weather Warning:** Heavy rainfall would occur at isolated places over Arunachal Pradesh and Assam & Meghalaya on 26th September.
- **Weather Outlook:** Rain/thundershowers would occur at a few places over northeastern states.
- **Advisories:**
 - As rain/thundershowers would occur at many places over Assam, Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram and Tripura on 26th & 27th September along with heavy spells at isolated places on 26th September, 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. Postpone harvesting of crops and keep harvested produce at safe places.
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Lower Bramhaputra Valley Zone of Assam, drain out excess water from standing crop fields.
 - In Hill Zone of Assam, complete sowing of green gram, black gram, sesame and nursery sowing of cole crops.
 - In Central Bramhaputra Valley Zone of Assam, sowing of cole crops and early radish may be continued. Weeding and thinning in sesame may be carried out. Nursery sowing of winter brinjal (Pusa Kranti, Pusa Purple Long, Pusa

Purple Cluster, Pusa Bhairav, JC-2, BWR-12) may be continued. Sowing of green gram (SG-1, T-44, Kopergaon, ML-56) may be undertaken.

- In Upper Brahmaputra Valley Zone of Assam, undertake sowing of *rabi* vegetables. In Meghalaya, continue nursery preparation/ sowing of vegetables like cabbage, cauliflower, carrot, radish, broccoli and French bean and planting of potato and continue sowing of pea in high altitude areas of East Khasi Hills after spells of heavy rain. Avoid water logging in ginger/turmeric to avoid rhizome rot and fungal disease.
- Due to cloudy and humid weather, there is chance of attack of rice hispa in *sali* rice at tillering stage in Hill Zone of Assam, spray with Quinalphos @ 10 ml /5 litre of water after current spells of rain.
- Due to prevailing humid weather conditions, there is chance of attack of hispa, sheath blight, blast and leaf folder in *Sali* rice in Barak Valley Zone, North Bank Plain Zone and Lower Brahmaputra Valley of Assam. Spray 0.02% Chloropyrifos 20 EC or Quinalphos 25 EC @ 2.5 ml per litre of water against pests. Spray Mancozeb @ 2.5g/litre of water or Hexaconazole 5EC @2ml/litre of water against sheath blight. Apply chemicals after current spells of rain.
- Due to prevailing humid weather conditions, there is chance of attack of gundhi bug, blast in normal transplanted rice in Arunachal Pradesh. Undertake foliar spray of Hexaconazole 5% EC @ 2 ml/litre of water or Carbendazim 12 % WP+Mancozeb 63% WP @ 2 g/litre of water after current spells of rain.
- In Meghalaya, maintain water level of 3-5 cm in transplanted *Sali* rice. Conserve water by repairing bunds. Transplanting of cabbage, cauliflower and broccoli and sowing of carrot, radish and French bean may be completed. In ginger and turmeric, undertake hand weeding followed by fertilizer application, earthing up and mulching. Land preparation for sowing peas and planting of potato and peas may be continued.
- Due to cloudy weather & high humidity, there is chance of incidence of blast in *kharif* rice in Meghalaya. Spray Mancozeb @ 2g/litre or Carbendazim @ 1g/litre. Also present weather is congenial for development of late leaf spot in groundnut. Spray Carbendazim (0.05%) + Mancozeb (0.2 %). Apply plant protection measures after current spells of rain.
- **Nagaland, Manipur, Mizoram and Tripura:**
- In Manipur, maintain water level of 5-8cm in *kharif* rice. Continue main field preparation for transplanting of cole crops after current spells of heavy rain.
- In Mizoram, continue nursery preparation for cole crops like cabbage, cauliflower, broccoli and knolkhol after current spells of heavy rain.
- In Mild Tropical Plain Zone of Tripura, undertake harvesting of *jhum* rice and groundnut and nursery sowing of winter vegetable particularly tomato, cauliflower, cabbage, broccoli after current spells of rain.
- In Nagaland, nursery preparation for cabbage may be undertaken after current spells of rain.
- In Mizoram, due to continuous wet condition, there is chance of leaf spot on ginger & turmeric; spray Dithane M-45 @ 2.5 g/litre of water or Bavistin @ 1 g/litre of water or Blitox @ 3 g/litre of water. Also weather is congenial for attack of stem borer, gundhi bug and leaf blast in rice, spray Monocrotophos @ 20 ml/10 litres water or Imidacloprid @ 20 ml/10 litres of water against stem borer. Spray Monocrotophos 36 WSC @ 1.5 ml/litre of water against gundhi bug. Spray Triclozole (Beam) @ 0.5 g/litre against leaf blast. Apply the chemicals after current spells of rain.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- In Northeastern States, keep cattle in sheds during heavy rainfall periods.
- In Meghalaya, in rainy season, litter should be changed periodically to avoid dampness and prevent disease development like coccidiosis in poultry. During day time sufficient ventilation should be provided to reduce the humidity inside the sheds.
- In Tripura, damp litter and high moisture may cause coccidiosis in the chicken, so avoid dampness in the deep litter. Prevailing high humidity may cause ammonia fumes which irritate the respiratory tract and eyes in poultry. Provide good ventilation in poultry sheds.
- In Manipur, provide clean drinking water to livestock. Avoid water logging around the sheds as it may help in mosquito breeding.

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



Sugarcane

Jute

Onion

Rice

- **Realised Rainfall:** Rainfall occurred in all districts of Bihar except Bhabua, Bhagalpur, Buxar, Darbhanga, East Champaran, Gopalganj, Lakhisarai, Madhepura, Madhubani, Monghyr, Nalanda, Rohtas, Saharsa, Sheohar and Sitamarahi; all districts of Jharkhand except; Garwaha, Gumla and West Singhbhum; all districts of Odisha except Deogarh, Dhenkanal, Keonghargarh and Sundargarh; Nicobar district of Andman & Nicobar Islands; all districts of Gangetic West Bengal; all districts of Sub- Himalayan West Bengal & Sikkim except North Dinajpur and West Sikkim.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Sub-Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands and at isolated places over Bihar during the period. Rain/thundershowers would occur at a few places over Gangetic West Bengal during next 24 hours and at isolated places thereafter. Rain/thundershowers would occur at isolated places over Odisha during next 24 hours and mainly dry thereafter. Mainly dry weather would prevail over Jharkhand during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at a few places over Sub-Himalayan West Bengal & Sikkim. Weather would be mainly dry over rest of the region.
- **Advisories:**
 - **West Bengal:**
 - In New Alluvial Zone of West Bengal, keep 5-7 cm water in *aman* rice fields at the time of panicle initiation stage. Continue seedbed / land preparation for early winter vegetables like radish, broccoli etc. and sowing of onion, cabbage, cauliflower etc. in the nursery bed.
 - In Laterite and Red Soil Zone continue harvesting of maize. In *aman* rice field, maintain 3-5 cm standing water at panicle initiation stage.
 - In Old Alluvial Zone of West Bengal, continue sowing of black gram and transplanting of 4-6 weeks old seedlings of cole crops like cauliflower and cabbage.
 - In Old Alluvial Zone, due to cloudy and humid weather, there is chance of occurrence of stem borer, leaf folder and sheath blight in *aman* rice, apply Chloropyriphos @ 2.5 ml/litre of water or Cartap Hydrochloride 50 WP @ 1 g/litre of water against stem borer and leaf folder. To control sheath blight, spray Validamycin @ 2.5ml or Carbendazim 50% WP @ 1g per litre of water. In moist weather condition, rhizome rot may be a problem in ginger and turmeric. Avoid water stagnation in the field. Spray Copper Oxychloride (Blitox) @4g/ Trichoderma Viridae @ 4g per litre of water. Apply the chemicals on a non rainy day.
 - In Laterite and Red Soil Zone, due to cloudy and humid weather, there is chance of occurrence of blast disease in *aman* rice. Apply Carbendazim + Mancozeb @ 2.5 g/litre of water.
 - In Coastal Saline Zone, stem rot or blunt rot in vegetables due to prevailing high humidity. Spray a mixture of Bavitin@1g/litre of water and Diethane against stem rot or blunt rot in vegetables.
 - **Odisha:**
 - Continue nursery raising for early *rabi* vegetables in North Eastern Coastal Plain Zone and Ghat Zone of Odisha.
 - In North Central Plateau Zone of Odisha, continue planting of lemon and mango utilizing the realized rainfall.
 - In North Central Plateau Zone of Odisha, complete sowing of green gram black gram and cowpea in fallow up and medium up land.
 - In North Eastern Plateau Zone of Odisha, due to high humidity and cloudy weather, there is chance of infestation of aphids in maize. To manage, spray Imidacloprid 17.8 SL @ 50 ml in 200 liters of water per acre.
 - In North Eastern Plateau Zone of Odisha, due to continuous cloudy and high humid weather, there is chances of Tikka leaf spot in groundnut. To control, spray Mancozeb@ 2.5g per liter of water.
 - Due to high humidity and temperature, infestation of hairy caterpillar in groundnut and stem borer in maize has been found in North Central Plateau Zone of Odisha which is likely to increase, apply Chloropyriphos @ 10-12 kg/ ha for hairy caterpillar and for stem borer, apply Furadan @ 1 g in the leaf whorl. Otherwise spray Chloropyriphos @ 2 ml or Phosphamidon @ 1.5 ml in 1 litre water for control of stem borer. Repeat the spraying after 15 days of first spray.
 - **Bihar:**
 - In North West Alluvial Plain Zone of Bihar, continue transplanting of tomato, cauliflower and nursery sowing of cabbage. Undertake top-dressing of nitrogen @ 30 Kg/ha in rice which is in booting stage and apply 40 kg N per

hectare in the late transplanted rice which is in tillering stage. Undertake field preparation for sowing of rai.

- In North East Alluvial Plain Zone of Bihar, maintain optimum water level in rice. Complete transplanting of early autumn vegetable viz. cauliflower, cabbage and brinjal etc.
- In South Bihar Alluvial Zone, complete sowing of kulthi and *rabi* pigeon pea in upland areas. Maintain 5 cm water in rice fields.
- Due to humid weather, there are chances of attack of brown plant hopper in rice crop in North East Alluvial Plain Zone of Bihar; spray Imidacloprid 17.8% EC @ 0.5 ml/L of water in the evening.
- **Jharkhand:**
- In Western Plateau Zone of Jharkhand, in upland areas, continue sowing toria. Undertake planting of early potato and sowing of green peas. Undertake field preparation for sowing of mustard and rainfed wheat.
- In South Eastern Plateau Zone of Jharkhand, continue land preparation for the cultivation of short duration early potato. In fallow land undertake sowing of green pea and toria.
- In Central & North Eastern Plateau Zone of Jharkhand, continue sowing of toria, green pea and potato. Continue sowing of tomato, cabbage and cauliflower in raised seed bed.
- Due to prevailing humid weather conditions, there is chance of attack of gundhi bug in timely sown rice in Western Plateau Zone of Jharkhand. To control the insects, dusting of Chlorpyrifos / Quinolphos / Methyl parathion dust @ 10 kg per acre. As an alternative method (in the case of unavailability of the insecticides), dusting of coal / wood ash mixed with kerosene.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- In Coastal Saline Zone of West Bengal, keep the cattle under proper shade and stop free grazing for avoiding worm infection due to rain.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane



Rice



Okra



Green Gram

- **Realised Rainfall:** Rainfall occurred in Harda district of West Madhya Pradesh; all districts of Chhattisgarh except Jashpur, Rajnandgaon and Surguja. Mainly dry weather prevailed over remaining parts of the region.
- **Weather Forecast:** Mainly dry weather would prevail over West Madhya Pradesh during next 24 hours and rain/thundershowers would occur at isolated places thereafter. Mainly dry weather would prevail over East Madhya Pradesh and Chhattisgarh during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be mainly dry over the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - In Vindhya Plateau Zone of Madhya Pradesh, if *kharif* crops were damaged due to heavy rain in previous weeks, farmers may undertake nursery sowing of onion, garlic and planting of short duration varieties of potato. The sowing may be done upto 15th October. Sowing of green gram and black by ridge furrow method is recommended.
 - Continue sowing of sarson saag, radish, spinach and coriander in Bundelkhand Zone of Madhya Pradesh.
 - Continue nursery sowing of winter vegetables like tomato, chilli, brinjal, cauliflower, cabbage, capsicum and planting of early varieties of potato and green peas in Jhabua Hill Zone and Vindhya Plateau Zone of Madhya Pradesh.
 - As mainly dry weather would prevail, apply irrigation in maize and cotton crops in Jhabua Hill Zone and in rice in Grid Zone of Madhya Pradesh.
 - As mainly dry weather would prevail, undertake harvesting of matured urad, moong and vegetables in Jhabua Hill Zone, Vindhya Plateau Zone and Nimar Valley Zone of Madhya Pradesh.
 - Due to cloudy weather, there are chances of attack of semilooper, tobacco caterpillar and girdle beetle in soybean, moong and urad in Jhabua Hill Zone of Madhya Pradesh, Spray Profenophos @ 2 ml per litre of water.
 - Due to humid weather, there is possibility of attack of yellow mosaic virus in urad and soybean in Nimar Valley Zone of Madhya Pradesh, spray Methyl dameton @ 2.0 ml or Imedachloprid @ 0.5 ml per litre of water.
 - Suitable varieties are given in Annexure II.

▪ **Chhattisgarh:**

- In Plain Zone and North Hill Zone of Chhattisgarh, in fallow upland, sowing of horse gram and Niger may be completed.
- In North Hill Zone and Bastar Plateau Zone of Chhattisgarh, raise the seedlings of winter vegetables like cauliflower, cabbage, chilli, tomato, brinjal etc.
- Due to cloudy weather, there are chances of incidence of stem borer in rice in North Hill Zone and Plain Zone of Chhattisgarh, apply Carbofuran @ 33 kg/ha or Fartera @ 10 kg/ha.
- Due to hot and humid weather, there are chances of tobacco caterpillar infestation in soybean in Plain Zone of Chhattisgarh. Spray Prophenophos + Cypermethrin (Poletin C) @1.25 litre per ha or Spynosad @ 250 ml/ha.

• **Animal Husbandry**

- In Madhya Pradesh, provide clean water and concentrate feed mixed with dry and green fodder to cattle.
- In Chhattisgarh, provide concentrated feed to milch animals by mixing dry and green fodder and enrich feed with protein, carbohydrate, fat, vitamins etc.

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



Rice



Sugarcane



Bottle Gourd



Onion

- **Realised Rainfall:** Rainfall occurred in Ballia, Ghazipur, Gorakpur, Mau and Mirzapur districts of Uttar Pradesh. Mainly dry weather prevailed over remaining parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Uttarakhand, Himachal Pradesh and Jammu & Kashmir during the period. Mainly dry weather would prevail over Uttar Pradesh, Haryana & Delhi, Punjab and Rajasthan during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over Western Himalayan region. Weather would be mainly dry over rest of the region.
- **Advisories:**
 - **Jammu & Kashmir:**
 - Drain out excess water from standing crop fields wherever feasible. Apply top dressing of nitrogen @ 3.25 kg urea per kanal in rice and in maize. Monitor maize crop for the incidence of stalk rot and apply Blitox @ 2 g/ litre of water.
 - As mainly dry weather would prevail, undertake harvesting of maize in Intermediate Zone of Jammu & Kashmir. Sowing of berseem as fodder crop may be undertaken. Weeding may be carried out in vegetables.
 - Continue harvesting of mash and moong crops immediately in Sub-tropical Zone to avoid shattering and other losses.
 - Undertake sowing of ghoji sarson (Var. GSL-1,GSL-2,DGS-1) with toria (RSPT-1 and local toria) as mixed or intercrop and nursery bed preparation for winter vegetables and nursery raising of cole crops and onion. Sowing of root crops like radish, carrot, turnip etc. may also be undertaken in Sub-Tropical Zone of Jammu & Kashmir.
 - Due to humid weather, there may be incidence of brown spot disease on rice in Sub-Tropical Zone of Jammu & Kashmir, to control apply Propaconazole @ 0.1 % .
 - Under prevailing humid weather condition, there are chances of incidence of sheath blight and blast in rice in Intermediate Zone of Jammu & Kashmir. Apply Bavistin @ 2 g per litre of water or Propiconazole 25 EC @ 1ml per litre of water.
 - **Himachal Pradesh:**
 - As mainly dry weather would prevail, undertake harvesting of maize and prepare for harvesting of rice and pulses in Sub-Montane and Low Hills Sub-Humid Tropical Zone and Bilaspur district of Mid Hills Sub-Humid Zone of Himachal Pradesh. Also undertake harvesting of peas, cabbage and cauliflower in high hill region.
 - Continue nursery sowing of mid season cauliflower and cabbage in poly house, planting of onion at 30X 10 cm spacing and sowing of potato in mid hill and lower region, transplanting of ageti cauliflower and cabbage in lower region in Sub-Montane and Low Hills Sub-Humid Tropical Zone and Bilaspur district of Mid Hills Sub-Humid Zone of Himachal Pradesh. Continue nursery sowing of late varieties of cauliflower, cabbage, knol khol and direct sowing of radish, carrot, turnip, palak and methi and sowing of early varieties of Pea in mid hill areas with available soil moisture.

- As mainly dry weather would prevail, undertake harvesting of rajmah in High Hill Temperate Dry Zone of Himachal Pradesh.
- Undertake intercultural operation like weeding in peas in High Hill Temperate Dry Zone of Himachal Pradesh. Spray Glycel @ 5ml per liter of water for weed control.
- Due to prevailing humid weather condition, there are chances of incidence of rice hispa in rice in Sub-Montane and Low Hills Sub-Humid Tropical Zone and Bilaspur district of Mid Hills Sub-Humid Zone of Himachal Pradesh. Spray Cypermethrin 10EC @ 1ml per litre or Chloropyrifos 20 EC @ 2.5 ml per litre of water.
- Due to prevailing humid weather condition, there are chances of attack of white fly in tomato in Mid Hills Sub-Humid Zone of Himachal Pradesh. Use yellow trap one trap/100 m² to prevent the attack and spray Imidacloprid (Confidor) @ 7.5 ml or Malathion @ 22.5 ml or Metasystox @ 15 ml in 15 litres of water.
- Humid weather is congenial for spread of fruit rot in tomato, chilli and capsicum in Sub-Montane and Low Hills Sub-Humid Tropical Zone and Bilaspur district of Mid Hills Sub-Humid Zone of Himachal Pradesh. For control; apply Dithane M-45 @ 2-3 g per litre of water at 10-15 days interval. Weather is also conducive for attack of tomato borer, spray Endosulphon @ 0.07%.
- Due to prevailing humid weather conditions, there are chances of attack of aphids in cabbage and cauliflower in High Hill Temperate Dry Zone of Himachal Pradesh. Spray Cypermethrin @ 1ml per litre of water.
- Weather is congenial for attack of anar butter fly and incidence of fruit rot in anar in Mild Hills Sub Humid Zone of Himachal Pradesh. Spray Quinalphos @ 500 ml per 200 litres of water against attack of anar butter fly and Captan @ 600g per 200 litres of water to prevent fruit rot in anar.
- **Uttarakhand:**
 - Continue sowing of mustard, palak, methi, raddish, early toria, pea in Hill Zone of Uttarakhand.
 - In Bhabar and Tarai Zone, undertake sowing of pea and toria and planting of potato. Undertake land preparation for sowing of peas, radish, fenugreek and spinach. Undertake harvesting of matured rice.
 - In Sub humid Sub Tropical Zone of Uttarakhand, undertake weeding in pulses like urad and moong to control weeds and undertake earthing up in sugarcane. Apply second dose of urea in maize at flowering stage.
 - Under present weather conditions, there may be attack of leaf hopper on vegetables like brinjal and okra in Sub humid Sub Tropical Zone of Uttarakhand. To control, apply Dichlorvas @ 1ml/liter of water.
 - Under humid weather condition, there are chances of attack of gundhi bug in rice in Sub humid Sub Tropical Zone of Uttarakhand. Spray Malathion or Carbaryl @ 30 kg per hectare.
- **Punjab, Haryana and Delhi:**
 - In Punjab, in view of deficit rainfall, adopt moisture conservation practices like hoeing, weeding, mulching in crops like sugarcane, maize, cotton to reduce the evapotranspiration losses and to conserve moisture for *rabi* crops. De-tasselling in maize is advised to reduce transpiration losses
 - In Western Undulating Zone of Punjab, continue nursery sowing of mid-season cauliflower, desi varieties of radish, carrot under irrigation and turnip and planting of mango and litchi.
 - In Central Plain Zone of Punjab, continue sowing of desi varieties of carrot, radish and turnip crops and undertake transplanting of tomato under irrigation. Continue sowing of potato, palak and nursery sowing of cauliflower. Harvest matured maize and groundnut in Ludhiana district.
 - Under hot and humid conditions, whitefly incidence may increase in cotton in Western Plain Zone of Punjab, spray Triazophos 40 EC @ 600ml/acre or Ethion 50 EC @ 800 ml/acre.
 - In Undulating Plain Zone of Punjab, higher humidity due to intermittent rainfall may lead to sheath blight in rice, spray Tilt @ 0.1% on the disease spots. Present weather condition is very congenial for attack of fruit rot in chilli, spray Indofil M45 @ 390 g/acre in 100-200 litres of water. Due to intermittent rainfall during previous week, false smut infection in rice heads may occur, spray Blitox @ 500 gm/acre to prevent. Grain discoloration in rice may occur due to rainfall during flowering stage, spray Tilt @ 200 ml/acre to prevent fungal infection in the unfilled grains. Present weather condition is very congenial for attack of fungal diseases in vegetable crops, spray Indofil M45 @ 390 g per acre in 100-200 litres of water to control fungal diseases.
 - In Western Zone of Haryana, complete sowing of fodder crop jowar mixed with cowpea to increase the nutritive value for continuous supply of green fodder. Undertake plantation of new orchard.
 - In Delhi, continue transplanting of onion seedlings in the prepared fields and continue planting of early potato. Undertake land preparation for sowing of early toria and sowing of radish, spinach and coriander. In the present weather conditions, false smut may appear in rice crop, Apply Blitox @ 500 grams per acre at 10 days interval (2-3 times).
- **Uttar Pradesh:**
 - Undertake nursery sowing of cabbage, sowing of Asiatic varieties of radish and methi in Central Plain Zone of Uttar Pradesh utilizing available soil moisture.
 - As mainly dry weather is likely to prevail, apply irrigation in soybean at flowering and pod formation stages and in moong and urad in Central Plain Zone of Uttar Pradesh. Undertake planting of potato and harvesting of maize.
 - Undertake second top dressing of nitrogen in maize at knee high stage and third during tasselling stage in Western Plain Zone of Uttar Pradesh.
 - Undertake sowing of toria @ 4kg seed per ha in Fatehpur, Pratapgarh, Allahabad, Chitrakut, Kaushambi, Agra, Mathura, Lucknow and Kanpur districts of Central Plain Zone and in Western Plain Zone of Uttar Pradesh.
 - Continue sowing of toria in Raibareilly, Amethi and Sultanpur districts of Eastern Plain Zone of Uttar Pradesh.

- Undertake land preparation for planting of potato in Basti, Sant Kabir Nagar and Gorakhpur districts of Eastern Plain Zone of Uttar Pradesh. Undertake land preparation and keep the inputs ready for sowing of mustard.
- Keep the inputs ready for sowing of Ageti Matar during first week of October in Sant Kabir Nagar and Gorakhpur districts of Eastern Plain Zone of Uttar Pradesh.
- Continue transplanting of cauliflower, cabbage, tomato, chilli and brinjal, sowing of palak, cucumber, methi, ageti carrot and planting of fruit crops like mango, papaya, lemon, amla, etc. in Jhansi district of Bundelkhand Zone of Uttar Pradesh. Undertake sowing of Ageti matar utilizing available soil moisture. Undertake field preparation for sowing of mustard, arhar, matar and masoor. Also undertake harvesting of matured moong. Maintain 5cm water level in rice at panicle initiation and flowering stage.
- Under prevailing hot weather condition, there are chances of incidence of tikka diseases in groundnut in Raibareilly, Amethi and Sultanpur districts of Eastern Plain Zone of Uttar Pradesh. Spray Zinib 75% @ 2.5kg per hectare or Thirum 27% liquid @ 3 litre per hectare 2-3 times after 10 days interval.
- Due to prevailing humid weather condition, there are chances of attack of Gundhi bug in rice in Central Plain Zone and Eastern Plain Zone of Uttar Pradesh. Spray Methyl Parathion 2% @ 20 kg or Malathion 5% @ 20-25 kg per hectare.
- Due to prevailing humid weather condition, there are chances of attack of beetle in banana in Central Plain Zone of Uttar Pradesh. Spray Monocrotophos @ 125 ml per litre of water or add 3-4 g Carbofuron in soil.
- **Rajasthan:**
 - As mainly dry weather would prevail, continue harvesting of matured bajra and jowar in Flood Prone Eastern Plain Zone of Rajasthan.
 - Continue nursery raising of tomato, brinjal, chillies, cabbage etc. in Transitional Plain Zone of Inland Drainage of Rajasthan, utilizing realized rainfall.
 - Continue nursery sowing of cauliflower (Japanese, Pusa hybrid-2 and Himjoyti) and radish (Pusa Chetki) and undertake sowing of rainfed Taramira, Toria and Mustard in Semi Arid Eastern Plain Zone of Rajasthan.
 - Continue nursery sowing of mid season cauliflower (Japanese, Pusa hybrid-2 and Himjoyti) and sowing radish (Pusa Chetki) in Arid Western Plain Zone of Rajasthan. Apply remaining half dose of nitrogen *i. e.* 30 kg/ha through urea in 25-30 days old pearl millet crop.
 - In Arid Western Plain Zone of Rajasthan, in the present weather conditions there may be increased attack of pod borer in moong and moth crops at flowering/pod formation stage. To control spray Quinalphose 25EC @ one litre/ha.
 - In Southern Humid Plain Zone of Rajasthan, in the present temperature conditions, there are is chance of attack of grass hopper on maize. To control, dusting of Methyl Parathion 2% @ 25 kg/ha is advised.
 - Due to humid and cloudy conditions, there are incidence of bollworm and jassids in cotton in Sub Humid Southern Plain and Aravali Hill Zone of Rajasthan, to control apply Karberil 50% dust @ 2.5 kg/ha.
 - Suitable varieties are given in Annexure II.
- **Floriculture**
 - Undertake field preparation for sowing of Gladiolus by applying mixture of 10kg. Cow-dung manure/Compost 200gm+ Murate of Potach mix. 15 days before sowing and apply @ 1m² in Central Plain Zone of Uttar Pradesh..
- **Horticulture**
 - In Sub-Montane and Low Hills Sub-Humid Tropical Zone and Bilaspur district of Mid Hills Sub-Humid Zone of Himachal Pradesh, keep the basins of the plants free from weeds. Make preparations for planting of strawberry during last week of September.
- **Animal Husbandry:**
 - Under prevailing humid weather condition, there are chances of attack of ticks and mites on animals also in Flood Prone Eastern Plain Zone of Rajasthan and Sub-Montane and Low Hills Sub-Humid Tropical Zone and Bilaspur district of Mid Hills Sub-Humid Zone of Himachal Pradesh and Intermediate zone of Jammu & Kashmir. For control spray Butox @ 2.0 ml per litre of water. Clean the cowshed with phenyl and keep the animal sheds dry and clean.
 - Under prevailing humid weather condition, there are may be attack of parasite diseases like Babesia & Thelaria in animals in Semi Arid Eastern Plain Zone of Rajasthan. Treat the animals immediately.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Rice

Sugarcane

Okra

Soybean

- **Realised Rainfall:** Rainfall occurred in Mumbai City and Raigad districts of Konkan & Goa. Mainly dry weather prevailed over remaining parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Konkan & Goa and at isolated places over Gujarat Region and Madhya Maharashtra during the period. Rain/thundershowers would occur at isolated places over Marathwada during next 24 hours and mainly dry thereafter. Mainly dry weather would prevail over Saurashtra & Kutch and Vidarbha during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at many places along west coast. Rain/thundershowers would occur at a few places over Madhya Maharashtra. Weather would be mainly dry over rest of the region.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, maintain water level upto 5-8 cm in rice fields. Undertake fertilizer application and intercultural operations in rice, finger millet, vegetable fields and mango and cashew orchards on a non rainy day.
 - In Madhya Maharashtra, maintain the water level of 5-8 cm in rice field. Undertake intercultural operations like weeding and fertilizer application in sugarcane, vegetables, cotton and red gram. In fallow and already harvested fields of green gram and black gram, undertake field preparation and sowing of *rabi* jowar and safflower utilizing the available soil moisture. Apply irrigation to sugarcane and vegetables.
 - In Marathwada, undertake intercultural operations in cotton, red gram and vegetables. Complete plucking of already matured green gram and black gram pods. Taking benefit of available soil moisture, undertake sowing of rainfed jowar. Apply irrigation to sugarcane, soybean and vegetables.
 - In Vidarbha, apply fertilizers and undertake intercultural operations in cotton and red gram. Maintain water level up to 7 cm in rice field in East Vidarbha. Prepare the field for sowing of safflower in the harvested field of green gram and black gram. Apply irrigation to vegetables and orange, sweet lime orchards.
 - Prevailing rainy and humid weather in Pune region is conducive for more infestation of sigatoka in banana; spray Carbendazim @ 10 g with 100 ml mineral oil & sticker per 10 litres water.
 - Due to cloudy weather there may be attack of pod borer in soybean in Marathwada region; spray Quinalphos @ 20 ml per 10 litres water.
 - Under prevailing temperature (28-30°C) in South Konkan there may be attack of brown hoppers in rice in low lying area; spray 50% Malathion @ 10 ml or Monocrotophos @ 15 ml per 10 litres of water on a non rainy day.
 - **Gujarat:**
 - Undertake harvesting of matured pulse crops. Carry out intercultural and weeding operation in cotton and castor crops and gap filling in late sown castor in Bhal and Coastal Zone.
 - Undertake nursery raising for *rabi* vegetables (chilli, tomato and brinjal) and intercultural operations in pigeon pea (before flowering) in South Gujarat Zone.
 - Taking advantage of mainly dry weather, continue harvesting of matured pearl millet and pulse crops (green gram, cow pea) in North Gujarat Zone. Undertake sowing of *rabi* castor. Under vasma condition prepare land for sowing of *rabi* fennel. Carry out gap filling in standing castor crop. Carry out weeding, hoeing and intercultural operations and mulching in cluster bean and standing castor crops for effective weed control and to conserve the soil moisture. Apply supplementary dose of nitrogen @ 40 kg/ha through urea in castor.
 - As mainly dry weather would prevail, continue harvesting of matured pearl millet in North West Zone of Gujarat.
 - Carry out intercultural operations, weeding and mulching in pulses, maize and cotton in Middle Gujarat zone and in late sown castor and vegetables (July-August transplanted) in South Gujarat Heavy Rainfall Zone. Carry out gap filling in germinated castor in South Gujarat Heavy Rainfall Zone.
 - Undertake land preparation for sowing of pea and carrot (for vegetable purpose) in North Saurashtra Zone. As mainly dry weather is likely to continue, apply irrigation in vegetables and cotton crops.
 - Due to humid weather conditions infestation of jassid is observed in cotton in North Gujarat Zone and in cotton and groundnut in North Saurashtra Zone and North West Zone; spray Imidacloprid 17.8 % @ 5 ml or Thiomethoxam @ 6 g in 10 liters of water for control.
 - Due to warm weather conditions heavy attack of mite in ladies finger is observed in South Saurashtra Zone which is

likely to persist; spray Ethion @ 20 ml/10 liters of water for control.

- Due to prevailing weather conditions mite infestation is observed in sesame in North Saurashtra Zone and North West Zone; spray Propargite 57 % EC @10 ml in 10 liters of water for control.
- Due to humid weather, there is chance of infestation of powdery mildew disease in sesame in North Gujarat Zone and in North Saurashtra Zone; spray Hexaconazole 5 % EC @ 20 ml in 10 liters of water to prevent it. In brinjal and tomato constant monitoring of fruit borers by using pheromone traps 4-6 per acre is advised. If insect population is above ETL, spray Spinosad @3.0 ml/10 litre of water for control.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- In Gujarat, maintain proper nutrient supplement in animal's diet.

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

Annexure I
Week by week Rainfall Distribution

Sub-Divisions	10.09.14		17.09.14		24.09.14	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	61.0	-1	13.1	-91	131.9	79
Dibang Valley	**	**	**	**	**	**
East Kameng	4.8	-92	13.3	-84	37.5	-35
East Siang	72.4	-41	53.1	-71	270.9	113
Kurung Kumey	**	**	**	**	**	**
Lohit	53.7	-27	22.5	-77	182.1	180
Lower Dibang Valley	61.2	49	22.7	-78	165.3	201
Lower Subansari	**	**	**	**	**	**
Papumpara	61.9	-51	93.5	2	193.3	95
Tawang	106.0	1	45.0	-69	179.0	54
Tirap	77.4	-32	26.8	-80	82.4	4
Upper Siang	104.6	-37	103.8	-49	74.8	-58
Upper Subansari	33.6	14	6.4	-83	42.2	11
West Kameng	77.6	-26	184.4	26	100.2	-14
West Siang	46.5	-21	55.5	-44	52.5	-28
Assam&Meghalaya						
Assam						
Baksa	14.6	-85	0.0	-100	121.2	17
Barpeta	8.4	-92	19.2	-88	247.2	139
Bongaigaon	9.0	-91	51.8	-50	211.4	105
Cachar	203.1	93	60.4	-34	80.3	19
Chirang	27.6	-71	79.2	-24	440.8	328
Darrang	27.0	-46	71.0	-10	185.0	320
Dhemaji	181.0	78	41.0	-66	97.0	10
Dhubri	9.8	-83	79.1	-40	260.6	308
Dibrugarh	61.0	-35	87.7	-3	130.7	101
Goalpara	17.8	-66	26.9	-66	483.0	547
Golghat	54.5	-10	37.8	-30	92.1	101

Hailakandi	165.5	82	55.5	-30	191.7	250
Jorhat	66.5	-17	15.6	-77	121.7	114
Kamrup(Rural)	17.2	-64	25.0	-48	243.2	587
Kamrup(Metro)	18.0	-63	23.1	-52	290.1	719
Karbi Anglong	74.1	31	15.8	-67	110.4	238
Karimganj	168.6	43	45.3	-63	180.8	139
Kokrajhar	16.3	-85	71.2	-35	322.9	174
Lakhimpur	136.6	34	114.8	-4	150.8	72
Morigaon	35.0	-34	114.4	100	277.6	484
N.C.Hills	125.8	511	65.8	82	70.0	47
Nowgong	54.7	-5	58.8	2	148.9	231
Nalbari	5.4	-89	10.8	-84	223.9	311
Sonitpur	40.2	-32	73.1	8	193.6	319
Sibsagar	6.4	-90	30.0	-42	82.3	127
Tinsukia	76.3	-15	30.2	-67	134.2	105
Udalgiri	49.5	-2	7.3	-91	227.5	416
Meghalaya						
East Garo Hills	13.3	-85	113.4	5	874.4	1513
East Khasi Hills	104.2	-29	80.7	-63	887.8	941
Jaintia Hills	20.0	-92	49.0	-77	254.0	98
Ribhoi	36.5	-46	48.0	-49	216.7	283
South Garo Hills	49.0	-40	35.0	-66	536.0	687
West Garo Hills	8.6	-89	20.4	-80	665.8	878
West Khasi Hills	**	**	**	**	**	**
NMMT						
Mizoram						
Aizwal	121.9	17	64.1	-34	110.2	41
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	331.0	218	186.0	120	91.0	-14
Serchhip	52.1	-40	149.4	87	160.6	104
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	28.0	-66	60.0	5	90.0	-16
Churachandpur	**	**	**	**	**	**
Imphal east	2.4	-95	12.4	-71	71.4	55
Imphal west	285.7	541	34.1	36	124.6	200
Senapati	0.0	-100	28.0	-45	66.0	31
Tamenglong	**	**	**	**	**	**
Thoubal	**	**	**	**	**	**
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	37.0	-4	22.6	-58	66.7	103
Kephire	**	**	**	**	**	**
Kohima	54.6	-27	86.6	47	98.0	93
Longleng	**	**	**	**	**	**

Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	23	-69	43	-27	46	-9
Tuensang	**	**	**	**	**	**
Wokha	**	**	**	**	**	**
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	109.9	79	64.7	-1	95.8	87
North tripura	198.4	192	7.0	-91	134.4	162
South tripura	8.4	-86	19.3	-69	194.4	251
West tripura	34.2	-45	14.8	-76	189.0	272
Himachal Pradesh						
Bilaspur	61.8	16	2.6	-92	6.7	-80
Chamba	96.5	34	4.4	-90	1.4	-96
Hamirpur	39.6	-15	8.5	-73	11.2	-62
Kangra	64.4	-25	12.2	-75	6.4	-81
Kinnaur	7.0	-56	0.4	-98	0.0	-100
Kullu	36.1	35	6.4	-67	0.7	-96
Lahaul and Spiti	28.5	19	0.0	-100	0.0	-100
Mandi	65.7	28	32.5	-1	5.5	-79
Shimla	41.3	19	5.6	-78	3.4	-84
Sirmaur	87.4	35	9.1	-78	0.5	-98
Solan	80.1	45	7.8	-79	9.8	-65
Una	74.1	64	1.1	-96	5.8	-79
Punjab						
Amritsar	100.3	226	19.1	54	4.5	-65
Barnala	27.5	64	3.7	-80	0.0	-100
Bhatinda	97.6	433	1.0	-94	0.0	-100
Faridkot	110.5	416	0.5	-96	0.0	-100
Fatehgarh Saheb	91.7	236	6.0	-66	0.0	-100
Ferozpur	76.2	297	6.7	-46	0.0	-100
Gurdaspur	164.0	295	10.0	-61	0.0	-100
Hoshiarpur	37.5	-2	9.3	-58	0.6	-98
Jalandhar	44.5	30	20.8	15	0.0	-100
Kapurthala	88.0	349	48.9	183	5.4	-63
Ludhiana	60.5	102	13.1	-33	0.0	-100
Mansa	20.9	17	2.5	-87	1.0	-94
Moga	60.0	200	6.1	-57	0.0	-100
Muktesar	195.2	607	2.4	-67	0.0	-100
Nawashahar	39.2	-6	13.1	-46	0.3	-99
Patiala	132.7	399	2.3	-89	0.0	-100
Ropar	68.3	78	10.8	-41	3.1	-89
Sangrur	52.3	95	14.4	37	0.0	-100
Mohali	79.3	81	0.0	-100	0.0	-100
TarnTaran	153.2	587	27.2	289	0.0	-100
Haryana,Chd,Delhi						
Haryana						
Ambala	57.8	9	4.3	-90	0.4	-99

Bhiwani	20.2	16	5.9	-61	0.0	-100
Chandigarh	104.5	170	2.0	-95	0.0	-100
Faridabad	34.2	-21	12.3	-50	0.0	-100
Fatehabad	21.2	49	4.2	-63	0.0	-100
Gurgaon	20.0	-35	5.3	-75	0.0	-100
Hissar	18.7	21	3.4	-78	0.0	-100
Jhajar	86.3	170	21.7	42	0.0	-100
Jind	52.3	77	10.2	-29	0.0	-100
Katihah	53.8	112	5.0	-68	0.0	-100
Karnal	128.9	385	5.3	-78	0.0	-100
Kurukshetra	81.3	202	2.2	-91	0.0	-100
Mahendragarh	29.9	38	17.9	37	0.0	-100
Mewat	29.8	-23	23.7	-1	0.0	-100
Palwal	35.5	22	21.8	-12	0.0	-100
Panchkkula	50.5	-20	1.0	-98	1.8	-92
Panipat	112.0	237	26.4	60	0.2	-99
Rewari	43.9	59	17.0	-1	0.0	-100
Rohtak	21.6	-18	5.4	-69	0.0	-100
Sirsa	64.2	629	7.2	-50	0.0	-100
Sonepat	50.1	78	9.5	-54	0.0	-100
Yamunanagar	78.5	47	7.7	-72	0.0	-100
Delhi						
Central Delhi	52.0	34	6.0	-83	0.0	-100
East Delhi	7.0	-82	6.0	-83	0.0	-100
New Delhi	29.6	-24	18.3	-47	0.0	-100
North Delhi	65.5	69	41.7	21	1.5	-89
North East Delhi	39.0	1	24.0	-30	0.0	-100
North West Delhi	28.3	-27	1.0	-97	0.0	-100
South Delhi	36.3	-3	30.3	-12	0.0	-100
South West Delhi	50.5	30	4.0	-89	0.0	-100
West Delhi	47.0	21	1.0	-97	0.0	-100
Jammu & Kashmir						
Anantnag	309.1	168	2.0	-71	0.0	-100
Badgam	76.7	293	0.0	-100	0.0	-100
Bandipore	**	**	**	**	**	**
Baramula	255.9	1489	0.0	-100	0.0	-100
Doda	320.8	767	0.0	-100	2.4	-91
Ganderbal	32.6	233	0.0	-100	0.0	-100
Jammu	354.2	801	0.0	-100	13.1	-60
Kargil	**	**	**	**	**	**
Kathua	193.2	692	0.0	-100	11.0	-68
Kistwar	**	**	**	**	**	**
Kulgam	460.2	1850	1.0	-89	0.0	-100
Kupwara	129.2	1984	0.0	-100	2.1	-76
Ladakh(Leh)	10.5	192	0.0	-100	0.0	-100
Poonch	10.8	-80	0.0	-100	0.0	-100
Pulwama	242.7	1711	1.0	-64	0.0	-100
Rajouri	43.2	92	0.0	-100	12.2	-70
Ramban	425.6	1144	2.0	-79	0.3	-99

Reasi	556.0	926	0.0	-100	3.1	-93
Samba	47.4	21	0.0	-100	27.3	-17
Shopian	348.0	2953	2.0	-81	0.0	-100
Srinagar	148.0	1410	8.5	93	0.0	-100
Udhampur	605.5	785	0.0	-100	4.3	-91
East Madhya Pradesh						
Anuppur	112.6	81	79.5	6	16.5	-50
Balaghat	32.9	-52	44.3	-19	7.7	-78
Chhatarpur	69.1	5	15.8	-72	0.6	-97
Chindwara	43.4	-17	20.7	-55	0.0	-100
Damoh	31.0	-49	13.8	-77	0.0	-100
Dindori	56.8	-6	93.7	86	3.2	-88
Jabalpur	83.2	22	22.0	-61	4.8	-80
Katni	32.8	-51	56.0	-2	0.0	-100
Mandla	58.7	-14	68.1	14	3.0	-91
Narsingpur	66.0	-12	36.0	-41	13.0	-64
Panna	85.2	25	19.1	-72	0.0	-100
Rewa	57.7	-17	18.9	-70	20.4	-31
Sagar	44.7	-34	36.6	-35	0.1	-99
Satna	136.9	128	36.4	-37	0.0	-100
Seoni	50.4	-8	33.7	-42	4.6	-87
Shahdol	149.0	127	7.2	-87	1.0	-96
Sidhi	57.8	-22	32.0	-46	7.4	-80
Singrauli	63.4	1	28.6	-44	26.4	-20
Tikamgarh	21.0	-51	30.5	-34	0.0	-100
Umaria	70.1	-6	26.2	-58	3.8	-87
West Madhya Pradesh						
Alirajpur	252.1	421	12.2	-67	0.0	-100
Asoknagar	22.8	-56	64.3	30	0.0	-100
Badwani	203.2	451	11.3	-63	0.0	-100
Betul	73.6	24	14.4	-77	1.4	-95
Bhind	60.0	20	32.7	-20	1.6	-92
Bhopal	33.1	-50	9.4	-80	9.3	-68
Burhanpur	165.1	297	53.0	47	28.9	15
Datia	80.6	47	41.4	-15	1.0	-96
Dewas	79.8	41	19.7	-52	5.0	-84
Dhar	179.7	259	14.7	-62	0.0	-100
Guna	30.4	-44	62.9	62	0.0	-100
Gwalior	23.1	-54	59.3	13	0.0	-100
Harda	171.7	146	51.3	9	48.5	29
Hosangabad	162.6	78	11.1	-85	10.9	-73
Indore	134.5	187	9.9	-77	3.1	-92
Jhabua	110.4	139	13.0	-56	0.0	-100
Khandwa	406.7	679	57.3	36	16.3	-53
Khargone	206.1	311	32.1	12	16.0	-51
Mandsaur	60.2	26	73.3	141	0.0	-100
Morena	62.0	48	52.3	32	0.0	-100
Neemuch	37.3	-27	58.1	85	0.0	-100
Raisen	62.5	-19	46.4	-12	0.9	-97

Rajgarh	64.3	29	26.4	-24	3.2	-87
Ratlam	72.9	33	7.3	-78	0.0	-100
Sehore	119.4	74	11.6	-76	3.8	-88
Shajapur	96.8	89	9.8	-71	6.5	-79
Sheopur Kalani	48.0	31	73.0	167	0.0	-100
Shivpuri	9.3	-82	46.5	12	0.0	-100
Ujjain	36.8	-22	26.7	-30	0.4	-99
Vidisha	92.5	64	79.2	101	2.8	-88
Chhattisgarh						
Bastar	121.5	83	69.1	9	150.4	262
Bijapur	301.7	337	37.0	-36	46.0	9
Bilaspur	100.0	62	41.5	-27	42.9	29
Dantewara	76.8	18	69.3	43	89.5	131
Dhamtari	90.6	61	13.8	-79	34.8	-19
Durg	97.8	101	31.1	-50	52.4	19
Janjgir	110.6	38	19.2	-62	52.7	22
Jashpurnagar	52.0	-37	36.8	-48	0.7	-98
Kanker	167.0	179	26.9	-61	65.5	48
Korba	75.8	4	32.2	-49	31.9	2
Koriya	69.7	9	30.2	-52	61.3	165
Kawardha	20.1	-55	10.6	-75	70.0	102
Mahasumund	111.4	79	15.4	-75	94.6	184
Narayanpur	92.7	31	47.5	-13	65.5	53
Raigarh	94.1	23	32.3	-53	35.0	14
Raipur	87.3	57	35.7	-39	76.1	117
Rajandgaon	100.0	66	38.0	-32	20.5	-52
Surguja	40.7	-45	25.0	-58	29.8	-11
East Uttar Pradesh						
Allahabad	41.6	-19	18.8	-70	0.7	-98
Ambedkar Nagar	0.0	-100	51.3	0	21.0	-13
Azamgarh	8.7	-87	45.3	-45	18.4	-54
Bahraich	14.2	-76	185.8	206	18.3	-31
Ballia	10.6	-75	39.0	-28	36.8	9
Balrampur	0.0	-100	56.2	-18	22.6	-25
Banda	47.8	-4	11.6	-78	0.2	-99
Barabanki	13.2	-80	74.5	2	0.0	-100
Basti	13.4	-77	113.3	90	9.1	-69
Chandauli	5.2	-91	18.0	-70	6.4	-72
Deoria	0.0	-100	19.0	-71	1.5	-96
Faizabad	11.6	-82	75.2	28	0.0	-100
Farrukhabad	24.1	-49	91.1	103	0.0	-100
Fatehpur	14.2	-70	23.2	-65	0.0	-100
Gazipur	31.6	-41	51.1	-35	54.3	63
Gonda	6.7	-90	87.3	26	10.7	-64
Gorakhpur	9.9	-86	53.7	-40	32.1	-3
Hardoi	27.8	-43	35.7	-37	0.0	-100
Jaunpur	2.5	-96	37.5	-52	3.0	-92
Kannauj	33.6	-37	77.3	59	0.0	-100
Kanpur City	38.0	3	98.0	96	0.0	-100

Kanpur Dehat	15.4	-69	16.8	-65	0.0	-100
Kaushambi	25.5	-43	5.9	-89	0.0	-100
Kheri	26.9	-49	137.3	141	3.6	-90
Kushi nagar	0.0	-100	68.0	-16	20.5	-52
Lucknow	43.1	-3	66.1	15	0.0	-100
Maharajganj	0.0	-100	51.6	-41	17.5	-46
Mau	3.0	-95	18.0	-81	31.0	-4
Mirzapur	18.3	-74	42.5	-44	30.5	-26
Pratapgarh	30.3	-48	16.7	-75	2.0	-92
RaiBareilly	10.2	-78	56.4	0	0.7	-97
Sahuji Maharajnagar	74.5	38	6.5	-91	25.5	11
Sant Kabirnnagar	0.0	-100	54.0	-18	22.0	-6
Sant Ravidas Nagar	29.0	-50	13.0	-79	0.0	-100
Shrawasti	9.9	-83	109.8	81	11.0	-58
Sidharthnagar	0.0	-100	130.2	97	27.0	3
Sitapur	15.4	-75	65.9	8	2.9	-90
Sonbhadra	22.3	-63	22.4	-69	18.8	-38
Sultanpur	12.2	-76	33.6	-42	0.0	-100
Unnao	33.2	-26	108.8	84	0.0	-100
Varanasi	26.1	-63	68.9	-15	11.9	-70
West Uttar Pradesh						
Agra	29.2	-7	12.0	-71	0.0	-100
Aligarh	20.1	-44	53.8	20	0.0	-100
Auraiya	31.5	-26	4.0	-91	0.0	-100
Badaun	14.8	-64	29.2	-35	0.0	-100
Baghpat	99.6	279	1.0	-96	0.0	-100
Bareilly	59.2	31	27.2	-48	4.5	-84
Bijnor	99.5	101	36.3	-30	4.0	-73
Bulandsahar	41.6	20	34.2	-23	0.0	-100
Etah	21.3	-33	36.8	-19	0.0	-100
Etawah	29.3	-39	27.1	-44	0.0	-100
Firozabad	38.9	20	47.9	-8	0.0	-100
GBNagar	56.0	113	11.0	-75	0.0	-100
Ghaziabad	26.5	-23	12.9	-69	0.0	-100
Hamirpur	38.0	-21	28.5	-47	0.0	-100
Jalaun	73.8	56	13.3	-74	8.8	-67
Jhansi	49.1	-5	40.7	-21	0.0	-100
Jotiba Phule Nagar	28.8	-28	8.0	-83	20.0	-3
Kanshiramnagar	50.0	40	26.0	-53	0.0	-100
Lalitpur	2.0	-96	82.0	60	0.0	-100
Mahamaya Nagar	11.0	-59	53.5	26	0.0	-100
Mahoba	76.6	54	2.0	-96	0.0	-100
Mainpuri	6.6	-82	31.1	-34	0.0	-100
Mathura	34.9	45	8.3	-78	0.0	-100
Meerut	54.4	16	33.6	-28	0.0	-100
Moradabad	50.0	5	42.5	-14	28.1	-4
Muzzaffarnagar	66.7	57	0.0	-100	0.0	-100
Pilibhit	29.7	-44	10.1	-85	2.0	-94
Rampur	30.9	-15	14.1	-71	19.5	-55

Saharanpur	55.0	36	40.7	-3	0.0	-100
Shahjahanpur	12.9	-76	44.6	-21	0.0	-100
Uttarakhand						
Almora	13.2	-68	31.7	-29	0.0	-100
Bageshwar	5.0	-88	9.8	-78	2.3	-92
Chamoli	16.2	-66	25.5	-12	2.7	-88
Champawat	35.5	-38	14.0	-81	20.5	-51
Dehradun	41.0	-54	39.2	-44	0.5	-99
Garhwal Pauri	51.3	-17	29.3	-46	0.0	-100
Garhwal Tehri	41.0	-27	1.4	-97	0.0	-100
Haridwar	110.1	109	7.5	-78	3.5	-83
Nainital	40.1	-41	63.2	-20	8.6	-83
Pithorgarh	26.6	-71	36.6	-52	16.5	-67
Rudraprayag	24.2	-70	14.8	-78	6.6	-78
Udham Sing Nagar	5.2	-91	8.6	-87	21.6	-43
Uttarkashi	29.6	-49	14.0	-80	5.7	-82
Bihar						
Araria	44.4	-43	27.0	-63	74.2	54
Arwal	1.3	-97	72.8	13	36.2	2
Aurangabad	21.9	-60	53.0	-18	33.1	12
Banka	2.7	-94	34.3	-25	49.4	3
Begusarai	1.8	-97	117.5	140	50.9	-10
Bhabua	16.1	-77	75.2	-14	20.7	-51
Bhagalpur	21.5	-60	81.6	58	5.4	-89
Bhojpur	4.5	-92	107.3	65	63.1	63
Buxar	0.6	-99	4.6	-94	11.7	-57
Darbhanga	24.5	-50	40.8	-10	0.0	-100
East Champaran	1.8	-97	65.9	19	29.3	-26
Gaya	5.5	-89	60.3	26	38.2	17
Gopalganj	1.1	-98	41.0	-50	4.9	-86
Jahanabad	1.1	-98	44.9	-24	33.9	-26
Jamui	2.5	-95	74.0	47	50.2	9
Kathihar	0.8	-99	24.7	-63	45.5	-5
Khagadia	4.2	-93	55.5	-20	41.4	-37
Kishanganj	46.6	-52	77.6	-6	126.5	90
Lakhisarai	0.9	-99	59.3	20	19.7	-64
Madhepura	0.9	-99	82.7	18	1.0	-97
Madhubani	35.0	-40	24.5	-52	9.0	-76
Monghyar	1.6	-97	20.5	-59	24.6	-55
Muzaffarpur	5.8	-88	122.2	85	46.8	14
Nalanda	0.0	-100	56.8	-1	28.2	-38
Nawada	5.0	-91	34.3	-26	38.2	10
Patna	8.6	-86	67.3	5	78.4	92
Purnea	12.9	-84	26.7	-66	178.7	270
Rohtas	29.7	-41	35.9	-44	24.7	-21
Saharsha	0.0	-100	31.5	-65	7.0	-86
Samstipur	8.8	-84	140.4	121	62.9	8
Saran	9.8	-83	100.8	48	42.3	11
Sheikpura	68.1	36	46.7	-12	62.2	51

Sheohar	0.0	-100	94.4	96	18.6	-52
Sitamarhi	0.0	-100	65.3	36	18.5	-52
Siwan	0.6	-99	50.5	-45	31.9	-25
Supaul	45.1	-20	64.5	13	31.5	-21
Vaishali	4.2	-94	55.9	-4	55.3	11
West Champaran	2.2	-95	76.2	-23	72.8	63
Jharkhand						
Bokaro	38.8	-50	28.1	-50	42.6	16
Chatra	22.5	-66	105.1	76	44.3	-1
Deoghar	9.5	-82	74.4	35	36.1	-33
Dhanbad	26.3	-61	26.6	-61	60.1	20
Dumka	1.6	-97	59.1	-6	102.4	120
East Singbhum	50.6	-20	6.9	-87	36.3	-8
Garhwa	3.9	-94	102.6	57	4.3	-86
Giridih	17.9	-72	40.3	-31	80.5	96
Godda	1.9	-96	120.4	84	110.1	191
Gumla	85.7	16	28.2	-56	10.7	-77
Hazaribagh	18.7	-70	74.9	14	44.1	25
Jamtara	12.5	-83	50.9	-37	63.7	29
Khunti	38.0	-56	9.5	-85	85.5	69
Koderna	15.5	-73	21.3	-60	34.5	-20
Latehar	50.8	-33	138.8	164	71.5	122
Lohardagga	51.2	-15	102.5	76	107.1	134
Pakur	0.0	-100	38.6	-49	79.8	-8
Palamau	19.9	-72	57.3	-9	35.3	-10
Ramgarh	46.8	-36	33.0	-45	34.4	-12
Ranchi	44.4	-37	35.6	-35	54.2	17
Sahebganj	4.2	-94	95.0	28	42.4	-38
Saraikele	17.7	-74	23.5	-63	45.7	12
Simdega	95.9	12	51.2	-36	39.1	-13
West Singbhum	50.0	-22	56.6	10	18.6	-52
East Rajasthan						
Ajmer	47.6	69	17.0	70	0.0	-100
Alwar	50.4	33	52.3	131	0.3	-98
Banswara	132.3	138	17.5	-40	0.0	-100
Baran	67.5	52	48.0	96	0.8	-96
Bharatpur	41.6	9	31.0	19	0.5	-95
Bhilwara	49.2	39	26.3	59	0.0	-100
Bundi	20.0	-53	24.7	46	0.0	-100
Chittorgarh	63.8	43	44.0	117	0.0	-100
Dausa	43.8	30	42.0	96	0.0	-100
Dholpur	65.8	72	46.8	28	0.0	-100
Dungarpur	97.3	143	23.8	-3	0.0	-100
Jaipur	38.3	39	38.8	144	0.0	-100
Jhalawar	43.0	-20	56.5	118	0.0	-100
Jhunjhunu	34.9	74	20.3	40	0.0	-100
Karauli	32.8	1	54.8	118	0.0	-100
Kota	51.5	1	18.1	-19	0.6	-96
Pratapgarh	79.2	27	20.0	-38	0.0	-100

Rajsamand	39.3	20	39.9	232	0.0	-100
Sawai Madhopur	20.8	-31	54.6	130	1.8	-86
Sikar	27.7	50	22.9	90	0.0	-100
Sirohi	140.1	115	78.5	182	0.0	-100
Tonk	35.7	17	16.0	-5	0.0	-100
Udaipur	117.8	215	78.8	328	0.5	-97
West Rajasthan						
Barmer	80.5	335	0.4	-95	0.0	-100
Bikaner	42.0	173	5.7	-20	0.0	-100
Churu	37.3	135	49.9	419	0.0	-100
Hanumangarh	97.9	737	20.3	178	0.0	-100
Jaisalmer	1.0	-91	5.3	20	0.0	-100
Jalore	124.5	282	20.5	85	0.0	-100
Jodhpur	95.3	350	2.1	-71	0.0	-100
Nagaur	48.7	154	14.9	71	0.0	-100
Pali	80.6	135	45.1	237	0.0	-100
Sri Ganganagar	129.1	871	3.8	-20	0.0	-100
Gujarat Region						
Ahmedabad	138.1	233	18.2	-17	0.2	-99
Anand	250.5	320	25.8	14	0.7	-96
Banaskantha	177.7	345	30.8	26	0.0	-100
Baroda	206.4	252	14.6	-59	0.0	-100
Broach	83.7	69	13.9	-44	1.4	-94
DNH	255.8	133	73.7	104	4.1	-95
Dahod	123.5	105	36.1	12	0.0	-100
Daman	134.0	22	80.6	123	14.0	-83
Dangs	127.0	17	28.5	-52	0.5	-99
Gandhinagar	142.9	145	50.1	107	0.3	-98
Kheda	239.5	265	27.9	7	0.0	-100
Mehsana	239.9	415	50.6	48	0.0	-100
Narmada	107.6	88	26.7	-25	0.0	-100
Navsari	170.1	81	67.8	39	3.9	-90
Panchmahal	245.5	290	59.3	77	0.1	-99
Patan	169.7	437	31.8	28	0.0	-100
Sabarkantha	225.6	336	83.0	187	0.0	-100
Surat	134.0	99	35.0	4	1.4	-95
Tapi	131.2	63	43.2	16	0.0	-100
Valsad	150.9	50	63.3	29	12.7	-70
S K & Diu region						
Amreli	55.2	148	18.7	11	1.0	-96
Bhavnagar	42.7	28	19.4	20	0.6	-97
Diu	160.8	584	2.3	-80	0.0	-100
Jamnagar	72.4	309	15.0	-14	0.7	-91
Junagarh	76.6	205	66.7	190	0.3	-98
Kutch	46.7	90	4.2	-80	0.0	-100
Porbandar	64.7	235	97.7	265	0.9	-94
Rajkot	42.8	96	20.0	-10	0.0	-100
Surendranagar	103.9	191	35.3	152	0.0	-100
Maharashtra & Goa						

Konkan & Goa						
Mumbai City	71.3	-2	16.6	-71	45.3	-25
Mumbai Suburban	58.4	-20	13.1	-77	26.6	-56
North Goa	115.3	44	111.8	103	13.9	-74
Raigad	229.6	110	59.2	-14	33.1	-53
Ratnagiri	256.7	157	81.0	36	22.3	-65
Sindhudurg	92.6	28	74.7	12	16.5	-71
South Goa	105.4	39	119.1	146	16.6	-67
Thane	199.0	107	36.8	-37	20.3	-67
Madhya Maharashtra						
Ahmednagar	21.7	-14	1.6	-95	5.8	-84
Dhule	97.7	354	1.2	-94	8.9	-68
Jalgaon	128.0	306	20.3	-20	6.1	-76
Kolhapur	94.3	116	20.4	-32	11.2	-74
Nandurbar	98.1	130	7.1	-73	4.3	-84
Nasik	121.3	150	14.9	-57	10.5	-72
Pune	49.6	56	9.3	-68	6.5	-84
Sangli	16.8	-20	5.6	-79	16.2	-60
Satara	32.6	33	7.6	-70	7.3	-82
Solapur	7.2	-74	10.1	-73	19.3	-60
Marathwada						
Aurangabad	51.0	79	15.3	-48	0.3	-99
Beed	13.5	-60	8.4	-77	8.0	-80
Hingoli	73.1	71	5.5	-79	3.0	-91
Jalna	49.5	71	13.5	-56	0.3	-99
Latur	13.9	-69	11.2	-69	7.5	-76
Nanded	50.6	22	10.9	-64	9.9	-76
Usmanabad	13.2	-64	10.1	-78	18.2	-57
Parbhani	32.8	-29	8.6	-71	8.9	-77
Vidarbha						
Akola	92.1	201	23.9	-23	2.5	-91
Amraoti	123.1	192	14.2	-58	5.0	-83
Bhandara	112.3	74	11.3	-77	8.9	-70
Buldhana	87.4	195	12.8	-53	3.2	-88
Chandrapur	184.4	196	21.4	-55	7.4	-79
Gadchiroli	273.5	326	32.4	-25	20.2	-35
Gondia	64.4	0	13.1	-76	26.7	-14
Nagpur	79.6	46	21.0	-43	4.9	-85
Wardha	111.2	114	20.0	-29	8.2	-74
Washim	70.1	70	6.1	-83	0.5	-98
Yeotmal	101.8	129	16.9	-31	4.4	-85
Odisha						
Angul	92.6	27	59.2	12	36.8	-10
Balasore	54.1	-23	23.2	-70	116.1	83
Bargarh	135.8	78	29.7	-53	55.9	66
Bhadrak	53.7	-1	40.7	-32	61.9	34
Bolangir	112.3	59	33.3	-46	31.3	-11
Boudh	168.2	182	46.2	-32	54.2	25
Cuttack	101.0	21	47.4	-17	72.5	56

Deogarh	61.0	-29	89.4	43	21.2	-40
Dhenkanal	89.9	26	46.5	-6	25.9	-42
Gajapati	201.1	315	72.4	11	30.5	-50
Ganjam	157.1	209	51.1	-1	63.9	29
Jagatsingpur	117.2	71	17.9	-70	65.5	41
Jajpur	78.0	28	55.7	-13	46.2	-27
Jharsuguda	66.1	-17	33.6	-48	75.9	126
Kalahandi	140.0	103	64.9	-3	77.5	98
Kandhamal	174.2	192	48.0	-29	39.7	-8
Kendrapara	91.5	31	17.7	-67	39.1	-34
Keonjhar	61.5	16	25.5	-54	25.8	-48
Khurda	95.3	27	26.6	-57	53.9	2
Koraput	92.5	23	45.3	-31	75.3	24
Malkangiri	125.2	50	135.4	190	63.0	41
Mayurbhanj	68.1	0	45.4	-32	67.1	16
Nawapara	106.8	101	89.3	78	38.4	1
Nawarangpur	114.2	56	62.7	9	91.3	82
Nayagarh	73.1	9	53.1	14	37.2	-38
Puri	144.4	103	34.6	-44	83.3	98
Rayagada	169.1	165	68.6	35	59.0	42
Sambalpur	140.6	64	57.8	-7	61.1	72
Sonepur	182.2	77	85.4	43	50.3	38
Sundargarh	66.5	-5	23.9	-62	28.9	-14
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	95.1	21	178.7	152	35.8	-57
North & Middle Andaman	187.1	61	115.1	20	20.8	-80
South Andaman	169.4	76	162.9	75	18.0	-84
GWB						
Bankura	27.0	-56	16.2	-69	78.5	58
Birbhum	10.1	-85	11.8	-78	68.7	4
Burdwan	26.1	-58	9.0	-85	117.0	124
East Midnapore	28.1	-67	22.2	-69	146.6	132
Hooghly	37.7	-40	6.9	-86	96.0	120
Howrah	16.0	-75	30.1	-58	135.4	225
Kolkata	43.2	-44	62.7	-6	127.7	160
Murshidabad	24.0	-61	55.0	5	173.0	257
Nadia	41.0	-25	0.5	-99	106.0	109
24 Pargana (N)	21.2	-69	8.7	-85	85.7	45
Purulia	19.3	-72	29.9	-55	85.0	115
24 Pargana (S)	44.0	-47	34.4	-59	137.1	125
West Midnapore	44.9	-31	18.7	-71	46.3	2
SHWB & Sikkim						
Cooch Behar	162.3	38	61.3	-52	255.6	172
Darjeeling	115.9	-17	88.3	-31	102.9	9
East Sikkim	75.3	-20	36.1	-60	65.5	0
Jalpaiguri	145.8	22	30.4	-76	200.6	88
Malda	4.3	-94	106.9	72	82.0	39
North Dinajpur	1.3	-99	44.5	-50	**	**

North Sikkim	107.2	2	70.8	-28	45.8	-40
South Dinajpur	9.5	-86	88.7	17	157.4	202
South Sikkim	64.2	-32	62.3	-31	98.1	50
West Sikkim	64.0	-39	10.5	-89	4.0	-95
Karnataka						
Coastal Karnataka						
Dakshin Kannada	156.6	88	86.9	44	39.1	-40
Udupi	154.4	37	113.6	54	32.1	-61
Uttar Kannada	120.4	76	36.6	-28	17.7	-67
N I Karnataka						
Bagalkote	19.6	4	2.6	-91	18.1	-61
Belgaum	31.1	113	6.1	-74	26.0	-24
Bidar	11.4	-70	36.3	0	24.0	-45
Bijapur	12.7	-46	28.9	-16	42.3	-21
Dharwad	17.2	21	5.9	-75	49.5	15
Gadag	10.2	-47	5.9	-79	34.1	-27
Gulbarga	15.8	-56	35.7	-9	58.1	15
Haveri	19.6	104	6.0	-72	27.0	-12
Koppal	20.2	-5	50.1	50	7.1	-85
Raichur	28.2	20	39.0	23	18.8	-59
Yadgir	13.0	-58	37.5	6	27.9	-52
S I Karnataka						
Bangalore Rural	10.1	-65	2.6	-94	89.6	64
Bangalore Urban	7.2	-77	6.9	-84	62.3	12
Bellary	5.9	-69	40.1	27	13.4	-71
Chamarajnagar	2.6	-81	3.4	-89	53.6	31
Chichballapur	19.5	-19	2.6	-93	25.1	-44
Chickmagalur	51.0	57	10.5	-65	17.1	-66
Chitradurga	8.3	-6	4.8	-80	3.7	-89
Davangere	14.0	25	5.4	-80	32.1	-20
Hassan	16.2	26	7.9	-62	22.0	-44
Kodagu	111.6	125	26.0	-31	59.8	19
Kolar	4.4	-82	4.7	-88	12.6	-71
Mandya	0.8	-94	4.0	-87	68.6	59
Mysore	8.5	-27	11.0	-54	73.7	102
Ramnagara	7.5	-67	13.8	-71	60.1	-4
Shimoga	105.5	261	22.5	-6	36.5	5
Tumkur	5.5	-71	8.4	-77	15.9	-68
Kerala						
Alappuzha	51.9	-11	27.8	-53	6.1	-91
Kannur	118.6	102	40.5	8	35.5	-18
Ernakulam	63.0	0	36.4	-42	10.6	-86
Idukki	68.5	14	53.7	-7	21.2	-71
Kasaragod	132.8	88	47.9	-9	74.0	35
Kollam	38.1	-9	37.1	-5	2.0	-97
Kottayam	50.4	-9	34.1	-40	6.0	-90
Kozhikode	112.7	91	36.7	-14	6.8	-87
Malappuram	82.0	79	13.3	-67	12.3	-72
Palakkad	55.0	53	11.9	-64	12.3	-68

Pathanamthitta	32.8	-39	52.4	-8	1.7	-97
Thiruvananthapuram	26.8	-13	3.4	-88	1.8	-96
Thrissur	61.1	13	30.2	-48	13.2	-79
Wynad	84.8	59	20.6	-50	33.4	-31
Tamil Nadu						
Ariyalur	1.5	-95	3.5	-91	12.3	-63
Chennai	63.2	172	41.4	44	17.9	-26
Coimbatore	19.8	168	7.1	-62	47.7	133
Cuddalore	11.3	-54	17.5	-44	30.7	-8
Dharmapuri	1.9	-92	0.0	-100	37.2	-23
Dindigul	2.0	-91	8.8	-74	55.9	65
Erode	5.5	-61	0.0	-100	67.3	126
Kanchipuram	46.4	39	59.1	91	16.7	-49
Kanyakumari	11.2	-45	0.2	-99	5.6	-78
Karikal	58.4	230	1.0	-96	1.2	-97
Karur	0.0	-100	1.0	-97	21.8	-24
Krishnagiri	1.0	-96	5.8	-86	37.7	-30
Madurai	0.9	-97	12.3	-65	27.9	-9
Nagapattinam	18.3	-17	8.6	-61	3.7	-84
Namakkal	4.5	-77	5.8	-85	50.8	48
Nilgiris	49.0	99	20.1	-39	25.8	-35
Perambalur	1.0	-95	4.0	-87	17.0	-60
Puducherry	2.0	-94	90.7	214	89.0	228
Pudukottai	21.0	1	21.9	-19	0.0	-100
Ramanathapuram	4.2	-52	5.3	-63	1.5	-90
Salem	10.4	-58	4.6	-90	81.2	77
Sivaganga	11.6	-38	26.6	6	8.7	-63
Thanjavur	6.8	-68	15.6	-41	1.6	-94
Theni	6.1	-18	1.1	-93	24.3	10
Tirunelveli	1.4	-67	0.1	-99	3.7	-62
Tirupur	0.2	-97	3.3	-84	47.2	122
Tiruvallur	41.7	67	52.4	58	28.7	-3
Tiruvannamalai	2.9	-92	72.6	59	64.3	58
Tiruvarur	4.4	-80	16.3	-25	1.4	-95
Toothukudi	0.0	-100	1.8	-76	2.8	-71
Trichy	2.8	-88	3.8	-90	20.7	-40
Vellore	17.6	-38	63.8	46	34.8	-18
Villupuram	0.9	-97	51.4	22	55.7	52
Virudhunagar	0.7	-94	14.6	-36	9.2	-60
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	46.2	18	21.2	-33	43.4	-10
Guntur	1.6	-95	75.8	180	59.7	49
Krishna	8.7	-76	52.3	74	34.8	-24
Nellore	17.4	-9	27.5	27	16.1	-48
Prakasam	2.1	-90	28.7	50	32.1	-16
Sirkakulam	110.8	128	38.2	-21	57.8	10
Visakhapatnam	38.9	-6	35.6	-9	54.1	11
Vizianagram	46.7	-1	62.2	20	41.3	-22

West Godavari	48.5	15	39.1	18	70.8	52
Rayalaseema						
Anantapur	5.1	-70	17.7	-46	8.5	-80
Chittoor	14.5	-45	26.8	-24	7.7	-77
Cuddapah	14.8	-37	41.6	52	19.5	-48
Kurnool	15.2	-35	52.5	87	18.9	-58
Telangana						
Adilabad	164.9	256	19.1	-40	3.0	-93
Hyderabad	40.9	9	12.4	-64	11.1	-76
Karimnagar	82.7	100	13.0	-58	7.6	-82
Khammam	72.0	65	30.2	-13	53.8	29
Mehabubnagar	8.1	-70	47.2	49	26.3	-36
Medak	16.4	-54	5.0	-86	10.4	-77
Nalgonda	5.3	-85	86.1	208	22.4	-46
Nizamabad	36.8	-21	8.8	-74	17.0	-55
Rangareddy	19.6	-50	27.2	-29	17.5	-66
Warangal	60.3	52	25.5	-19	10.4	-73

Legends

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

Annexure II List of varieties

Tamil Nadu

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

Direct seeded rice: (White Ponni or ADT 39)

Assam

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

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

Radish : Pusa Deshi, Pusa Chetki, Pusa Himani

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

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

Early maturity Knol Khol : White Vienna.

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

Meghalaya

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

Cabbage: H-139, Pride of India

Cauliflower: Meghalaya Local

Carrot: New Karoda, Nantesh

Radish: Local genotype

Broccoli: Puspa, Aiswarya

French bean: Naga Local

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

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

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

Tripura

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

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

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

Broccoli: Everest, Ayeshwaria.

Odisha

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

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

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

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

West Bengal

Banana: Mortoman, Chapa, Kathali, Singapuri.

Tomato: Avinash-2, 448.

Cabbage: Pride of India, Pusa early, Kranti.

Cauliflower: Jawhar moti, Bharat Jyoti, Early banaras

Bihar

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

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

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

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

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

Jharkhand:

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

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

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

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

Madhya Pradesh

Green gram: K-851, Jawahar Mung -721, Pant Mung- 4, T.J. M 3

Black gram: Pant U-30, R.B.U.-38, Jawahar Urd-3, J. U-37

Jammu & Kashmir

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

Uttarakhand

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

Potato: Kufri- Jyoti, Ashok, Anand

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

Himachal Pradesh

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

Late variety of Cauliflower: broccoli

East Uttar Pradesh

Cabbage: Imprabad Japani, Pusa chipali and Pusa kartiki

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

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

Potato: Kuferi - Chandramukhi, Bahar

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

Ageti Matar: Kashi - Nandini, Uday, Mukti, Arkel, Azad-3

West Uttar Pradesh:

Toria: Sangam, TL-17, 67

Ageti matar: Azad P-3, Arkel

Maharashtra

Madhya Maharashtra

rabi jowar: Selection-3, Phule Mauli, Phule Anuradha in light soil, Phule Chitra, Maldandi-35-1 in medium soil and Phule Vasudha, Phule Yashodha in black soil

Safflower: Bhima or Phule Kusuma

Marathwada

Jowar: Parbhani Moti or Parbhani Jyoti.

Gujarat:

Pea: Pusa Pragati.

Carrot: Pusa Rudhira and Pusa Kesar.