

# National Agromet Advisory Service Bulletin

**Friday 09<sup>th</sup> May 2014**

**(For the period 09<sup>th</sup> to 13<sup>th</sup> May 2014)**



**Issued by**

**National Agrometeorological Advisory Service Centre,**

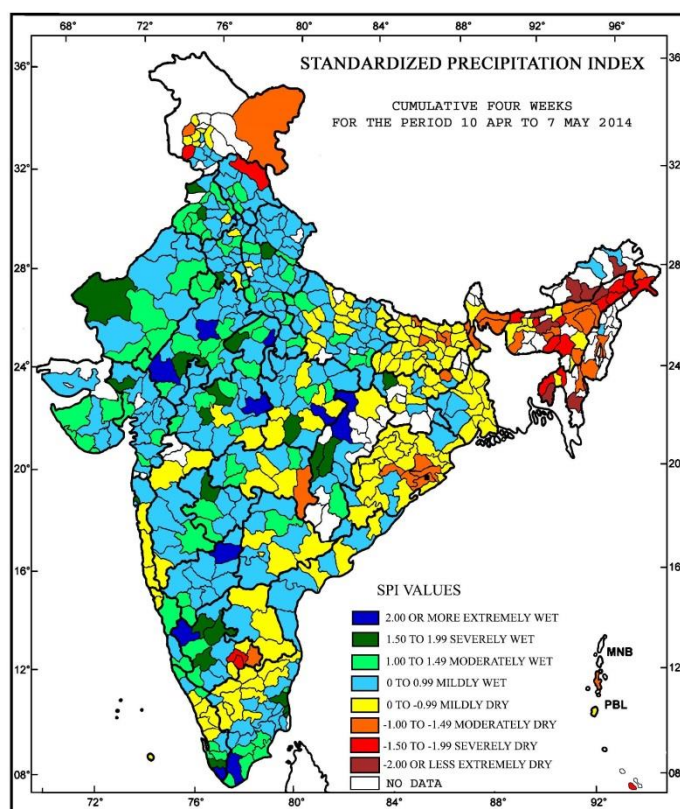
**Agricultural Meteorology Division,**

**India Meteorological Department, Shivajinagar, Pune.**



**Standardised Precipitation Index**  
**Four Weekly**  
**for the Period 10<sup>th</sup> April to 7<sup>th</sup> May 2014**

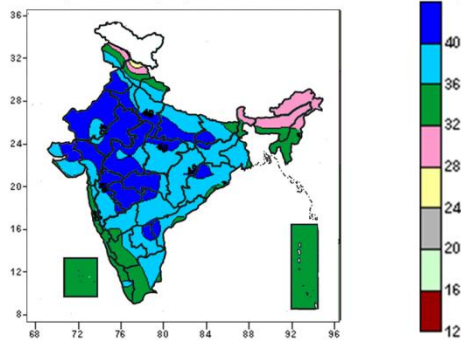
MINISTRY OF EARTH SCIENCES  
INDIA METEOROLOGICAL DEPARTMENT  
HYDROMET SECTION, PUNE



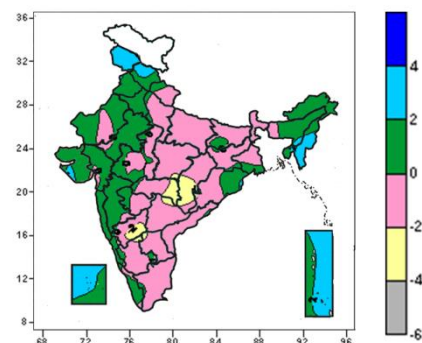
- Extremely wet/severely wet conditions experienced over Jaisalmer, Tonk, Chittorgarh and Udaipur districts of Rajasthan; Patan district of Gujarat; Shajapur, Sheopur, Indore, Raisen, Datia, Seoni and Dindori districts of Madhya Pradesh; Koriya, Rajnandgaon, Durg and Bilaspur districts of Chhattisgarh; Gulbarga, Shimoga, Davangere, Hassan and Chitradurga districts of Karnataka; Amritsar and Moga districts of Punjab; Mahendragarh district of Haryana; Bijnor district of Uttar Pradesh, Jalna district of Maharashtra, Palamau district of Jharkhand, Kollam and Trivandrum districts of Kerala, Tirunelveli, Cuddalore and Nagappattinam districts of Tamil Nadu.
- Moderately/ severely dry conditions experienced most parts of North East India; some parts of Bihar, Odisha; Deogarh district of Jharkhand, Gadchiroli district of Maharashtra; Baramula and Rajouri districts of Jammu & Kashmir, Lahaul & Spitti district of Himachal Pradesh, Bangalore rural, Bangalore Urban and Kolar districts of Karnataka.
- Rest of the country experienced mild wet/dry conditions.

**Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 07.05.2014**

**Actual Mean Maximum Temperature (°C) in India for the week ending 07.05.2014**



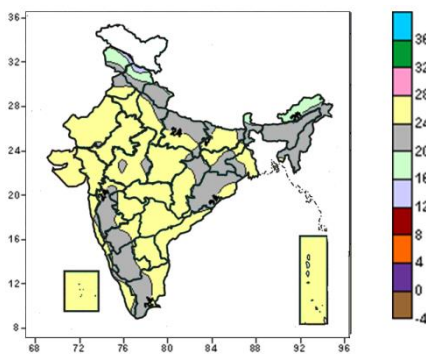
**Mean Maximum Temperature (°C) Anomaly in India for the week ending 07.05.2014**



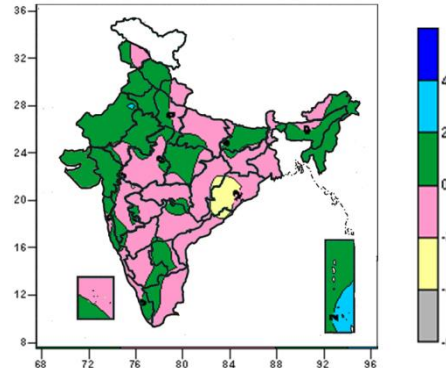
- 40 to 44<sup>0</sup>C over many parts of Punjab, Haryana, Delhi, Rajasthan, Gujarat, West Madhya Pradesh, Vidarbha, Marathwada, some parts of Uttar Pradesh, Bihar, Jharkhand, Odisha, East Madhya Pradesh, Saurashtra & Kutch, Andhra Pradesh and Madhya Maharashtra.
- 36 to 40<sup>0</sup>C over many parts of Uttar Pradesh, Bihar, Jharkhand, Gangetic West Bengal, East Madhya Pradesh, Chhattisgarh, Odisha, Madhya Maharashtra, Andhra Pradesh, South Interior Karnataka, Saurashtra & Kutch, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, West Madhya Pradesh, Gujarat, Konkan, Gujarat, North Interior Karnataka, Tamil Nadu and Kerala.
- 32 to 36<sup>0</sup>C over many parts of Mizoram, Tripura, Tamil Nadu, Kerala, Coastal & South Interior Karnataka, Konkan & Goa, Lakshadweep, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Bihar, Sub-Himalayan West Bengal, Assam & Meghalaya, Manipur, Coastal Andhra Pradesh, North Interior Karnataka.
- 24 to 32<sup>0</sup>C over many parts of Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, some parts of Jammu & Kashmir and Himachal Pradesh.

- 2 to 4<sup>0</sup>C over many parts of Jammu & Kashmir, Mizoram, Tripura, Lakshadweep, Andaman & Nicobar Islands, some parts of Himachal Pradesh, Assam, Manipur and Saurashtra.
- 0 to 2<sup>0</sup>C over all parts of many parts of Himachal Pradesh, Punjab, Haryana, Delhi, Rajasthan, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Gujarat, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra, Coastal Karnataka, Kerala, some parts of Uttarakhand, West Uttar Pradesh, Bihar, Jharkhand, Tripura, Coastal Odisha, Rayalaseema, Tamil Nadu, Interior Karnataka, Marathwada, Vidarbha, West Madhya Pradesh, Lakshadweep and Andaman & Nicobar Islands.
- -2 to 0<sup>0</sup>C over many places over Uttarakhand, Uttar Pradesh, East India, Central India, Andhra Pradesh, Tamil Nadu, Kerala, Interior Karnataka, some parts of Rajasthan, Madhya Maharashtra, Assam & Meghalaya, Kerala, Gujarat region and Saurashtra.
- -4 to -2 over some parts of East Madhya Pradesh, Chhattisgarh, Telangana, Raylaseema and Interior Karnataka.

**Actual Mean Minimum Temperature (°C) in India for the week ending 07.05.2014**



**Mean Minimum Temperature (°C) Anomaly in India for the week ending 07.05.2014**



- 24 to 28<sup>0</sup>C over many parts of Punjab, Haryana, Delhi, Rajasthan, West Uttar Pradesh, Bihar, Gangetic West Bengal, Gujarat, Saurashtra & Kutch, Central India, Vidarbha, Konkan & Goa, Marathwada, Vidarbha, Andhra Pradesh, Coastal & North Interior Karnataka, Tamil Nadu, Kerala, Lakshadweep, Andaman &

- 2 to 4<sup>0</sup>C over some parts of Andaman & Nicobar Islands.
- 0 to 2<sup>0</sup>C over many parts of Rajasthan, Himachal Pradesh, Punjab, Haryana, Delhi, West Uttar Pradesh, Bihar, North East India, East Madhya Pradesh, Gujarat, Saurashtra & Kutch, Konkan & Goa, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Uttarakhand, East Uttar

Nicobar Islands, some parts of Jharkhand, Tripura, Odisha, Madhya Maharashtra, Coastal & South Interior Karnataka.

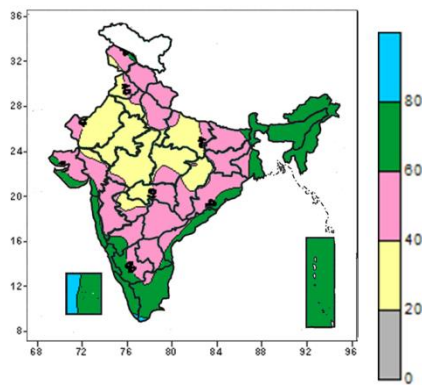
- 18 to 24<sup>0</sup>C over many parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Jharkhand, Sub-Himalayan West Bengal & Sikkim, North East India, Odisha, Madhya Maharashtra, Karnataka, Tamil Nadu, some parts of Punjab, West Uttar Pradesh, Bihar, Gangetic West Bengal, Chhattisgarh, Kerala, Marathwada and Konkan.
- 12 to 16<sup>0</sup>C over some parts of Jammu & Kashmir and Himachal Pradesh.

Pradesh, Jharkhand, West Madhya Pradesh, Madhya Maharashtra, Marathwada, Vidarbha, Telangana, Rayalaseema, Tamil Nadu, Kerala, Interior Karnataka and Lakshadweep Islands.

- -2 to 0<sup>0</sup>C over many parts of Jammu & Kashmir, Uttarakhand, Punjab, Haryana, Delhi, East Rajasthan, Uttar Pradesh, Central India, Odisha, Vidarbha, some parts of Bihar, Jharkhand, East Rajasthan, Madhya Maharashtra, Marathwada and Andhra Pradesh.
- -4 to -2<sup>0</sup>C over many parts of Odisha, some parts of Chhattisgarh and Coastal Andhra Pradesh..

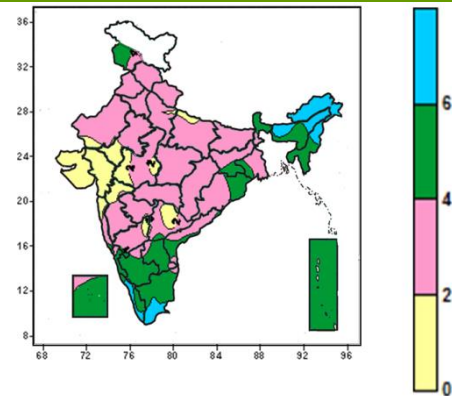
**Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 07.05.2014**

**Relative Humidity (%) over India for the week ending 07.05.2014**



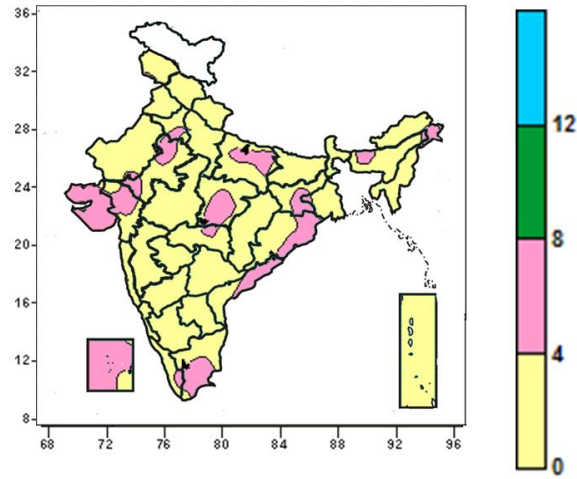
- 80 to 100% over some parts of Kerala, Tamil Nadu and Lakshadweep Islands.
- 60 to 80% over many parts of West Bengal & Sikkim, North East India, Coastal Andhra Pradesh, Tamil Nadu, Kerala, Karnataka, Konkan & Goa, Lakshadweep, Andaman & Nicobar Islands, Some parts of Jammu & Kashmir, Bihar, Coastal Odisha, Rayalaseema, Gujarat, Saurashtra & Kutch.
- 40 to 60% over many parts Jammu & Kashmir, Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Bihar, Jharkhand, Odisha, Telangana, Rayalaseema, Interior Karnataka, Madhya Maharashtra, Gujarat, Saurashtra & Kutch, some parts of West Rajasthan, Punjab, Haryana, Delhi, East Uttar Pradesh, Gangetic West Bengal, Central India, Vidarbha and Marathwada.
- 20 to 40% over many parts of East Uttar Pradesh, Punjab, Haryana, Delhi, Rajasthan, Central India, some parts of Jammu & Kashmir, West Uttar Pradesh, Vidarbha, Marathwada and Gujarat.

**Cloud amount (okta) over India for the week ending 07.05.2014**



- 6 to 8 okta over many parts of Arunachal Pradesh, Nagaland, some parts of Assam & Meghalaya, Manipur, Tamil Nadu and Kerala.
- 4 to 6 okta over many parts of Jammu & Kashmir, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Mizoram, Tripura, Tamil Nadu, Kerala, Rayalaseema, Coastal & South Interior Karnataka, Lakshadweep, Andaman & Nicobar Islands, some parts of Jharkhand, Gangetic West Bengal, Mizoram, Odisha, Coastal Andhra Pradesh, Telangana, North Interior Karnataka and Goa.
- 2 to 4 okta over many parts of North India(except Jammu & Kashmir), East India(except Sub-Himalayan West Bengal & Sikkim), Central India, Maharashtra, North Interior Karnataka, some parts of Sub-Himalayan West Bengal, Andhra Pradesh, Coastal & North Interior Karnataka, Tamil Nadu, Lakshadweep Islands.
- 0 to 2 okta over many parts of Gujarat, Saurashtra & Kutch, some parts of Rajasthan, Uttar Pradesh, West Madhya Pradesh, Konkan, Madhya Maharashtra, North Interior Karnataka and Telangana.

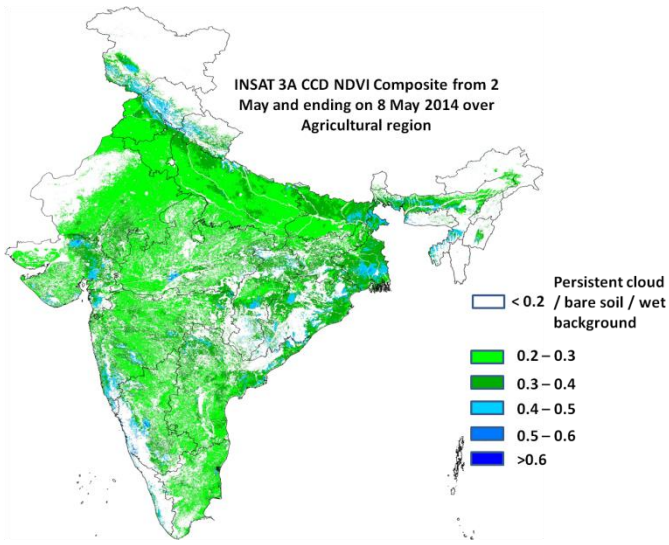
**Wind speed (knots) over India for the week ending 07.05.2014**



- 4 to 8 knots over many parts of, Saurashtra & Kutch, Gujarat, East Madhya Pradesh, Lakshadweep Islands, some parts of Rajasthan, Haryana, East Uttar Pradesh, Jharkhand, Gangetic West Bengal, Arunachal Pradesh, Assam, West Madhya Pradesh, Vidarbha, Assam, Odisha, Coastal Andhra Pradesh, Tamil Nadu and Kerala.
- 0 to 4 knots over entire parts of country except many parts of, Saurashtra & Kutch, Gujarat, East Madhya Pradesh, Lakshadweep Islands, some parts of Rajasthan, Haryana, East Uttar Pradesh, Jharkhand, Gangetic West Bengal, Arunachal Pradesh, Assam, West Madhya Pradesh, Vidarbha, Assam, Odisha, Coastal Andhra Pradesh, Tamil Nadu and Kerala.

## INSAT 3A CCD NDVI COMPOSITE OVER AGRICULTURAL REGION

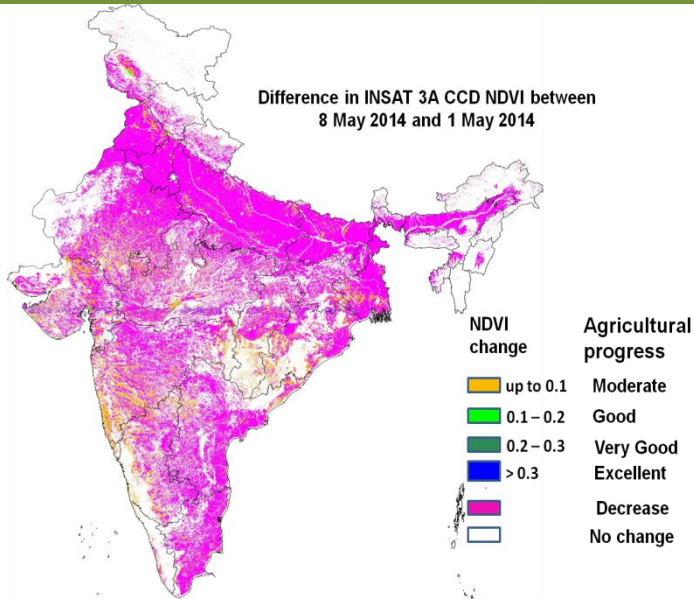
2<sup>nd</sup> – 8<sup>th</sup> May 2014



Source: SAC, Ahmedabad

Agricultural vigour is moderate over few pockets of central West Bengal where NDVI varies between 0.4 to 0.5 upto 8<sup>th</sup> May 2014. The NDVI remains within the range of 0.2 to 0.4 over rest of India.

## Difference in INSAT 3A CCD NDVI between 1<sup>st</sup> May and 8<sup>th</sup> May 2014



Source: SAC, Ahmedabad

Major parts of India showed decay in agricultural vigour as compared to past week which may be due to maturity of summer crops.

## Weather Forecast

### Weather Forecast for next 3 days (upto 0830 hours IST of 12<sup>th</sup> May, 2014)

- Rain/thundershowers would occur at most places over Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura during next 24 hours; over Arunachal Pradesh during next 48 hours and at many places thereafter.
- Rain/thundershowers would occur at a few places over Sub-Himalayan West Bengal & Sikkim, Konkan & Goa during next 24 hours; over Coastal Andhra Pradesh and Telangana during next 48 hours and at isolated places thereafter.
- Rain/thundershowers would occur at a few places over Jammu & Kashmir during the period.
- Rain/thundershowers would occur at most places over Kerala during next 24 hours and at a few places thereafter.
- Rain/thundershowers would occur at most places over Interior Karnataka during next 24 hours and at a few places on 10<sup>th</sup> and at isolated places thereafter.
- Rain/thundershowers would occur at a many places over Coastal Karnataka, Tamil Nadu & Pudduchery, Lakshadweep during next 24 hours and at isolated places thereafter.
- Rain/thundershowers would occur at a few places over Madhya Maharashtra during next 24 hours and decrease thereafter.
- Rain/thundershowers would occur at isolated places over Gangetic West Bengal, Uttarakhand, Marathwada, Vidarbha during the period.
- Rain/thundershowers would occur at isolated places over Andaman & Nicobar Islands during next 24 hours; over Odisha, Himachal Pradesh during next 48 hours and at a few places thereafter.
- Rain/thundershowers would occur at isolated places over Uttar Pradesh, west Rajasthan during next 24 hours over Punjab, Haryana, Delhi, east Rajasthan, Madhya Pradesh, Jharkhand, Bihar during next 48 hours and mainly dry thereafter.
- Rain/thundershowers would occur at isolated places over Chhattisgarh during next 24 hours; at a few places on 10<sup>th</sup> and isolated places thereafter.
- Rain/thundershowers would occur at a few places over Rayalaseema during next 24 hours and decrease thereafter.
- Mainly dry/dry weather would prevail over Gujarat State during the period.
- Maximum temperatures would rise by about 2°C over plains of northwest India during next 48 hours.
- No significant change in temperatures likely over central and east India.

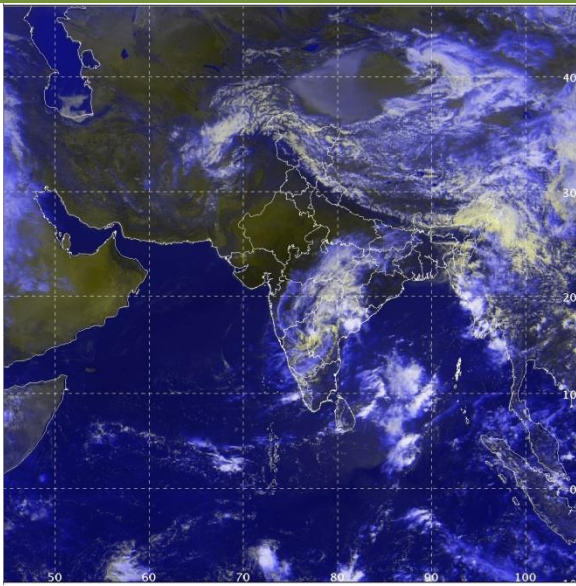
### Weather Warning during next 3 days

- **09 May (Day 1):** Thundersquall would occur at isolated places over Punjab, Haryana & Delhi, Uttar Pradesh, West Bengal & Sikkim. Isolated heavy to very heavy rainfall would occur over coastal & south interior Karnataka and Kerala. Isolated heavy rainfall would also occur over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Lakshadweep.
- **10 May (Day 2):** Thundersquall would occur at isolated places over Uttar Pradesh, Bihar, West Bengal & Sikkim, Jharkhand, Chhattisgarh and Odisha. Isolated heavy rainfall would occur over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.
- **11 May (Day 3):** Thundersquall would occur at isolated places over Uttar Pradesh, Bihar, West Bengal & Sikkim, Jharkhand, Chhattisgarh and Odisha. Isolated heavy rainfall would occur over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.

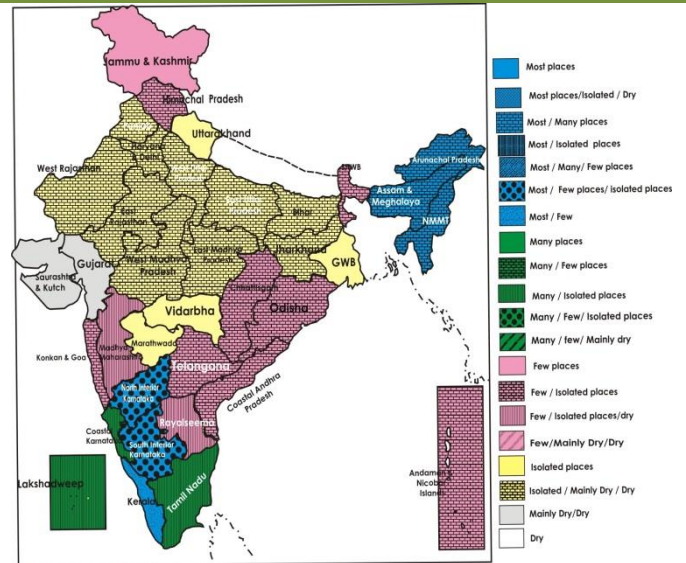
### Weather Outlook for subsequent 4 days from 12<sup>th</sup> to 16<sup>th</sup> May 2014

- Rain/thundershowers would continue to occur at many places over northeastern states.
- Rain/thundershowers would occur at a few places over western Himalayan region and at isolated places over adjoining plains of northwest India.
- Isolated rain/thundershowers would occur over south Peninsular India and at a few places over Andaman & Nicobar Islands.
- Weather would be mainly dry over rest of the country.

Satellite image dated 09.05.2014, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 12<sup>th</sup> May, 2014)



### Salient Advisories

- As thundersquall would occur at isolated places over **Uttar Pradesh** during the period, over **Chhattisgarh, Odisha, Bihar** and **Jharkhand** on 10<sup>th</sup> and 11<sup>th</sup> and over **Punjab, Haryana** and **Delhi** on 9<sup>th</sup> May, provide mechanical support to vegetables, young fruit plants and undertake propping up in sugarcane to prevent the crops from lodging due to strong winds.
- As thundersquall would occur at isolated places over **West Bengal & Sikkim** during the period, provide mechanical support to banana, vegetables and young fruit plants.
- As rain/thundershowers would occur at most/many places along with isolated heavy falls over **Assam, Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram** and **Tripura** during the period, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone sowing/ nursery sowing and harvesting of crops and keep harvested produce at safe places. Also provide adequate drainage in crop fields to avoid water stagnation.
- As no significant rain is expected in **Marathwada** in Maharashtra, apply irrigation to summer groundnut, sugarcane, orchard crops like banana, pomegranate, fig and vegetable crops in morning and evening hours. As prevailing day temperature is about 38- 40<sup>o</sup>C, apply mulch of crop residues and other plant waste product in the orchards and sugarcane trash in sugarcane. To minimize the premature fruit dropping in mango due to high temperature; spray NAA 10 ppm.
- Under dry weather conditions, apply irrigation in groundnut at pegging / pod filling stages and in green gram at pod formation stage in **North Gujarat Zone**. Undertake mulching in mango orchards using crop residues or paddy husk to avoid impact of high temperature on mango causing spongy tissue effect.
- As rain/thundershowers would occur at most/many places over **Karnataka** and **Tamil Nadu** on 9<sup>th</sup>, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested produce at safe places in sheds.
- As isolated heavy to very heavy would also occur over coastal and south interior **Karnataka** on 9<sup>th</sup>, provide adequate drainage in standing crops to avoid water stagnation.
- As rain/thundershowers would occur at most places along with isolated heavy to very heavy falls over **Kerala** on 9<sup>th</sup>, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Also provide adequate drainage in crop fields to avoid water stagnation.



## Detailed Zonewise Agromet Advisories

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



*Sugarcane*



*Bottle Gourd*



*Onion*



*Mango*

- **Realised Rainfall:** Rainfall occurred in Mandi, Shimla and Solan districts of Himachal Pradesh; in Chandigarh district of Haryana; in Samba district of Jammu & Kashmir; in Almora, Bageshwar, Champawat, Garhwal Tehri, Nainital, Pithoragarh, Rudraprayag and Uttarkashi districts of Uttarakhand; in Bijnor district of west Uttar Pradesh during the week. Weather remained mainly dry over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Jammu & Kashmir during the period. Rain/thundershowers would occur at isolated places over Uttarakhand during the period. Rain/thundershowers would occur at isolated places over Himachal Pradesh during next 48 hours and at a few places thereafter. Rain/thundershowers would occur at isolated places over Uttar Pradesh, west Rajasthan during next 24 hours over Punjab, Haryana, Delhi, east Rajasthan during next 48 hours and mainly dry thereafter. Maximum temperatures would rise by about 2°C over plains of northwest India during next 48 hours
- **Weather Warning:** Thundersquall would occur at isolated places over Punjab, Haryana & Delhi on 9<sup>th</sup> May and over Uttar Pradesh during next three days.
- **Weather Outlook:** Rain/thundershowers would occur at a few places over western Himalayan region and at isolated places over adjoining plains of northwest India.
- **Advisories:**
  - **Jammu & Kashmir:**
    - Start sowing of maize and continue sowing of beans and bhindi and transplanting of solanaceous vegetable crops in Valley Temperate Zone.
    - Due to hot weather, there is chance of attack of fruit fly and red pumpkin beetle in cucumber, bottle gourd and ridge gourd in SubTropical Zone of Jammu & Kashmir. For control, spray Malathion @ 1.5ml/litre of water on a non rainy day at weekly interval.
    - Due to hot weather conditions, there is chance of attack of aphids and mites on peach, plum and apricot in Intermediate Zone of Jammu & Kashmir. To control, spray Chloropyriphos 20 EC @ 100ml per 100 litres of water on a non rainy day.
  - **Himachal Pradesh:**
    - Due to prevailing dry weather condition in Mid-Hills Sub-Humid Zone, undertake mulching in fruit crops to conserve moisture.
    - Due to hot weather conditions, there is chance of infestation of apple scab at pink bud stage in apple in Mild-Hills Sub-Humid Zone of Himachal Pradesh. For control, spray mixture of 100 g of Carbendazim + 400 ml of Chlorpyriphos + 200 g of Boric acid in 200 litres of water. For the control of attack of defoliating caterpillars and beetles in apple, spray Malathion @ 200 ml per 200 litres of water.
  - **Uttarakhand:**
    - As significant rainfall has occurred over Almora, Bageshwar, Champawat, Garhwal Tehri, Nainital, Pithoragarh, Rudraprayag and Uttarkashi during last week, postpone irrigation to standing crops in these districts.
    - Undertake summer ploughing in Bhabar and Tarai Zone after harvesting of *rabi* crops to conserve soil moisture.
    - Due to increase in temperature, there may be incidence of yellow mosaic virus disease in moong and urad crops at flowering & pod formation stage in Bhabar and Tarai Zone of Uttarakhand. To control whiteflies which act as vector of the disease, spray Metasystox @ 400 ml/400 litres of water per acre.
  - **Punjab, Haryana and Delhi:**
    - As thundersquall would occur at isolated places over Punjab, Haryana and Delhi on 9th May, provide mechanical support to young fruit plants, vegetables and undertake propping up in sugarcane to prevent the crops from lodging due to strong winds.
    - In view of increasing temperature, it is advised to irrigate tomato crop once in a week to encourage maximum fruit setting and development of fruits in Central Plain Zone of Punjab. Also protect fruit trees from sun scorching, white wash the trunk, provide shade arrangements to young trees and give light and frequent irrigation

to young as well as fruit bearing trees.

- As dry and hot weather conditions are prevailing, apply light and frequent irrigation in turmeric till emergence in Western Plain Zone of Punjab. Spread paddy / wheat straw over the crop to conserve moisture and for controlling the weeds. Irrigate sugarcane crop at 7-12 days interval for better growth.
- In Undulating Plain Zone of Punjab, protect the young fruit plants from scorching sun by covering them with Thach/ Sarkande leaves.
- As dry weather is likely to prevail, apply light and frequent irrigation in all vegetable crops and new horticultural plantations in Eastern Zone of Haryana. Irrigation should be done in the morning or evening hours.
- In Delhi, in view of increasing temperature, apply light and frequent irrigation in all vegetable crops in the morning or evening hours.
- **Uttar Pradesh**
  - As thundersquall would occur at isolated places over Uttar Pradesh on 10<sup>th</sup> and 11<sup>th</sup> May, provide mechanical support to banana, staking of vegetables and undertake propping up in sugarcane to prevent the crops from lodging due to strong winds.
  - As mainly dry weather is prevailing, apply irrigation in sugarcane, vegetables and fruit crops and inter-cultural operations in sugarcane in West Uttar Pradesh. Also undertake harvesting of matured wheat in Central Plain Zone and Western Plain Zone of Uttar Pradesh.
  - Due to hot weather condition, there is chance of attack of mango hopper and fruit fly in mango in Central Plain Zone of Uttar Pradesh. To control the attack of hopper, spray Imidacloprid @ 0.5 ml per litre of water. For control of fruit fly, apply Propanophos @ 0.5 ml per litre of water.
  - Due to hot weather conditions, there is chance of attack of yellow mosaic in moong, lobia and urad, in Central Plain Zone of Uttar Pradesh; to control spray Metasistok @ 1 litre per ha in 1000 litres of water.
- **Rajasthan:**
  - As dry weather is likely to prevail, apply light and frequent irrigation in all vegetable crops in Rajasthan.
  - Due to prevailing hot weather, there is possibility of attack of sucking pests in moong in Southern Humid Plain Zone of Rajasthan; to control spray Dimethoate 30 EC @ 1 litre/ha.
  - Due to rise in temperature, chilli crop is affected by leaf curl and mosaic disease in Semi Arid Eastern Plain Zone of Rajasthan. To control, uproot and burn the affected plants and spray Dimethoate 30 EC @ 1.0 ml per litre water.
  - Due to rise in temperature, there is possibility of attack of sucking pests in tomato in nursery in Flood Prone Eastern Plain Zone of Rajasthan. To control, spray Imidacloprid @ 1ml per 3 litres of water.
- **Animal Husbandry**
  - Due to prevailing high temperature in Uttar Pradesh, Uttarakhand and West Rajasthan, grazing /feeding of cattle/goats may be done during morning/ evening hours. Keep animals under shade or in sheds during noon hours and provide plenty of water mixed with minerals for drinking. Also provide balanced feed & adopt vaccination schedule.
- **Poultry**
  - Due to prevailing hot weather conditions, give balanced feed to the poultry birds in Central Plain Zone of Uttar Pradesh and Rajasthan. Make proper ventilation in poultry sheds and keep the sheds clean. White wash the poultry shed from outside especially the roof. This will help to reflect the sun rays.

### CENTRAL INDIA [M.P., CHHATTISGARH]



*Sugarcane*



*Chilli*



*Okra*



*Green Gram*

- **Realised Rainfall:** Weather was mainly dry over the region.
- **Weather forecast:** Rain/thundershowers would occur at isolated places over Chhattisgarh during next 24 hours and at a few places on 10<sup>th</sup> and at isolated places thereafter. Rain/thundershowers would occur at isolated places over Madhya Pradesh during next 48 hours and mainly dry thereafter. No significant change in maximum temperatures over central India.
- **Weather Warning:** Thundersquall would occur at isolated places over Chhattisgarh on 10<sup>th</sup> and 11<sup>th</sup> May.
- **Weather Outlook:** Weather would be mainly dry over the region.

- **Advisories:**

- **Madhya Pradesh:**

- As prevailing temperature is high, apply light and frequent irrigation in vegetables in Madhya Pradesh.
    - As mainly dry weather and high temperature conditions are prevailing, apply light and frequent irrigation in summer vegetables, mango, guava and lemon orchards in Gird Zone, Jhabua Hill Zone and Kymore Plateau Zone of Madhya Pradesh.
    - As mainly dry weather would prevail, continue harvesting of matured cauliflower, tomato, brinjal, chilli, *capsicum* etc. in Satpura Plateau Zone, Kymore Plateau Zone and Nimar Valley Zone of Madhya Pradesh.
    - As prevailing temperature is high, undertake soil mulching / apply mulch in young fruit plants in Jhabua Hill Zone of Madhya Pradesh.
    - Due to prevailing hot weather, there is possibility of attack of stem & fruit borer in brinjal, tomato & okra in Jhabua Hill Zone of Madhya Pradesh; spray Trizophos @ 30 ml/pump.
    - Due to prevailing hot weather, there is possibility of attack of early shoot borer and scale insect in sugarcane in Central Narmada Valley Zone of Madhya Pradesh, apply Forate 10 g @ 10-15 kg/ha.

- **Chhattisgarh:**

- As thundersquall would occur at isolated places over Chhattisgarh on 10<sup>th</sup> and 11<sup>th</sup> May, arrange mechanical support to young fruit plants, staking in vegetables and undertake propping up in sugarcane to prevent the crops from lodging due to strong winds.
    - In Chhattisgarh, in view of prevailing high temperature, apply light and frequent irrigation in sunflower, groundnut and vegetables and young fruit plants.
    - As no significant rainfall is expected, apply irrigation in summer rice, maize, sugarcane and mango and litchi orchards in North Hill Zone of Chhattisgarh.
    - Due to hot weather, there is possibility of attack of stem borer in summer maize in North Hill Zone of Chhattisgarh, apply Carbofuran @ 2-3 grain per plant.
    - Due to dry weather, there is possibility of attack of termite in sugarcane in North Hill Zone of Chhattisgarh. Soil drenching may be done by Chloropyriphos 20 EC.

- **Animal Husbandry**

- Vaccinate poultry birds with F-1 or Lasota strain vaccine against Ranikhet disease and cattles against FMD disease during the season. Also protect chicks against high temperature and provide cold and clean water to animals for drinking 3 times a day in Madhya Pradesh.
    - Due to increase in temperature, cover the window and doors of poultry farms with gunny bags and keep wet with water in Bundelkhand Zone of Madhya Pradesh.
    - Due to prevailing high temperature, special attention should be given to milch animals with regard to feed and water in North Hill Zone of Chhattisgarh. Provide plenty of clean water to the animals and keep them in the shaded place.

### EAST INDIA [JHARKHAND, BIHAR, ODISHA, WEST BENGAL & SIKKIM]



*Mango*



*Sugarcane*



*Green Gram*



*Onion*

- **Realised Rainfall:** Rainfall occurred in most of the districts of Gangetic West Bengal (except Birbhum and Burdwan) and Sub Himalayan West Bengal and Sikkim (except Malda North and South Dinajpur); in East Singbhum, Hazaribag, Khunti, Palamu and Ramgarh districts of Jharkhand and in Gajapati, Kandhamal, Koraput, Malkangiri and Mayurbhanj districts of Odisha. Weather will be mainly dry/dry over rest of the region.
- **Weather Forecast:** Rain / thundershowers would occur at a few places over Sub Himalayan West Bengal and Sikkim during next 24 hours and at isolated places thereafter. Rain / thundershowers would occur at isolated places over Gangetic West Bengal during the period. Rain / thundershowers would occur at isolated places over Odisha during next 48 hours and at a few places thereafter. Rain/thundershowers would occur at isolated places over Bihar and Jharkhand during next 48 hours and mainly dry thereafter.  
No significant change in maximum temperatures over east India.
- **Weather Warning:** Thundersquall would occur at isolated places over West Bengal & Sikkim on 9<sup>th</sup>, 10<sup>th</sup> and 11<sup>th</sup> May and Over Bihar, Jharkhand and Odisha on 10<sup>th</sup> and 11<sup>th</sup> May.

- **Weather Outlook:** Weather would be mainly dry over rest of the region.
- **Advisories:**
  - **Odisha:**
    - As thundersquall would occur at isolated places over Odisha on 10<sup>th</sup> and 11<sup>th</sup> May, provide mechanical support to banana, vegetables, young fruit plants and undertake propping up in sugarcane.
    - High diurnal variation of temperature favours incidence of blast in rice in East and South Eastern Coastal Plain Zone of Odisha. For control, spray 1 g Beam/ litre of water.
    - Present weather favours infestation of *alternaria* blight in tomato and cole crops in North Central Plateau Zone of Odisha. Spray Dethane-M-45 @ 3 g in 1 litre water for control.
    - In the present weather Gundhi bug infestation has become severe in rice during milk and soft dough stage in Western Undulating Zone of Odisha and likely to continue; spray Monocrotophos @ 2ml/litre of water
    - High diurnal variation of temperature may aggravate whitefly problem in green gram at flowering to pod formation stage in North Eastern Coastal Plain Zone of Odisha. Use yellow sticky traps and spray Dimethoate/Triazophos @ 2ml/litre of water to control whitefly population.
    - Increased temperature may favour the incidence of stem borer in rice in the main field in Western Undulating Zone of Odisha. Spray Prophenophos @2 ml per litre water.
  - **West Bengal:**
    - As thundersquall would occur at isolated places over West Bengal & Sikkim during the period, provide mechanical support to banana, vegetables and young fruit plants.
    - Taking the advantage of prevailing mainly dry weather over Gangetic West Bengal, undertake harvesting of matured *boro* rice.
    - In New Alluvial Zone of West Bengal, high temperature and humidity may cause fungal fruit rot & stem rot diseases in summer vegetables. To control it, apply Carbendazim @ 1g or Blitox @ 4g/ litre of water.
    - In Terai Zone of West Bengal, undertake planting of ginger and turmeric utilizing the realised rainfall.
  - **Bihar:**
    - As thundersquall would occur at isolated places over Bihar on 10<sup>th</sup> and 11<sup>th</sup> May, provide mechanical support to vegetables, young fruit plants and undertake propping up in sugarcane.
    - As no significant rain is likely to occur, apply irrigation in sugarcane, onion, sunflower, green gram, summer vegetables, mango and litchi in North West Alluvial Plain Zone of Bihar.
    - In view of prevailing mainly dry weather, apply irrigation in green gram and vegetables in South Bihar Alluvial Zone.
  - **Jharkhand:**
    - As thundersquall would occur at isolated places over Jharkhand on 10<sup>th</sup> and 11<sup>th</sup> May, provide mechanical support to vegetables and young fruit plants.
    - As no significant rainfall is expected, apply irrigation in moong, vegetables and in mango and litchi orchards in Western Plateau Zone of Jharkhand.
    - As no significant rainfall is likely, apply irrigation to moong and summer rice in South Eastern Plateau Zone of Jharkhand.
    - Due to hot weather, attack of leaf roller or stem borer in rice is noticed and likely to spread in some pockets of Western Plateau Zone of Jharkhand. For control, spray Monocrotophos or Trizophos @ 2.5 ml. per litre of water during evening.
    - High day and night temperature favours production of case worms, leaf folders or hispa, brown plant hopper and stem borer eggs and their infestation are also being seen in rice in South Eastern Plateau Zone of Jharkhand; spray Monocrotophos @ 1 ml per liter of water.
- **Animal Husbandry**
  - In West Bengal & Sikkim, keep cattle indoor during thundersquall period.
  - Prevailing high temperature may adversely affect the milk production of milch animals in North West Alluvial Plain Zone of Bihar. Provide plenty of clean water to animals and keep them in the shade during noon hours.
  - In Western Plateau Zone of Jharkhand, high day temperature may cause heat stroke in animals. Hence, keep them in the shade during noon hours. To keep the sheds cool, jute bags may be hanged as curtain in the windows and it should be wetted time to time.
- **Fisheries**
  - In South Eastern Plateau Zone of Jharkhand, increase in temperature and decline in water level may cause low concentration of soluble oxygen in fish ponds which can be maximized by making ripples by beating with sticks or faster drawing and pumping water from the pond and again back to the same pond. Apply KMNO<sub>4</sub>@ 1 -2 PPM or lime @ 800 g per acre.

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



*Green Gram*

*Rice*

*Okra*

*Sugarcane*

- **Realised Weather:** Rainfall occurred in Changlang, East Siang, Lohit, Lower Dibang Valley, Papumpara, Tawang, Tirap, Upper Subansari, West Kameng and West Siang districts of Arunachal Pradesh, in all districts of Assam, East Garo Hills, East Khasi Hills, Ribhoi, South Garo Hills and West Garo Hills districts of Meghalaya, Aizwal and Saiha districts of Mizoram, Churachandpur, Imphal East and Imphal West districts of Manipur, Dimapur, Kohima and Phek district of Nagaland, Dhalai, North Tripura and West Tripura districts of Tripura.
- **Weather Forecast:** Rain/thundershowers would occur at most places over Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura during next 24 hours and over Arunachal Pradesh during next 48 hours and at many places thereafter.
- **Weather Warning:** Isolated heavy rainfall would occur over Assam & Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura during next three days.
- **Weather Outlook:** Rain/thundershowers would continue to occur at many places over northeastern states.
- **Advisories:**
  - **Assam & Meghalaya, Arunachal Pradesh:**
    - As rain/thundershowers would occur at most/many places along with isolated heavy falls over Assam, Meghalaya and Arunachal Pradesh during the period, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone sowing/ nursery sowing and harvesting of crops and keep harvested produce at safe places. Also provide adequate drainage in crop fields to avoid water stagnation.
    - Due to increase in humidity, there is chance of attack of blast disease in *ahu* rice in Hill Zone, North Bank Plain Zone and Central Brahmaputra Valley Zone of Assam. Spray with Bavistin @ 1g/litre of water or Carbendazim @ 1g/litre of water after current spells of rain.
    - Due to cloudy and rainy weather, there may be infestation of rice bug in *boro* rice in Central Brahmaputra Valley Zone and North Bank Plain Zone of Assam. Dusting of Malathion 5% powder may be done after current spells of rain.
  - **Nagaland, Manipur, Mizoram and Tripura:**
    - As rain/thundershowers would occur at many places during the period along with isolated heavy falls over Nagaland, Manipur, Mizoram and Tripura, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Also postpone sowing/ nursery sowing and harvesting of crops and keep harvested produce at safe places. Also provide adequate drainage in crop fields to avoid water stagnation.
    - Warm and humid conditions may cause cercospora /sigatoka leaf spot in banana in Mid Tropical Hill Zone of Mizoram. Spray Mancozeb+ Carbendazim @ 2g/litre of water after current spells of rain.
    - Partly cloudy and humid weather is conducive for attack of fruit & shoot borer in summer brinjal and tomato in Mild Tropical Plain Zone of Tripura. To manage the attack, apply Cypermethrin @ 1.5ml or Flubendamid @ 0.5 ml per litre of water after current spells of rain.
- **Animal Husbandry**
  - In Mild Tropical Hill Zone of Tripura, vaccination for the cattle may be undertaken prior to monsoon season to protect from disease like anthrax, black quarter, Foot Mouth Disease, Duck Plague.

## WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



*Rice*

*Groundnut*

*Green Gram*

*Mango*

- **Realised Weather:** Weather remained mainly dry / dry over the region.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Konkan & Goa during next 24 hours and at isolated places thereafter. Rain/thundershowers would occur at isolated places over Marathwada and Vidarbha during the period. Rain/thundershowers would occur at a few places over Madhya Maharashtra during next 24 hours and at isolated places on 10<sup>th</sup> and mainly dry thereafter. Mainly dry/dry weather would prevail over Gujarat State during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be mainly dry over the region.
- **Advisories:**
  - **Maharashtra:**
    - In Konkan, mango is at fruit development / maturity stage; harvest the 80-85% matured fruits early in the morning and in the evening on a non-rainy day. Considering the high temperature, keep the harvested fruits in shade to prevent the spongy tissue diseases and transport the harvested fruits during night hours. Undertake intercultural operations and fertilizer application in summer vegetables on a non-rainy day.
    - In Madhya Maharashtra, as day temperature is prevailing around 38-42°C, apply mulch of crop residues and other plant waste product in the orchards and sugarcane trash in sugarcane. Cover banana bunch with white plastic (100 gauge and 6% porous) or dried banana leaves to protect from scorching sun. Continue intercultural operations and fertilizer application in sugarcane and vegetables on a non-rainy day. As rain is expected at a few places, undertake harvesting matured *bajra* in Pune region on bright sunny day. Keep the harvested produce in a safe place under sheds.
    - As no significant rain is expected, apply irrigation to summer groundnut, sugarcane, orchard crops like banana, pomegranate, fig and vegetable crops in morning and evening hours in Marathwada. Continue intercultural operations and fertilizer application in orchards (banana, fig, pomegranate, sweet lime, guava), sugarcane and vegetables. As day temperature is about 38- 40<sup>0</sup>C, apply mulch of crop residues and other plant waste product in the orchards and sugarcane trash in sugarcane. To minimize the premature fruit dropping in mango due to high temperature; spray NAA 10 ppm.
    - In Vidarbha, considering the prevailing high temperature (38-40°C), reduce the duration between two irrigations as well as apply mulch of plant waste product in orange and sweet lime orchards. Newly planted fruit crops may be protected from sun burn by erecting temporary shed. Cover the heads of cauliflower with its leaves to protect them from scorching sun. As no significant rain is expected, apply irrigation to water melon, musk melon, summer vegetables, summer groundnut and summer green gram. Maintain upto 10 cm water level in already transplanted rice field in Gondia, Bhandara, Chandrapur and Gadchiroli districts.
    - Due to high temperature in Pune region there may be attack of stem borer in newly planted sugarcane; use Phule Trichocards two –three times @ 2 per acre at 10 days interval.
    - Due to cloudy and humid weather there may be infestation of powdery mildew and wilting in guar in Western Maharashtra Scarcity Zone; spray Tridemarf @ 10 ml / 10 litres water at 10-15 days interval for 2-3 times against powdery mildew. For control of wilting; spray Copper Oxy Chloride @30 g + Streptomycin @1.5 g per 10 litres of water.
  - **Gujarat:**
    - Under prevailing hot and dry weather condition, irrigate vegetable crops at 7 to 9 days interval in Bhal and Coastal Zone to avoid water stress. Apply irrigation at regular intervals in orchards like mango, citrus fruits, sapota and pomegranate which are in fruit development stage.
    - In South Gujarat Zone, due to prevailing high temperature evaporation rate is increased. Apply drip irrigation to fruit crops. If drip irrigation is not available, provide 12 to 15 litres of water to every graft. Fruit crops should be kept weed free and covered with suitable mulch for conservation of soil moisture.
    - As hot and dry weather condition is prevailing, apply irrigation in groundnut at pegging / pod development stage and sesame at flowering / capsule formation stage in North West Zone of Gujarat and in vegetables in South Gujarat Zone.
    - Under dry weather condition, apply irrigation in groundnut at pegging / pod filling stages and in green gram at

pod formation stage in North Gujarat Zone. Under limited water condition irrigate bajra during ear head formation stage. Undertake mulching in mango orchard using plant residue or paddy husk to avoid impact of heat on mango causing spongy tissue effect.

- In view of prevailing high temperature and dry weather condition, apply irrigation in sugarcane (8 cm depth water) in South Gujarat Heavy Rainfall Zone and apply light irrigation in groundnut at pegging stage and pod development stage, in mango orchards and in lemon orchards at regular intervals to prevent fruit cracking and fast development of fruits in North Saurashtra Zone.
- Due to hot weather in North Saurashtra Zone, mite infestation has been observed in some fields of summer groundnut crops. Monitor the crop for mite infestation and spray Dicofol @ 20 ml or Propergyte @ 10 ml per 10 litres of water for control.
- Due to high temperature condition, severe attack of Heliothis is observed in summer green gram in North West Zone of Gujarat and North Saurashtra Zone and is likely to continue. For control, spray neem seed extract 5 % or neem seed oil 50 ml and Quinalphos @20 ml / 10 lit of water. In case of heavy attack, immediate spray of Indoxacarb @10 ml/ 10 liter of water is recommended.
- **Animal Husbandry**
- In Gujarat, to protect cattle from summer heat, shower the animals with cold water two to three times in a day. Increase the green fodder quantity for feeding. Arrange adequate amount of fresh drinking water. Keep animals under shade during noon hours and avoid feeding between 11 to 15 hrs. Put curtains on west side of poultry house and sprinkle water on curtains during noon time.
- In Maharashtra considering the prevailing high temperature, provide clothing from outside the poultry shed and sprinkle it with water. Cover the roof with grass or gunny bags.

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



*Rice*



*Sugarcane*



*Onion*



*Okra*

- **Realised Weather:** Rainfall occurred in all the districts in Coastal Karnataka and Kerala; Dharwad, Gulbarga and Haveri districts of North Interior Karnataka; Chamarajnar, Chickmagalur, Hassan, Kodagu, Mandya, Mysore, Shimoga and Tumkur districts of South Interior Karnataka; most of the districts in Tamil Nadu except Dharmapuri, Kancheepuram, Thiruvallur, Thiruvannamalai and Vellore; Srikakulam district in Coastal Andhra Pradesh and Rangareddy and Warangal districts in Telangana.
- **Weather Forecast:** Rain/thundershowers would occur at most places over Kerala during next 24 hours and few places thereafter. Rain/thundershowers would occur at many places over Coastal Karnataka and Tamil Nadu during next 24 hours and isolated places thereafter. Rain/thundershowers would occur at most places over North and South Interior Karnataka on 9<sup>th</sup>, at a few places on 10<sup>th</sup> and isolated thereafter. Rain/thundershowers would occur at a few places over Coastal Andhra Pradesh and Telangana during the next 48 hours and isolated thereafter; at a few places over Rayalaseema on 9<sup>th</sup>, isolated places on 10<sup>th</sup> and mainly dry thereafter.
- **Weather Warning:** Isolated heavy to very heavy rainfall would occur over Coastal & South Interior Karnataka and Kerala on 9<sup>th</sup> May.
- **Weather Outlook:** Isolated rain/thundershowers would occur over south Peninsular India.
- **Advisories:**
  - **Karnataka:**
    - As rain/thundershowers would occur at most/many places over the State on 9<sup>th</sup>, postpone irrigation, inter-cultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested produce at safe places in sheds.
    - As isolated heavy to very heavy would also occur over coastal and south interior Karnataka on 9<sup>th</sup>, provide adequate drainage in standing crops to avoid water stagnation.
  - **Andhra Pradesh:**
    - Prevailing high temperature conditions are congenial for the incidence of sucking pest in tomato and fruit borer in mango in Scarce Rainfall Zone of Andhra Pradesh. Spray Dimethoate @ 2 ml / litre of water or Methyl Dematon @ 2 ml / litre of water to manage sucking pest and chloropyriphos @ 2.5 ml/lit of water to manage fruit borer on a non- rainy day.

- Prevailing high temperatures are congenial for the occurrence of sucking pests and mites in vegetables and fruit fly in mango in the Southern Telangana Zone of Andhra Pradesh. To control, spray Acephate @ 1.5 g or Fipronil @ 2 ml per litre of water for sucking pests, spray Propargite @ 2 ml per litre of water to control mites and hang the plastic containers with mixture of Methyl Eugenol @ 2 ml + Carbofuran 3G @ 3 g per litre of water to manage fruit fly on a non rainy day.
- **Tamil Nadu:**
- As rain/thundershowers would occur at many places over Tamil Nadu on 9<sup>th</sup>, postpone irrigation, inter-cultural operation and application of plant protection measures and fertilizers to the standing crops. Keep already harvested produce at safe places.
- Undertake summer ploughing in Cauvery Delta Zone with realised rainfall to conserve moisture and control weeds and larvae of insects.
- Undertake planting of black pepper, clove, nutmeg and cinnamon in the High Rainfall Zone of Tamil Nadu utilizing the realised rainfall.
- **Kerala:**
- As rain/thundershowers would occur at most places along with isolated heavy to very heavy falls over Kerala on 9<sup>th</sup>, postpone irrigation, inter-cultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in crop fields to avoid water stagnation.
- Prevailing hot and humid conditions are congenial for root wilt disease in coconut in the Central Zone of Kerala. Apply fertilizers and replace severely affected palms with high yielding resistant varieties after spells of rain.
- **Animal Husbandry**
- Due to prevailing high temperature, do not allow the cattle to graze during noon hours and provide plenty of drinking water in the Western Zone of Tamil Nadu.
- Vaccinate animals against haemorrhagic septicaemia before the onset of monsoon in the Problem Area Zone of Kerala.

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



**Annexure I**  
**Week by week Rainfall Distribution**

State/Districts	23.04.14		30.04.14		07.05.14	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
<b>Arunachal Pradesh</b>						
Anjaw	**	**	**	**	**	**
Changlang	9.4	-90	25.4	-84	54.0	-28
Dibang Valley	10	-78	4.0	-97	5.0	-88
East Kameng	0	-100	6.6	-84	4.2	-89
East Siang	10.9	-77	11.1	-84	43.7	-38
Kurung Kumey	**	**	**	**	**	**
Lohit	19.1	-73	45.7	-42	40.4	-47
Lower Dibang Valley	27	-41	37.8	-70	76.4	82
Lower Subansari	**	**	**	**	**	**
Papumpara	0	-100	17.4	-75	68.2	-21
Tawang	11	-74	70.0	64	52.0	-17
Tirap	11.4	-81	14.1	-83	41.2	-41
Upper Siang	134.8	64	49.4	-56	19.1	-71
Upper Subansari	69.2	346	37.8	-3	54.0	107
West Kameng	**	**	2.4	-94	58.6	-6
West Siang	22	-63	9.3	-82	32.3	-34
<b>Assam</b>						
Baksa	2	-95	2.0	-97	58.0	-26
Barpeta	11	-75	15.0	-77	96.6	23
Bongaigaon	29	-51	10.4	-82	110.0	2
Cachar	1.1	-98	55.0	-22	96.5	11
Chirang	38.4	-34	22.5	-61	97.1	-10
Darrang	10	-71	27.0	-50	106.0	27
Dhemaji	5	-87	7.0	-86	21.0	-69
Dhubri	0.8	-98	20.1	-61	89.5	19
Dibrugarh	5.6	-90	16.7	-73	45.8	-37
Goalpara	2	-96	15.9	-77	151.3	70
Golghat	6.1	-82	6.8	-80	57.8	-16
Hailakandi	2.5	-95	37.4	-53	84.8	-20
Jorhat	2.2	-95	11.6	-79	67.3	4
Kamrup(Rural)	5	-88	13.1	-74	67.4	-2
Kamrup(Metro)	0	-100	3.5	-93	96.7	41
Karbi Anglong	1.3	-96	1.3	-96	57.8	82
Karimganj	0	-100	26.7	-74	74.4	-43
Kokrajhar	10.4	-83	19.1	-74	64.8	-36
Lakhimpur	4.8	-88	7.3	-86	44.2	-35
Morigaon	4.2	-85	0.4	-99	52.5	18
N.C.Hills	0	-100	5.6	-86	68.7	25
Nowgong	13.8	-61	23.4	-38	27.2	-39
Nalbari	5.9	-80	19.9	-73	83.2	-24
Sonitpur	4.4	-86	4.8	-89	50.2	-24
Sibsagar	9	-76	12.3	-58	24.9	-64
Tinsukia	9.3	-82	11.7	-79	53.1	-14

Udalgiri	5.2	-85	30.5	-43	50.1	-40
<b>Meghalaya</b>						
East Garo Hills	0	-100	30.1	-70	24.8	-69
East Khasi Hills	8.2	-89	9.0	-91	105.3	-33
Jaintia Hills	13	-80	33.0	-65	2.0	-99
Ribhoi	0	-100	16.8	-69	41.6	-28
South Garo Hills	0	-100	46.0	-36	51.0	-30
West Garo Hills	0	-100	24.2	-66	48.8	-33
West Khasi Hills	3	-92	0.0	-100	0.0	-100
<b>Mizoram</b>						
Aizwal	0.3	-99	26.7	-63	57.1	-21
Champhai	0	-100	0.0	-100	1.0	-98
Kolasib	0	-100	1.0	-98	1.0	-99
Lawngtlai	**	**	**	**	**	**
Lunglei	4	-86	3.0	-93	12.0	-77
Mamit	0	-100	30.0	-58	7.0	-91
Saiha	0	-100	2.0	-94	21.0	-59
Serchhip	0	-100	1.0	-98	8.0	-85
<b>Manipur</b>						
Bishnupur	1	-96	2.0	-91	6.0	-77
Chandel	0	-100	8.0	-55	14.0	-64
Churachandpur	0	-100	12.0	-75	20.0	-67
Imphal east	0.5	-98	14.2	-57	60.6	41
Imphal west	0	-100	34.0	83	122.6	198
Senapati	0	-100	15.0	-37	18.0	-57
Tamenglong	**	**	**	**	**	**
Thoubal	0	-100	9.0	-30	12.0	-50
Ukhrul	0	-100	0.0	-100	0.0	-100
<b>Nagaland</b>						
Dimapur	0	-100	6.5	-66	62.0	61
Kephire	0	-100	2.0	-96	4.0	-93
Kohima	0	-100	45.3	51	101.6	211
Longleng	**	**	**	**	**	**
Mokokchung	7	-76	0.0	-100	3.0	-92
Mon	**	**	**	**	**	**
Paran	**	**	**	**	**	**
Phek	1	-95	14.0	-53	50.0	53
Tuensang	**	**	**	**	**	**
Wokha	2	-94	0.0	-100	0.0	-100
Zunheboto	**	**	**	**	**	**
<b>Tripura</b>						
Dhalai	2.7	-96	26.2	-61	98.0	-3
North tripura	4.8	-93	29.3	-55	70.8	-29
South tripura	0	-100	3.0	-95	9.6	-87
West tripura	5.9	-89	22.8	-62	20.8	-73
<b>Himachal Pradesh</b>						
Bilaspur	21.3	525	0.0	-100	7.5	103
Chamba	50.3	262	0.0	-100	3.1	-51
Hamirpur	29.5	491	0.2	-97	16.8	148

Kangra	40.6	472	0.0	-99	8.1	-18
Kinnaur	25.4	67	1.0	-94	0.0	-100
Kullu	41.6	134	2.1	-87	11.7	-23
Lahaul and Spiti	14.8	-36	0.0	-100	0.0	-100
Mandi	37.1	317	0.1	-99	35.8	302
Shimla	27.4	174	0.3	-97	23.7	99
Sirmaur	17.8	166	0.0	-100	4.1	-32
Solan	30.4	316	0.0	-100	20.1	183
Una	26	1427	0.0	-100	6.7	-5
<b>Punjab</b>						
Amritsar	33.9	815	0.9	-79	0.0	-99
Barnala	10.7	327	0.0	-100	0.0	-100
Bhatinda	4.5	309	0.0	-100	6.5	364
Faridkot	31	2483	0.0	-100	2.0	-23
Fatehgarh Sahib	0	-100	0.0	-100	0.0	-100
Ferozpur	21.9	1465	0.0	-100	0.2	-94
Gurdaspur	42	1005	0.0	-100	1.3	-73
Hoshiarpur	26.3	1283	0.0	-100	5.9	38
Jalandhar	10.8	442	0.0	-100	0.8	-83
Kapurthala	46.8	4580	0.0	-100	2.0	-43
Ludhiana	15.8	557	0.0	-100	1.3	-68
Mansa	12.5	862	0.0	-100	3.7	131
Moga	44.9	1939	0.5	-82	2.0	-38
Muktesar	20.9	1800	0.0	-100	1.2	-8
Nawashahar	22.8	850	0.4	-92	0.3	-91
Patiala	9	592	0.0	-100	1.6	-51
Ropar	19.1	536	0.0	-100	2.3	-31
Sangrur	11.9	378	0.0	-100	0.0	-100
Mohali	11	479	0.0	-100	19.0	459
TarnTaran	40.8	2447	0.0	-100	4.0	186
<b>Haryana</b>						
Ambala	9.7	866	0.0	-100	3.2	-1
Bhiwani	5.5	400	0.0	-100	1.4	-4
Chandigarh	13.2	238	0.0	-100	33.5	1576
Faridabad	6.5	1200	0.0	-100	0.0	-100
Fatehabad	0.5	-67	0.0	-100	0.8	-50
Gurgaon	0	-100	16.0	789	0.0	-100
Hissar	3	168	0.0	-100	0.2	-88
Jhajar	4.9	205	0.0	-100	3.0	0
Jind	0.3	-78	0.0	-100	0.0	-100
Katihah	7.4	722	0.0	-100	5.3	425
Karnal	9.9	330	0.0	-100	17.3	518
Kurukshetra	0	-100	0.0	-100	0.4	-71
Mahendragarh	23	2200	0.0	-100	0.0	-100
Mewat	0	-100	0.0	-100	0.0	-100
Palwal	15	1775	0.4	33	0.0	-100
Panchkkula	5.5	129	0.0	-100	10.8	108
Panipat	2.1	53	0.0	-100	0.7	-62
Rewari	6.7	2122	0.0	-100	0.0	-100

Rohtak	5.2	225	0.0	-100	0.0	-100
Sirsa	0.2	-90	0.0	-100	1.0	-44
Sonepat	1.8	15	0.0	-100	3.0	1
Yamunanagar	11	479	0.0	-100	7.3	-12
<b>Delhi</b>						
Central Delhi	8	344	0.0	-100	11.0	182
East Delhi	6	233	0.0	-100	0.0	-100
New Delhi	7.3	306	0.0	-100	10.9	179
North Delhi	5.3	194	0.0	-100	3.2	-18
North East Delhi	0	-100	0.0	-100	**	**
North West Delhi	0	-100	0.0	-100	0.0	-100
South Delhi	13.5	650	0.0	-100	2.1	-46
South West Delhi	4.8	167	0.0	-100	0.5	-87
West Delhi	8	344	0.0	-100	0.0	-100
<b>Jammu &amp; Kashmir</b>						
Anantnag	42.7	66	3.7	-87	7.0	-60
Badgam	26.9	36	2.0	-92	2.7	-74
Bandipore	**	**	**	**	**	**
Baramula	33.9	-23	6.0	-85	6.0	-77
Doda	87.4	318	8.2	-68	11.2	-39
Ganderbal	67.4	253	12.0	-50	14.4	7
Jammu	14.9	170	0.0	-100	8.2	163
Kargil	0	-100	0.0	-100	0.0	-100
Kathua	38	1420	0.0	-100	0.0	-100
Kistwar	**	**	**	**	**	**
Kulgam	20	-22	1.0	-96	1.4	-92
Kupwara	47.7	50	2.2	-95	3.6	-81
Ladakh(Leh)	0	-100	0.0	-100	0.0	-100
Poonch	0	-100	0.0	-100	9.5	-24
Pulwama	34.8	51	5.1	-79	2.2	-83
Rajouri	19.6	158	2.1	-43	10.2	50
Ramban	48.4	131	1.5	-94	4.8	-74
Reasi	36	267	0.0	-100	6.2	-32
Samba	20.4	271	0.0	-100	26.6	758
Shopian	30	30	2.0	-92	9.0	-32
Srinagar	29	52	1.7	-93	1.5	-89
Udhampur	37.4	282	0.0	-100	2.7	-70
<b>East Madhya Pradesh</b>						
Anuppur	0	-100	0.0	-100	0.0	-100
Balaghat	2.8	76	0.0	-100	0.0	-100
Chhatarpur	4.6	562	0.0	-100	0.0	-100
Chindwara	1.7	8	0.0	-100	0.3	-83
Damoh	2.6	73	0.0	-100	0.0	-100
Dindori	26.2	1538	0.0	-100	0.0	-100
Jabalpur	1	-5	0.0	-100	2.9	7
Katni	0	-100	0.0	-100	0.0	-100
Mandla	0	-100	0.0	-100	0.3	-78
Narsingpur	0	-100	0.0	-100	0.0	-100
Panna	0	-100	0.0	-100	0.0	-100

Rewa	3	400	0.0	-100	0.0	-100
Sagar	3.3	552	0.0	-100	0.2	-28
Satna	1.2	36	0.0	-100	0.2	-50
Seoni	25.7	1250	0.0	-100	2.2	-6
Shahdol	2.4	41	0.0	-100	0.0	-100
Sidhi	3.6	260	0.0	-100	0.0	-100
Singrauli	0	-100	0.0	-100	0.0	-100
Tikamgarh	0	-100	0.0	-100	0.0	-100
Umaria	0.3	-81	0.0	-100	0.0	-100
<b>West Madhya Pradesh</b>						
Alirajpur	0	-100	0.0	-100	0.0	-100
Asoknagar	0	-100	0.0	-100	0.0	-100
Badwani	0	-100	0.0	-100	0.0	-100
Betul	0.6	-36	0.0	-100	0.2	-66
Bhind	0	-100	0.0	-100	0.0	-100
Bhopal	5.6	1300	0.0	-100	0.0	-100
Burhanpur	0	-100	0.0	-100	0.0	-100
Datia	9.2	2967	0.0	-100	6.7	850
Dewas	0	-100	0.0	-100	0.0	-100
Dhar	0	-100	0.0	-100	0.0	-100
Guna	3.5	775	0.0	-100	0.0	-100
Gwalior	10.7	1429	0.2	-62	0.0	-100
Harda	0	-100	0.0	-100	0.0	-100
Hosangabad	0.8	33	0.0	-100	0.2	-50
Indore	5.4	2600	0.0	-100	0.2	-60
Jhabua	0	-100	0.0	-100	0.0	-100
Khandwa	4	1233	0.0	-100	0.0	-100
Khargone	0	-100	0.0	-100	0.0	-100
Mandsaur	0	-100	0.0	-100	4.5	650
Morena	1.4	244	0.0	-100	2.5	250
Neemuch	0	-100	0.0	-100	0.0	-100
Raisen	8.2	8100	0.0	-100	0.0	-100
Rajgarh	5.5	2640	0.0	-100	0.0	-100
Ratlam	0	-100	0.0	-100	2.5	722
Sehore	0	-100	0.0	-100	0.0	-100
Shajapur	6.6	6500	0.0	-100	0.0	-100
Sheopur Kalani	8.5	8400	0.0	-100	0.0	-100
Shivpuri	2	900	0.0	-100	1.3	79
Ujjain	0.5	400	1.0	400	1.8	483
Vidisha	1.1	273	0.0	-100	0.0	-100
<b>Chhattisgarh</b>						
Bastar	22	120	15.6	90	4.7	-45
Bijapur	12.4	97	0.0	-100	0.0	-100
Bilaspur	30	1011	0.0	-100	2.3	-51
Dantewara	**	**	0.0	-100	7.0	79
Dhamtari	5.2	160	0.0	-100	0.0	-100
Durg	7.5	367	1.2	9	9.8	277
Janjgir	0	-100	0.0	-100	0.0	-100
Jashpurnagar	0	-100	0.0	-100	0.0	-100

Kanker	0	-100	0.0	-100	0.0	-100
Korba	0	-100	**	**	0.0	-100
Koriya	7.4	1139	0.0	-100	0.0	-100
Kawardha	**	**	**	**	**	**
Mahasumund	0	-100	0.0	-100	0.0	-100
Narayanpur	8.8	49	0.0	-100	0.0	-100
Raigarh	**	**	**	**	**	**
Raipur	11.9	493	0.1	-95	3.5	-13
Rajandgaon	17.2	1047	0.0	-100	4.6	70
Surguja	1.8	-17	0.0	-100	0.5	-88
<b>East Uttar Pradesh</b>						
Allahabad	0	-100	0.0	-100	2.9	190
Ambedkar Nagar	2	18	0.0	-100	1.0	-76
Azamgarh	0	-100	0.0	-100	0.0	-100
Bahraich	0.1	-97	0.0	-100	0.0	-100
Ballia	1.4	-33	0.0	-100	4.4	56
Balrampur	0.5	-87	0.0	-100	0.0	-100
Banda	0.1	-98	0.0	-100	0.0	-100
Barabanki	1.8	-1	0.0	-100	0.2	-93
Basti	0	-100	0.0	-100	1.0	-67
Chandauli	2	-5	0.0	-100	11.1	327
Deoria	0	-100	0.0	-100	8.3	112
Faizabad	0.5	-75	0.0	-100	0.0	-100
Farrukhabad	8.6	473	0.0	-100	0.0	-100
Fatehpur	0	-100	0.0	-100	0.0	-100
Gazipur	0	-100	0.0	-100	10.4	271
Gonda	0	-100	0.0	-100	0.0	-100
Gorakhpur	0	-100	0.0	-100	10.6	140
Hardoi	11.2	461	0.0	-100	0.0	-100
Jaunpur	0	-100	0.0	-100	5.1	113
Kannauj	1.8	29	0.0	-100	2.6	-7
Kanpur City	3	233	0.2	-67	1.8	23
Kanpur Dehat	0.8	-38	0.0	-100	0.7	-39
Kaushambi	0	-100	0.0	-100	0.9	-54
Kheri	4.9	143	0.0	-100	5.3	9
Kushi nagar	0	-100	0.0	-100	2.0	-69
Lucknow	0	-100	0.0	-100	1.3	-32
Maharajganj	0	-100	0.0	-100	19.0	164
Mau	0	-100	0.0	-100	4.0	25
Mirzapur	0	-100	0.0	-100	9.5	692
Pratapgarh	6	1100	0.0	-100	2.0	43
RaiBareilly	0.4	-20	0.0	-100	1.4	35
Sahuji Maharajnagar	0	-100	0.0	-100	5.1	467
Sant Kabirnnagar	0	-100	0.0	-100	3.0	-33
Sant Ravidas Nagar	0	-100	0.0	-100	1.5	-42
Shrawasti	0	-100	0.0	-100	**	**
Sidharthnagar	0	-100	0.0	-100	11.0	182
Sitapur	3.6	79	0.0	-100	0.0	-100
Sonbhadra	1.9	-23	0.0	-100	0.0	-100

Sultanpur	0.8	-59	0.0	-100	0.2	-93
Unnao	0	-100	0.0	-100	0.0	-100
Varanasi	0.1	-94	0.0	-100	9.7	186
<b>West Uttar Pradesh</b>						
Agra	1.9	19	0.2	-70	6.0	330
Aligarh	5.8	379	0.0	-100	0.0	-100
Auraiya	6	757	0.0	-100	0.0	-100
Badaun	4.3	442	0.0	-100	1.0	-44
Baghpat	2.4	9	0.0	-100	4.0	74
Bareilly	9	307	0.0	-100	6.1	175
Bijnor	2.5	56	0.0	-100	25.7	1412
Bulandsahar	3.8	436	0.0	-100	0.2	-93
Etah	9	543	0.0	-100	0.7	-71
Etawah	0	-100	0.0	-100	0.0	-100
Firozabad	2.3	25	0.0	-100	2.6	86
GBNagar	5	163	0.0	-100	5.0	200
Ghaziabad	1.1	-15	0.0	-100	0.3	-88
Hamirpur	3.3	270	0.0	-100	7.0	775
Jalaun	0	-100	0.0	-100	2.8	175
Jhansi	6.7	642	0.0	-100	0.7	-52
Jotiba Phule Nagar	0	-100	0.0	-100	0.0	-100
Kanshiramnagar	11	686	0.0	-100	0.0	-100
Lalitpur	0	-100	0.0	-100	2.5	127
Mahamaya Nagar	5.5	450	0.0	-100	0.0	-100
Mahoba	0	-100	0.0	-100	0.0	-100
Mainpuri	1.8	64	0.0	-100	0.0	-100
Mathura	2.5	150	0.0	-100	10.0	426
Meerut	3.1	239	0.0	-100	2.5	-19
Moradabad	4.5	180	0.0	-100	0.8	-53
Muzzaffarnagar	10.5	950	0.0	-100	11.0	511
Pilibhit	3.7	68	0.0	-100	1.7	-31
Rampur	3.7	15	0.0	-100	1.1	-50
Saharanpur	5	614	0.0	-100	0.0	-100
Shahjahanpur	2.8	31	0.0	-100	3.3	-19
<b>Uttarakhand</b>						
Almora	6	-10	0.0	-100	22.9	186
Bageshwar	7.6	13	0.0	-100	35.0	338
Chamoli	20.1	116	1.4	-85	13.4	16
Champawat	2.5	-68	0.0	-100	24.0	233
Dehradun	11.3	151	0.0	-100	4.5	-22
Garhwal Pauri	2.8	-43	0.0	-100	14.0	204
Garhwal Tehri	12	64	0.0	-100	37.5	681
Haridwar	5.5	175	0.0	-100	1.0	-79
Nainital	7.7	42	0.0	-100	20.5	205
Pithorgarh	8.9	-23	0.0	-100	36.1	201
Rudraprayag	11	4	0.0	-100	42.0	120
Udham Sing Nagar	7.4	116	0.0	-100	11.9	310
Uttarkashi	25.1	124			24.7	126
<b>Bihar</b>						

Araria	0.0	-100	9.7	-43	16.6	-2
Arwal	0.0	-100	0.0	-100	0.0	-100
Aurangabad	0.0	-100	0.0	-100	0.0	-100
Banka	0.0	-100	0.0	-100	3.5	-54
Begusarai	0.0	-100	0.0	-100	0.0	-100
Bhabua	0.0	-100	0.0	-100	0.0	-100
Bhagalpur	0.0	-100	0.0	-100	0.7	-94
Bhojpur	0.0	-100	0.0	-100	0.0	-100
Buxar	0.0	-100	0.0	-100	0.2	-94
Darbhanga	0.0	-100	0.0	-100	7.3	-35
East Champaran	0.0	-100	0.0	-100	13.9	53
Gaya	0.0	-100	0.0	-100	1.1	-63
Gopalganj	0.0	-100	0.0	-100	2.0	-38
Jahanabad	0.0	-100	0.0	-100	0.0	-100
Jamui	0.0	-100	0.0	-100	0.5	-92
Kathihar	0.0	-100	0.0	-100	9.8	-42
Khagadia	0.0	-100	0.0	-100	0.0	-100
Kishanganj	0.0	-100	7.4	-70	14.5	-51
Lakhisarai	0.0	-100	0.0	-100	0.0	-100
Madhepura	0.0	-100	0.0	-100	5.3	-62
Madhubani	0.0	-100	0.0	-100	10.4	-2
Monghyar	0.0	-100	0.0	-100	0.0	-100
Muzaffarpur	0.0	-100	0.0	-100	2.2	-75
Nalanda	0.0	-100	0.0	-100	0.0	-100
Nawada	0.0	-100	0.0	-100	0.0	-100
Patna	0.0	-100	0.0	-100	1.9	-58
Purnea	0.0	-100	0.0	-100	6.6	-67
Rohtas	0.0	-100	0.0	-100	0.0	-100
Saharsha	0.0	-100	0.0	-100	0.0	-100
Samstipur	0.0	-100	0.0	-100	0.0	-100
Saran	0.0	-100	0.0	-100	4.8	8
Sheikpura	0.0	-100	0.0	-100	0.0	-100
Sheohar	0.0	-100	0.0	-100	0.0	-100
Sitamarhi	0.0	-100	0.0	-100	2.9	-74
Siwan	0.0	-100	0.0	-100	3.5	58
Supaul	0.1	-99	0.0	-100	16.1	42
Vaishali	0.0	-100	0.0	-100	4.6	-2
West Champaran	0.0	-100	0.0	-100	**	**
<b>Jharkhand</b>						
Bokaro	3.2	-46	0.0	-100	5.1	-45
Chatra	0	-100	0.0	-100	1.2	-14
Deoghar	0	-100	0.0	-100	0.0	-100
Dhanbad	0	-100	0.0	-100	10.4	3
Dumka	0	-100	0.0	-100	7.3	-54
East Singbhum	0.5	-95	0.0	-100	42.6	298
Garhwa	0	-100	0.0	-100	3.5	169
Giridih	0.7	-89	0.0	-100	10.3	69
Godda	0	-100	0.0	-100	**	**
Gumla	0	-100	0.0	-100	10.4	-5



Hazaribagh	0.2	-96	0.0	-100	21.0	275
Jamtara	0	-100	0.0	-100	19.9	75
Khunti	0	-100	0.0	-100	29.0	559
Koderrna	0	-100	0.0	-100	1.5	-66
Latehar	0	-100	0.0	-100	**	**
Lohardagga	0	-100	0.0	-100	**	**
Pakur	0	-100	0.0	-100	**	**
Palamau	0.8	-68	0.0	-100	47.9	1611
Ramgarh	0	-100	0.0	-100	29.4	425
Ranchi	2.1	-72	0.0	-100	7.3	30
Sahebganj	29.6	385	0.0	-100	**	**
Saraikela	0	-100	0.0	-100	**	**
Simdega	0	-100	0.0	-100	**	**
West Singbhum	2.1	-76	0.0	-100	**	**
<b>East Rajasthan</b>						
Ajmer	4.9	1542	0.0	-100	0.2	-73
Alwar	1.7	57	0.0	-100	1.9	-1
Banswara	0.5	200	0.0	-100	0.0	-100
Baran	0	-100	0.0	-100	0.0	-100
Bharatpur	0.2	-71	0.0	-100	1.6	14
Bhilwara	10.7	1233	0.0	-100	0.0	-100
Bundi	5.7	1789	0.0	-100	0.0	-100
Chittorgarh	9.9	1873	0.0	-100	0.0	-94
Dausa	0	-100	0.0	-100	0.0	-100
Dholpur	4.3	983	0.0	-100	0.0	-100
Dungarpur	3.6	3483	0.0	-100	0.0	-100
Jaipur	5	893	0.0	-100	0.0	-98
Jhalawar	3	1418	0.0	-100	0.0	-100
Jhunjhunu	15.3	1289	0.0	-100	0.6	-69
Karauli	4.5	1025	0.0	-100	0.0	-100
Kota	3.6	1713	0.0	-100	0.3	-34
Pratapgarh	0.4	-20	0.0	-100	0.0	-100
Rajsamand	4.9	710	0.0	-100	0.0	-100
Sawai Madhopur	6.9	2196	0.0	-100	0.0	-100
Sikar	11.7	1364	0.0	-100	0.0	-100
Sirohi	9.2	1214	0.0	-100	0.0	-100
Tonk	17.5	4281	0.0	-100	0.9	24
Udaipur	15	2890	0.0	-100	4.4	452
<b>West Rajasthan</b>						
Barmer	0.7	47	0.0	-100	0.3	-75
Bikaner	8.9	1018	0.0	-100	0.3	-79
Churu	12	759	0.0	-100	2.5	55
Hanumangarh	0.4	-61	0.0	-100	0.3	-68
Jaisalmer	12	1402	0.0	-100	1.3	329
Jalore	8.1	2608	0.0	-100	0.0	-100
Jodhpur	10.8	1704	0.0	-100	1.9	26
Nagaur	6.8	1033	0.0	-100	0.0	-100
Pali	4.3	514	0.0	-100	0.0	-100
Sri Ganganagar	2.4	63	0.0	-100	0.0	-100

<b>Gujarat Region</b>						
Ahmedabad	5.1	4993	0.0	-100	0.0	-92
Anand	0	-100	0.0	-100	0.0	-100
Banaskantha	0	-100	0.0	-100	0.0	-100
Baroda	0	-100	0.0	-100	0.0	-100
Broach	0	-100	0.0	-100	0.0	-100
DNH	**	**	**	**	**	**
Dahod	0	-100	0.0	-100	0.0	-100
Daman	**	**	**	**	**	**
Dangs	0	-100	0.0	-100	5.0	317
Gandhinagar	13.2	4300	0.0	-100	0.0	-100
Kheda	0.2	82	0.0	-100	0.0	-100
Mehsana	0	-100	0.0	-100	0.0	-100
Narmada	0	-100	0.0	-100	0.0	-100
Navsari	0	-100	0.0	-100	0.0	-100
Panchmahal	0.1	200	0.0	-100	0.0	-100
Patan	3	200	0.0	-100	0.4	-38
Sabarkantha	0.2	-78	0.0	-100	0.0	-100
Surat	0	-100	0.0	-100	0.0	-100
Tapi	0	-100	0.0	-100	0.0	-100
Valsad	0	-100	0.0	-100	0.0	-100
<b>S K &amp; Diu region</b>						
Amreli	1	200	0.0	-100	0.0	-100
Bhavnagar	0	-100	0.0	-100	0.0	-100
Diu	0	-100	0.0	-100	0.0	-100
Jamnagar	0	-100	0.0	-100	0.0	-100
Junagarh	0.6	200	0.0	-100	0.0	-100
Kutch	0	-100	0.0	-100	0.0	-100
Porbandar	0	-100	0.0	-100	0.0	-100
Rajkot	0.4	326	0.0	-100	0.0	-100
Surendranagar	4	200	0.0	-100	0.0	-100
<b>Maharashtra</b>						
<b>Konkan &amp; Goa</b>						
Goa	0	-100	1.0	-64	0.5	-96
Mumbai	0	-100	0.0	-100	0.0	-100
Raigad	0	-100	0.0	-100	0.0	-100
Ratnagiri	0	-100	0.0	-100	0.9	-48
Sindhudurg	1.4	38	0.0	-100	0.0	-100
Thane	0.1	-33	0.0	-100	0.0	-100
<b>Madhya Maharashtra</b>						
Ahmednagar	0.1	-87	0.0	-100	7.3	152
Dhule	0	-100	0.0	-100	**	**
Jalgaon	0.2	-12	0.0	-100	0.0	-100
Kolhapur	18.2	230	3.4	-63	1.7	-83
Nandurbar	0	-100	0.0	-100	**	**
Nasik	0	-100	0.0	-100	0.0	-100
Pune	4.3	231	0.0	-100	4.7	-3
Sangli	10.6	97	1.8	-75	11.7	2
Satara	10.1	274	1.5	-74	15.6	151

Solapur	15	1146	1.6	-26	4.0	-4
<b>Marathwada</b>						
Aurangabad	7.6	987	0.0	-100	0.0	-100
Beed	8.3	536	1.3	-22	3.6	90
Hingoli	8.3	361	0.0	-100	0.0	-100
Jalna	15.4	1827	1.3	157	0.9	-22
Latur	10.3	268	2.3	1	3.3	31
Nanded	8.7	479	0.0	-100	4.1	117
Usmanabad	16.1	1913	4.5	124	6.6	152
Parbhani	1.3	-26	0.0	-100	3.8	82
<b>Vidarbha</b>						
Akola	7.6	533	0.0	-100	1.8	157
Amraoti	1.4	55	0.0	-100	0.0	-100
Bhandara	0	-100	0.0	-100	14.8	490
Buldhana	3.8	379	0.0	-100	0.0	-100
Chandrapur	0.5	-84	0.6	-76	3.2	52
Gadchiroli	0	-100	0.0	-100	0.4	-88
Gondia	1.7	-25	0.0	-100	2.2	54
Nagpur	0	-99	0.1	-90	9.7	343
Wardha	0	-100	0.0	-100	0.7	-73
Washim	7.2	1100	0.0	-100	2.5	127
Yeotmal	1.5	46	0.0	-100	0.4	-79
<b>Odisha</b>						
Angul	3.4	-54	0.1	-99	7.5	1
Balasore	5	-74	16.0	-9	4.8	-78
Bargarh	0.5	-83	0.0	-100	0.0	-100
Bhadrak	7.8	-29	3.3	-84	11.6	-39
Bolangir	4	-32	3.3	-31	0.2	-96
Boudh	0	-100	0.0	-100	0.0	-100
Cuttack	0	-100	0.0	-100	0.5	-96
Deogarh	1	-74	0.0	-100	13.2	140
Dhenkanal	0.2	-98	0.0	-100	0.0	-100
Gajapati	7.7	-65	12.1	-61	44.0	51
Ganjam	3.4	-71	2.3	-78	2.7	-78
Jagatsingpur	0	-100	0.0	-100	0.0	-100
Jajpur	10.9	7	0.0	-100	0.0	-100
Jharsuguda	3.2	-51	0.0	-100	1.4	-83
Kalahandi	0	-100	2.5	-68	3.9	-47
Kandhamal	3.4	-62	0.2	-98	25.5	122
Kendrapara	0	-100	0.3	-97	0.0	-100
Keonjhar	11.1	38	4.7	-81	11.4	-38
Khurda	4.8	-11	0.0	-100	0.0	-100
Koraput	4	-74	4.5	-65	28.9	25
Malkangiri	5.8	-51	10.0	18	20.8	106
Mayurbhanj	11.4	-31	7.8	-63	28.2	66
Nawapara	5.6	8	0.9	-85	2.6	-66
Nawarangpur	11.5	-64	20.9	237	14.2	-32
Nayagarh	0.4	-96	0.0	-100	5.6	-34
Puri	0	-100	0.0	-100	0.0	-100

Rayagada	9.7	-35	16.1	32	12.9	-23
Sambalpur	0.8	-79	0.0	-100	4.4	-20
Sonepur	0	-100	0.2	-95	0.8	-84
Sundargarh	1.2	-63	0.0	-100	0.9	-85
<b>West Bengal</b>						
<b>GWB</b>						
Bankura	5.7	-55	0.0	-100	33.4	135
Birbhum	0	-100	0.0	-100	13.1	1
Burdwan	0.4	-97	0.0	-100	14.1	-6
East Midnapore	2.3	-75	0.0	-100	32.5	30
Hooghly	0.1	-99	0.0	-100	42.3	113
Howrah	1	-94	0.0	-100	33.9	119
Kolkata	0.1	-99	0.0	-100	24.2	18
Murshidabad	0	-100	0.0	-100	24.0	70
Nadia	0	-100	0.0	-100	30.7	56
24 Pargana (N)	0.1	-99	0.0	-100	46.8	79
Purulia	3.1	-74	0.0	-100	32.0	227
24 Pargana (S)	0	-100	0.0	-100	69.0	230
West Midnapore	8.6	-52	0.0	-100	70.4	269
<b>SHWB &amp; Sikkim</b>						
Cooch Behar	0	-100	7.0	-88	70.9	24
Darjeeling	2.3	-93	19.3	-61	67.3	38
East Sikkim	21	-46	21.4	-57	132.0	137
Jalpaiguri	5.4	-84	12.3	-76	69.7	21
Malda	4.1	-65	2.0	-86	12.4	-38
North Dinajpur	0	-100	0.0	-100	8.0	-73
North Sikkim	64	26	32.8	-41	119.3	58
South Dinajpur	0	-100	10.2	-63	12.6	-57
South Sikkim	0.8	-98	8.1	-84	49.9	-10
West Sikkim	8.7	-83	25.7	-54	41.0	-46
<b>Karnataka</b>						
<b>Coastal Karnataka</b>						
Dakshin Kannada	3.8	-56	25.3	87	83.0	266
Udupi	1.6	-77	12.7	13	44.3	109
Uttar Kannada	6	50	20.7	125	33.2	129
<b>N I Karnataka</b>						
Bagalkote	11.5	75	7.1	2	7.0	-15
Belgaum	12	97	13.6	32	17.7	14
Bidar	3.2	-35	5.7	19	13.0	170
Bijapur	4.3	12	6.9	1	13.4	144
Dharwad	12	14	15.9	-15	53.8	232
Gadag	9.8	33	10.1	-22	9.6	-20
Gulbarga	13.1	265	14.9	171	23.9	388
Haveri	6.5	-37	41.3	132	21.9	23
Koppal	6.2	29	8.6	20	16.4	209
Raichur	3.8	-26	8.3	86	7.7	108
Yadgir	2.6	-44	8.7	38	7.6	138
<b>S I Karnataka</b>						
Bangalore Rural	0	-100	0.0	-100	1.2	-94

Bangalore Urban	0.1	-99	0.0	-100	2.5	-87
Bellary	1.7	-77	12.8	40	15.6	85
Chamarajnagar	12.8	-38	3.5	-85	22.4	-20
Chichballapur	2	-72	0.0	-100	1.8	-86
Chickmagalur	13.7	3	29.7	36	44.2	117
Chitradurga	14.8	146	19.8	83	19.7	112
Davangere	21.8	207	36.9	162	13.0	0
Hassan	43.1	232	14.4	-29	49.1	117
Kodagu	14	-39	21.0	-23	90.8	208
Kolar	3.5	-60	0.0	-100	3.8	-65
Mandya	9.2	-17	0.5	-97	31.0	51
Mysore	7.1	-58	2.1	-89	44.8	83
Ramnagara	16.2	18	0.0	-100	14.3	-47
Shimoga	10.3	11	47.6	240	52.5	245
Tumkur	6.5	-28	8.1	-25	26.9	68
<b>Kerala</b>						
Alappuzha	38	23	38.4	4	106.5	121
Kannur	13.6	-12	1.9	-90	56.9	128
Ernakulam	11.3	-56	27.2	-26	47.3	20
Idukki	21.1	-49	17.3	-57	91.7	156
Kasaragod	4	-69	4.1	-77	129.7	700
Kollam	47.1	18	45.2	-3	195.7	326
Kottayam	33.3	23	35.7	5	148.3	236
Kozhikode	0	-100	27.1	18	35.7	18
Malappuram	2.9	-87	9.7	-62	25.4	-32
Palakkad	2.7	-89	4.3	-85	26.6	-15
Pathanamthitta	52.3	16	39.4	-20	168.7	167
Thiruvananthapuram	31.2	22	45.2	32	200.4	460
Thrissur	1.9	-90	7.1	-68	35.1	-5
Wayanad	30.7	25	33.7	47	37.1	53
<b>Tamil Nadu</b>						
Ariyalur	0	-100	0.0	-100	57.5	342
Chennai	0	-100	0.0	-100	22.2	131
Coimbatore	3.5	-81	0.8	-95	38.6	68
Cuddalore	0	-100	0.0	-100	98.7	709
Dharmapuri	0	-100	0.0	-100	15.8	-20
Dindigul	0.6	-97	1.3	-92	56.6	176
Erode	1.3	-90	0.0	-100	20.3	9
Kanchipuram	0	-100	0.0	-100	19.7	78
Kanyakumari	8.4	-63	12.8	-52	179.2	499
Karikal	0	-100	0.0	-100	119.0	844
Karur	0	-100	0.0	-100	28.0	88
Krishnagiri	3.1	-75	0.0	-100	26.8	39
Madurai	0	-100	3.5	-75	79.1	465
Nagapattinam	0	-100	0.0	-100	104.9	1149
Namakkal	2.7	-79	0.0	-100	45.6	137
Nilgiris	19.4	-14	1.4	-93	61.6	169
Perambalur	0	-100	0.0	-100	35.7	190
Puducherry	0	-100	0.0	-100	61.1	275

Pudukottai	0	-100	0.3	-96	57.1	434
Ramanathapuram	0.3	-98	0.4	-97	109.2	1169
Salem	0	-100	1.5	-90	40.6	104
Sivaganga	0	-100	0.1	-99	86.5	560
Thanjavur	0	-100	0.1	-99	58.5	388
Theni	0.4	-98	7.4	-63	85.0	329
Tirunelveli	2.5	-84	11.3	-22	171.4	952
Tirupur	0	-100	0.0	-100	48.6	166
Tiruvallur	0	-100	0.0	-100	7.3	-20
Tiruvannamalai	0	-100	0.0	-100	14.9	26
Tiruvarur	0	-100	0.0	-100	65.6	507
Toothukudi	2.7	-77	0.6	-93	87.8	770
Trichy	0	-100	0.0	-100	34.5	155
Vellore	0	-100	0.1	-99	13.2	3
Villupuram	0	-100	0.0	-100	29.8	186
Virudhunagar	1.4	-92	15.2	-3	84.9	364
<b>Andhra Pradesh</b>						
<b>Coastal Andhra Pradesh</b>						
East Godavari	0	-100	0.0	-100	8.8	-10
Guntur	0	-100	0.0	-100	11.1	114
Krishna	0	-100	0.0	-100	11.0	104
Nellore	0	-100	0.0	-100	3.3	-66
Prakasam	0	-100	0.0	-100	7.4	-5
Sirkakulam	0	-100	1.0	-86	29.4	141
Visakhapatnam	6.3	-53	13.9	7	17.6	-9
Vizianagram	0	-100	0.0	-100	15.3	-12
West Godavari	0	-100	4.5	-33	19.4	252
<b>Telangana</b>						
Adilabad	10.8	260	0.0	-100	7.5	169
Hyderabad	0	-100	2.7	-47	0.3	-95
Karimnagar	8.5	98	0.2	-94	19.7	432
Khammam	1.5	-82	0.0	-100	12.4	72
Mehabubnagar	2.9	-26	5.1	-15	5.2	44
Medak	0.4	-93	0.2	-96	6.4	95
Nalgonda	0	-100	0.0	-100	2.5	-40
Nizamabad	11.8	336	0.5	-72	3.7	-5
Rangareddy	2.9	-43	8.0	26	20.4	234
Warangal	0	-100	0.9	-61	21.5	437
<b>Rayalaseema</b>						
Anantapur	0.8	-86	2.2	-65	4.0	-57
Chittoor	0	-99	0.0	-100	7.1	-43
Cuddapah	0	-100	0.0	-100	0.7	-90
Kurnool	1	-82	0.0	-100	4.3	-44

#### Legends

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