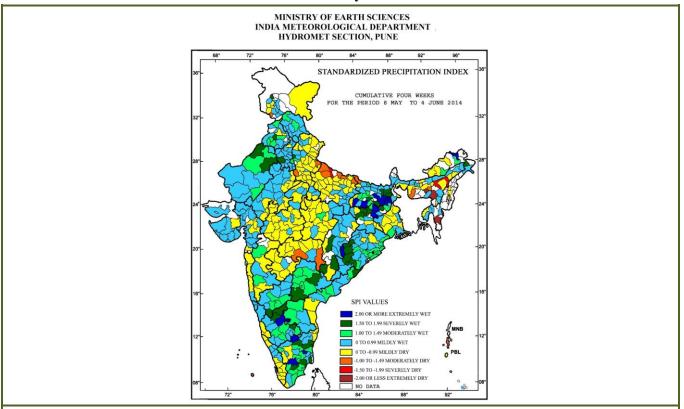


Standardised Precipitation Index Four Weekly for the Period 8th May to 4th June 2014

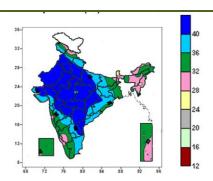


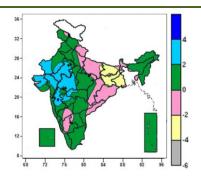
- Extremely wet/severely wet conditions experienced over many parts of Bihar, Jharkhand; some parts of Odisha, Tamilnadu and Karnataka; Kupwara district of Jammu & Kashmir; Moga district of Punjab; Bhiwani district of Haryana; Baghpat district of West Uttar Pradesh; Sri Ganganagar and Churu districts of Rajasthan; Upper Siang and Lohit districts of Arunachal Pradesh; Durg and Bijapur districts of Chhattisgarh; Warangal, Mahbubnagar and Srikakulam districts of Andhra Pradesh.
- Moderately/ severely dry conditions experienced in some places of Uttar Pradesh and North East; Jammu district of Jammu & Kashmir; Champawat district of Uttarakhand; Gadchiroli and Yeotmal districts of Maharashtra.
- 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 04.06.2014

Actual Mean Maximum Temperature (°C) in India for the week ending 04.06.2014

$\label{eq:mean_maximum} \mbox{Mean Maximum Temperature ($^{\circ}$C) Anomaly in India} \\ \mbox{for the week ending 04.06.2014}$



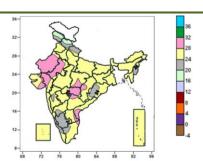


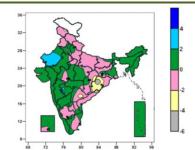
- 40 to 44^oC over many parts of Punjab, Haryana, Delhi, Uttar Pradesh, Rajasthan, Central India, Andhra Pradesh, Vidarbha, Marathwada and Gujarat, some parts of Uttarakhand, Odisha and Madhya Maharashtra.
- 36 to 40°C over many parts of Uttarakhand, Bihar, Jharkhand, Odisha, Tamil Nadu and North Interior Karnataka, some parts of Jammu & Kashmir, Himachal Pradesh, West Uttar Pradesh, Gangetic West Bengal, Andhra Pradesh, South Interior Karnataka, Gujarat, Madhya Maharashtra, Marathwada and Konkan.
- 32 to 36^oC over many parts of Bihar, Gangetic West Bengal, Arunachal Pradesh, Tamilnadu, Kerala, Karnataka, Konkan & Goa and Lakshadweep, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Himachal Pradesh, Jharkhand, Sub-Himalayan West Bengal, Odisha, Coastal Andhra Pradesh and Madhya Maharashtra.
- 28 to 32⁰C over many parts of Assam & Meghalaya, Manipur, Mizoram, Tripura and Sub-Himalayan West Bengal, some parts of Jammu & Kashmir, Himachal Pradesh, Bihar, Arunachal Pradesh, Nagaland, Kerala, Coastal & South Interior Karnataka, Konkan, Lakshadweep and Andaman & Nicobar Islands,.
- 24 to 28°C over many parts of Sikkim, some parts of Assam and Mizoram.

- 2 to 4^oC over many parts of East Rajasthan, West Madhya Pradesh, Gujarat and Madhya Maharashtra, some parts of West Rajasthan, Marathwada, Vidarbha and Konkan.
- 0 to 2°C over many parts of Jammu & Kashmir, Himachal Pradesh, West Rajasthan, Punjab, Haryana, West Uttar Pradesh, Sikkim, North East India, Vidarbha, East Madhya Pradesh, Andhra Pradesh, Tamilnadu, Kerala, Coastal Karnataka, Konkan & Goa, Lakshadweep, Andaman & Nicobar Islands, some parts of East Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Chhattisgarh, Gujrat, Madhya Maharashtra and Marathwada.
- -2 to 0⁰C over many parts of Uttarakhand, East Uttar Pradesh, Sub-Himalayan West Bengal, Odisha, Chhattisgarh and Interior Karnataka, some parts of Jammu & Kashmir, West Uttar Pradesh, East Madhya Pradesh, Coastal Andhra Pradesh, Telangana and Kerala.
- -4 to -2^oC over many parts of Bihar, Jharkhand and Gangetic West Bengal, some parts of East Uttar Pradesh and Sub-Himalayan West Bengal.

Actual Mean Minimum Temperature (°C) in India for the week ending 04.06.2014

Mean Minimum Temperature (°C) Anomaly in India for the week ending 04.06.2014





- 28 to 32^oC over many parts of Rajasthan, Gujarat region and Vidarbha, some parts of Saurashtra & Kutch, East Madhya Pradesh, Chhattisgarh, Andhra Pradesh and Tamilnadu.
- 24 to 28^oC over entire country except over many parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Manipur, Coastal & South Interior Karnataka, Rajasthan,
- 2 to 4⁰C over many parts of West Rajasthan, some parts of Madhya Maharashtra.
- 0 to 2⁰C over many parts of East Rajasthan, Haryana, Delhi, West Bengal & Sikkim, North East India, Madhya Pradesh, Kerala, Coastal & North Interior Karnataka, Maharashtra, Gujarat, Lakshadweep, Andaman & Nicobar Islands, some parts of Punjab,

- Gujarat region and Vidarbha, some parts of Mizoram, Tamil Nadu, Kerala, North Interior Karnataka, Madhya Maharashtra, Saurashtra & Kutch, East Madhya Pradesh, Chhattisgarh, Andhra Pradesh and Tamil Nadu.
- 20 to 24⁰C over many parts of Uttarakhand, Manipur, Coastal & South Interior Karnataka, some parts of Jammu & Kashmir, Himachal Pradesh, Mizoram, Tamilnadu, Kerala, North Interior Karnataka and Madhya Maharashtra.
- 16 to 20^oC over some parts of Jammu & Kashmir, Himachal Pradesh.

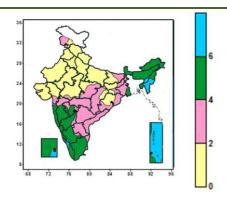
- West Uttar Pradesh, West Rajasthan, Bihar, Jharkhand, Andhra Pradesh and Tamilnadu.
- -2 to 0°C over entire country except many parts of Rajasthan, Haryana, Delhi, West Bengal & Sikkim, North East India, Madhya Pradesh, Kerala, Coastal & North Interior Karnataka, Maharashtra, Gujarat, Lakshadweep, Andaman & Nicobar Islands, some parts of Punjab, West Uttar Pradesh, Bihar, Jharkhand, Andhra Pradesh, Tamilnadu and Madhya Maharashtra.
- -6 to -2⁰C over many parts of Odisha, some parts of Jammu & Kashmir, Chhattisgarh and Telangana.

Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 04.06.2014

Relative Humidity (%) over India for the week ending 04.06.2014

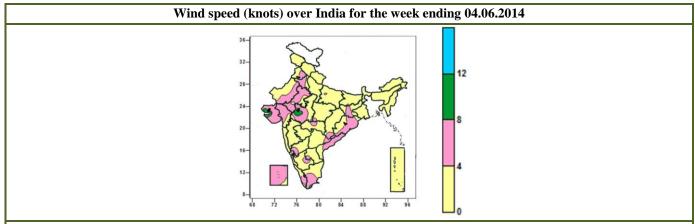
228-224-24-20-16-12-56 72 76 80 84 80 92 96

Cloud amount (okta) over India for the week ending 04.06.2014



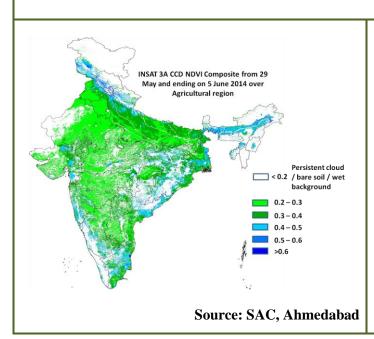
- 80 to 100% over many parts of Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Mizoram, Tripura, Lakshadweep, Andaman & Nicobar Islands, some parts of Arunachal Pradesh and Manipur.
- 60 to 80% over many parts of Bihar, Gangetic West Bengal, Arunachal Pradesh, Nagaland, Manipur, Odisha, Tamilnadu, Kerala, Coastal & South Interior Karnataka, Konkan & Goa, some parts of Jharkhand, Coastal Andhra Pradesh, North Interior Karnataka, Madhya Maharashtra, Gujarat, Andaman & Nicobar Islands.
- 40 to 60% over many parts Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Jharkhand, Andhra Pradesh, North Interior Karnataka, Madhya Maharashtra, Marathwada and Gujarat, some parts of West Rajasthan, Punjab, Haryana, Bihar, Chhattisgarh, West Madhya Pradesh, Tamilnadu and South Interior Karnataka.
- 20 to 40% over many parts of Punjab, Haryana, Delhi, Rajasthan, Central India and Vidarbha, some parts of Jammu & Kashmir, Uttar Pradesh, Telangana, Madhya Maharashtra and Gujarat region.

- 6 to 8 okta over many parts of Mizoram, Tripura, Andaman
 & Nicobar Islands, some parts of Assam & Meghalaya,
 Kerala, South Interior Karnataka and Lakshadweep Islands.
- 4 to 6 okta over many parts of West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Tamilnadu, Kerala, Karnataka, Konkan & Goa, Madhya Maharashtra, Marathwada and Lakshadweep Islands, some parts of Gangetic West Bengal, Tripura, Andaman & Nicobar Islands.
- 0 to 4 okta over entire country except many parts of West Bengal & Sikkim, North East India, Tamilnadu, Kerala, Karnataka, Konkan & Goa, Madhya Maharashtra, Marathwada, Lakshadweep Islands, Andaman & Nicobar Islands.



- 8 to 12 knots over some parts of Saurashtra & Kutch, West Madhya Pradesh.
- 4 to 8 knots over many parts of Haryana, Delhi, Rajasthan, Gujarat, West Madhya Pradesh, Odisha, Lakshadweep Islands, some parts of Punjab, East Uttar Pradesh, Bihar, Jharkhand, East Madhya Pradesh, Chhattisgarh, Vidarbha, Andhra Pradesh, Tamil Nadu, Interior Karnataka and Kerala.
- 0 to 4 knots over entire country except Haryana, Delhi, Rajasthan, Gujarat, West Madhya Pradesh, Odisha, Lakshadweep Islands, some parts of Punjab, East Uttar Pradesh, Bihar, Jharkhand, East Madhya Pradesh, Chhattisgarh, Vidarbha, Andhra Pradesh, Tamil Nadu, Interior Karnataka and Kerala.

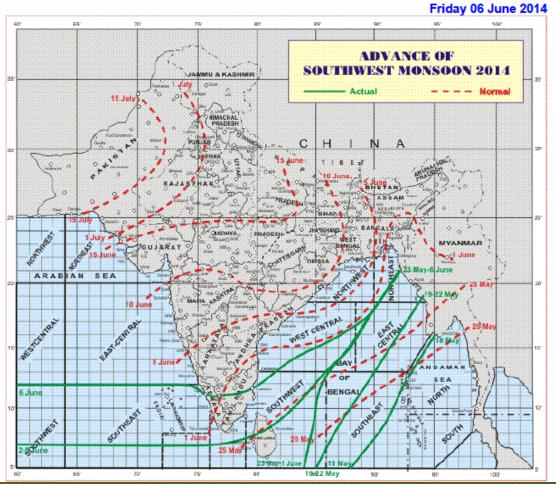
INSAT 3A CCD NDVI COMPOSITE OVER AGRICULTURAL REGION 29th May – 5th June 2014



• Agricultural vigour is moderate over very few pockets of central Madhya Pradesh, south Gujarat and Coastal Andhra Pradesh NDVI varies between 0.4 to 0.5 upto 5th June 2014. The NDVI remains within the range of 0.2 to 0.3 over rest of India. There is further decrease in NDVI as compared to last week.

Monsoon Watch

Northern Limit of Monsoon



- The northern limit of monsoon passes through 12.0°N/60.0°E, 12.0°N/70.0°E, 12.0°N/74.0°E, Kozhikode, Coimbatore, Cuddalore, 13.0°N/83.0°E, 16.0°N/87.0°E, 18.0°N/90.0°E and 21.0°N/92.0°E.
- Southwest monsoon has set in over Kerala today, i.e. 6th June 2014. The southwest monsoon has further advanced into most parts of south Arabian sea and Kerala, remaining parts of Maldives-Comorin areas, some parts of Tamilnadu, most parts of southwest Bay of Bengal and some parts of westcentral Bay of Bengal. Conditions are becoming favourable for further advance of Southwest Monsoon into remaining parts of south Arabian sea, some parts of central Arabian sea, remaining parts of Kerala, some parts of south Karnataka, some more parts of Tamilnadu and Bay of Bengal during next 2-3 days. conditions continue to remain favourable for further advance of Southwest monsoon into some parts of northeastern state during next 48 hours.

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 9th June, 2014)

- Rain/thundershowers would occur at most places over Andaman & Nicobar Islands during the period.
- Rain/thundershowers would occur at a few places over Arunachal Pradesh during next 24 hours and at many places thereafter.
- Rain/thundershowers would occur at many places over Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura and Sub-Himalayan West Bengal & Sikkim during the period.
- Rain/thundershowers would occur at many places over South Interior Karnataka, Kerala and Lakshadweep during the period.
- Rain/thundershowers would occur at many places over Coastal Karnataka during next 48 hours and at a few places thereafter.
- Rain/thundershowers would occur at a few places over Rayalaseema during the period.
- Rain/thundershowers would occur at a few places over North Interior Karnataka, Tamilnadu & Pudduchery during next 48 hours and at isolated places thereafter.
- Rain/thundershowers would occur at isolated places over Odisha, Konkan & Goa, Madhya Maharashtra, Marathwada, Costal Andhra Pradesh and Telangana during the period.
- Mainly dry/dry weather would prevail over Gangetic West Bengal during next 48 hours and rain/thundershowers would occur at isolated places thereafter.
- Mainly dry/dry weather would prevail over rest of the country.
- No significant change in maximum temperatures over many parts of northwest and adjoining west central and east India during next 2-3 days.

Weather Warning during next 3 days

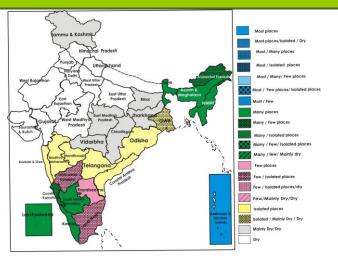
- 06 June (Day 1): Heat wave conditions would prevail at some parts of Punjab, Haryana, Chandigarh & Delhi, Rajasthan, Uttar Pradesh, Madhya Pradesh, Vidarbha, Gujarat region and Saurashtra & Kutch.
 - Isolated heavy rainfall would occur over Sub-Himalayan West Bengal, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **07 June (Day 2):** Heat wave conditions would prevail at some parts of Punjab, Haryana, Chandigarh & Delhi, Rajasthan, Uttar Pradesh, Madhya Pradesh, Vidarbha, Gujarat region and Saurashtra & Kutch.
 - Isolated heavy rainfall would occur over Andaman & Nicobar islands, Sub-Himalayan West Bengal, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Kerala.
- **08 June (Day 3):** Heat wave conditions would prevail at some parts of Punjab, Haryana, Chandigarh & Delhi, Rajasthan, west Uttar Pradesh, Gujarat region and Saurashtra & Kutch.
- Isolated heavy rainfall would occur over Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Kerala.

Weather Outlook for subsequent 4 days from 9^{th} June to 13^{th} June 2014

- Rain/thundershowers would occur at many places over northeastern states and Sub-Himalayan West Bengal & Sikkim and at isolated places over Gangetic West Bengal.
- Rain/thundershowers would occur at many places over Andaman & Nicobar Islands and Kerala and at a few places over rest south peninsular India.
- Rain/thundershowers would occur at isolated places over Jammu & Kashmir.
- Weather would be mainly dry over rest of the country.

Satellite image dated 06.06.2014, 0600 UTC

Weather Forecast Map (Valid upto 0830 hours of 9th June, 2014)



Salient Advisories

- As rain/thundershowers would occur at many places over **Kerala** during the period along with isolated heavy rainfall on 7th and 8th June, 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 arrange for adequate drainage facilities in crop fields to avoid water stagnation.
- As rain/thundershowers would occur at many places over **South Interior Karnataka** during the period and over Coastal Karnataka on 6th and 7th June, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- ➤ Undertake nursery preparation for sowing of rice in **Coastal Zone of Karnataka** with expected rainfall.
- As rain/thundershowers would occur at many places over **Assam, Meghalaya, Nagaland, Manipur, Mizoram** and **Tripura** along with isolated heavy rainfall 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 arrange for adequate drainage facilities in crop fields to avoid water stagnation.
- As rain/thundershowers would occur at many places over **Arunachal Pradesh** on 7th and 8th June, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- As heat wave conditions would prevail over some parts of **Punjab**, **Haryana**, **Chandigarh & Delhi**, **Rajasthan**, **Gujarat region** and **Saurashtra & Kutch** during the period over **Uttar Pradesh**, **Madhya Pradesh** and **Vidarbha** on 6th & 7th June and over **west Uttar Pradesh** on 8th June, apply light and frequent irrigation to the standing crops or undertake soil mulching/ mulching with straw/polythene to cope up with the excess evaporative demand due to high temperature.

Detailed Zonewise Agromet Advisories

SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP]









Land preparation

Sugarcane

Onion

Okra

- Realised Rainfall: Rainfall occurred in Vizianagaram district of Coastal Andhra Pradesh; Anantapur and Kurnool districts of Rayalaseema; Hyderabad, Mahbubnagar and Rangareddy districts of Telangana; Haveri district of North Interior Karnataka; all districts of South Interior Karnataka except Bangalore Rural and Shimoga; in Kannur, Kasaragod, Kozhikode, Malappuram, Palakkad, Thrissur and Wayanad districts of Kerala; Dharmapuri, Dindigul, Erode, Karaikal, Krishnagiri, Madurai, Namakkal, Salem, Thiruppur and Virudhunagar districts of Tamilnadu and in Pudduchery. Mainly dry weather prevailed over remaining parts of the region.
- Weather Forecast: Rain/thundershowers would occur at many places over South Interior Karnataka, Kerala and Lakshadweep during the period. Rain/thundershowers would occur at many places over Coastal Karnataka during next 48 hours and at a few places thereafter. Rain/thundershowers would occur at a few places over Rayalaseema during the period. Rain/thundershowers would occur at a few places over North Interior Karnataka, Tamilnadu & Pudduchery during next 48 hours and at isolated places thereafter. Rain/thundershowers would occur at isolated places over Costal Andhra Pradesh and Telangana during the period.
- Weather Warning: Isolated heavy rainfall would occur over Kerala on 7th and 8th June.
- Weather Outlook: Rain/thundershowers would occur at many places over Kerala and few places over rest south peninsular India.
- Advisories:
 - Kerala:
 - As rain/thundershowers would occur at many places over Kerala during the period along with isolated heavy rainfall on 7th and 8th June, postpone irrigation, intercultural operations 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 arrange for adequate drainage facilities in crop fields to avoid water stagnation.
 - ➤ Undertake direct sowing of rice (Uma variety), planting coconut seedlings in the Problem Area Zone of Kerala after the current spells of rain.

- ➤ Undertake land preparation for nursery sowing of *virippu* rice in the Central and Southern Zones of Kerala after current spells of rain.
- There is chance of quick wilt disease in pepper due to high relative humidity in Central Zone of Kerala. Apply *Trichoderma* or *Pseudomonas* culture in soil or spray 1% Bordeaux mixture on the leaves and small branches after current spells of rain.
- ➤ Undertake prophylactic spraying of Bordeaux mixture @ 1% against bud rot disease in coconut before the onset of monsoon in the Problem Area Zone and Southern Zone of Kerala after current spells of rain.

Karnataka:

- As rain/thundershowers would occur at many places over South Interior Karnataka during the period and over Coastal Karnataka on 6th and 7th June, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- > Undertake nursery bed preparation for sowing of rice in the Coastal Zone of Karnataka with expected rainfall.
- ➤ Undertake land preparation for sowing of *kharif* crops and procure certified seeds in the Eastern Dry Zone, North Dry Zone, Central Dry Zone Hill Zone and North Transition Zone of Karnataka utilizing the realised rainfall.
- ➤ Continue planting of ginger and turmeric in Southern Transition Zone of Karnataka with the expected rainfall.

Andhra Pradesh:

- ➤ Undertake summer ploughing to control weeds, hibernating pests and disease spores that may damage *kharif* crops and keep farm inputs ready for timely sowing of rainfed crops like cotton, jowar, maize, castor, groundnut, pigeon pea, green gram etc. in the Southern Telangana Zone of Andhra Pradesh.
- ➤ Undertake land preparation for planting of rainfed sugarcane in the North Coastal Zone of Andhra Pradesh and continue land preparation for sowing of *kharif* crops like groundnut, castor, cotton, maize and vegetables and sowing of Mungari cotton in Kurnool district of Scarce Rainfall Zone of Andhra Pradesh utilizing the realised rainfall.
- ➤ Present temperature condition is congenial for incidence of wooly aphids in sugarcane and it is likely to increase in the Krishna Godavari Zone of Andhra Pradesh. Spray Malathion @ 2 ml or Methyl Demoton @ 2 ml to manage the incidence.

Tamil Nadu:

- Continue nursery preparation for sowing of rice in the Western Zone of Tamil Nadu.
- As winds with high speed is expected in the coming days in the Southern Zone of Tamil Nadu, provide support for banana and undertake propping in sugar-cane.
- Due to prevailing hot and humid weather condition, mealy bug incidence in cotton, leaf mite incidence and blast incidence in summer rice is noticed in the Cauvery Delta Zone of Tamil Nadu. Spray Profenophos 400 ml/acre. + Azadiractin 10000 ppm @ 200 ml/acre to manage mealy bug incidence, Dicofol @ 500 ml/ acre or Wettable Sulphur @ 600 g/ acre to manage leaf mite incidence and Carbendazim 200 g/acre or Tricylazole @ 200 ml/acre in 200 litre of water to manage blast incidence on a non rainy day.

Animal Husbandry

➤ Vaccinate animals (cow, buffalo, bullock) against Foot and Mouth Disease (FMD vaccination) and Haemorrhagic Septicaemia and sheep and goats against Enterotoximia before the onset of monsoon in the Southern Transition Zone and North Dry Zone of Karnataka.

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









Green Gram

Land preparation

Okra

Sugarcane

- Realised Rainfall: Rainfall occurred in East Siang, Lohit, Lower Dibang Valley, Papumpara, Tawang, Upper Siang and West Kameng districts of Arunachal Pradesh; Barpeta, Bongaigaon, Cachar, Chirang, Dhemaji, Dhubri, Goalpara, Hailakandi, Jorhat, Karbi Anglong, Karimganj, Kokrajhar, Lakhimpur, Morigaon, Nalbari, Sonitpur, Sibsagar and Tinsukia districts of Assam; East Garo Hills, East Khasi Hills and West Garo Hills districts of Meghalaya, Aizwal district of Mizoram, Imphal West district of Manipur; Dimapur, Kohima and Mokokchung districts of Nagaland, all districts of Tripura. Mainly dry weather prevailed over rest parts of the region.
- Weather forecast: Rain/thundershowers would occur at many places over Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura during the period. Rain/thundershowers would occur at a few places over Arunachal Pradesh during

next 24 hours and at many places thereafter.

- Weather Warning: Isolated heavy rainfall would occur at Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during the period.
- Weather Outlook: Rain/thundershowers would occur at many places over northeastern states.

• Advisories:

As rain/thundershowers would occur at many places over Assam, Meghalaya, Nagaland, Manipur, Mizoram and Tripura along with isolated heavy rainfall 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 arrange for adequate drainage facilities in crop fields to avoid water stagnation.

Assam & Meghalaya, Arunachal Pradesh:

- As rain/thundershowers would occur at many places over Arunachal Pradesh on 7th and 8th June, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- Due to cloudy weather and increase in humidity, there is chance of attack of blast disease in *ahu* rice in Hill Zone and Central Bramhaputra Valley Zone of Assam and in Temperate Sub Alpine Zone of Meghalaya. Spray Bavistin @ 1g/litre of water or Carbendazim @ 1 g/litre of water after current spells of rain.
- ➤ Due to cloudy weather and increase in humidity, there is chance of attack of powdery mildew, red pumpkin beetle and fruit fly in cucurbitaceous crops in Hill Zone and North Bank Plain Zone of Assam. Spray Bavistin 0.1% or Karathane WP 0.05% against powdery mildew and Malathion 50 EC @ 2 ml/ litre of water against red pumpkin beetle and fruit fly after current spells of rain.
- ➤ Due to high humidity, mite infestation and tip blight may occur in chilli in Central Bramhaputra Valley Zone of Assam. Spray Ethion @ 1.5 ml or Rogor @ 2 ml/litre water to reduce mite infestation and for tip blight spray Malathion @ 2 ml per litre of water after current spells of rain.
- ➤ Due to excess soil moisture and cloudy weather there is chance of collar rot/wilting/damping off in green gram in Sub Tropical Hill Zone of Arunachal Pradesh. Spray Carbandazim @ 1g per litre of water or Endofil M45 @ 2.5 g per litre of water after current spells of rain.

Nagaland, Manipur, Mizoram and Tripura:

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.

Animal Husbandry

In northeastern states, immunizations against FMD, HS and BQ in cattle & buffaloes and swine fever in pigs may be carried out during this period. Vaccination (RDF1) against Ranikhet disease in one week old chicks and against Gamboro disease in two weeks old chicks may be carried out.

Pissiculture

➤ Before onset of monsoon, prepare the fingerling rearing tanks and nurseries by cleaning them and applying lime in North Bank Plain Zone, Lower Bramhaputra Valley Zone and Central Bramhaputra Valley Zone of Assam. Apply cow dung @ 500 g per sq. m. at least 15 days ahead of releasing fingerlings into the tanks.

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









Sugarcane Bottle Gourd Onion Mango

- **Realised Rainfall:** Rainfall occurred in Kangra district in Himachal Pradesh; in Kupwara district in Jammu & Kashmir and in Dehradun district in Uttarakhand. Mainly dry/dry weather prevailed over rest of the region
- Weather Forecast: Mainly dry/dry weather would prevail over the region.

 No significant change in maximum temperatures over many parts of plains of northwest India during next 2-3 days.
- **Weather Warning:** Heat wave conditions would prevail at some parts of Rajasthan, Punjab, Haryana, Chandigarh & Delhi during next three days and over Uttar Pradesh on 6th and 7th June and over West Uttar Pradesh on 8th June.
- Weather Outlook: Rain/thundershowers would occur at isolated places over Jammu & Kashmir.

Advisories:

As heat wave conditions would prevail at some parts of Punjab, Haryana, Chandigarh & Delhi and Rajasthan during the period and over Uttar Pradesh on 6th & 7th June and over West Uttar Pradesh on 8th June, apply light and frequent irrigation to the standing crops or undertake soil mulching/ mulching with straw/polythene to cope up with the excess evaporative demand due to high temperature.

Jammu & Kashmir:

- Continue transplanting of cole crops, tomato, capsicum, chilli and onion in lower and middle belts and vegetables like celery, parsley and leek in the main field in Cold Arid Zone of Jammu & Kashmir. Also undertake direct sowing of spinach, carrot, beet root, coriander and fenugreek.
- In Valley Temperate Zone of Jammu and Kashmir, continue sowing of maize, kale, knol khol, beans and bhindi and transplanting of seedlings of solanaceous vegetables utilizing the available moisture.
- The incidence of powdery mildew may be expected in cucurbits with the rise of temperature in Sub Tropical Zone of Jammu & Kashmir, for control spray Karathane/Sulfex @ 2 g per litre preferably in the evening hours.
- In the prevailing weather condition there is chance of attack of aphids and walnut weevils in walnut orchards in Intermediate Zone of Jammu & Kashmir, spray walnut trees with Chloropyriphos @200ml/100 litres of water for control of aphids and walnut weevils.

Himachal Pradesh:

- Continue nursery sowing of rice, sowing of maize and cucurbits in Mid-Hills Sub-Humid Zone and Sub-Monatane & Low Hills Sub-Tropical Zone of Himachal Pradesh utilizing the realised rainfall.
- Continue sowing of peas and undertake nursery sowing of cabbage, cauliflower and summer squash on raised beds in High Hill Temperate Zone of Himachal Pradesh.
- Due to rise in temperature, apply light irrigation in vegetables like tomato, brinjal and chilli and undertake mulching with grass in fruit crops in Mid Hills Sub-Humid Zone of Himachal Pradesh to conserve soil moisture.
- ➤ Due to hot weather conditions, there is chance of attack of red beetle in pumpkin in Mid-Hills Sub-Humid Zone and Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh. For control, spray Malathion 50EC @ 1ml per litre of water.

Uttarakhand:

- Due to prevailing hot weather conditions, apply irrigation in fruit crops like litchi, mango and lemon orchards in Bhabar and Tarai Zone of Uttarakhand. Also there is chance of incidence of fruit borer in vegetable crops (tomato, capsicum etc.), for control, spray 50 EC Prophenophas @ 1 ml per liter of water. In cucurbits spray Indophil M-45 @2.5 g per liter of water for control of Downy Mildew disease.
- As mainly dry weather would prevail, apply irrigation in sugarcane which is at vegetative stage to avoid moisture stress in Sub Humid Sub Tropical Zone of Uttarakhand. Undertake mulching with dry leaves / straw in winter planted sugarcane which is at tillering stage to minimize the moisture loss.
- As mainly dry weather would prevail, undertake earthing up in 20-25 day old potato and apply mulch to conserve moisture in Hill Zone of Uttarakhand.

Punjab, Harvana and Delhi:

- As dry weather would prevail in Western Zone of Punjab, apply irrigation in cotton crop which is at 4-6 weeks old. Apply light and frequent irrigation to the vegetable and fruit crops to protect from rising temperature.
- In view of prevailing hot weather conditions in Central Plain Zone of Punjab, it is advised to apply light and frequent irrigation in tomato, chilli, capsicum and cucurbit crops to encourage maximum fruit setting and development of fruits. Mulching can be practiced in widely spaced cultivated vegetable crops and sugarcane rows with the use of straw/wheat straw/rice husk etc. for conservation of moisture. Save the orchard crops from rising temperature by applying light and frequent irrigation.
- ➤ Due to prevailing dry and hot weather conditions in Western Plain Zone of Punjab, irrigate the sugarcane crop at 7-12 days interval for better growth. Apply paddy straw or rice husk or sugarcane trash between the rows of sugarcane to reduce soil temperature and moisture loss.
- As dry and hot weather conditions are prevailing, irrigate young fruit plant orchards (mango/litchi/ peach/plum/ Kinnow) twice/thrice a week in Sub Montane Undulating Zone of Punjab. Protect the young fruit plants from scorching sun by covering them with thach / sarkande leaves.
- As mainly dry weather would prevail, apply irrigation in spring maize, moong and sunflower in Sub Montane Undulating Zone of Punjab.
- ➤ In Eastern Zone of Haryana undertake nursery sowing of rice with irrigation facilities. Increase the frequency of irrigation during critical growth stages of vegetable and horticulture crops. Young saplings may be protected from scorching sun by erecting temporary shade.
- In Western Zone of Haryana as high temperature is prevailing, give frequent irrigation in vegetable and fruit crops.
- ➤ In Delhi, in view of increasing temperature, apply light and frequent irrigation in all vegetable crops in the morning or evening hours. Optimum moisture level should be maintained in cucurbitaceous crops by applying light and frequent irrigation, as dry conditions may lead to poor pollination and thus drop in yield. Protect banana, citrus, mango and kinnow orchards against hot winds by erecting physical barriers and also by applying frequent irrigation.

➤ Prevailing hot weather conditions are favourable for the incidence of downy mildew in cucurbits in Central plain Zone of Punjab. To control, spray Indofil M-45 or Kavach @ 300-600 g in 100-200 litres of water. Repeat the spray at weekly intervals.

Uttar Pradesh

- As mainly dry weather would prevail, apply irrigation in vegetables, cucurbits and fruit crops in West Uttar Pradesh.
- ➤ Under prevailing mainly dry weather conditions, apply irrigation in maize, urad and moong in Central Plain Zone of Uttar Pradesh. Keep farm inputs ready for *kharif* sowing.
- ➤ Undertake sowing of arhar under irrigated condition in Central Plain Zone and Western Plain Zone of Uttar Pradesh
- ➤ Due to hot weather conditions, there is chance of incidence of yellow vein moisac disease in moong in Central Plain Zone of Uttar Pradesh. Spray Imidacloprid @ 0.24 ml per litre of water in the morning or evening hours.
- ➤ Due to hot weather conditions, there is chance of attack of white grub in sugarcane in Western Plain Zone of Uttar Pradesh. For control, apply Buaria Basiana @ 2 kg + cow dung @ 50 kg per hectare or Metarizam @1kg + cow dung @ 28 kg per hectare.

Rajasthan:

- ➤ High temperature may cause damage to horticultural crops in Flood Prone Eastern Plain Zone of Rajasthan. Apply light and frequent irrigation or apply mulch to reduce the damage.
- ➤ Due to high temperature, there may be attack of fruit fly in cucurbits in Transitional Plain Zone of Rajasthan. Remove and destroy all infested fruits and spray Malathion 50 EC @ 1.25 litre or Dimethoate 30 EC @ 1 litre per hectare.
- ➤ Under prevailing hot weather condition, summer okra may be affected with fruit borer in Semi Arid Eastern Plain Zone of Rajasthan. This grub affects quality of okra fruits. To control this insect spray Malathion 50 EC @ 1.0 ml per litre water.
- ➤ Due to high temperature, there may be attack of pod borer in moong in Flood Prone Eastern Plain Zone of Rajasthan. Spray 25 EC Quinolphos @ 1.25 litre per 600 -800 litres of water per hectare.
- ➤ Under hot and dry weather condition, there are chances of attack of mites in brinjal and tomato in Arid Western Plain Zone of Rajasthan. Apply Pharmathene @ 25 EC or Methyl Dimetone @ 25 EC in litre of water per ha.

• Floriculture

➤ Under prevailing dry weather condition, undertake intercultural operations and weeding in summer annual plantations in Mid Hills Sub-Humid Zone of Himachal Pradesh.

• Animal Husbandry

- As heat wave conditions would prevail at some parts of Punjab, Haryana, Chandigarh & Delhi and Rajasthan during the period over Uttar Pradesh on 6th & 7th June and over west Uttar Pradesh on 8th June, 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 cool water mixed with minerals for drinking. Also provide balanced feed & adopt vaccination schedule.
- ➤ Undertake vaccination of cattle against B.H.Q in Central Plain Zone of Uttar Pradesh.
- ➤ Due to prevailing high temperature in the region, Ecto and endo parasites may attack on livestock in Arid Western plain Zone of Rajasthan. To control ecto parasites like lice, mite, joke etc. apply Butox/Tikkle @ 1 ml per litre of water on the body of animal.

Poultry

As heat wave conditions would prevail at some parts of Punjab, Haryana, Chandigarh & Delhi, Rajasthan and Uttar Pradesh, make arrangements for proper ventilation in poultry sheds and keep the sheds clean. Cover the windows with curtains and sprinkle water frequently. 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: Rainfall occurred in Bastar district of Chhattisgarh. Weather was mainly dry over rest of the region.
- **Weather forecast:** Mainly dry weather would prevail over the region. No significant change in maximum temperatures over many parts of central India during next 2-3 days.
- Weather Warning: Heat wave conditions would prevail over some parts of Madhya Pradesh on 6th and 7th June.

- Weather Outlook: Weather would be mainly dry over the region.
- Advisories:

Madhya Pradesh:

- As heat wave conditions would prevail at some parts of Madhya Pradesh on 6th and 7th June, apply light and frequent irrigation to the standing crops or undertake soil mulching/ mulching with straw/polythene to cope up with the excess evaporative demand due to high temperature.
- As prevailing temperature is high, undertake soil mulching / apply mulch in young fruit plants in Jhabua Hill Zone of Madhya Pradesh.
- As mainly dry weather and high temperature conditions are prevailing, apply irrigation to mango and jack fruit in Bundelkhand Zone of Madhya Pradesh and to protect the citrus plants from sun burn, paint the stem with lime and vlitox mixture and irrigate the plants.
- As dry weather is prevailing harvest matured vegetables in Jhabua Hill Zone, Nimar Valley Zone and Bundelkhand Zone of Madhya Pradesh.
- Due to prevailing hot weather, there is possibility of attack of stem borer in sugarcane in Vindhya Plateau Zone of Madhya Pradesh; apply Phorate 10 G @ 10 kg/ha.
- Due to prevailing hot weather, there is possibility of attack of sucking insect and leaf curl disease in vegetables, in Central Narmada Valley Zone of Madhya Pradesh, spray Imidachlorpid @ 0.03% solution at 15 days interval.
- Chhattisgarh:
- As mainly dry weather would prevail, apply irrigation in summer rice, maize, sugarcane and mango and litchi orchards in North Hill Zone of Chhattisgarh.
- Farmers in North Hill Zone and Plain Zone of Chhattisgarh are advised to start land preparation for nursery sowing of rice and arrange for farm inputs for *kharif* sowing.
- As prevailing temperature is high, apply irrigation in vegetables in Chhattisgarh Plain Zone, undertake mulching with paddy straw in summer vegetables (okra, tomato and brinjal) and soil mulching in groundnut and moong.
- As mainly dry weather is prevailing harvest matured mango and litchi in North Hill Zone of Chhattisgarh.
- ➤ Due to prevailing high temperature there is possibility of attack of maize stem borer in Plain Zone of Chhattisgarh, apply Carbofuran @ 2-3 grain per plant.
- Animal Husbandry
- As heat wave conditions would occur over west Madhya Pradesh during 6th and 7th June, 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.
- In view of increasing 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 sheds/ under shade.

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









Mango Sugarcane Green Gram Onion

- Realised Rainfall: Rainfall occurred in Begusarai, Katihar, Kishanganj and Purnea districts of Bihar; in Godda and Pakur districts of Jharkhand; in all districts of Sikkim; in all districts of Sub-Himalayan West Bengal except North Dinajpur; in Burdwan, East Midnapore, Hooghly, Howrah, Kolkata, Nadia, North 24 Parganas and South 24 Parganas districts of Gangetic West Bengal.
- Weather Forecast: Rain/thundershowers would occur at most places over Andaman & Nicobar Islands, at many places over Sub-Himalayan West Bengal & Sikkim and at isolated places over Odisha during the period. Mainly dry/dry weather would prevail over Gangetic West Bengal during next 48 hours and rain/thundershowers would occur at isolated places thereafter. Mainly dry weather would prevail over rest parts of the region.

 No significant change in maximum temperatures over many parts of east India during next 2-3 days.
- **Weather Warning:** Isolated heavy rainfall would occur over Sub-Himalayan West Bengal on 6th and 7th June and over Andaman & Nicobar Islands on 7th and 8th June.

• Weather Outlook: Rain/thundershowers would occur at many places over Sub-Himalayan West Bengal & Sikkim and at isolated places over Gangetic West Bengal. Rain/thundershowers would occur at many places over Andaman & Nicobar Islands. Weather would be mainly dry over rest of the region.

• Advisories:

West Bengal:

- As rain/thundershowers would occur at many places over Sub-Himalayan West Bengal & Sikkim during the period along with isolated heavy rainfall on 6th and 7th June, 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.
- In coastal Saline Zone of West Bengal, undertake land preparation for sowing of direct seeded *aman* rice utilising the realised rainfall.
- In New Alluvial Zone of West Bengal, prevailing high temperature and humidity may cause stem-rot disease in pointed gourd. To control the attack of stem-rot, apply Bavistin or Benlate @1g per litre of water. Also there is chance of the attack of stem weevil in jute. To control it spray Dimethoate 2 ml/litre or Carbaryl @ 2 g/litre of water.
- Due to humid weather, there is possibility of stem and fruit rot in pointed gourd in Terai Zone of West Bengal. Spray Mancozeb 64%+ Metalaxyl 8% @ 1 g per litre of water by wetting the plant and leaf after current spells of rain. Damping off may also occur in vegetable nursery, to manage the disease, spray Carbendazim 12% + Mancozeb 64% @2 g/litre of water after current spells of rain.
- ➤ Due to high humidity, there is chance of attack of blight and root rot in cucumber in Coastal Saline Zone of West Bengal. Drenching should be done at the base with Diathane –M-45@2.5g/litre of water.

Andaman & Nicobar Islands:

Continue transplanting of brinjal and chilli in north and middle Andaman utilizing the realized and expected rainfall

Odisha

- In North Eastern Coastal Plain Zone of Odisha, continue land preparation and sowing of jute and direct sowing of *kharif* rice taking advantage of realised rainfall.
- Prevailing high temperature is congenial for early shoot borer infestation in sugarcane at grand growth stage in Western Undulating Zone of Odisha. Spray Monocrotophos 2ml/litre of water for its control.
- Due to humid weather there is chance of occurrence of fruit & shoot borer in brinjal and tomato in North Central Plateau Zone of Odisha. Collect the infested fruit and shoot and burry it in the soil and spray Spinosad 48 EC @ 1 ml in 4 litres of water.
- In Mid Central Table Land Zone and in East and South Eastern Coastal Plain Zone of Odisha fruit and shoot borer in brinjal has been reported and likely to continue. To control it, install Pheromone trap@12 nos /ac. Alternately, spray Cartap Hydrochloride 50 SP @ 400 g/ha or Triazophos 40 EC @ 1000 ml/ha.

Bihar:

- In North West Alluvial Plain Zone of Bihar, undertake land preparation for sowing of *kharif* crops and prepare the nursery for sowing of long duration rice varieties utilizing the realised rainfall. As mainly dry weather would prevail, continue harvesting of litchi and maize.
- ➤ By utilizing the realised rainfall, prepare seed bed for *kharif* onion and prepare nursery for sowing of medium duration hybrid rice varieties in South Bihar Alluvial Zone. Undertake planting of turmeric utilizing realized rainfall.

Jharkhand:

- ➤ In South Eastern Plateau Zone of Jharkhand, undertake land preparation for sowing of direct seeded upland rice and prepare the nursery for sowing of long duration rice varieties and continue land preparation for planting of ginger, turmeric and elephant foot yam utilizing the realised rainfall.
- Continue land preparation in upland areas for sowing of *kharif* crops and planting of ginger and turmeric in Western Plateau Zone of Jharkhand utilizing the realised rainfall.
- Due to hot and humid weather there is chance of anthracnose and leaf blight in cucurbitaceous vegetables in South Eastern Plateau Zone of Jharkhand, spray Blitox 50 or Copperoxychloride @ 3 g per liter of water.

Animal Husbandry

In North West Alluvial Plain Zone of Bihar, farmers are advised to carry out vaccination of their animals against the Black Quarter, anthrax and other diseases.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]









Rice Groundnut Green Gram Mango

- **Realised Rainfall:** Weather remained mainly dry over the region.
- Weather Forecast: Rain/thundershowers would occur at isolated places over Konkan & Goa and Madhya Maharashtra and Marathwada during the period. Weather would be mainly dry over Vidarbha and dry over Gujarat State during the period.
 - No significant change in maximum temperatures over many parts of West India during next 2-3 days.
- **Weather Warning:** Heat wave conditions would prevail at some parts of Vidarbha on 6th and 7th June and at some parts of Gujarat State on 6th, 7th and 8th June.
- Weather Outlook: Weather would be mainly dry over the region.
- Advisories:
 - As heat wave conditions would prevail at some parts of Gujarat region and Saurashtra & Kutch during the period and over Vidarbha on 6th and 7th June, apply light and frequent irrigation to the standing crops or undertake soil mulching/ mulching with straw/polythene to cope up with the excess evaporative demand due to high temperature.
 - Maharashtra:
 - As heat wave condition would prevail over some parts of Vidarbha on 6th and 7th June, apply light and frequent irrigation 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. As no significant rain is expected, apply irrigation to summer vegetables.
 - In Konkan, undertake nursery sowing of rice and finger millet and sowing of fresh mango stones (seed) on beds. Dig the pits for new plantation of mango, cashew, coconut, arecanut and expose the pits to sunlight.
 - In Madhya Maharashtra, apply irrigation to summer vegetable crops and sugarcane. Continue intercultural operations and fertilizer application in sugarcane and vegetables. Considering the heat wave conditions in North Madhya Maharashtra, apply mulch of crop residues and other plant waste product in the orchards and sugarcane trash in sugarcane. Apply irrigation to sugarcane by alternate furrow method in water stress condition. Raise temporary shed to protect the newly planted grafts and saplings from scorching sun.
 - ➤ In Marathwada, as no significant rain is expected and due to persisting high temperature, apply irrigation to summer sugarcane, orchard crops like banana, pomegranate, fig (drip irrigation) and vegetable crops in morning or evening hours. As day temperature is 40-42°C, apply mulch of crop residues and other plant waste product in the orchards and sugarcane trash in sugarcane. Raise temporary shed to protect the newly planted grafts and saplings from scorching sun.
 - Due to cloudy weather in Marathwada region, there may be attack of thrips in summer chilli; spray Fipronil 5% @ 20ml per 10 litres of water.
 - Gujarat:
 - ➤ Under high temperature condition and no rain forecast in North Gujarat Zone, apply irrigation in old and newly planted pomegranate and papaya orchards and in vegetable crops at fruiting stage at regular intervals. Protect young saplings by erecting temporary shade. As dry weather is prevailing undertake harvesting and threshing of pearl millet and green gram.
 - As dry weather would prevail in South Gujarat Heavy Rainfall Zone, complete harvesting and threshing of early varieties of summer rice and green gram crop at the earliest. In view of high temperature forecast, cover papaya fruits using gunny bags. Irrigate brinjal, tomato, okra and other vegetable crops in morning hours. Pluck matured fruits regularly.
 - As high temperature (max. temp. 42-43°C) is prevailing in North Saurashtra Zone, apply light and frequent irrigation in vegetable crops. For new cultivation of orchard crops dig out pits of proper size at proper distance. Undertake land preparation for sowing of *kharif* groundnut, pulses, sesame, pearl millet and rainfed cotton. Apply 25 kg/ha nitrogen and 25 kg/ha P2O5 as basal dose. Procure seeds of good quality for *kharif* sowing well in advance.
 - As dry and hot conditions are prevailing, protect new grafts and newly planted fruit crops from sun burn by erecting temporary shed in South Gujarat Zone. Before monsoon spray Stomp 30 EC or Basalin 45EC @ 2.5 litre of water/ha for control of all types of weeds.

• Animal Husbandry

- As heat wave condition would prevail at some parts of Gujarat region and Saurashtra & Kutch during the period, keep animals under shade/in sheds during noon time and provide plenty of cool and clean drinking water. Vaccinate animals against FMD and BQ to avoid disease outbreak during monsoon season. Provide 6-8 kg good quality dry roughage with 15-20 kg green fodder to the animals.
- As heat wave condition would prevail over some parts of Vidarbha, hang gunny bags from outside the poultry sheds and sprinkle it with water. Cover the roof with grass or gunny bags and keep proper ventilation in poultry sheds.

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

Annexure I Week by week Rainfall Distribution

	21.05.14		28.05.14		04.06.14	
Sub-Divisions	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	40.5	-52	13.3	-78	29.8	-62
Dibang Valley	40.0	-38	2.0	-97	0.0	-100
East Kameng	20.2	-64	59.9	56	5.8	-88
East Siang	79.6	0	193.5	153	59.2	-37
Kurung Kumey	**	**	**	**	**	**
Lohit	16.7	-77	41.8	-27	52.9	-35
Lower Dibang Valley	79.1	24	77.5	31	39.1	-53
Lower Subansari	**	**	**	**	**	**
Papumpara	87.8	44	190.0	95	212.2	24
Tawang	73.0	2	34.0	-59	40.0	-64
Tirap	8.8	-88	25.4	-71	20.6	-82
Upper Siang	267.8	156	58.8	-49	40.2	-68
Upper Subansari	19.4	-42	8.6	-80	24.2	-48
West Kameng	24.4	-66	10.6	-87	70.4	-37
West Siang	24.5	-66	28.5	-48	29.0	-61
Assam & Meghalaya						
Assam						
Baksa	37.3	-56	32.5	-64	28.1	-82
Barpeta	81.8	-3	57.4	-36	58.7	-63
Bongaigaon	61.8	-23	78.8	-34	62.4	-50
Cachar	24.5	-73	33.3	-57	67.9	-37
Chirang	193.2	141	127.2	7	122.5	-1
Darrang	19.0	-70	26.0	-57	15.0	-82
Dhemaji	161.0	107	46.0	-44	87.0	-11
Dhubri	61.2	-30	74.4	-22	47.7	-66
Dibrugarh	19.0	-68	49.3	-27	20.6	-72
Goalpara	15.6	-83	78.3	-14	88.1	-27
Golghat	3.3	-94	9.2	-81	15.0	-70
Hailakandi	21.0	-78	32.7	-66	58.3	-47
Jorhat	20.5	-67	51.1	-12	51.2	-14
Kamrup(Rural)	20.6	-69	51.2	-15	27.2	-67
Kamrup(Metro)	2.0	-97	42.8	-29	21.5	-74
Karbi Anglong	5.2	-85	9.9	-73	36.1	14
Karimganj	73.0	-48	53.3	-50	171.3	4
Kokrajhar	99.8	22	187.7	39	150.3	-10
Lakhimpur	95.0	22	60.0	-27	101.6	4
Morigaon	3.0	-92	14.9	-63	55.8	28
N.C.Hills	91.7	10	17.8	-66	19.7	-77
Nowgong	2.7	-91	5.8	-82	28.1	-47
Nalbari	33.2	-58	58.8	-6	30.9	-69
Sonitpur	34.3	-42	23.6	-64	70.9	-7
Sibsagar	6.2	-88	16.8	-67	37.2	-36
Tinsukia	22.9	-59	23.6	-61	37.5	-43

Udalgiri	27.6	-57	21.5	-64	29.0	-65
Meghalaya						
East Garo Hills	76.4	2	137.7	124	46.0	-46
East Khasi Hills	87.0	-45	139.1	-11	130.9	-44
Jaintia Hills	1.0	-99	0.0	-100	0.0	-100
Ribhoi	4.4	-93	51.1	3	14.0	-79
South Garo Hills	4.0	-95	**	**	**	**
West Garo Hills	20.4	-76	102.6	42	43.8	-54
West Khasi Hills	1.0	-99	1.0	-99	1.0	-99
NMMT						
Mizoram						
Aizwal	17.9	-79	58.4	-32	47.2	-55
Champhai	0.0	-100	1.0	-98	0.0	-100
Kolasib	0.0	-100	0.0	-100	1.0	-99
Lawngtlai	**	**	**	**	**	**
Lunglei	1.0	-99	1.0	-99	1.0	-99
Mamit	11.0	-87	**	**	**	**
Saiha	40.0	-61	85.0	-11	9.0	-85
Serchhip	6.0	-92	36.0	-58	23.0	-67
Manipur						
Bishnupur	27.0	-31	8.0	-64	1.0	-99
Chandel	17.0	-26	40.0	-30	3.0	-95
Churachandpur	15.0	-71	38.0	-13	4.0	-96
Imphal east	27.4	-45	11.3	-69	23.4	-67
Imphal west	31.7	19	76.8	473	104.9	121
Senapati	44.0	1	32.0	-5	24.0	-66
Tamenglong	**	**	**	**	**	**
Thoubal	2.0	-93	5.0	-79	3.0	-95
Ukhrul	0.0	-100	0.0	-100	1.0	-98
Nagaland						
Dimapur	1.0	-97	5.0	-74	39.9	-11
Kephire	**	**	**	**	**	**
Kohima	8.3	-80	26.3	-23	42.3	-8
Longleng	**	**	**	**	**	**
Mokokchung	0.0	-100	15.0	-83	45.0	-25
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	4.0	-90	17.0	-50	8	-83
Tuensang	**	**	**	**	**	**
Wokha	**	**	1.0	-99	5.0	-93
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	26.0	-73	22.4	-75	131.0	9
North tripura	58.1	-39	34.7	-62	158.4	24
South tripura	3.5	-96	57.6	-15	97.3	7
West tripura	9.7	-88	31.7	-54	102.8	0
Himachal Pradesh						
Bilaspur	0.0	-100	1.3	-89	14.0	50
Chamba	12.4	2	18.1	102	14.8	62
Hamirpur	0.3	-97	4.6	-61	20.3	65

Kangra	4.1	-59	1.3	-85	37.6	233
Kinnaur	1.3	-91	25.2	105	6.3	-19
Kullu	6.5	-60	24.2	56	19.0	79
Lahaul and Spiti	5.7	-71	45.1	175	15.7	27
Mandi	7.8	-50	17.1	30	14.6	-24
Shimla	0.0	-100	13.4	1	13.9	-4
Sirmaur	0.0	-100	15.7	93	21.8	132
Solan	0.0	-100	2.4	-76	12.1	-7
Una	3.9	-27	1.0	-79	12.6	74
Punjab						
Amritsar	0.1	-98	0.2	-89	0.2	-93
Barnala	0.0	-100	0.0	-100	0.0	-100
Bhatinda	4.0	122	0.0	-100	5.0	150
Faridkot	0.0	-100	0.5	-75	0.0	-100
Fatehgarh Saheb	**	**	0.0	-100	0.0	-100
Ferozpur	0.7	-77	0.0	-100	0.0	-100
Gurdaspur	0.6	-85	0.8	-77	0.6	-88
Hoshiarpur	0.0	-100	0.0	-100	5.1	5
Jalandhar	0.0	-100	0.0	-100	0.0	-100
Kapurthala	0.0	-100	0.5	-71	0.0	-100
Ludhiana	0.0	-100	1.7	-55	0.7	-78
Mansa	0.5	-78	0.0	-100	0.5	-77
Moga	0.0	-100	0.5	-78	0.5	-62
Muktesar	10.0	108	0.0	-100	0.0	-100
Nawashahar	1.2	-76	0.0	-100	2.2	-41
Patiala	0.0	-100	0.7	-76	0.0	-100
Ropar	0.0	-100	0.8	-86	1.7	-51
Sangrur	0.0	-100	0.0	-100	0.0	-100
Mohali	0.0	-100	4.5	-13	0.0	-100
TarnTaran	0.0	-100	0.0	-100	2.5	213
Haryana, Chd, Delhi	0.0	-100	0.0	-100	2.0	213
Haryana Haryana						
Ambala	0.0	-100	1.1	-69	0.0	-100
Bhiwani	0.1	-97	0.0	-100	9.7	214
Chandigarh	0.0	-100	0.1	-99	0.0	-100
Faridabad	0.0	-100	1.0	-57	0.0	-100
Fatehabad	2.0	0	0.0	-100	2.5	-49
Gurgaon	19.0	660	2.6	-4	2.3	-22
Hissar	3.9	11	0.7	-67	4.2	8
Jhajar	0.0	-100	0.0	-100	2.2	-30
Jind	0.0	-100	9.8	228	12.5	257
Katihal	0.7	40	1.0	-52	1.0	-64
Karnal	0.0	-100	0.0	-100	0.0	-100
Kurukshetra	0.0	-100	0.0	-100	0.0	-100
Mahendragarh	0.0	-100	1.6	-55	9.9	81
Mewat	0.0	-100	0.0	-100	1.0	-50
Palwal	0.0	-100	0.0	-100	0.0	-100
Panchkkula	0.0	-100	0.0	-100	0.0	-100
Panipat	0.1	-88	5.3	252	0.0	-100
1 ampai	V.1	-00	3.3	252	0.0	-100

Rewari	0.0	-100	2.2	120	7.6	111
Rohtak	2.1	-33	0.3	-87	2.6	-56
Sirsa	3.0	58	0.0	-100	4.5	29
Sonepat	0.0	-100	3.4	-4	8.0	196
Yamunanagar	0.0	-100	3.2	-45	1.5	-78
Delhi						
Central Delhi	0.0	-100	11.0	144	3.0	-33
East Delhi	0.0	-100	0.0	-100	1.0	-78
New Delhi	0.0	-100	21.7	382	0.7	-86
North Delhi	0.0	-100	12.1	169	10.1	124
North East Delhi	0.0	-100	11.0	144	16.0	256
North West Delhi	0.0	-100	8.5	89	3.0	-33
South Delhi	0.0	-100	5.3	18	2.0	-56
South West Delhi	0.0	-100	11.6	158	0.4	-91
West Delhi	0.0	-100	13.0	189	3.0	-33
Jammu & Kashmir						
Anantnag	46.3	116	9.0	-61	21.9	53
Badgam	13.4	-31	5.5	-67	10.4	37
Bandipore	**	**	**	**	**	**
Baramula	33.5	45	19.5	-15	19.0	-22
Doda	22.2	30	15.8	-12	16.4	40
Ganderbal	46.8	198	16.6	12	13.2	36
Jammu	0.1	-99	0.0	-100	1.2	-75
Kargil	0.0	-100	0.0	-100	0.0	-100
Kathua	0.0	-100	0.0	-100	1.6	-64
Kistwar	**	**	**	**	**	**
Kulgam	27.3	28	9.4	-59	19.8	38
Kupwara	19.6	-12	5.8	-73	37.2	135
Ladakh(Leh)	0.0	-100	0.7	-70	0.0	-100
Poonch	10.8	-54	0.3	-98	8.5	-60
Pulwama	23.7	14	3.9	-75	12.1	44
Rajouri	5.6	19	0.0	-100	10.3	7
Ramban	27.5	61	9.1	-49	7.3	-37
Reasi	2.2	-71	0.6	-92	13.6	36
Samba	10.6	126	0.0	-100	6.0	28
Shopian	27.0	29	7.0	-55	16.0	90
Srinagar	21.4	36	6.9	-53	13.1	35
Udhampur	6.0	-21	0.0	-100	8.2	-18
East Madhya Pradesh						
Anuppur	0.0	-100	0.0	-100	0.0	-100
Balaghat	0.0	-100	2.3	158	0.7	-84
Chhatarpur	0.0	-100	1.2	-33	0.6	-81
Chindwara	2.5	174	0.0	-100	0.0	-100
Damoh	0.0	-100	0.0	-100	1.0	-79
Dindori	0.0	-100	0.0	-100	0.0	-100
Jabalpur	1.0	19	0.0	-100	0.0	-100
Katni	0.0	-100	0.0	-100	0.0	-100
Mandla	0.0	-100	0.0	-100	0.0	-100
· · · · · · · · · · · · · · · · · · ·	0.0	-100	0.0	-100	0.0	-100

Panna	0.0	-100	0.0	-100	0.0	-100
Rewa	0.0	-100	0.0	-100	0.0	-100
Sagar	0.0	-100	0.0	-100	0.0	-100
Satna	0.0	-100	0.3	-70	1.0	-43
Seoni	1.2	-50	0.0	-100	0.0	-100
Shahdol	0.0	-100	0.0	-100	0.0	-100
Sidhi	0.0	-100	0.0	-100	0.0	-100
Singrauli	0.0	-100	0.0	-100	0.0	-100
Tikamgarh	0.0	-100	1.5	25	0.0	-100
Umaria	0.0	-100	0.0	-100	1.3	-54
West Madhya Pradesh		200		200		
Alirajpur	0.0	-100	0.0	-100	0.0	-100
Asoknagar	0.0	-100	0.0	-100	0.0	-100
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	0.4	-73	0.0	-100	0.0	-100
Bhind	0.0	-100	0.0	-100	0.0	-100
Bhopal	1.4	-22	3.0	43	0.0	-100
Burhanpur	0.0	-100	0.0	-100	0.0	-100
Datia	0.0	-100	0.6	-45	3.0	114
Dewas	0.0	-100	0.0	-100	0.0	-100
Dhar	0.0	-100	0.0	-100	0.0	-100
Guna	0.0	-100	0.3	-86	0.0	-100
Gwalior	0.0	-100	2.1	-5	6.8	300
Harda	0.0	-100	0.0	-100	0.0	-100
Hosangabad	2.7	108	0.0	-100	0.0	-100
Indore	1.5	114	0.3	-90	0.0	-100
Jhabua	0.0	-100	0.0	-100	0.0	-100
Khandwa	0.0	-100	0.0	-100	4.0	25
Khargone	0.0	-100	0.0	-100	1.6	-74
Mandsaur	0.0	-100	0.0	-100	0.0	-100
Morena	0.0	-100	0.0	-100	0.0	-100
Neemuch	0.0	-100	0.0	-100	0.0	-100
Raisen	0.0	-100	0.0	-100	0.0	-100
Rajgarh	0.0	-100	1.2	71	0.0	-100
Ratlam	0.0	-100			0.0	-100
Sehore	+		0.0	-100		
Shajapur	3.3	-100	0.0	-100	0.0	-100
J 1	_	150	0.3	-86	0.0	-100
Sheopur Kalani	0.0	-100	0.0	-100	0.0	-100
Shivpuri	_	-74	0.0	-100	0.0	-100
Ujjain Vidisha	0.4	-33	0.0	-100	0.0	-100
Vidisha Chhattisgarh	0.0	-100	0.0	-100	0.0	-100
Bastar	57.2	557	3.0	-57	42.5	217
Bijapur	49.2	1487	0.0	-100	0.0	-100
Bilaspur	0.0	-100	13.0	306	2.7	-72
Dantewara	0.0	-100	0.0	-100	7.6	-34
Dhamtari	0.0	-100	0.8	-72	6.4	-10
Durg	0.0	-100	47.6	2544	0.4	-93
Janjgir	0.0	-100	2.0	33	0.0	-100
Janilan	0.0	-100	2.0	33	0.0	-100

Jashpurnagar	0.0	-100	3.5	-56	7.7	-58
Kanker	**	**	0.0	-100	0.0	-100
Korba	0.0	-100	1.0	-50	0.0	-100
Koriya	0.0	-100	0.0	-100	0.7	-94
Kawardha	0.0	-100	0.0	-100	8.1	-5
Mahasumund	0.0	-100	0.0	-100	2.0	-82
Narayanpur	**	**	0.0	-100	0.0	-100
Raigarh	**	**	**	**	**	**
Raipur	2.0	-44	11.9	285	5.7	-29
Rajandgaon	0.0	-100	4.8	66	0.0	-100
Surguja	0.0	-100	21.0	600	0.0	-100
East Uttar Pradesh						
Allahabad	0.0	-100	0.0	-100	0.0	-100
Ambedkar Nagar	0.0	-100	38.3	682	2.0	-66
Azamgarh	0.0	-100	0.0	-100	3.5	-43
Bahraich	0.0	-100	0.0	-100	0.2	-98
Ballia	0.0	-100	39.0	852	0.0	-100
Balrampur	0.0	-100	0.0	-100	0.0	-100
Banda	0.4	-91	0.5	-83	2.4	-20
Barabanki	0.0	-100	0.0	-100	7.0	35
Basti	0.0	-100	12.5	150	0.6	-94
Chandauli	0.0	-100	3.0	7	1.0	-60
Deoria	0.0	-100	4.0	-49	3.5	-63
Faizabad	0.0	-100	0.0	-100	7.7	-3
Farrukhabad	0.0	-100	0.0	-100	0.0	-100
Fatehpur	0.0	-100	0.0	-100	0.0	-100
Gazipur	0.0	-100	3.3	43	17.0	227
Gonda	0.0	-100	0.0	-100	0.0	-100
Gorakhpur	0.0	-100	20.6	311	2.3	-83
Hardoi	0.0	-100	0.5	-83	2.9	-40
Jaunpur	0.0	-100	7.6	124	4.1	-23
Kannauj	0.0	-100	0.0	-100	0.0	-100
Kanpur City	0.0	-100	0.0	-100	0.0	-100
Kanpur Dehat	0.0	-100	0.0	-100	0.0	-100
Kaushambi	0.0	-100	0.0	-100	0.0	-100
Kheri	0.0	-100	0.4	-93	1.6	-81
Kushi nagar	0.0	-100	5.0	-40	3.0	-81
Lucknow	0.0	-100	0.0	-100	0.3	-95
Maharajganj	0.0	-100	5.7	-46	13.0	6
Mau	0.0	-100	0.0	-100	3.0	-47
Mirzapur	2.5	-17	6.0	114	1.7	-66
Pratapgarh	0.0	-100	0.0	-100	12.7	273
RaiBarelly	0.0	-100	0.0	-100	0.4	-84
Sahuji Maharajnagar	0.0	-100	0.0	-100	0.0	-100
Sant Kabirnnagar	0.0	-100	3.0	0	1.3	-86
Sant Ravidas Nagar	0.0	-100	0.0	-100	0.0	-100
Shrawasti	**	**	**	**	0.0	-100
Sidharthnagar	0.0	-100	0.0	-100	0.0	-100
Sitapur	0.0	-100	1.1	-69	0.0	-100

Sonbhadra	2.0	-17	6.5	148	0.8	-85
Sultanpur	0.0	-100	0.0	-100	6.1	43
Unnao	0.0	-100	0.0	-100	1.8	-64
Varanasi	2.1	17	6.4	205	1.3	-60
West Uttar Pradesh						
Agra	0.0	-100	0.5	-79	0.0	-100
Aligarh	0.0	-100	2.8	8	2.3	-43
Auraiya	0.0	-100	1.0	-66	0.0	-100
Badaun	0.0	-100	0.0	-100	1.6	-78
Baghpat	0.0	-100	15.6	643	1.9	-42
Bareilly	0.0	-100	0.0	-100	0.0	-100
Bijnor	0.0	-100	5.3	14	0.0	-100
Bulandsahar	0.0	-100	1.3	-46	1.0	-75
Etah	0.0	-100	1.3	-31	0.0	-100
Etawah	0.0	-100	0.0	-100	0.0	-100
Firozabad	0.0	-100	0.0	-100	0.0	-100
GBNagar	0.0	-100	9.5	3067	3.0	50
Ghaziabad	0.0	-100	9.9	397	1.7	-48
Hamirpur	0.5	-64	0.8	-75	2.8	-26
Jalaun	0.0	-100	2.7	48	11.7	185
Jhansi	0.4	-76	0.7	-70	0.7	-81
Jotiba Phule Nagar	0.0	-100	8.0	300	0.0	-100
Kanshiramnagar	0.0	-100	5.5	162	0.0	-100
Lalitpur	0.0	-100	1.0	-14	0.0	-100
Mahamaya Nagar	0.0	-100	0.5	-76	6.1	117
Mahoba	0.0	-100	0.0	-100	0.0	-100
Mainpuri	0.0	-100	0.0	-100	0.0	-100
Mathura	0.0	-100	0.0	-100	0.0	-100
Meerut	0.0	-100	17.1	970	1.4	-75
Moradabad	0.0	-100	0.7	-77	0.0	-100
Muzzaffarnagar	0.0	-100	2.8	8	0.0	-100
Pilibhit	0.0	-100	0.0	-100	0.0	-100
Rampur	0.0	-100	0.0	-100	0.0	-100
Saharanpur	0.0	-100	1.3	-80	0.0	-100
Shahjahanpur	0.0	-100	0.0	-100	0.0	-100
Uttarakhand						
Almora	0.0	-100	11.1	-3	2.5	-86
Bageshwar	0.0	-100	20.1	75	1.1	-94
Chamoli	0.0	-100	11.6	-18	0.3	-98
Champawat	0.0	-100	4.0	-64	1.3	-92
Dehradun	0.0	-100	10.8	-6	43.2	136
Garhwal Pauri	0.0	-100	2.7	-73	12.5	-24
Garhwal Tehri	0.0	-100	15.1	14	1.5	-92
Haridwar	0.0	-100	2.5	-31	2.5	-66
Nainital	0.0	-100	8.1	-35	10.1	-61
Pithorgarh	0.0	-100	9.5	-63	7.0	-70
Rudraprayag	0.0	-100	21.6	-3	0.0	-100
Udham Sing Nagar	0.0	-100	0.0	-100	10.5	-33
Uttarkashi	1.9	-92	17.5	-40	0.0	-100

Bihar						
Araria	0.0	-100	101.8	206	26.8	-23
Arwal	0.0	-100	12.3	262	5.5	-20
Aurangabad	0.0	-100	21.6	516	5.7	-10
Banka	0.0	-100	155.6	1328	13.2	-12
Begusarai	0.0	-100	194.6	1094	39.3	397
Bhabua	0.0	-100	1.5	-67	5.0	11
Bhagalpur	0.0	-100	168.2	845	23.8	30
Bhojpur	0.0	-100	42.1	454	1.4	-68
Buxar	0.0	-100	2.6	100	1.2	-88
Darbhanga	0.0	-100	83.1	326	0.4	-98
East Champaran	0.0	-100	70.6	390	16.5	2
Gaya	0.0	-100	63.7	1228	19.6	201
Gopalganj	0.0	-100	12.6	22	3.6	-68
Jahanabad	0.0	-100	36.7	312	3.9	-33
Jamui	0.0	-100	76.9	580	19.3	94
Kathihar	0.0	-100	190.7	634	48.6	79
Khagadia	0.0	-100	29.6	97	14.0	-17
Kishanganj	15.1	-49	63.3	25	118.4	139
Lakhisarai	0.0	-100	203.7	1822	20.6	65
Madhepura	0.0	-100	192.5	808	5.0	-78
Madhubani	0.0	-100	70.5	239	1.1	-94
Monghyar	0.0	-100	255.4	2309	14.1	13
Muzaffarpur	0.0	-100	63.8	320	1.5	-90
Nalanda	0.0	-100	92.8	991	3.1	-66
Nawada	0.0	-100	52.1	506	12.3	13
Patna	0.0	-100	61.7	745	13.8	84
Purnea	0.0	-100	133.0	346	135.6	240
Rohtas	0.0	-100	59.0	1744	7.5	436
Saharsha	0.0	-100	80.4	219	0.0	-100
Samstipur	0.0	-100	78.5	394	0.0	-100
Saran	0.0	-100	55.1	392	0.0	-100
Sheikpura	0.0	-100	152.2	1223	6.4	-44
Sheohar	0.0	-100	54.2	156	25.2	11
Sitamarhi	0.0	-100	127.0	499	5.0	-78
Siwan	0.0	-100	29.6	162	3.2	-69
Supaul	0.0	-100	107.7	549	14.2	-42
Vaishali	0.0	-100	67.6	735	2.1	-73
West Champaran	0.0	-100	5.8	-65	16.8	-14
Jharkhand						
Bokaro	0.0	-100	124.5	1941	5.9	-66
Chatra	0.0	-100	90.4	1313	4.5	-46
Deoghar	0.0	-100	11.6	603	4.7	-59
Dhanbad	0.0	-100	44.1	320	20.0	15
Dumka	0.0	-100	89.7	428	20.9	14
East Singbhum	0.0	-100	45.8	174	10.1	-50
Garhwa	0.0	-100	21.0	1400	1.0	-86
Giridih	0.0	-100	118.4	1362	15.4	4
Godda	0.0	-100	158.3	795	41.2	210

Gumla	0.0	-100	0.0	-100	0.0	-100
Hazaribagh	0.0	-100	116.7	1241	3.3	-65
Jamtara	0.0	-100	46.6	118	17.9	-22
Khunti	0.0	-100	27.0	129	0.0	-100
Koderrna	0.0	-100	54.6	452	9.4	-47
Latehar	0.0	-100	83.2	1310	2.0	-82
Lohardagga	0.0	-100	80.6	420	0.0	-100
Pakur	0.0	-100	58.6	222	51.2	81
Palamau	0.0	-100	10.2	162	1.5	-80
Ramgarh	0.0	-100	74.4	629	3.8	-74
Ranchi	0.0	-100	49.5	338	3.1	-82
Sahebganj	0.0	-100	268.8	881	5.4	-78
Saraikela	0.0	-100	28.5	139	6.3	-58
Simdega	0.0	-100	49.1	573	0.0	-100
West Singbhum	0.0	-100	64.8	360	0.0	-100
East Rajasthan						
Ajmer	0.0	-100	1.6	-58	0.0	-100
Alwar	0.2	-93	0.9	-71	18.4	424
Banswara	0.0	-100	0.0	-100	0.0	-100
Baran	0.0	-100	0.0	-100	0.0	-100
Bharatpur	0.0	-100	0.0	-100	0.0	-100
Bhilwara	0.0	-100	0.0	-100	0.2	-95
Bundi	0.0	-100	2.6	3	0.0	-100
Chittorgarh	1.2	-10	0.0	-100	0.1	-98
Dausa	0.0	-100	5.8	32	15.2	334
Dholpur	0.0	-100	0.0	-100	0.0	-100
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	0.5	-85	2.9	-43	7.6	90
Jhalawar	0.5	-59	0.0	-100	0.0	-100
Jhunjhunu	0.3	-95	1.5	-68	10.6	80
Karauli	0.0	-100	0.9	-76	0.0	-100
Kota	1.5	35	0.2	-92	0.0	-100
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
Rajsamand	3.6	225	4.3	-11	0.0	-100
Sawai Madhopur	0.0	-100	1.5	-53	0.0	-100
Sikar	0.0	-100	0.6	-88	12.7	131
Sirohi	0.0	-100	0.5	-81	6.1	-17
Tonk	0.0	-100	4.0	50	0.9	-80
Udaipur	14.9	1395	0.0	-100	1.0	-79
West Rajasthan						
Barmer	11.0	686	0.0	-100	4.3	-11
Bikaner	3.4	22	0.0	-100	0.9	-81
Churu	3.4	-12	0.6	-86	15.9	280
Hanumangarh	16.6	563	0.0	-100	4.0	38
Jaisalmer	7.1	374	0.0	-100	0.2	-93
Jalore	3.4	1594	0.0	-100	3.6	-21
Jodhpur	9.9	516	0.0	-100	0.0	-100
Nagaur	1.1	-67	5.5	25	1.7	-65
Pali	1.8	157	7.0	119	0.3	-96

Sri Ganganagar	11.1	311	0.0	-100	0.0	-100
Gujarat Region						
Ahmedabad	0.2	-67	0.0	-100	1.3	-49
Anand	0.0	-100	0.1	-90	0.0	-100
Banaskantha	3.9	1200	0.0	-100	0.9	-74
Baroda	0.0	-67	0.0	-100	0.1	-98
Broach	0.0	-100	0.0	-100	0.0	-100
DNH	**	**	**	**	**	**
Dahod	0.0	-100	0.0	-100	0.0	-100
Daman	**	**	**	**	**	**
Dangs	0.5	-89	0.0	-100	0.0	-100
Gandhinagar	0.0	-100	0.0	-100	0.0	-100
Kheda	0.0	-100	0.0	-100	0.0	-100
Mehsana	2.1	200	0.0	-100	0.8	-69
Narmada	0.0	-100	0.0	-100	0.0	-100
Navsari	0.0	-100	0.0	-100	0.0	-100
Panchmahal	0.0	-100	0.0	-100	0.1	-99
Patan	0.0	-100	0.0	-100	0.0	-100
Sabarkantha	0.7	238	0.0	-100	4.1	-20
Surat	0.0	-100	0.0	-100	0.0	-100
Tapi	0.0	-100	0.0	-100	0.0	-100
Valsad	0.0	-100	0.0	-100	0.0	-100
S K & Diu region						
Amreli	2.5	213	4.1	307	5.3	-27
Bhavnagar	1.7	753	0.0	-100	1.0	-92
Diu	0.0	-100	0.0	-100	0.0	-100
Jamnagar	0.0	-100	0.0	-100	0.0	-100
Junagarh	0.0	-100	0.0	-100	0.0	-100
Kutch	0.0	-100	0.0	-100	0.0	-100
Porbandar	0.0	-100	0.0	-100	0.0	-100
Rajkot	8.1	3932	0.0	-100	1.1	-78
Surendranagar	0.0	-100	0.0	-99	1.1	-72
Maharashtra & Goa						
Konkan & Goa						
Mumbai City	50.1	156	26.6	-21	0.0	-100
Mumbai Suburban	0.0	-100	0.0	-100	2.0	-92
North Goa	0.0	-100	6.2	-10	15.2	-75
Raigad	1.5	-74	0.2	-98	0.0	-100
Ratnagiri	19.7	80	2.7	-89	23.1	-49
Sindhudurg	0.0	-100	0.0	-100	23.4	-60
South Goa	**	**	**	**	19.3	-68
Thane	**	**	**	**	0.6	-97
Madhya Maharashtra						
Ahmednagar	3.8	-19	0.5	-95	4.2	-61
Dhule	0.0	-100	0.0	-100	2.3	-72
Jalgaon	0.0	-100	0.2	-92	0.8	-89
Kolhapur	3.3	-79	9.6	-54	12.9	-48
Nandurbar	0.0	-100	0.2	-96	2.1	-70
Nasik	25.7	1017	9.6	47	18.9	63

Pune	6.4	7	5.6	-49	10.4	-13
Sangli	1.3	-87	11.7	-42	13.1	-31
Satara	10.1	44	13.3	-7	29.9	76
Solapur	6.4	12	7.9	-40	6.6	-57
Marathwada						
Aurangabad	0.0	-100	0.0	-100	2.1	-81
Beed	0.0	-100	0.0	-100	4.9	-66
Hingoli	0.0	-100	0.0	-100	0.5	-95
Jalna	0.0	-100	0.0	-100	4.0	-68
Latur	2.2	-52	0.0	-100	0.0	-100
Nanded	0.3	-87	0.0	-100	0.5	-95
Usmanabad	1.7	-67	0.0	-100	4.4	-77
Parbhani	22.2	1135	0.0	-100	0.3	-98
Vidarbha						
Akola	0.2	-85	0.2	-96	2.8	-67
Amraoti	0.0	-100	0.1	-93	0.9	-88
Bhandara	0.0	-100	0.0	-100	0.0	-100
Buldhana	0.2	-85	0.0	-100	3.1	-59
Chandrapur	0.0	-100	0.1	-94	6.1	-15
Gadchiroli	0.0	-100	0.0	-100	0.0	-100
Gondia	0.0	-100	0.7	-35	0.0	-100
Nagpur	1.6	-19	0.5	-80	0.1	-99
Wardha	2.9	-33	0.0	-100	0.4	-96
Washim	0.0	-100	0.0	-100	2.6	-62
Yeotmal	0.1	-94	0.1	-98	0.7	-93
Odisha						
Angul	2.6	-78	58.6	358	8.4	-64
Balasore	1.0	-95	203.2	477	16.0	-51
Bargarh	0.0	-100	93.3	1694	0.9	-92
Bhadrak	4.6	-80	171.7	640	3.7	-86
Bolangir	0.0	-100	133.9	1594	0.0	-100
Boudh	8.3	-56	66.5	571	0.0	-100
Cuttack	0.8	-94	137.5	594	7.3	-75
Deogarh	0.5	-92	20.7	173	10.3	-33
Dhenkanal	0.4	-97	71.9	333	0.9	-96
Gajapati	10.8	-59	177.7	708	11.0	-49
Ganjam	0.9	-94	71.9	336	16.5	-8
Jagatsingpur	0.0	-100	152.6	367	3.4	-87
Jajpur	1.6	-91	130.9	426	13.3	-56
Jharsuguda	0.0	-100	33.8	463	0.3	-98
Kalahandi	0.6	-92	174.9	1598	0.0	-100
Kandhamal	1.8	-90	76.4	672	2.5	-89
Kendrapara	8.5	-48	187.2	498	13.5	-51
Keonjhar	0.0	-99	60.4	129	3.7	-88
Khurda	7.5	-58	104.1	590	10.3	-51
Koraput	2.0	-88	59.4	288	7.8	-66
Malkangiri	3.2	-74	2.0	-84	17.0	25
Mayurbhanj	0.0	-100	121.7	302	6.9	-72
Nawapara	0.0	-100	139.4	1949	0.0	-100
Nawarangpur	0.1	-99	19.0	-31	25.9	-13

Nayagarh	22.5	120	97.2	724	24.3	2
Puri	0.0	-100	126.6	773	3.0	-85
Rayagada	15.8	4	160.5	732	1.8	-90
Sambalpur	0.0	-100	24.1	217	8.7	-44
Sonepur	0.0	-100	63.6	614	1.0	-91
Sundargarh	0.0	-100	50.0	303	3.3	-80
West Bengal						
GWB						
Bankura	0.0	-100	23.7	76	26.9	6
Birbhum	0.0	-100	30.3	67	18.5	-29
Burdwan	0.0	-100	13.6	-27	33.1	36
East Midnapore	0.0	-100	139.0	362	50.5	34
Hooghly	0.0	-100	43.1	65	49.4	58
Howrah	0.5	-98	58.8	63	89.6	165
Kolkata	0.0	-100	77.0	143	56.4	37
Murshidabad	0.0	-100	45.0	62	26.0	-7
Nadia	0.0	-100	26.0	7	94.2	205
24 Pargana (N)	0.0	-100	48.0	75	39.1	-15
Purulia	0.0	-100	51.9	303	11.5	-48
24 Pargana (S)	0.0	-100	97.6	239	78.2	189
West Midnapore	0.0	-100	59.1	83	17.1	-52
SHWB & Sikkim						
Cooch Behar	38.2	-40	102.4	-10	122.0	6
Darjeeling	32.5	-48	79.1	13	104.2	56
East Sikkim	88.7	22	114.9	75	46.6	-41
Jalpaiguri	54.4	-13	96.9	-11	166.7	55
Malda	0.0	-100	81.3	211	56.1	85
North Dinajpur	0.0	-100	3.0	-90	**	**
North Sikkim	72.2	-12	77.5	5	66.7	-41
South Dinajpur	0.0	-100	33.4	-30	62.6	33
South Sikkim	23.8	-67	52.4	-20	35.7	-55
West Sikkim	20.8	-75	71.3	-3	50.7	-55
Karnataka	2000	7.0	7200			
Coastal Karnataka						
Dakshin Kannada	13.7	46.3	12.6	-78	25.6	-74
Udupi	20.8	53.5	12.0	-82	2.5	-98
Uttar Kannada	13.6	32.7	24.4	-37	11.1	-81
N I Karnataka						
Bagalkote	18.5	12.9	21.4	0	14.3	-32
Belgaum	24.4	19.2	12.5	-38	26.0	17
Bidar	12.1	6.1	0.4	-95	7.0	-56
Bijapur	8.1	11.1	12.4	-35	3.0	-83
Dharwad	29.4	20.8	19.2	-14	6.1	-72
Gadag	14.4	18.7	28.7	31	25.1	19
Gulbarga	7.7	7.2	9.5	-27	14.6	3
Haveri	9.4	20.1	12.0	-43	51.5	172
Koppal	2.9	15.5	17.2	1	8.8	-45
Raichur	7.5	10.4	15.8	8	12.5	1
Yadgir	5.3	7.3	12.3	-6	2.4	-84
S I Karnataka						

Bangalore Rural	30.2	24.1	42.6	102	23.4	-8
Bangalore Urban	28.8	26	31.1	18	32.9	12
Bellary	19.1	16.2	20.7	24	51.8	163
Chamarajnagar	16.8	34.2	18.1	-41	75.5	197
Chichballapur	41.0	20.8	50.3	205	38.8	81
Chickmagalur	17.2	33.7	2.5	-90	54.3	63
Chitradurga	33.1	18.8	10.4	-36	79.5	357
Davangere	19.7	21.7	3.3	-80	53.8	183
Hassan	16.3	26.8	16.6	-28	51.4	150
Kodagu	11.4	39.5	2.7	-93	38.4	-16
Kolar	23.9	22	46.0	154	42.2	82
Mandya	19.4	26.8	30.8	5	83.0	328
Mysore	16.2	31.6	19.3	-39	74.9	227
Ramnagara	41.3	26.6	13.7	-59	62.8	116
Shimoga	11.1	23	4.2	-78	27.1	4
Tumkur	40.5	24.6	15.4	-20	47.2	89
Kerala						
Alappuzha	4.9	-94	23.1	-71	19.5	-81
Kannur	7.5	-89	5.4	-92	48.0	-54
Ernakulam	12.3	-85	40.4	-54	27.6	-77
Idukki	3.5	-94	14.0	-78	21.7	-73
Kasaragod	14.0	-78	12.0	-84	48.8	-58
Kollam	23.7	-61	1.5	-97	26.1	-68
Kottayam	12.6	-82	44.9	-40	28.6	-75
Kozhikode	12.1	-84	9.3	-87	83.3	-34
Malappuram	8.1	-87	15.0	-72	54.5	-36
Palakkad	5.6	-87	4.4	-89	59.1	13
Pathanamthitta	22.2	-68	27.8	-60	23.1	-74
Thiruvanantapuram	0.0	-100	9.0	-83	24.6	-65
Thrissur	0.6	-99	8.2	-90	63.6	-41
Wayanad	19.6	-63	17.1	-64	60.6	-1
Tamil Nadu	1510	0.0	17,11	0.	00.0	_
Ariyalur	1.5	-91	22.0	39	12.5	-22
Chennai	0.0	-100	0.0	-100	11.2	93
Coimbatore	4.7	-80	9.9	-27	15.6	40
Cuddalore	1.9	-87	27.5	217	23.9	120
Dharmapuri	15.0	-45	76.7	199	44.4	75
Dindigul	13.8	-32	31.2	77	51.3	259
Erode	1.9	-92	11.8	-25	31.6	145
Kanchipuram	0.6	-95	6.4	-28	9.9	-7
Kanyakumari	0.2	-99	12.3	-60	7.8	-82
Karikal	0.8	-93	0.0	-100	37.5	89
Karur	2.4	-87	21.4	83	27.7	219
Krishnagiri	25.2	-5	107.8	331	41.9	75
Madurai	1.2	-92	13.4	5	44.2	263
Nagapattinam	0.0	-99	3.4	-65	19.2	134
Namakkal	1.4	-94	21.3	1	33.0	109
Nilgiris	8.5	-75	17.7	-36	27.8	14
Perambalur	7.0	-69	77.3	490	19.0	86
	7.0	-07	11.0	170	17.0	00

Puducherry	14.9	59	38.7	445	32.0	338
Pudukottai	3.5	-73	25.7	149	19.7	55
Ramanathapuram	0.0	-100	3.0	-50	6.7	42
Salem	11.7	-58	49.7	112	40.2	101
Sivaganga	0.0	-100	12.3	20	18.8	40
Thanjavur	0.1	-99	27.6	109	10.4	-3
Theni	0.0	-100	8.5	-18	17.0	118
Tirunelveli	1.1	-88	0.4	-92	0.6	-92
Tirupur	2.7	-88	10.2	-25	60.2	473
Tiruvallur	0.1	-99	3.2	-74	5.0	-56
Tiruvannamalai	12.2	-41	43.7	182	21.6	31
Tiruvarur	0.0	-100	25.4	114	0.7	-90
Toothukudi	5.5	-9	0.0	-100	4.6	36
Trichy	9.0	-45	27.4	111	7.3	-37
Vellore	6.7	-68	49.7	159	22.4	8
Villupuram	23.4	34	27.2	212	23.1	138
Virudhunagar	6.3	-58	10.9	8	40.1	305
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	10.0	-39	11.5	-17	5.8	-63
Guntur	0.7	-95	19.4	48	3.3	-73
Krishna	0.6	-96	1.1	-87	12.1	-10
Nellore	0.2	-98	12.6	-5	3.2	-54
Prakasam	2.7	-77	5.8	-60	10.1	-12
Sirkakulam	0.0	-100	132.4	968	22.0	62
Visakhapatnam	10.9	-43	16.5	-5	23.6	27
Vizianagram	10.0	-43	72.1	290	42.9	104
West Godavari	8.3	-38	3.4	-67	7.6	-39
Telangana						
Adilabad	6.0	57	1.2	-71	5.5	-48
Hyderabad	5.1	-20	0.6	-94	48.1	304
Karimnagar	1.8	-59	13.6	127	15.3	26
Khammam	6.2	-58	1.8	-83	5.3	-60
Mehabubnagar	2.5	-65	22.5	125	51.6	377
Medak	4.2	-17	1.5	-80	15.3	9
Nalgonda	0.6	-92	35.3	330	15.8	19
Nizamabad	20.0	456	0.5	-92	3.0	-74
Rangareddy	7.3	13	3.9	-56	37.8	232
Warangal	20.1	182	9.1	54	7.4	-45
Rayalaseema						
Anantapur	28.5	108	12.5	-22	45.5	140
Chittoor	9.8	-49	28.1	61	17.5	11
Cuddapah	3.5	-72	9.6	-33	21.6	46
Kurnool	14.0	33	8.5	-46	49.5	246

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