

National Agromet Advisory Service Bulletin

Friday 30th January 2015

(For the period 30th January to 3rd February 2015)



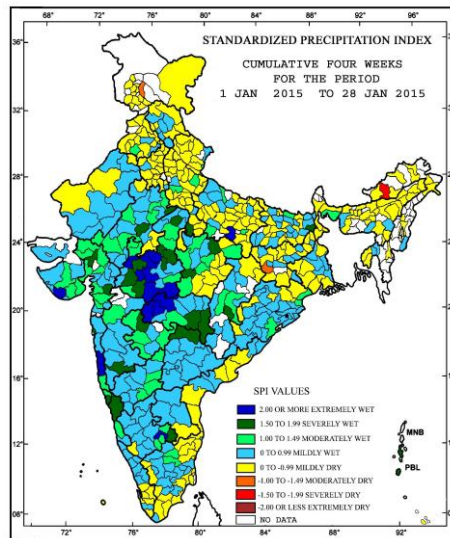
Issued by

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



Standardised Precipitation Index
Four Weekly
for the Period 1st January to 28th January 2015

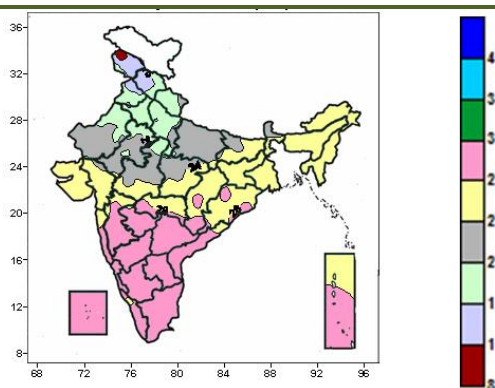
MINISTRY OF EARTH SCIENCES
 INDIA METEOROLOGICAL DEPARTMENT
 HYDROMET SECTION, PUNE



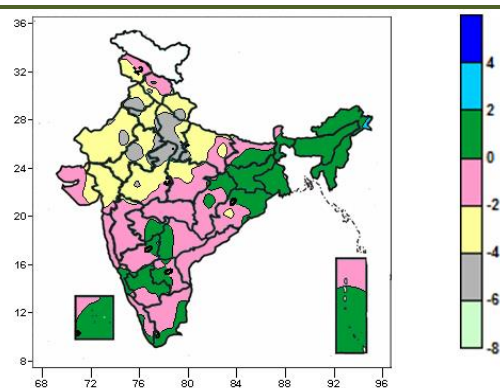
- Extremely/severely wet conditions in few districts of Madhya Pradesh and Maharashtra; Katihar district of Bihar; Allahabad, Jhansi district of Uttar Pradesh; Bundi, Dholpur districts of Rajasthan; Mehsana, Narmada district of Gujarat region; Junagarh district of Saurashtra; Ratnagiri, Mumbai Suburban, South Goa district of Konkan and Goa; Uttara Kannada, Kolar, Bangalore rural district of Karnataka; Dhamtari district Chhattisgarh and Adilabad of district of Telangana
- Severely dry conditions experienced in East Kameng districts of Arunachal Pradesh.
- Moderately dry conditions experienced in Anantnag district of Jammu & Kashmir; Gumla district of Jharkhand.
- Rest of the country experienced moderately wet/ mildly wet/dry conditions.

Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 28.01.2015

Actual Mean Maximum Temperature (°C) in India for the week ending 28.01.2015



Mean Maximum Temperature (°C) Anomaly in India for the week ending 28.01.2015



- 28 to 32°C over Tamil Nadu, Andhra Pradesh, Telangana, Karnataka, Lakshadweep Islands, many parts of Konkan & Goa, Madhya Maharashtra, Marathwada, Kerala, Andaman & Nicobar Islands, few parts of Chhattisgarh, isolated parts of Vidarbha and Odisha.

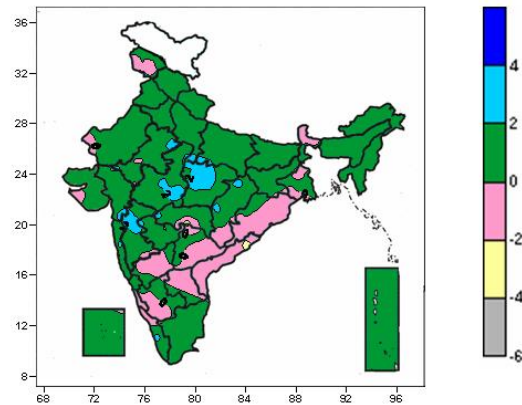
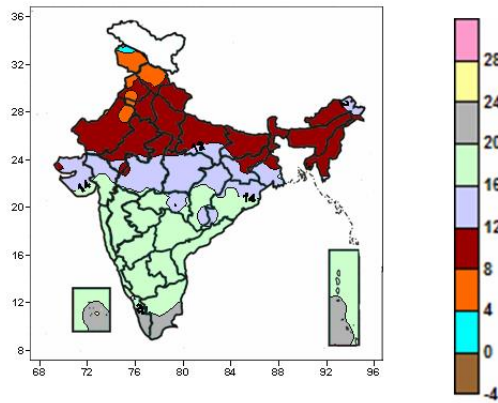
- 0 to 2°C over Gangetic West Bengal, Jharkhand, many parts of North East India, Bihar, Sub-Himalayan West Bengal, Coastal & South Interior Karnataka, Lakshadweep and Andaman & Nicobar Islands, few parts of Chhattisgarh, Odisha, Marathwada, Telangana, Rayalaseema, isolated parts of North Interior Karnataka, Tamil Nadu and Kerala.

- 24 to 28⁰C over North East India, Gangetic West Bengal, Jharkhand, many parts of Gujarat, Bihar, Chhattisgarh, Odisha, Vidarbha, few parts of Madhya Pradesh, Konkan, Andaman & Nicobar Islands and isolated parts of East Uttar Pradesh.
- 20 to 24⁰C over East Uttar Pradesh, many parts of Sub-Himalayan West Bengal & Sikkim, Rajasthan, Madhya Pradesh, isolated parts of Uttarakhand, Bihar and West Uttar Pradesh.
- 12 to 20⁰C over Himachal Pradesh, Punjab, Haryana & Delhi, many parts of Jammu & Kashmir, Uttarakhand, West Uttar Pradesh, few parts of Rajasthan and isolated parts of Madhya Pradesh.

- -4 to 0⁰C over entire country except Gangetic West Bengal, Jharkhand, many parts of North East India, West Uttar Pradesh, Bihar, Sub-Himalayan West Bengal, Coastal & South Interior Karnataka, Lakshadweep and Andaman & Nicobar Islands, few parts of Uttarakhand, Punjab, Haryana & Delhi, West Madhya Pradesh Chhattisgarh, Odisha, Marathwada, Telangana and Rayalaseema, isolated parts of Himachal Pradesh, Rajasthan, East Uttar Pradesh, North Interior Karnataka, Tamil Nadu and Kerala.
- -6 to -4⁰C over many parts of West Uttar Pradesh, few parts of Uttarakhand, Punjab, Haryana & Delhi and West Madhya Pradesh, isolated parts of Himachal Pradesh, Rajasthan and East Uttar Pradesh.

Actual Mean Minimum Temperature (⁰C) in India for the week ending 28.01.2015

Mean Minimum Temperature (⁰C) Anomaly in India for the week ending 28.01.2015

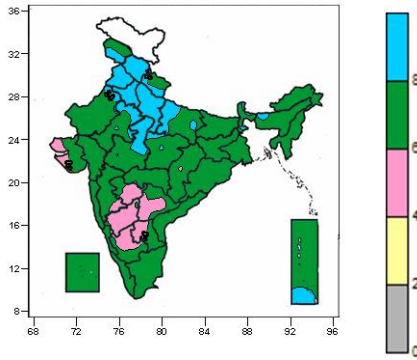


- 0 to 4⁰C over isolated parts of Jammu & Kashmir.
- 4 to 8⁰C over many parts of Himachal Pradesh, Jammu & Kashmir, isolated parts of Punjab, Haryana & Delhi and West Rajasthan.
- 8 to 12⁰C over Uttarakhand, West Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, many parts of Punjab, Haryana & Delhi, Rajasthan, Bihar and North East India, few parts of Himachal Pradesh, Jharkhand and isolated parts of Gangetic West Bengal, Madhya Pradesh and Kutch.
- 12 to 16⁰C over many parts of Madhya Pradesh, Gujarat State, Gangetic West Bengal, Jharkhand and Chhattisgarh, few parts of East Uttar Pradesh, Odisha and Vidarbha, isolated parts of Arunachal Pradesh and Bihar.
- 16 to 20⁰C over Konkan & Goa, Madhya Maharashtra, Marathwada, Andhra Pradesh, Telangana, Karnataka, many parts of Vidarbha, Chhattisgarh, Odisha, Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands, few parts of Gujarat region, Saurashtra and Kerala.
- 20 to 24⁰C over many parts of Kerala, few parts of Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands.

- 2 to 4⁰C over many parts of East Madhya Pradesh, isolated parts of West Madhya Pradesh, Gujarat region, Kerala, East Rajasthan, Chhattisgarh, Madhya Maharashtra, Vidarbha and Konkan.
- 0 to 2⁰C over entire country except Sikkim, many parts of East Madhya Pradesh, Coastal Andhra Pradesh, Jammu & Kashmir, Sub-Himalayan West Bengal, Odisha, Telangana, Rayalaseema, Interior Karnataka, few parts of Kerala, Gangetic West Bengal Chhattisgarh, Vidarbha and Coastal Karnataka, isolated parts of Saurashtra, Rajasthan Lakshadweep, West Madhya Pradesh, Gujarat region, Kerala, Chhattisgarh, Madhya Maharashtra, Vidarbha and Konkan.
- -2 to 0⁰C over Sikkim, many parts of Coastal Andhra Pradesh, Jammu & Kashmir, Sub-Himalayan West Bengal, Odisha, Telangana, Rayalaseema, Interior Karnataka, few parts of Kerala, Gangetic West Bengal Chhattisgarh, Vidarbha and Coastal Karnataka, isolated parts of Saurashtra, Rajasthan and Lakshadweep.

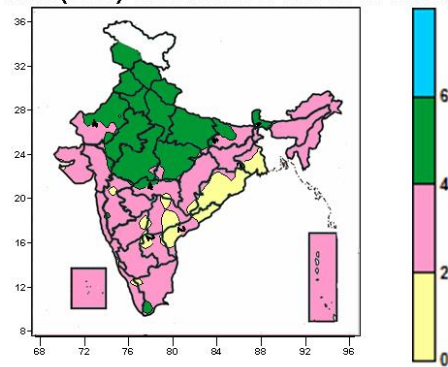
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 28.01.2015

Relative Humidity (%) over India for the week ending 28.01.2015



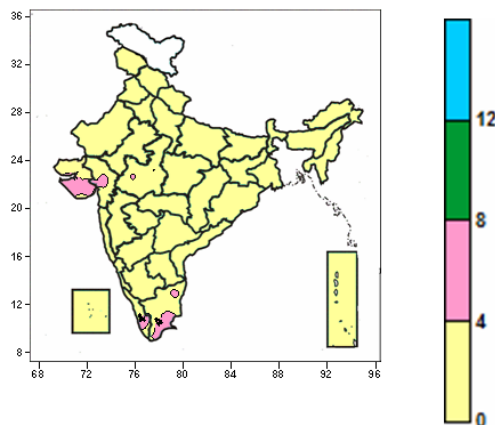
- 80 to 100% over Himachal Pradesh, Punjab, Haryana, Delhi, West Uttar Pradesh, many parts of East Uttar Pradesh, few parts of Jammu & Kashmir, Uttarakhand, Rajasthan, Madhya Pradesh and Andaman & Nicobar Islands.
- 60 to 80% over entire country except Himachal Pradesh, Punjab, Haryana, Delhi, West Uttar Pradesh, North Interior Karnataka, many parts of East Uttar Pradesh, Marathwada, South Interior Karnataka, Telangana, few parts of Jammu & Kashmir, Uttarakhand, Rajasthan, Madhya Pradesh, Rayalaseema, Saurashtra & Kutch and Andaman & Nicobar Islands, isolated parts of Chhattisgarh.
- 40 to 60% over North Interior Karnataka, many parts of Marathwada, South Interior Karnataka, Telangana, few parts of Rayalaseema and Saurashtra & Kutch, isolated parts of Chhattisgarh.

Cloud amount (okta) over India for the week ending 28.01.2015



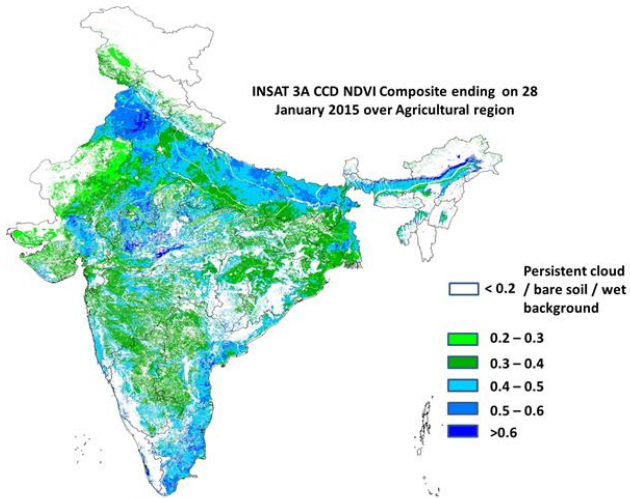
- 4 to 6 okta over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana & Delhi, Uttar Pradesh, Sikkim, many parts of Madhya Pradesh, Rajasthan, Sub-Himalayan West Bengal & Sikkim, few parts of Bihar, isolated parts of Gujarat, Vidarbha and Tamil Nadu.
- 2 to 4 okta over entire country except Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana & Delhi, Uttar Pradesh, Sikkim, many parts of Madhya Pradesh, Rajasthan, West Bengal, Odisha, Coastal Andhra Pradesh, few parts of Rayalaseema, Bihar, isolated parts of Chhattisgarh, Telangana Vidarbha, Madhya Maharashtra, North Interior Karnataka, Tamil Nadu, Kerala, Gujarat and Vidarbha.
- 0 to 2 over many parts of Odisha, Gangetic West Bengal, Coastal Andhra Pradesh, few parts of Rayalaseema, isolated parts of Chhattisgarh, Telangana Vidarbha, Madhya Maharashtra, North Interior Karnataka, Tamil Nadu and Kerala.

Wind speed (knots) over India for the week ending 28.01.2015



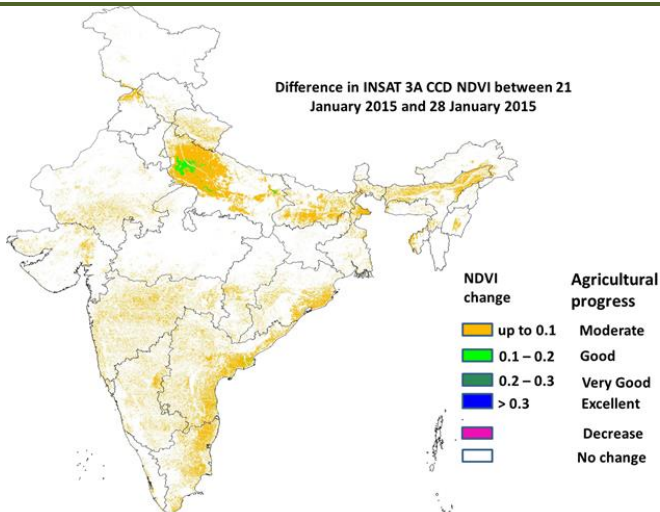
- 4 to 8 knots over many parts of Saurashtra, isolated parts of Gujarat region, Tamil Nadu and Kerala.
- 0 to 4 knots over entire country except many parts of Saurashtra, isolated parts of Gujarat region, Tamil Nadu and Kerala.

INSAT 3A CCD NDVI COMPOSITE ENDING ON 28th JANUARY 2015 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour is good (0.4 to 0.5) over many parts of East Uttar Pradesh, West Uttar Pradesh, Coastal Andhra Pradesh, Tamil Nadu, some parts of East Rajasthan, central and western Gujarat, Gangetic West Bengal, eastern and coastal parts of Odisha, North and Central Bihar. NDVI varied from 0.5 to 0.6 in many parts of Punjab and north western parts of Haryana and few pockets of central and western Madhya Pradesh. Some parts of central Bihar, few pockets in west Rajasthan, south eastern parts of Punjab, central Madhya Pradesh, few pockets in Karnataka, Kerala, Tamil Nadu and coastal Andhra Pradesh shows a significant increase in the NDVI value. The NDVI remained within the range of 0.3 to 0.4 over few parts of the Indo Gangetic plains in Uttar Pradesh and Bihar, central Maharashtra, parts of Karnataka, Telangana and central Rajasthan.

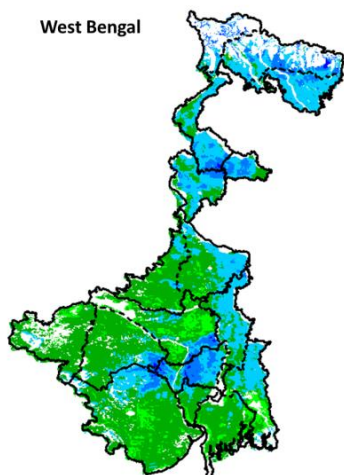
Difference in INSAT 3A CCD NDVI between 21st January 2015 and 28th January 2015



- Considerable positive change (0.1- 0.2) in NDVI was observed over south western part of West Uttar Pradesh. Moderate change (upto 0.1) in NDVI was observed over many parts of western Uttar Pradesh, Bihar, some parts of costal Andhra Pradesh, coastal Odisha, Tamil Nadu, Maharashtra, Karnataka, a few pockets in Gujarat and north Punjab. Not much change was observed in rest of India.

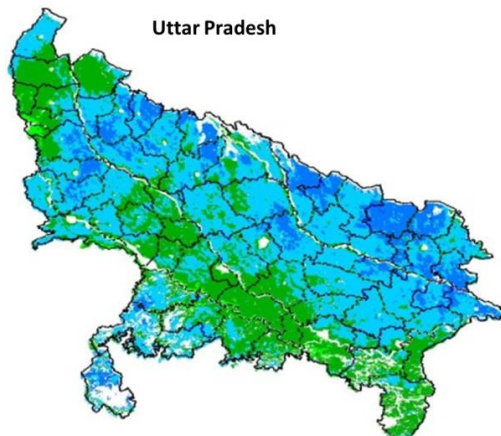
INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON 28th JANUARY 2015 FOR DIFFERENT STATES

West Bengal



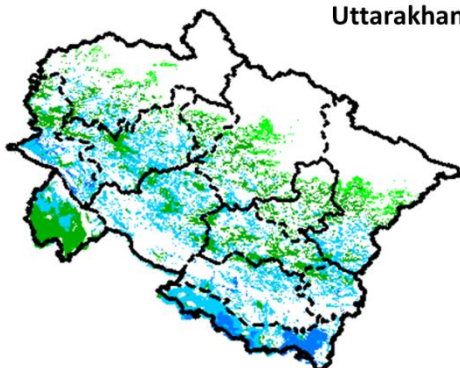
Agricultural vigour is good over most of the southern parts of West Bengal, whereas rest of the northern and central parts show higher values of NDVI in patches varying from 0.4-0.6 till 28 Jan 2015.

Uttar Pradesh



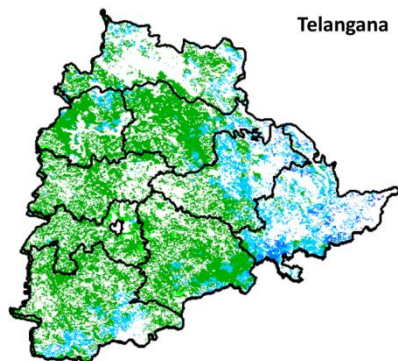
Agricultural vigour is good for the Northern Uttar Pradesh where NDVI values varies from 0.4 -0.6. Southern and north western part of Uttar Pradesh is showing NDVI values which varies from 0.2- 0.4 till 28 Jan 2015.

Uttarakhand



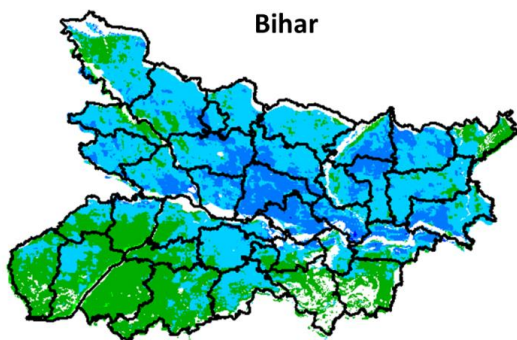
NDVI values vary from 0.2 - 0.4 over Uttarakhand till the 28 Jan 2015.

Telangana



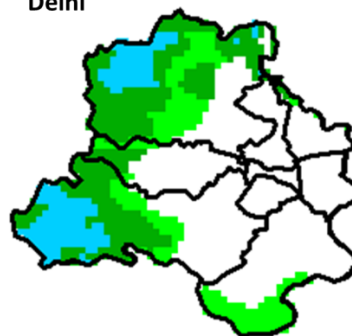
Agricultural vigour is good in pockets of north east Telangana where NDVI values vary from 0.4 - 0.5. In the southern parts of the Telangana values of NDVI varies from 0.2- 0.4 till 28 Jan 2015.

Bihar



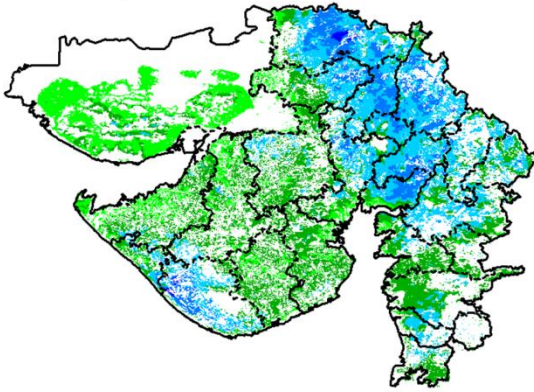
North and central districts of Bihar show comparatively a high value (0.4-0.5) of NDVI. Values are normal over the southern part of the state which varies form 0.3- 0.4 till 28 Jan 2015.

Delhi



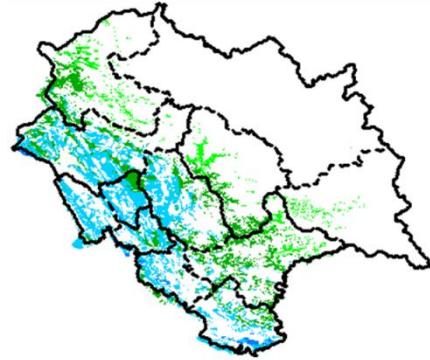
Agriculture vigour is good over western part of Delhi. NDVI values lies between 0.4-0.5. NDVI values are normal over central and western part of the state.

Gujarat



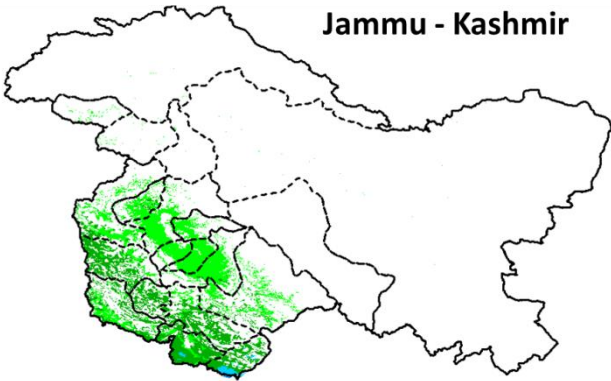
Agriculture vigour is good over part of Eastern, northern Gujarat and Saurashtra where NDVI values lies between 0.4-0.5. Whereas normal NDVI is observed in Kutch area till 28 Jan 2015.

Himachal Pradesh



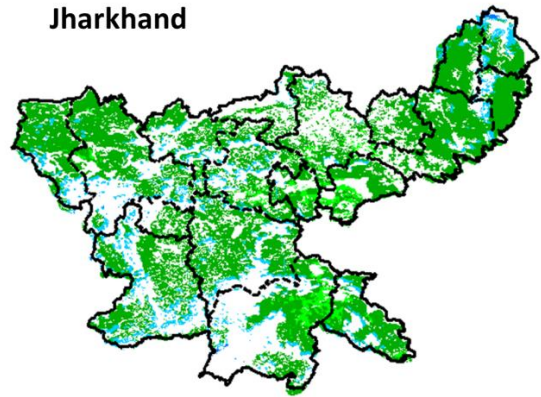
Agriculture vigour is good over south western parts of Himachal Pradesh with NDVI values varying between 0.4-0.5. Whereas, isolated patches of normal NDVI are observed in the state till 28 Jan 2015.

Jammu - Kashmir



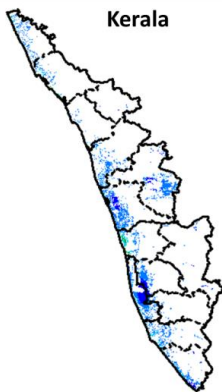
Agriculture vigour is normal all over Jammu. NDVI values vary in between 0.2-0.3 in south western parts till 28 Jan 2015.

Jharkhand



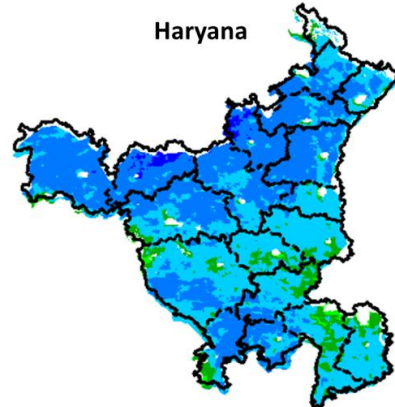
Agriculture vigour is good in patches over central to western part of the Jharkhand which lies in between 0.3-0.4. Rest of the parts shows normal NDVI values till 28 Jan 2015.

Kerala

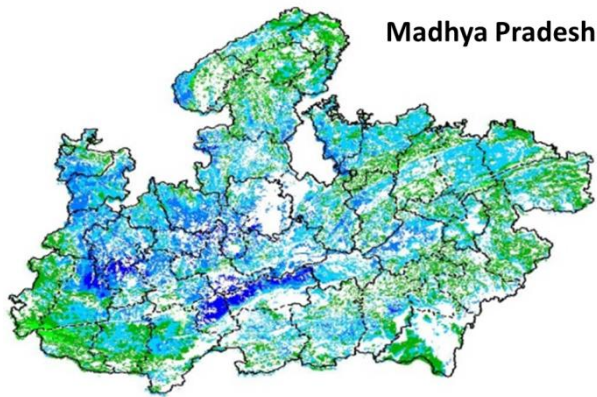


Some pockets in south coastal parts of Kerala show NDVI values varying from 0.5 - 0.6, whereas rest of agricultural vigour of Kerala shows normal values of NDVI till 28 Jan 2015.

Haryana

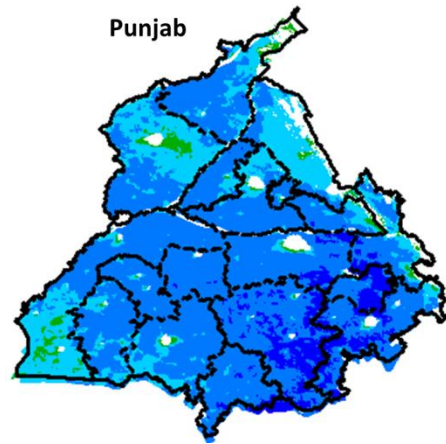


Agriculture vigour is good; NDVI values vary from 0.4-0.6 over most of the parts of Haryana till 28 Jan 2015.



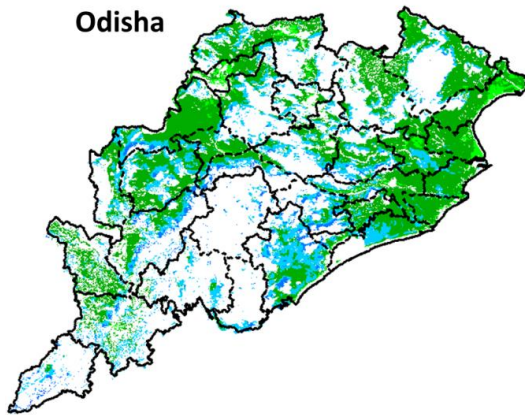
Madhya Pradesh

Agricultural vigour is good for central, Western region of Madhya Pradesh showing higher values of NDVI varies from 0.5 - 0.6. Whereas North and East parts showing comparatively low values vary from 0.3 – 0.4 till 28 Jan 2015.



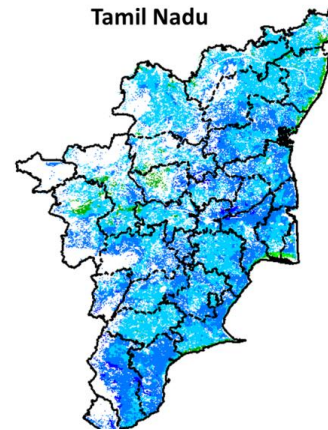
Punjab

Agricultural vigour is comparatively good for all over Punjab with NDVI values varying from 0.4-0.6. South - East districts of Punjab showing dominantly higher NDVI values more than 0.6 till 28 Jan 2015.



Odisha

Agricultural vigour is good for east coast and south west part of Odisha with NDVI values of 0.3 - 0.5 whereas central and south coast show normal values of NDVI till 28 Jan 2015.



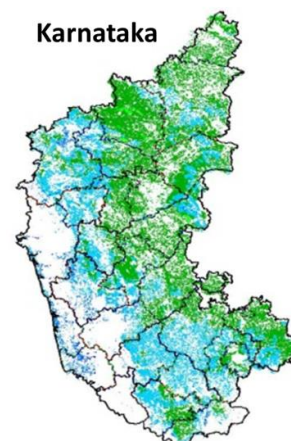
Tamil Nadu

Agricultural vigour is good over Tamil Nadu with NDVI values varying from 0.4 - 0.6 till 28 Jan 2015.



Chhattisgarh

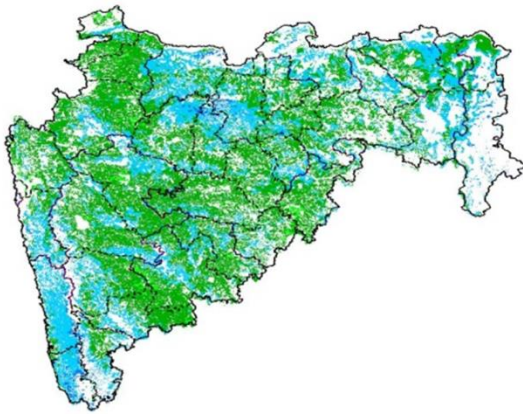
Agriculture vigour is good all over western and southern part of Chhattisgarh where NDVI values lies in between 0.4-0.5. NDVI values are normal over eastern, central and northern part of the state till 28 Jan 2015.



Karnataka

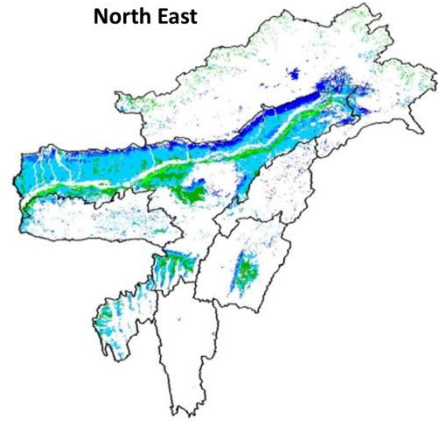
Agriculture vigour is good over South-Central parts of Karnataka which lies in between 0.3-0.5. Rest of the part show normal condition where NDVI values vary up to 0.2-0.3 till 28 Jan 2015.

Maharashtra



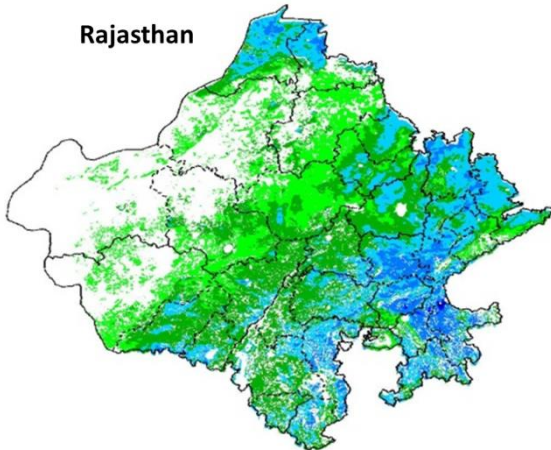
Agricultural vigour is good for central, Western and Marathwada region of Maharashtra with NDVI values of 0.3 - 0.5. Whereas Vidarbha, Northern and Konkan regions showing comparatively high value of 0.5 till 28 Jan 2015.

North East



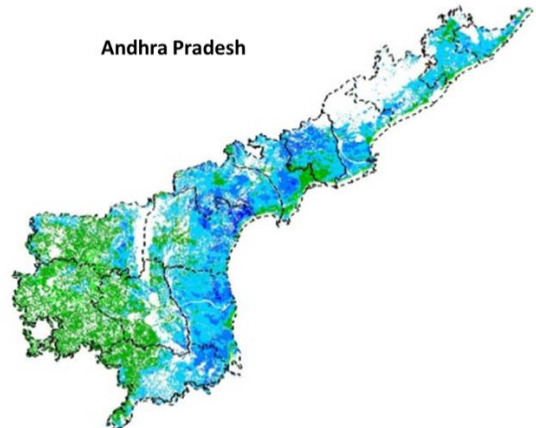
Agriculture vigour is good in valleys of northern hilly range of North-East states which covers most of the part of Assam. NDVI values vary from 0.4-0.5 in this region. In north-east part of Assam, NDVI values are more than 0.6. Isolated patches of normal NDVI conditions are observed all over NE region till 28 Jan 2015.

Rajasthan




Agricultural vigour is good over the central Rajasthan with NDVI values varying from 0.3 - 0.4. In the eastern part and north western parts of Rajasthan NDVI values vary from 0.5-0.6 till 28 Jan 2015.

Andhra Pradesh



Agriculture vigour is good over middle part of Andhra Pradesh, as it also good over northern coast. NDVI values are normal over rest part of the state till 28 Jan 2015.


Persistent cloud /

 **< 0.2** bare soil / wet background

 **0.2 - 0.3**

 **0.3 - 0.4**

 **0.4 - 0.5**

 **0.5 - 0.6**

 **> 0.6**

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 2nd February, 2015).

- Rain/snow would occur at isolated places over Jammu & Kashmir during the period.
- Rain/snow would occur at isolated places over Uttarakhand during next 24 hours; over Himachal Pradesh during next 48 hours and dry weather would prevail thereafter.
- Rain/thundershowers would occur at isolated places over Andaman & Nicobar Islands during the period.
- Rain/thundershowers would occur at isolated places over Arunachal Pradesh, Assam & Meghalaya, Bihar, Jharkhand, Chhattisgarh, Tamil Nadu & Puducherry during next 24 hours; over Kerala and Lakshadweep during next 48 hours and dry weather would prevail thereafter.
- Dry weather would prevail over rest parts of the country during the period.
- Fog would continue to occur at a few places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, north Rajasthan, north Madhya Pradesh, north Chhattisgarh, Bihar, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- The fresh Western Disturbance would affect Western Himalayan region from 31st night onwards.

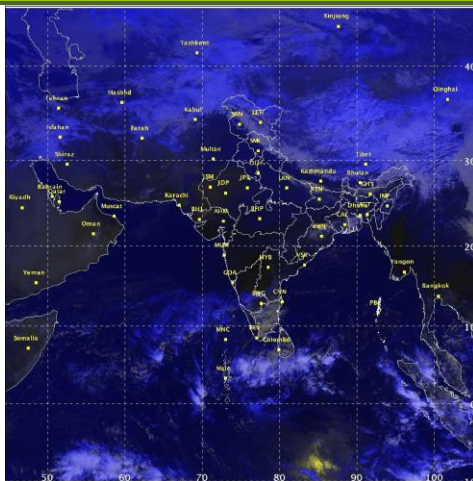
Weather Warning during next 3 days

- **30 January (Day 1):** Dense fog would occur at isolated places over Uttar Pradesh, Bihar and Sub-Himalayan West Bengal.
Cold wave conditions would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Rajasthan, West Uttar Pradesh and West Madhya Pradesh.
Ground frost would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi and north Rajasthan.
- **31 January (Day 2):** Dense fog would occur at isolated places over Uttar Pradesh, Bihar and Sub-Himalayan West Bengal.
Cold wave condition would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Rajasthan, West Uttar Pradesh and West Madhya Pradesh.
- **01 February (Day 3):** No weather warning.

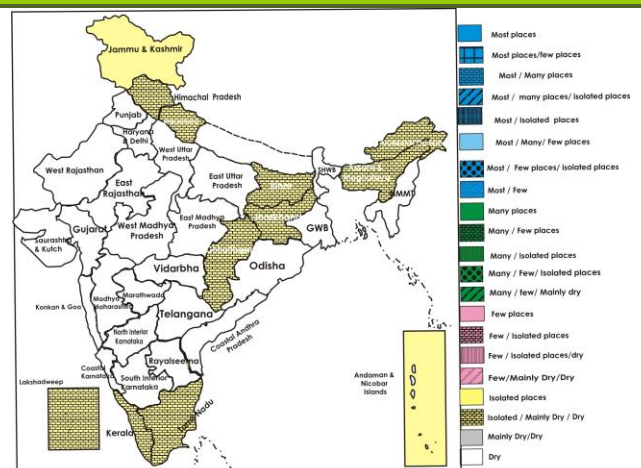
Weather Outlook for subsequent 4 days from 2nd to 6th February, 2015

- Rainfall/snowfall activity would increase over western Himalayan region with possibility of isolated heavy snowfall over Jammu & Kashmir and Himachal Pradesh on 2nd & 3rd.
- Rain/thundershowers would occur at isolated places over south Haryana & Delhi, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Chhattisgarh and Vidarbha from 2nd.
- Weather would be mainly dry over rest of the country.

Satellite image dated, 30.01.2015, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 2nd February, 2015)



Salient Advisories

- As cold wave conditions would occur at isolated places over **Punjab, Haryana, Chandigarh & Delhi, Rajasthan** and **West Uttar Pradesh** on 30th and 31st January and ground frost would occur at isolated places over **Punjab, Haryana, Chandigarh & Delhi** and **north Rajasthan** on 30th January, apply light and frequent irrigation in standing crops and arrange for smoking around the crop fields during night hours to protect the crops from cold/frost injury.
- As cold wave condition would occur at isolated places over **West Madhya Pradesh** on 30th and 31st January, apply light and frequent irrigation in standing crops to protect them from cold injury.
- Due to low temperature and humid weather, there may be attack of rust in wheat, barley and pod borer in gram in Southern Humid Plain Zone of **Rajasthan**. For control of rust, dust Sulphur powder @ 25 kg /ha and for pod borer in gram, spray Azadiractin @ 5 ml / litre of water.

Detailed Zonewise Agromet Advisories

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



Sorghum



Sugarcane



Chilli



Rice Transplanting

- **Realised Rainfall:** Weather remained mainly dry over the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Tamil Nadu & Puducherry during next 24 hours; over Kerala and Lakshadweep during next 48 hours and dry weather would prevail thereafter. Dry weather would prevail over rest of the region during the period.
- **Weather Warning:** Nil
- **Weather Outlook:** Weather would be mainly dry over the region.
- **Advisories:**
 - **Andhra Pradesh:**
 - Complete harvesting of red gram, Bengal gram and castor in Anantapur district in the Scarce Rainfall Zone.
 - Continue harvesting of sugarcane and undertake spraying of Propiconazole @ 1 ml/litre of water on sugarcane immediately after stubble shaving against smut disease in ratoon crop in the North Coastal Zone.
 - As dry weather prevailing, apply light and frequent irrigations to mango crop to get synchronised flowering in the Southern Zone.
 - In the Scarce Rainfall Zone, prevailing dry weather and low temperature conditions are congenial for incidence of mango hoppers. For control, undertake spraying of Dichlorvos @ 0.5 ml/ litre or Carbaryl @ 3g/ litre of water in the early stages of flowering and Monochrotophos @ 1.6-2 ml/litre of water at the time of flowering.
 - Prevailing dry weather is congenial for incidence of stem borer in maize in the Southern Zone. To control, apply Carbofuron granules @ 3 kilo/acre 12-13 days of sowing and Monocrotopos @ 1.6 ml or Carbaryl @ 3 g/litre of water at later stage with 15 days interval.
 - **Telangana:**
 - In Telangana, as dry weather is prevailing, apply irrigation in rice nurseries.
 - Prevailing low temperature is congenial for increase in *maruca* pod borer in red gram at flowering to pod formation stage in Northern Telangana Zone. To control pod borer, spray Chlorpyrifos @ 2.5 ml + Dichlorvos @ 1ml/ litre of water or Spinosad @ 0.4 ml/ litre of water.
 - Prevailing cool and dry weather conditions are congenial for incidence leaf blight and tobacco mosaic virus in tomato in Southern Telangana Zone. Spray Carbendazim 12 % + Mancozeb 63% WP @ 2 g or Mancozeb + Metalaxyl @ 2 g per litre of water to manage leaf blight and Fipronil @ 2 ml or Dimethoate @ 2 ml per litre of water to manage tobacco mosaic virus.
 - **Karnataka:**
 - Continue planting of sugarcane in North Transition and North East Transition Zone after proper set treatment and harvest early sown Bengal gram and pigeon pea in the North East Transition Zone.
 - Continue sowing of sunflower, maize, groundnut and ragi in the Eastern Dry Zone.
 - As dry weather is prevailing, apply irrigation to wheat and summer groundnut. Continue planting of sugarcane and harvesting of red gram, Bengal gram and safflower in the North East Dry Zone.

- As dry weather is prevailing, undertake harvesting of red gram in Southern Transition Zone.
- Dry weather and high humidity in the morning hours is congenial for incidence of powdery mildew disease and leaf hopper in mango orchard in the North East Dry Zone, Eastern Dry Zone and Hill Zone. Spray Carbaryl WP @ 4 g/ litre of water or Carbendazim @ 1 g / litre of water to manage the incidence.
- **Kerala:**
 - Undertake mulching with crop residue and dried leaves in coconut, banana and nutmeg fields to reduce evapotranspiration in the Problem Area Zone.
 - Due to increase in temperature, attack of insects such as aphids, white flies, hoppers, etc. will be more in vegetables in the Central Zone. For control, apply Verticillium or Metarhizium @5 g / litre of water.
- **Tamil Nadu:**
 - Continue sowing of rice fallow pulses under waxy condition in *samba* rice fields under rice fallow condition in the Cauvery Delta Zone.
 - Under prevailing clear weather condition, apply irrigation in banana and maize and continue harvesting of rice in the Western Zone.
 - As mainly dry weather would prevail, harvest the matured sunflower and rice in the South Zone.
 - Prevailing low temperature and high relative humidity conditions is congenial for incidence of bacterial leaf blight in rice. To control, apply Streptomycin Sulphate + Tetracycline combination @ 300 g + Copper Oxychloride @ 1250 g/ha and if necessary repeat after 15 days in the Western Zone.
 - Suitable varieties are given in Annexure II.
- **Animal Husbandry**
 - Undertake preventive measures to protect animals from Anthrax disease which was observed in few parts of Anantapur district in the Scarce Rainfall Zone.

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



Rice transplanting



Mustard



Potato



Cabbage

- **Realised Rainfall:** Weather remained dry over the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Arunachal Pradesh, Assam & Meghalaya during next 24 hours and dry weather would prevail thereafter. Dry weather would prevail over rest parts of the region during the period.
Fog would continue to occur at a few places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be mainly dry over the region.
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Assam, continue transplanting of *boro* rice of about 45 days old (5- 6 leave stage) seedlings. Maintain 6 cm of standing water in the main fields of transplanted *boro* rice. Continue gap filling in *boro* rice after 10-15 days after transplanting.
 - In Lower Bramhaputra Valley Zone of Assam, continue sowing of sunflower. Undertake land preparation for planting of sugarcane in upland area. Apply irrigation to *rabi* maize, lentil, rapeseed & mustard.
 - In Central Bramhaputra Valley Zone of Assam, continue land preparation for sowing of summer green gram and black gram.
 - In Meghalaya, complete transplanting of *boro* rice. Gap filling with seedlings of similar age should be done within 7-10 days of transplanting. Apply irrigation to mustard / rapeseed at flowering stage and cole crops. Also prepare basin around plants of khasi mandarin followed by mulching with local grasses and apply irrigation at 15-20 days interval to avoid moisture stress.
 - In Barak Valley Zone of Assam, apply Furadon @ 2.5 g/plant at 20 days after transplanting to control fruit and shoot borer and stem borer of brinjal. Undertake soil drenching of Streptocycline @ 6 g/20 litre of water for effective control of wilting in brinjal.
 - In Central Bramhaputra Valley Zone and North Bank Plain Zone of Assam, humid and foggy weather are congenial for wilt in lentil, linseed and khesari crops. Drench the soil with Bavistin @ 1ml/litre of water.
 - In Meghalaya, due to humid weather, there is chance of attack of blast /brown spot disease in *boro* rice. Spray

Carbendazim @ 1g/litre of water against blast/brown spot.

▪ **Nagaland, Manipur, Mizoram and Tripura:**

- In Mizoram, apply irrigation to mustard, toria, banana, brinjal, early cole crops, pea and tomato.
- In Manipur, continue sowing of rice under irrigation.
- In Nagaland, apply light irrigation in toria and pea. Apply mulching in vegetables and cole crops.
- In Mild Tropical Plain Zone of Tripura, apply light irrigation on every alternate day in cole crops, mustard, maize and lentil. Undertake mulching after irrigation to conserve moisture. Continue transplanting of *boro* rice and nursery preparation for summer brinjal and tomato.
- In Tripura, due to the prevailing foggy weather condition, there may be infestation of early blight in potato. Apply Cymoxanil+ Mancozeb or Metalaxyl+ Mancozeb @ 1.5 g per litre of water for control of early blight. Also due to humid weather, there is chance of attack of aphids in mustard. Spray Monocrotophos or Imidachloprid @ 2ml per litre of water to manage the attack.
- In Nagaland, humid and foggy weather is favourable for occurrence of Pseudostem Weevil in banana. Remove the dried and diseased leaves and kill the weevil.
- In Mizoram, due to foggy weather condition, there is chance of infestation of aphids in pea. For control, apply Imidachloprid @ 1.5 ml/litre of water.
- Suitable varieties are given in Annexure II.

• **Animal Husbandry**

- In Northeastern States, provide artificial heating through lighting of electric bulb to protect poultry birds (upto 25 days old) from low temperature. Cover poultry and pig house with gunny bags/ polythene sheet to protect the animals from cold. During this period vaccinate poultry birds against *Ranikhet* disease.
- In Barak Valley Zone of Assam, prevailing cold weather is favourable for attack of pneumonia in newly born chicks. Special care must be taken against pneumonia.

• **Fishery**

- During winter season, apply Potash @ 4-5 mg/litre of water / Sukrena WS @ 1 litre per bigha of water / lime in required doses to protect the fish population against various bacterial diseases in Lower, Central and Upper Brahmaputra Valley Zone and North Bank Plain Zone of Assam.

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



Sugarcane

Wheat

Rice transplanting

Onion

- **Realised Rainfall:** Weather remained mainly dry/dry over the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Andaman & Nicobar Islands during the period. Rain/thundershowers would occur at isolated places over Bihar and Jharkhand during next 24 hours and dry weather would prevail thereafter. Dry weather would prevail over rest parts of the region during the period. Fog would continue to occur at a few places over Bihar and Sub-Himalayan West Bengal & Sikkim.
- **Weather Warning:** Dense fog would occur at isolated places over Bihar and Sub-Himalayan West Bengal on 30th and 31st January.
- **Weather Outlook:** Weather would be mainly dry over the region.
- **Advisories:**
 - **West Bengal:**
 - In Old Alluvial and Terai Zone, continue transplanting of *boro* rice. Cover the nursery bed with polythene or apply water in the nursery bed at night and drain water at morning to protect the seedlings from cold.
 - Due to high humidity and foggy weather, there are chances of attack of aphids and diamond back moth in vegetables during its fruiting stage in Hill Zone. To control aphids, apply Imidachloprid @ 1ml/4 litres of water and for control of diamond back moth, apply Lamda Cyhalothrin @ 10 ml/15 litres of water.
 - In Coastal Saline Zone of West Bengal, due to high humidity and light fog, there are chance of aphids in mustard and late blight in potato. For control of aphids, spray Thiamithoxon @ 3g/10 liters of water and for late blight, spray a mixture of Metasistox @1.5ml and Copper Oxichloride @ 4g/ liter of water.
 - In Old Alluvial Zone and Terai Zone, due to low temperature and foggy weather, there is chance of attack of late blight in potato. For control, spray Mancozeb @ 2 g /litre of water and Blitox @ 4 g/litre of water

alternately at 7-10 days interval by completely wetting the leaves.

- In New Alluvial Zone, Laterite and Red Soil Zone, humid weather condition is favourable for attack of aphids in mustard and leaf-blight infestation in chilli. For control of aphids, apply Imidacloprid 17.8 SL @ 3 ml /10 litres of water or Quinalphos 25 EC @ 2 ml/ litres of water. For leaf-blight, apply Blitox @ 2.5 to 3 g/ litre water and repeat at an interval of 20 days.
- **Andaman and Nicobar Islands:**
- In North and Middle Andaman and South Andaman districts, continue intercultural operations like weeding and earthing up in vegetable crops.
- **Odisha:**
- In East and South Eastern Coastal Plain Zone, continue nursery sowing of rice. Continue sowing of sunflower and groundnut. Undertake nursery sowing of ragi. Undertake planting of sugarcane.
- In North Eastern Plateau Zone of Odisha, as dry weather is prevailing, apply irrigation in rice nursery. Undertake land preparation for transplanting of rice.
- In North Eastern Coastal Plain Zone of Odisha, as dry weather is prevailing, apply irrigation to rapeseed and mustard which are at flowering stage.
- In East and South Eastern Coastal Plain Zone of Odisha, cold and cloudy weather favours the infestation of powdery mildew and aphids in green gram, black gram and pea. To control powdery mildew, spray Sulfex WP @ 1 kg in 200 litres of water per acre and to control aphids, spray Imidacloprid @ 50 ml in 200 litre water per acre.
- In North Eastern Coastal Plain Zone of Odisha, rise in temperature will favour the growth of stem borer population in rice nurseries. To control it, spray Traizophos or Chloropyriphos @ 2ml/litre of water.
- In North Eastern Plateau Zone of Odisha, due to cool weather, there is chance of powdery mildew in pulses, spray wettable Sulphur @ 1 kg per acre.
- **Bihar:**
- In South Bihar Alluvial Zone, as dry weather is prevailing, continue plucking of matured pods of pea. Continue harvesting of early sown potato, stop irrigation 15 days before harvesting.
- In North West Alluvial Plain Zone of Bihar, continue transplanting of *rabi* onion.
- In North East Alluvial Zone of Bihar, undertake transplanting of onion and planting of spring sugarcane. Undertake nursery preparation for chili, tomato and brinjal in poly house.
- In North West Alluvial Plain Zone of Bihar, due to foggy weather there is a chance of white rust in mustard/rapeseed, spray Chlorothalonil 75 WP @ 1 g/ litre of water.
- In South Bihar Alluvial Zone, cool and humid weather is favourable for the attack of aphids in mustard/toria, spray Cartap Hydrochloride or Metasystox or rogor @ 1.5 ml/litre of water.
- In North East Alluvial Zone of Bihar, cool and dry weather is favourable for incidence of powdery mildew disease in pea. To control it, spray Kairathen @ 1 ml or Sulfex @ 3 ml per litre of water.
- **Jharkhand:**
- In Western Plateau Zone, continue nursery sowing of summer rice and harvesting of timely sown potato. Undertake sowing of cucurbitaceous vegetables like sponge gourd, bottle gourd, pumpkin, water melon, musk melon etc. Farmers, who have already raised the seedlings in polythene bag, may transplant the seedlings in the main field @ 2-3 seedlings per pit. Apply light irrigation after transplanting of seedlings.
- In South Eastern Plateau Zone of Jharkhand, apply irrigation in wheat, arhar, mustard, field pea and potato. Continue nursery sowing of summer rice. Undertake land preparation for sowing of vegetables like bottle gourd, khira, kakri, sponge gourd, ridge gourd, bitter gourd, okra, brinjal and Shimla mirch.
- In Central & North Eastern Plateau Zone of Jharkhand, continue land preparation for sowing of vegetables like long gourd, round gourd, bitter gourd, sponge gourd, cucumber, water melon and musk melon. Continue nursery sowing of summer rice. Continue transplanting of onion. Undertake harvesting of matured potato.
- In Central & North Eastern Plateau Zone of Jharkhand, cool and dry weather is favourable for incidence of powdery mildew disease in pea. To control it, spray Kairathen @ 1 ml or Sulfex @ 3 ml per litre of water.
- In South Eastern Plateau Zone of Jharkhand, cool and humid weather in the morning and later on clear sunny weather is favourable for the attack of aphids in mustard/toria, spray Thiamexoxam 25 % WG @ 3-4 g or Rogar (Dimethoate) @ 2 ml or Monochrotophos @ 1 ml per litre of water. Also decreased sunshine hours with high humidity is congenial for the attack of diamond back moth, aphids and thrips in cole crops and tomato, spray Dimethoate (30%) @ 1 ml per litres of water to control the attack.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- In Bihar and Jharkhand it is advised to keep the animals inside the sheds and provide dry bedding and use heaters inside cattle sheds to protect them from cold. Increase protein level and minerals in the feed concentrate to cattle.
- **Poultry**
- In North East Alluvial Zone of Bihar, provide warmth through lighting of electric bulbs and cover poultry house with gunny bags/ polythene sheets to protect the birds from cold.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane

Wheat

Mustard

Onion

- **Realised Rainfall:** Rainfall occurred in Chhatarpur district of East Madhya Pradesh; Bhind, Datia, Gwalior, Shivpuri and Vidisha districts of West Madhya Pradesh. Weather remained dry over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Chhattisgarh during next 24 hours and dry weather would prevail thereafter. Dry weather would prevail over rest parts of the region during the period. Fog would continue to occur at a few places over north Madhya Pradesh and north Chhattisgarh.
- **Weather Warning:** Cold wave condition would occur at isolated places over West Madhya Pradesh on 30th and 31st January.
- **Weather Outlook:** Rain/ thundershowers would occur at isolated places over Madhya Pradesh and Chhattisgarh from 2nd February.
- **Advisories:**
 - **Madhya Pradesh:**
 - As cold wave condition would occur at isolated places over West Madhya Pradesh on 30th and 31st January, apply light and frequent irrigation in standing crops to protect them from cold injury.
 - Continue transplanting of onion, tomato, brinjal, chilli, cabbage and cauliflower in Malwa Plateau Zone.
 - Continue picking up of matured vegetables like pea, tomato, brinjal, chilli etc. in Vindya Plateau Zone.
 - Continue nursery preparation for summer tomato and transplanting of onion in Grid Zone.
 - Due to cloudy weather, there are chances of attack of sucking pests in vegetables in Jhabua Hill Zone; spray Thiomithaxam @ 0.35 g per litre of water.
 - Due to cloudy and foggy weather there are chances of leaf blight disease in mustard in Satpura Plateau Zone and Bundelkhand Zone; spray Dimethoate 30 E.C. @ 2.0 ml. per litre of water.
 - **Chhattisgarh:**
 - As dry weather would prevail, continue digging of matured potato and continue harvesting of matured onion in Bastar Plateau Zone. Undertake land preparation for sowing of cucurbitaceous crops.
 - Continue land preparation for transplanting of summer rice and sowing of cowpea and okra in Chhattisgarh Plain Zone and North Hill Zone. Undertake intercultural operations in sugarcane and sowing of cucurbitaceous crops and leafy vegetables.
 - Due to cloudy weather, there is chance of attack of powdery mildew in pea in Chhattisgarh Plain Zone; spray Sulfox @ 3 g /liter of water.
- **Animal Husbandry**
 - Keep animals indoors in Madhya Pradesh to protect from cold. Increase light duration in poultry farms.

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



Wheat

Sugarcane

Mustard

Cabbage

- **Realised Rainfall:** Rainfall occurred in all districts, except Sirmaur in Himachal Pradesh; Allahabad, Banda, Kaushambi, Pratapgarh, Sahuji Maharaj Nagar and Sant Ravidas Nagar districts in East Uttar Pradesh; Agra, Badaun, Etah, Firozabad, Kanshiram Nagar and Mahamaya Nagar districts in West Uttar Pradesh; Baramula, Doda, Ganderbal, Kupwara, Rajouri, Ramban and Reasi districts in Jammu & Kashmir; Ropar and Mohali districts in Punjab; Chandigarh, Palwal and Panchkula districts in Haryana; Bharatpur, Bundi, Dholpur and Sawai Madhopur

districts in Rajasthan. Weather remained mainly dry over rest of the region.

- **Weather Forecast:** Rain/snow would occur at isolated places over Jammu & Kashmir during the period. Rain/snow would occur at isolated places over Uttarakhand during next 24 hours; over Himachal Pradesh during next 48 hours and dry weather would prevail thereafter. Dry weather would prevail over rest parts of the region during the period. Fog would continue to occur at a few places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh and north Rajasthan.
The fresh Western Disturbance would affect Western Himalayan region from 31st night onwards.
- **Weather Warning:** Dense fog would occur at isolated places over Uttar Pradesh on 30th and 31st January. Cold wave conditions would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Rajasthan and West Uttar Pradesh on 30th and 31st January. Ground frost would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi and north Rajasthan on 30th January.
- **Weather Outlook:** Rainfall/snowfall activity would increase over western Himalayan region with possibility of isolated heavy snowfall over Jammu & Kashmir and Himachal Pradesh on 2nd & 3rd. Rain/thundershowers would occur at isolated places over south Haryana & Delhi, Uttar Pradesh and East Rajasthan from 2nd February. Weather would be mainly dry over rest of the region.
- **Advisories:**
 - As cold wave conditions would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Rajasthan and West Uttar Pradesh on 30th and 31st January and ground frost would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi and north Rajasthan on 30th January, apply light and frequent irrigation in standing crops and arrange for smoking around the crop fields during night hours to protect the crops from cold/frost injury.
 - **Jammu & Kashmir:**
 - In Cold Arid Zone of Jammu & Kashmir, undertake direct sowing of turnip, coriander and radish in Green Houses. Also keep the trenches covered with UV film to avoid heat loss due to sudden temperature dip (< -15^oC). An additional layer of black polythene from sunset to sunrise also will be beneficial for standing crops.
 - In Sub Tropical and Intermediate Zone of Jammu & Kashmir, due to cold and humid weather there may be attack of yellow rust in wheat crop. To control, apply Propiconazole @ 1 ml/litre of water.
 - Due to low temperature and humid weather condition, there may be incidence of yellow rust & loose smut diseases in wheat in Intermediate Zone of Jammu & Kashmir. Prophylactic spray with Tebuconazole 25 EC (Folicur) or Propiconazole (Tilt) 25 EC @ 0.1 % (1ml/litre) is advised. Repeat the spray after 10-15 days interval if the disease persists.
 - **Uttarakhand:**
 - In Hill Zone, due to prevailing cold weather condition, there are chances of attack of Mau in toria. For control, spray Neem oil @ 5 ml per litre of water and repeat at 10 days interval.
 - Due to humid weather with low temperature, there is attack of leaf hopper in brinjal, and tomato in Sub humid Sub Tropic Zone of Uttarakhand. To control, apply Dichlorvas @ 1ml/litre of water.
 - In Bhabar and Tarai Zone of Uttarakhand, due to cold weather conditions, there is chance of incidence of aphids in mustard. If the population of these insects is 8 insects per plant then spray Metasystox @250 ml dissolved in 250 litre of water per acre crop area during afternoon hours.
 - **Rajasthan:**
 - In Semi Arid Eastern Plain Zone of Rajasthan, continue land preparation for sowing of early cucurbits like muskmelon, watermelon, ridge gourds, bitter gourds, round gourd etc.
 - Due to low temperature and humid weather, there may be attack of rust in wheat, barley and pod borer in gram in Southern Humid Plain Zone of Rajasthan. For control of rust, dust Sulphur powder @ 25 kg /ha and for pod borer in gram spray Azadiractin @ 5 ml/ litre of water.
 - Due to cool and humid weather conditions there are chances of thrips and aphids attack in brinjal, tomato and chilli in Flood Prone Eastern Plain Zone; to control, spray Malathion @ 0.1% at 10 day interval.
 - Due to cloudy weather condition, there is chance of attack of blight in mustard in Arid Western Plain Zone of Rajasthan. To control, spray Mancozeb @ 2 g/ litre of water.
 - **Himachal Pradesh:**
 - In Mid Hills Sub-Humid Zone, continue transplanting of late season cauliflower (Pusa-snowball) and cabbage and planting of onion at a distance of 15x10cm utilizing realized rainfall. Complete sowing of pea, radish, turnip, methi and spinach.
 - Under prevailing low temperature and cloudy weather condition, there are chances of occurrence of yellow rust in wheat in Sub-Montane and Low Hills Sub-Humid Tropical Zone. For control, spray Tebuconazole 25 EC or Bayletan 25 WP @ 30ml or 30 g per 30 litres of water per kanal and repeat the spray at 15 days interval. Downy mildew is also expected in cruciferous vegetables. For control, spray Redomil M-Z @ 25 g/litre of water and repeat at 15 days interval.
 - Under prevailing low temperature and cloudy weather condition, there are chances of attack of aphids in mustard and gobhi-sarson and powdery mildew in peas in Sub-Montane and Low Hills Sub-Humid Tropical Zone. Spray Cypermethrin or Metasystax @ 750ml/750 litres of water/ha to manage aphids. For control of powdery mildew in peas, spray Celfex @ 25g or Karathane @ 5 ml per 10 litres of water.

➤ Under prevailing low temperature and cloudy weather condition, there is chance of attack of woolly apple aphid in apple orchards in Mid Hills Sub-Humid Zone. Spray Thiamethoxam (Ektara) @ 100g or Carbosulfan (Marshal) @ 100ml or Chlorpyrifos (Durmet) @ 200ml per 100 litres of water and for control of attack of aphids in vegetables, spray Methyl Demeton (Metasystax) @ 10ml/10litres of water.

➤ Under low temperature condition, there are chances of incidence of collar rot in apple in Mild Hills Sub Humid Zone. For control, spray Ridomil @ 75 g per 20 litres of water or Bavistin @ 15-20g/20 litres of water or Dithane-M-45 @ 90-100g/15 litres of water.

▪ **Punjab, Haryana and Delhi:**

➤ In Eastern Zone of Haryana, provide polythene sheet/Sarkanda/Kahi/ rice straw to protect the plants from cold/frost injury. Dwarf vegetable varieties can be protected from frost injury by covering with 100 gauge thick white plastic bags of 35 x 25 cm size.

➤ In Undulating Plain Zone of Punjab, apply light irrigation and cover the newly planted plants with thatches for protection from cold and apply light irrigation in mustard in the evening to protect from cold/frost injury. Complete sowing of late sown wheat and transplanting of onion.

➤ In Western Semi-arid Zone of Delhi, continue transplanting of mature seedlings of tomato, cauliflower, cabbage, knolkhol and broccoli crop in the raised bed.

➤ In Western Zone of Haryana, continue transplanting of onion, mature seedlings of tomato, cauliflower and cabbage. Apply light and frequent irrigation to vegetables and young fruit plants to protect from cold and cover the young fruit plants with Bhusa /thatch to protect from cold weather.

➤ Due to foggy weather, constant monitoring of aphids in mustard is advised in Western Semi-Arid Zone of Delhi. If the attack reaches above ETL, spray Dimethoate 30 EC or Quinalphos 25 EC @ 2.0 ml\ litre of water.

➤ Due to foggy weather, there is chance of incidence of late blight disease on potato and tomato in Western Zone and Undulating Plain Zone of Punjab. To control, spray Indofil-M-45/Kavach/Antracol @ 500-700 g/acre or Blitox @ 750-1000 g/acre using 250-350 litres of water/acre at weekly interval.

➤ In Punjab, due to foggy weather, there is chance of incidence of yellow rust in wheat in the form of yellow powder/stripes on the leaves. The susceptible varieties are PBW-343, PBW-502, PBW-550, HPW-184, HPW-42, HS-240, HS-295, HS-420, UP-2328 and WL-711. Farmers are advised to monitor the crop and spray the fungicides Tilt (Propiconazole) 25 EC/folicure (Tebuconazole) 25 EC/Bayletan 25 WP @ 0.1% i.e. 30 ml or 30 g per 30 litres of water per kanal with the appearance of the symptoms and repeat the spray after 15 days interval.

➤ Due to foggy weather, there is chance of aphids in mustard/rapeseed in Western plain Zone of Punjab; spray Actara 25 WG @ 40 g or Metasystox 25 EC @ 400 ml in 80-125 litres of water/acre.

▪ **Uttar Pradesh:**

➤ Undertake sowing of ladies finger and continue nursery sowing of tomato and chilli, sowing of summer maize, planting of sugarcane and transplanting of onion in Central plain Zone with available soil moisture. Undertake harvesting of winter sugarcane and normal sown potato.

➤ Continue land preparation for planting summer sugarcane and transplanting of onion (Pusa red) and sowing of urad and moong in Eastern Plain Zone.

➤ Undertake planting of onion and complete sowing of tomato, chilli and brinjal in Bundelkhand Zone. Undertake top dressing of remaining half dose of nitrogen and urea in wheat. For control of weeds in wheat, apply Sulphuron Methyl 5% WG @ 40 g in 800 litres of water per hectare. Also undertake intercultural operations like weeding and hoeing in gram, pea, rajma, masoor crops.

➤ Foggy weather is conducive for the incidence of blight disease in tomato and potato in Central Plain Zone. For control of blight disease in tomato, spray Mancozeb 75 WP or Ridomil MZ-27 (64% Mancozeb + 8% Metalaxyl) @ 2g/litre followed by Dithane M-45 @ 2.5g/litre of water. For control of blight in potato, spray Cymoxanil+ Mancozeb or Metalaxyl+ Mancozeb @ 1.5g/litre of water.

➤ Under prevailing high humid condition, there is chance of incidence of leaf rot disease in wheat in Bundelkhand Zone. Spray Thiophanate Methyl WP 70% @ 700g or Ziram WP 80% or Mancozeb WP 75 @ 2kg/500 litres of water/ha. Under foggy weather condition, there is chance of powdery mildew in peas. For control, apply soluble Sulphur 80EC @2 kg or Tridemorph 80 EC @500ml/ha.

➤ Under foggy weather condition, there are chances of incidence of *Alternaria* blight in mustard and late blight in potato in North Eastern Plain Zone and Central Plain Zone. Spray Quinalphos @ 1g or Ridomil MZ @ 2 g/litre of water for control of *Alternaria* blight in mustard and for control of late blight in potato, spray Ridomil MZ @ 2g+ Coper Oxichloride @ 1g per litre of water. For control of attack of aphids in potato and mustard, spray Imidachloprid @ 1ml/litre of water.

➤ Under foggy weather condition, there is chance of attack of aphids in mustard in Western Plain Zone. For control, spray Metasystax @ 250ml/250 litres of water.

➤ Suitable varieties are given in Annexure II.

• **Floriculture**

➤ Under prevailing low temperature, red scales are observed in roses in Sub-Montane and Low Hills Sub-Humid Zone of Himachal Pradesh. For control, spray Carbofuran @ 1 teaspoon per plant.

• **Apiculture**

- In view of prevailing low temperature, give winter packing immediately to bee colonies in Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. Check the colonies for nectar and give artificial food to honey bees as there is scarcity of flowers during these days. Keep colonies in sun on clear day.
- **Animal Husbandry**
- Due to prevailing low temperature in Punjab, Haryana & Delhi, East Rajasthan and Uttar Pradesh, keep cattle in cowsheds to protect them from cold. Also give 40-50g mineral mixture with the daily feed. Also make arrangements in poultry houses for protection of birds from cold. Due to light rain, there are chances of spread of H.S. (Haemorrhagic Septicemia or Gall Ghotu) in cattle. Vaccinate the animals.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Banana

Sugarcane

Sorghum

Mango

- **Realised Rainfall:** Weather remained mainly dry/ dry over the region.
- **Weather Forecast:** Dry weather would prevail over the region during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/ thundershowers would occur at isolated places over Vidarbha from 2nd February.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, as dry weather is likely to prevail, apply irrigation to groundnut (at 10 – 12 days interval) and vegetables. Apply fertilizers and undertake intercultural operations in groundnut, vegetable crops and mango and cashew orchards. Considering the rise in temperature apply 150 to 200 litres of water per mango tree at 15 days interval. Apply grass mulch in lateritic soil to avoid water loss. Complete transplanting of seedlings of *rabi* rice and finger millet. Maintain 2-3 cm transplanted rice field and finger millet for 8-10 days and maintain water level upto 5 cm at vegetative state.
 - In Madhya Maharashtra, as dry weather prevailed and dry weather is likely to continue during next three days, apply irrigation to vegetables, sugarcane, wheat, gram and pomegranate, banana orchards. Continue intercultural operations like weeding and apply fertilizers in sugarcane and vegetables. Complete preparatory tillage and continue planting of *suru* sugarcane. Prepare the field for sowing of summer groundnut.
 - In Marathwada, as dry weather prevailed during last week and dry weather is likely to prevail, apply irrigation in gram (pod development stage), wheat (booting stage) and vegetables. Apply irrigation to sugarcane by drip irrigation or by alternate furrow method due to water stress condition also apply mulch of crop residue or sugarcane trash to preserve moisture. Undertake intercultural operations in vegetables and sugarcane. Continue planting of *suru* sugarcane.
 - In Vidarbha, apply irrigation to vegetables, gram (pod development stage) and wheat (booting stage). Complete transplanting of 30 -35 days old summer rice seedlings. Maintain 2-3 cm water level in transplanted rice fields. As temperature is rising, complete preparatory tillage for the sowing of summer groundnut and summer green gram.
 - Due to partly cloudy weather in south Konkan, there may be incidence of hoppers and powdery mildew on mango inflorescence and mustard/ pea size mango fruit, spray Thiomethoxam @1 g plus Carbendazim @10 g per 10 litres of water.
 - Rise in temperature in Pune region is favourable for attack of aphids in tomato, bean, wheat, gaur and gourd vegetables spray Carbosulfan @10 ml per 10 litre of water.
 - **Gujarat:**
 - As dry weather would prevail, apply irrigation in wheat (milking stage) in North Gujarat Zone. Carry out intercultural operations and weeding in standing crops (wheat, mustard, cotton etc.). Undertake picking of matured bolls of cotton during early morning hours. Prepare land for sowing of summer crops after harvesting cotton crop.
 - Continue land preparation for sowing of *summer* crops (groundnut, moong and pearl millet) in South Gujarat Heavy Rainfall Zone. As dry weather would prevail, apply irrigation in Indian bean (pod formation stage), gram and garlic (bulb formation/development stage). Provide irrigation to banana orchards at 10 to 12 days interval. Harvest matured spikes of castor.
 - Carry out hand weeding in wheat North West Zone. Harvest the matured spikes of castor during early morning hours in North Gujarat and North West Zone.
 - Apply irrigation in mustard (pod formation stage) and light irrigation in fruit crops in Bhal and Coastal Zone of

Gujarat.

- In North Saurashtra Zone, keep inputs ready for summer sowing (sesame, groundnut and green gram). Apply irrigation in wheat (grain development stage) in North and South Saurashtra Zone.
- Due to favourable dry and cool weather there is a chance of occurrence of whitefly in papaya in Middle Gujarat Zone; to control, spray Methyl-O-Dematon 25 EC @ 10 ml or Acetamiprid 20 SP @ 2 g in 10 litres of water. Also dry weather is favourable for outbreak of powdery mildew disease in mango; spray Hexaconazol @ 15 ml in 10 litres water at 10 days interval for control.
- Due to cold and humid weather there is chance of attack of rust disease and termite in wheat in South Gujarat Heavy Rainfall Zone; for effective control of rust, spray Carbendazim 250 gm + Mancozeb 1 kg/ha in 200 litres of water and to control damage due to termite, apply Chlorpyrifos @ 1.25 litre/ha with irrigation water.
- Due to cold and humid weather there may be attack of powdery mildew in mango orchards (flowering stage) in South Gujarat Zone; spray wettable Sulphur @ 30 g per 10 litres of water for control.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- Keep young calves indoors during night time in Gujarat.

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

Annexure I
Week by week Rainfall Distribution

Sub-Divisions	14.01.15		21.01.15		28.01.15	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	0.0	-100	0.0	-100	0.0	-100
Dibang Valley	**	**	**	**	**	**
East Kameng	0.0	-100	0.0	-100	0.0	-100
East Siang	0.0	-100	0.0	-100	0.0	-100
Kurung Kumey	**	**	**	**	**	**
Lohit	0.0	-100	0.0	-100	0.0	-100
Lower Dibang Valley	0.0	-100	0.0	-100	0.0	-100
Lower Subansari	**	**	**	**	**	**
Papumpara	0.0	-100	0.0	-100	1.0	-75
Tawang	0.0	-100	0.0	-100	0.0	-100
Tirap	0.0	-100	0.0	-100	0.0	-100
Upper Siang	0.0	-100	0.0	-100	0.0	-100
Upper Subansari	0.0	-100	0.0	-100	0.0	-100
West Kameng	0.0	-100	0.0	-100	0.0	-100
West Siang	0.0	-100	0.0	-100	0.0	-100
Assam&Meghalaya						
Assam						
Baksa	0.0	-100	0.0	-100	0.0	-100
Barpeta	0.0	-100	0.0	-100	0.0	-100
Bongaigaon	0.0	-100	0.0	-100	0.0	-100
Cachar	0.0	-100	0.0	-100	0.0	-100
Chirang	0.0	-100	0.0	-100	0.0	-100
Darrang	0.0	-100	0.0	-100	0.0	-100
Dhemaji	0.0	-100	0.0	-100	0.0	-100
Dhubri	0.0	-100	0.0	-100	0.0	-100
Dibrugarh	0.0	-100	0.0	-100	0.1	-99
Goalpara	0.0	-100	0.0	-100	0.0	-100

Golghat	0.0	-100	0.0	-100	0.0	-100
Hailakandi	0.0	-100	0.0	-100	0.0	-100
Jorhat	0.0	-100	0.0	-100	0.0	-100
Kamrup(Rural)	0.0	-100	0.0	-100	0.0	-100
Kamrup(Metro)	0.0	-100	0.0	-100	0.0	-100
Karbi Anglong	0.0	-100	0.0	-100	0.0	-100
Karimganj	0.0	-100	0.0	-100	0.0	-100
Kokrajhar	0.0	-100	0.0	-100	0.0	-100
Lakhimpur	0.0	-100	0.0	-100	0.1	-98
Morigaon	0.0	-100	0.0	-100	0.0	-100
N.C.Hills	0.0	-100	0.0	-100	0.0	-100
Nowgong	0.0	-100	0.0	-100	0.0	-100
Nalbari	0.0	-100	0.0	-100	0.0	-100
Sonitpur	0.0	-100	0.0	-100	0.0	-100
Sibsagar	0.0	-100	0.0	-100	0.0	-100
Tinsukia	0.0	-100	0.0	-100	0.0	-100
Udalgiri	0.0	-100	0.0	-100	0.0	-100
Meghalaya						
East Garo Hills	0.0	-100	0.0	-100	0.0	-100
East Khasi Hills	0.0	-100	0.0	-100	0.0	-100
Jaintia Hills	0.0	-100	0.0	-100	0.0	-100
Ribhoi	0.0	-100	0.0	-100	0.0	-100
South Garo Hills	0.0	-100	0.0	-100	0.0	-100
West Garo Hills	0.0	-100	0.0	-100	0.0	-100
West Khasi Hills	0.0	-100	0.0	-100	0.0	-100
NMMT						
Mizoram						
Aizwal	0.0	-100	0.0	-100	0.0	-100
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	0.0	-100	0.0	-100	**	**
Mamit	**	**	**	**	**	**
Saiha	0.0	-100	0.0	-100	0.0	-100
Serchhip	0.0	-100	0.0	-100	**	**
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	0.0	-100	0.0	-100	0.0	-100
Churachandpur	**	**	**	**	**	**
Imphal east	0.0	-100	0.0	-100	0.0	-100
Imphal west	0.0	-100	0.0	-100	0.0	-100
Senapati	0.0	-100	0.0	-100	0.0	-100
Tamenglong	**	**	**	**	**	**
Thoubal	0.0	-100	0.0	-100	0.0	-100
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	0.0	-100	0.0	-100	0.0	-100
Kephire	**	**	**	**	**	**
Kohima	0.0	-100	0.0	-100	0.0	-100

Longleng	**	**	**	**	**	**
Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	0.0	-100	0.0	-100	0.0	-100
Tuensang	**	**	**	**	**	**
Wokha	**	**	**	**	**	**
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	0.0	-100	0.0	-100	0.0	-100
North Tripura	0.0	-100	0.0	-100	0.0	-100
South Tripura	0.1	-95	0.1	-95	0.0	-100
West Tripura	0.0	-100	0.0	-100	0.0	-100
Himachal Pradesh						
Bilaspur	2.4	-78	11.1	13	31.7	59
Chamba	6.8	-70	9.0	-68	43.5	19
Hamirpur	4.0	-74	12.9	25	44.3	111
Kangra	8.6	-58	12.9	-28	37.7	90
Kinnaur	9.5	-56	4.0	-79	34.9	28
Kullu	6.8	-63	8.3	-51	50.3	94
Lahaul and Spiti	4.3	-86	1.6	-94	35.3	-7
Mandi	2.5	-80	13.7	-5	41.6	97
Shimla	2.4	-83	8.1	-48	24.1	31
Sirmaur	1.9	-86	7.8	-43	16.3	16
Solan	1.6	-89	7.5	-45	33.8	64
Una	4.9	-57	9.3	4	40.3	247
Punjab						
Amritsar	7.0	6	0.5	-92	12.4	72
Barnala	0.0	-100	0.0	-100	7.4	65
Bhatinda	10.0	285	0.0	-100	11.2	272
Faridkot	2.0	-17	1.5	-48	2.0	-58
Fatehgarh Saheb	0.5	-84	4.3	6	7.3	-24
Ferozpur	1.3	-63	0.6	-84	1.6	-29
Gurdaspur	6.1	-54	4.9	-56	15.5	-2
Hoshiarpur	2.4	-73	1.4	-80	7.0	-38
Jalandhar	5.3	7	0.0	-100	16.4	122
Kapurthala	2.3	-54	0.8	-75	6.2	-40
Ludhiana	2.2	-54	2.5	-44	10.7	50
Mansa	3.2	60	1.2	-45	3.0	-30
Moga	9.0	70	0.0	-100	3.0	-29
Muktesar	4.5	88	12.0	344	6.0	33
Nawashahar	3.1	-61	5.3	-18	18.9	66
Patiala	1.1	-68	4.3	3	6.8	-25
Ropar	1.3	-83	4.3	-52	23.2	113
Sangrur	3.1	-20	1.9	-41	18.5	248
Mohali	5.3	-11	8.3	52	26.0	165
TarnTaran	3.2	68	0.3	-90	3.7	-35
Haryana,Chd,Delhi						
Haryana						

Ambala	1.0	-88	1.9	-80	14.4	85
Bhiwani	0.6	-78	0.0	-98	8.0	61
Chandigarh	1.1	-84	4.5	-53	22.9	60
Faridabad	0.0	-100	0.0	-100	14.8	244
Fatehabad	1.3	-67	0.0	-100	3.9	-37
Gurgaon	1.4	-18	0.0	-100	5.3	154
Hissar	1.9	-25	0.5	-83	3.2	75
Jhajar	0.0	-100	1.4	-43	7.7	167
Jind	0.3	-90	0.1	-95	2.8	25
Katihah	0.6	-85	1.3	-68	2.7	-47
Karnal	0.2	-97	1.1	-84	4.5	-41
Kurukshetra	0.2	-97	0.4	-93	2.4	-68
Mahendragarh	0.5	-88	0.0	-100	8.5	166
Mewat	0.0	-100	0.0	-100	18.6	709
Palwal	0.0	-100	0.0	-100	21.8	738
Panchkkula	1.0	-81	2.5	-74	26.7	115
Panipat	0.0	-100	1.3	-71	2.1	-57
Rewari	0.0	-100	0.0	-100	10.8	671
Rohtak	0.0	-100	0.8	-82	2.6	-48
Sirsa	5.3	102	1.5	-21	3.0	-14
Sonepat	1.3	-73	1.7	-65	3.8	-7
Yamunanagar	0.3	-96	0.6	-95	4.3	-59
Delhi						
Central Delhi	1.0	-69	0.0	-100	5.0	4
East Delhi	1.0	-69	0.0	-100	4.0	-17
New Delhi	0.8	-77	0.0	-100	11.9	148
North Delhi	0.5	-84	1.3	-67	10.7	122
North East Delhi	0.0	-100	0.0	-100	2.0	-58
North West Delhi	0.0	-100	1.0	-74	2.8	-41
South Delhi	0.9	-72	0.8	-79	11.9	147
South West Delhi	0.7	-80	1.2	-69	11.3	134
West Delhi	1.0	-69	1.0	-74	5.0	4
Jammu & Kashmir						
Anantnag	5.2	-64	2.0	-86	15.9	-48
Badgam	1.0	-87	0.0	-100	4.8	-79
Bandipore	**	**	**	**	**	**
Baramula	6.4	-63	0.0	-100	20.9	-63
Doda	6.0	-76	4.4	-82	35.4	-19
Ganderbal	11.6	25	0.0	-100	23.8	9
Jammu	2.5	-81	0.8	-94	10.9	-36
Kargil	**	**	**	**	**	**
Kathua	6.2	-66	0.0	-100	10.4	-33
Kistwar	**	**	**	**	**	**
Kulgam	7.2	-50	0.9	-94	12.2	-60
Kupwara	8.2	-38	0.0	-100	30.0	8
Ladakh(Leh)	1.4	-33	0.0	-100	1.7	39
Poonch	**	**	**	**	**	**
Pulwama	1.4	-81	0.0	-100	4.3	-65
Rajouri	1.0	-95	0.0	-100	28.0	87

Ramban	3.5	-86	1.2	-95	39.4	-10
Reasi	4.2	-76	0.8	-96	20.4	-48
Samba	3.4	-74	1.8	-86	7.8	-54
Shopian	0.0	-100	0.0	-100	1.0	-92
Srinagar	1.8	-81	0.0	-100	3.1	-86
Udhampur	2.3	-87	1.4	-92	14.0	-64
East Madhya Pradesh						
Anuppur	0.0	-100	0.0	-100	0.0	-100
Balaghat	0.0	-100	0.0	-100	0.0	-100
Chhatarpur	0.0	-100	0.0	-100	29.5	367
Chindwara	0.0	-100	0.0	-100	0.0	-100
Damoh	0.0	-100	0.0	-100	19.5	160
Dindori	0.0	-100	0.0	-100	5.0	39
Jabalpur	0.0	-100	0.0	-100	6.6	16
Katni	0.0	-100	0.0	-100	6.1	-16
Mandla	0.0	-100	0.0	-100	0.1	-97
Narsingpur	0.0	-100	0.0	-100	8.8	159
Panna	0.0	-100	0.0	-100	16.5	157
Rewa	0.0	-100	0.0	-100	3.1	-54
Sagar	0.0	-100	0.0	-100	10.7	138
Satna	0.0	-100	0.0	-100	10.8	50
Seoni	0.0	-100	0.0	-100	0.0	-100
Shahdol	0.0	-100	0.0	-100	0.0	-100
Sidhi	0.0	-100	0.0	-100	7.4	6
Singrauli	0.0	-100	0.0	-100	5.1	143
Tikamgarh	0.0	-100	0.0	-100	8.0	86
Umaria	0.0	-100	0.0	-100	0.5	-95
West Madhya Pradesh						
Agar	0.0	-100	0.0	-100	0.0	-100
Alirajpur	0.0	-100	0.0	-100	0.0	-100
Asoknagar	0.0	-100	0.0	-100	15.3	1171
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	0.0	-100	0.0	-100	2.1	13
Bhind	0.0	-100	1.5	-57	23.9	1225
Bhopal	0.0	-100	0.0	-100	14.4	454
Burhanpur	0.0	-100	0.0	-100	0.0	-100
Datia	0.0	-100	0.0	-100	21.3	913
Dewas	0.0	-100	0.0	-100	0.0	-100
Dhar	0.0	-100	0.0	-100	1.5	275
Guna	0.0	-100	0.0	-100	10.1	259
Gwalior	0.0	-100	0.7	-86	33.0	1273
Harda	0.0	-100	0.0	-100	0.4	-71
Hosangabad	0.0	-100	0.0	-100	5.9	95
Indore	0.0	-100	0.0	-100	15.9	1345
Jhabua	0.0	-100	0.0	-100	0.0	-100
Khandwa	0.0	-100	0.0	-100	0.0	-100
Khargone	0.0	-100	0.0	-100	0.0	-100
Mandsaur	0.0	-100	0.0	-100	0.0	-100
Morena	0.0	-100	0.0	-100	17.1	966

Neemuch	0.0	-100	0.0	-100	0.0	-100
Raisen	0.0	-100	0.0	-100	11.0	547
Rajgarh	0.0	-100	0.0	-100	8.0	323
Ratlam	0.0	-100	0.0	-100	0.3	-33
Sehore	0.0	-100	0.0	-100	3.4	70
Shajapur	0.0	-100	0.0	-100	4.1	130
Sheopur Kalani	0.0	-100	0.0	-100	19.0	1627
Shivpuri	0.0	-100	0.0	-100	24.4	1063
Ujjain	0.0	-100	0.0	-100	0.2	-80
Vidisha	0.0	-100	0.0	-100	23.3	870
Chhattisgarh						
Bastar	0.0	-100	0.0	-100	0.0	-100
Bijapur	0.0	-100	0.0	-100	0.0	-100
Bilaspur	0.0	-100	0.0	-100	0.0	-100
Dantewara	0.0	-100	0.0	-100	0.0	-100
Dhamtari	0.0	-100	0.0	-100	0.0	-100
Durg	0.0	-100	0.0	-100	0.0	-100
Janjgir	**	**	0.0	-100	0.0	-100
Jashpurnagar	0.0	-100	0.0	-100	0.0	-100
Kanker	**	**	**	**	0.0	-100
Korba	0.0	-100	0.0	-100	0.0	-100
Koriya	0.0	-100	0.0	-100	0.0	-100
Kawardha	**	**	**	**	0.0	-100
Mahasumund	0.0	-100	0.0	-100	0.0	-100
Narayanpur	0.0	-100	0.0	-100	0.0	-100
Raigarh	**	**	**	**	0.0	-100
Raipur	0.0	-100	0.0	-100	0.0	-100
Rajandgaon	0.0	-100	0.0	-100	0.0	-100
Surguja	0.0	-100	0.0	-100	0.0	-100
East Uttar Pradesh						
Allahabad	0.0	-100	0.0	-100	22.4	376
Ambedkar Nagar	0.0	-100	0.0	-100	16.0	290
Azamgarh	0.0	-100	0.0	-100	16.0	416
Bahraich	0.0	-100	0.0	-100	2.7	-40
Ballia	0.0	-100	0.0	-100	11.3	278
Balrampur	0.0	-100	0.0	-100	0.0	-100
Banda	0.0	-100	0.0	-100	26.7	404
Barabanki	0.0	-100	0.0	-100	4.1	14
Basti	0.0	-100	0.0	-100	4.0	14
Chandauli	0.0	-100	0.0	-100	2.6	-54
Deoria	0.0	-100	0.0	-100	2.0	-38
Faizabad	0.0	-100	0.0	-100	5.2	-10
Farrukhabad	0.0	-100	0.0	-100	12.2	306
Fatehpur	0.0	-100	0.0	-100	10.8	82
Gazipur	0.0	-100	0.0	-100	7.5	78
Gonda	0.0	-100	0.0	-100	0.5	-90
Gorakhpur	0.0	-100	0.0	-100	2.4	-35
Hardoi	0.0	-100	0.0	-100	8.9	97
Jaunpur	0.0	-100	0.0	-100	19.4	471

Kannauj	0.0	-100	0.0	-100	18.2	379
Kanpur City	0.0	-100	0.0	-100	11.9	261
Kanpur Dehat	0.0	-100	0.0	-100	12.2	352
Kaushambi	0.0	-100	0.0	-100	58.1	1163
Kheri	0.0	-100	0.0	-100	7.5	71
Kushi nagar	0.0	-100	0.0	-100	0.0	-100
Lucknow	0.0	-100	0.0	-100	9.0	115
Maharajganj	0.0	-100	0.0	-100	0.0	-100
Mau	0.0	-100	0.0	-100	4.7	51
Mirzapur	0.0	-100	0.0	-100	0.5	-91
Pratapgarh	0.0	-100	0.0	-100	35.0	821
RaiBareilly	0.0	-100	0.0	-100	8.4	141
Sahuji Maharajnagar	0.0	-100	0.0	-100	33.3	552
Sant Kabirnagar	0.0	-100	0.0	-100	4.0	43
Sant Ravidas Nagar	0.0	-100	0.0	-100	23.5	320
Shrawasti	**	**	0.0	-100	0.0	-100
Sidharthnagar	0.0	-100	0.0	-100	0.0	-100
Sitapur	0.0	-100	0.0	-100	4.7	10
Sonbhadra	0.0	-100	0.0	-100	2.7	-61
Sultanpur	0.0	-100	0.0	-100	9.1	184
Unnao	0.0	-100	0.0	-100	9.0	137
Varanasi	0.0	-100	0.0	-100	15.5	259
West Uttar Pradesh						
Agra	0.0	-100	0.4	-89	27.3	521
Aligarh	0.0	-100	2.5	-35	17.3	456
Auraiya	0.0	-100	0.0	-100	6.5	171
Badaun	0.0	-100	1.2	-67	22.5	971
Baghpat	1.0	-68	0.5	-91	2.8	-33
Bareilly	0.0	-100	2.3	-38	19.3	285
Bijnor	0.2	-98	2.5	-62	8.4	-9
Bulandsahar	0.0	-100	1.0	-74	8.7	93
Etah	0.0	-100	1.0	-69	24.7	816
Etawah	0.0	-100	0.0	-100	4.3	55
Firozabad	0.0	-100	2.7	-34	24.9	728
GBNagar	1.5	-64	1.5	-70	15.5	223
Ghaziabad	0.1	-98	1.7	-60	14.8	168
Hamirpur	0.0	-100	0.0	-100	10.8	144
Jalaun	0.0	-100	0.0	-100	14.0	509
Jhansi	0.0	-100	0.0	-100	17.1	469
Jotiba Phule Nagar	0.0	-100	4.0	-35	5.7	13
Kanshiramnagar	0.0	-100	2.5	-53	55.0	1386
Lalitpur	0.0	-100	0.0	-100	9.7	93
Mahamaya Nagar	0.0	-100	0.7	-78	29.0	1015
Mahoba	0.0	-100	0.0	-100	8.9	123
Mainpuri	0.0	-100	0.0	-100	9.7	306
Mathura	0.0	-100	0.0	-100	3.5	46
Meerut	0.4	-93	2.7	-56	13.5	105
Moradabad	0.0	-100	2.7	-51	11.2	114
Muzzaffarnagar	0.7	-87	3.1	-44	3.5	-57

Pilibhit	0.0	-100	0.9	-81	15.1	258
Rampur	0.0	-100	2.7	-32	11.4	81
Saharanpur	0.0	-100	1.7	-73	4.3	-48
Shahjahanpur	0.0	-100	0.0	-100	8.5	215
Uttarakhand						
Almora	0.0	-100	0.0	-100	9.7	-22
Bageshwar	0.0	-100	0.0	-100	7.5	-39
Chamoli	4.5	-56	3.1	-76	16.6	7
Champawat	0.0	-100	1.0	-85	12.5	3
Dehradun	0.2	-99	3.4	-68	7.4	-48
Garhwal Pauri	0.0	-100	1.7	-83	2.8	-74
Garhwal Tehri	0.6	-94	1.5	-84	11.1	-39
Haridwar	0.0	-100	6.3	-9	6.9	-24
Nainital	0.0	-100	0.9	-89	14.9	24
Pithorgarh	0.0	-100	0.7	-92	11.0	-27
Rudraprayag	2.2	-86	2.6	-72	6.4	-65
Udham Sing Nagar	0.0	-100	0.4	-92	11.8	30
Uttarkashi	4.2	-75	7.8	-55	15.1	-18
Bihar						
Araria	0.0	-100	0.0	-100	0.0	-100
Arwal	0.0	-100	0.0	-100	0.0	-100
Aurangabad	0.0	-100	0.0	-100	3.7	-13
Banka	0.0	-100	0.0	-100	0.0	-100
Begusarai	0.0	-100	0.0	-100	0.0	-100
Bhabua	0.0	-100	0.0	-100	7.4	-11
Bhagalpur	0.0	-100	0.0	-100	0.8	-84
Bhojpur	0.0	-100	0.0	-100	1.0	-70
Buxar	**	**	**	**	**	**
Darbhangha	0.0	-100	0.0	-100	0.0	-100
East Champaran	0.0	-100	0.0	-100	1.7	-38
Gaya	0.0	-100	0.1	-99	1.4	-68
Gopalganj	0.0	-100	0.0	-100	0.0	-100
Jahanabad	0.0	-100	0.0	-100	1.4	-48
Jamui	0.0	-100	0.0	-100	0.0	-100
Kathihar	0.0	-100	0.0	-100	0.0	-100
Khagadia	0.0	-100	0.0	-100	0.0	-100
Kishanganj	0.0	-100	0.0	-100	0.0	-100
Lakhisarai	0.0	-100	0.0	-100	0.0	-100
Madhepura	0.0	-100	0.0	-100	0.0	-100
Madhubani	0.0	-100	0.0	-100	0.0	-100
Monghyar	0.0	-100	0.0	-100	0.0	-100
Muzaffarpur	0.0	-100	0.0	-100	0.1	-96
Nalanda	0.0	-100	0.0	-100	0.7	-73
Nawada	0.0	-100	0.0	-100	0.0	-100
Patna	0.0	-100	0.0	-100	1.6	-36
Purnea	0.0	-100	0.0	-100	0.0	-100
Rohtas	0.0	-100	0.0	-100	3.3	19
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	0.0	-100
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	0.0	-100
Siwan	0.0	-100	0.0	-100	3.3	-24
Supaul	0.0	-100	0.0	-100	0.0	-100
Vaishali	0.0	-100	0.0	-100	7.1	146
West Champaran	0.0	-100	0.0	-100	0.0	-100
Jharkhand						
Bokaro	0.0	-100	0.0	-100	0.0	-100
Chatra	0.0	-100	0.0	-100	0.0	-100
Deoghar	0.0	-100	0.0	-100	0.0	-100
Dhanbad	0.0	-100	0.0	-100	0.0	-100
Dumka	0.0	-100	0.0	-100	0.0	-100
East Singbhum	0.0	-100	0.0	-100	0.0	-100
Garhwa	0.0	-100	0.0	-100	0.0	-100
Giridih	0.0	-100	0.0	-100	0.0	-100
Godda	0.0	-100	0.0	-100	0.0	-100
Gumla	0.0	-100	0.0	-100	0.0	-100
Hazaribagh	0.0	-100	0.0	-100	0.0	-100
Jamtara	0.0	-100	0.0	-100	0.0	-100
Khunti	0.0	-100	0.0	-100	**	**
Koderna	0.0	-100	0.0	-100	0.0	-100
Latehar	0.0	-100	0.0	-100	2.1	-52
Lohardagga	0.0	-100	0.0	-100	0.0	-100
Pakur	0.0	-100	0.0	-100	0.0	-100
Palamau	0.0	-100	0.0	-100	0.2	-96
Ramgarh	0.0	-100	0.0	-100	0.0	-100
Ranchi	0.0	-100	0.0	-100	0.0	-100
Sahebganj	0.0	-100	0.0	-100	0.0	-100
Saraikela	0.0	-100	0.0	-100	0.0	-100
Simdega	0.0	-100	0.0	-100	0.0	-100
West Singbhum	0.0	-100	0.0	-100	0.0	-100
East Rajasthan						
Ajmer	0.0	-100	0.0	-100	12.4	2379
Alwar	0.0	-100	0.0	-100	9.8	446
Banswara	0.0	-100	0.0	-100	0.1	-56
Baran	0.0	-100	0.0	-100	1.9	275
Bharatpur	0.0	-100	0.0	-100	23.4	1070
Bhilwara	0.0	-100	0.0	-100	3.7	817
Bundi	0.0	-100	0.0	-100	21.3	2948
Chittorgarh	0.0	-100	0.0	-100	10.9	2627
Dausa	0.0	-100	0.0	-100	19.0	1362
Dholpur	0.0	-100	0.0	-100	25.7	2039
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	0.0	-100	0.0	-100	9.3	1064
Jhalawar	0.0	-100	0.0	-100	0.0	-100
Jhunjhunu	0.4	-84	0.0	-100	2.5	106
Karauli	0.0	-100	0.0	-100	9.8	446

Kota	0.0	-100	0.0	-100	8.1	1055
Pratapgarh	0.0	-100	0.0	-100	3.4	1600
Rajsamand	0.0	-100	0.0	-100	0.0	-100
Sawai Madhopur	0.0	-100	0.0	-100	20.1	1730
Sikar	0.0	-100	0.0	-100	12.3	924
Sirohi	0.0	-100	0.0	-100	9.1	1711
Tonk	0.0	-100	0.0	-100	13.8	1873
Udaipur	0.0	-100	0.0	-100	8.4	2688
West Rajasthan						
Barmer	0.0	-100	0.3	233	0.8	200
Bikaner	0.0	-100	0.0	-100	0.2	-81
Churu	0.5	-74	0.8	-47	1.6	47
Hanumangarh	0.0	-100	2.1	4	2.4	35
Jaisalmer	0.0	-100	0.0	-100	0.0	-100
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.0	-100	0.1	-67	0.5	80
Nagaur	0.0	-100	0.0	-100	2.7	286
Pali	0.0	-100	0.0	-100	1.1	83
Sri Ganganagar	0.6	-57	0.9	15	1.7	-4
Gujarat Region						
Ahmedabad	0.0	-100	0.0	-100	1.6	200
Anand	0.0	-100	0.0	-100	0.1	200
Banaskantha	0.0	-100	0.0	-100	2.1	314
Baroda	0.0	-100	0.0	-100	0.0	-100
Broach	0.0	-100	0.0	-100	0.0	-100
DNH	**	**	**	**	**	**
Dahod	0.0	-100	0.0	-100	0.0	-100
Daman	**	**	0.0	-100	0.0	-100
Dangs	0.0	-100	0.0	-100	0.0	-100
Gandhinagar	0.0	-100	0.0	-100	2.0	900
Kheda	0.0	-100	0.0	-100	2.7	200
Mehsana	0.0	-100	0.0	-100	5.1	5011
Narmada	0.0	-100	0.0	-100	0.6	200
Navsari	0.0	-100	0.0	-100	0.0	-100
Panchmahal	0.0	-100	0.0	-100	0.0	-100
Patan	0.0	-100	0.0	-100	2.0	900
Sabarkantha	0.0	-100	0.0	-100	3.7	3614
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	0.0	-100	0.0	-100	2.2	982
Bhavnagar	0.0	-100	0.0	-100	1.4	200
Diu	0.0	-100	0.6	200	0.0	-100
Jamnagar	0.0	-100	0.4	200	0.7	627
Junagarh	0.0	-100	0.1	-100	3.3	200
Kutch	0.0	-100	0.8	746	0.0	-100
Porbandar	0.0	-100	0.0	-100	0.0	-100
Rajkot	0.0	-100	0.0	-100	1.1	200

Surendranagar	0.0	-100	0.0	-100	0.2	200
Maharashtra & Goa						
Konkan & Goa						
Mumbai City	0.0	-100	0.0	-100	0.0	-100
Mumbai Suburban	0.0	-100	0.0	-100	0.0	-100
North Goa	0.0	-100	0.0	-100	0.0	-100
Raigad	0.0	-100	0.0	-100	0.0	-100
Ratnagiri	0.0	-100	0.0	-100	0.0	-100
Sindhudurg	0.0	-100	0.0	-100	0.0	-100
South Goa	0.0	-100	0.0	-100	0.0	-100
Thane	0.0	-100	0.0	-100	0.0	-100
Madhya Maharashtra						
Ahmednagar	0.0	-100	0.0	-100	0.0	-100
Dhule	**	**	**	**	0.0	-100
Jalgaon	0.0	-100	0.0	-100	0.4	-30
Kolhapur	0.0	-100	0.0	-100	0.0	-100
Nandurbar	**	**	**	**	0.0	-100
Nasik	0.0	-100	0.0	-100	2.4	1075
Pune	0.0	-100	0.0	-100	0.0	-100
Sangli	0.0	-100	0.0	-100	0.0	-100
Satara	0.0	-100	0.0	-100	0.0	-100
Solapur	0.0	-100	0.0	-100	0.0	-100
Marathwada						
Aurangabad	0.0	-100	0.0	-100	0.0	-100
Beed	0.0	-100	0.0	-100	0.0	-100
Hingoli	**	**	0.0	-100	**	**
Jalna	0.0	-100	0.0	-100	0.0	-100
Latur	0.0	-100	0.0	-100	0.0	-100
Nanded	0.0	-100	0.0	-100	0.0	-100
Usmanabad	0.0	-100	0.0	-100	0.0	-100
Parbhani	0.0	-100	0.0	-100	0.0	-100
Vidarbha						
Akola	0.0	-100	0.0	-100	0.1	-95
Amraoti	0.0	-100	0.0	-100	0.0	-100
Bhandara	0.0	-100	0.0	-100	0.0	-100
Buldhana	0.0	-100	0.0	-100	0.0	-100
Chandrapur	0.0	-100	0.0	-100	0.0	-100
Gadchiroli	0.0	-100	0.0	-100	0.0	-100
Gondia	0.0	-100	0.0	-100	0.0	-100
Nagpur	0.0	-100	0.0	-100	0.0	-100
Wardha	0.0	-100	0.0	-100	0.0	-100
Washim	0.0	-100	0.0	-100	0.0	-100
Yeotmal	0.0	-100	0.0	-100	0.0	-100
Odisha						
Angul	0.0	-100	0.0	-100	0.0	-100
Balasore	0.5	-74	0.0	-100	0.0	-100
Bargarh	0.0	-100	0.0	-100	0.0	-100
Bhadrak	0.0	-100	0.0	-100	0.0	-100
Bolangir	0.0	-100	0.0	-100	0.0	-100

Boudh	0.0	-100	0.0	-100	0.0	-100
Cuttack	0.0	-100	0.0	-100	0.0	-100
Deogarh	0.0	-100	0.0	-100	0.0	-100
Dhenkanal	0.0	-100	0.0	-100	0.0	-100
Gajapati	0.0	-100	0.0	-100	0.0	-100
Ganjam	0.0	-100	0.0	-100	0.0	-100
Jagatsingpur	0.0	-100	0.0	-100	0.0	-100
Jajpur	0.0	-100	0.0	-100	0.0	-100
Jharsuguda	0.0	-100	0.0	-100	0.0	-100
Kalahandi	0.0	-100	0.0	-100	0.0	-100
Kandhamal	0.0	-100	0.0	-100	0.0	-100
Kendrapara	0.0	-100	0.0	-100	0.0	-100
Keonjhar	0.0	-100	0.0	-100	0.0	-100
Khurda	0.0	-100	0.0	-100	0.0	-100
Koraput	0.0	-100	0.0	-100	0.0	-100
Malkangiri	0.0	-100	0.0	-100	0.0	-100
Mayurbhanj	0.0	-100	0.0	-100	0.0	-100
Nawapara	0.0	-100	0.0	-100	0.0	-100
Nawarangpur	0.0	-100	0.0	-100	0.0	-100
Nayagarh	0.0	-100	0.0	-100	0.0	-100
Puri	0.0	-100	0.0	-100	0.0	-100
Rayagada	0.0	-100	0.0	-100	0.0	-100
Sambalpur	0.0	-100	0.0	-100	0.0	-100
Sonepur	0.0	-100	0.0	-100	0.0	-100
Sundargarh	0.0	-100	0.0	-100	0.0	-100
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	84.3	197	16.1	15	1.1	-95
North & Middle Andaman	4.3	-69	83.6	2222	0.0	-100
South Andaman	33.9	145	59.4	1551	0.0	-100
GWB						
Bankura	0.0	-100	0.0	-100	0.0	-100
Birbhum	0.0	-100	0.0	-100	0.0	-100
Burdwan	0.0	-100	0.0	-100	0.0	-100
East Midnapore	0.0	-100	0.0	-100	0.0	-100
Hooghly	0.0	-100	0.0	-100	0.0	-100
Howrah	0.0	-100	0.0	-100	0.0	-100
Kolkata	0.0	-100	0.0	-100	0.0	-100
Murshidabad	0.0	-100	0.0	-100	0.0	-100
Nadia	0.0	-100	0.0	-100	0.0	-100
24 Pargana (N)	0.0	-100	0.0	-100	0.0	-100
Purulia	1.9	-36	0.0	-100	0.0	-100
24 Pargana (S)	0.0	-100	0.0	-100	0.0	-100
West Midnapore	0.0	-100	0.0	-100	0.0	-100
SHWB & Sikkim						
Cooch Behar	0.1	-97	0.0	-100	0.0	-100
Darjeeling	0.8	-91	0.0	-100	0.0	-100
East Sikkim	3.6	6	0.0	-100	0.0	-100
Jalpaiguri	0.8	-54	0.0	-100	0.0	-100

Malda	0.0	-100	0.0	-100	0.0	-100
North Dinajpur	0.0	-100	0.0	-100	0.0	-100
North Sikkim	4.2	-57	0.0	-100	0.0	-100
South Dinajpur	0.0	-100	0.0	-100	0.0	-100
South Sikkim	0.3	-90	0.0	-100	0.0	-100
West Sikkim	4.0	-59	0.0	-100	0.0	-100
Karnataka						
Coastal Karnataka						
Dakshin Kannada	0.0	-100	0.0	-100	0.0	-100
Udupi	0.0	-100	0.0	-100	0.0	-100
Uttar Kannada	0.0	-100	0.0	-100	0.0	-100
N I Karnataka						
Bagalkote	0.0	-100	0.0	-100	0.0	-100
Belgaum	0.0	-100	0.0	-100	0.0	-100
Bidar	0.0	-100	0.0	-100	0.0	-100
Bijapur	0.0	-100	0.0	-100	0.0	-100
Dharwad	0.0	-100	0.0	-100	0.0	-100
Gadag	0.0	-100	0.0	-100	0.0	-100
Gulbarga	0.0	-100	0.0	-100	0.0	-100
Haveri	0.0	-100	0.0	-100	0.0	-100
Koppal	0.0	-100	0.0	-100	0.0	-100
Raichur	0.0	-100	0.0	-100	0.0	-100
Yadgir	0.0	-100	0.0	-100	0.0	-100
S I Karnataka						
Bangalore Rural	0.0	-100	0.0	-100	0.0	-100
Bangalore Urban	0.0	-100	0.0	-100	0.0	-100
Bellary	0.0	-100	0.0	-100	0.0	-100
Chamarajnagar	0.0	-100	0.0	-100	0.0	-100
Chichballapur	0.0	-100	0.0	-100	0.0	-100
Chickmagalur	0.0	-100	0.0	-100	0.0	-100
Chitradurga	0.0	-100	0.0	-100	0.0	-100
Davangere	0.0	-100	0.0	-100	0.0	-100
Hassan	0.0	-100	1.1	118	0.0	-100
Kodagu	0.0	-100	0.0	-100	0.0	-100
Kolar	0.0	-100	0.0	-100	0.0	-100
Mandya	0.0	-100	0.0	-100	0.0	-100
Mysore	0.0	-100	2.4	120	0.0	-100
Ramnagara	0.0	-100	0.0	-100	0.0	-100
Shimoga	0.0	-100	0.0	-100	0.0	-100
Tumkur	0.0	-100	0.0	-100	0.0	-100
Kerala						
Alappuzha	0.9	-81	0.1	-96	1.0	-77
Kannur	0.0	-100	5.0	736	0.0	-100
Ernakulam	0.0	-100	0.0	-100	0.0	-100
Idukki	1.2	-63	0.0	-100	0.0	-100
Kasaragod	0.0	-100	0.0	-100	0.0	-100
Kollam	0.0	-100	0.3	-90	1.0	-76
Kottayam	5.2	106	0.0	-100	0.0	-100
Kozhikode	0.0	-100	0.0	-100	0.0	-100

Malappuram	0.0	-100	0.0	-100	0.0	-100
Palakkad	0.0	-100	0.0	-100	0.0	-100
Pathanamthitta	5.3	-5	0.0	-100	0.0	-100
Thiruvananthapuram	0.0	-100	0.0	-100	0.6	-90
Thrissur	0.0	-100	0.0	-100	0.0	-100
Wynad	0.0	-100	0.1	-93	0.0	-100
Tamil Nadu						
Ariyalur	0.0	-100	0.0	-100	4.0	700
Chennai	0.0	-100	0.0	-100	3.2	540
Coimbatore	0.0	-100	0.0	-100	0.0	-100
Cuddalore	0.0	-100	0.0	-100	7.9	424
Dharmapuri	0.0	-100	0.0	-100	0.0	-100
Dindigul	0.0	-100	0.0	-100	0.0	-100
Erode	0.0	-100	0.0	-100	0.0	-100
Kanchipuram	0.0	-100	0.0	-100	0.9	-16
Kanyakumari	5.0	0	0.0	-100	0.6	-84
Karikal	0.0	-100	9.7	-19	0.4	-81
Karur	0.0	-100	0.0	-100	0.0	-100
Krishnagiri	0.0	-100	0.0	-100	0.0	-100
Madurai	0.0	-100	0.0	-100	0.0	-100
Nagapattinam	0.0	-100	0.0	-100	9.6	58
Namakkal	0.0	-100	0.0	-100	0.0	-100
Nilgiris	0.0	-100	0.0	-100	1.2	-52
Perambalur	0.0	-100	0.0	-100	2.0	300
Puducherry	0.0	-100	0.0	-100	0.1	-93
Pudukottai	0.0	-100	0.0	-100	0.0	-100
Ramanathapuram	0.0	-100	0.0	-99	0.3	-87
Salem	0.0	-100	0.0	-100	0.0	-100
Sivaganga	0.0	-100	0.0	-100	0.0	-100
Thanjavur	0.0	-100	0.0	-100	0.9	18
Theni	0.0	-100	0.0	-100	1.8	66
Tirunelveli	0.0	-100	0.0	-100	0.4	-88
Tirupur	0.0	-100	0.0	-100	0.0	-100
Tiruvallur	0.0	-100	0.0	-100	0.2	-84
Tiruvannamalai	0.0	-100	0.0	-100	0.0	-100
Tiruvarur	0.0	-100	0.0	-100	3.5	76
Toothukudi	0.0	-100	0.0	-100	0.0	-100
Trichy	0.0	-100	0.0	-100	1.2	133
Vellore	0.0	-100	0.0	-100	0.0	-100
Villupuram	0.0	-100	0.0	-100	1.2	70
Virudhunagar	0.0	-100	0.0	-100	0.0	-100
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	0.0	-100	0.0	-100	0.0	-100
Guntur	0.0	-100	0.0	-100	0.0	-100
Krishna	0.0	-100	0.0	-100	0.0	-100
Nellore	0.0	-100	0.3	-93	0.0	-100
Prakasam	0.0	-100	0.0	-100	0.0	-100
Sirkakulam	0.0	-100	0.0	-100	0.0	-100

Visakhapatnam	0.0	-100	0.0	-100	0.0	-100
Vizianagram	0.0	-100	0.0	-100	0.0	-100
West Godavari	0.0	-100	0.0	-100	0.0	-100
Royalaseema						
Anantapur	0.0	-100	0.0	-100	0.0	-100
Chittoor	0.0	-100	0.0	-98	0.0	-100
Cuddapah	0.0	-100	0.0	-100	0.0	-100
Kurnool	0.0	-100	0.0	-100	0.0	-100
Telangana						
Adilabad	0.0	-100	0.0	-100	0.0	-100
Hyderabad	0.0	-100	0.0	-100	0.0	-100
Karimnagar	0.0	-100	0.0	-100	0.0	-100
Khammam	0.0	-100	0.0	-100	0.0	-100
Mehabubnagar	0.0	-100	0.0	-96	0.0	-100
Medak	0.0	-100	0.0	-100	0.0	-100
Nalgonda	0.0	-100	0.0	-100	0.0	-100
Nizamabad	0.0	-100	0.0	-100	0.0	-100
Rangareddy	0.0	-100	0.0	-100	0.0	-100
Warangal	0.0	-100	0.0	-100	0.0	-100

Legends

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

Annexure II List of varieties

Karnataka

Sunflower: Mordern, K.B.S.H-1, 41, 42 and 44

Maize: Ganga-11, Deccan-103, N.A.C-6002 & 6004, Nityashree

Groundnut: ICGS-11, K-134, Chintamani-2(KCH-2)

Ragi: Indaf-5, GPU-26 and 48

Sugar-cane: Co-86032, Co-94012

Assam

Boro rice: Mahsuri, IR-50, Dinanath, Bishnuprasad, Jyotiprasad, Kanaklata and Dinanat, Boro-1, -2, -3, Kalinga-3, Joymati, Dinanath, Swarnav.

Sunflower: Jwalamukhi.

Green gram: Pratap, T-44, Kopergaon, AAU-39, K-851 and ML-55.

Black gram: T-9, Pant-U-19, UG-157.

Odisha

Sunflower: Morden, Sunrise, Surya and Hybrid varieties like KBSH-1, KBSH-3 and MSFH.

Groundnut: Smruti, TAG-27, TAG – 24 and JL-24

Onion: Nasik Red, Patna Red, Pune Red, Bellary Red, Pusa Ratnar, Pusa Madhavi, Arka Niketan ,Arka Pragati

Ragi: HYVs. like Subhra, Vairabi, Dibyasingh, Nilachala, Subhra, Godavari and Chilka.

Bihar

Boro rice: Gutum, Prabhat, Richaria, Dhanlaxmi, Saroj Rajendra Bhagvati, and R.A.U

Jharkhand:

Summer Rice: IR-36, IR-64, Naveen, lalat, Parijat (80-85 days).

Jammu & Kashmir

Wheat: VL-738 and PBW-175 ,VL-738, VL-804, HS-240, HD-1553, HS-277, HS-240, VL- 616 & SKW-196, VL-829, PBW-175 , VL- 892, VL-738, VL-804, HS-507, VL-829 & VL-892, VL – 907, HS-240 & PBW-154.

Onion: Agrifound Parvati, Pusa red, N-53.

Uttarakhand

Wheat: UP-2572, UP-2584, UP-1109, VL-802, VL-804, VL-738, VL-421, HS-240.VL-616, HS-277, VL-829, VL-738(mandri), HS-277 etc.

Onion: VL-3.

Lentil: T 36, BL 406, Sihore 74-7 and K 75.

Barley: RD 2035, RD 2052, RD 2503, RD 2668,

Himachal Pradesh

Wheat: HPW-155, HPW-89, HPW-147, HPW-236, HPW-211 in low and mid hill and HPW-155, HPW-236, HPW-42 in high hill

Late variety of Cauliflower: broccoli

Cauliflower: Pusa-snowwall

Radish:Japanese white, Chinese pink and mino early white

Turnip: PTWG-1

Carrot: Pusa kesar

Fenugreek: I.C. 74, Kasoori

East Uttar Pradesh

Wheat: Narendra-1012, HD-2824, 2733, HP-1731, UP-2382, PWD-343, CVW-38, DBW-39, UO-2382, HUU-510

Wheat (Late varieties): Malaveey-234, HP-1633, H-1744, Narendra-1014, UP-2425

Onion: Pusa red, Kalynpur red, light red

Lentil: T-8, Pant L-406, 234

Chilli: Patasi-1, Jwala, Sadabahar

West Uttar Pradesh:

Wheat (non-irrigated): K-9644, Maghar(K-8027), Mandakini(K-9351), Indra(K-8962), Gomati(K-9465), HDR-77, HD-2888

Wheat (Irrigated): K-307, DBW-17, PBW-343,502,550, GW-366, K-1006, 607,402, DVW-39

KRL-210, 213, 19, K-8434(Prasad), NW-1067

Lentil: Narendra-1, DPL-62, Pant-5, L-4076, K-75, HUL-57, Shekhar-3,2, IPL-81

Sunflower: No.1, PAC- 302, SH-322

Rajasthan

Mustard: Pusa Jai Kisan (115-120 days), P.R-15 (125-130 days), Pusa bold (130-135 days), R.H. 30 and R.H. 9304 (130-135 day)

Wheat: HI-8381, 8498, 1544 GW-273, Raj-3077, 4037, DL-803-3, GW-322, 190, 366

Linseed: RL-6, RDB-1, RD-31,387, 2552, 2035, 103, BL-2

Gram: BG-256, Phuleji-5, RSG-44, Samrat, Pratap-1, GNG-469,149,663, Kabuli-2

Maharashtra

Madhya Maharashtra

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

Safflower: Bhima or Phule Kusuma

Marathwada

Jowar: Parbhani Moti or Parbhani Jyoti.

suru Sugarcane: CO-86032, COM- 7125, CO-8014 or CO-740

Vidarbha

summer Groundnut: TAG-24, TG-26 or SB-11.