



National Agromet Advisory Service Bulletin



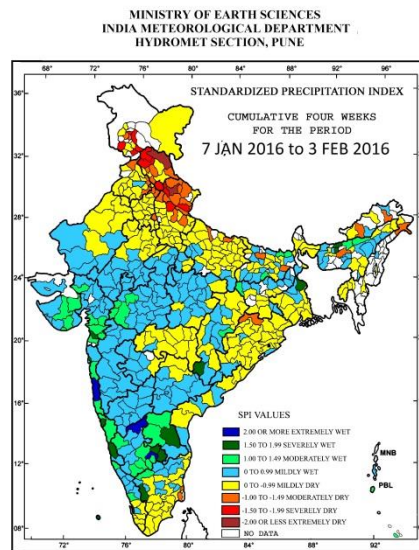
Friday 5th February 2016
(For the period 5th to 9th February 2016)



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National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division,
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Weblink For
District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

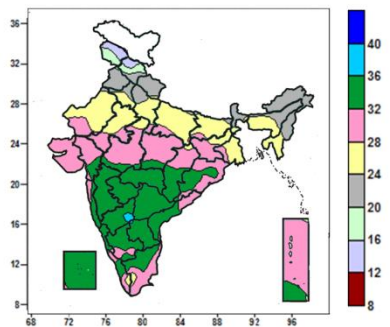
Standardised Precipitation Index Four Weekly for the Period 7th January to 3rd February 2016



- Extremely/severely wet conditions experienced in Ratnagiri district of Konkan & Goa; Nalbari, Baksa districts of Assam; Murshidabad district of West Bengal; Navsari district of Gujarat Region; Bijapur district of Chhattisgarh; Cuddapah district of Andhra Pradesh; Coimbatore district of Tamil Nadu; Udipi, Bangalore Rural, Bellary, Kolar, Chickballapur districts of Karnataka; Lakshadweep district of Lakshadweep.
- Extremely/Severely dry conditions experienced in few districts of Uttarakhand; Himachal Pradesh; Jammu & Kashmir; Bijnor district of Uttar Pradesh.
- Moderately dry conditions experienced in many districts of Uttarakhand; Delhi; few districts of Arunachal Pradesh; Himachal Pradesh; Kamrup district of Assam; Sundargarh district of Odisha; Bhagalpur, Muzaffarpur districts of Bihar; Bagraich, Siddharth Nagar, Bareilly, Moradabad, Saharanpur districts of Uttar Pradesh; Gurdaspur, Patiala, Sas Nagar Mohali districts of Punjab; Badgam, Pulwama districts of Jammu & Kashmir. Nagapattinam, Tiruvarur districts of TamilNadu.
- Rest of the country experienced moderately wet/ mildly dry/mildly wet conditions.

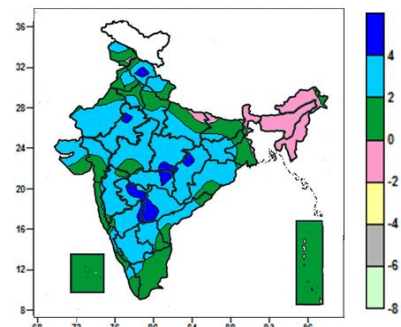
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 03.02.2016

Actual Mean Maximum Temperature (°C) in India for the week ending 03.02.2016



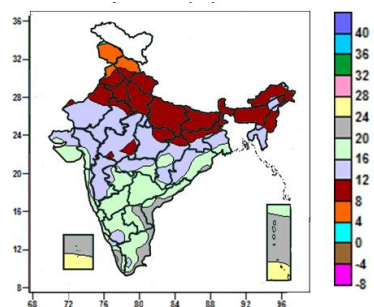
- Mean maximum temperature was between 36 to 40°C over isolated pockets of North Interior Karnataka.
- Mean maximum temperature was between 32 to 36°C over Marathwada, Vidarbha, Lakshadweep, many parts of Madhya Maharashtra, Konkan & Goa, Telangana, Andhra Pradesh, Karnataka, Chhattisgarh, some parts of Odisha, Gujarat region, Tamil Nadu, Kerala and isolated pockets of Madhya Pradesh and Andaman & Nicobar Islands.
- Mean maximum temperature was between 24 to 32°C over rest of the country except Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Arunachal Pradesh, Nagaland, Manipur, many parts of Sub-Himalayan West Bengal & Sikkim, some parts of Haryana & Delhi, West Uttar Pradesh, Assam & Meghalaya and isolated pockets of Bihar where it was between 12 and 24°C.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 03.02.2016



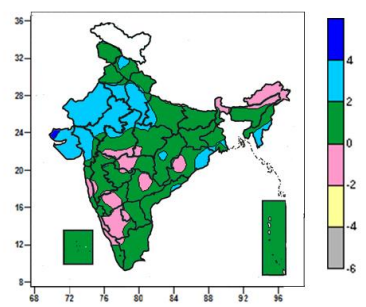
- Mean maximum temperature was above normal by 4 to 6°C over some parts of Telangana and isolated pockets of Himachal Pradesh, East Rajasthan, East Madhya Pradesh, Chhattisgarh, Marathwada, North Interior Karnataka.
- Mean maximum temperature was above normal by 2 to 4°C over many parts of Himachal Pradesh, Uttarakhand, Punjab, Rajasthan, Jharkhand, Madhya Pradesh, Chhattisgarh, Odisha, Madhya Maharashtra, Marathwada, Vidarbha, Gujarat, Telangana, Andhra Pradesh, Karnataka, some parts of Haryana, Uttar Pradesh and isolated pockets of Bihar, Gangetic West Bengal, Konkan, Tamil Nadu, Kerala.
- It was normal to near normal in remaining parts of the Country.

Actual Mean Minimum Temperature (°C) in India for the week ending 03.02.2016



- Mean minimum temperature was between 0 to 4°C over isolated pockets of Jammu & Kashmir.
- Mean minimum temperature was between 4 to 8°C over many parts of Jammu & Kashmir, Himachal Pradesh and some parts of Punjab.
- Mean minimum temperature was between 8 to 12°C over Uttarakhand, Haryana & Delhi, Bihar, Sub-Himalayan West Bengal & Sikkim, Manipur, many parts of Punjab, Uttar Pradesh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, some parts of Himachal Pradesh, Rajasthan, and isolated pockets of Madhya Pradesh, Chhattisgarh.
- Mean minimum temperature was between 12 to 20°C

Mean Minimum Temperature (°C) Anomaly in India for the week ending 03.02.2016

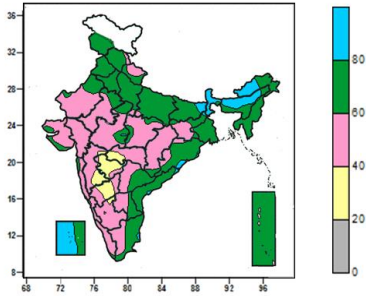


- Mean minimum temperature was above normal by 4 to 6°C over isolated pockets of Kutch.
- Mean minimum temperature was above normal by 2 to 4°C over West Rajasthan, many parts of Haryana & Delhi, West Uttar Pradesh, East Rajasthan, Gujarat, Mizoram, some parts of Manipur, Odisha, West Madhya Pradesh and isolated pockets of Himachal Pradesh, Gangetic West Bengal, East Madhya Pradesh, Chhattisgarh and Coastal Andhra Pradesh.
- It was normal to near normal in remaining parts of the country.

over rest of country except Lakshadweep, many parts of Coastal Andhra Pradesh, Kerala, Andaman & Nicobar Islands, some parts of Rayalaseema, Tamil Nadu, where it was 20 to 28⁰C.

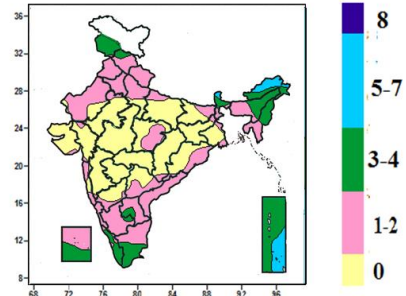
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 03.02.2016

Relative Humidity (%) over India for the week ending 03.02.2016



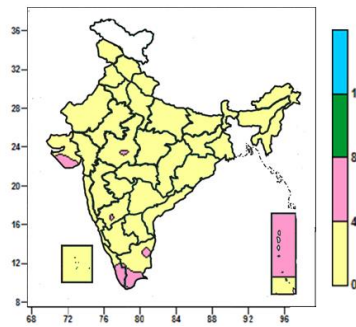
- Mean Relative humidity was above 80% over Sub-Himalayan West Bengal & Sikkim, many parts Arunachal Pradesh, Assam & Meghalaya, Lakshadweep, and isolated pockets of Bihar, Jharkhand, Odisha.
- Mean Relative humidity was between 40 to 80% over rest of the country except many parts of Marathwada, North Interior Karnataka, some parts of Madhya Maharashtra, Vidarbha and isolated pockets of South Interior Karnataka where it was between 20 to 40%.

Cloud amount (okta) over India for the week ending 03.02.2016



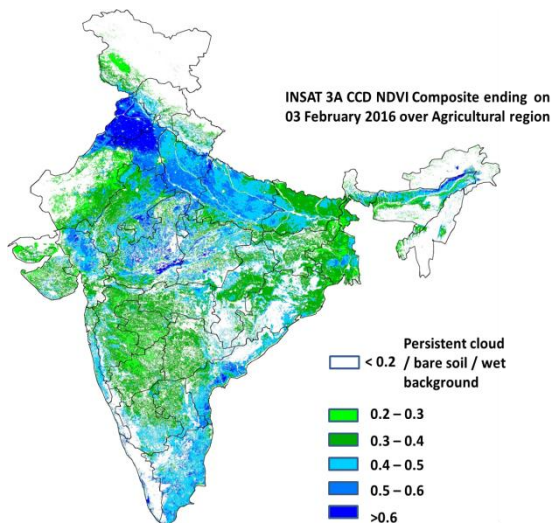
- Sky remained generally cloudy (5-7 okta) over some parts of Arunachal Pradesh, Sikkim, Andaman & Nicobar Islands.
- Sky remained partly cloudy (3-4 okta) over Jammu & Kashmir, Nagaland, Manipur, many parts of Kerala, Andaman & Nicobar Islands, some parts of Sub-Himalayan West Bengal, Arunachal Pradesh, Assam & Meghalaya, Tamil Nadu, Lakshadweep and isolated pockets of Himachal Pradesh, Rayalaseema, South Interior Karnataka.
- Sky remained mainly clear/clear sky (1 to 2/0 okta) over rest of the country.

Wind speed (knots) over India for the week ending 03.02.2016



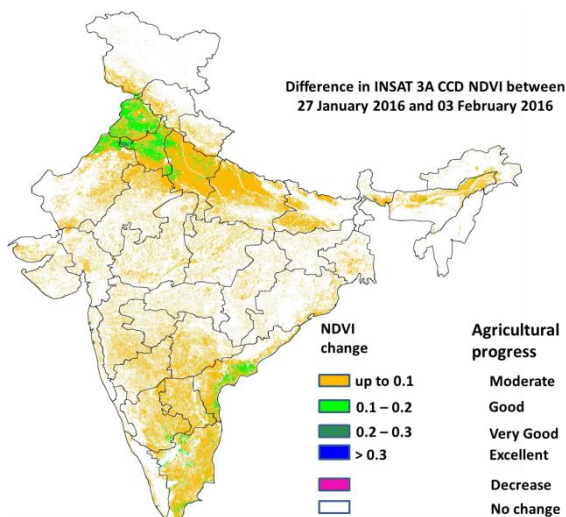
- Mean wind speed was 4 to 8 knots over many parts of Andaman & Nicobar Islands, Kerala, some parts of Saurashtra, Tamil Nadu and isolated pockets of West Madhya Pradesh, North Interior Karnataka.
- It was less than 4 knots over rest of the country.

INSAT 3A CCD NDVI COMPOSITE ENDING ON 3rd February 2016 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour is very good over Punjab, Haryana and isolated pockets in Madhya Pradesh where NDVI is > 0.6. NDVI is good in Uttar Pradesh, Gujarat, East Rajasthan, rest parts of Madhya Pradesh, Andhra Pradesh, Tamil Nadu, Assam, Coastal Odisha, Coastal Maharashtra, patches in Vidarbha and South Interior Karnataka where NDVI varies from 0.4 to 0.6. Agricultural growth was moderate over most parts of West Rajasthan, Saurashtra, Telangana, Bihar, West Bengal and Madhya Maharashtra (NDVI 0.2 to 0.4).

Difference in INSAT 3A CCD NDVI between 27th January and 3rd February 2016



- Good Progress in NDVI is observed in Punjab, Haryana, Northern parts of West Rajasthan, Coastal Andhra Pradesh and patches in Tamil Nadu. Moderate progress in NDVI was observed in States of Uttar Pradesh, Bihar, patches in Madhya Pradesh, Andhra Pradesh, Telangana, Tamil Nadu, Kerala and Karnataka. No change in NDVI was observed in Odisha and eastern parts of Bihar.

- INSAT 3A CCD NDVI composite maps for the week ending on 3rd February 2016 for different States are given below in Annexure II.

Weather Forecast for next 5 days valid upto 0830 hours of 10th February 2016

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- Minimum temperatures very likely to rise by 2-4°C over plains of northwest India during next 48 hours.
- Shallow to moderate fog very likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during next 2 days.

5 Day Rainfall Forecast (MID DAY) 5th February 2016

Met Sub-divisions	05 Feb	06 Feb	07 Feb	08 Feb	09 Feb
1. Andaman & Nicobar Islands	ISOL	ISOL	ISOL	ISOL	ISOL
2. Arunachal Pradesh	DRY	DRY	ISOL	ISOL	SCT
3. Assam & Meghalaya	DRY	DRY	ISOL	ISOL	SCT
4. N. M. M. & T.	DRY	ISOL	ISOL	ISOL	ISOL
5. S.H. West Bengal & Sikkim	DRY	DRY	DRY	ISOL	ISOL
6. Gangetic West Bengal	DRY	DRY	DRY	ISOL	ISOL
7. Orissa	DRY	DRY	DRY	DRY	ISOL
8. Jharkhand	DRY	DRY	DRY	ISOL	ISOL
9. Bihar	DRY	DRY	DRY	ISOL	ISOL
10. East Uttar Pradesh	DRY	DRY	ISOL	ISOL	DRY
11. West Uttar Pradesh	DRY	ISOL	ISOL	DRY	DRY
12. Uttarakhnad	DRY	ISOL	SCT	DRY	DRY
13. Haryana, Chd & Delhi	DRY	ISOL	ISOL	DRY	DRY
14. Punjab	DRY	SCT	SCT	DRY	DRY
15. Himachal Pradesh	DRY	SCT	SCT	ISOL	DRY
16. Jammu & Kashmir	ISOL	FWS	SCT	DRY	ISOL
17. West Rajsthan	DRY	ISOL	ISOL	DRY	DRY
18. East Rajasthan	DRY	ISOL	ISOL	DRY	DRY
19. West Madhya Pradesh	DRY	DRY	ISOL	ISOL	DRY
20. East Madhya Pradesh	DRY	DRY	ISOL	ISOL	DRY
21. Guiarat Region	DRY	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	DRY	DRY	DRY	DRY
23. Konkan & Goa	DRY	DRY	DRY	DRY	DRY
24. Madhya Maharashtra	DRY	DRY	DRY	DRY	DRY
25. Marathawada	DRY	DRY	DRY	DRY	DRY
26. Vidharbha	DRY	DRY	DRY	DRY	DRY
27. Chhattisgarh	DRY	DRY	ISOL	ISOL	DRY
28. Coastal Andhra Pradesh	DRY	DRY	DRY	DRY	DRY
29. Telangana	DRY	DRY	DRY	DRY	DRY
30. Rayalaseema	DRY	DRY	DRY	DRY	DRY
31. Tamilnadu & Puducherry	DRY	ISOL	ISOL	ISOL	ISOL
32. Coastal Karnataka	DRY	DRY	DRY	DRY	ISOL
33. North Interior Karnataka	DRY	DRY	DRY	DRY	DRY
34. South Interior Karnataka	DRY	DRY	DRY	ISOL	ISOL
35. Kerala	DRY	DRY	ISOL	ISOL	ISOL
36. Lakshadweep	DRY	DRY	ISOL	ISOL	ISOL

% Station Reporting Rainfall

% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)
No Rain	Dry		

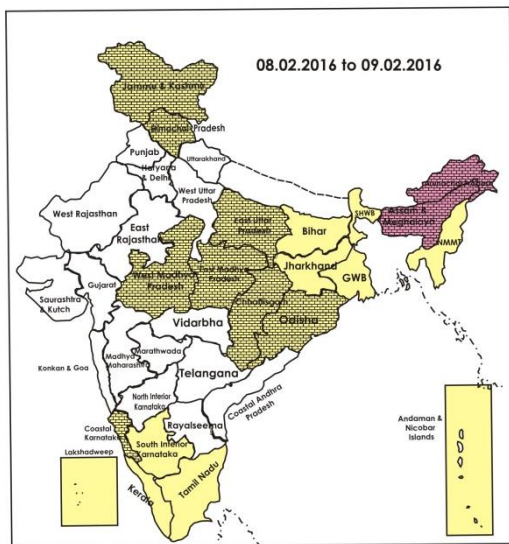
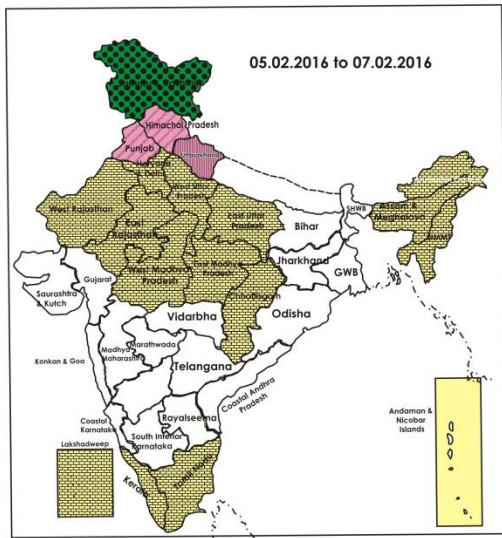
Weather Warning during next 5 days

- **05 February (Day 1):** No weather warning.
- **06 February (Day 2):** Hailstorm is likely at isolated places over Punjab.
- **07 February (Day 3):** Hailstorm is likely at isolated places over Punjab.
- **08 February (Day 4):** No weather warning.
- **09 February (Day 5):** No weather warning.

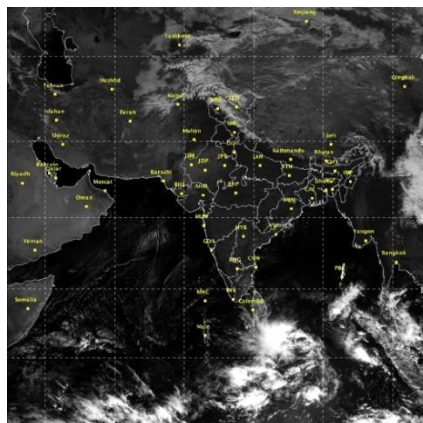
Weather Outlook for subsequent 2 days from 10th to 12th February 2016

- Precipitation very likely at a few places over Western Himalayan region.
- Rain/thundershower very likely at isolated places over plains of northwest, east and northeastern state and south peninsular India.

Weather Forecast Map (Valid upto 0830 hours of 10th February, 2016)



Satellite image dated, 05.02.2016 0600 UTC



Salient Advisories

- As hailstorm is likely at isolated places over **Punjab** on 6th & 7th February, use hail net for orchard crops like kinnow, peach, pear etc. to protect from mechanical damage. Undertake propping up in sugarcane and provide mechanical support to young fruit plants and vegetables.
- In **Himachal Pradesh**, due to prevailing above normal maximum temperature conditions, there may be early earhead emergence/flowering in wheat crop, apply irrigation to the crops to keep the fields at optimum soil moisture conditions. Also monitor wheat for the incidences of yellow rust. If symptoms are noticed; spray Tilt @ 1 ml per litre of water.
- In Western Plain Zone and Central Plain Zone of **Uttar Pradesh**, due to prevailing above normal day temperature, there may be less tillering and early flowering in late sown wheat crop, apply irrigation.
- In **Jharkhand**, as normal sown wheat is at earhead emergence/flowering stage, in view of the prevailed above normal maximum temperature and expected dry weather conditions, apply need based irrigation in the wheat fields and keep optimum soil moisture condition.
- Due to prevailing above normal day temperatures, incidence of yellow rust is observed in wheat in **Jammu & Kashmir**; spray Propiconazole 0.1 % (Tilt) after current spells of rain.
- As rain/snow is very likely at many places over **Jammu & Kashmir** on 6th February, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- As shallow to moderate fog is very likely at isolated places over Assam, Meghalaya, Nagaland, Manipur, Mizoram & Tripura during next 2 days there is chance of incidence of early blight disease in potato, tomato and onion crops and other standing crops for incidence of pest and diseases. Monitor the crops and if symptoms are noticed, undertake plant protection measures.
- In **Madhya Maharashtra**, apply irrigation to timely sown wheat. Apply irrigation to vegetables and orchards crops. Also apply mulch of crop residue to orchards. Continue sowing of irrigated summer groundnut, sunflower and summer pearl millet.
- In the Western Zone of **Tamil Nadu**, continue land preparation for planting of mid-season sugarcane and sowing of summer irrigated sesame after harvesting of samba rice.
- In Western Zone of **Punjab**, incidence of aphids has been noticed in wheat. Monitor the crop, if pest population crosses ETL, spray Thiamethoxam 25 WG @ 20g/acre on a non rainy day.
- In Upper Brahmaputra Valley Zone, Central Brahmaputra Valley Zone and North Bank Plain Zone of **Assam**, humid weather condition is congenial for blast disease in wheat crop at booting/heading stage. Spray Bavistin @ 2 gm/litre of water.

Detailed Zonewise Agromet Advisories

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



Banana



Groundnut



Rice



Cotton

- **Realised Rainfall:** Weather remained dry over the region.
- **Advisories:**
 - **Tamil Nadu:**
 - In the Cauvery Delta Zone, continue harvesting of matured *Samba* rice and sowing of rice fallow pulses under waxy condition (ADT 3 black gram variety and ADT 3 green gram variety) in *Samba* rice fields in Nagapattinam, Thanjavur, Thiruvarur and Trichy districts.
 - In the Western Zone, continue land preparation for planting of mid-season sugarcane and sowing of summer irrigated sesame after harvesting of samba rice.
 - Undertake harvesting of rice in the South Zone and continue sowing of green gram (ADT 3) @ 25 kg/ha in

Karaikal.

- In the High Rainfall Zone, continue irrigating pepper plants by hose irrigation or daily by drip irrigation and staking of banana plants with bamboo poles to protect from strong wind.
- In the North Western Zone, continue cultivation of cucurbitaceous vegetables.
- In the High Altitude Hilly Zone, since dry weather is expected in forthcoming days, maintain optimum moisture in carrot fields by providing irrigation to prevent splitting in carrot and mulch the soil to preserve moisture.
- In the Western Zone, since the anticipated minimum temperature is around 18°C, there is possibility of occurrence of blast disease in Navarai rice nursery. If incidence is noticed, spray Ediphenphos 50 EC @ 25ml to be dissolved in 40 litres of water for 20 cent nursery.
- In the South Zone, incidences of yellow muranai mite and gall fly are noticed in chilli. Spray Ethion @ 2 ml/litre of water based on the intensity of the attack.

▪ **Andhra Pradesh:**

- In the North Coastal Zone, continue planting of sugarcane after sett treatment with Propiconazol @ 1ml/litre of water for 15 minutes before planting and transplanting of *rabi* rice in the High Altitude Tribal Zone.
- In the Scarce Rainfall Zone, continue transplanting of rice.
- In the Krishna Godavari Zone, due to prevailing dry weather condition, light irrigation may be provided to *rabi* black gram and green gram.
- In the Southern Zone, due to prevailing dry weather, give light and frequent irrigations to get synchronized flowering in mango crop.
- In the Krishna Godavari Zone, prevailing dry weather conditions are congenial for leaf drying and leaf rust in maize and mites in jowar. Spray Mancozeb @ 500 grams/200 litres of water per acre to control leaf rust and Carbaryl @ 8 kg per acre to control mites.
- In the North Coastal Zone, prevailing dry weather conditions are congenial for incidences of stem borer in maize (growing stage). To control, apply Carbofuran 3G granules @ 4 kg /ac. in whorls.
- In the Scarce Rainfall Zone, thrips damage and purple blotch incidence was noticed in onions. Spray Pipronil @ 2ml/litre of water for control of thrips, and Ridomil MZ @ 2g/litre of water to control purple blotch incidence.

▪ **Telangana:**

- In the Southern Telangana Zone, undertake sowing of fodder crops like sorghum, bajra and maize where irrigation facilities are available. Fodder sorghum, bajra, maize, sunhemp and horsegram can be taken up in rice fallows. Continue sowing of sesamum.
- In the Northern Telangana Zone, continue harvesting of chilli and Bengal gram.
- In the Northern Telangana Zone, pod borer incidence is noticed in Bengal gram. To control, spray Novaluron @ 1 ml/litre of water or Indoxacarb @ 2 ml/litre of water.
- In the Southern Telangana Zone, prevailing high temperatures are congenial for jassids in tomato which transmits Tomato Spotted Wilt Virus (TSWV). Remove and destroy the affected plants and spray systemic insecticides like Dimethoate @ 2 ml or Methyl Demeton.
@ 2 ml per litre of water to control the insect vector.

▪ **Karnataka:**

- In Hill Zone, taking advantage of dry weather complete threshing of rice; continue deep ploughing in rice fields. Undertake harvesting of completely ripened bunches of black peppern and arecanut. Apply irrigation to areca nut, coconut and black pepper gardens either in furrows or by drip irrigation. Each coconut tree requires 60-70 litres of water per day.
- In North Dry Zone, as dry weather is prevailing, complete harvesting, threshing and drying of chickpea, safflower and sorghum. After harvesting of crops, undertake ploughing which will facilitate conservation of rainwater during pre-monsoon showers.
- In North East Dry Zone, as dry weather is prevailing, complete harvesting of sorghum, safflower, Bengal gram and red gram.
- In North Transition Zone, in view of the prevailing dry weather, continue harvesting of early sown chickpea and chilli; apply irrigation to wheat (flowering to grain filling) crop sown in October, early sown sorghum (grain filling) and chickpea (pod formation) sown in November. Continue sowing of Co-8014 and Co-740 varieties of sugarcane during February.
- In Southern Transition Zone, continue transplanting of rice seedlings, harvesting of matured pods of red gram, arecanut, coconut, matured ginger and turmeric.
- In Southern Dry Zone, as dry weather is prevailing, provide irrigation to dry land horticulture crops and other field crops depending on soil and crop condition.
- Due to cloudy weather condition, there is a possibility of occurrence of powdery mildew and hoppers in mango in Southern Dry Zone; spray Wettable Sulphur @ 3g / litre and Rogar @ 1.5 ml /litre respectively for control.

▪ **Kerala:**

- In the High Altitude Zone, continue sowing of vegetable crops like amaranths, bitter gourd, cucumber, water melon, snake gourd, bottle gourd etc. and provide irrigation to coconut, arecanut, ginger, cardamom and coffee.
- In the Problem Area Zone, as mainly dry weather is prevailing, continue providing irrigation to banana, nutmeg and pepper gardens.
- In the Northern Zone, continue planting of bananas (Robusta, Poovan, Njalipoovan, Palayankodan varieties),

cultivation of vegetables as intercrops in coconut gardens, mulching of soil to prevent loss of water by evaporation and cultivate winter season vegetables like cabbage cauliflower etc.

- In the Southern Zone, undertake harvesting of *Mundakan* rice, provide drip and flood irrigation and undertake mulching so as to conserve moisture and combat dryness in coconut gardens.
- In the Southern Zone, prevailing dry and humid weather conditions are congenial for incidence of leaf spot disease in amaranthus. To control, spray Baking soda @ 8g, Turmeric powder @ 32g in 10 litres of water.
- In the Central Zone, high temperature and low humidity is congenial for Cigar end disease in banana bunches and white fly, hopper and aphids incidence in vegetables. Apply Verticillium @ 20 g/ one litre of water and sunflower oil or castor oil @ 5 ml along with 10 g of jiggery to control white fly, hopper and aphids and spray Dithane M-45 @ 3 g/litre of water to control Cigar end disease.
- In the Problem Area Zone, present dry weather is congenial for rhinoceros beetle & red palm weevil in coconut and mite infestation in bananas. Apply Ferterra @ 20gm + 200gm sand in leaf axil to prevent rhinoceros beetle & red palm weevil and spray Oberon 0.6g/litre of water to control mite infestation.
- **Animal Husbandry**
- In the Western Zone of Tamil Nadu, since there is increase in day temperature, provide enough clean water to both animals and poultry.
- Maintain optimum room temperature in sericulture and poultry in Southern Dry Zone.

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



Mustard



Transplanting of Boro rice



Okra



Cabbage

- **Realised Rainfall:** Weather remained mainly dry/dry over the region.
- **Advisories:**
 - As shallow to moderate fog is very likely at isolated places over Assam, Meghalaya, Nagaland, Manipur, Mizoram & Tripura during next 2 days, there is chance of incidence of early blight disease in potato, tomato and onion crops and other standing crops for incidence of pest and diseases. Monitor the crops and if symptoms are noticed, undertake plant protection measures.
 - **Assam, Meghalaya & Arunachal Pradesh:**
 - Complete transplanting of *boro* rice in Central Bramhaputra Valley Zone and North Bank Plain Zone of Assam. Maintain 3 cm depth standing water after 2-3 days of transplanting of *boro* rice. Also farmers are advised to filling the gaps as early as possible.
 - In Hill Zone, undertake sowing of recommended high yielding varieties of cucurbits and early okra.
 - In Lower Bramhaputra Valley Zone of Assam, continue land preparation for planting of sugarcane. Undertake sowing of early *ahu* rice.
 - In Upper Bramhaputra Valley Zone of Assam, continue land preparation for sowing of ridge gourd and okra.
 - In Central Bramhaputra Valley Zone of Assam, continue land preparation for sowing of green gram and black gram.
 - In North Bank Plain Zone of Assam, continue land preparation for sowing of summer vegetables like ridge gourd, cucumber, bitter gourd, okra etc.
 - In Meghalaya, complete transplanting of *boro* rice. Replanting of dead hills or gap filling with seedlings of similar age of *boro* rice should be done within 7-10 days of transplanting at the earliest.
 - In Arunachal Pradesh, cover the tomato crops with polyethene/cloth during night time to avoid cold/frost injury and place 2-3 inch crop residue mulch around the base of the plant.
 - In Hill Zone, North Bank Plain Zone and Central Bramhaputra Valley Zone of Assam, foggy and humid weather is favourable for attack of aphids and sawfly in rapeseed & mustard. Spray Malathion 50 EC @ 2ml/litre or Dimethoate 30 EC or Chloropyriphos 20 EC @ 1ml per litre of water in toria field during afternoon hours.
 - In Barak Valley Zone of Assam, due to cloudy weather, there is chance of late blight in tomato. To manage the blight in tomato, apply Redomil or Indofil @ 2 g per litre of water. Also spray Indofil M-45 @ 2.5 ml/litre of water against late blight in potato.
 - In Upper Bramhaputra Valley Zone, Central Bramhaputra Valley Zone and North Bank Plain Zone of Assam, humid weather condition is congenial for blast disease in wheat crop at booting/heading stage. Spray Bavistin @ 2 gm/litre of water.
 - In Upper Bramhaputra Valley Zone, cloudy and foggy weather condition is congenial for aphid in rapeseed &

mustard. To control the pest, spray Dimethoate 30 EC or Chloropyriphos 20 EC @ 0.5 litre per ha area.

- In Lower Brahmaputra Valley Zone of Assam, there is chance of attack of whorl maggot, hispa, stem borer etc in transplanted of *boro* rice. For all the cases, farmers may apply Chloropyriphos 20EC at the concentration of 0.02% solution or Carbofuran 3G @ 4kg/bigha.
- In Meghalaya, in the prevailing weather attack of aphids is observed in mustard and rapeseed, spray Chlorpyriphos 20 EC or Dimethoate 30 EC @ 2 ml/litre of water for control. Prevailing weather is also congenial for incidence of attack of blast/brown spot diseases in *boro* rice at vegetative stage. Spray Carbendazim @ 1g/litre of water to control the attack.
- **Nagaland, Manipur, Mizoram and Tripura:**
- In Manipur, continue transplanting of tomato. Apply light irrigation to *rabi* maize.
- In Mizoram, continue transplanting of brinjal and chilli. Continue sowing of pea and harvesting of banana, French bean, cowpea, ginger, turmeric and khasi mandarin. Continue sowing of pea, mustard and toria.
- In Nagaland, apply light irrigation in the evening to protect chick pea, lentil, linseed from cold/frost injury. Continue harvesting of pea, tomato, mustard, maize, orchard crop, cole crops and ginger.
- In Tripura, complete transplanting of *boro* rice and maintain 2-3 cm standing water in the field. Undertake transplanting of brinjal and tomato.
- In Manipur, due to humid weather condition there is chance of attack of aphid in lentil. Spray Cypermethrin @2ml/litre of water or Nuvan @ 0.5ml/litre of water against aphid.
- In Tripura, due to foggy weather, there is chance of attack of late blight in potato, aphids in mustard and lentil. Spray Metalexyle 8% with Mancozeb 64% or Cymoxinyle 8%+ Mancozeb 64% @ 2.5 gm per litre of water against late blight in potato. Spray Monocrotophos or Imidachlopid @ 2ml per litre of water against aphids in mustard and lentil.
- Suitable varieties are given in Annexure III.
- **Animal Husbandry**
- In Northeastern states, cover poultry house with gunny bags/polythene sheet to prevent the expose of animal to cool night. Provide artificial heating through lighting of electric bulb @ 2 watt/chick in damp cold areas or during night time to protect the poultry birds (day old to 25 days old) from low temperature.
- In Hill Zone of Assam, pigs at the age of 2-4 weeks should be vaccinated against swine fever.
- In Lower Brahmaputra Valley Zone of Assam, vaccinate poultry birds against Ranikhet disease during this period. Poultry birds in general should be regularly observed and fed with antibiotics and vitamins after consulting veterinary doctors.
- In Tripura, prevailing cold weather is favorable for pneumonia in poultry. Special care may be taken for newly born chicks.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Cotton



Sugarcane



Groundnut



Wheat

- **Realised Rainfall:** Weather remained dry over the region.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, in *rabi* rice, maintain 3-5 cm water level. Apply light irrigation to groundnut and sunflower. Provide shade arrangements to protect the cashew, coconut and mango grafts from bright sunshine (maximum temperature above 32⁰C).
 - In Madhya Maharashtra, apply irrigation to timely sown wheat. Apply irrigation to vegetables and orchards crops. Also apply mulch of crop residue to orchards. Apply irrigation to onion crop at an interval of 6-8 days. Continue sowing of irrigated summer groundnut, sunflower and summer pearl millet. Continue harvesting of old adsali and preseasonal sugarcane. Apply mulch of sugarcane thrash to ratoon sugarcane. Provide shade arrangements, to protect the mango grafts from bright sunshine (maximum temperature above 32⁰C).
 - In Marathwada, continue sowing of irrigated summer groundnut and sunflower. Apply irrigation to timely sown wheat. Continue harvesting of timely sown gram crop. Continue harvesting of matured Jowar and sunflower. Apply mulch of sugarcane thrash to ratoon sugarcane.
 - In Vidarbha, continue sowing of summer groundnut. Apply irrigation to wheat crop. Maintain water level of 2-3 cm in transplanted summer rice field in East Vidarbha. As dry weather is prevailing, apply irrigation to vegetable crops and orchards crops like orange and sweet lime in Central Vidarbha region. Also apply mulch of crop residue to the orchards. Undertake intercultural operations like hoeing, weeding and thinning in mustard

crop.

- Due to rise in temperature in Madhya Maharashtra region, there is chance of attack of aphids on vegetables, onions and wheat crops; spray Dimethoate @ 10 ml or Acephate @ 20 g per 10 litres of water.
- **Gujarat:**
- In North Saurashtra Zone, undertake transplanting of brinjal, sowing of vegetable crops like ridge gourd, bottle gourd, sponge gourd, bitter gourd, lady's finger, cluster bean and water melon, land preparation for sowing of summer sesame and groundnut, procure good quality seeds. Carry out sowing of summer sesame, summer groundnut. Carry out sowing of maize for fodder purpose.
- In North Gujarat Zone, undertake land preparation for sowing of sesame and groundnut; procure good quality seeds of summer crops. Undertake harvesting of matured spikes of castor in Middle Gujarat Zone and North Gujarat Zone.
- In South Gujarat Rainfall Zone, undertake land preparation with deep tillage for sowing of summer crops.
- In South Gujarat Zone, spray 0.5 % urea solution for higher flowering in mango crop and spray 0.5 % Zinc Sulphate or 0.2% Ferrous Sulphate in banana crop for higher yield and good quality of banana.
- In Gujarat, apply irrigation in potato with drip system at 60 cm distance with the help of 4 litre/hr dripper; run drip for 68 minutes at alternate day; apply light irrigation in mustard (pod development stage) in North Gujarat Zone, apply regular irrigation to wheat in Middle Gujarat Zone, to sweet corn, gram (flowering/pod formation) in South Gujarat Heavy Rainfall Zone and to wheat in North and South Saurashtra Zone.
- Due to heavy dew during morning hours, there is chance of incidence of blight in cumin and late blight in potato in North Gujarat Zone; for control of blight in cumin, spray Mencozeb (0.25%) @ 30 g plus 20 ml desi soap solution adding in 10 litres of water; for effective control of late blight in potato, spray Metalaxil MZ (Redomel gold) @ 20 g in 10 litres of water. Also there is chance of white rust disease in mustard; spray Mencozeb (0.25%) @ 30 g plus 20 ml *desi* soap solution adding in 10 litres of water.
- In North Saurashtra Zone, attack of thrips is observed in garlic crop; alternative sprays of Imidacloprid 30.5 SC @ 3 ml and Profenofos @20 ml in 10 litres of water at 10 days interval is advised for control.
- Prevailing weather conditions in South Gujarat Zone are congenial for bud borer and leaf spot in sapota crop; spray Quinalphos 20 ml + Mancozeb 15 g/10 litres of water against bud borer and leaf spot for better control.
- Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
- In Gujarat, keep animals indoor at night time, protect from cold wind, give dry fodder twice a day and provide warm water for drinking.

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



Seed bed preparation of rice



Wheat



Gram



Mustard

- **Realised Rainfall:** Rainfall occurred in Nicobar district of Andaman & Nicobar Islands. Weather remained dry over rest of the region.
- **Advisories:**
 - **West Bengal:**
 - In Coastal Saline Zone, Old Alluvial Zone, New Alluvial Zone and Laterite and Red Soil Zone, complete transplanting of *boro* rice at the earliest. Maintain 2-3 cm stagnant water for next seven days after transplanting to complete the root establishment.
 - In Hill Zone, complete harvesting of Mandarin fruits and undertake manuring in mandarin orchards with FYM @ 50kg/plant. Undertake weeding in large cardamom fields to get better pollination.
 - In Old Alluvial Zone, continue land preparation for sowing of summer moong and sowing of early lady's finger.
 - In Laterite and Red Soil Zone, present weather conditions are favourable for attack of aphids in wheat and mustard. For control of aphids in wheat crop, spray Dimethoate (ROGOR) 30 EC @ 1.75 ml/litre of water. For control of aphids in mustard, spray Imidachloprid @ 1ml/litre of water.
 - In Old Alluvial Zone and Terai Zone, due to low temperature and humid weather conditions, there is chance of late blight attack in potato and leaf blight in lentil. To control late blight attack in potato, spray Dimethomorph + Mancozeb @ 2g/litre water or Cymoxanil + Mancozeb @ 2g/litre of water and to control leaf blight in lentil, spray Mancozeb @ 2.5g/litre or Chlorothalonil @1.5g/litre o Carbendazim @1g/litre water.
 - In Terai Zone, due to low temperature and humid weather conditions, there may be attack of aphids and leaf

blight in mustard. Spray Thiamethoxam @1 g in 3 litres of water against aphids. Apply Mancozeb @ 2.5g/litre of water against Leaf blight.

- **Andaman and Nicobar Islands:**

- In North and Middle Andaman, undertake weeding and earthing up of vegetable and maize and cover the interspaces of crops with crop residues to prevent moisture loss.

- **Odisha:**

- In East and South Eastern Coastal Plain Zone, continue land preparation and transplanting of rice. The rice seedlings at 4-5 leaf stage are ready for transplanting.
- In East and South Eastern Coastal Plain Zone, as temperature conditions are favourable, undertake sowing of sunflower and sesame.
- In Eastern Ghat High Land Zone, continue sowing of pea and lentil under zero tillage in rice field.
- In Western Undulating Zone, continue nursery for raising of rice.
- In Western Undulating Zone, aphids infestation may occur at green gram and black gram crop at pod formation stage. Spray Thiomethaxome @ 0.40/litre of water or Acetamiprid @ 0.2g/litre of water for its control.
- In East and South Eastern Coastal Plain Zone, the prevailing cloudy weather may aggravate the infestation of aphids and powdery mildew in pulses and powdery mildew in cole crops. Spray Imidachlopid @ 5 ml. or Metacystox @ 20 ml per 10 litre water to control aphids and spray Sulfex @ 50 g per 10 litre water to control powdery mildew.
- In East and South Eastern Coastal Plain Zone, present temperature conditions may favour the infestation of aphids and *Alternaria blight* in potato. Spray Dimethoate @ 400 ml or Imidachlopid @ 50 ml in 200 litres of water per acre for aphids and spray Indofil-M-45 @ 3g in one litre water for control of *Alternaria blight*.

- **Bihar:**

- In North East Alluvial Plain Zone, continue planting of spring sugarcane and land preparation for sowing of vegetables like cucumber, bottle gourd, musk melon, water melon, bitter gourd, ridge gourd and ladies finger. Undertake transplanting of boro rice. Farmers are advised to apply the light irrigation to the vegetables crops.
- In North West Alluvial Plain Zone, continue weeding in early sown onion crop. Apply light irrigation in rabi onion and late sown wheat crop which is at CRI stage. Undertake land preparation for sowing of summer vegetables.
- In South Bihar Alluvial zone, continue harvesting of matured potato. Apply need based irrigation in wheat crop.
- In North East Alluvial Plain Zone, in the present weather condition, there is chance of attack of leaf spot disease in wheat and aphids in mustard. Spray Mancozeb @ 2.5ml/litre of water against leaf spot disease. Also spray Dimethoate @ 2.5ml/litre of water against aphids in mustard.
- In North West Alluvial Plain Zone, weather is congenial for attack of aphids in mustard and pod borer in pigeon pea in flowering/pod formation stages. Spray Rogar or Quinalphos @ 2.0 ml/litre of water against aphids in mustard and spray Cartap hydrochloride @ 1.5 ml/litre of water against and pod borer in pigeon pea.
- In South Bihar Alluvial zone, in the present weather condition, there is chance of incidence of powdery mildew disease in pea. Apply Karathen (liquid) 1 litre in 1000 litres of water per ha.

- **Jharkhand:**

- In Jharkhand, as normal sown wheat is at earhead emergence/flowering stage, in view of the prevailed above normal maximum temperature and expected dry weather conditions, apply irrigation in the wheat fields to keep optimum soil moisture conditions.
- In Western Plateau Zone, continue sowing of vegetables like sponge gourd, bottle gourd, pumpkin, water melon, musk melon etc.
- In South Eastern Plateau Zone, because of foggy weather during morning and later on clear and sunny weather favours attack of aphids on mustard hence frequent monitoring is necessary. In early stages of attack, farmers are advised to separate and destroy the infected part of the plants.
- In Central, North Eastern Plateau and South Eastern Plateau Zone, due to variation in temperature, spreading of powdery mildew disease is likely to be more prominent in pea. Hence, spraying of Karathen @ 1.5 ml or Sulfex @ 2.5 g per litre of water should be done to prevent it from further spreading.
- In South Eastern Plateau Zone, those areas remain dry with cool and lower temperature, there is chance of attack of various leaf eating and sucking pests on pigeon pea crop, spray Monochrotophos @ 1 ml per litre of water at flowering stage and Indoxacarb @ 0.5 – 1 ml per litre of water at pod formation stage.
- In South Eastern Plateau Zone, because of cool and humid weather, potato crop is seen with the infestation of early and late blight. Undertake spraying of Krilaksil or Ridomil MZ @ 1.5 g per litre of water to check it from further spreading.
- Suitable varieties for sowing are given in Annexure III.

- **Animal Husbandry**

- In Bihar, low temperature condition may adversely affect the milk production and performance of domestic animals. Farmers are advised to give protein enriched feed to the animals and do not keep the animal in the open during night hours. Provide heat by lighting 100W filament bulb @ 1 bulb per 20 new born chicks and vaccinate the birds as per the recommended age.
- In Terai Zone of West Bengal, provide artificial heat to new born animal or chick to protect from chill especially

during night.

- In Coastal Saline Zone of West Bengal, protect poultry birds from cold by using electric bulb (300 watt for 100sq feet) to prevent Coryza disease.

CENTRAL INDIA [M.P., CHHATTISGARH]



Cauliflower



Gram



Okra



Wheat

- **Realised Rainfall:** Weather remained dry over the region.

- **Advisories:**

- **Madhya Pradesh:**

- In Malwa Plateau Zone, continue nursery sowing of tomato, brinjal and chilli. In view of prevailing dry weather Apply irrigation in potato and wheat and in gram at pod filling stage. Continue harvesting of matured cauliflower and cabbage.
- In Jhabua Hill Zone, continue harvesting of matured vegetables, turmeric and ginger. Apply irrigation in gram and mustard at pod formation and pod filling stage.
- In Satpura Plateau Zone, continue nursery sowing of vegetables like chill, tomato and brinjal and sowing of spinach and fenugreek. Continue nursery sowing of summer vegetables in Grid Zone.
- In Central Narmada Valley Zone, apply irrigation in wheat at jointing/ear head emergence, gram (flowering stage), mustard (pod formation stage) and in onion at tuber development stage.
- In Bundelkhand Zone, undertake transplanting of vegetables like tomato, onion, brinjal, chilli and cauliflower in main fields.
- In Kymore Plateau and Satpura Hill Zone due to variation in temperature conditions, there are chances of attack of aphids in mustard, apply Imidachloprid @ 100 ml/ha by mixing in 500-600 litre of water.
- In Vindya Plateau Zone, in the prevailing temperature, there are chances of attack of sucking pests in vegetables, spray Etofenprox 10 EC @ 1litre in 500 litre of water.
- Due to humid weather, there is possibility of leaf curl disease in tomato, brinjal, chilly and ladyfinger vegetables in Bundelkhand Zone; spray Imidacloprid 25 E.C. @ 1.0 ml. per litre of water.

- **Chhattisgarh:**

- Continue sowing of cucurbitaceous crops in polythene bags, sowing of leafy vegetables and land preparation for sowing of summer vegetables and planting of sugarcane in North Hill Zone. Continue sowing of maize and sunflower. Undertake sowing of summer rice.
- In Bastar Plateau Zone, apply sprinkler irrigation in pulse crops like chickpea and garden pea etc. at flowering stage. Continue field preparation for planting sugarcane. Undertake sowing of summer legume crops like mung and urad after seed with rhizobium and fungicide.
- In Chhattisgarh Plain Zone, continue preparation of seedlings of cucurbitaceous vegetables in polythene bags. Continue sowing of maize and sunflower.
- Due to humid weather, white rust is noticed in mustard in Bastar Plateau Zone; for control, spray Mancozeb+ Metalycsil @ 2.5 g/litre of water or any Copper fungicide @ 2.5 g/litre of water.
- Due to partly cloudy weather, there is chance of attack of aphids in mustard in Chhattisgarh Plain Zone, apply Imidachloprid @ 80 ml/acre dissolved in 200 litres of water.

- **Animal Husbandry**

- In Madhya Pradesh, provide fodder/feed mixed with minerals etc. and fresh water to milch animals. Keep animals in sheds during night time.

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



Wheat



Sugarcane



Cauliflower



Mustard

- **Realised Rainfall:** Rainfall occurred in Kullu district of Himachal Pradesh; Baramula, Ganderbel, Kupwara and Ramban districts of Jammu & Kashmir. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Jammu & Kashmir:**
 - As Rain/snow is very likely at many places over Jammu & Kashmir on 6th February, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
 - In Valley Temperate Zone, continue mulching in Knol-khol, cabbage & root crops in view of the low temperature conditions. Maintain drainage channels in the fields.
 - In Sub Tropical Zone, continue transplanting of *rabi* onion utilising the realised/expected rainfall.
 - In Intermediate Zone, continue nursery sowing of cucurbits (cucumber, bottle gourd and bitter gourd).
 - In Sub Tropical Zone, due to humid weather condition there is chance of attack of aphids in mustard, for control, spray Imidacloprid @ 0.5ml per litre of water after current spells of rain.
 - In Intermediate Zone, due to humid weather, there may be incidence of early and late blight in potato and *Alternaria* blight in mustard crops. To control, apply Mancozeb @ 2.5 g/litre of water and Ridomil MZ @ 2.5 g/litre of water alternately as curative measure after current spells of rain.
 - **Uttarakhand:**
 - In Bhabar and Tarai Zone and Hill Zone, undertake nursery sowing of brinjal (brinjal-4, ARU-1 etc) and potato (Kufri Jyoti, Kufri Ashok & Kufri Anand etc and continue sowing of tomato-3, Pant T-3, Him Sona, Him Shikhar etc variety in nursery) under optimum soil moisture. Also continue nursery sowing of capsicum with varieties California Vander, Pus Dipti, Anupam. Heera, Indira, Supriya & Bharat etc. Undertake mulching in vegetables to conserve moisture and to protect crops from frost.
 - In Hill Zone, continue transplanting of cabbage and round radish for seed production.
 - In Hill Zone, in the present weather, there may be incidence of mahu/thrips in garlic and onion, spray Metacystacus/ Roger @ 2ml per litre of water in toria and spray Imidacloprid @ 6 -8 ml in 10 litres of water in garlic and onion.
 - **Himachal Pradesh:**
 - In Sub-Montane and Low Hills Sub-Tropical Zone, continue transplanting of onion and complete planting of potato. Continue protective measures to protect the vegetable crops, nurseries of vegetable crops from frost. Continue nursery sowing of tomato, brinjal, chillies and capsicum in poly house.
 - In Mid Hills sub-Humid Zone, undertake nursery preparation of tomato, brinjal and capsicum.
 - In High Hill Temperate Dry zone, maintain desired temperature inside poly houses of seedlings of Chinese cabbage, spinach and coriander and vegetable crops in lower region to protect from frost.
 - In Sub-Montane and Low Hills Sub-Tropical Zone, under prevailing weather conditions, there are chances of attack of downy mildew in cruciferous vegetables and powdery mildew in peas, spray Redomil M-Z @ 25 g per litre of water at 15 days interval downy mildew and spray Celfex @ 25 g per 10 litres of water for powdery mildew. Also, there may be chances of attack of yellow rust and aphids in wheat crop. For control of yellow rust, spray Tilt @ 1ml per litre of water and spray Cypermethrin 10 EC @ 30 ml per 30 litre of water per kanal area for aphids. Undertake plant protection measures on a non rainy day.
 - **Rajasthan:**
 - In East Rajasthan, apply third irrigation in normal sown wheat (60-65 days after sowing at jointing stage), second irrigation in late sown wheat at tillering stage (40-45 days after sowing) in Flood Prone Eastern Plain Zone.
 - Apply irrigation in maize with top dressing of nitrogen at tasseling stage and third irrigation in wheat at jointing stage. Also apply irrigation in gram and mustard at pod formation stage in Southern Humid Plain Zone.
 - In Sub Humid Southern Plain, Aravali Hill Zone, continue field preparation for sowing of summer groundnut and nursery preparation for brinjal and chilli. Apply irrigation in wheat (booting and ear emergence stage).
 - In West Rajasthan, in Transitional Plain Zone, apply light and frequent irrigation/sprinkler irrigation in standing crops in the evening and arrange for smoking around the fields during night time, to protect the crops from frost/cold injury. To protect young fruit plants from frost, cover north side of the plants with thatch of sarkanda sticks. In Arid Western Zone, apply irrigation in late sown wheat, gram, cumin at seed formation stage and in

onion in Barmer, Churu, jalore, Jodhpur and Pali districts.

- Continue harvesting of sugarcane in Irrigated North western Plain Zone. Apply second irrigation in late sown wheat (tillering stage); third irrigation in timely sown wheat (at jointing stage), third irrigation in mustard at pod formation stage and third irrigation in barley (100-110 days after sowing) and second irrigation in gram at pod formation stage (90-100 days after sowing).
- In Flood Prone Eastern Plain Zone, weather is conducive for incidence of *alternaria* blight in mustard crop and attack of pod borer in gram, spray Iprodione or Mencozeb @ 2 Kg/800 litre solution against alternaria blight, dust 5% Melathion or Carboryl @ 20-25 kg/ha to control pod borer in gram. Due to cool and humid weather there are chances of thrips and aphid attack in brinjal, tomato and chilli crops; spray 0.1% Malathion solution at 10 day interval to manage the pest.
- In Flood Prone Eastern Plain Zone and Southern Humid Plain Zone, weather is conducive for early blight in potato and tomato respectively, spray Mencozeb @ 2g/litre water against early blight.
- In Semi-Arid Eastern Plain Zone, there is a chance of attack of termite in wheat and barley. Apply Chlorpyrifos 25 EC @ 4.0 litre per hectare with irrigation water, for attack of thrips in garlic and onion, spray Malathion 50 EC @ 1.0 ml per litre of water to control and spray Dimethoate 30 EC @ 1 ml per litre water to control attack of aphid on mustard and barley.
- In Sub Humid Southern Plain, Aravali Hill Zone, in the prevailing temperature condition, there is a chance of attack of powdery mildew in mustard and rust diseases in wheat, broadcast Sulphur dust @ 20 kg/ha or 500 litre/ha or water solution of Dinocap/ha @ 750 ml for powdery mildew and spray Mancozeb @ 2 kg/ha at 15 days interval 2 to 3 times for rust.
- In Bikaner and Jaisalmer districts of Arid Western Zone, due to change in temperature, there is a chance of infestation of aphids on mustard, heliothis in gram and termite in wheat and barley, spray Malathion 50 EC @ 1200 ml/ha along with water for aphids, spray Quinolphos 25 EC @ 1200 ml/ha along with water at the time of flowering and repeat the spray if required for heliothis, spray Dithane M-45 @ 2-3g/litre at the time of flowering and repeat the spray at 10-15 days interval or at cloudy weather for blight and apply Chloropyrifos (20 EC) @ 2400 ml/ha along with irrigation water for termite.
- **Punjab, Haryana and Delhi:**
 - As hailstorm is likely at isolated places over Punjab on 6th & 7th February, use hail net for orchard crops like kinnow, peach, pear etc. to protect from mechanical damage. Undertake propping up in sugarcane and provide mechanical support to young fruit plants and vegetables.
 - In Undulating Plain Zone of Punjab, protect newly planted fruit plants from decreasing night temperature for their proper growth and cover the nursery/young fruit plants with rice straw, thatches, plastic sheet etc. Undertake intercultural operations in vegetable crops and complete the sowing of onion in this month.
 - In Western Plain Zone of Punjab, undertake the sowing of spring maize and sugarcane.
 - In Central and Undulating Plain Zone of Punjab, continue planting of peach, plum, pear, pomegranate and ber plants.
 - In Undulating Plain zone of Punjab undertake harvesting of sugarcane and in Sub-Montane and Central Plain Zone of Punjab, continue harvesting of sugarcane.
 - In Western Zone of Haryana, apply light irrigation in mustard and apply light irrigation in wheat crop as per requirement. Apply light irrigation to vegetable and young fruit plants.
 - In Western Semi-Arid Zone of Delhi, continue transplanting of *rabi* onion, tomato, cabbage, broccoli and early cauliflower on raised bed, sowing of garlic in raised bed.
 - In Western Zone, Central and Undulating Plain Zone of Punjab, due to foggy weather condition, there may be chances of attack of late blight in potato crop and in Central and Undulating Plain Zone of Punjab rust in pea may appear for control, spray Indofil-M-45 @ 500 gm per acre at weekly interval on a non rainy day.
 - In Central, Western and Undulating Plain Zone of Punjab, there is chance for occurrence of yellow rust in wheat fields in the present weather condition. Monitor the crop and spray with Tilt/Shine/Bumper/Compass/Markzole @ 200 ml in 200 litres of water/acre if symptoms are noticed on a non rainy day.
 - In Central and Undulating Plain Zone of Punjab, there may be chances of aphids in mustard crop; to control spray 40g Actara 25 WG or 400 ml Rogor 30EC in 80-125 litre of water per acre on a non rainy day.
 - In Central Plain Zone of Punjab, due to humid weather condition, there may be chances of attack of pink stem borer in wheat, for control, spray Quinalphos 25 EC @ 800 ml in 100 litres of water per acre on a non rainy day.
 - In Western Zone of Punjab incidence of aphids has been noticed in wheat. Monitor the crop, if pest population crosses ETL, spray Thiamethoxam 25WG @ 20g/acre on a non rainy day.
 - Due to humid weather condition, early blight may occur in potato and tomato in Western Zone of Haryana. Monitor the crops. Also there may be chances of appearance of yellow rust disease in wheat, monitor the crops regularly. Due to high moisture or variable weather condition, there may be attack of *alternaria* blight/powdery mildew in mustard crop, spray Mancozeb/Indophil M 45 @ 600 g in 300 liters of water per acre.
- **Uttar Pradesh:**
 - In Western Plain Zone, as dry weather is prevailing, apply irrigation in wheat at ear head emergence/ lowering stage and in mustard at flowering/ silique formation stage.
 - In Central Plain Zone, continue transplanting of onion and nursery sowing of chilli (variety- Pant C-1, Jwala and Sadabahar etc.), continue sowing of bhindi and cucurbits. Apply irrigation in gram before flowering stage.

- Undertake sowing of water melon.
- In Eastern Plain Zone, undertake planting of autumn sugarcane. Apply irrigation in onion as per requirement. Continue sowing of urad, mung and cucurbits.
- In Western Plain Zone, continue planting of autumn sugarcane and continue sowing of sunflower.
- In Bundelkhand Zone, undertake sowing of cucurbits. Continue planting of garlic and onion, transplanting of cabbage, cauliflower, tomato, brinjal and chilli.
- In Bundelkhand Zone, due to prevailing temperature conditions, there may be chances of attack of aphid in mustard, for control spray Monocrotophos or Dimethoate @ 1.5 litres in 600 litres of water per hectare.
- In Central Plain Zone, due to prevailing weather condition, there may be chances of attack of pod borer in gram, for control, spray Monocrotophos @ 1 ml per 1 litre of water at 15 days of interval.
- In Central Plain Zone, due to prevailing weather condition, there may be chances of attack of powdery mildew in pea and aphids in mustard, for control, powdery mildew in pea, spray Tridemorph 80 % EC @ 500 ml in 500 to 600 litres of water per hectare and for control of aphids, spray Methyl-O-Demeton 25 % E.C. @ 1 litre per 600 to 750 litres of water per hectare.
- Suitable varieties for sowing are given in Annexure III.
- **Horticulture**
- In Eastern Plain Zone, in Faizabad, undertake planting of grape vines.
- In North Eastern Plain Zone, due to prevailing weather condition, there may be chances of attack of mango hopper and mealy bug in mango trees for control spray mixture of 0.2 % Emidacloprid @ 400 ml and 0.2 % Carbendazim @ 400 gm. per 200 litres of water per 20 plants.
- Continue preparation of tree basins for apple in High Hill Temperate Dry zone of Himachal Pradesh, in Mild Hills Sub Humid Zone of Himachal Pradesh for apple, stone fruits and pomegranate and also continue preparation of tree basins and pruning and in Mid Hills sub-Humid Zone, for apple, pear and stone fruits.
- In Sub Montane and Low Hills Sub Humid Zone of Himachal Pradesh, undertake measures to protect mango and litchi from frost, continue pruning in peach, pear, plum and almonds.
- In Mid Hills sub-Humid Zone of Himachal Pradesh, continue mulching of tree basins to protect from frost. Continue planting of new varieties of apple, pear, stone fruits, walnut, pecanut and grapes.
- In Mid Hills sub-Humid Zone of Himachal Pradesh, under prevailing weather conditions, there are chances of attack of powdery mildew in mango, for control, apply Contaf (100ml)/Bavistin (100gms)/Kerathene (100ml) in 200 litres of water.
- **Floriculture**
- In Sub Montane and Low Hills Sub Humid Zone of Himachal Pradesh, continue interculture in the winter flowers. As there is a chance of attack of aphids, spray Malathion @ 0.05% for the control.
- **Animal Husbandry**
- In High Hill Temperate Dry Zone and in Sub-Montane and Low Hills Sub-Tropical Zone of Himachal Pradesh, give daily 40-50g Minerals mixture per cow and protect animals from cold.
- In Central Plain Zone of Uttar Pradesh, protect livestock from cold. Cover cattles with gunny bags or Jute bags.
- In Valley temperate zone and in Intermediate Zone of Kashmir, protect the animals from low temperatures by covering the windows and doors of animal sheds with gunny bags particularly during night hours to avoid stress to the animals.
- In Bundelkhand Zone of Uttar Pradesh, protect animals from low night temperature during night time.

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

Annexure I

Week by week Rainfall Distribution

Sub-Divisions	20.01.16		27.01.16		03.02.16	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	10.5	-17	1.6	-87	0.6	-98
Dibang Valley	6.0	-64.0	8.0	-52.0	3.0	-92
East Kameng	0.0	-100	0.0	-100	0.0	-100
East Siang	2.3	-65	0.9	-83	0.0	-100
Kurung Kumey	**	**	**	**	**	**
Lohit	0.4	-96	3.2	-60	0.0	-100

Lower Dibang Valley	3.7	-78	2.2	-87	0.3	-99
Lower Subansari	**	**	**	**	**	**
Papumpare	10.9	47	1.2	-72	1.6	85
Tawang	7.0	-18	13.0	67	3.0	70
Tirap	1.0	-92	17.6	117	0.8	-96
Upper Siang	9.2	-32	12.6	-33	0.0	-100
Upper Subansari	5.8	-36	11.6	383	0.0	-100
West Kameng	0.0	-100	0.0	-100	0.4	-96
West Siang	9.0	76	13.0	282	0.0	-100
Assam&Meghalaya						
Assam						
Baksa	4.2	-3	0.0	-100	0.0	-100
Barpeta	3.3	-24	0.0	-100	0.2	-94
Bongaigaon	1.2	-76	5.8	383	0.0	-100
Cachar	0.1	-97	0.5	-76	0.3	-96
Chirang	0.6	-88	0.0	-100	0.0	-100
Darrang	**	**	**	**	**	**
Dhemaji	**	**	0.0	-100	0.0	-100
Dhubri	5.6	107	0.0	-100	2.8	-18
Dibrugarh	5.2	41	11.8	128	0.2	-98
Goalpara	1.7	-60	0.0	-100	0.0	-100
Golghat	0.0	-100	2.4	2	0.5	-91
Hailakandi	4.0	-58	5.0	117	0.0	-100
Jorhat	1.2	-80	2.9	-19	0.0	-100
Kamrup(Rural)	1.1	-56	0.4	-76	0.0	-100
Kamrup(Metro)	5.4	116	14.2	735	1.7	-64
Karbi Anglong	0.0	-100	11.3	1313	0.0	-100
Karimganj	0.0	-100	0.1	-92	0.0	-100
Kokrajhar	4.4	9	4.1	307	0.0	-100
Lakhimpur	4.7	-21	1.9	-62	4.4	-66
Morigaon	0.0	-100	0.0	-100	0.0	-100
N.C.Hills	0.0	-100	0.0	-100	0.0	-100
Nowgong	1.5	-61	11.2	602	1.7	-51
Nalbari	3.7	106	1.6	60	0.0	-100
Sonitpur	7.9	-13	17.6	1256	0.0	-100
Sibsagar	2.9	-12	8.1	161	0.0	-100
Tinsukia	0.8	-89	2.5	-49	0.4	-98
Udalgiri	15.4	450	2.2	-12	0.6	-88
Meghalaya						
East Garo Hills	16.0	1131	0.0	-100	0.0	-100
East Khasi Hills	3.7	40	8.1	145	0.6	-87
Jaintia Hills	4.0	-58	12.0	118	0.0	-100
Ribhoi	3.5	40	3.2	-45	3.6	-8
South Garo Hills	6.0	94	8.0	344	0.0	-100
West Garo Hills	6.4	106	0.0	-100	0.0	-100
West Khasi Hills	6.0	25	12.0	900	1.0	-83
NMMT						
Mizoram						
Aizwal	0.0	-100	0.4	-94	0.0	-100

Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	**	**	**	**	0.0	-100
Serchhip	**	**	**	**	**	**
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	**	**	**	**	**	**
Churachandpur	**	**	**	**	**	**
Imphal east	0.0	-100	0.1	-96	0.0	-100
Imphal west	0.0	-100	0.2	-85	0.0	-100
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	**	**	**	**	**	**
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	0.0	-100	10.7	0	2.0	-38
Kephire	**	**	**	**	**	**
Kohima	1.2	-37	12.9	486	0.0	-100
Longleng	**	**	**	**	**	**
Mokokchung	0.0	-100	7.0	67	0.0	-100
Mon	**	**	**	**	**	**
Paran	**	**	**	**	**	**
Phek	**	**	**	**	**	**
Tuensang	**	**	**	**	**	**
Wokha	1.0	-70	18.0	134	0.0	-100
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	0.0	-100	1.5	-67	0.0	-100
NorthTripura	0.6	-54	3.4	-3	0.0	-100
SouthTripura	0.0	-100	0.0	-98	0.0	-100
West Tripura	0.0	-100	1.6	-44	0.0	-100
Himachal Pradesh						
Bilaspur	0.0	-100	0.0	-100	11.1	-58
Chamba	0.0	-100	0.0	-100	10.3	-71
Hamirpur	0.0	-100	0.0	-100	11.2	-56
Kangra	0.0	-100	0.0	-100	6.6	-71
Kinnaur	1.5	-92	0.0	-100	9.5	-71
Kullu	0.0	-100	0.0	-100	32.8	31
Lahaul and Spiti	0.0	-100	2.0	-95	6.2	-83
Mandi	0.3	-98	0.0	-100	12.2	-47
Shimla	0.2	-98	0.0	-100	17.8	-13
Sirmaur	0.0	-100	0.0	-100	1.2	-93
Solan	0.0	-100	0.0	-100	6.4	-74
Una	0.0	-100	0.0	-100	10.2	-43
Punjab						
Amritsar	0.0	-100	0.0	-100	12.3	39

Barnala	0.0	-100	0.0	-100	0.0	-100
Bhatinda	0.0	-100	0.0	-100	0.0	-100
Faridkot	0.0	-100	0.0	-100	0.0	-100
Fatehgarh Saheb	0.0	-100	0.0	-100	0.0	-100
Ferozpur	0.0	-100	0.0	-100	1.6	-67
Gurdaspur	0.0	-100	0.0	-100	2.3	-88
Hoshiarpur	0.0	-100	0.0	-100	4.9	-60
Jalandhar	0.0	-100	0.0	-100	4.3	-52
Kapurthala	0.0	-100	0.0	-100	3.4	-62
Ludhiana	0.0	-100	0.0	-100	1.1	-88
Mansa	0.0	-100	0.0	-100	0.0	-100
Moga	0.5	-87	0.0	-100	1.0	-86
Muktesar	0.0	-100	0.0	-100	0.0	-100
Nawashahar	0.3	-95	0.0	-100	2.8	-82
Patiala	0.0	-100	0.0	-100	0.0	-100
Ropar	0.0	-100	0.0	-100	6.7	-33
Sangrur	0.0	-100	0.0	-100	0.0	-100
Mohali	0.0	-100	0.0	-100	0.0	-100
TarnTaran	0.0	-100	0.0	-100	15.0	134
Haryana,Chd,Delhi						
Haryana						
Ambala	0.0	-100	0.0	-100	0.0	-100
Bhiwani	0.0	-100	0.0	-100	0.0	-100
Chandigarh	0.0	-100	0.0	-100	0.0	-100
Faridabad	0.0	-100	0.0	-100	0.0	-100
Fatehabad	0.0	-100	0.0	-100	0.0	-100
Gurgaon	0.0	-100	0.0	-100	0.0	-100
Hissar	0.0	-100	0.0	-100	0.0	-100
Jhajar	0.0	-100	0.0	-100	0.0	-100
Jind	0.0	-100	0.0	-100	0.0	-100
Katihah	0.0	-100	0.0	-100	0.0	-100
Karnal	0.0	-100	0.0	-100	0.0	-100
Kurukshetra	0.0	-100	0.0	-100	0.0	-100
Mahendragarh	0.0	-100	0.0	-100	0.0	-100
Mewat	0.0	-100	0.0	-100	0.0	-100
Palwal	0.0	-100	0.0	-100	0.0	-100
Panchkkula	0.2	-98	0.0	-100	0.0	-100
Panipat	0.0	-100	0.0	-100	0.0	-100
Rewari	0.0	-100	0.0	-100	0.0	-100
Rohtak	0.0	-100	0.0	-100	0.0	-100
Sirsa	0.0	-100	0.0	-100	0.0	-100
Sonepat	0.0	-100	0.0	-100	0.0	-100
Yamunanagar	0.0	-100	0.0	-100	0.0	-100
Delhi						
Central Delhi	0.0	-100	0.0	-100	0.0	-100
East Delhi	0.0	-100	0.0	-100	0.0	-100
New Delhi	0.0	-100	0.0	-100	0.0	-100
North Delhi	0.0	-100	0.0	-100	0.0	-100
North East Delhi	0.0	-100	0.0	-100	0.0	-100

North West Delhi	0.0	-100	0.0	-100	0.0	-100
South Delhi	0.0	-100	0.0	-100	0.0	-100
South West Delhi	0.0	-100	0.0	-100	0.0	-100
West Delhi	0.0	-100	0.0	-100	0.0	-100
Jammu & Kashmir						
Anantnag	0.0	-100	1.0	-97	9.6	-59
Badgam	0.0	-100	0.1	-99	7.4	-54
Bandipore	**	**	**	**	**	**
Baramula	0.0	-100	1.4	-97	37.8	-20
Doda	0.0	-100	2.0	-95	9.6	-75
Ganderbal	0.0	-100	4.4	-77	22.2	21
Jammu	0.0	-100	0.0	-100	10.8	-39
Kargil	**	**	**	**	**	**
Kathua	0.0	-100	0.0	-100	5.4	-72
Kistwar	**	**	**	**	**	**
Kulgam	0.0	-100	0.0	-100	15.6	-34
Kupwara	0.0	-100	3.0	-89	32.4	36
Ladakh(Leh)	0.1	-95	1.4	13	0.6	-68
Poonch	**	**	**	**	**	**
Pulwama	0.0	-100	0.3	-98	3.5	-72
Rajouri	0.0	-100	0.0	-100	18.2	*
Ramban	0.0	-100	1.5	-96	22.5	-42
Reasi	0.0	-100	0.0	-100	13.3	-58
Samba	0.0	-100	0.0	-100	10.6	-40
Shopian	**	**	**	**	**	**
Srinagar	0.0	-100	0.0	-100	7.0	-62
Udhampur	0.0	-100	0.0	-100	8.4	-73
East Madhya Pradesh						
Anuppur	8.5	30	0.0	-100	0.0	-100
Balaghat	4.8	10	0.0	-100	0.0	-100
Chhatarpur	19.7	368	0.0	-100	0.0	-100
Chindwara	17.7	489	0.0	-100	0.0	-100
Damoh	36.5	508	0.0	-100	0.0	-100
Dindori	19.6	390	0.0	-100	0.0	-100
Jabalpur	14.8	347	0.0	-100	0.0	-100
Katni	14.0	278	0.0	-100	0.0	-100
Mandla	19.6	184	0.0	-100	0.0	-100
Narsingpur	3.0	7	0.0	-100	0.0	-100
Panna	15.1	110	0.0	-100	0.0	-100
Rewa	21.4	364	0.0	-100	0.0	-100
Sagar	19.5	316	0.0	-100	0.0	-100
Satna	37.4	513	0.0	-100	0.0	-100
Seoni	13.3	410	0.0	-100	0.0	-100
Shahdol	14.2	168	0.0	-100	0.0	-100
Sidhi	33.2	564	0.0	-100	0.0	-100
Singrauli	2.5	-14	0.0	-100	0.0	-100
Tikamgarh	7.5	12	0.0	-100	0.0	-100
Umaria	44.4	788	0.0	-100	0.0	-100

West Madhya Pradesh						
Agar	0.0	-100	0.0	-100	0.0	-100
Alirajpur	2.6	333	0.0	-100	0.0	-100
Asoknagar	10.8	412	0.0	-100	0.0	-100
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	3.5	94	0.0	-100	0.0	-100
Bhind	5.9	83	0.0	-100	0.0	-100
Bhopal	21.0	577	0.0	-100	0.0	-100
Burhanpur	0.0	-100	0.0	-100	0.0	-100
Datia	6.1	203	0.0	-100	0.0	-100
Dewas	0.0	-100	0.0	-100	0.0	-100
Dhar	3.9	382	0.0	-100	0.0	-100
Guna	8.8	150	0.0	-100	0.0	-100
Gwalior	7.2	57	0.0	-100	0.0	-100
Harda	0.0	-100	0.0	-100	0.0	-100
Hosangabad	8.6	207	0.0	-100	0.0	-100
Indore	0.4	-73	0.0	-100	0.0	-100
Jhabua	0.9	367	0.0	-100	0.0	-100
Khandwa	0.7	-67	0.0	-100	0.0	-100
Khargone	0.0	-100	0.0	-100	0.0	-100
Mandsaur	0.8	-11	0.0	-100	0.0	-100
Morena	0.1	-97	0.0	-100	0.0	-100
Neemuch	1.8	775	0.0	-100	0.0	-100
Raisen	10.6	343	0.0	-100	0.0	-100
Rajgarh	10.9	418	0.0	-100	0.0	-100
Ratlam	0.0	-67	0.0	-100	0.0	-100
Sehore	3.6	57	0.0	-100	0.0	-100
Shajapur	11.7	457	0.0	-100	0.0	-100
Sheopur Kalani	0.0	-100	0.0	-100	0.0	-100
Shivpuri	3.6	-21	0.0	-100	0.0	-100
Ujjain	9.8	600	0.0	-100	0.0	-100
Vidisha	13.6	313	0.0	-100	0.0	-100
Chhattisgarh						
Bastar	0.6	-57	0.0	-100	0.0	-100
Bijapur	10.2	10100	0.0	-100	0.0	-100
Bilaspur	21.2	684	0.0	-100	0.0	-100
Dantewara	0.1	-89	0.0	-100	0.0	-100
Dhamtari	3.8	533	0.0	-100	0.0	-100
Durg	10.8	984	0.0	-100	0.0	-100
Janjgir	0.0	-100	0.0	-100	0.0	-100
Jashpurnagar	5.2	53	0.0	-100	0.0	-100
Kanker	0.0	-100	0.0	-100	0.0	-100
Korba	11.8	594	0.0	-100	0.0	-100
Koriya	0.0	-100	0.0	-100	0.0	-100
Kawardha	0.0	-100	0.0	-100	0.0	-100
Mahasumund	15.0	971	0.0	-100	0.0	-100
Narayanpur	0.4	-73	0.0	-100	0.0	-100
Raigarh	4.0	38	0.0	-100	0.0	-100
Raipur	5.5	358	0.0	-100	0.0	-100

Rajandgaon	0.0	-100	0.0	-100	0.0	-100
Surguja	7.5	149	0.0	-100	0.0	-100
East Uttar Pradesh						
Allahabad	9.5	138	0.0	-100	0.0	-100
Ambedkar Nagar	8.0	129	0.0	-100	0.0	-100
Azamgarh	7.2	167	0.0	-100	0.0	-100
Bahraich	1.2	-64	0.0	-100	0.0	-100
Ballia	3.5	136	0.0	-100	0.0	-100
Balrampur	0.0	-100	0.0	-100	0.0	-100
Banda	11.1	178	0.0	-100	0.0	-100
Barabanki	5.0	18	0.0	-100	0.0	-100
Basti	3.7	12	0.0	-100	0.0	-100
Chandauli	3.0	-19	0.0	-100	0.0	-100
Deoria	1.0	-60	1.0	-73	0.0	-100
Faizabad	1.6	-57	1.0	-86	0.0	-100
Farrukhabad	0.9	-67	0.0	-100	0.0	-100
Fatehpur	2.1	-53	0.0	-100	0.0	-100
Gazipur	2.0	-5	0.0	-100	0.0	-100
Gonda	7.5	134	0.0	-100	0.0	-100
Gorakhpur	3.2	-29	0.0	-100	0.0	-100
Hardoi	5.2	63	0.0	-100	0.0	-100
Jaunpur	1.9	-49	0.0	-100	0.0	-100
Kannauj	4.0	60	0.0	-100	0.0	-100
Kanpur City	7.5	59	0.0	-100	0.0	-100
Kanpur Dehat	5.0	25	0.0	-100	0.0	-100
Kaushambi	5.5	42	0.0	-100	0.0	-100
Kheri	0.3	-93	0.0	-100	0.0	-100
Kushi nagar	0.0	-100	1.5	-65	0.0	-100
Lucknow	6.7	63	0.0	-100	0.0	-100
Maharajganj	0.0	-100	0.5	-89	0.0	-100
Mau	0.0	-100	0.0	-100	0.0	-100
Mirzapur	10.5	156	0.0	-100	0.0	-100
Pratapgarh	7.7	132	0.0	-100	0.0	-100
RaiBareilly	1.5	-50	0.0	-100	0.0	-100
Sahuji Maharajnagar	9.5	111	0.0	-100	0.0	-100
Sant Kabirnmagar	7.0	192	0.0	-100	0.0	-100
Sant Ravidas Nagar	11.0	197	0.0	-100	0.0	-100
Shrawasti	**	**	**	**	**	**
Sidharthnagar	0.0	-100	0.0	-100	0.0	-100
Sitapur	1.5	-57	0.3	-94	0.0	-100
Sonbhadra	21.1	471	0.0	-100	0.0	-100
Sultanpur	1.5	-57	0.0	-100	0.0	-100
Unnao	9.5	164	0.0	-100	0.0	-100
Varanasi	7.0	71	0.0	-100	0.0	-100
West Uttar Pradesh						
Agra	0.3	-88	0.0	-100	0.0	-100
Aligarh	0.0	-100	0.0	-100	0.0	-100
Auraiya	5.0	16	0.0	-100	0.0	-100

Badaun	0.0	-100	0.0	-100	0.0	-100
Baghpat	0.0	-100	0.0	-100	0.0	-100
Bareilly	0.0	-100	0.0	-100	0.0	-100
Bijnor	0.0	-100	0.0	-100	0.0	-100
Bulandsahar	0.0	-100	0.0	-100	0.0	-100
Etah	0.0	-100	0.0	-100	0.0	-100
Etawah	4.5	32	0.0	-100	0.0	-100
Firozabad	1.4	-55	0.0	-100	0.0	-100
GBNagar	0.0	-100	0.0	-100	0.0	-100
Ghaziabad	0.0	-100	0.0	-100	0.0	-100
Hamirpur	5.3	67	0.0	-100	0.0	-100
Jalaun	5.7	21	0.0	-100	0.0	-100
Jhansi	3.9	-7	0.0	-100	0.0	-100
Jotiba Phule Nagar	0.0	-100	0.0	-100	0.0	-100
Kanshiramnagar	1.0	-78	0.0	-100	0.0	-100
Lalitpur	14.0	155	0.0	-100	0.0	-100
Mahamaya Nagar	0.0	-100	0.0	-100	0.0	-100
Mahoba	5.6	19	0.0	-100	0.0	-100
Mainpuri	1.6	-47	0.0	-100	0.0	-100
Mathura	0.0	-100	0.0	-100	0.0	-100
Meerut	0.0	-100	0.0	-100	0.0	-100
Moradabad	0.0	-100	0.0	-100	0.2	-96
Muzzaffarnagar	0.0	-100	0.0	-100	1.0	-80
Pilibhit	0.0	-100	0.0	-100	0.7	-85
Rampur	0.0	-100	0.0	-100	0.8	-78
Saharanpur	0.0	-100	0.0	-100	0.0	-100
Shahjahanpur	0.8	-73	0.0	-100	0.0	-100
Uttarakhand						
Almora	3.8	38	0.0	-100	0.0	-100
Bageshwar	0.0	-100	0.0	-100	0.0	-100
Chamoli	2.3	-81	0.0	-100	4.8	-74
Champawat	2.5	-58	0.0	-100	0.0	-100
Dehradun	0.0	-100	0.0	-100	0.5	-97
Garhwal Pauri	0.1	-99	0.0	-100	0.0	-100
Garhwal Tehri	0.3	-96	0.0	-100	0.4	-97
Haridwar	2.2	-64	0.0	-100	0.0	-100
Nainital	0.6	-91	0.1	-99	0.7	-95
Pithorgarh	5.7	-28	0.3	-98	5.1	-68
Rudraprayag	0.3	-97	0.0	-100	0.5	-98
Udham Sing Nagar	0.0	-100	0.0	-100	0.1	-99
Uttarkashi	0.0	-100	0.0	-100	6.6	-54
Bihar						
Araria	0.0	-100	27.8	718	0.0	-100
Arwal	0.0	-100	0.0	-100	0.0	-100
Aurangabad	15.7	257	0.0	-100	2.3	-45
Banka	18.3	554	0.0	-100	0.0	-100
Begusarai	5.2	160	0.0	-100	0.0	-100
Bhabua	0.0	-100	0.0	-100	0.0	-100
Bhagalpur	0.0	-100	0.1	-99	0.0	-100

Bhojpur	0.0	-100	0.0	-100	0.0	-100
Buxar	0.0	-100	**	**	0.0	-100
Darbhanga	0.0	-100	0.0	-100	0.0	-100
East Champaran	2.2	-35	8.0	218	0.0	-100
Gaya	23.1	507	0.2	-97	0.0	-100
Gopalganj	0.0	-100	0.0	-100	0.0	-100
Jahanabad	0.0	-100	0.0	-100	0.0	-100
Jamui	0.0	-100	0.0	-100	0.0	-100
Katihar	0.0	-100	**	**	0.0	-100
Khagadia	5.7	256	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	7.1	238	0.0	-100
Monghyar	4.6	12	0.0	-100	0.0	-100
Muzaffarpur	0.0	-100	0.0	-100	0.0	-100
Nalanda	9.3	116	0.0	-100	0.0	-100
Nawada	29.5	677	0.0	-100	0.0	-100
Patna	1.9	-50	1.1	-59	0.0	-100
Purnea	6.0	88	0.0	-100	0.0	-100
Rohtas	19.0	604	0.0	-100	0.0	-100
Saharsha	0.0	-100	0.0	-100	0.0	-100
Samstipur	0.0	-100	0.0	-100	0.0	-100
Saran	11.0	156	1.5	-47	0.0	-100
Sheikpura	0.0	-100	**	**	0.0	-100
Sheohar	0.0	-100	**	**	0.0	-100
Sitamarhi	0.0	-100	**	**	0.0	-100
Siwan	0.0	-100	**	**	0.0	-100
Supaul	2.6	30	16.2	1250	0.0	-100
Vaishali	14.8	300	0.0	-100	0.0	-100
West Champaran	0.0	-100	0.0	-100	0.0	-100
Jharkhand						
Bokaro	5.7	55	0.0	-100	0.0	-100
Chatra	14.0	211	0.0	-100	0.0	-100
Deoghar	12.4	125	0.0	-100	0.0	-100
Dhanbad	1.9	-48	0.0	-100	0.0	-100
Dumka	12.3	374	0.0	-100	0.0	-100
East Singbhum	18.4	609	0.0	-100	0.0	-100
Garhwa	55.0	1096	0.0	-100	0.0	-100
Giridih	11.1	457	0.0	-100	0.0	-100
Godda	9.1	132	0.0	-100	0.0	-100
Gumla	**	**	0.0	-100	0.0	-100
Hazaribagh	12.7	338	**	**	0.0	-100
Jamtara	12.5	248	0.0	-100	**	**
Khunti	0.0	-100	0.0	-100	0.0	-100
Koderrna	7.8	41	0.0	-100	0.0	-100
Latehar	7.0	71	0.0	-100	0.0	-100
Lohardagga	9.2	360	**	**	0.0	-100
Pakur	10.3	186	0.0	-100	0.0	-100

Palamau	14.3	360	0.0	-100	0.0	-100
Ramgarh	2.8	4	0.0	-100	**	**
Ranchi	4.9	17	0.0	-100	0.0	-100
Sahebganj	**	**	6.4	100	0.0	-100
Saraikela	7.1	109	0.0	-100	0.0	-100
Simdega	3.1	35	0.0	-100	0.0	-100
West Singhbhum	11.1	270	0.0	-100	0.0	-100
East Rajasthan						
Ajmer	0.0	-100	0.0	-100	0.0	-100
Alwar	0.0	-100	0.0	-100	0.0	-100
Banswara	0.0	-100	0.0	-100	0.0	-100
Baran	4.8	98	0.0	-100	0.0	-100
Bharatpur	0.0	-100	0.0	-100	0.0	-100
Bhilwara	0.3	-17	0.0	-100	0.0	-100
Bundi	0.3	-59	0.0	-100	0.0	-100
Chittorgarh	0.0	-100	0.0	-100	0.0	-100
Dausa	0.0	-100	0.0	-100	0.0	-100
Dholpur	0.0	-100	0.0	-100	0.0	-100
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	0.4	-64	0.0	-100	0.0	-100
Jhalawar	3.6	127	0.0	-100	0.0	-100
Jhunjhunu	0.0	-100	0.0	-100	0.0	-100
Karauli	0.1	-92	0.0	-100	0.0	-100
Kota	1.6	-28	0.0	-100	0.0	-100
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
Rajsamand	0.0	-100	0.0	-100	0.0	-100
Sawai Madhopur	0.0	-100	0.0	-100	0.0	-100
Sikar	0.0	-100	0.0	-100	0.0	-100
Sirohi	0.0	-100	0.0	-100	0.0	-100
Tonk	1.5	202	0.0	-100	0.0	-100
Udaipur	0.0	-100	0.0	-100	0.0	-100
West Rajasthan						
Barmer	0.0	-100	0.0	-100	0.0	-100
Bikaner	0.0	-100	0.0	-100	0.0	-100
Churu	0.0	-100	0.0	-100	0.0	-100
Hanumangarh	0.0	-100	0.0	-100	0.0	-100
Jaisalmer	0.0	-100	0.0	-100	0.0	-100
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.0	-100	0.0	-100	0.0	-100
Nagaur	0.0	-100	0.0	-100	0.0	-100
Pali	0.0	-100	0.0	-100	0.0	-100
Sri Ganganagar	0.0	-100	0.0	-100	0.0	-100
Gujarat Region						
Ahmedabad	0.0	-100	0.0	-100	0.0	-100
Anand	0.0	-100	0.0	-100	0.0	-100
Banaskantha	0.0	-100	0.0	-100	0.0	-100
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	**	-100	0.0	-100
Dangs	0.0	-100	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	0.0	-100	0.0	-100	0.0	-100
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	0.0	-100
Patan	0.0	-100	0.0	-100	0.0	-100
Sabarkantha	0.0	-100	0.0	-100	0.0	-100
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	0.0	-100
Bhavnagar	0.0	-100	0.0	-100	0.0	-100
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	0.0	-100	0.0	-100	0.0	-100
Surendranagar	0.0	-100	0.0	-100	0.0	-100
Maharashtra						
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	0.0	-100	0.0	-100
Jalgaon	0.0	-100	0.0	-100	0.0	-100
Kolhapur	0.0	-100	0.0	-100	0.0	-100
Nandurbar	0.0	-100	0.0	-100	0.0	-100
Nasik	0.0	-100	0.0	-100	0.0	-100
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	0.0	-100
Amraoti	0.2	-89	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	0.3	-79	0.0	-100	0.0	-100
Gadchiroli	3.4	49	0.0	-100	0.0	-100
Gondia	0.2	-94	0.0	-100	0.0	-100
Nagpur	0.7	-80	0.0	-100	0.0	-100
Wardha	0.7	-79	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	0.5	-77	0.0	-100	0.0	-100
Balasore	0.0	-100	5.7	61	0.0	-100
Bargarh	4.9	105	0.0	-100	0.0	-100
Bhadrak	0.0	-100	0.1	-92	0.0	-100
Bolangir	1.1	-50	0.0	-100	0.0	-100
Boudh	0.0	-100	0.0	-100	0.0	-100
Cuttack	0.0	-100	0.1	-95	0.0	-100
Deogarh	3.7	62	0.0	-100	0.0	-100
Dhenkanal	0.0	-100	0.0	-100	0.0	-100
Gajapati	0.0	-100	1.2	517	0.0	-100
Ganjam	0.0	-100	3.2	86	0.0	-100
Jagatsingpur	0.0	-100	2.1	58	0.0	-100
Jajpur	0.0	-100	0.0	-100	0.0	-100
Jharsuguda	0.3	-92	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	2.1	138	0.0	-100
Keonjhar	3.1	-40	0.3	-93	0.0	-100
Khurda	0.0	-100	1.1	8	0.0	-100
Koraput	0.0	-100	0.0	-100	0.0	-100
Malkangiri	0.0	-100	0.0	-100	0.0	-100
Mayurbhanj	4.7	68	3.2	46	0.0	-100
Nawapara	0.0	-100	0.0	-100	0.0	-100
Nawarangpur	0.0	-100	0.4	-38	0.0	-100
Nayagarh	0.0	-100	0.0	-100	0.0	-100
Puri	0.0	-99	22.9	1046	0.0	-100
Rayagada	0.0	-100	0.2	-75	0.0	-100
Sambalpur	4.4	93	0.0	-100	0.0	-100
Sonepur	3.8	667	0.0	-100	0.0	-100
Sundargarh	0.2	-93	0.0	-100	0.0	-100

West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	47.6	205	38.1	76	72.9	228
North & Middle Andaman	0.0	-100	26.0	313	1.2	-59
South Andaman	0.0	-100	47.2	626	16.7	70
GWB						
Bankura	6.0	400	0.1	95	0.0	-100
Birbhum	24.2	867	0.1	-96	0.0	-100
Burdwan	12.9	971	0.6	-81	0.0	-100
East Midnapore	0.6	-84	4.6	53	0.0	-100
Hooghly	0.3	-86	1.0	-68	0.0	-100
Howrah	0.0	-100	0.4	-95	0.0	-100
Kolkata	0.0	-100	0.0	-100	0.0	-100
Murshidabad	38.0	1018	8.0	196	0.0	-100
Nadia	0.0	-100	0.8	-77	0.0	-100
24 Pargana (N)	0.2	-80	0.5	-91	0.0	-100
Purulia	5.4	81	0.0	-100	0.0	-100
24 Pargana (S)	0.0	-100	3.5	-17	3.5	-4
West Midnapore	3.7	87	2.2	-28	0.0	-100
SHWB & Sikkim						
Cooch Behar	2.9	-4	3.7	185	0.0	-100
Darjeeling	3.7	-56	1.9	-86	0.9	-94
East Sikkim	9.6	14	1.0	-91	1.9	-87
Jalpaiguri	3.8	4	1.4	-13	0.0	-100
Malda	16.9	483	0.0	-100	0.0	-100
North Dinajpur	**	**	**	**	**	**
North Sikkim	16.8	24	11.2	-16	0.0	-100
South Dinajpur	0.0	-100	0.0	-100	0.0	-100
South Sikkim	10.4	24	0.5	-95	3.3	-77
West Sikkim	6.5	-52	3.0	-78	1.2	-95
Karnataka						
Coastal Karnataka						
Dakshina Kannada	0.5	13	0.0	-100	0.0	-100
Udupi	2.0	186	0.0	-100	0.0	-100
Uttara Kannada	0.5	200	0.0	-100	0.0	-100
NI Karnataka						
Bagalkote	0.3	-80	0.0	-100	0.0	-100
Belagavi	0.0	-92	0.0	-100	0.0	-100
Bidar	0.6	-79	0.0	-100	0.0	-100
Dharwad	0.5	-48	0.0	-100	0.0	-100
Gadag	0.4	-40	0.0	-100	0.0	-100
Haveri	0.7	567	0.0	-100	0.0	-100
Kalaburgi	0.2	-93	0.0	-100	0.0	-100
Koppal	0.6	1	0.0	-100	0.0	-100
Raichur	2.1	158	0.0	-100	0.0	-100
Vijayapura	0.1	-96	0.0	-100	0.0	-100
Yadgir	0.0	-100	0.0	-100	0.0	-100
SI Karnataka						

Ballari	12.5	1461	0.0	-100	0.0	-100
Bangalore Rural	4.3	967	2.5	200	0.0	-100
Bangalore Urban	2.8	295	2.3	2240	0.0	-100
Chamarajanagar	0.0	-100	5.4	2580	0.0	-100
Chikaballapur	3.5	607	3.7	200	0.0	-100
Chikkamagaluru	1.0	92	0.0	-100	0.0	-100
Chitradurga	1.3	29	0.0	-100	0.0	-100
Davangere	0.8	92	0.0	-100	0.0	-100
Hassan	1.3	125	0.2	200	0.0	-100
Kodagu	0.3	-53	0.0	-100	0.0	-100
Kolar	0.0	-100	9.1	200	0.0	-100
Mandya	2.7	78	0.0	-100	0.0	-100
Mysuru	2.4	121	4.4	775	0.0	-100
Ramanagara	1.4	69	0.7	200	0.0	-100
Shivamogga	1.1	986	0.0	-100	0.0	-100
Tumakuru	7.0	435	0.1	200	0.0	-100
Kerala						
Alappuzha	0.0	-100	5.9	38	0.0	-100
Kannur	0.0	-100	0.0	-100	0.0	-100
Ernakulam	0.0	-100	0.4	-83	0.0	-100
Idukki	4.7	76	0.3	-86	0.0	-100
Kasaragod	0.5	-10	2.4	380	0.0	-100
Kollam	0.0	-100	1.0	-71	0.0	-100
Kottayam	3.7	28	7.8	117	0.0	-100
Kozhikode	0.0	-100	0.0	-100	0.0	-100
Malappuram	0.0	-100	0.0	-100	0.0	-100
Palakkad	0.2	-48	0.0	-100	0.0	-100
Pathanamthitta	0.0	-100	0.0	-100	0.0	-81
Thiruvananthapuram	0.0	-100	3.2	-28	0.0	-100
Thrissur	9.5	1254	0.0	-100	0.0	-100
Wayanad	0.0	-100	3.3	177	0.0	-100
Tamil Nadu						
Ariyalur	0.0	-100	0.0	-100	0.0	-100
Chennai	0.0	-100	0.5	-97	0.0	-100
Coimbatore	0.8	-55	22.8	199	0.0	-100
Cuddalore	0.0	-100	0.7	-97	0.0	-100
Dharmapuri	0.0	-100	0.0	-100	0.0	-100
Dindigul	0.0	-100	0.6	-97	0.0	-100
Erode	0.0	-100	0.0	-100	0.0	-100
Kanchipuram	0.0	-100	0.4	-98	0.0	-100
Kanyakumari	0.0	-100	0.0	-100	0.0	-100
Karikal	0.0	-100	0.8	-99	0.0	-100
Karur	0.0	-100	0.0	-100	0.0	-100
Krishnagiri	0.0	-100	0.2	-97	0.0	-100
Madurai	0.0	-100	0.0	-100	0.0	-100
Nagapattinam	0.0	-100	0.6	-99	0.0	-100
Namakkal	0.0	-100	0.0	-100	0.0	-100
Nilgiris	0.1	-99	12.4	-42	0.0	-100
Perambalur	0.0	-100	0.0	-100	0.0	-100

Puducherry	0.0	-100	0.6	-96	0.0	-100
Pudukottai	0.0	-100	0.0	-100	0.0	-100
Ramanathapuram	0.0	-100	0.9	-97	0.0	-100
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	0.0	-100
Theni	1.6	-54	1.6	-88	0.0	-100
Tirunelveli	0.0	-100	5.3	-84	0.0	-100
Tirupur	0.0	-100	0.0	-100	0.0	-100
Tiruvallur	0.0	-100	1.2	-93	0.0	-100
Tiruvannamalai	0.0	-100	9.0	-35	0.0	-100
Tiruvarur	0.0	-100	0.0	-100	0.0	-100
Toothukudi	0.0	-100	0.0	-100	0.0	-100
Trichy	0.0	-100	0.0	-100	0.0	-100
Vellore	0.0	-100	0.9	-88	0.0	-100
Villupuram	0.0	-100	0.0	-100	0.0	-100
Virudhunagar	0.0	-100	3.0	-82	0.0	-100
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	0.0	-100	1.9	525	0.0	-100
Guntur	0.1	-96	0.1	-58	0.0	-100
Krishna	0.0	-98	1.0	409	0.0	-100
Nellore	0.3	-96	6.7	860	0.0	-100
Prakasam	0.4	-88	0.0	-100	0.0	-100
Sirkakulam	0.0	-100	1.2	16	0.0	-100
Visakhapatnam	0.0	-97	0.4	-67	0.0	-100
Vizianagram	0.0	-100	0.3	-75	0.0	-100
West Godavari	0.0	-100	1.1	442	0.0	-100
Rayalaseema						
Anantapur	5.8	188	4.1	200	0.0	-100
Chittoor	0.0	-100	3.0	1385	0.0	-100
Cuddapah	3.8	219	10.9	200	0.0	-100
Kurnool	3.8	845	0.9	200	0.0	-100
Telangana						
Adilabad	1.3	-58	0.0	-100	0.0	-100
Hyderabad	1.5	-33	0.0	-100	0.0	-100
Karimnagar	0.3	-91	0.0	-100	0.0	-100
Khammam	1.2	23	0.1	-34	0.0	-100
Mehabubnagar	0.1	-92	0.0	-100	0.0	-100
Medak	0.3	-88	0.0	-100	0.0	-100
Nalgonda	1.8	13	0.6	200	0.0	-100
Nizamabad	1.0	-71	0.0	-100	0.0	-100
Rangareddy	0.6	-25	0.0	-100	0.0	-100
Warangal	2.9	80	0.3	-69	0.0	-100

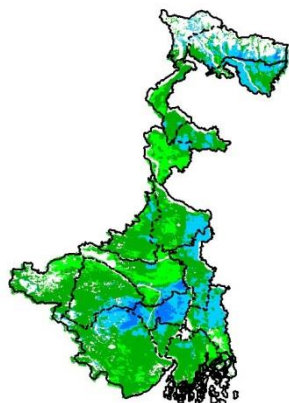
Legends

	(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

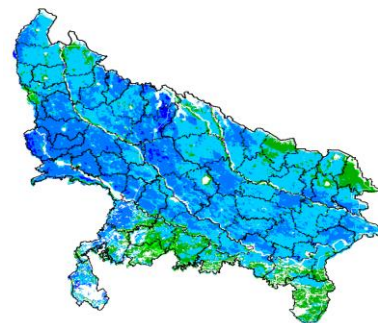
**INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON
3rd February 2016 FOR DIFFERENT STATES**

West Bengal



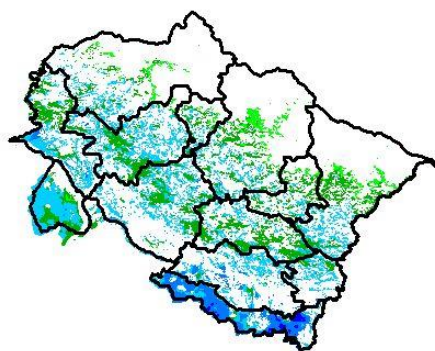
Agricultural vigour is good in central and Northern part of West Bengal where NDVI is varying from 0.4-0.5, whereas rest of the state shows moderate NDVI (0.2-0.4).

Uttar Pradesh



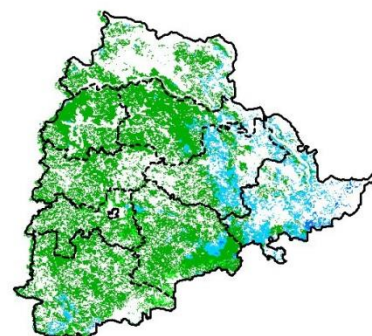
Agricultural vigour is very good over the entire state of Uttar Pradesh where NDVI value varies from 0.4 -0.6. whereas few patches in southern part shows moderate values of NDVI (0.3-0.4)

Uttarakhand



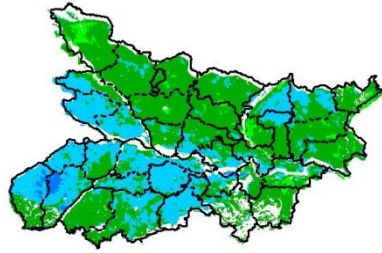
Agricultural vigour is moderate over entire state of Uttarakhand where NDVI is varying from 0.3-0.4, whereas few patches in south and west part shows good values of NDVI (0.4-0.6).

Telangana



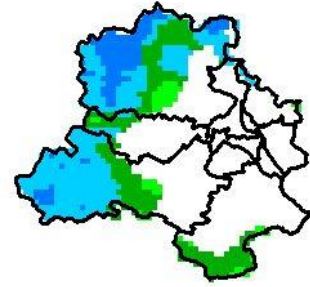
Agriculture vigour is good over Eastern parts of Telangana (NDVI 0.4-0.5). Rest of the region shows moderate values of NDVI (0.3-0.4)

Bihar



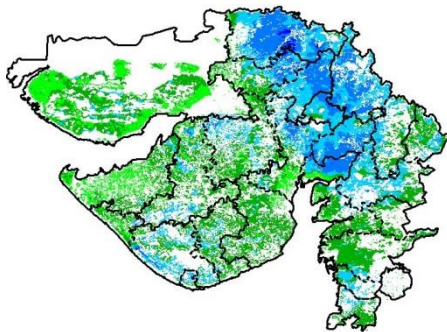
Agriculture vigour is good over central and western parts of Bihar where NDVI value lies between 0.4-0.6. Except in northern and eastern part of state shows moderate values from 0.3-0.4.

Delhi



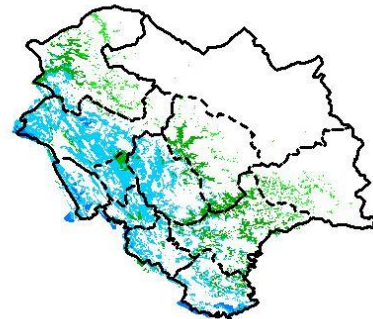
Agriculture vigour is moderate all over Delhi where NDVI value lies between 0.2-0.3, whereas few patches over west shows good values of NDVI (0.4 – 0.5).

Gujarat



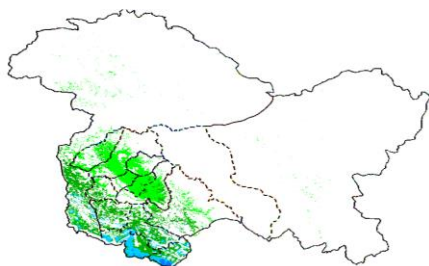
Agriculture vigour is moderate in Kutch and Saurashtra whereas, good agricultural vigour is observed over Gujarat region where NDVI values lies between 0.4-0.6. .

Himachal Pradesh



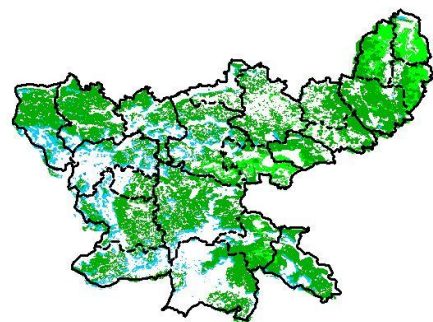
Agriculture vigour is good over western and southern part of Himachal Pradesh where NDVI values are 0.4 – 0.5, whereas rest of the state shows moderate values of NDVI.

Jammu & Kashmir



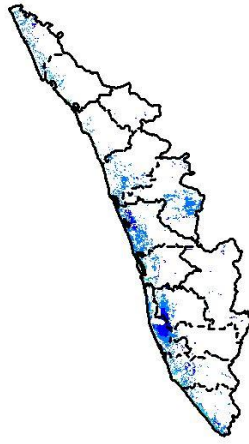
Agriculture vigour is Normal over entire state of Jammu & Kashmir where NDVI values are 0.2 – 0.4.

Jharkhand



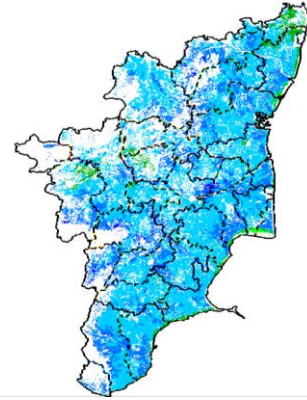
Agriculture vigour is good over western part of the Jharkhand where NDVI values vary from 0.4 - 0.5., whereas rest of the state shows moderate values of NDVI (0.3-0.4).

Kerala



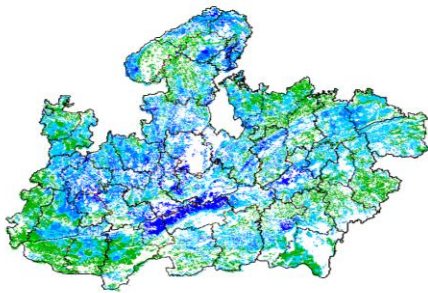
Agriculture vigour is good over entire state of Kerala where NDVI value lies between 0.5-0.6.

Tamil Nadu



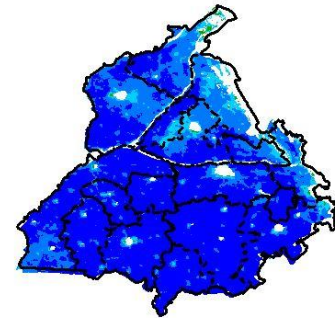
Agricultural vigour is very good over entire state of Tamilnadu where NDVI values lies between 0.5-0.6.

Madhya Pradesh



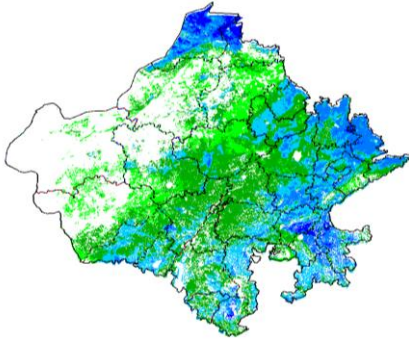
Agriculture vigour shows good values over western and central part of Madhya Pradesh where NDVI varies from 0.4-0.6 and rest of the part shows moderate values of NDVI (0.3 – 0.4).

Punjab



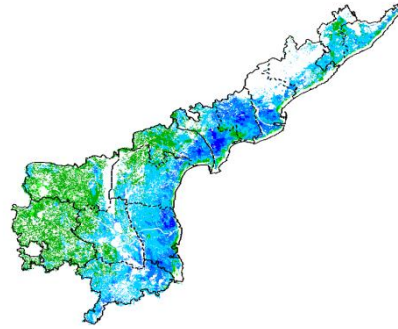
Agricultural vigour is very good over central, eastern and southern part of Punjab where NDVI value lies between 0.4-0.6.

Rajasthan



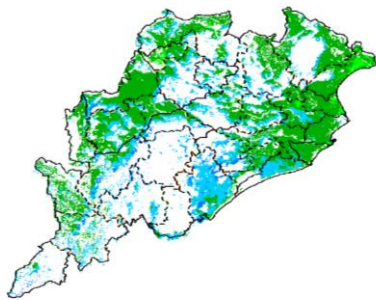
Agriculture vigour is moderate (0.2-0.4) in some patches over central part of Rajasthan whereas good values of NDVI are observed over eastern and northern parts of state (0.4-0.6).

Andhra Pradesh



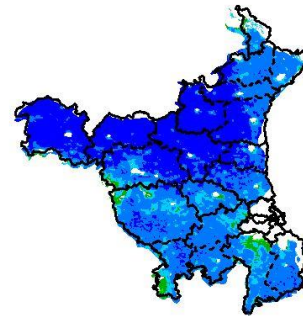
Agriculture vigour is good over entire state of Andhra Pradesh where NDVI vary between 0.4-0.6. except western parts which shows normal values of NDVI (0.2-0.3).

Odisha



Agricultural vigour is good over central and southern part of Odisha with NDVI value ranging between 0.4 – 0.6 . North eastern part shows moderate values of NDVI (0.3-0.4).

Haryana



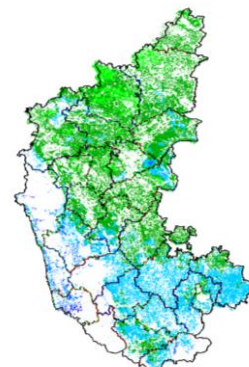
Agriculture vigour is very good over state of Haryana where NDVI value lies between 0.4 – 0.6

Chhattisgarh



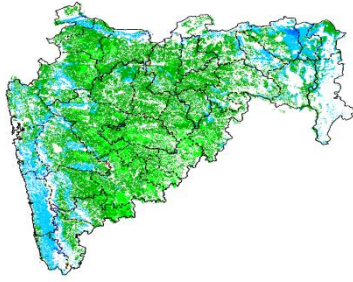
Agriculture vigour is good in northern and southern parts of Chhattisgarh where NDVI values are between 0.4-0.5 except central part which shows moderate values of NDVI.

Karnataka



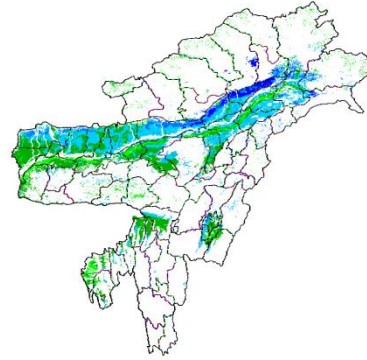
Agriculture vigour is good over southern part of Karnataka state where NDVI value lies between 0.4-0.6 Rest of the state shows moderate values of NDVI (0.3 - 0.4).

Maharashtra



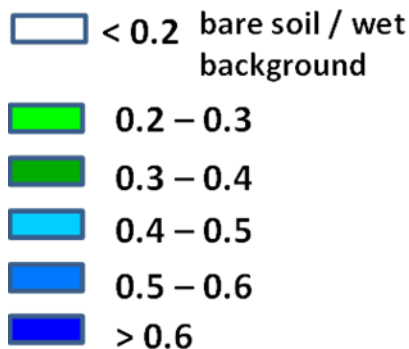
Agricultural vigour is good over Coastal Maharashtra and Vidarbha region with NDVI values from 0.4-0.5, whereas Moderate values of NDVI are observed over Madhya Maharashtra and Marathwada region (0.2-0.4).

North East Region



Agriculture vigour is good over entire states of North-East region where NDVI varies from 0.4-0.6.

Persistent cloud /



Annexure III

List of varieties

Assam

Boro rice : Mahsuri, IR-50, Dinanath, Bishnuprasad, Jyotiprasad, Kanaklata and Dinanath.

Sugarcane : Kolong, Luhit, Dhansiri, Co 1148

Okra: Pusa Sawani, Arka Anamika, Parbhdani Kranti.

Ridge gourd : Pusa Nashdar or other local varieties like AAU-1, AAU-2, AAU-3 etc.

Sponge gourd: Pusa Chikni or other local varieties.

Odisha

Mango: Baiganpalli, Totapuri, Bombay green, Suvarnarekha, Neelam, Himsagar,, Langra, Dusheri, Amrapalli, Mallika, Ratna, Ramkella, Alphonso and Keshar, etc.

Cashewnut: Vengrulla-1.4, BPP-4, Bhubaneswar-1, VRI-2, Hybrid 2-17

Pulses

Green gram: K 851, PDM 11, PDM 54, OUM 115

Black gram: T 9, PU 11, PU 19 and PU 30

Horse gram : Urmi

Sunflower: DRSF- 108, DRSF- 113, TNAUSUF-7, Modern

Toria- M27, TS 36, TS 46;

Lentil- DPL 15, DPL-62;

Pea - Prakash, Vikash.

Bihar

Potato: KufriJyoti,Kufri Ashoka,Pukharaj
Pulses: K-75, PL77,KLS-218
Lentil: BR-25,Pant L 406,Malika,Arun
Kidney Pea: PDR-14,IIDR 96-4,IIPR 98-5
Peas: Ratna, Aprnaharbajan Malbai mater15
Garlic: Jamuna Safed-2(G-50),Jamuna safed-3(G-282) Jamuna-4(G-323)

Jharkhand

Lentil: P.L.-406, P.L.-639, K.L.S -218,K-75
Barley: Jyoti,Ratna,D.L.-36,B.R.-32
Linseed: Sweta,Shubhra, T-397
Field Pea: Rachna,DDR-23, Swarnrekha
Onion : N-53,Pusa red,Arka nicketan, Arka kalian
Gram: KAK-2, ICCC-2,Pusa 256, Pusa-372

West Bengal

Mango: Himsagar, Mallicka, Langra
Guava: Safeda, L-49
Coconut: Eastcoastal, Hazari
Banana: Mortoman, Chapa, Kathali, Singapuri,
Mustard: Varuna, Sita and Bhagirathi

Jammu & Kashmir

Cabbage: Golden Acre, Pride of India and PusaMukta.
Cauliflower: Giant Snow Ball, Pant Gobh 2 & 3 and Pusa Synthetic.
Pea : AP-1, Bonnevillea, Rachna and Arkel);
Lentil: L-4147, L-9/12,PL-406)
Wheat(late sown) : PBW-175, PBW-396, RSP-81(Jitto)

Uttarakhand

Sugarcane: Co-238, Co-241, Co Pant 3220, Co Pant 84211, COS-8436, COS-88230 etc. and medium to late sown varieties like Co Pant 90223, Co Pant-96219, COS-97222, COS-767, COS-1148
Barley :Jyoti, Vijaya, or Jagrati
Oat : UPO-50, UPO-212, JHO-822, Kent Etc

Himachal Pradesh

Cauliflower: snowball and Giant snowball.
Radish:Japanese white, Chinese pink and mino early white
Turnip: PTWG-1
Carrot:Pusakesar
Fenugreek :I.C. 74, kasoori.
Peas :Mater ageta-6 (early variety).
Cabbage:Pride of India, golden achor and hybrid

East Uttar Pradesh

Sugarcane: coj-64, cos-96268, cos-98231, cos-767, cos-84, cos-32, copant-84212, Ko.Sha.-88230, 95255, Ko.Sha.-95436, 01235.
Tomato: pusa early, pusa ruby, HS 101.
Cauliflower: pusaDipali.
Okra:PusaSawani, VarsaUphar, Azad kranti.
Brinjal: Pant Samrat, Pant Rituraj, Pusa hybrid-6.
Pea:Rachna, Pantmatar-5, Aparna, Malviya Matar-2, Malviya Matar-15, Shikha and Sapna(K.P.M.R.-144-1), Ta-163, Jay(K.P.M.R.522), Hariyal, Pant P-42, Aman 2009;
Cabbage:Japani, PusaDieepali, PusaKartiki
Potato:KufriChandramukhi, KufriSadabahar, KufriAshoka,kufrijawahar, kufrilalima, kufribahar, kufribadshah, kufrisatlaj, kufrianand, kufri chipsona-1, kufri chipsona-3, kufrisinduri, kufrisurya.
Lentil: Ta-8, Pant L-406, and 234.

West Uttar Pradesh

Ladies finger:VRO-6, VRO-5.
Pigeon pea:T-21, UPAS 120.
Sugarcane: ko.sha 88230, ko.sha 8436, ko 0238, ko.sha 07250 or U.P. 0512.
Barseem: V.L.1,V.L.10, maskavi, jai,K-8027, K-9565, Mandakini.
Onion: pusa red, pusa white.
Vegetable Pea: Azad P-3, arkil, Jai, Indra, Prakash.

Punjab

Wheat: PBW 621, DBW 17, PBW 550, PBW 502, PBW 343, WH 542, PDW 291, PDW 274 and PDW
Sugarcane: CoJ-85, CoJ-83, CoJ-64 (early maturing), COH-119, CoJ-88, CoS-8436 for and CoJ-89,CO118, COJ85, COJ64.

Rice: Pusa-44, T.R-112 and T.R-113.
Onion: Punjab Naroya, Punjab White and PRO 6.
Radish: Punjab Pasand and Japanese white.
Turnip: L-1.
Carrot: Punjab Black Beauty, Punjab Carrot Red and PC-34.
Tomato: TH-1, Punjab Ratta, Punjab NR 7, Punjab Chuhara, Punjab Upma, Castle Rock.

Delhi

Oat : J.H.O-822, O.L.-9, Pusa oat-5;
Barseem: Vardan, Buland Barseem-1, Masakavi, J.B-3;
Lentil: Pusa Masoor -5 (L-4594).
Radish: Japani White, Hill queen, French Radish;
Spinach: Pusa Bharti.
Amaranths: Pusalal Chaulai, Pusa Kiran.
Ladyfinger: Pusa A-4.
Pea: Azad Matar-1, Pant Matar-3 and Bournville.
Carrot: Pusa Mridula, Japanese White and Pusa Himani,
Radish: Japani White, Hill queen, French Radish;
Spinach: All Green, Pusa Bharti;
Fenugreek: Pusa Kasuri;
Coriander: Pant Haritama, Hybrids;
Turnip: Pusa Swati, Local Red variety

West Rajasthan

Isabgol : RI 89 & GI-2
Fenugreek : RMt 1 & RMt 305
Barley: RD 2052, RD 2035 (suitable for saline and alkali soils) and RD 2715 (dual purpose), RD2058, 2503, 103, NDB1173.
cumin: GC 4, RZ -19, RZ 223, RZ19, 209, 223 and GC4b.
Cowpea: RC-19, RC-101, RCP-27.
Oat : OS 6, OS 9
Berseem: BL 10, BL 22
Cauliflower: Pusa snow ball K-1, Hisar-1, Dania and Selection-7
Radish: (Pusa Rashmi).
Carrot: Pusa Keshar

East Rajasthan

Radish: Pusa Chetki, Japanese white & hill queen.
Carrot: Pusa Keshar
Cowpea: Short dur C-152, RS-9, FS-68, RC-19 and RC-101, C-152, RS-9.
Gram: RSG-888, 895 (Anubhav), CSJD-884 (Aakash), RSG-44, Pusa-209, C-235, H-208, Pratap raj chana, RSG-888, Dahod yellow, ICCV-10 and Pratap Chana-1.
Cauliflower: Pusa snow ball K-1, Hisar-1, Dania and Selection-7
Onion: Punjab safed goal, Udaipur 102, nasik red.
Lucerne : Anand-2, LLC-3, RL-88 & Type-9
Berseem: Muskavivardan and Pusa Jiant
Barley : RD-2552, RD-2052, RD-2035, RD-2503, RD-2715, RD-2660 and Jyoti.
Summer groundnut: T.A.G.24, T.G.37A, G.G.2, D.H.86.

Gujarat

Summer Groundnut: GG 2, GG 4 and GG 20.
Summer Sesame: G.Til-1, G.Til-2, G.Til-3.
Brinjal: Junagadh oblong, Junagadh long, Guj. Bringle-2.
Lady's finger: Guj. Hy.-1 & 2.
Ridge gourd: Pusa nasdar, Jaipuri.
Bottle gourd: Junagadh tender long, Pusa summer prolific long.
Sponge gourd: Pusa chikni.
Bitter gourd: Priya, Pusa domosmi.
Cluster bean: Pusa sadabahar, Pusa navbahar, IC-11388.
Water melon: Sugar baby, Arka jyoti.