



National Agromet Advisory Service Bulletin



Friday 29th January 2016

(For the period 29th January to 2nd February 2016)



Issued by

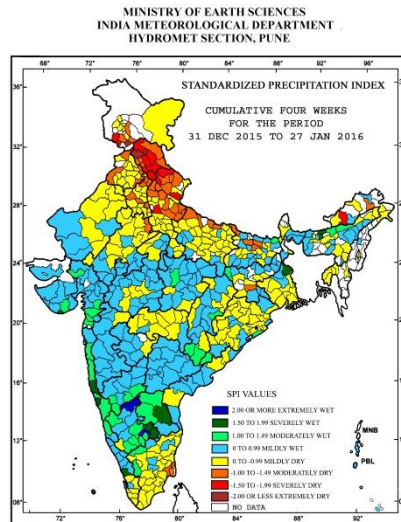
*National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division,
India Meteorological Department, Shivajinagar, Pune.*

Weblink For

District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>

State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

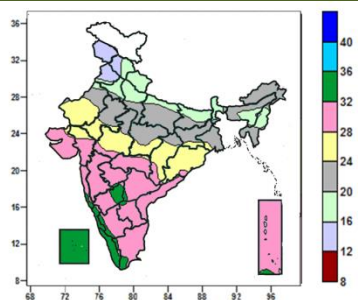
Standardised Precipitation Index
Four Weekly for the Period 31st December 2015 to 27th January 2016



- Extremely/severely wet conditions experienced in few districts of Konkan & Goa; Nalbari, Baksa districts of Assam; Murshidabad district of West Bengal and Diu in Gujarat; Cuddapah district of Andhra Pradesh; Bangalore Rural, Bellary, Kolar; Chickballapur district of Karnataka; Thrissur district of Kerala; and Lakshadweep.
- Extremely/Severely dry conditions experienced in many districts of Himachal Pradesh; few districts of Uttarakhand; East Kameng district of Arunachal Pradesh; Bulandshahar district of Uttar Pradesh; Jammu, Udhampur, Rajouri districts of Jammu & Kashmir.
- Moderately dry conditions experienced in many districts of Uttarakhand, Delhi; few districts of Punjab; Himachal Pradesh; East Siang district of Arunachal Pradesh; Khunti district of Jharkhand; West Champaran, Darbhanga, Muzaffarpur, Samastipur districts of Bihar; Bahraich, Balrampur, Kheri, Siddharth Nagar, Bareilly, Bijnor, Badaun, Moradabad, Muzaffarnagar, Pilibhit, Shahjahanpur, Saharanpur districts of Uttar Pradesh; Anantnag, Doda, Reasi districts of Jammu & Kashmir; Bharatpur district of Rajasthan, Nagapattinam, Thanjavur, Tiruvarur districts of Tamilnadu.
- Rest of the country experienced moderately wet/ mildly dry/ mildly wet conditions.

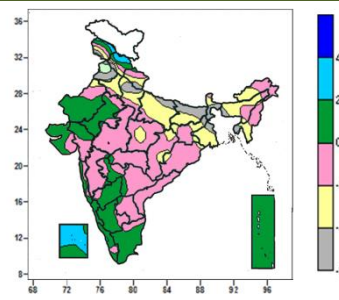
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 27.01.2016

Actual Mean Maximum Temperature ($^{\circ}\text{C}$) in India for the week ending 27.01.2016



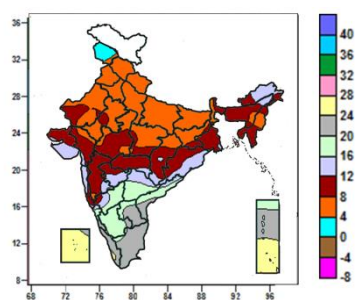
- Mean maximum temperature was between 32 to 36 $^{\circ}\text{C}$ over Lakshadweep, Kerala many parts of, Coastal Karnataka, some parts of Interior Karnataka, Konkan & Goa and isolated pockets of Telangana, Rayalaseema, Tamil Nadu and Andaman & Nicobar Islands.
- Mean maximum temperature was between 24 to 32 $^{\circ}\text{C}$ over rest of the country except Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana & Delhi, Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Northeast India, many parts of Rajasthan, Jharkhand, Gangetic West Bengal, some parts of Madhya Pradesh and Chhattisgarh where it was between 12 and 24 $^{\circ}\text{C}$.

Mean Maximum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 27.01.2016



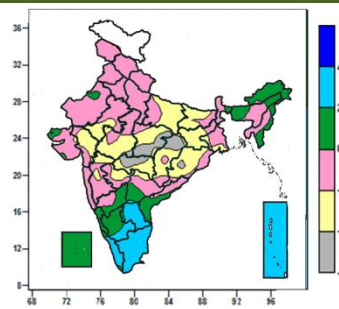
- Mean maximum temperature was above normal by 2 to 4 $^{\circ}\text{C}$ over many parts of Lakshadweep and some parts of Jammu & Kashmir and Kerala.
- Mean maximum temperature was below normal by 2 to 4 $^{\circ}\text{C}$ over Mizoram, many parts Haryana & Delhi, Uttar Pradesh, Bihar, Gangetic West Bengal, Arunachal Pradesh, Assam & Meghalaya, some parts of Himachal Pradesh, Uttarakhand, Jharkhand, Tripura and isolated pockets of Jammu & Kashmir, West Rajasthan, East Madhya Pradesh, Chhattisgarh, Odisha and Nagaland.
- Mean maximum temperature was below normal by 4 to 6 $^{\circ}\text{C}$ over Sub-Himalayan West Bengal and Sikkim, many parts of Punjab, Uttarakhand, Tripura, some parts of Himachal Pradesh, Uttar Pradesh, Bihar and isolated pockets of Jammu & Kashmir, Jharkhand, Gangetic West Bengal and Assam & Meghalaya.
- It was normal to near normal in remaining parts of the Country.

Actual Mean Minimum Temperature ($^{\circ}\text{C}$) in India for the week ending 27.01.2016



- Mean minimum temperature was between 0 to 4 $^{\circ}\text{C}$ over many parts of Jammu & Kashmir.
- Mean minimum temperature was between 4 to 8 $^{\circ}\text{C}$ over Himachal Pradesh, Uttarakhand, Uttar Pradesh, Punjab, Haryana & Delhi, Bihar, many parts of Rajasthan, Madhya Pradesh, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Manipur, some parts of Chhattisgarh, Nagaland and isolated pockets of Assam & Meghalaya, Gujarat region, Madhya Maharashtra.
- Mean minimum temperature was between 8 to 12 $^{\circ}\text{C}$ over Mizoram and Tripura, many parts of Gujarat, Madhya Maharashtra, Vidarbha, Odisha, Gangetic West Bengal, Assam & Meghalaya, Nagaland, some parts of Rajasthan, Madhya Pradesh, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Marathwada and isolated pockets of Konkan & Goa and North Interior Karnataka.

Mean Minimum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 27.01.2016

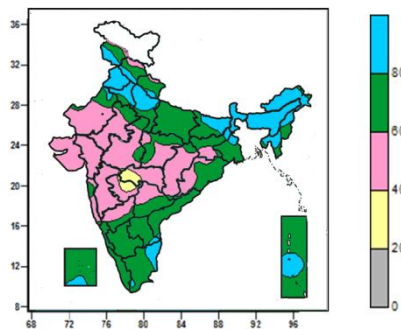


- Mean minimum temperature was above normal by 2 to 4 $^{\circ}\text{C}$ over Tamil Nadu and Andaman & Nicobar Islands, many parts of Kerala, Rayalaseema, some parts of South Interior Karnataka and isolated pockets of Telangana.
- Mean minimum temperature was below normal by 2 to 4 $^{\circ}\text{C}$ over many parts of East Uttar Pradesh, Bihar, Jharkhand, Odisha, Chhattisgarh, West Madhya Pradesh, Gujarat region, Vidarbha, some parts of East Rajasthan, East Madhya Pradesh, Madhya Maharashtra, Marathwada and isolated pockets of Telangana and Gangetic West Bengal.
- Mean minimum temperature was below normal by 4 to 6 $^{\circ}\text{C}$ over some parts of East Madhya Pradesh, Chhattisgarh, Vidarbha and isolated pockets of West Madhya Pradesh and Odisha.
- It was normal to near normal in remaining parts of the country.

- Mean minimum temperature was between 12 to 20⁰C over rest of country except Lakshadweep, Kerala, many parts of Tamil Nadu, Coastal Karnataka Rayalaseema, Andaman & Nicobar Islands, some parts of Coastal Andhra Pradesh and isolated pockets of South Interior Karnataka, where it was 20 to 28⁰C.

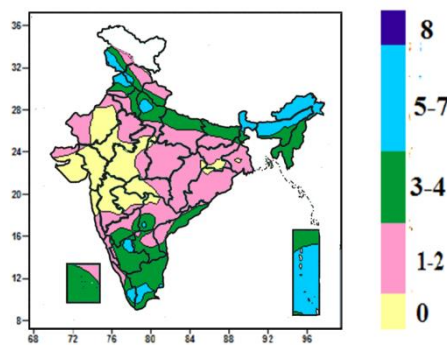
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 27.01.2016

Relative Humidity (%) over India for the week ending 27.01.2016



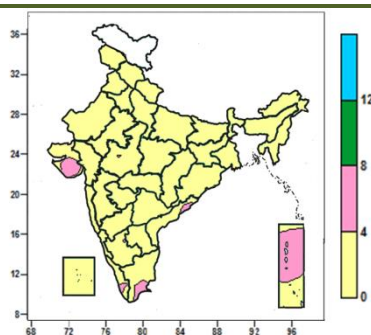
- Mean Relative humidity was above 80% over Punjab, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Sub-Himalayan West Bengal & Sikkim, many parts of Haryana & Delhi, West Uttar Pradesh, Mizoram, Tripura, some parts of Jammu & Kashmir, Himachal Pradesh, Bihar, Tamil Nadu, Andaman & Nicobar Islands and isolated pockets of Uttarakhand, West Rajasthan, Jharkhand, Gangetic West Bengal, Rayalaseema, Coastal Andhra Pradesh and Lakshadweep.
- Mean Relative humidity was between 40 to 80% over rest of the country except some parts of Vidarbha and Marathwada where it was between 20 to 40%.

Cloud amount (okta) over India for the week ending 27.01.2016



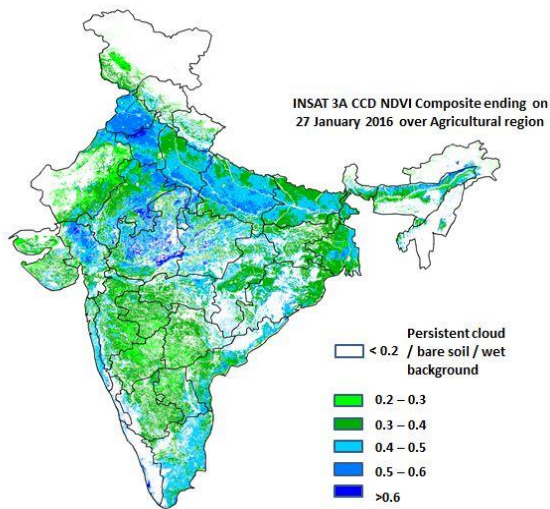
- Sky remained generally cloudy (5-7 okta) over Arunachal Pradesh, Sikkim, many parts of Assam & Meghalaya, Sub-Himalayan West Bengal, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Punjab, West Uttar Pradesh, South Interior Karnataka, Kerala, Tamil Nadu and isolated pockets of Himachal Pradesh and Telangana.
- Sky remained partly cloudy (3-4 okta) over Nagaland, Manipur, Mizoram, Tripura, many parts of West Uttar Pradesh, Coastal Andhra Pradesh, Interior Karnataka, Rayalaseema, Tamil Nadu and Lakshadweep, some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana & Delhi, Uttarakhand, East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal, Assam & Meghalaya, Telangana, Kerala and isolated pockets of Jharkhand.
- 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 27.01.2016



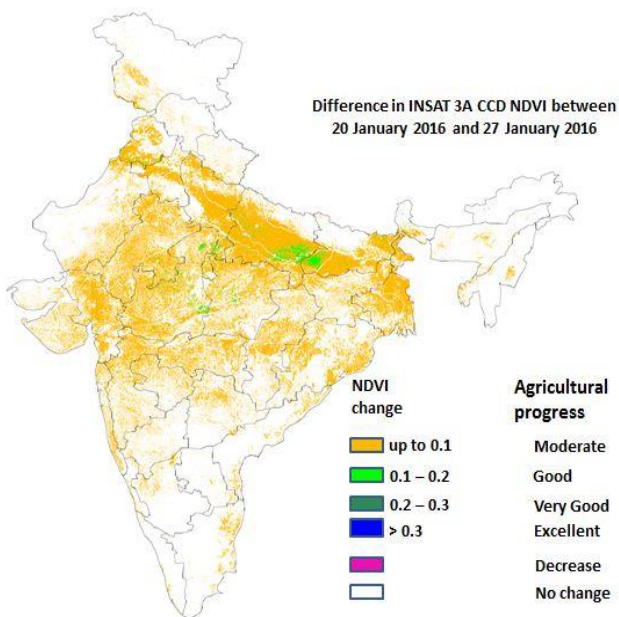
- Mean wind speed was 4 to 8 knots over many parts of Saurashtra, some parts of Tamil Nadu and isolated pockets of Coastal Andhra Pradesh and Kerala.
- It was less than 4 knots over rest of the country.

INSAT 3A CCD NDVI COMPOSITE ENDING ON 27th January 2016 OVER AGRICULTURAL REGION OF INDIA



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

Difference in INSAT 3A CCD NDVI between 20th and 27th January 2016



Moderate progress in NDVI was observed in Uttar Pradesh, Bihar, Central parts of Madhya Pradesh. No change in NDVI was observed in Andhra Pradesh, Tamil Nadu, Kerala and Karnataka.

- INSAT 3A CCD NDVI composite maps for the week ending on 27th January 2016 for different States are given below in Annexure II.

Weather Forecast for next 5 days valid upto 0830 hours of 3rd February 2016

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- Moderate to dense fog very likely at a isolated places over Uttar Pradesh, Bihar and Sub-Himalayan West Bengal & Sikkim, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during next 24 hours.
- No significant change in minimum temperatures over northwest and adjoining central India during next 2 days. Minimum temperatures very likely to fall by 2-3°C over northwest and adjoining central India from 31st January.

5 Day Rainfall Forecast (MID DAY) 29th January 2016

Met Sub-divisions	29 Jan	30 Jan	31 Jan	01 Feb	02 Feb
1. Andaman & Nicobar Islands	SCT	SCT	ISOL	ISOL	ISOL
2. Arunachal Pradesh	DRY	DRY	ISOL	SCT	ISOL
3. Assam & Meghalaya	DRY	DRY	ISOL	ISOL	ISOL
4. N. M. M. & T.	DRY	DRY	DRY	ISOL	ISOL
5. S.H. West Bengal & Sikkim	DRY	DRY	ISOL	ISOL	DRY
6. Gangetic West Bengal	DRY	DRY	DRY	DRY	DRY
7. Orissa	DRY	DRY	DRY	DRY	DRY
8. Jharkhand	DRY	DRY	DRY	DRY	DRY
9. Bihar	DRY	DRY	DRY	DRY	DRY
10. East Uttar Pradesh	DRY	DRY	DRY	DRY	DRY
11. West Uttar Pradesh	ISOL	ISOL	DRY	DRY	DRY
12. Uttarakhand	SCT	SCT	ISOL	DRY	DRY
13. Haryana, Chd & Delhi	ISOL	ISOL	ISOL	DRY	DRY
14. Punjab	SCT	ISOL	DRY	DRY	DRY
15. Himachal Pradesh	WS	FWS	ISOL	DRY	DRY
16. Jammu & Kashmir	WS	WS	ISOL	ISOL	DRY
17. West Rajasthan	ISOL	DRY	DRY	DRY	DRY
18. East Rajasthan	ISOL	DRY	DRY	DRY	DRY
19. West Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
20. East Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
21. Gujrat 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. Marathwada	DRY	DRY	DRY	DRY	DRY
26. Vidharbha	DRY	DRY	DRY	DRY	DRY
27. Chhattisgarh	DRY	DRY	DRY	DRY	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	DRY	DRY	DRY	DRY
32. Coastal Karnataka	DRY	DRY	DRY	DRY	DRY
33. North Interior Karnataka	DRY	DRY	DRY	DRY	DRY
34. South Interior Karnataka	DRY	DRY	DRY	DRY	DRY
35. Kerala	DRY	DRY	DRY	DRY	DRY
36. Lakshadweep	DRY	DRY	DRY	DRY	DRY

% 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

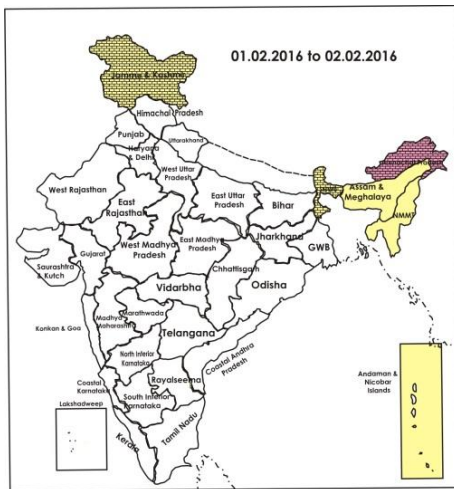
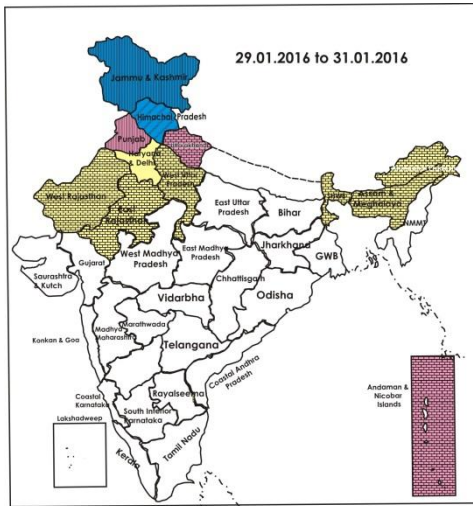
- **29 January (Day 1):** Heavy rain/snow very likely at isolated places over Jammu & Kashmir and Himachal Pradesh. Heavy rain very likely at isolated places over Nicobar Islands. Dense to very dense fog very likely at isolated places over coastal Odisha.
- **30 January (Day 2):** Heavy rain/snow very likely at isolated places over Jammu & Kashmir. Heavy rain very likely at isolated places over Nicobar Islands.

- 31 January (Day 3): No weather warning.
- 01 February (Day 4): No weather warning.
- 02 February (Day 5): No weather warning.

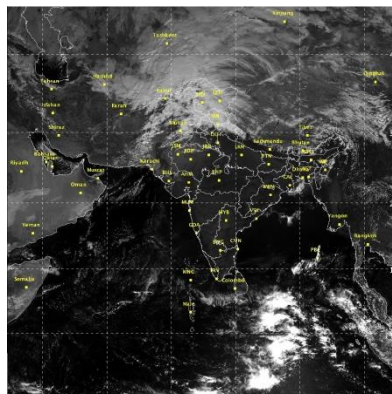
Weather Outlook for subsequent 2 days from 3rd to 5th February 2016

- Rain/thunderstorm very likely at isolated places over northeastern states.

Weather Forecast Map (Valid upto 0830 hours of 3rd February, 2016)



Satellite image dated, 29.01.2016 0600 UTC



Salient Advisories

- As Rain/snow very likely at most/many places over **Jammu & Kashmir** and **Himachal Pradesh** on 29th & 30th January along with heavy rain/snow at isolated places, farmers are advised to postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in the crop fields.
- As moderate to dense fog is very likely at isolated places over **Uttar Pradesh, Assam, Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Bihar, Odisha** and **Sub-Himalayan West Bengal & Sikkim** during next 24 hours and dense to very dense fog is very likely at isolated places over **coastal Odisha** on 29th January, 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 the Cauvery Delta Zone of **Tamil Nadu**, 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 Southern **Telangana** Zone, continue sowing of sesamum and short duration groundnut cultivars (TAG 24, K6) after seed treatment with Tebuconazole @ 2 g per kg seed.
- In Sub Tropical Zone of **Jammu & Kashmir**, due to humid weather condition, there is chance of yellow rust in wheat crops. Monitor the crops and if attack is observed, apply Propiconazole (Tilt) @ 0.1%. Also monitor *rabi* pulses for wilt and blight disease, if observed, apply Bavistin/Carbendazim @ 3g/litre of water after current spells of rain.
- In Southern Humid Plain Zone of **Rajasthan**, in the prevailing weather there is a chance of attack of pod borer in gram, aphids in mustard, early blight in tomato and termite in wheat, spray Acephate 75 SP@ 650 g/ha in gram before flowering for control of pod borer; apply Chlorpyrifos 20 EC @ 600 ml/ha for aphids; spray Mancozeb @ 2g per litre of water for early blight and apply Chlorpyrifos 20 EC @ 4 litre/ha with irrigation water for control of termite.
- Due to humid weather condition, early blight may occur in potato and tomato crops 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.
- In Central Brahmaputra Valley Zone and North Bank Plain Zone of **Assam**, cloudy and foggy weather condition is congenial for appearance and spread of leaf blight disease in potato. Spray with Mancozeb 75% a.i. @ 2.5 g/litre of water against late blight.

Detailed Zonewise Agromet Advisories

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



Banana



Groundnut



Rice



Cotton

- **Realised Rainfall:** Rainfall occurred in Coimbatore district of Tamil Nadu. Weather remained mainly dry/dry over rest of 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, banana crop of more than five months may be propped against lodging due to heavy wind. Provide irrigation in standing crops, if irrigation facilities are available, since dry weather is expected in the

forthcoming days,

- In the South Zone, apply Pink Pigmented Facultative Methylo-troph (*Methylobacterium* sp.) as foliar spray (500 ml/ ha) at flag leaf stage for alleviation of water stress in both SRI and transplanted rice cultivation. Create dust mulch through manual hoeing and apply crop residue mulch in the inter-row space to minimize loss of soil moisture in chilli fields.
- 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 wind.
- In the North Western Zone, prevailing weather conditions are congenial for thrips attack in onion crop which lead to tip drying and stunted growth. When the problem is found to be above economic threshold level (5 thrips/hill), place yellow sticky traps @ 5/acre and undertake foliar spray with Neem based pesticide @ 2ml/acre or Profenophos 2ml/lit of water along with adjuvant 10 ml/tank.
- In the South Zone, incidence of leaf hopper is noticed in cotton. Collect and destroy the infested plant parts and spray Profenofos 50% EC @ 1000 ml/ha based on the intensity of the pest.
- In the Western Zone, prevailing dry weather, increasing temperature and wind speed is favourable for infestation of sucking pests in vegetable crops. Spray Neem Oil @ 2% or Neem Seed Kernel extract @ 5%.
- In the High Altitude Hilly Zone, to prevent diseases caused due to prevailing humid weather condition, spray Trichoderma Viridi 1% solution with any one of the sticking agent on carrot, beans, cabbage and garlic crops.

▪ **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, provide light irrigation followed by spraying of 13-0-45 @ 10g/litre of water in those mango orchards where flowering has not been initiated and continue transplanting of rice.
- 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, under present weather, mites may attack sugarcane crop. To manage, spray water soluble Sulphur @ 3 g per litre of water.
- In the North Coastal Zone, prevailing dry weather conditions are congenial for incidences of sucking pests and powdery mildew in rice fallow green gram & black gram. Spray Dimethoate @ 2.0 ml/litre of water to control sucking pests and Tridemorph @ 1.0 ml or sulphur @ 3.0 g/litre of water to control powdery mildew.
- In the Scarce Rainfall Zone, prevailing conditions are congenial for incidence of hoppers in mango crop. For controlling hoppers, spray Carbaryl @ 3.0 gm or Fenvalerate @ 0.02% or Phosphomidon @ 0.05%. First spray should be given at the early stage of panicle formation (bud burst stage). The second spray at full length of panicle but before full bloom and the third spray after fruits are set and have attained pea and marble stage.

▪ **Telangana:**

- In the Southern Telangana Zone, continue sowing of sesamum and short duration groundnut cultivars (TAG 24, K6) after seed treatment with Tebuconazole @ 2 g per kg seed.
- In the Northern Telangana Zone, continue nursery sowing of tomato, tomato (pusarubi, pusa early dwaft, marutham & Arka vikas) and sowing of sesamum, bhendi (Purbani kranthi, Arka anamika & Arka abhaya) and harvesting of chilli.
- In the Northern Telangana Zone, incidence of powdery mildew is noticed in black and green gram. Spray Carbendazim @ 1.0 g/litre or Thiophanate Methyl @ 1.0 g/litre of water at 10 days interval twice, soon after the appearance of the disease.

▪ **Karnataka:**

- In Southern Transition Zone, undertake nursery preparation for summer rice, harvesting of matured pods of red gram, arecanut, matured rhizomes of ginger and turmeric. Provide irrigation to ginger and turmeric once in a week and cover the beds with mulches.
- In North East Dry Zone, as dry weather is prevailing, undertake harvesting of Bengal gram and red gram and apply irrigation to wheat.
- In Southern Dry Zone and Hill Zone, undertake sowing of pulses like black gram, green gram and also the green manure crop sun hemp, in the areas where rice harvesting is completed, to utilize residual moisture.
- In Hill Zone, taking advantage of dry weather continue threshing of rice, pigeon pea, chickpea, sunflower and chilli and resin making in grapes. Apply irrigation in sorghum.
- In the North East Transition Zone, as dry weather is prevailing, apply protective irrigation to wheat (flowering/milk stage), *rabi* sorghum (ear head emergence) and safflower (pod formation). Continue harvesting of pigeon pea, Bengal gram and Niger. Continue intercultural operations in brinjal.
- In North Transition Zone, in view of the prevailing dry weather, apply irrigation to wheat (late Jointing / flowering stage), early sown sorghum (flowering/grain filling) and chickpea (flowering to pod formation). Continue sowing of Co-8014 and Co-740 varieties of sugarcane during January and February.
- Due to prevailing weather conditions there is chance of pod fly in pigeon pea, helicoverpa in Bengal gram in North East Transition Zone; spray Thiomethaxam @ 0.25 g/litre of water to avoid the pod fly damage; for control of helicoverpa, spray Profenophos or Chlorpyrifos @ 2 ml/litre or Indoxacarb @ 0.3 ml/litre or Spinosad @ 0.2 ml per litre of water.
- Due to low temperature, hoppers were noticed in mango crop in North East Dry Zone; for effective control,

spray Carbaryl 50WP @ 4 g or Malathion 50EC @ 2 ml or Monocrotophos 36 SL @ 1.5 ml or Phosphamidon 40 EC @ 0.5 ml in one litre of water.

- Due to partly cloudy and humid condition, there is chance of leaf spot disease in safflower, powdery mildew in grapes, leaf minor in lime in North Dry Zone; spray Mencozeb 75 WP @ 2 g in one litre of water for control of leaf spot; spray Azoxysprobin @ 1 ml in one litre of water for control of powdery mildew and spray Imidachloprid @ 0.3 ml dissolved in one litre of water for control of leaf minor.

▪ **Kerala:**

- In the Central Zone, continue mulching in coconut and pepper gardens and land preparation for sowing *puncha* rice.
- In the Problem Area Zone, as mainly dry weather is prevailing, continue providing irrigation to banana, nutmeg and pepper gardens.
- In the Southern Zone, prevailing dry and humid weather conditions are congenial for incidence of leaf rot disease in coconut. Leaf rot disease increases the probability of incidence of root wilt disease. Remove and destroy rotten leaves and apply Copper Oxy Chloride or Dithane M 45 @ 4 g/litre of water to manage the disease.
- In the Central Zone, due to high temperature, there is a chance of increase of mite population in coconut. Apply 2% Neem oil-garlic-soap emulsion in the crown on young bunches to prevent mite attack.
- In the Problem Area Zone, present dry and humid weather is congenial for occurrence of diseases like blast and brown spot in rice. Spray 2% Pseudomonas @ 20g/litre of water or broadcast Pseudomonas @ 1 Kg + 20 kg of Cow Dung powder/ acre and also reduce dosage of nitrogen in the soil.
- Suitable varieties for sowing are given in Annexure III.

▪ **Animal Husbandry**

- Maintain the optimum temperature in poultry houses in the North East Transition Zone of Karnataka and in sericulture, poultry and dairy unit in Southern and Eastern Dry Zone of Karnataka.
- In the Western Zone of Tamil Nadu, increasing temperature causes stress in cattle and poultry. Provide adequate amount of good drinking water and protect the poultry shed by providing wet sac to combat wind speed and temperature.

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



Mustard



Transplanting of Boro rice



Okra



Cabbage

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

• **Advisories:**

- As moderate to dense fog is very likely at isolated places over Assam, Meghalaya, Nagaland, Manipur, Mizoram & Tripura during next 24 hours, 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:**

- In Lower Bramhapurtra Valley Zone and Upper Bramhapurtra Valley Zone of Assam, complete transplanting of *boro* rice. Continue transplanting of *boro* rice. Maintain 3cm 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 Upper Bramhapurtra Valley Zone of Assam, continue land preparation for sowing of ridge gourd and okra.
- In Hill Zone, continue raising of coconut seedlings.
- In Lower Bramhapurtra Valley Zone of Assam, continue land preparation for early planted sugarcane.
- In Meghalaya, continue transplanting of *boro* rice and harvesting of ginger/ turmeric. Replanting of dead hills or gap filling with seedlings of similar age of *boro* rice should be done within 7-10 days of transplanting.
- 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. Apply mulching with crop residue in mustard crops for conservation of soil moisture.
- In Hill Zone Assam, foggy and humid weather is favourable for attack of rice hispa & stem borer in seedling stage of *boro* rice. Spray Chloropyriphos @ 2 ml/litre of water or Carbofuran 3G @ 4kg/bigha. Also spray Bavistin 2 gm/litre of water for controlling blast disease in wheat.
- 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 Brahmaputra Valley Zone, Central Brahmaputra Valley Zone and North Bank Plain Zone of Assam, cloudy and foggy weather condition is congenial for late blight in potato. Spray with Mancozeb 75% a.i. @ 2.5 g/litre of water against late blight. Farmers are also advised to apply Indofil M-45 @ 2.5g/litre of water to protect wheat crop from Helminthosporium leaf blight at booting/heading stage.
- In Upper Brahmaputra Valley Zone, cloudy and foggy weather condition is congenial for late 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 stem borer infestation in *rabi* maize and blast in wheat. Spray Phosphamidon 100 EC @ 500 ml in 700 litre of water, Fenitrothion 50 EC @ 1litre in 700 litre of water against stem borer in *rabi* maize and spray 2 gm Bavistin/litre of water against blast in wheat.
- 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 late & early blight in potato. Apply Mancozeb 75% WP @ 1.5- 2.0 kg/ha or Copper Oxy Chloride 50% WP @ 2.5 kg/ha or Chlorothalonil 75% WP @ 1.25 kg/ha to control the attack.
- **Nagaland, Manipur, Mizoram and Tripura:**
- In Manipur, continue transplanting of tomato.
- 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 lentil, linseed, mustard, citrus, orchard crop and cole crops from cold/frost injury. Keep the fields weed free as the weeds blocks the sunlight and heating of the soil during daytime.
- In Tripura, provide light irrigation with mulching in mustard and lentil. Continue transplanting of *boro* rice. Undertake sowing 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 early blight in potato, aphids in mustard and lentil. Spray Cymoxanil+ Mancozeb or Metalaxyl+ Mancozeb @ 1.5g per litre of water against early 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 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.

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. If early sown groundnut is one month old and flowering has been started, then undertake earthing up.
 - In Madhya Maharashtra, as the minimum temperature is prevailing around 10°C at Jalgaon districts, apply irrigation to banana in the night hours. Apply irrigation to wheat, vegetables, jowar, gram and orchards crops. Apply irrigation to onion crop at an interval of 6-8 days. Continue harvesting of old adsali and preseasonal sugarcane. Continue land preparation for sowing of summer groundnut, bajra and plantation of new *suru* sugarcane. Continue sowing of pearl millet.
 - In Marathwada, as minimum temperature is prevailing around 10°C in Nanded district, apply light irrigation to banana during night time. Continue land preparation for sowing of summer groundnut and bajra. Apply irrigation to wheat, safflower and gram. Undertake harvesting of timely sown gram crop. To protect the onion crop from low minimum temperature use sprinkler irrigation 5 to 10 minutes early in the morning.

- In Vidarbha, undertake land preparation for sowing of summer groundnut. Apply irrigation after 45 and 65 days of sowing (at early tillering/tillering stage) to wheat crop. Complete transplanting of summer rice in East Vidarbha. Apply irrigation to vegetable crops, gram and orchards crops like orange and sweet lime in Central Vidarbha region.
- Due to partly cloudy weather condition in south Konkan, there is chance of attack of thrips on inflorescence of mango; spray Spinosad @ 2.5 ml per 10 liters of water on the whole tree.
- **Gujarat:**
- In Gujarat, apply light irrigation to wheat, mustard, castor during evening hours in North West Zone, regular irrigation to sweet corn, gram (flowering/pod formation), cabbage/cauliflower in South Gujarat Heavy Rainfall Zone; regular irrigation to wheat (flowering/grain filling) in North Saurashtra Zone and wheat in South Saurashtra Zone.
- Undertake harvesting of matured spikes of castor in North Gujarat Zone.
- Carry out weeding in wheat, castor, vegetable and fruit crops in North West Zone of Gujarat, in vegetable (brinjal, chilli, tomato, cabbage and cauliflower) and rice crops in South Gujarat Heavy Rainfall Zone.
- Under increasing temperature condition, there are chances of attack of aphid in cumin, fennel, potato, mustard vegetable crops and infestation of late blight in potato in North Gujarat Zone; attack of aphid in vegetable, mustard and cumin in North West Zone of Gujarat; for effective control of aphid spray Dimethoate @10 ml or Phosphamidon @ 3ml in 10 litres of water; for effective control of late blight spray Metalaxil MZ (Redomel gold) @ 20 g in 10 litres of water.
- Under prevailing partly cloudy weather condition there is chance of infestation of blight and powdery mildew in cumin in South Saurashtra Zone; spray Hexaconazole @ 15 ml/10 litres of water for control.
- 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 outbreak of powdery mildew in field cowpea and mango (flowering); spray Wetable Sulphur @ 30 g/10 litres of water for control.
- Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
- Spread the crop residue in animal sheds to protect the animals from cold. Provide dry fodder twice a day to cattle and luke warm water to lactating animals. Keep young calves indoors during night time to avoid cold stress in Gujarat.

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



Seed bed preparation of rice

Wheat

Gram

Mustard

- **Realised Rainfall:** Rainfall occurred in all districts of Andaman & Nicobar Islands; Araria district of Bihar; Puri district of Odisha. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As moderate to dense fog is very likely at isolated places over Bihar, Odisha and Sub-Himalayan West Bengal & Sikkim during next 24 hours and dense to very dense fog is very likely at isolated places over coastal Odisha on 29th January, 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.
 - **West Bengal:**
 - In New Alluvial Zone, Laterite and Red Soil Zone, complete the transplanting of *boro* rice within the end of this month. Maintain 2-3 cm stagnant water for next seven days 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 Laterite and Red Soil Zone, present weather conditions are favourable for attack of rust and blight diseases in wheat crop and aphids in mustard. For control rust and blight, spray Mancozeb @ 2.5-3 g/litre. For control of aphids, spray Imidachloprid @ 1ml/litre of water.
 - In Hill Zone, due to foggy weather, there is chance of late blight disease in potato crops. For control, 1st spray with Copper Oxychloride 50% WP @ 4g/litre of water and 2nd spray with Mancozeb 75% WP (10 days after 1st spray) @ 2.5g/litre of water.

- In New Alluvial Zone, due to foggy weather condition, there may be attack of early blight may be severe in potato and black spot may be seen on onion leaf and leaf fall may occur. To control early blight, apply Mancozeb @ 2.5 g per litre of water and to control black spot, apply Mancozeb @ 2 gm or Zyrum @ 2 g per litre of water.
- In Old Alluvial Zone and Terai Zone, due to low temperature and foggy weather conditions, late blight attack is found in potato To control, spray Dimethomorph + Mancozeb @ 2g/litre water or Cymoxanil + Mancozeb @ 2g/litre of water. Also spray, Carbendazim 50%WP or Copper Oxychloride alternately at 10-15 days interval to control fungal attack in lentil.
- In Terai Zone, present weather condition , there may be attack of downey mildew in cucumber. Spray the mixture of Metalaxyl 8% and Mancozeb 64% @ 1 g per litre of water.
- **Andaman and Nicobar Islands:**
- In Nicobar, provide adequate drainage in vegetable fields to avoid water logging.
- **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 Eastern Ghat High Land Zone, continue sowing of pea and lentil under zero tillage in rice field.
- In Western Undulating Zone, continue nursery preparation and sowing pre germinated seeds for rice raising seedlings.
- In Western Undulating Zone, aphid 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, cloudy weather may favour infestation of saw fly in mustard. Undertake spraying of Quinalphos @ 2 ml per litre water to control.
- In Mid Central Table Land Zone, in the present weather, there is every possibility of increase in stem borer population in *rabi* rice nursery. To control, spray Triazophos @ 2ml/litre of water in the nursery.
- In Mid Central Table Land Zone, in the prevailing weather, powdery mildew infestation may be seen on pulses. Spray Sulfex @ 5g/litre of water.
- **Bihar:**
- In North East Alluvial Plain Zone, undertake land preparation for planting of spring sugarcane and nursery preparation of vegetables. Undertake transplanting the seedling of onion in this week.
- In North West Alluvial Plain Zone, complete transplanting of onion at the earliest and undertake weeding in early sown onion crop. Apply light irrigation in late sown wheat crop which is at CRI stage.
- In North West Alluvial Plain Zone, in the present weather condition there may be attack of aphids and incidence of white rust in mustard. For aphids, undertake spraying of Rogar or Quinalphos @ 2.0 ml/litre of water and for control of white rust spray Chlorothalonil 75 WP @ 1 g/litre of water.
- In South Bihar Alluvial zone, in the present weather condition there may be attack of late blight and aphid disease in potato and mustard. Apply Redomil @ 2g/litre water to protect the crop from late blight and apply Metasystox or Rogor @ 1.5 ml/litre of water in mustard or toria to protect them from aphid.
- In North West Alluvial, South Alluvial Zone and North East Alluvial Plain Zone, present weather is conducive for attack of powdery mildew disease in pea. Apply Karathen @ 1litre/1000 litres of water per ha.
- In North East Alluvial Plain Zone, present weather is conducive for attack of aphids in mustard and White Grub/Termite infestation in maize. To control aphid Rogar or Quinalphos @ 2 ml/litre of water is recommended and to control white grub/termite, spray with Chlorpyrifos 20 EC @ 2.5 ml/litre of water in the evening.
- **Jharkhand:**
- In Western Plateau Zone, undertake 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.
- In Western Plateau Zone, the existing weather conditions are favourable for the attack of aphids in different crops like mustard, pea, bean etc. Spray Monocrotophos or Metasystox or Imidaclopryd @ 1 ml per litre of water to control the aphid.
- Suitable varieties for sowing are given in Annexure III.

- **Animal Husbandry**

- In Odisha & 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.
- In Terai Zone of West Bengal, provide artificial heat to new born animal or chick to protect from chill especially during night.
- In Bihar, provide heat by lighting 100W filament bulb @ 1 bulb per 20 new born chicks and vaccinate the birds as per the recommended age.
- In Coastal Saline Zone of West Bengal, protect poultry birds from cold by using electric bulb (300watt 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. Apply irrigation in potato, coriander (flowering stage), onion and in wheat at tillering stage. Continue harvesting of matured cauliflower and cabbage.
- In Jhabua Hill Zone, continue harvesting of matured vegetables, turmeric and ginger.
- 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 attack of Diamond back in cauliflower and cabbage crops in Bundelkhand Zone; spray Malathion 50 E.C. @ 2ml/litre of water for control.

- **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. Apply irrigation in potato and continue inter-cultural operations in winter sugarcane.
- In Bastar Plateau Zone, continue inter-cultural operation in vegetable and flower crops. Apply sprinkler irrigation in pulse crops like chickpea and garden pea etc. at flowering stage. Spray 2% urea after nipping in gram crop for better branching and yield. Continue field preparation for planting sugarcane.
- In Chhattisgarh Plain Zone, continue field preparation for sowing of maize and sunflower. Continue preparation of seedlings of cucurbitaceous vegetables in polythene bags.
- 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.
- Suitable varieties are given in Annexure III.

- **Animal Husbandry**

- In Madhya Pradesh and Chhattisgarh, provide fodder/feed mixed with minerals etc. and fresh water to milch animals. Keep animals in sheds during night time. Hang gunny bags in the cattle and poultry house to prevent entry of cold air.

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



Wheat



Sugarcane



Cauliflower



Mustard

- **Realised Rainfall:** Weather remained mainly dry/dry over the region.
- **Advisories:**
 - As Rain/snow very likely at most/many places over Jammu & Kashmir and Himachal Pradesh on 29th & 30th January along with heavy rain/snow at isolated places, farmers are advised to postpone the irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Arrange for adequate drainage to avoid water stagnation in the crop fields.
 - **Jammu & Kashmir:**
 - 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, undertake transplanting of *rabi* onion.
 - In Sub Tropical Zone, due to humid weather condition there is chance of yellow rust in wheat crops. Monitor the crops and if attack is observed, apply Propiconazole (Tilt) @ 0.1%. Also monitor *rabi* pulses for wilt and blight disease, if observed, apply Bavistin/Carbendazim @ 3g/litre of water after current spells of rain
 - 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.
 - In Intermediate Zone, due to humid weather, there may be incidence of early and late blight in potato crop and alternaria blight in mustard crop 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, apply irrigation in timely sown wheat crop at ear head emergence stage and top dress urea @ one kg/10 litre of water per Nali to boost ear head emergence in wheat and apply light irrigation in onion and other vegetable crops. Continue sowing of French bean (VL Bean-1 & VL Bean -2 varieties) and tomato (VL 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. under optimum soil moisture in. Also continue harvesting of Vegetable pea and potato. Undertake weeding operation in vegetable crops and cover the ground with grass to conserve soil moisture and to protect crops from frost.
 - In Hill Zone, apply light and frequent irrigation/sprinkler irrigation in garlic and onion and continue mulching in potato and cabbage crops. Continue transplanting of cabbage and round radish for seed production.
 - In Sub humid Sub tropic Zone, apply irrigation in wheat crops.
 - 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, apply irrigation in early sown as well as timely sown wheat; continue transplanting of onion and complete planting of potato. Undertake protective measures to protect the vegetable crops from frost.
 - In Mid Hills sub-Humid Zone, complete harvesting of ginger. Continue transplanting of onion.
 - In High Hill Temperate Dry zone and Sub-Montane and Low Hills Sub-Tropical 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, spray Redomil M-Z @ 25 g per litre of water at 15 days interval; 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 after current spells of rain.
 - **Rajasthan:**
 - In Semi-Arid Eastern Plain Zone, continue field preparation for sowing of early cucurbits, 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) and in gram at pod formation stage.

- In Sub Humid Southern Plain, Aravali Hill Zone and Arid Western Zone and in Transitional Plain Zone, arrange for smoking around the fields during night, apply light and frequent irrigation/sprinkler irrigation in the evening to protect the crops from frost/cold injury. To protect young fruit plants from chilly winds, cover young fruit plants with straw/polythene sheets/gunny bags. Apply first irrigation in wheat 20-25 days after sowing and in barley 30-35 days after sowing in Transitional Plain Zone.
- Apply irrigation in maize with top dressing of nitrogen at knee high stage and second irrigation in wheat at tillering stage with top dressing of remaining one third dose of nitrogen in Southern Humid Plain Zone and also apply irrigation in wheat 65-70 days at jointing and booting stage, barley at flowering stage and mustard at pod grain filling stage in Sub Humid Southern Plain, Aravali Hill Zone.
- In Arid Western Zone, apply irrigation in cumin at seed formation stage and in vegetables in Barmer, Churu, jalore, Jodhpur and Pali districts.
- Continue harvesting of matured kinnow fruits and continue measures to protect kinnow trees from cold. Continue harvesting of sugarcane and stop irrigation before 15 days of cutting in Irrigated North western Plain Zone. Apply first irrigation in late sown wheat (25-30 days after sowing); second irrigation in early sown wheat 25-30 days after tillering, second irrigation in mustard at flowering stage and barley (60-70 days after sowing) and first irrigation in gram at branching stage (50-55 days after sowing) and undertake hoeing and weeding operations.
- In Flood Prone Eastern Plain Zone, weather is conducive for white rust and alternaria blight in mustard crop, termite in wheat and barley, early blight in potato and attack of pod borer in gram, spray Mancozeb or Ridomil MZ 72 WP @ 2.0 Kg in 800 litre water/ha against white rust ; spray Iprodione or Mencozeb @ 2 Kg/800 litre solution against alternaria blight; apply Chlorpyrifos 20 EC @ 4 litre/ha with irrigation water against termite; spray Mencozeb @ 2g/litre water against early blight; dust 5% Melathion or Carboryl @ 20-25 kg/ha before flowering and pod formation. 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 Semi-Arid Eastern Plain Zone, due to rise in temperature there is a chance of 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 leaf curl & mosaic in Papaya.
- In Transitional Plain Zone of Inland Drainage, there is a chance of attack of aphids on mustard and cumin, dust Methyl parathion 2% @ 25 kg/ha. In Barmer, Churu, jalore, Jodhpur and Pali districts, there is a chance of attack aphid in mustard and downey mildew in fenugreek, spray Malathion 50 EC @ 1.25 litre /ha to control aphid in mustard and spray Mancozeb @ 2 g per litre of water for downy mildew.
- In Irrigated North western Plain Zone , due to prevailing weather, there is a chance of attack of pod borer in gram, apply Quinalphos @ 1.5 per cent dust 24 kg/ha or Monocrotophos 36 SL @ 1 litre of water per hectare.
- In Southern Humid Plain Zone, due to prevailing weather there is a chance of attack of pod borer in gram, aphids in mustard, early blight in tomato and termite in wheat, spray Acephate 75 SP @ 650 g/ha in gram before flowering for control of pod borer; apply Chlorpyrifos 20 EC @ 600 ml/ha for aphids; spray Mancozeb @ 2g per litre of water for early blight and apply Chlorpyrifos 20 EC @ 4 litre/ha with irrigation water for control of termites.
- In Sub Humid Southern Plain, Aravali Hill Zone, due to frequent change in temperature there is a chance of attack of moyla disease and black spot in mustard, apply Dimethoate 30 EC @ 1litre/ha. For the control of black spot, spray three times Mancozeb @ 2g/litre at 15 days interval.
- **Punjab, Haryana and Delhi:**
- 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 Central and Undulating Plain Zone of Punjab, continue planting of peach, plum, pear, pomegranate and ber plants.
- 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 g per acre at weekly interval.
- 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.
- In Central, Western 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 30 EC in 80-125 litre of water per acre.
- 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.
- 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.

▪ **Uttar Pradesh:**

- As moderate to dense fog is very likely at isolated places over Uttar Pradesh during next 24 hours, 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 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.
- In Central Plain Zone, apply irrigation in gram before flowering stage.
- In Eastern Plain Zone, undertake planting of tomato, sowing of urad, mung and cucurbits. Continue land preparation for planting of autumn sugarcane.
- In Western Plain Zone, continue planting of autumn sugarcane and continue sowing of sunflower.
- In Bundelkhand Zone, continue planting of garlic and transplanting of onion, cabbage, cauliflower, tomato, brinjal and chilli.
- In North Eastern Plain Zone, continue sowing of rabi maize, linseed and lentil.
- 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 litre of water per hectare and for control of aphids, spray Methyle-O-Dimaton 25 % E.C. @ 1 litre per 600 to 750 litres of water per hectare.
- In Central Plain Zone, due to prevailing weather condition, there may be chances of attack of mosaic leaf curl in brinjal, chilli and tomato for control spray Mithyle-O-Dimetan 25 E.C. @ 2 litre per 700 to 800 litres of water per hectare.
- 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 litre in 600 litres of water per hectare.
- In Eastern Plain Zone, due to prevailing weather condition, there may be chances of attack of stem borer and fruit borer in brinjal and boll worm in cabbage for control spray D.D.V.P. 76 EC @ 750 ml or Malathion 50 EC @ 2 litres in 600 to 800 litres of water per hectare.
- Suitable varieties are given in Annexure III.

• **Horticulture**

- Continue preparation of tree basins for apple in High Hill Temperate Dry zone of Himachal Pradesh, for apple, stone fruits and pomegranate and also undertake pruning in Mild Hills Sub Humid Zone of Himachal Pradesh, for apple and stone fruits in Mid Hills sub-Humid Zone.
- 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 various fungal diseases in apple tree, for control, whitewash stem with lime and copper sulphate (lime 15 kg+5 kg Copper sulphate+ 2 litre alsil oil) on stem.
- In Intermediate zone of Jammu and Kashmir, protect young plants of mango, litchi, papaya, guava, citrus etc. from frost by covering them with suitable thatching material. Complete pruning of fruit trees before February.

• **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	13.01.16		20.01.16		27.01.16	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	2.5	-83	10.5	-17	1.6	-87
Dibang Valley	38.0	233.0	6.0	-64.0	8.0	-52.0
East Kameng	0.0	-100	0.0	-100	0.0	-100
East Siang	11.7	113	2.3	-65	0.9	-83
Kurung Kumey	**	**	**	**	**	**
Lohit	14.6	77	0.4	-96	3.2	-60
Lower Dibang Valley	32.6	186	3.7	-78	2.2	-87
Lower Subansari	**	**	**	**	**	**
Papumpare	28.1	126	10.9	47	1.2	-72
Tawang	9.0	2	7.0	-18	13.0	67
Tirap	11.2	23	1.0	-92	17.6	117
Upper Siang	39.8	310	9.2	-32	12.6	-33
Upper Subansari	1.6	-63	5.8	-36	11.6	383
West Kameng	4.2	-52	0.0	-100	0.0	-100
West Siang	14.0	192.0	9.0	76	13.0	282
Assam&Meghalaya						
Assam						
Baksa	44.5	2518	4.2	-3	0.0	-100
Barpeta	4.4	156	3.3	-24	0.0	-100
Bongaigaon	0.0	-100	1.2	-76	5.8	383
Cachar	3.0	-32	0.1	-97	0.5	-76
Chirang	22.6	4420	0.6	-88	0.0	-100
Darrang	**	**	**	**	**	**
Dhemaji	12.0	88	**	**	0.0	-100
Dhubri	0.0	-100	5.6	107	0.0	-100
Dibrugarh	9.5	47	5.2	41	11.8	128
Goalpara	0.0	-100	1.7	-60	0.0	-100
Golghat	17.4	255	0.0	-100	2.4	2
Hailakandi	8.7	1630	4.0	-58	5.0	117
Jorhat	24.8	464	1.2	-80	2.9	-19
Kamrup(Rural)	0.2	-95	1.1	-56	0.4	-76
Kamrup(Metro)	0.0	-100	5.4	116	14.2	735
Karbi Anglong	5.8	15	0.0	-100	11.3	1313
Karimganj	8.8	86	0.0	-100	0.1	-92
Kokrajhar	3.0	-19	4.4	9	4.1	307
Lakhimpur	17.2	169	4.7	-21	1.9	-62
Morigaon	1.6	-68	0.0	-100	0.0	-100
N.C.Hills	4.2	0	0.0	-100	0.0	-100
Nowgong	4.9	37	1.5	-61	11.2	602
Nalbari	43.0	1003	3.7	106	1.6	60
Sonitpur	20.5	413	7.9	-13	17.6	1256

Sibsagar	11.6	107	2.9	-12	8.1	161
Tinsukia	7.6	36	0.8	-89	2.5	-49
Udalgiri	21.1	559	15.4	450	2.2	-12
Meghalaya						
East Garo Hills	0.0	-100	16.0	1131	0.0	-100
East Khasi Hills	0.6	-91	3.7	40	8.1	145
Jaintia Hills	0.0	-100	4.0	-58	12.0	118
Ribhoi	1.7	-76	3.5	40	3.2	-45
South Garo Hills	0.0	-100	6.0	94	8.0	344
West Garo Hills	0.0	-100	6.4	106	0.0	-100
West Khasi Hills	0.0	-100	6.0	25	12.0	900
NMMT						
Mizoram						
Aizwal	0.0	-100	0.0	-100	0.4	-94
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	**	**	**	**	**	**
Serchhip	**	**	**	**	**	**
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	**	**	**	**	**	**
Churachandpur	**	**	**	**	**	**
Imphal east	6.5	33	0.0	-100	0.1	-96
Imphal west	0.3	-97	0.0	-100	0.2	-85
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	**	**	**	**	**	**
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	10.6	21	0.0	-100	10.7	873
Kephire	**	**	**	**	**	**
Kohima	6.8	134	1.2	-37	12.9	486
Longleng	**	**	**	**	**	**
Mokokchung	4.0	-43	0.0	-100	7.0	67
Mon	**	**	**	**	**	**
Paran	**	**	**	**	**	**
Phek	**	**	**	**	**	**
Tuensang	**	**	**	**	**	**
Wokha	6.0	3	1.0	-70	18.0	134
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	0.0	-100	0.0	-100	1.5	-67
NorthTripura	0.9	-75	0.6	-54	3.4	-3
SouthTripura	0.0	-100	0.0	-100	0.0	-98
West Tripura	2.2	-34	0.0	-100	1.6	-44
Himachal Pradesh						

Bilaspur	0.0	-100	0.0	-100	0.0	-100
Chamba	3.4	-88	0.0	-100	0.0	-100
Hamirpur	0.0	-100	0.0	-100	0.0	-100
Kangra	0.9	-95	0.0	-100	0.0	-100
Kinnaur	2.0	-92	1.5	-92	0.0	-100
Kullu	8.1	-53	0.0	-100	0.0	-100
Lahaul and Spiti	2.2	-93	0.0	-100	2.0	-95
Mandi	1.1	-92	0.3	-98	0.0	-100
Shimla	3.2	-77	0.2	-98	0.0	-100
Sirmaur	0.0	-100	0.0	-100	0.0	-100
Solan	0.0	-100	0.0	-100	0.0	-100
Una	95.0	-95	0.0	-100	0.0	-100
Punjab						
Amritsar	6.9	1	0.0	-100	0.0	-100
Barnala	2.0	-9	0.0	-100	0.0	-100
Bhatinda	0.7	-72	0.0	-100	0.0	-100
Faridkot	0.5	-77	0.0	-100	0.0	-100
Fatehgarh Saheb	0.0	-100	0.0	-100	0.0	-100
Ferozpur	0.4	-87	0.0	-100	0.0	-100
Gurdaspur	0.9	-93	0.0	-100	0.0	-100
Hoshiarpur	6.5	-32	0.0	-100	0.0	-100
Jalandhar	6.3	1	0.0	-100	0.0	-100
Kapurthala	4.0	-23	0.0	-100	0.0	-100
Ludhiana	15.5	204	0.0	-100	0.0	-100
Mansa	0.0	-100	0.0	-100	0.0	-100
Moga	2.8	-47	0.5	-87	0.0	-100
Muktesar	5.0	213	0.0	-100	0.0	-100
Nawashahar	15.4	93	0.3	-95	0.0	-100
Patiala	0.4	-90	0.0	-100	0.0	-100
Ropar	3.5	-58	0.0	-100	0.0	-100
Sangrur	0.3	-93	0.0	-100	0.0	-100
Mohali	0.0	-100	0.0	-100	0.0	-100
TarnTaran	0.0	-100	0.0	-100	0.0	-100
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	0.3	-96	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	-96	0.2	-98	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	7.3	-49	0.0	-100	1.0	-97
Badgam	3.6	-55	0.0	-100	0.1	-99
Bandipore	**	**	**	**	**	**
Baramula	5.5	-76	0.0	-100	1.4	-97
Doda	6.8	-75	0.0	-100	2.0	-95
Ganderbal	12.8	28	0.0	-100	4.4	-77
Jammu	0.1	-99	0.0	-100	0.0	-100
Kargil	**	**	**	**	**	**
Kathua	0.0	-100	0.0	-100	0.0	-100
Kistwar	**	**	**	**	**	**
Kulgam	3.2	-78	0.0	-100	0.0	-100
Kupwara	14.1	12	0.0	-100	3.0	-89
Ladakh(Leh)	0.0	-100	0.1	-95	1.4	13
Poonch	**	**	**	**	**	**
Pulwama	1.9	-77	0.0	-100	0.3	-98
Rajouri	1.2	-94	0.0	-100	0.0	-100
Ramban	4.3	-84	0.0	-100	1.5	-96
Reasi	1.1	-95	0.0	-100	0.0	-100
Samba	0.0	-100	0.0	-100	0.0	-100
Shopian	**	**	**	**	**	**
Srinagar	3.9	-61	0.0	-100	0.0	-100
Udhampur	2.0	-90	0.0	-100	0.0	-100
East Madhya Pradesh						
Anuppur	0.0	-100	8.5	30	0.0	-100
Balaghat	0.0	-100	4.8	10	0.0	-100
Chhatarpur	0.0	-100	19.7	368	0.0	-100
Chindwara	0.0	-100	17.7	489	0.0	-100
Damoh	0.0	-100	36.5	508	0.0	-100
Dindori	0.0	-100	19.6	390	0.0	-100

Jabalpur	0.0	-100	14.8	347	0.0	-100
Katni	0.0	-100	14.0	278	0.0	-100
Mandla	0.0	-100	19.6	184	0.0	-100
Narsingpur	0.0	-100	3.0	7	0.0	-100
Panna	0.0	-100	15.1	110	0.0	-100
Rewa	0.0	-100	21.4	364	0.0	-100
Sagar	0.0	-100	19.5	316	0.0	-100
Satna	0.0	-100	37.4	513	0.0	-100
Seoni	0.0	-100	13.3	410	0.0	-100
Shahdol	0.0	-100	14.2	168	0.0	-100
Sidhi	0.0	-100	33.2	564	0.0	-100
Singrauli	0.0	-100	2.5	-14	0.0	-100
Tikamgarh	0.0	-100	7.5	12	0.0	-100
Umaria	0.0	-100	44.4	788	0.0	-100
West Madhya Pradesh						
Agar	0.0	-100	0.0	-100	0.0	-100
Alirajpur	0.0	-100	2.6	333	0.0	-100
Asoknagar	0.0	-100	10.8	412	0.0	-100
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	0.0	-100	3.5	94	0.0	-100
Bhind	0.0	-100	5.9	83	0.0	-100
Bhopal	0.0	-100	21.0	577	0.0	-100
Burhanpur	0.0	-100	0.0	-100	0.0	-100
Datia	0.9	-69	6.1	203	0.0	-100
Dewas	0.0	-100	0.0	-100	0.0	-100
Dhar	0.0	-100	3.9	382	0.0	-100
Guna	0.5	-82	8.8	150	0.0	-100
Gwalior	0.0	-100	7.2	57	0.0	-100
Harda	0.0	-100	0.0	-100	0.0	-100
Hosangabad	0.0	-100	8.6	207	0.0	-100
Indore	0.0	-100	0.4	-73	0.0	-100
Jhabua	0.0	-100	0.9	367	0.0	-100
Khandwa	0.0	-100	0.7	-67	0.0	-100
Khargone	0.0	-100	0.0	-100	0.0	-100
Mandsaur	0.0	-100	0.8	-11	0.0	-100
Morena	0.0	-100	0.1	-97	0.0	-100
Neemuch	0.0	-100	1.8	775	0.0	-100
Raisen	0.1	-96	10.6	343	0.0	-100
Rajgarh	0.0	-100	10.9	418	0.0	-100
Ratlam	0.0	-100	0.0	-67	0.0	-100
Sehore	0.0	-100	3.6	57	0.0	-100
Shajapur	0.0	-100	11.7	457	0.0	-100
Sheopur Kalani	0.0	-100	0.0	-100	0.0	-100
Shivpuri	0.0	-100	3.6	-21	0.0	-100
Ujjain	0.0	-100	9.8	600	0.0	-100
Vidisha	0.1	-91	13.6	313	0.0	-100
Chhattisgarh						
Bastar	0.0	-100	0.6	-57	0.0	-100

Bijapur	0.0	-100	10.2	10100	0.0	-100
Bilaspur	0.0	-100	21.2	684	0.0	-100
Dantewara	0.0	-100	0.1	-89	0.0	-100
Dhamtari	0.0	-100	3.8	533	0.0	-100
Durg	0.0	-100	10.8	984	0.0	-100
Janjgir	0.0	-100	0.0	-100	0.0	-100
Jashpurnagar	0.0	-100	5.2	53	0.0	-100
Kanker	0.0	-100	0.0	-100	0.0	-100
Korba	0.0	-100	11.8	594	0.0	-100
Koriya	0.0	-100	0.0	-100	0.0	-100
Kawardha	0.0	-100	0.0	-100	0.0	-100
Mahasumund	0.0	-100	15.0	971	0.0	-100
Narayanpur	0.0	-100	0.4	-73	0.0	-100
Raigarh	0.0	-100	4.0	38	0.0	-100
Raipur	0.0	-100	5.5	358	0.0	-100
Rajandgaon	0.0	-100	0.0	-100	0.0	-100
Surguja	0.0	-100	7.5	149	0.0	-100
East Uttar Pradesh						
Allahabad	0.0	-100	9.5	138	0.0	-100
Ambedkar Nagar	0.0	-100	8.0	129	0.0	-100
Azamgarh	0.0	-100	7.2	167	0.0	-100
Bahraich	0.0	-100	1.2	-64	0.0	-100
Ballia	0.0	-100	3.5	136	0.0	-100
Balrampur	0.0	-100	0.0	-100	0.0	-100
Banda	0.3	-93	11.1	178	0.0	-100
Barabanki	0.0	-100	5.0	18	0.0	-100
Basti	0.0	-100	3.7	12	0.0	-100
Chandauli	0.0	-100	3.0	-19	0.0	-100
Deoria	0.0	-100	1.0	-60	1.0	-73
Faizabad	0.0	-100	1.6	-57	1.0	-86
Farrukhabad	0.0	-100	0.9	-67	0.0	-100
Fatehpur	0.0	-100	2.1	-53	0.0	-100
Gazipur	0.0	-100	2.0	-5	0.0	-100
Gonda	0.0	-100	7.5	134	0.0	-100
Gorakhpur	0.0	-100	3.2	-29	0.0	-100
Hardoi	0.0	-100	5.2	63	0.0	-100
Jaunpur	0.0	-100	1.9	-49	0.0	-100
Kannauj	0.0	-100	4.0	60	0.0	-100
Kanpur City	0.0	-100	7.5	59	0.0	-100
Kanpur Dehat	0.0	-100	5.0	25	0.0	-100
Kaushambi	0.0	-100	5.5	42	0.0	-100
Kheri	0.0	-100	0.3	-93	0.0	-100
Kushi nagar	0.0	-100	0.0	-100	1.5	-65
Lucknow	0.0	-100	6.7	63	0.0	-100
Maharajganj	0.0	-100	0.0	-100	0.5	-89
Mau	0.0	-100	0.0	-100	0.0	-100
Mirzapur	0.0	-100	10.5	156	0.0	-100
Pratapgarh	0.0	-100	7.7	132	0.0	-100
RaiBareilly	0.0	-100	1.5	-50	0.0	-100

Sahuji Maharajnagar	0.0	-100	9.5	111	0.0	-100
Sant Kabirnagar	0.0	-100	7.0	192	0.0	-100
Sant Ravidas Nagar	0.0	-100	11.0	197	0.0	-100
Shrawasti	**	**	**	**	**	**
Sidharthnagar	0.0	-100	0.0	-100	0.0	-100
Sitapur	0.0	-100	1.5	-57	0.3	-94
Sonbhadra	0.0	-100	21.1	471	0.0	-100
Sultanpur	0.0	-100	1.5	-57	0.0	-100
Unnao	0.0	-100	9.5	164	0.0	-100
Varanasi	0.0	-100	7.0	71	0.0	-100
West Uttar Pradesh						
Agra	0.0	-100	0.3	-88	0.0	-100
Aligarh	0.0	-100	0.0	-100	0.0	-100
Auraiya	0.0	-100	5.0	16	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	0.0	-100	4.5	32	0.0	-100
Firozabad	0.0	-100	1.4	-55	0.0	-100
GBNagar	0.0	-100	0.0	-100	0.0	-100
Ghaziabad	0.0	-100	0.0	-100	0.0	-100
Hamirpur	0.0	-100	5.3	67	0.0	-100
Jalaun	0.0	-100	5.7	21	0.0	-100
Jhansi	0.0	-100	3.9	-7	0.0	-100
Jotiba Phule Nagar	0.0	-100	0.0	-100	0.0	-100
Kanshiramnagar	0.0	-100	1.0	-78	0.0	-100
Lalitpur	0.0	-100	14.0	155	0.0	-100
Mahamaya Nagar	0.0	-100	0.0	-100	0.0	-100
Mahoba	0.0	-100	5.6	19	0.0	-100
Mainpuri	0.0	-100	1.6	-47	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	0.0	-100
Muzzaffarnagar	0.0	-100	0.0	-100	0.0	-100
Pilibhit	0.0	-100	0.0	-100	0.0	-100
Rampur	0.0	-100	0.0	-100	0.0	-100
Saharanpur	0.0	-100	0.0	-100	0.0	-100
Shahjahanpur	0.0	-100	0.8	-73	0.0	-100
Uttarakhand						
Almora	0.0	-100	3.8	38	0.0	-100
Bageshwar	0.0	-100	0.0	-100	0.0	-100
Chamoli	3.6	-58	2.3	-81	0.0	-100
Champawat	0.0	-100	2.5	-58	0.0	-100
Dehradun	0.5	-95	0.0	-100	0.0	-100
Garhwal Pauri	0.0	-100	0.1	-99	0.0	-100

Garhwal Tehri	0.2	-98	0.3	-96	0.0	-100
Haridwar	0.0	-100	2.2	-64	0.0	-100
Nainital	0.0	-100	0.6	-91	0.1	-99
Pithorgarh	3.0	-68	5.7	-28	0.3	-98
Rudraprayag	2.5	-86	0.3	-97	0.0	-100
Udham Sing Nagar	0.0	-100	0.0	-100	0.0	-100
Uttarkashi	1.9	-89	0.0	-100	0.0	-100
Bihar						
Araria	0.0	-100	0.0	-100	27.8	718
Arwal	0.0	-100	0.0	-100	0.0	-100
Aurangabad	0.0	-100	15.7	257	0.0	-100
Banka	0.0	-100	18.3	554	0.0	-100
Begusarai	0.0	-100	5.2	160	0.0	-100
Bhabua	0.0	-100	0.0	-100	0.0	-100
Bhagalpur	0.0	-100	0.0	-100	0.1	-99
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	0.0	-100	2.2	-35	8.0	218
Gaya	0.0	-100	23.1	507	0.2	-97
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
Kathihar	0.0	-100	0.0	-100	**	**
Khagadia	0.0	-100	5.7	256	0.0	-100
Kishanganj	0.0	-100	0.0	-100	0.0	-100
Lakhisarai	0.0	-100	0.0	-100	0.0	-100
Madhepura	0.0	-100	0.0	-100	0.0	-100
Madhubani	0.0	-100	0.0	-100	7.1	238
Monghyar	0.0	-100	4.6	12	0.0	-100
Muzaffarpur	0.0	-100	0.0	-100	0.0	-100
Nalanda	0.0	-100	9.3	116	0.0	-100
Nawada	0.0	-100	29.5	677	0.0	-100
Patna	0.0	-100	1.9	-50	1.1	-59
Purnea	0.0	-100	6.0	88	0.0	-100
Rohtas	0.0	-100	19.0	604	0.0	-100
Saharsha	0.0	-100	0.0	-100	0.0	-100
Samstipur	0.0	-100	0.0	-100	0.0	-100
Saran	0.0	-100	11.0	156	1.5	-47
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	0.0	-100	2.6	30	16.2	1250
Vaishali	0.0	-100	14.8	300	0.0	-100
West Champaran	0.0	-100	0.0	-100	0.0	-100
Jharkhand						
Bokaro	0.0	-100	5.7	55	0.0	-100
Chatra	0.0	-100	14.0	211	0.0	-100

Deoghar	0.0	-100	12.4	125	0.0	-100
Dhanbad	0.0	-100	1.9	-48	0.0	-100
Dumka	0.0	-100	12.3	374	0.0	-100
East Singbhum	0.0	-100	18.4	609	0.0	-100
Garhwa	0.0	-100	55.0	1096	0.0	-100
Giridih	0.0	-100	11.1	457	0.0	-100
Godda	0.0	-100	9.1	132	0.0	-100
Gumla	**	**	**	**	0.0	-100
Hazaribagh	0.0	-100	12.7	338	**	**
Jamtara	**	**	12.5	248	0.0	-100
Khunti	0.0	-100	0.0	-100	0.0	-100
Koderna	0.0	-100	7.8	41	0.0	-100
Latehar	0.0	-100	7.0	71	0.0	-100
Lohardagga	0.0	-100	9.2	360	**	**
Pakur	0.0	-100	10.3	186	0.0	-100
Palamau	0.0	-100	14.3	360	0.0	-100
Ramgarh	**	**	2.8	4	0.0	-100
Ranchi	0.0	-100	4.9	17	0.0	-100
Sahebganj	0.0	-100	**	**	6.4	100
Saraikela	0.0	-100	7.1	109	0.0	-100
Simdega	0.0	-100	3.1	35	0.0	-100
West Singbhum	0.0	-100	11.1	270	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	0.0	-100	4.8	98	0.0	-100
Bharatpur	0.0	-100	0.0	-100	0.0	-100
Bhilwara	0.0	-100	0.3	-17	0.0	-100
Bundi	0.0	-100	0.3	-59	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	0.0	-100	0.4	-64	0.0	-100
Jhalawar	0.0	-100	3.6	127	0.0	-100
Jhunjhunu	0.0	-100	0.0	-100	0.0	-100
Karauli	0.0	-100	0.1	-92	0.0	-100
Kota	0.1	-97	1.6	-28	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	0.0	-100	1.5	202	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	1.3	-33	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	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	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	0.0	-100	0.2	-89	0.0	-100
Bhandara	0.0	-100	0.0	-100	0.0	-100
Buldhana	0.0	-100	0.0	-100	0.0	-100
Chandrapur	0.0	-100	0.3	-79	0.0	-100
Gadchiroli	0.0	-100	3.4	49	0.0	-100
Gondia	0.0	-100	0.2	-94	0.0	-100
Nagpur	0.0	-100	0.7	-80	0.0	-100
Wardha	0.0	-100	0.7	-79	0.0	-100
Washim	0.0	-100	0.0	-100	0.0	-100
Yeotmal	0.0	-100	0.0	-100	0.0	-100
Odisha						
Angul	0.0	-100	0.5	-77	0.0	-100
Balasore	0.0	-100	0.0	-100	5.7	61
Bargarh	0.0	-100	4.9	105	0.0	-100
Bhadrak	0.0	-100	0.0	-100	0.1	-92
Bolangir	0.0	-100	1.1	-50	0.0	-100
Boudh	0.0	-100	0.0	-100	0.0	-100
Cuttack	0.0	-100	0.0	-100	0.1	-95
Deogarh	0.0	-100	3.7	62	0.0	-100
Dhenkanal	0.0	-100	0.0	-100	0.0	-100
Gajapati	0.0	-100	0.0	-100	1.2	517
Ganjam	0.0	-100	0.0	-100	3.2	86
Jagatsingpur	0.0	-100	0.0	-100	2.1	58
Jajpur	0.0	-100	0.0	-100	0.0	-100
Jharsuguda	0.0	-100	0.3	-92	0.0	-100
Kalahandi	0.0	-100	0.0	-100	0.0	-100






Kandhamal	0.0	-100	0.0	-100	0.0	-100
Kendrapara	0.0	-100	0.0	-100	2.1	138
Keonjhar	0.0	-100	3.1	-40	0.3	-93
Khurda	0.0	-100	0.0	-100	1.1	8
Koraput	0.0	-100	0.0	-100	0.0	-100
Malkangiri	0.0	-100	0.0	-100	0.0	-100
Mayurbhanj	0.0	-100	4.7	68	3.2	46
Nawapara	0.0	-100	0.0	-100	0.0	-100
Nawarangpur	0.0	-100	0.0	-100	0.4	-38
Nayagarh	0.0	-100	0.0	-100	0.0	-100
Puri	0.0	-100	0.0	-99	22.9	1046
Rayagada	0.0	-100	0.0	-100	0.2	-75
Sambalpur	0.0	-100	4.4	93	0.0	-100
Sonepur	0.0	-100	3.8	667	0.0	-100
Sundargarh	0.0	-100	0.2	-93	0.0	-100
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	0.0	-100	47.6	205	38.1	76
North & Middle Andaman	0.0	-100	0.0	-100	26.0	313
South Andaman	0.0	-100	0.0	-100	47.2	626
GWB						
Bankura	0.0	-100	6.0	400	0.1	95
Birbhum	0.0	-100	24.2	867	0.1	-96
Burdwan	0.0	-100	12.9	971	0.6	-81
East Midnapore	0.0	-100	0.6	-84	4.6	53
Hooghly	0.0	-100	0.3	-86	1.0	-68
Howrah	0.0	-100	0.0	-100	0.4	-95
Kolkata	0.0	-100	0.0	-100	0.0	-100
Murshidabad	0.0	-100	38.0	1018	8.0	196
Nadia	0.0	-100	0.0	-100	0.8	-77
24 Pargana (N)	0.0	-100	0.2	-80	0.5	-91
Purulia	0.0	-100	5.4	81	0.0	-100
24 Pargana (S)	0.0	-100	0.0	-100	3.5	-17
West Midnapore	0.0	-100	3.7	87	2.2	-28
SHWB & Sikkim						
Cooch Behar	0.0	-100	2.9	-4	3.7	185
Darjeeling	0.0	-99	3.7	-56	1.9	-86
East Sikkim	3.5	17	9.6	14	1.0	-91
Jalpaiguri	2.1	0	3.8	4	1.4	-13
Malda	0.0	-100	16.9	483	0.0	-100
North Dinajpur	0.0	-100	**	**	**	**
North Sikkim	21.8	103	16.8	24	11.2	-16
South Dinajpur	0.0	-100	0.0	-100	0.0	-100
South Sikkim	2.0	-35	10.4	24	0.5	-95
West Sikkim	1.5	-86	6.5	-52	3.0	-78
Karnataka						
Coastal Karnataka						
Dakshina Kannada	0.0	-100	0.5	13	0.0	-100

Udupi	0.0	-100	2.0	186	0.0	-100
Uttara Kannada	0.0	-100	0.5	200	0.0	-100
NI Karnataka						
Bagalkote	0.0	-100	0.3	-80	0.0	-100
Belagavi	0.0	-100	0.0	-92	0.0	-100
Bidar	0.0	-100	0.6	-79	0.0	-100
Dharwad	0.0	-100	0.5	-48	0.0	-100
Gadag	0.0	-100	0.4	-40	0.0	-100
Haveri	0.0	-100	0.7	567	0.0	-100
Kalaburgi	0.0	-100	0.2	-93	0.0	-100
Koppal	0.0	-100	0.6	1	0.0	-100
Raichur	0.0	-100	2.1	158	0.0	-100
Vijayapura	0.0	-100	0.1	-96	0.0	-100
Yadgir	0.0	-100	0.0	-100	0.0	-100
SI Karnataka						
Ballari	0.0	-100	12.5	1461	0.0	-100
Bangalore Rural	0.0	-100	4.3	967	2.5	200
Bangalore Urban	0.0	-100	2.8	295	2.3	2240
Chamarajanagar	0.0	-100	0.0	-100	5.4	2580
Chikaballapur	0.0	-100	3.5	607	3.7	200
Chikkamagaluru	0.0	-100	1.0	92	0.0	-100
Chitradurga	0.0	-100	1.3	29	0.0	-100
Davangere	0.0	-100	0.8	92	0.0	-100
Hassan	0.0	-100	1.3	125	0.2	200
Kodagu	0.0	-100	0.3	-53	0.0	-100
Kolar	0.0	-100	0.0	-100	9.1	200
Mandya	0.0	-100	2.7	78	0.0	-100
Mysuru	0.0	-100	2.4	121	4.4	775
Ramanagara	0.0	-100	1.4	69	0.7	200
Shivamogga	0.0	-100	1.1	986	0.0	-100
Tumakuru	0.0	-100	7.0	435	0.1	200
Kerala						
Alappuzha	0.0	-100	0.0	-100	5.9	38
Kannur	0.0	-100	0.0	-100	0.0	-100
Ernakulam	0.0	-100	0.0	-100	0.4	-83
Idukki	0.0	-100	4.7	76	0.3	-86
Kasaragod	0.0	-100	0.5	-10	2.4	380
Kollam	0.0	-100	0.0	-100	1.0	-71
Kottayam	0.0	-100	3.7	28	7.8	117
Kozhikode	0.0	-100	0.0	-100	0.0	-100
Malappuram	0.0	-100	0.0	-100	0.0	-100
Palakkad	0.0	-100	0.2	-48	0.0	-100
Pathanamthitta	0.0	-100	0.0	-100	0.0	-100
Thiruvananthapuram	0.0	-100	0.0	-100	3.2	-28
Thrissur	0.0	-100	9.5	1254	0.0	-100
Wayanad	0.0	-100	0.0	-100	3.3	177
Tamil Nadu						
Ariyalur	0.0	-100	0.0	-100	0.0	-100
Chennai	0.0	-100	0.0	-100	0.5	-97

Coimbatore	0.0	-100	0.8	-55	22.8	199
Cuddalore	0.0	-100	0.0	-100	0.7	-97
Dharmapuri	0.0	-100	0.0	-100	0.0	-100
Dindigul	0.0	-100	0.0	-100	0.6	-97
Erode	0.0	-100	0.0	-100	0.0	-100
Kanchipuram	0.0	-100	0.0	-100	0.4	-98
Kanyakumari	0.0	-100	0.0	-100	0.0	-100
Karikal	0.0	-100	0.0	-100	0.8	-99
Karur	0.0	-100	0.0	-100	0.0	-100
Krishnagiri	0.2	-90	0.0	-100	0.2	-97
Madurai	0.0	-100	0.0	-100	0.0	-100
Nagapattinam	0.0	-100	0.0	-100	0.6	-99
Namakkal	0.0	-100	0.0	-100	0.0	-100
Nilgiris	0.0	-100	0.1	-99	12.4	-42
Perambalur	0.0	-100	0.0	-100	0.0	-100
Puducherry	0.0	-100	0.0	-100	0.6	-96
Pudukottai	0.0	-100	0.0	-100	0.0	-100
Ramanathapuram	0.1	-99	0.0	-100	0.9	-97
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	0.0	-100	1.6	-54	1.6	-88
Tirunelveli	0.0	-100	0.0	-100	5.3	-84
Tirupur	0.0	-100	0.0	-100	0.0	-100
Tiruvallur	0.0	-100	0.0	-100	1.2	-93
Tiruvannamalai	0.0	-100	0.0	-100	9.0	-35
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	0.0	-100	0.9	-88
Villupuram	0.0	-100	0.0	-100	0.0	-100
Virudhunagar	0.0	-100	0.0	-100	3.0	-82
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	0.0	-100	0.0	-100	1.9	525
Guntur	0.0	-100	0.1	-96	0.1	-58
Krishna	0.0	-100	0.0	-98	1.0	409
Nellore	0.0	-100	0.3	-96	6.7	860
Prakasam	0.0	-100	0.4	-88	0.0	-100
Sirkakulam	0.0	-100	0.0	-100	1.2	16
Visakhapatnam	0.0	-100	0.0	-97	0.4	-67
Vizianagram	0.0	-100	0.0	-100	0.3	-75
West Godavari	0.0	-100	0.0	-100	1.1	442
Rayalaseema						
Anantapur	0.0	-100	5.8	188	4.1	200
Chittoor	0.0	-100	0.0	-100	3.0	1385
Cuddapah	0.0	-100	3.8	219	10.9	200
Kurnool	0.0	-100	3.8	845	0.9	200

Telangana						
Adilabad	0.0	-100	1.3	-58	0.0	-100
Hyderabad	0.0	-100	1.5	-33	0.0	-100
Karimnagar	0.0	-100	0.3	-91	0.0	-100
Khammam	0.0	-100	1.2	23	0.1	-34
Mehabubnagar	0.0	-100	0.1	-92	0.0	-100
Medak	0.0	-100	0.3	-88	0.0	-100
Nalgonda	0.0	-100	1.8	13	0.6	200
Nizamabad	0.0	-100	1.0	-71	0.0	-100
Rangareddy	0.0	-100	0.6	-25	0.0	-100
Warangal	0.0	-100	2.9	80	0.3	-69

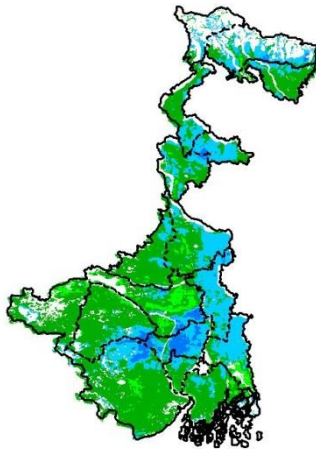
Legends

	(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

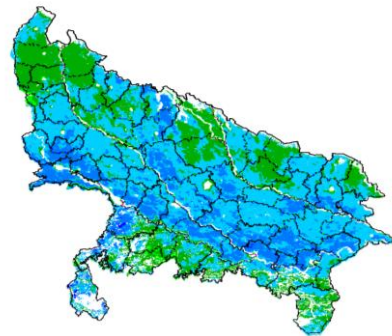
INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON 27th January 2016 FOR DIFFERENT STATES

West Bengal



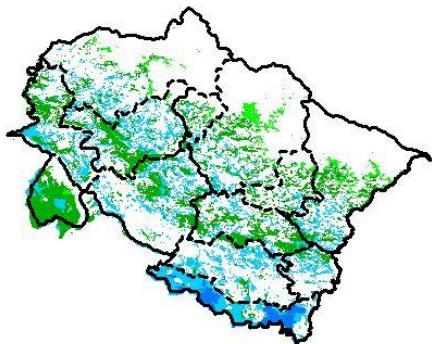
Agricultural vigour is good in central and Northern part of West Bengal where NDVI is varying from 0.4-0.5, whereas rest of the state shows moderate NDVI (0.2-0.4).

Uttar Pradesh



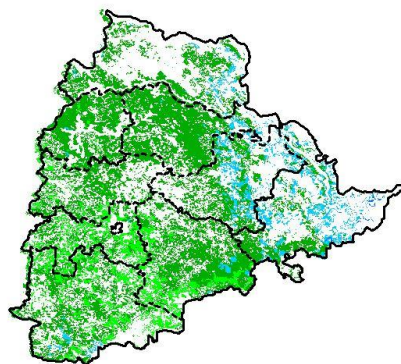
Agricultural vigour is good over the entire state of Uttar Pradesh where NDVI value varies from 0.4-0.5. whereas few patches in northern part shows moderate values of NDVI (0.3-0.4)

Uttarakhand



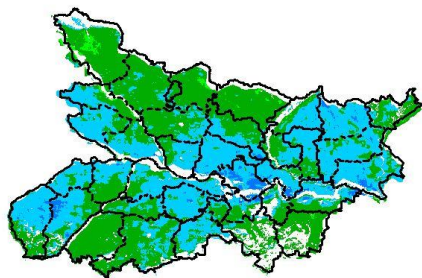
Agricultural vigour is good over entire state of Uttarakhand where NDVI is varying from 0.3-0.4, whereas few patches in south shows good values of NDVI (0.4-0.6).

Telangana



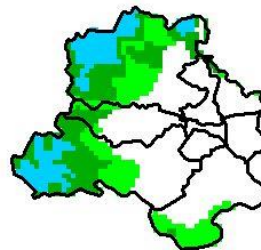
Agriculture vigour is good over Eastern parts of Telangana (NDVI 0.4-0.5). Rest of the region shows moderate values of NDVI (0.3-0.4)

Bihar



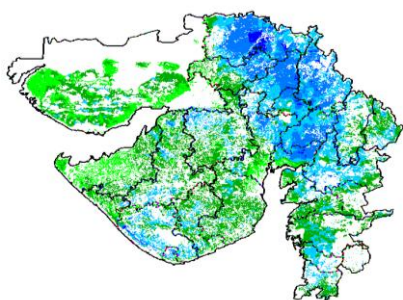
Agriculture vigour is good over central and eastern parts of Bihar where NDVI value lies between 0.4-0.6. Except in northern and southern part of state shows moderate values from 0.3-0.4.

Delhi



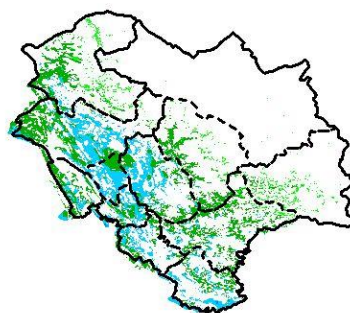
Agriculture vigour is moderate all over Delhi where NDVI value lies between 0.2-0.3, whereas few patches over west shows good values of NDVI (0.4 – 0.5).

Gujarat



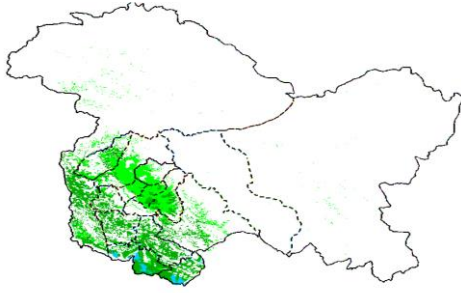
Agriculture vigour is moderate in Kutch and Saurashtra whereas, good agricultural vigour is observed over Gujarat region where NDVI values lies between 0.4-0.6. .

Himachal Pradesh



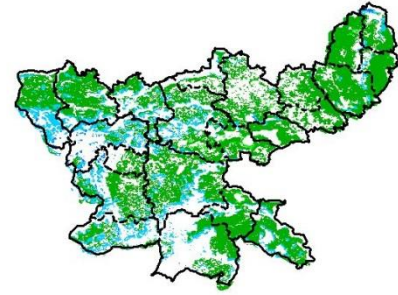
Agriculture vigour is good over western and southern part of Himachal Pradesh where NDVI values are 0.4 – 0.5, whereas rest of the state shows moderate values of NDVI.

Jammu & Kashmir



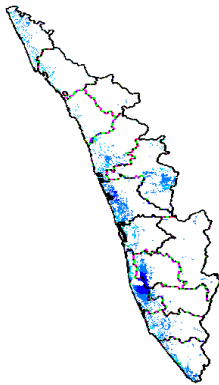
Agriculture vigour is Normal over entire state of Jammu & Kashmir where NDVI values are 0.2 – 0.4.

Jharkhand



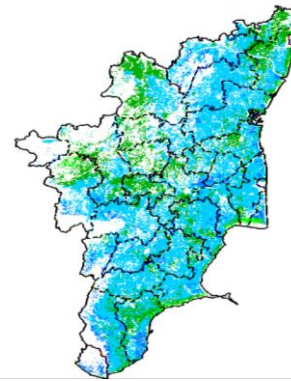
Agriculture vigour is good over western part of the Jharkhand where NDVI values vary from 0.4 - 0.5. , whereas rest of the state shows moderate values of NDVI (0.3-0.4).

Kerala



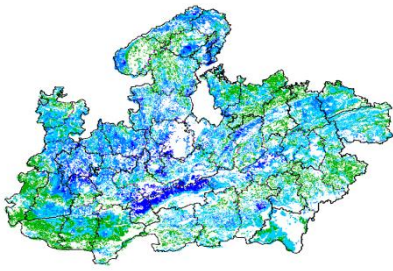
Agriculture vigour is good over entire state of Kerala where NDVI value lies between 0.5-0.6.

Tamil Nadu



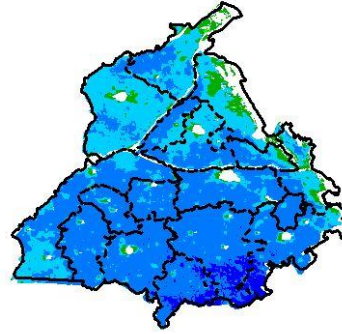
Agricultural vigour is very good over entire state of Tamilnadu where NDVI values lies between 0.5-0.6, whereas few patches in northern part shows moderate values of NDVI (0.3-0.4).

Madhya Pradesh



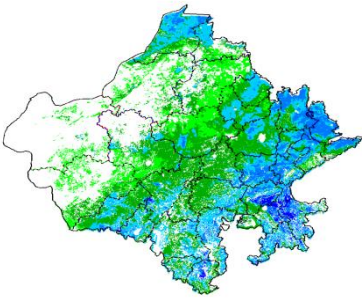
Agriculture vigour shows good values over western and central part of Madhya Pradesh where NDVI varies from 0.4-0.6 and rest of the part shows moderate values of NDVI (0.3 – 0.4).

Punjab



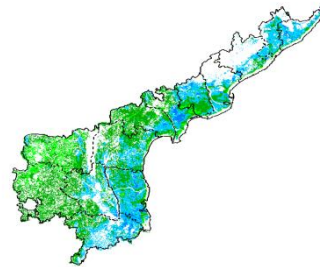
Agricultural vigour is very good over central, eastern and southern part of Punjab where NDVI value lies between 0.4-0.6.

Rajasthan



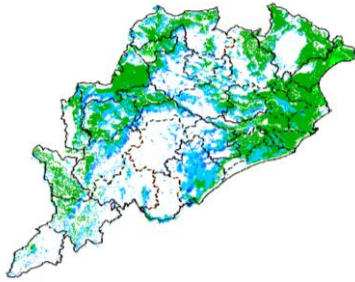
Agriculture vigour is moderate (0.2-0.4) in some patches over central part of Rajasthan whereas good values of NDVI are observed over eastern and northern parts of state (0.4-0.6).

Andhra Pradesh



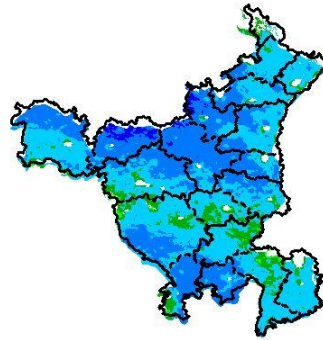
Agriculture vigour is good over entire state of Andhra Pradesh where NDVI vary between 0.4-0.6, except western parts which shows normal values of NDVI (0.2-0.3).

Odisha



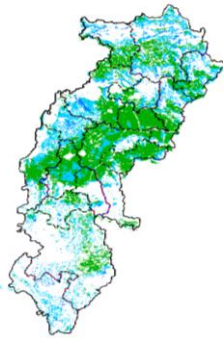
Agricultural vigour is good over central and southern part of Odisha with NDVI value ranging between 0.4 – 0.6 . North eastern part shows moderate values of NDVI (0.3-0.4).

Haryana



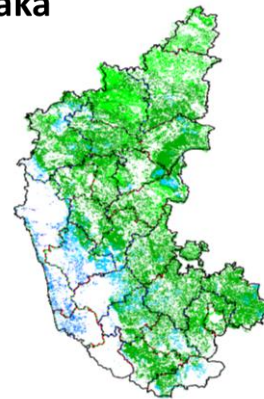
Agriculture vigour is very good over state of Haryana where NDVI value lies between 0.4 – 0.6. whereas few patches in central part shows moderate values of NDVI (0.3-0.4)

Chhattisgarh



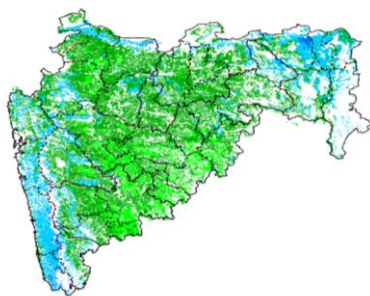
Agriculture vigour is good in northern and southern parts of Chhattisgarh where NDVI values are between 0.4-0.5 except central part which shows moderate values of NDVI.

Karnataka



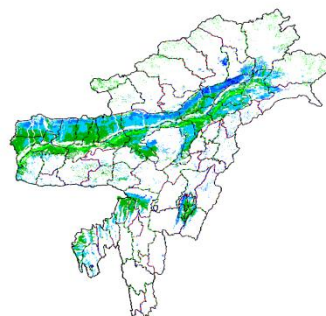
Agriculture vigour is good over western part of Karnataka state where NDVI value lies between 0.4-0.6 Rest of the state shows moderate values of NDVI (0.3 - 0.4).

Maharashtra

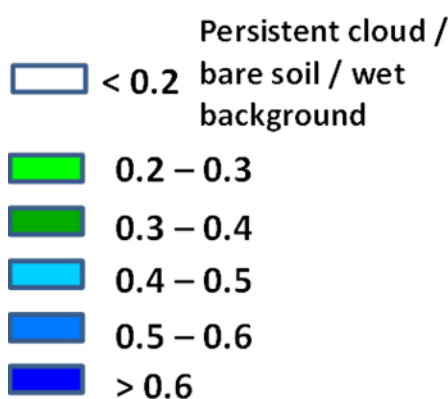


Agricultural vigour is good over Coastal Maharashtra and Vidarbha region with NDVI values from 0.4-0.5, whereas Moderate values of NDVI are observed over Madhya Maharashtra and Marathwada region (0.2-0.4).

North East Region



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



Annexure III

List of varieties

Assam

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

Okra : Pusa Sawani, Arka Anamika, Parbhdani Kranti

Meghalaya

Toria: M27, TS 36, TS 46; Lentil- DPL 15, DPL-62.

Pea : Prakash, Vikash.

Manipur

Onion : Nasik Red

Odisha

Mango: Baiganpalli, Totapuri, Bombay green, Suvarnarekha, Neelam, Himsagar,, Langra, Dusheri, Amrapalli, Mallika, Ratna, Ramkella, Alphanso 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

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);
Chickpea : K-468, Gourav);
Lentil: L-4147, L-9/12, PL-406)
Wheat(late sown) : PBW-175, PBW-396, RSP-81(Jitto)
Mustard : Pusa Bold, RSPR-01, RSPR-03, Kranti.

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.
Guava: Sardar(Lucknow-49).
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
Toria: TA-9, Bhawani, PT-30 and PT-507
Potato: KufriChandramukhi, KufriSadabahar, KufriAshoka, kufrijawahar, kufirilalima, 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.
Pea: Punjab 89 and MithiPhali, Matar Ageta-7, Arkel and Matar Ageta-6.
Kabuli gram (L 552, L 550 & BG-1053)
Mustard: PBR 357, RLC-1, PBR-210, RLM-619, PBR-91, PBR-97, RLC-1, PBR 210 and PBR 91, Gobhisarson GSC-7, GSC-6, GSL-1, GSL-2, Hyola (PAC-401), African sarson PC-5.
Radish: Punjab Pasand and Japanese white.
Turnip: L-1.
Carrot: Punjab Black Beauty, Punjab Carrot Red and PC-34.
Tomato: TH-1, PunjabRatta, Punjab NR 7, Punjab Chhuhara, 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: PusaMasoor -5 (L-4594).

Sarso:Pusa Saag-1; Bathua- Pusa Bathua-1;
Radish:Japani White, Hill queen, French Radish;
Spinach: PusaBharti.
Amaranths: PusalalChaulai, PusaKiran.
Ladyfinger: Pusa A-4.
Pea:Azad Matar-1, Pant Matar-3 and Bournville.
Carrot:PusaMridula, Japanese White and PusaHimani,
Radish:Japani White, Hill queen, French Radish;
Spinach:All Green, PusaBharti;
Fenugreek:PusaKasuri;
Coriander:PantHaritama, 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, RZ19,209,223and 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 andSelection-7
Radish: (PusaRashmi).
Carrot: PusaKeshar

East Rajasthan

Radish: PusaChetki,Japanese white & hill queen.
Carrot: PusaKeshar
Cowpea: Short durC-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 andSelection-7
Onion: Punjab safed goal, Udaipur 102, nasik red.
Lucerne :Anand-2, LLC-3, RL-88 & Type-9
Berseem:Muskavivardan and PusaJiant
Barley : RD-2552, RD-2052, RD-2035, RD-2503, RD-2715, RD-2660 and Jyoti.

Madhya Pradesh:

Lentil: RVL 31, JL 2.
Mustard: RVM 2, RGN 73, Pusa Jai Kisan.

Chhattisgarh:

Linseed: R.L.C. 92 (Indira Alsi), Dipika (R.L.C.-78), Indira Alsi (R.L.C.-81), Kartika (R.L.C.-76), Jawahar 552 (R.L.C.-552), Kiran (R.L.C.-6).
Safflower: J.S.F.-1, J.S.I-7, J.S.H.-129.