



National Agromet Advisory Service Bulletin



Friday 3rd February 2017
(For the period 3rd to 7th February 2017)

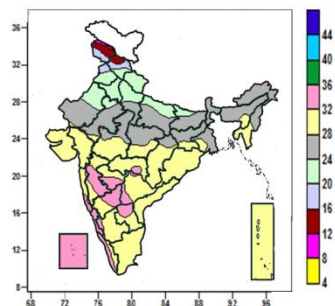


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National Agrometeorological Advisory Service Centre,
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Weblink For
District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>
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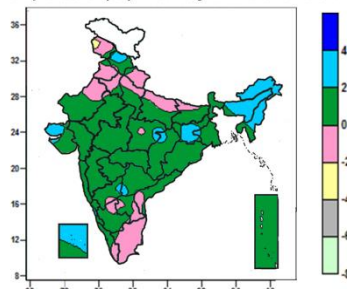
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 01.02.2017

Actual Mean Maximum Temperature (°C) in India for the week ending 01.02.2017



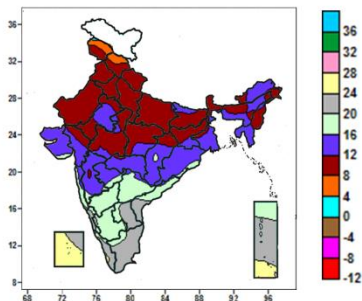
- Mean maximum temperature was between 32 to 36°C over Coastal Karnataka, Lakshadweep, many parts of Kerala, some parts of Konkan & Goa, Madhya Maharashtra, Marathwada, North Interior Karnataka, Telangana, Rayalaseema and isolated pocket of Vidarbha.
- Mean maximum temperature was between 24 to 32°C over rest of the Country except Uttarakhand, Punjab, Haryana & Delhi, many parts of Himachal Pradesh, some parts of Uttar Pradesh, Rajasthan and Bihar, where it was between 16 to 24°C and many parts of Jammu & Kashmir and some parts of Himachal Pradesh, where it was between 8 to 16°C

Mean Maximum Temperature (°C) Anomaly in India for the week ending 01.02.2017



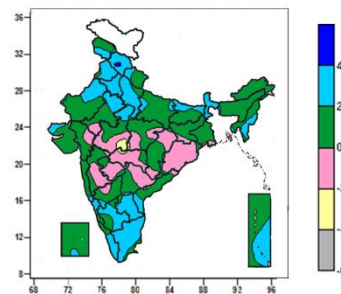
- Mean maximum temperature was above normal by 2 to 4°C over Arunachal Pradesh, Nagaland, Manipur, many parts of Assam & Meghalaya, Jharkhand, Lakshadweep, some parts of Himachal Pradesh, Mizoram, Saurashtra & Kutch and isolated pockets of Gangetic West Bengal, East Madhya Pradesh, Chhattisgarh, North Interior Karnataka and Telangana.
- It was normal to near normal over rest of the country except some part of Jammu & Kashmir, where it was below normal by 2 to 4°C.

Actual Mean Minimum Temperature (°C) in India for the week ending 01.02.2017



- Mean minimum temperature was between 0 to 4°C over isolated pocket of Jammu & Kashmir.
- Mean minimum temperature was between 4 to 8°C over many parts of Jammu & Kashmir, some parts of Himachal Pradesh.
- Mean minimum temperature was between 8 to 12°C over Uttarakhand, Punjab, Haryana & Delhi, West Uttar Pradesh, Sikkim, Manipur, many parts of Himachal Pradesh, East Uttar Pradesh, Sub-Himalayan West Bengal, Rajasthan, Madhya Pradesh, Bihar, Jharkhand, Nagaland, some parts of Jammu & Kashmir, Arunachal Pradesh, Assam, Gujarat Region, Chhattisgarh and isolated pockets of Madhya Maharashtra, Vidarbha and Gangetic West Bengal.
- Mean minimum temperature was between 12 to 20°C over rest of the Country except many parts of Coastal Karnataka, Kerala, Tamil Nadu, Rayalaseema, Andaman & Nicobar Islands, some parts of Coastal Andhra Pradesh, Lakshadweep and isolated pockets of

Mean Minimum Temperature (°C) Anomaly in India for the week ending 01.02.2017

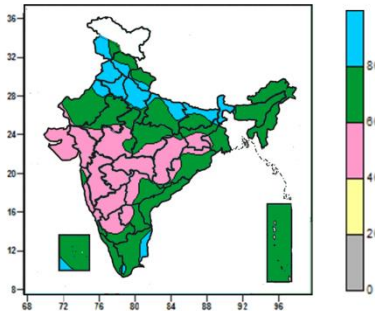


- Mean minimum temperature was above normal by 4 to 6°C over isolated pocket of Himachal Pradesh.
- Mean minimum temperature was above normal by 2 to 4°C over Haryana & Delhi, Sub-Himalayan West Bengal & Sikkim, many parts of Himachal Pradesh, Punjab, West Uttar Pradesh, Mizoram, South Interior Karnataka, Rayalaseema, Kerala, Tamil Nadu, some parts of Jammu & Kashmir, Uttarakhand, Manipur, East Uttar Pradesh, Bihar, Rajasthan, West Madhya Pradesh, Kutch, Goa, Coastal Karnataka, Coastal Andhra Pradesh, Andaman & Nicobar Islands and isolated pockets of Tripura, North Interior Karnataka, Telangana and Lakshadweep.
- Mean minimum temperature was normal to near normal over rest of the country except isolated pockets of Madhya Pradesh and Vidarbha, where it was below normal by 2 to 4°C.

Goa, where it was between 20 to 24⁰C and many parts of Lakshadweep and some parts of Andaman & Nicobar Islands and isolated pocket of Kerala, where it was between 24 to 28⁰C.

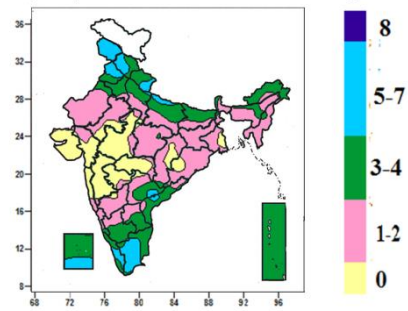
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 01.02.2017

Relative Humidity (%) over India for the week ending 01.02.2017



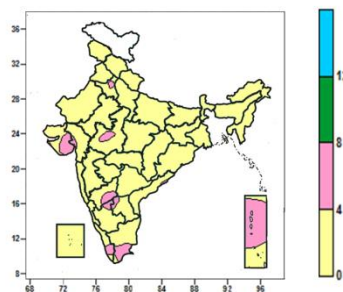
- Mean Relative Humidity was above 80% over Punjab, Sub-Himalayan West Bengal & Sikkim, many parts of Jammu & Kashmir, Haryana & Delhi, West Uttar Pradesh, some parts of Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Bihar, West Rajasthan and isolated pockets of East Rajasthan, Assam, Jharkhand, Lakshadweep, Kerala and Tamil Nadu.
- Mean Relative Humidity was between 60 to 80% over Arunachal Pradesh, Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh, Andaman & Nicobar Islands, many parts of Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Bihar, Gangetic West Bengal, Rajasthan, East Madhya Pradesh, Odisha, Telangana, Rayalaseema, Kerala, Tamil Nadu, Lakshadweep, some parts of Jammu & Kashmir, West Madhya Pradesh, Jharkhand, Coastal Karnataka and isolated pockets of Chhattisgarh and Konkan.
- Mean Relative Humidity was between 40 to 60% over rest of the Country.

Cloud amount (okta) over India for the week ending 01.02.2017



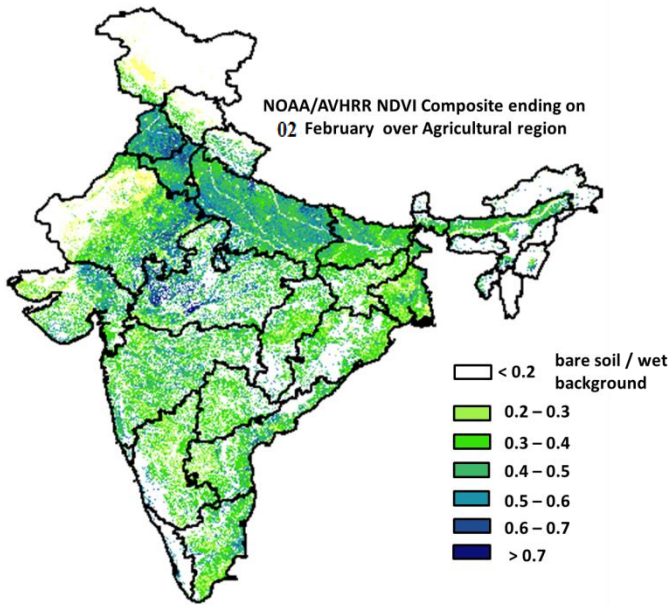
- Sky remained generally cloudy (5-7okta) over Jammu & Kashmir, many parts of Punjab, Tamil Nadu, some parts of Himachal Pradesh, Uttarakhand, Kerala, Lakshadweep and isolated pockets of Uttar Pradesh, Telangana and Coastal Andhra Pradesh.
- Sky remained partly cloudy (3-4 okta) over Andaman & Nicobar Islands, many parts of Himachal Pradesh, Uttarakhand, Uttar Pradesh, Haryana & Delhi, Bihar, Arunachal Pradesh, Coastal Andhra Pradesh, South Interior Karnataka, Rayalaseema, Kerala, Lakshadweep, some parts of Punjab, Sub-Himalayan West Bengal & Sikkim, Assam, Manipur, Coastal Karnataka and isolated pockets of Rajasthan, East Madhya Pradesh, Chhattisgarh and Odisha.
- Sky remained mainly clear/clear sky (1-2 okta/0 okta) over rest of the country.

Wind speed (knots) over India for the week ending 01.02.2017



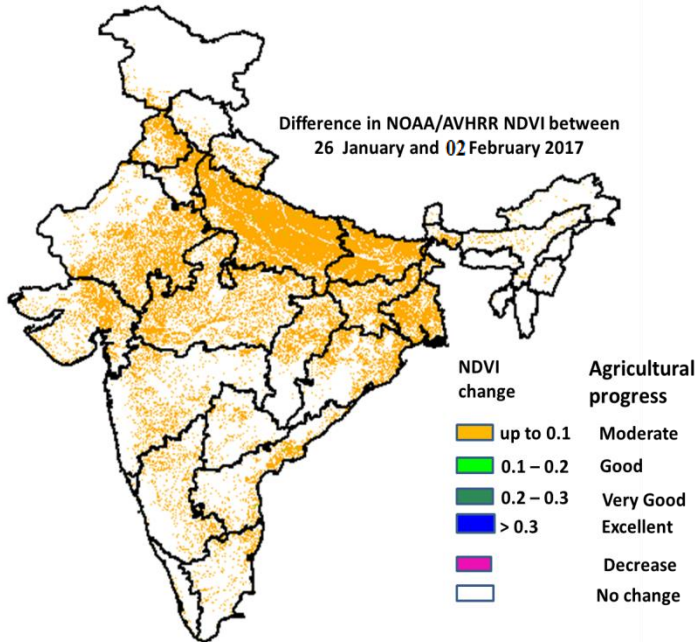
- Mean wind speed was between 0 to 4 knots over the country except many parts of Andaman & Nicobar Islands, some parts of Saurashtra & Kutch, North Interior Karnataka, Kerala, Tamil Nadu and isolated pockets of Haryana, Gujarat Region, West Madhya Pradesh, Telangana, South Interior Karnataka and Rayalaseema, where it was between 4 to 8 knots.

NOAA/AVHRR NDVI composite ending on 2nd February 2017 over Agricultural region of India



- Agricultural vigour is good to very good in Haryana, Punjab, West Madhya Pradesh, patches in North Maharashtra, central Tamil Nadu, Kerala, North Andhra Pradesh, Gujarat, East Rajasthan, Uttarakhand, patches in Uttar Pradesh and North-east, where NDVI value varies from 0.5 to 0.7. NDVI is moderate in west Rajasthan, west Punjab, west Haryana, East Madhya Pradesh, Uttar Pradesh, Bihar, Madhya Maharashtra, southern region of Andhra Pradesh and Tamil Nadu (NDVI 0.2 to 0.5).

Difference in NOAA/AVHRR NDVI between 26th January and 2nd February 2017

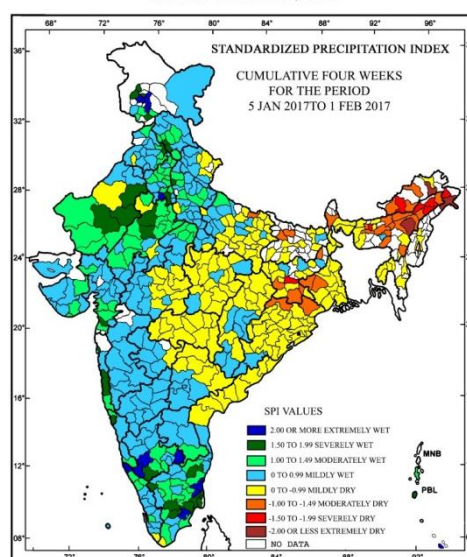


- Moderate progress in NDVI was observed in Punjab, Haryana & Delhi, Madhya Pradesh, Rajasthan, Uttar Pradesh, Bihar, and patches in Maharashtra, Gujarat, Karnataka, Kerala, Tamil Nadu, Telangana, Andhra Pradesh, North-East Region, Jharkhand, West Bengal and Chhattisgarh. Good progress was observed in few patches of Uttar Pradesh.

- NOAA/AVHRR NDVI composite maps for the week ending on 2nd February 2017 for different States are given in Annexure II.

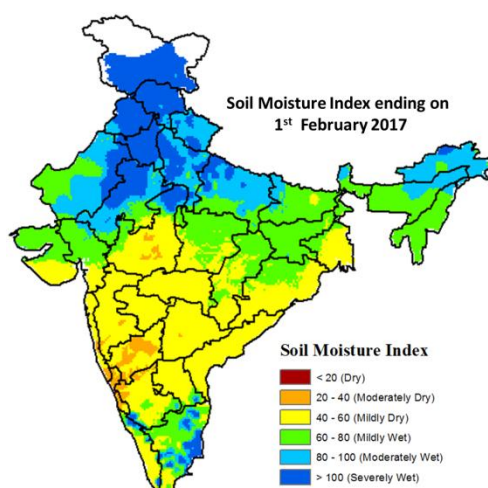
Standardised Precipitation Index Four Weekly for the period 5th January to 1st February 2017

MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE



- Extremely/severely wet conditions experienced in few districts of Delhi; Jammu & Kashmir; Konkan & Goa; Tamil Nadu & Puducherry; South Andaman district of Andaman & Nicobar Islands; Baghpat district of Uttar Pradesh; Jind, Mewat, Rewari districts of Haryana; Ropar, Sas Nagar (Mohali) districts of Punjab; Bilaspur, Solan districts of Himachal Pradesh; Churu, Jodhpur, Nagaur, Jaipur, Tonk districts of Rajasthan; Navsari district of Gujarat Region; Hassan, Kodagu, Kolar, Mysore districts of Karnataka; Kasargod districts of Kerala.
- Extremely/Severely dry conditions experienced in many districts of Arunachal Pradesh; few districts of Assam; Ranchi district of Jharkhand.
- Moderately dry conditions experienced in many districts of Assam; few districts of Arunachal Pradesh; East Khasi Hills district of Meghalaya; Darjeeling, Bankura, Purulia districts of West Bengal; Mayurbhanj, Sundargarh districts of Odisha; Godda, Gumla, West Singhbhum, Seraikela-Khar districts of Jharkhand; Muzaffarpur, Saran districts of Bihar; Siddharth Nagar district of Uttar Pradesh.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

Soil Moisture Index for the week ending on 1st February 2017



- Soil moisture index indicates severely and moderately wet condition in many parts of Sikkim, Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Uttarakhand, East Rajasthan, Uttar Pradesh, some parts of Tamil Nadu, Kerala and North-East Region. Mild wet condition in many parts of Jharkhand, North-East Region, Gujarat, Tamil Nadu, Sub-Himalayan West Bengal, Bihar, East Madhya Pradesh, Chhattisgarh and some parts of Uttar Pradesh, Gangetic West Bengal, Odisha, Kerala, Rajasthan and West Madhya Pradesh. Rest of the country shows Mild dry condition.

Weather Forecast for next 5 days valid upto 0830 hours of 8th February 2017

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- Minimum temperatures very likely to rise by 2-4°C over Punjab, Haryana, Chandigarh & Delhi, north Rajasthan and East Uttar Pradesh during next 3 days and fall by 2°C thereafter.
- Minimum temperature very likely to rise by 1-2°C over Gujarat and by 2-3°C over Konkan & Goa, Madhya Maharashtra and Marathwada during next 2 days.
- No significant change in minimum temperatures very likely over central India during next 24 hours and rise by 2-3°C thereafter. No significant change in temperatures likely over rest of the country.
- Fog at a few places very likely over Bihar, Sub-Himalayan West Bengal during next 24 hours and at isolated places during subsequent 24 hours and fog at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh and Assam & Meghalaya during next 24 hours and over Odisha during next 48 hours.

5 Day Rainfall Forecast (MID DAY) 3rd February 2017

Met Sub-divisions	03 Feb	04 Feb	05 Feb	06 Feb	07 Feb
1. Andaman & Nicobar Islands	DRY	ISOL	ISOL	DRY	DRY
2. Arunachal Pradesh	DRY	DRY	DRY	DRY	DRY
3. Assam & Meghalaya	DRY	DRY	DRY	DRY	DRY
4. N.M.M. & T.	DRY	DRY	DRY	DRY	DRY
5. S.H. West Bengal & Sikkim	DRY	DRY	DRY	DRY	ISOL
6. Gangetic West Bengal	DRY	DRY	DRY	DRY	DRY
7. Odisha	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	DRY	DRY	ISOL	DRY	DRY
12. Uttarakhand	DRY	SCT	WS	SCT	ISOL
13. Haryana, Chd & Delhi	DRY	SCT	SCT	DRY	DRY
14. Punjab	DRY	SCT	FWS	DRY	DRY
15. Himachal Pradesh	ISOL	WS	WS	SCT	DRY
16. Jammu & Kashmir	SCT	WS	WS	SCT	DRY
17. West Rajasthan	DRY	ISOL	ISOL	DRY	DRY
18. East Rajasthan	DRY	DRY	ISOL	DRY	DRY
19. West Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
20. East Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
21. Gujarat Region	DRY	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	ISOL	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. Vidarbha	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. Tamil Nadu & 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

- **03 February (Day 1):** Dense to very dense fog at isolated places very likely over Su-bHimalayan West Bengal & Sikkim and Bihar; dense fog at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar

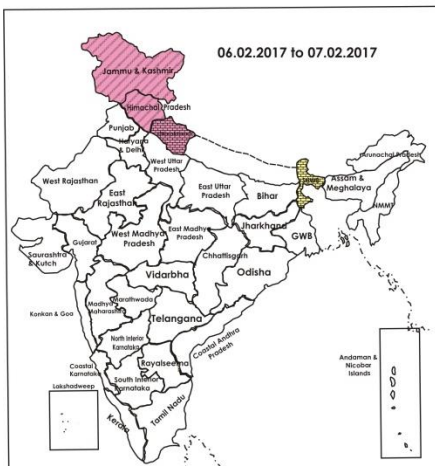
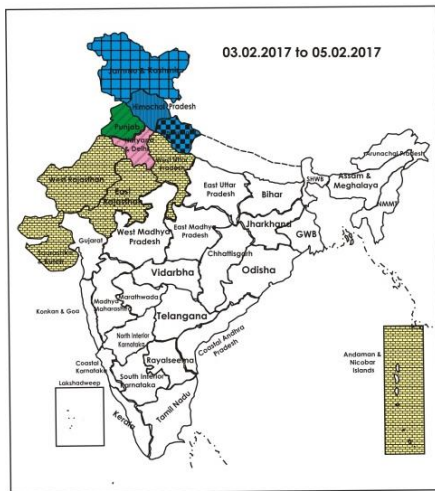
Pradesh, coastal Odisha and Assam & Meghalaya.

- **04 February (Day 2):** Heavy to very heavy rain/snow very likely at isolated places over Jammu & Kashmir and heavy at isolated places over Himachal Pradesh. Hailstorm very likely at isolated places over Punjab and Haryana, Chandigarh & Delhi. Dense fog at isolated places very likely over Bihar, Sub-Himalayan West Bengal & Sikkim and coastal Odisha.
- **05 February (Day 3):** Heavy to very heavy rain/snow very likely at isolated places over Jammu & Kashmir and heavy at isolated places over Himachal Pradesh. Hailstorm very likely at isolated places over Punjab and Haryana, Chandigarh & Delhi.
- **06 February (Day 4):** No weather warning.
- **07 February (Day 5):** Dense fog at a few places with very dense at isolated places very likely over Punjab; dense fog at isolated places over Haryana, Chandigarh & Delhi and Uttar Pradesh.

Weather Outlook for subsequent 2 days from 8th to 10th February 2017

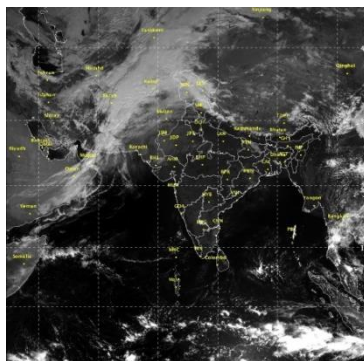
- Rain/snow at many places likely over Jammu & Kashmir and at a few places over Himachal Pradesh and Uttarakhand.
- Gradual rise in minimum and maximum temperatures over most parts of the country.

Weather Forecast Map (valid upto 0830 hours of 8th February 2017)



- Most places
- Most places/ Dry
- Most/Few places/ Dry
- Most/ Few places
- Most/ Many places
- Most/Many / Isolated places
- Most/ Isolated places
- Most/ Many/ Few places
- Most/ Few/ Isolated places
- Most/Many places/ Dry
- Most/ Isolated places/ Dry
- Many places
- Many/ Few places
- Many/ Isolated places
- Many/ Few/ Isolated places
- Many/ Few places/ Dry
- Many/ Isolated places/ Dry
- Many places/ Dry
- Few places
- Few/ Isolated places
- Few/ Isolated places/Dry
- Few places/Dry
- Isolated places
- Isolated places/ Dry
- Dry

Satellite image dated, 03.02.2017, 0600 UTC



Salient Advisories

- As hailstorm very likely at isolated places over **Punjab, Haryana, Chandigarh & Delhi** on 4th and 5th February, make arrangement for hailnet/hailcaps in orchards to protect orchard fruits (grapes, kinnow, papaya) and fruit vegetables like tomato from damage due to hail. Harvest matured fruits and vegetables immediately. Provide support to young fruit plants and staking in vegetables to prevent the crops from lodging. Also undertake propping up in sugarcane crop.
- As rain/snow very likely at most places over **Jammu & Kashmir** and **Himachal Pradesh** on 4th & 5th and over **Uttarakhand** on 5th along with heavy to very heavy rain/snow very likely at isolated places over Jammu & Kashmir and heavy rain/snow at isolated places over Himachal Pradesh on 4th & 5th February, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage/clean the drainage channels to avoid snow deposition and accumulation of water in the fields.
- In **Jammu & Kashmir**, drain out excess water/remove snow from the vegetable fields and clear drainage channels in other standing crops and in saffron fields. Shake off snow from young fruit plants and provide staking to garden pea. Undertake nursery preparation of summer vegetables under protected structures.
- As rain/thundershowers very likely at many places over **Punjab** on 5th February, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- As dense to very dense fog very likely at isolated places over **Sub-Himalayan West Bengal & Sikkim** and **Bihar** on 3rd, dense fog very likely at a few/isolated places with isolated very dense fog over **Punjab** on 3rd & 7th, dense fog very likely at isolated places over **Haryana, Chandigarh & Delhi** and **Uttar Pradesh** on 3rd & 7th, over **Assam & Meghalaya** on 3rd and over Coastal Odisha on 3rd & 4th February, monitor potato, tomato and onion crops for early/late blight disease. If symptoms are noticed undertake plant protection measures.
- In **Himachal Pradesh**, present weather is conducive for attack of yellow rust in the wheat crop. Monitor the crops and spray Propiconazole 25 EC Tebuconazole 25 EC/Bayletan 25 WP @ 0.1% i.e. 30ml or 30 g per 30 litres of water per kanal after current spells of rain and repeat the spray after 15 days interval.
- Due to congenial weather, farmers are advised to monitor the wheat crop for occurrence of yellow rust in fields in Western Plain Zone of **Punjab**. If its symptoms are noticed, spray the crop with Tilt/Shine/Bumper/Compass/Markzole @ 200 ml in 200 litres of water/ acre. Weather is also conducive for severe attack of mustard aphid. Monitor the crop regularly, if pest population reaches ETL, spray the crop with Actara 25 WG @ 40g /acre. Spraying should be done in the afternoon when the pollinators are less active.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone and Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone of **Jammu & Kashmir**, weather is favourable for incidence of wilt & blight in pulse crops(gram); if symptoms observed drench the affected spots with Carbendazin @1 ml in 1 litre of water. Undertake plant protection methods after current spells of rain.
- In Lower Bramhapurtra Valley Zone of **Assam**, foggy weather is congenial for incidence of powdery mildew in pea, spray Indophil M45 @ 1 gm per litre of water.

Detailed Zonewise Agromet Advisories

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



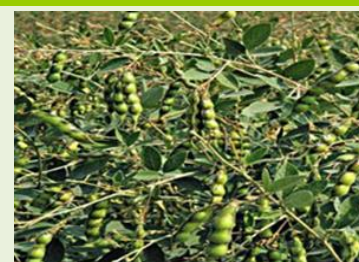
Banana



Rice



Sugarcane



Red gram

- **Realised Rainfall:** Rainfall occurred over Ariyalur, Cuddalore, Dindigul, Karaikal, Nagapattinam, Nilgiris, Puducherry, Pudukkottai, Ramanathapuram, Sivaganga, Thanjavur, Tirunelveli, Tiruvanammalai, Tiruvarur, Vellore and Villupuram districts of Tamil Nadu, Kodagu district of South Interior Karnataka and Alappuzha, Kottayam and Pathanamthitta districts of Kerala. Weather remained mainly dry/dry over rest of the region.
- **Realised Minimum Temperature:** Minimum temperatures are below normal (1.6°C to 3.0°C) at isolated places over Tamilnadu & Puducherry. They are above normal (1.6°C to 3.0°C) at most places over Coast Karnataka, at isolated places over Kerala.
- **Advisories:**
 - **Andhra Pradesh:**
 - In the Krishna Godavari Zone, as dry weather is prevailing, provide light irrigation to sugarcane and Bengal gram crops.
 - In the North Coastal Zone, in the prevailing favourable weather conditions, complete sowing of sesame and continue planting of sugarcane. Taking advantage of dry weather undertake hoeing in groundnut crop.
 - In the High Altitude Tribal Zone, continue planting of sugarcane, after hot water treatment of setts @ 52°C for 30 minutes to avoid diseases like whip smut and red rot and complete picking of cotton.
 - In the Scarce Rainfall Zone of Rayalaseema, in prevailing weather conditions are favourable for incidence of hoppers in mango. For control, spray Imidacloprid 0.3ml/litre + Carbendazim 1gm/litre of water. If fruits are in marble size, spray Fenthion @ 1ml/litre + Nuvan (Dichlorvos) @ 0.5ml/litre of water.
 - In the Krishna Godavari Zone, prevailing weather conditions (appearance of fog during morning hours and diurnal variation in day and night temperatures) may enhance incidence of powdery mildew in black and green gram. If intensity is more, spray Belaton @ 1 gram/litre of water.
 - In the Southern Zone, prevailing weather conditions are congenial for attack of thrips, powdery mildew and anthracnose in mango. To control, spray Thiomithaxam @ 0.3 g or Hexaconazole @ 2 ml/litre of water.
 - **Telangana:**
 - In North Telangana Zone, as dry weather would prevail, provide one or two light irrigations in Bengal gram at pre-flowering and seed formation stage and spray 2% DAP or Urea at pre-flowering stage to increase yield. As temperature conditions are favourable, continue sowing of sunflower, sesamum, bhendi and nursery sowing of tomato. Undertake transplanting of early sown rice and harvesting of groundnut.
 - In South Telangana Zone, in the prevailing weather there is chance of incidence of powdery mildew and downy mildew in grapes, spray Kresoxim Methyl 44.3 SC @ 0.6 ml/litre of water for control.
 - **Tamil Nadu:**
 - Utilizing the realized rainfall, complete sowing of rice fallow pulses under waxy condition (ADT 3 blackgram variety and ADT 3 green gram variety) under rice fallow condition in *Samba* rice fields in the Cauvery Delta Zone. In Karaikal, continue sowing of rice fallow pulses viz., black gram and green gram variety ADT 3 @ 25 kg/ha after treatment with *Trichoderma viride* @ 4g/kg of seed (or) *Pseudomonas fluorescense* @ 10 g/kg seed.
 - In the Western Zone, as dry weather would prevail, undertake picking of irrigated Combodia cotton variety in the morning up to 10 am followed by drying in shade. As expected temperature conditions are favourable, undertake land preparation for sowing of summer irrigated sesame (suitable varieties TMV 4, TMV 6 SVPR 1)
 - In the North Western Zone, rise in temperature may lead to flower and fruit drop in mango. This can be prevented by foliar spray of “Planofix” growth regulator @ 2 ml/4.5 litres of water.
 - In the South Zone (Kovilpatti), citrus canker disease is noticed in citrus may increase in the prevailing weather. To control, undertake one spray of Copper oxy chloride @ 0.3% followed by 4 sprayings with Streptocyclin @ 100 ppm + COC 0.3 % at monthly intervals after pruning.
 - In the High Rainfall Zone, strengthen the basins for coconut and nutmeg trees for better harvesting of rains and provide staking should be given to banana trees.

▪ **Kerala:**

- In view of the prevailing dry weather, apply mulch and provide irrigation in banana crop fields. Provide irrigation in vegetable crop fields once in 3-4 days and undertake pruning of coffee immediately after completion of harvest. In the High Altitude Zone. In the Problem Area Zone, for moisture conservation, undertake mulching with crop residues/ organic manures to protect plants from sun scorching. In Thiruvananthapuram district of the Southern Zone, provide sufficient quantity of water to the coconut palms. If irrigation is through drip system, provide 50-60 litres of water /palm. Provide shade to small rubber plants.
- In the Central Zone, increase in maximum temperature is congenial for incidences of white flies and sooty mould in coconut, spodoptra in banana and root mealy bug in pepper. As a control measure, spray Starch solution @1% on coconut leaves to control white flies and sooty mould, destroy the spodoptra affected leaves and spray Fame 2 ml/ 10 litres of water in case of severe attack and drench the basin with Chlorpyrifos 2.5 ml/litre of water to control root mealy bug in pepper.

▪ **Karnataka:**

- In North East Dry Zone, as dry weather is prevailing, provide irrigation to mango, as the crop is in fruit setting stage and wheat. Continue harvesting of Bengal gram and safflower and picking of late sown seed cotton.
- In Bidar district of North East Transition Zone, undertake harvesting of Bengal gram, safflower and pigeon pea and continue planting of sugarcane. Provide irrigation to wheat (dough stage and rabi sorghum (grain filling stage).
- Taking advantage of the dry weather continue picking of matured pods of red gram in Southern Transition Zone and harvesting of matured Bengal gram and chilli in North Transition Zone. Avoid picking of cotton during early morning hours.
- In the Eastern Dry Zone, prevailing weather is congenial for powdery mildew disease in mango. Spray Lamda Cyhalothrin 5 EC @ 0.5 ml/ litre of water or Sulphur dust (SULTAF) 80 W @3g/litre of water for control.
- Suitable varieties for sowing are given in Annexure III.

• **Animal Husbandry**

- In the Southern Zone of Tamil Nadu, due to the prevailing dry conditions, feed 75-80 litres of good water to adult cows. For the milking cow, in addition to 75 litres of water, an excess of 2.5 litres of water as per the yield of milk. Vaccinate sheep against sheep pox.
- In the Western Zone of Tamil Nadu, present weather is congenial for anthrax disease in cattle especially in the villages near the Western Ghats. Get the animals vaccinated.

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



Mustard



Rice



Cauliflower



Wheat

- **Realised Rainfall:** Rainfall occurred in Dibang Valley and Upper Siang districts of Arunachal Pradesh. Weather remained mainly dry/dry over rest of the region.
- **Realised Minimum Temperature:** Minimum temperatures are below normal (1.6°C to 3.0°C) at isolated places Nagaland, Manipur, Mizoram & Tripura. They are above normal (1.6°C to 3.0°C) at a few places over Arunachal Pradesh and at isolated places over Assam & Meghalaya.
- **Advisories:**
 - As dense fog very likely at isolated places over Assam & Meghalaya on 3rd February, monitor potato, tomato and onion crops for early/late blight disease. If symptoms are noticed undertake plant protection measures.
 - **Assam, Meghalaya & Arunachal Pradesh:**
 - In North Bank Plain Zone and Upper Brahmaputra Valley Zone of Assam, as dry weather would prevail, maintain 3-5 cm standing water in *boro* rice field after 2-3 days of transplanting.
 - In Karimganj, Hailakandi and Cachar districts of Barak Valley Zone of Assam, as dry weather would prevail, undertake earthing up in potato just before irrigation. Also apply irrigation in rajmah and cole crops.
 - In Dhemaji, Lakhimpur, Sonitpur, Dibrugarh, Golghat, Jorhat and Sibsagar districts of In North Bank Plain Zone of Assam, as temperature condition are favourable, undertake land preparation for sowing of summer green gram and black gram and continue sowing of okra, ridge gourd and sponge gourd in Upper Brahmaputra Valley Zone of Assam. In Central Brahmaputra Valley Zone of Assam, continue transplanting of *boro* paddy seedlings at 4 to 5 leaf stage (45 days old seedling). Continue land preparation for sowing of summer green gram and black gram. Also

- apply the second irrigation in wheat at heading stage (70-75 days after sowing).
- In Barpeta, Bongaigaoin, Dhubri and Goalpara districts of Lower Brahmaputra Valley Zone of Assam, continue nursery bed preparation for summer rice.
- In Arunachal Pradesh, continue mulching with straw/crop residue for moisture conservation in pea and potato.
- In Meghalaya, as dry weather would prevail, apply light irrigation in rapeseed/mustard as per requirement. Continue nursery raising of tomato.
- In Lower Brahmaputra Valley Zone of Assam, foggy weather is congenial for Powdery mildew in pea, spray Indophil M45 @ 1 gm per litre of water. Also the farmers are advised foliar application with Carbendazin @ 1g per litre of water or spray Ziram @ 2 ml per litre against stem rot and blight in lentil.
- In Barak Valley Zone, due to increase in temperature, there may be attack of stem borer in *boro* rice at the time of tillering. To control the pest, spray Chlorpyrifos 50 EC @ 2 ml per liter of water. In Hill Zone, there is chance of attack of thrips in *boro* rice. Spray Chlorpyrifos @ 2ml/litre of water if the attack is above ETL.
- In Arunachal Pradesh, spray Azadirachtin 0.15% EC 2@ 6ml/litre against leaf eating insects in cabbage/cauliflower, pea & other vegetables. Drench with Dichlorovos 76 EC @ 0.05% against trunk-borer in citrus. Also spray of Metalaxyl+Dithane M-45 @ 2.5g/litre at 15 days interval for management of white rust/downy mildew in mustard.
- In Meghalaya, spray Wettable Sulphur @ 2 g/litre or Dinocap @ 1 ml/litre or Tridemorph @ 0.5 ml/litre or Dust Sulphur @ 25 kg/ha against powdery mildew and Dithane M-45 (0.2 %) against rust in pea.
- **Nagaland, Manipur, Mizoram and Tripura:**
- In Nagaland, soil moisture conservation techniques like mulching with crop residue is recommended in toria, rabi maize, pea and vegetables.
- In Manipur, as temperature conditions are favourable, complete sowing of *rabi* maize and continue land preparation and sowing of winter vegetables. Undertake land preparation for nursery raising of pre-*kharif* rice. In Mizoram, continue sowing of French bean, carrot and radish and sowing of Zero tillage pea, toria and lentil cultivation in rice fallow. Complete sowing of rabi maize and planting of potato.
- In Tripura, as dry weather prevails, provide light irrigation with mulching in mustard, lentil, cole crops, *rabi* maize.
- In Manipur, spray Propiconazole @ 15ml/15 litre water against rust/powdery mildew in pulses and Mancozeb 2 g/litre of water against late blight in potato.
- In Tripura, humid weather is conducive for blight disease in potato, spray Mancozeb (Indofil M-45) @ 2.5g per litre of water against blight in potato. Also spray Matalaxyl 1000 g/Mancozeb 2 g/litre against leaf blight in maize at tasseling stage.
- Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
- In Barak Valley Zone of Assam, weather condition is favorable for infestation by round and tape worm in livestock. Farmers are advised to de-worming the animal under recommendation and supervision of authorized practitioner.
- In Nagaland, ensure periodic vaccination of cattles against FMD, Brucellosis, Haemorrhagic Septicaemia, Anthrax. Cattles should be given mineral mixture along with salt regularly and wheat grains, jaggery etc. may be provided @ 10% - 20% in the daily ration during winter season to meet the energy requirement of the animals. Avoid feeding of damp and foul smelling feed to all livestock and poultry.
- **Fishery**
- In Lower Brahmaputra Valley Zone of Assam, apply 1:10 ratio of turmeric and lime i.e. for 1 bigha 1 kg turmeric and 10 kg lime mixed uniformly in water and applied in the ponds for protection against bacterial/ fungal disease.
- In Tripura, during winter season, to prevent the EUS diseases in fish, apply Cifax @ 200 ml/ kani.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Maize



Mustard



Sugarcane



Wheat

- **Realised Rainfall:** Weather remained dry over the region.
- **Realised Minimum Temperature:** Minimum temperatures are appreciably above normal (3.1°C to 5.0°C) at most places over Gujarat Region; at many places over Saurashtra & Kutch; at a few places over Konkan & Goa; above normal (1.6°C to 3.0°C) at many places over Madhya Maharashtra and Marathwada.

- **Advisories:**

- **Maharashtra:**

- In Konkan, as dry weather is prevailing, maintain water level up to 5 cm in transplanted *rabi* rice (vegetative stage). Continue harvesting of leafy vegetables. Continue transplanting of brinjal and chilli seedlings.
 - In Madhya Maharashtra, as temperature conditions are favourable, continue planting of *suru* sugarcane and sowing of summer groundnut, okra, bitter gourd, cucumber, ridge gourd and bottle gourd. As dry weather is prevailing, apply irrigation to wheat, gram, vegetable crops and orchards. Undertake harvesting of matured early sown *rabi* jowar in Kolhapur region.
 - In Marathwada, as dry weather is prevailing, apply light irrigation to *suru* sugarcane, wheat, gram, maize, vegetable crops and orchards. Undertake harvesting of turmeric. Continue planting of *suru* sugarcane. Undertake sowing of okra (Parbhani Kranti, Arka Abhay, Arka Anamika, Phule Utkarsha, Phule Kirti etc.).
 - In Vidarbha, as dry weather condition is prevailing, apply irrigation in vegetables, sugarcane & orchards. Continue sowing of summer groundnut. Continue land preparation for sowing of summer sesame. Continue transplanting of summer rice. Continue sowing of fenugreek, spinach, radish, capsicum and carrot and nursery sowing of onion/tomato with assured irrigation.
 - In Madhya Maharashtra, due to increase in temperature, there is chance of attack of aphids & sucking pests in wheat crop, spray Thiamethoxam 25 WG @ 1 g per in 10 liters of water for control.

- **Gujarat:**

- In Middle Gujarat Zone, as dry weather would prevail, apply irrigation in wheat crop at vegetative stage (75 days after sowing) and chickpea crop and in wheat in North Saurashtra Zone. Undertake picking of cotton and prepare field for next crop. In North West Zone of Gujrat, Continue harvesting of matured spikes of castor.
 - In North Saurashtra Zone of Gujrat, as temperature condition are favourable, undertake sowing of summer groundnut, summer sesame and sowing of ladies finger, ridge gourd, bottle gourd, sponge guard, bitter guard, cluster bean and water melon. Undertake transplanting of brinjal.
 - In South Gujarat Heavy Rainfall Zone, continue land preparation for transplanting of rice. Continue nursery raising of tomato. Apply irrigation in *rabi* pulses. Keep standing water 3-5 cm in the nursery.
 - Weather condition is congenial for outbreak of powdery mildew in pea crop in South Gujarat Zone; spray the crop with Wettable Sulphur @ 0.25% or Dinocap @ 0.05%.
 - Under increasing temperature condition, there is chance of aphid infestation in vegetable crops in North West and North Zone of Gujrat; for effective control of aphid, spray Dimethoate @ 10 ml/10 litres of water. To control Powdery mildew in Mustard apply Sulphur (80 WP) 25 gm or Denocap (48 EC) 5 ml in 10 lit of water.
 - Due to cold and cloudy weather condition, there is chance of incidence of leaf rust in wheat in South Saurashtra Zone; Monitor the crops and if symptoms are noticed, two to three sprays of Mancozeb @ 30 g in 10 litres of water at 12 to 15 days interval period are advised. Also for the control of powdery mildew in cumin and coriander, spray Dinocap 10 ml or 80 % wettable Sulphur 30 gm mix with 10 liter of water.
 - In the present weather condition, there are chances of late blight disease in potato crop in North Gujarat Zone, spray Metalaxil MZ (Redomel gold) @ 20 g /10 litres of water. Also for effective control of aphids in mustard, spray Dimethoate @10ml or Phosphamidon @ 3ml adding in 10 liters of water.
 - Suitable varieties for sowing are given in Annexure III.

- **Animal Husbandry**

- In Gujarat, provide luke warm water to lactating animals. Keep young calves indoors during night time to avoid cold stress. Spread the crops residues in animal house. Provide artificial light in the poultry sheds.

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



Rice



Okra



Maize



Wheat

- **Realised Rainfall:** Weather remained dry over the region.
- **Realised Minimum Temperature:** Minimum temperatures are below normal (1.6°C to 3.0°C) at many places over Gangetic West Bengal & Bihar, at a few places over Jharkhand, Odisha. They are appreciably above normal (3.1°C to 5.0°C) at a few places over Andaman & Nicobar Islands; above normal (1.6°C to 3.0°C) at a few places over Odisha,

Sub-Himalayan West Bengal & Sikkim.

• **Advisories:**

- As dense/dense to very dense fog very likely at isolated places over Bihar, Sub-Himalayan West Bengal & Sikkim on 3rd & 4th; dense fog very likely at isolated places over Coastal Odisha on 3rd & 4th February, monitor potato, tomato and onion crops for early/late blight disease and wheat crop for incidence of rust. If symptoms are noticed undertake plant protection measures.
- **Odisha:**
 - In East and South Eastern Coastal Plain Zone, as temperature conditions are favourable, complete sowing of summer groundnut and sunflower. Continue harvesting of sugarcane. Continue transplanting of rice seedlings at 4-5 leaf stage. Keep a thin film of water while transplanting.
 - In East and South Eastern Coastal Plain Zone, as dry weather is prevailing, apply irrigation in sunflower at flowering stage and in North Eastern Coastal Plain Zone, apply irrigation in rapeseed/mustard and continue transplanting of rice.
 - In Deogarh and Sundargarh districts of North Eastern Plateau Zone, complete sowing of mung, Biri and Peas. Continue transplanting of rice.
 - In Kalahandi and Nuapara districts of Western Undulating Zone, cover the vegetable nurseries to protect from low temperatures. Irrigate the vegetable seedling nursery during evening hours. Continue sowing of groundnut and nursery sowing of onion. Continue harvesting of rice.
 - In East and South Eastern Coastal Plain Zone, cold and cloudy weather favours the infestation of powdery mildew in pea. Spray 1 kg Sulfex WP in 200 litre per acre.
 - In North Eastern Coastal Plain Zone, rise in temperature may favour attack of stem borer in rice nurseries. To control it, spray Traizophos or Chloropyriphos @ 2ml/litre or Cartap hydrochloride@2g/litre of water.
 - In North Eastern Coastal Plain Zone, rising temperature is favourable for attack of aphids in rapeseed/mustard. Spray Neem oil 500ppm@5ml/litre. Due to fluctuation in day and night temperature, the problem of Tobacco cater may aggravate. To control it, spray Lambda cyhalothrin @ 2ml/litre of water.
- **West Bengal:**
 - In Burdwan, Murshidabad, Nadia, North 24 Parganas districts of New Alluvial Zone, as dry weather is expected, farmers are advised to maintain 3-5 cm stagnant water in transplanted *boro* rice fields. Also apply irrigation in potato and wheat as per requirement. In Hill Zone, continue harvesting of ginger, turmeric, pea and complete the harvesting of mandarin orange.
 - In Bankura, Birbhum and Purulia districts of Laterite & Red Soil Zone, complete the transplanting of *boro* rice by end of this month. At the time of final puddling, apply fertilizer 14.7 kg Urea, 42 kg SSP and 12.8 kg MOP per bigha as a basal dose. Maintain the water level upto 2 cm in the fields.
 - In Malda & Dakshin Dinajpur districts of Old Alluvial Zone of West Bengal, undertake transplanting of *boro* rice.
 - In Hill Zone, in prevailing weather condition, late blight and white fly may appear in tomato. Apply Mancozeb 75% WP @ 2.5 g /litre of water for management of late blight and apply Imidacloprid 17.8 SL @ 0.3ml/lit. of water for management of white fly on tomato.
 - In Coastal Saline Zone, there may be attack of late blight in potato at tuber formation stage due to morning fog and aphid attack in mustard due to rising temperature. For late blight attack above threshold level, spray a mixture of 1.5ml Metasistox and 4g Copper oxichloride per liter of water. For aphid attack, spray Dimethoate@1.5ml/liter of water if infestation reach ETL.
 - In laterite and Red soil Zone of West Bengal, prevailing weather condition may favour yellow rust and blight disease in wheat. Spray Mancozeb @ 2.5-3 ml/litre of water.
- **Andaman and Nicobar Islands:**
 - In North, Middle and South Andaman, in the prevailing weather condition may be attack of shoot borer in brinjal. clip the infested shoot of brinjal every week and dispose it by burning to control the spreading of the shoot borer in other vegetable field.
- **Bihar:**
 - In Araria, Katihar, Kishanganj, Madhepura, Purnea, Saharsa and Supaul districts in North East Alluvial Zone, as dry weather is prevailing, irrigate the wheat crop which is about 60-65 days old crop. Earthing up in maize followed by light irrigation (50-60 days after sowing) and top dressing with urea should be done, if the crop reached knee- height stage.
 - In Darbhanga, East Champaran, Gopalganj, Samastipur, West Champaran districts of North West Alluvial Plain Zone, undertake for sowing of summer vegetables. Intercultural operation and light irrigation is required in vegetable crops such as pea, tomato, brinjal, chilli and cabbage and apply irrigation in rabi maize which is in tasselling/silking stage.
 - In Bhagalpur, munger, banka and jamui districts of South Bihar Alluvial Zone, undertake field's preparation for sowing of early crop of lady's finger also undertake nursery preparation for chilli, tomato and brinjal crops in poly house. Prepare seedling of early cucurbitaceous crops in small polythene bags in poly houses.

- In North East Alluvial Zone, in present weather condition, constant monitoring of aphids is advised in mustard crop. If insect population above ETL, spraying of Rogar or Quinalphos @ 2.0 ml/litre water is recommended. Farmers are also advised to do spray of Mancozeb @ 2 g/litre of water along with tepol (sticky material) in the seed potato crop for controlling the late blight. Timely sown pea crop is at pod formation stage and at this stage, if attack of pod borer are found, spray Chloropyriphos @ 3-5 ml/litre of water should be sprayed two times at an interval of 10-12 days if infestation is severe.
- In South Bihar Alluvial Zone, in the present weather condition, in mustard crop, if there is attack of aphids, spray Cartap hydrochloride or Metasystox or Rogor @ 1.5 ml per litre water. In wheat crop, if termite is noticed, apply mixture of 20 kg sand with Chlorpyriphos 20 EC @ 2 litre/acre in evening hours and subsequent irrigation is recommended.
- **Jharkhand:**
 - In Western Plateau Zone of Jharkhand, as dry weather would prevail, continue harvesting of toria crop.
 - In Central and North Eastern Plateau Zone, continue nursery sowing of summer rice and prepare field for sowing of vegetable like long gourd, round gourd, bitter gourd, sponge gourd, cucumber, water melon and musk melon. Continue nursery sowing of onion.
 - In Western Plateau Zone, at prevailing weather condition, there is a chance of the attack of powdery mildew disease on green pea in which white powder appears on leaves and stem. To control this disease, spray Kairathen @ 1 ml per litre of water or Sulfex @ 3 g per litre of water.
 - In Central and North Eastern Plateau Zone, due to high humidity and cold weather, there is chance of attack of late blight disease in potato, to control it - spraying of Metalaxyl MZ +Maancozeb @ 1.5g /litre of water is advised.
 - In South Eastern Plateau Zone, timely sown arhar cop is at flowering to pod formation stage and at this stage if attack of leaf eating insect and pod borer are found, spray Monochrotophos @ 2 ml/litre of water two times at an interval of 10-12 days to control leaf eating insects. To prevent pod borer, spray Indoxacarb 14.5 % SC @ 120 ml/acre or Emamectin bencoate 5 % SG @ 5 g/acre or Spinosad 14.5 % SC @ 23-30 g/acre or Neem 1500 ppm @ 800 ml/acre or Profenophos 50 EC @ 800 ml/acre is recommended.
 - In Western Plateau Zone, the existing weather condition is favourable for attack of late blight disease in potato and aphids on mustard and other crops/vegetables. Hence, as a preventive measure, farmers may spray fungicide and insecticide in the respective crops.
 - Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
 - In Bihar, newly born calves need special care during cold weather as they are susceptible to attack of pneumonia. Keep the animals under roof at night time and in the sun during the day. The energy content of the concentrate mixture should be increased by 5-10 % where the protein in the concentrate can be reduced by 2-3 per cent during cold season. Provide heat by lighting 100W filament bulb @ 1 bulb per 20 newly born chicks in poultry house.
 - In Jharkhand, to treat Fowl Cholera and pullorum disease in poultry birds, give Oxytetracycline @ 1gm /litre of water. To protect the birds from cold, cover the windows and doors with gunny sheet and increase the temperature by addition of more bulb in brooder.
 - In Terai Zone of West Bengal, vaccination is the principal way to protect animals from Black Quarter (BQ) and Foot and Mouth Disease (FMD). Vaccinate to poultry bird against Fowl pox and Ranikhet/ ND disease.
- **Fishery:**
 - In Odisha, to protect fish from cold stress, maintain water to a depth of 1 to 1.5 m and apply 80 kg lime to pond of 1 acre.

CENTRAL INDIA [M.P., CHHATTISGARH]



Gram



Cabbage



Mustard



Wheat

- **Realised Rainfall:** Rainfall occurred in Bhind, Gwalior, Datia and Morena districts of West Madhya Pradesh. Weather remained mainly dry/dry over rest of the region.
- **Realised Minimum Temperature:** Minimum temperatures are below normal (1.6°C to 3.0°C) at a few places over Chhattisgarh, East Madhya Pradesh. They are above normal (1.6°C to 3.0°C) at many places over West Madhya Pradesh.
- **Advisories:**

▪ **Madhya Pradesh:**

- As dry weather would prevail, apply irrigation in wheat, mustard, gram and vegetables as per requirement in Gwalior, Bhind, Morena, Guna, Ashoknagar and Shivpuri districts. In Malwa Plateau Zone, apply irrigation in wheat at tillering stage and in coriander at flowering stage as per requirement. Continue nursery preparation of summer vegetables like tomato, chilli, brinjal etc.
- In Vindhya Plateau Zone, apply irrigation in gram and vegetables. Apply 3rd irrigation in wheat at booting stage.
- In Jhabua, Alirajpur and Dhar districts, apply 2nd irrigation in gram and mustard at pod filling stage. Continue picking up of matured vegetables. Apply 3rd irrigation in wheat at booting stage. Continue nursery preparation for cucurbitaceous crops.
- In Jhabua Hill Zone, due to dry weather, there may termite attack in wheat fields, apply Chlorpyrifos 20 EC @ 3.5 litre/ha with irrigation.
- In Malwa Plateau Zone, use Pheromone Traps @ 20 Nos/ha to control attack of fruit borer in brinjal, tomato and okra.

▪ **Chhattisgarh:**

- In Chhattisgarh, in view of prevailing dry weather, apply irrigation in wheat at heading stage and apply remaining dose of fertilizer. Continue sowing of cucurbitaceous crop in the polythene bags, sowing of leafy vegetables and land preparation for sowing of summer vegetables like cowpea, okra. Continue land preparation for planting of sugarcane in Hill Zone.
- In North Hill Zone, due to partly cloudy weather, there are chances of attack of pod borer in gram, spray Quinolophos @ 0.05%.
- In Bastar Plateau Zone, due to humid weather there are chances of leaf blight disease in mustard, spray Mancozeb @ 3 gm per litre of water or Propeconazol @ 1 ml per litre of water at 15 days interval.
- Suitable varieties for sowing are given in Annexure III.

• **Animal Husbandry**

- In Madhya Pradesh, keep animals in sheds during night hours and cover the floor with paddy straw litter to protect from cold. Provide artificial light during night time in poultry house. Provide green fodder, clean and fresh water to cattle twice a day. To control ecto parasite use Butox and also undertake deworming of cattle.
- In Chhattisgarh, protein enriched diet should be given to the animals and keep them in shed during night hours.

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



Mustard



Maize



Cauliflower



Wheat

- **Realised Rainfall:** Rainfall occurred in all districts of Himachal Pradesh; all districts of Jammu & Kashmir except Ladakh(Leh), in Nainital, Udhamasinghnagar districts of Uttarakhand; Amritsar, Fatehgarhsaheb, Gurudaspur, Hoshiarpur, Jalandar, Ludhiana, Nawashahar, Patiala, Ropar, Sangrur, Mohali, Taran Taran districts of Punjab; in Ambala, Chandigarh, Gurgaon, Jind, Katihal, Karnal, Kurukshetra, Mewat, Panchkkula, Panipat, Rewari, Rohtak, Sonapat, Yamunanagar districts of Haryana; all districts of Delhi except Central Delhi; in Bhairai, Kannauj, Kheri, Sant Ravidasnagar districts of East Uttar Pradesh; in Aligarh, Bhagpat, Bareilly, Bulandshahar, Ghaziabad, Kanshiramnagar, Mahamayanagar, Moradabad, Muzaffarnagar, Saharanpur districts of West Uttar Pradesh; in Alwar, Bharatpur, Jaipur districts of East Rajasthan; in Churu district of West Rajasthan. Weather remained mainly dry over rest of the region.
- **Realised Minimum Temperature:** Minimum temperatures are appreciably above normal (3.1°C to 5.0°C) at most places over Himachal Pradesh, at many places over Jammu & Kashmir, Rajasthan, at a few places over Haryana, Chandigarh & Delhi; above normal (1.6°C to 3.0°C) at most places over Punjab. The lowest minimum temperature of 6.4°C recorded at Fursatganj (East Uttar Pradesh) in the plains of the country.
- **Advisories:**
 - As hailstorm very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi on 4th and 5th February, make arrangement for hailnet/ hailcaps in orchards to protect orchard fruits (grapes, knnow, papaya) and fruit vegetables like tomato from damage due to hail. Harvest matured fruits and vegetables immediately. Provide support to young fruit plants and staking in vegetables to prevent the crops from lodging. Also undertake propping up in sugarcane

crop.

- As rain/snow very likely at most places over Jammu & Kashmir and Himachal Pradesh on 4th & 5th and over Uttarakhand on 5th along with heavy to very heavy rain/snow very likely at isolated places over Jammu & Kashmir and heavy rain/snow at isolated places over Himachal Pradesh on 4th & 5th February, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage/ lean the drainage channels to avoid snow deposition and accumulation of water in the fields.
- As dense fog very likely at a few/isolated places with isolated very dense fog over Punjab on 3rd & 7th, dense fog very likely at isolated places over Haryana, Chandigarh & Delhi and Uttar Pradesh on 3rd & 7th February, monitor potato, tomato and onion crops for early/late blight disease. If symptoms are noticed undertake plant protection measures.
- **Jammu & Kashmir:**
 - In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, apply 2nd top dressing of Urea to normal sown wheat and 1st top dressing to late sown wheat after current spell of rain. Start preparation of nursery of summer vegetables under protected structures. In pea crop, go for staking with dry wooden branches to trail vines over them.
 - In Valley Temperate Zone of Jammu and Kashmir, provide drainage channels in the fields as there is possibility of accumulation of snow/water in the fields. Avoid stagnation of water in saffron field. Do hand weeding/hoeing to reduce infestation by weeds to saffron crop after current spells of rain. In high frost condition mulching of seed crops of KnolKhol, cabbage and other root crops may be done. Undertake seed sowing of leafy vegetables in poly house after current spell of rains.
 - In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, monitor zinc deficiency in wheat crop, if symptoms observed like yellow patches between the mid-vein and edge of the leaf in young to middle leaves develop, spray zinc sulphate @ 0.2% after current spell of rain.
 - In Cold Arid Zone of Leh district, continue harvesting of Chinese cabbage, Palak, Pakchoi, knolkhol and Lettuce in protected structures. Timely hoeing and weeding should be done in protected structure for proper root aeration. The current night temperature is below -8.0 deg.C. Therefore the trenches and poly houses should be covered with blankets. Transplanting of Haenz Saag and other cold tolerant vegetables should be done as a second crop under poly houses. As there is expected to snow in this week, farmers are advised to cover trenches and poly houses to avoid crop damage.
 - In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, there may be incidence of wilt & blight in pulse crops, to control, spray Carbendazin @1 ml in 1 litre of water. Also monitor potato crop at regular intervals for potato blight disease, If symptoms observed spray Mancozeb or Metalaxy+mancozeb (1:1) @ 50 gm in 20 liters of water/kanal. Undertake plant protection method after current spells of rain.
- **Uttarakhand:**
 - In Udham Singh Nagar district of Bhabar and Tarai Zone, to protect the newly transplanted seedlings of papaya, mango and litchi from snow/frost, these plants should be covered by straw. Top dressing of Urea should be done in Cabbage and Cauliflower crop in clear weather. Continue early sowing of Mentha with varieties like- Koshi, Saksham, Kushal, Himalaya, Saryu, Simkranti. In lentil and gram crop, first irrigation should be given before flowering and second irrigation at the time of pod formation.
 - In Nainital district of Bhabar and Tarai Zone, continue harvesting of mustard on a non rainy day. Undertake field preparation for summer Squash (Chappankaddu).
 - In Bhabar and Tarai Zone, there may be occurrence of Mahu in mustard crop, spray Thiamethoxam 25 WSG @ 50-100g/ha after current spells of rain. There may be attack of fruit borer in gram and lentil crop at the time of flowering, spray Melathiyen 50EC @ 2.0 liter/Ha or Quinalphos 25 EC @ 1.5liter/Ha in 500-600 liter of water after current spells of rain.
 - In TehriGarhwal, Chamoli, Champawat, Pithoragarh, Rudraprayag and Uttarkashi districts of Hill Zone, undertake the weeding and hoeing in vegetable crops in clear weather. Undertake top dressing of Urea to wheat crop which is 25-30 days old after current spells of rain. Undertake nursery preparation for chilli, tomato and brinjal in poly houses.
 - In Dehradun, Pauri and Haridwar districts of Sub Humid Sub Tropic Zone, give 2nd top dressing to timely sown wheat.
 - In Bhabar and Tarai Zone, weather is favourable for late blight disease in potato and tomato crop, spray Mancozeb @ 2.5g/litre and there may be incidence of yellow rust disease in wheat crop, spray Propiconazole 25EC @ 1ml/liter of water after current spells of rain.
 - In Dehradun, Pauri and Haridwar districts of Sub Humid Sub Tropic Zone, there may be possibility on incidence of late Blight in potato, to control spray Zinc Carbomate @ 2kg/ha dissolved in 800-1000 litres of water.
- **Himachal Pradesh:**
 - In Himachal Pradesh, protect the nurseries of vegetables and forest plants and crops from frost in lower regions. Cover nursery with polythene sheet to protect from frost.

- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, continue thinning and weeding operation in timely sown mustard crop and intercultural operations & weed control in sarsonsaag, bathua, radish, spinach, fenugreek, coriander, turnip after current spells of rain. Apply mulch and well rotten FYM on ginger, turmeric, calocasia and elephant foot and leafy vegetable crops. Continue nursery raising of tea plants in polythene tubes. In low and mid hill areas undertake transplanting of onion seedlings at a spacing of 15-20 cm X 5-7 cm apart. Undertake earthing up operation in potato crops on a non rainy day. Undertake nursery sowing of chilli, tomato, brinjal crops in poly house, prepare seedling of early cucurbitaceous crops in small polythene bags in poly houses.
- In mid hills sub humid Zone of Himachal Pradesh, undertake nursery sowing of tomato, capsicum, brinjal, chilli in lower hills area.
- In Mild Hills Sub-Humid Zone of Himachal Pradesh, in Kullu and Mandi districts, continue preparation of tree basins in stone fruit, apple and pomegranate orchards and transplanting of onion after current spells of rain. Continue pruning in pomegranate orchard by removing diseased and unwanted branches etc.
- In High Hills Temperate Dry Zone of Himachal Pradesh, in Kinnaur and Lahaul & Spiti, avoid pruning of apple trees when snow is fallen until the weather is warm. Close the polyhouse properly as temperature will decrease and maintain temperature around 20°C.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of blight in potato and tomato crops, for control, spray Carbendazim @ 1.0 gm per litre of water or Dithane-M-45 @ 2.0 gm per litre of water after current spells of rain.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of thrips in onion crop, for control spray Carbaryl @ 2 gm per litre of water with sticky material (Tropol 1.0 gm /litre) after current spells of rain.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of yellow rust in the wheat crop for control spray Tilt (Propiconazole) 25 EC/Folicure (Tebuconazole) 25 EC/Bayletan 25 WP @ 0.1% i.e. 30ml or 30 g per 30 litres of water per kanal and repeat the spray after 15 days interval after current spells of rain.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of powdery mildew in polyhouse crops like tomato and shimlamirch, for control spray Haxaconazol @ 1ml per litre of water in 10 days interval after current spells of rain.
- **Punjab, Haryana and Delhi:**
 - As rain/thundershowers very likely at many places over Punjab on 5th February, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
 - In Central Plain Zone of Punjab, as temperature conditions are favourable, continue sowing of sunflower (PSH 1962, DK 3849, PSH 996, PSH 569, PSFH 118 and SH 3322) as temperature . The vegetable crops like chilli, capsicum and cucumber should be protected from cold by providing light irrigation. In addition to this, the farmers who have transplanted the capsicum, cucumber and chilli in field should cover the crop under low plastic tunnels. It is optimum time of sowing of recommended varieties of spring maize i.e. PMH 10, DKC 9108, PMH 8, PMH 7, PMH 1 and PMH 2.
 - In Western Zone of Punjab, remove “Sarkanda” from the fields of chilli and capsicum in the afternoon and earth up near the base of plants. Complete Grape pruning by mid-February. Before flowering, spray 500 ml of Malathion 50 EC in 500 litres of water for the control of Grapevine thrips.
 - In Haryana monitor the wheat crop regularly for yellow rust disease. If yellow powder appears on leaves, it is yellow rust. Spray the crop with 200 ml Tilt 25% EC (propiconazole 25% EC) in 200 litres of water per acre. Differentiate yellow rust from zinc deficiency and for zinc deficiency spray the crop twice with 2.5% urea and 0.5% zinc sulphate at 15 days interval.
 - In New Delhi, mustard crop is pod filling stage, farmers are advised to maintain optimum moisture in the fields at this stage. Continue sowing of spinach, coriander and fenugreek
 - In Western Semi-Arid Zone of Delhi, in present weather, wrapping of plastic sheets around mango trunk should be done for preventing climbing of young (nymphs) mealy bugs. Apply grease to seal any cracks in the polythene sheets.
 - Due to congenial weather, farmers are advised to monitor the wheat crop for occurrence of yellow rust in fields in Western Plain Zone of Punjab. If its symptoms are noticed, spray the crop with Tilt/Shine/Bumper/Compass/Markzole @ 200 ml in 200 litres of water/ acre. Weather is also conducive for severe attack of mustard aphid. Monitor the crop regularly, if pest population reaches to ETL, spray the crop with Actara 25 WG @ 40g /acre. Spraying should be done in the afternoon when the pollinators are less active.
- **Uttar Pradesh:**
 - In Central Plain Zone of Uttar Pradesh, complete transplanting of onion nursery and apply irrigation as per requirement. Continue sowing of cucurbit crops, Bitter gourd, bottle gourd, cucumber, pumpkin, muskmelon, ridge gourd, watermelon. Undertake harvesting of mature crop cabbage, cauliflower. Continue irrigation and inter-

cultural operations in garlic and onion crop as per requirement. Stop irrigation to standing crop of potato for one month before harvest for proper maturation of tubers. Irrigate standing crop of wheat as per requirement, top dressed remaining 60 kg urea/ha at PI stage. Undertake weeding and staking operation in earlier sown tomato crop.

- In Eastern Plain Zone of Uttar Pradesh, undertake earthing up operation in timely sown potato crop. Undertake weeding operation in onion crop at eastern part. Undertake harvesting of matured sugarcane and sowing of urad and mung.
- In Western Plain Zone of Uttar Pradesh, keeping in view of rainfall during last week, farmers are advised to postpone irrigation for next few days as sufficient moisture is available in all the crops. In present weather condition mustard crop is in capsule filling stage, farmers are advised to maintain optimum moisture for proper development of grains.
- In Central Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of white fly in tomato and chilli crop, for control spray Dimethoate @ 2 ml per litre of water.
- In Central Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of blight in gram crop, for control spray Zinc Carbonate @ 200 gm or Ziram 90% @ 2 kg per hectare.
- In Central Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of aphid in mustard crop and stem borer in sugarcane for control aphid in mustard spray Phosphamidon 85% @ 250 ml in 800 litres of water per hectare and for control of stem borer in sugarcane broadcast Furadan @ 30 kg per hectare.
- In North Eastern plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of blight in toria crop at flowering stage, for control spray Ridomil MZ @ 0.2 %.
- In Bundelkhand Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of aphid in mustard, lentil, linseed and other rabi crops, for control spray Monocrotophos @ 1.25 litres in 600 litres of water per hectare.
- In Western Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of termite in wheat crop, for control apply Chlorpyrifos 20 EC @ 2.0 litres along with irrigation.
- In Western Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of diamond back moth in cole crop, pod borer, install pheromone traps @ 3-4 traps per acre for monitoring of the pest population for in pea and fruit borer in tomato.
- **Rajasthan:**
 - In East Rajasthan, In Sub Humid Southern Plain and Aravali Hill Zone, in Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts, continue nursery sowing of brinjal, apply 10 kg compost, 1 kg Neem Cake, 100 g Super Phosphate and 10 g Furadone in 100 sqm area for planting brinjal in one hectare area. Undertake field preparation for sowing of summer groundnut.
 - In Dungarpur, Banswara and Pratapgarh districts of Southern Humid Plain Zone, The weather during next 3 days would be stable with clouds. Apply third irrigation in wheat at jointing stage. Undertake intercropping operation in maize crop and irrigate with top dressing of nitrogen at the knee high stage. Farmers are also advised to be applied irrigation in gram and mustard at pod formation stage.
 - In Arid Western Plain Zone, in Barmer, Churu, Jalore, Jodhpur, Pali districts, apply irrigation in mustard crop at grain filling stage. Undertake nursery sowing of brinjal. In Jaisalmer and Bikaner districts, due to higher temperatures during coming days may increase the water demand of the rabi crops, therefore irrigate the crops as and when crops show wilting symptoms /as per need on the basis of critical growth stages of crops. In timely sown wheat, apply 3rd irrigation to standing crop at 55 days after sowing on late jointing stages, and also apply 2nd irrigation to the barley crop at 65-70 days after sowing. In late sown wheat, apply 2nd irrigation to standing crop at 40 days after sowing at tillering stages,.
 - In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, undertake harvesting of matured sugarcane, not apply irrigation 15 days before harvesting of mature sugarcane. Apply third irrigation to timely sown wheat crop at 25-30 days after sowing and in mustard crop at 90 to 100 days at grain filling stage. Apply second irrigation in gram at 90 to 100 days after sowing at pod formation stage. Apply second irrigation in jou crop at 65 to 70 days and third irrigation at 100 to 110 days after sowing.
 - In East Rajasthan, In Sub Humid Southern Plain and Aravali Hill Zone, in Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts, prevailing weather condition is congenial for attack of rust diseases in wheat, for control spray apply sulphur dust @ 25 kg per hectare or spray Mancozeb @ 2 kg per hectare at 15 days interval 2 to 3 times. The spray or dusting must be done in the morning or evening time.
 - In Arid Western Plain Zone, in Jaisalmer and Bikaner districts prevailing weather condition is congenial for attack of aphid in mustard crop, heliothis in gram crop and blight in cumin, for control of aphid in mustard, spray Malathion 50 EC @ 1200 ml per hectare or Dimethoate 30 EC @ 1200 ml per hectare along with water, for control of heliothis in gram, spray Quinalphos 25 EC @ 1200 ml/ha or Indoxycarb @ 200 ml/ha along with water at the time of flowering and repeat the spray if required and for control of blight in cumin spray Diethane M-45 @ 2-3g per litre at the time of flowering and repeat the spray at 10-15 days of intervals.
 - In Arid Western Plain Zone, in Barmer, Churu, Jalore, Jodhpur, Pali districts, prevailing cloudy and high humidity weather condition is congenial for attack of pod borer in gram crop, for control spray Quinalfos 25 EC @ 1200 ml

per hectare.

- In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhopur districts of Flood Prone Eastern Plain Zone, prevailing weather condition is congenial for attack of blight in potato crop and pod borer in gram, for control blight in potato spray, Mancozeb @ 2g per litre of water and for control of pod borer in gram, broadcast Malathion dust (5%) @ 20 to 25 kg per hectare.

- Suitable varieties for sowing are given in Annexure III.

- **Horticulture**

- In Himachal Pradesh, in view of the snowy conditions, do not undertake training and pruning of horticultural crops. Remove snow from young/small plants.
- In Himachal Pradesh present weather is conducive for the Citrus canker in citrus, for control spray Streptocycline Sulphate 500 ppm solution after current spells of rain.
- In Himachal Pradesh, prepare the pits for planting the winter plants like peanut, walnut, almond plum and peach. The new plant planted in frost affected region may be protected with thatch of grass.
- In Punjab, cover the newly planted and young fruit plants with thatches /rice straw etc. to protect them from frost injury.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, make necessary arrangement to drain out the excess water from young plant basin. Give manures and fertilizers to those fruit plants which are at flowering stage. Undertake harvesting of citrus fruits.
- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, complete plantation of peach, plum, apricot, almond walnut and peacan nut. Go for staking for budded and grafted fruit plants to avoid from snow damage under temperate areas.
- In Nainital district of Bhabar and Tarai Zone, continue sowing of fruit crops like-apple, pear, plum, wall nut. In high hills, undertake pruning of temperate fruit trees like apple, pear, peach, plum etc. Undertake sowing of seedlings of tomato, capsicum and brinjal in nursery bed at proper distance.
- In Udham Singh Nagar district of Bhabar and Tarai Zone of Uttarakhand, to control the mango hopper (Bhunga) insect in fruit trees, first spray should be given at panicle initiation with Imidacloprid 17.8SL @ 0.03 ml/lit. Second spray at pea stage with thiamethoxam @0.32 g/lit and third spray need based at 21 days after second spray with NSKE 5% @ 5ml/litre.

- **Floriculture**

- In Western Plain Zone of Uttar Pradesh, in present weather, constant monitoring of inflorescence rotting disease in marigold crop is needed. If symptoms are found, spray Bavistin @ 1 gm per litre of water.
- In Himachal Pradesh, present weather is conducive for the attack of inflorescence rotting disease in marigold crop for control spray Bavistin @ 1 gm per litre of water or Indofil-M 45 @ 2 ml per litre of water and undertake intercultural operations and weeding in flower beds after current spells of rain. The flowers affected with aphids, for control spray Malathion @ 0.05%, and apply light and frequent irrigation after current spells of rain.
- In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhopur districts of Flood Prone Eastern Plain Zone, prevailing weather condition is congenial for attack of aphid in rose, for control spray Malathion @ 0.1% at the most three times at 10 day intervals.
- In Valley Temperate Zone of Jammu and Kashmir, complete planting of spring flowering bulbs of tulip, iris, daffodils etc. Complete transplanting of winter flowering annuals. Complete pruning of trees.

- **Apiculture**

- In Himachal Pradesh, give the winter packing immediately to bee colonies. Check the colonies for nector and give artificial food to honey bees as there is scarcity of flowers during these days. And keep colonies in sun on clear day.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, protect bee colonies from extreme climatic conditions through reduced entrance and proper packing. Keep colonies at a place where sunlight is properly received. Maintain adequate reserves of honey and pollen in the bee colony. Maintain bee strength by giving sealed brood to weak colonies, or unite them. Continue sulphur dusting at fortnight interval.

- **Animal Husbandry**

- In High Hills Temperate Dry Zone of Himachal Pradesh, protect the newly born calves and animals from cold. Feed pregnant and lactating cows and buffalos with balance feed including mineral mixture. For milch animals follow schedule of 1 kg feed+50g mineral mixtures per 2 litres of milk. Ensure to give 50 g mineral mixture to animals daily. Ensure cleanliness in cows having advanced pregnancy to avoid mastitis.
- In Punjab, new born calves need special care in cold weather. They are susceptible to Pneumonia. Keep them warm by providing clean and dry bedding. Give them vitamin 'A' concentrate 1 ml daily in milk for three days to be repeated after a month.
- In Haryana, keep the animals under roof at night and in the sun during the day time. Dry bedding to animals helps to save them from cold.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, give special care to young calves as they are more sensitive to pneumonia. Protect the pregnant and milch animals from cold and feed them mineral mixture

regularly. Provide dry bedding during night. Use dry gunny bags as bedding material for protection against low night temperatures.

- Bhabar and Tarai Zone of Uttarakhand, *Toxocara vitulorum* (patera) are found in the food tube of buffalo calf in the age of 1-4 month. More than 50% buffalo calf should be died because of delay in treatment. Piperazine should be given to the infected calf on identification of Patera disease.
- **Fishery**
 - In Himachal Pradesh, disinfect the fish tank by draining out the water and exposing the bottom floor of the tank to direct sunlight.
 - In Jammu & Kashmir, farmers should not further add any manure/fertilizer/feed for some days in case of appearance of algal bloom in the fish pond. Remove algal bloom by the addition of fresh water in to the fish pond.
- **Poultry**
 - In Himachal Pradesh, replace the poultry houses with fresh litter to avoid wetting and keep the houses clean and ensure clean drinking water to the birds. Protect the birds from cold and increase the feed by 10%. For the attack of coccidiosis disease consult the nearby veterinarian. Temperature is falling so farmers are advised to make the arrangements for protection of cold in the poultry houses.
 - In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, in poultry shed, keep temperature 37 deg. Celcius for day old chicks in brooding house with the bukhari.
 - In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, cover the poultry shed with gunny bags in order to protect the birds from cold weather.
 - In Haryana, provide curtains at the windows in poultry sheds. Keep the chicks warm by giving them artificial heat according to age.

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

Annexure I

Sub-Divisions	18.01.17		25.01.17		01.02.17	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	0.0	-100	0.0	-100	3.9	-88
Dibang Valley	1.0	-94	0.0	-100	25.0	-26
East Kameng	0.0	-100	0.0	-100	0.0	-100
East Siang	0.0	-100	0.0	-100	0.9	-94
Kurung Kumey	**	**	**	**	**	**
Lohit	0.0	-100	0.0	-100	5.6	-62
Lower Dibang Valley	2.1	-87	0.0	-100	6.2	-82
Lower Subansari	**	**	**	**	**	**
Papumpare	0.0	-100	0.0	-100	1.4	-82
Tawang	0.0	-100	0.0	-100	6.0	-19
Tirap	0.0	-100	0.0	-100	1.8	-86
Upper Siang	0.8	-94	0.0	-100	25.2	-34
Upper Subansari	0.0	-100	0.0	-100	8.0	-30
West Kameng	0.0	-100	0.0	-100	0.0	-100
West Siang	5.5	-10	0.0	-100	6.0	-52
Assam&Meghalaya						
Assam						
Baksa	0.0	-100	0.0	-100	3.3	233
Barpeta	0.0	-100	0.0	-100	0.0	-100
Bongaigaon	0.0	-100	0.0	-100	0.0	-100
Cachar	0.0	-100	0.0	-100	0.0	-100
Chirang	0.0	-100	0.0	-100	0.4	-56

Darrang	**	**	**	**	**	**
Dhemaji	0.0	-100	0.0	-100	2.0	-82
Dhubri	0.0	-100	0.0	-100	0.8	-68
Dibrugarh	0.0	-100	0.0	-100	2.0	-83
Goalpara	0.0	-100	0.0	-100	0.8	-69
Golaghat	0.0	-100	0.0	-100	2.6	-40
Hailakandi	0.0	-100	0.0	-100	0.0	-100
Jorhat	0.0	-100	0.0	-100	2.4	-69
Kamrup(Rural)	0.0	-100	0.0	-100	0.0	-100
Kamrup(Metro)	0.0	-100	0.0	-100	0.0	-100
Karbi Anglong	0.0	-100	0.0	-100	0.0	-100
Karimganj	0.0	-100	0.0	-100	0.0	-100
Kokrajhar	0.0	-100	0.0	-100	0.0	-100
Lakhimpur	0.0	-100	0.0	-100	0.9	-92
Morigaon	0.0	-100	0.0	-100	0.0	-100
N.C.Hills	0.0	-100	0.0	-100	0.0	-100
Nagaon	0.0	-100	0.0	-100	0.0	-100
Nalbari	0.0	-100	0.0	-100	4.6	35
Sonitpur	0.0	-100	0.0	-100	2.2	-24
Sibsagar	0.0	-100	0.0	-100	1.2	-84
Tinsukia	0.0	-100	0.0	-100	5.9	-35
Udalgiri	0.0	-100	0.0	-100	0.5	-86
Meghalaya						
East Garo Hills	0.0	-100	0.0	-100	0.0	-100
East Khasi Hills	0.0	-100	0.0	-100	0.1	-98
Jaintia Hills	0.0	-100	0.0	-100	0.0	-100
Ribhoi	0.3	-89	0.0	-100	0.3	-89
South Garo Hills	0.0	-100	0.0	-100	4.0	700
West Garo Hills	0.0	-100	0.0	-100	1.0	100
West Khasi Hills	0.0	-100	0.0	-100	2.0	-55
NMMT						
Mizoram						
Aizwal	0.0	-100	0.0	-100	0.0	-100
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	0.0	-100	0.0	-100	0.0	-100
Mamit	**	**	**	**	**	**
Saiha	0.0	-100	0.0	-100	0.0	-100
Serchhip	0.0	-100	0.0	-100	0.0	-100
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	**	**	**	**	**	**
Churachandpur	**	**	**	**	**	**
Imphal east	0.0	-100	0.0	-100	0.0	-100
Imphal west	0.0	-100	0.0	-100	0.0	-100
Senapati	0.0	-100	0.0	-100	0.0	-100
Tamenglong	**	**	**	**	**	**
Thoubal	**	**	**	**	**	**

Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	0.0	-100	0.0	-100	0.0	-100
Kephire	**	**	**	**	**	**
Kohima	0.0	-100	0.0	-100	0.0	-100
Longleng	**	**	**	**	**	**
Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	0.0	-100	0.0	-100	0.0	-100
Tuensang	**	**	**	**	**	**
Wokha	0.0	-100	0.0	-100	0.0	-100
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	0.0	-100	0.0	-100	0.0	-100
NorthTripura	0.0	-100	0.0	-100	0.0	-100
SouthTripura	0.0	-100	0.0	-100	0.0	-100
West Tripura	0.0	-100	0.0	-100	0.0	-100
Himachal Pradesh						
Bilaspur	27.5	212	0.0	-100	90.3	210
Chamba	39.3	94	14.9	-56	78.9	88
Hamirpur	13.0	15	**	**	72.0	148
Kangra	15.2	-20	0.5	-97	53.8	101
Kinnaur	25.1	15	23.6	19	54.5	63
Kullu	26.3	38	18.2	2	67.3	118
Lahaul and Spiti	21.8	-19	40.3	30	80.6	97
Mandi	19.2	52	0.2	-99	50.6	92
Shimla	17.2	16	3.4	-77	32.5	36
Sirmaur	8.7	-35	0.7	-94	31.7	54
Solan	10.0	-25	0.3	-98	93.6	238
Una	7.2	-29	0.0	-100	44.1	127
Punjab						
Amritsar	7.0	-3	0.8	-85	35.6	266
Barnala	0.0	-100	0.0	-100	13.0	21
Bhatinda	1.0	-17	0.0	-100	10.6	88
Faridkot	0.0	-100	4.6	31	8.9	65
Fatehgarh Saheb	1.3	-49	0.0	-100	51.7	338
Ferozpur	0.3	-94	2.4	-1	6.4	19
Gurdaspur	21.5	87	2.7	-79	51.4	145
Hoshiarpur	4.2	-47	0.0	-100	32.8	119
Jalandhar	5.5	0	0.0	-100	24.5	119
Kapurthala	4.8	53	2.3	-64	18.8	64
Ludhiana	1.8	-57	0.0	-100	25.7	160
Mansa	0.0	-100	2.8	4	5.5	-2
Moga	4.0	25	3.4	-47	9.0	20
Muktesar	0.0	-100	0.9	-77	4.4	-12
Nawashahar	4.7	-15	0.0	-100	51.5	184
Patiala	1.8	-20	1.0	-82	39.7	203
Ropar	10.0	33	0.0	-100	60.8	399

Sangrur	1.5	-36	0.6	-85	32.7	314
Mohali	2.0	-65	0.0	-100	57.0	371
TarnTaran	11.0	378	0.0	-100	40.0	441
Haryana,Chd,Delhi						
Haryana						
Ambala	0.4	-96	0.7	-90	56.7	333
Bhiwani	0.0	-100	0.0	-100	16.6	254
Chandigarh	1.9	-65	0.1	-99	56.9	187
Faridabad	0.0	-100	0.0	-100	14.0	159
Fatehabad	0.0	-100	4.4	-15	13.8	229
Gurgaon	0.0	-100	1.2	-8	27.2	635
Hissar	0.0	-100	1.3	-21	18.6	430
Jhajar	0.0	-100	0.0	-100	18.5	373
Jind	1.0	-62	0.5	-71	26.5	464
Katihai	0.3	-94	0.0	-100	37.2	552
Karnal	2.8	-58	0.4	-94	30.2	232
Kurukshetra	0.0	-100	1.7	-64	30.7	181
Mahendragarh	0.0	-100	0.0	-100	17.0	415
Mewat	0.0	-100	0.0	-100	26.0	863
Palwal	0.0	-100	0.0	-100	14.3	360
Panchkkula	3.0	-70	0.5	-94	38.8	119
Panipat	0.0	-100	0.0	-100	31.4	324
Rewari	0.0	-100	0.0	-100	36.7	1310
Rohtak	0.0	-100	0.0	-100	21.2	190
Sirsa	0.0	-100	0.0	-100	10.0	104
Sonepat	0.0	-100	0.0	-100	28.5	312
Yamunanagar	0.3	-97	1.3	-86	38.0	214
Delhi						
Central Delhi	0.0	-100	0.0	-100	17.0	204
East Delhi	1.0	-69	0.0	-100	29.0	418
New Delhi	0.0	-100	0.0	-100	28.3	405
North Delhi	0.5	-84	0.0	-100	23.6	321
North East Delhi	0.0	-100	0.0	-100	30.0	436
North West Delhi	0.0	-100	0.0	-100	37.3	567
South Delhi	1.5	-53	0.0	-100	33.8	504
South West Delhi	0.0	-100	0.0	-100	38.4	585
West Delhi	**	**	**	**	42.0	650
Jammu & Kashmir						
Anantnag	32.8	73	30.3	38	132.0	389
Badgam	21.2	74	17.2	29	63.5	175
Bandipore	**	**	**	**	**	**
Baramula	11.9	-55	116.5	291	125.4	215
Doda	74.2	92	22.6	-13	139.2	362
Ganderbal	17.2	74	44.6	179	49.4	135
Jammu	24.0	97	4.6	-51	99.5	350
Kargil	0.1	-97	0.0	-100	**	**
Kathua	20.0	-6	3.6	-78	79.4	228
Kistwar	**	**	**	**	**	**
Kulgam	74.6	882	44.9	61	131.4	495

Kupwara	26.5	22	49.6	125	67.1	168
Ladakh(Leh)	0.1	-98	0.0	-100	14.2	911
Poonch	**	**	**	**	**	**
Pulwama	60.2	871	11.0	11	79.0	367
Rajouri	8.6	-56	28.4	193	87.0	342
Ramban	76.7	122	46.4	37	199.0	332
Reasi	39.7	127	13.8	-43	101.8	146
Samba	16.7	37	1.9	-79	67.5	205
Shopian	**	**	**	**	**	**
Srinagar	31.9	222	31.3	96	68.4	225
Udhampur	70.5	184	9.9	-62	185.4	444
East Madhya Pradesh						
Anuppur	0.0	-100	0.0	-100	0.0	-100
Balaghat	0.0	-100	0.0	-100	0.0	-100
Chhatarpur	0.0	-100	0.0	-100	0.3	-95
Chindwara	0.0	-100	0.0	-100	0.0	-100
Damoh	0.0	-100	0.0	-100	1.0	-83
Dindori	0.0	-100	0.0	-100	1.0	-83
Jabalpur	0.0	-100	0.0	-100	1.0	-74
Katni	0.0	-100	0.0	-100	3.0	-29
Mandla	0.0	-100	0.0	-100	0.0	-100
Narsingpur	0.0	-100	0.0	-100	0.6	-81
Panna	0.0	-100	0.0	-100	1.0	-81
Rewa	0.0	-100	0.0	-100	1.4	-75
Sagar	0.0	-100	0.0	-100	0.8	-81
Satna	0.0	-100	0.0	-100	2.4	-59
Seoni	0.0	-100	0.0	-100	0.0	-100
Shahdol	0.0	-100	0.0	-100	0.0	-100
Sidhi	0.0	-100	0.0	-100	1.4	-70
Singrauli	0.0	-100	0.0	-100	0.0	-100
Tikamgarh	0.0	-100	0.0	-100	0.5	-91
Umaria	0.0	-100	0.0	-100	0.3	-96
West Madhya Pradesh						
Agar	0.0	-100	0.0	-100	0.3	200
Alirajpur	0.0	-100	0.0	-100	0.0	-100
Asoknagar	0.0	-100	0.0	-100	1.8	46
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	0.0	-100	0.0	-100	1.2	13
Bhind	0.0	-100	0.0	-100	27.9	1016
Bhopal	0.0	-100	0.0	-100	3.4	0
Burhanpur	0.0	-100	0.0	-100	3.1	338
Datia	0.0	-100	0.0	-100	26.8	857
Dewas	0.0	-100	0.0	-100	0.7	-61
Dhar	0.0	-100	0.0	-100	0.1	-76
Guna	0.0	-100	2.3	-15	3.7	19
Gwalior	0.0	-100	0.0	-100	30.1	736
Harda	0.0	-100	0.0	-100	0.0	-100
Hoshangabad	0.0	-100	0.0	-100	1.7	-50

Indore	0.0	-100	0.0	-100	0.0	-100
Jhabua	0.0	-100	0.0	-100	0.0	-100
Khandwa	0.0	-100	0.0	-100	0.0	-100
Khargone	0.0	-100	0.0	-100	0.0	-100
Mandsaur	0.0	-100	0.0	-100	0.5	-29
Morena	0.0	-100	0.0	-100	20.3	600
Neemuch	0.0	-100	0.0	-100	1.3	90
Raisen	0.0	-100	0.0	-100	2.8	77
Rajgarh	0.0	-100	0.0	-100	0.0	-100
Ratlam	0.0	-100	0.0	-100	0.0	-100
Sehore	0.0	-100	0.0	-100	1.7	-25
Shajapur	0.0	-100	0.0	-100	0.0	-100
Sheopur Kalani	0.0	-100	0.0	-100	5.8	161
Shivpuri	0.0	-100	0.0	-100	16.0	264
Ujjain	0.0	-100	0.0	-100	0.0	-100
Vidisha	0.0	-100	0.0	-100	0.2	-93
Chhattisgarh						
Balod	0.0	-100	0.0	-100	0.0	-100
Baloda Bazar	0.0	-100	0.0	-100	0.0	-100
Balrampur	0.0	-100	0.0	-100	0.0	-100
Bastar	0.0	-100	0.0	-100	0.0	-100
Bemetara	0.0	-100	0.0	-100	0.0	-100
Bijapur	0.0	-100	0.0	-100	0.0	-100
Bilaspur	0.0	-100	0.0	-100	0.0	-100
Dantewara	0.0	-100	0.0	-100	0.0	-100
Dhamtari	0.0	-100	0.0	-100	0.0	-100
Durg	0.0	-100	0.0	-100	0.0	-100
Gariaband	0.0	-100	0.0	-100	0.0	-100
Janjgir	0.0	-100	0.0	-100	0.0	-100
Jashpurnagar	0.0	-100	0.0	-100	0.0	-100
Kabirdham	0.0	-100	0.0	-100	0.0	-100
Kanker	0.0	-100	0.0	-100	0.0	-100
Kondagaon	0.0	-100	0.0	-100	0.0	-100
Korba	0.0	-100	0.0	-100	0.0	-100
Koriya	0.0	-100	0.0	-100	0.0	-100
Mahasumund	0.0	-100	0.0	-100	0.0	-100
Mungeli	0.0	-100	0.0	-100	0.0	-100
Narayanpur	0.0	-100	0.0	-100	0.0	-100
Raigarh	0.0	-100	0.0	-100	0.0	-100
Raipur	0.0	-100	0.0	-100	0.0	-100
Rajnandgaon	0.0	-100	0.0	-100	0.0	-100
Sukma	0.0	-100	0.0	-100	0.0	-100
Surajpur	0.0	-100	0.0	-100	0.0	-100
Surguja	0.0	-100	0.0	-100	0.0	-100
East Uttar Pradesh						
Allahabad	0.0	-100	0.0	-100	0.2	-97
Ambedkar Nagar	0.0	-100	0.0	-100	6.0	43
Azamgarh	0.0	-100	0.0	-100	8.3	93
Bahraich	0.0	-100	0.0	-100	21.7	295

Ballia	0.0	-100	0.0	-100	3.5	-20
Balrampur	0.0	-100	0.0	-100	7.0	17
Banda	0.0	-100	0.0	-100	0.0	-100
Barabanki	0.0	-100	0.0	-100	8.0	45
Basti	0.0	-100	0.0	-100	18.2	333
Chandauli	0.0	-100	0.0	-100	1.0	-88
Deoria	0.0	-100	0.0	-100	6.5	35
Faizabad	0.0	-100	0.0	-100	14.8	190
Farrukhabad	0.0	-100	0.0	-100	6.7	91
Fatehpur	0.0	-100	0.0	-100	4.7	-39
Gazipur	0.0	-100	0.0	-100	0.0	-100
Gonda	0.0	-100	0.0	-100	10.5	119
Gorakhpur	0.0	-100	0.0	-100	6.5	12
Hardoi	0.0	-100	0.0	-100	18.8	230
Jaunpur	0.0	-100	0.0	-100	3.9	-24
Kannauj	0.0	-100	0.0	-100	24.0	411
Kanpur City	0.0	-100	0.0	-100	14.5	154
Kanpur Dehat	0.0	-100	0.0	-100	7.0	30
Kaushambi	0.0	-100	0.0	-100	0.0	-100
Kheri	0.0	-100	0.0	-100	38.5	552
Kushi nagar	0.0	-100	0.0	-100	2.5	-47
Lucknow	0.0	-100	0.0	-100	7.0	30
Maharajganj	0.0	-100	0.0	-100	5.8	-14
Mau	0.0	-100	0.0	-100	10.0	108
Mirzapur	0.0	-100	0.0	-100	0.5	-92
Pratapgarh	0.0	-100	0.0	-100	1.7	-68
RaiBareilly	0.0	-100	0.0	-100	5.0	-13
Sahuji Maharajnagar	0.0	-100	0.0	-100	0.0	-100
Sant Kabirnmagar	0.0	-100	0.0	-100	5.0	25
Sant Ravidas Nagar	0.0	-100	0.0	-100	22.0	175
Shrawasti	**	**	**	**	**	**
Sidharthnagar	0.0	-100	0.0	-100	0.0	-100
Sitapur	0.0	-100	0.0	-100	15.0	200
Sonbhadra	0.0	-100	0.0	-100	0.0	-100
Sultanpur	0.0	-100	0.0	-100	6.6	64
Unnao	0.0	-100	0.0	-100	14.0	130
Varanasi	0.0	-100	0.0	-100	4.9	-29
West Uttar Pradesh						
Agra	0.0	-100	0.0	-100	12.4	169
Aligarh	0.0	-100	0.0	-100	21.4	435
Auraiya	0.0	-100	0.0	-100	5.0	22
Badaun	0.0	-100	0.0	-100	17.6	403
Baghpat	0.0	-100	0.0	-100	54.0	757
Bareilly	0.0	-100	0.0	-100	20.8	206
Bijnor	0.1	-99	0.0	-100	5.3	-41
Bulandsahar	0.0	-100	0.0	-100	21.0	320
Etah	0.0	-100	0.0	-100	16.4	368
Etawah	0.0	-100	0.0	-100	8.0	40

Firozabad	0.0	-100	0.0	-100	13.8	331
GBNagar	0.0	-100	0.0	-100	2.0	-68
Ghaziabad	0.0	-100	0.0	-100	20.7	208
Hamirpur	0.0	-100	0.0	-100	3.3	-36
Jalaun	0.0	-100	0.0	-100	19.5	387
Jhansi	0.0	-100	0.0	-100	4.9	4
Jotiba Phule Nagar	0.0	-100	0.0	-100	16.0	227
Kanshiramnagar	0.0	-100	0.0	-100	21.0	425
Lalitpur	0.0	-100	0.0	-100	0.0	-100
Mahamaya Nagar	0.0	-100	0.0	-100	20.0	525
Mahoba	0.0	-100	0.0	-100	0.0	-100
Mainpuri	0.0	-100	0.0	-100	9.1	203
Mathura	0.0	-100	0.0	-100	1.0	-63
Meerut	0.0	-100	0.0	-100	17.2	172
Moradabad	0.0	-100	0.0	-100	20.9	236
Muzzaffarnagar	0.0	-100	0.0	-100	41.4	418
Pilibhit	0.0	-100	0.0	-100	12.7	131
Rampur	0.0	-100	0.0	-100	8.6	32
Saharanpur	0.0	-100	0.0	-100	24.7	162
Shahjahanpur	0.0	-100	0.0	-100	15.6	289
Uttarakhand						
Almora	0.0	-100	0.0	-100	8.0	-50
Bageshwar	0.0	-100	0.0	-100	5.7	-65
Chamoli	3.3	-69	0.0	-100	14.7	-27
Champawat	0.0	-100	0.0	-100	10.5	-22
Dehradun	6.3	-31	2.2	-83	8.1	-53
Garhwal Pauri	0.8	-88	0.0	-100	10.0	-30
Garhwal Tehri	4.0	-40	0.0	-100	14.0	-31
Haridwar	0.6	-89	0.0	-100	2.3	-81
Nainital	0.0	-100	0.0	-100	26.9	78
Pithoragarh	0.2	-98	0.0	-100	7.7	-60
Rudraprayag	6.9	-31	0.0	-100	12.8	-41
Udham Sing Nagar	0.0	-100	0.0	-100	25.7	147
Uttarkashi	10.5	-21	0.0	-100	19.1	0
Bihar						
Araria	0.0	-100	0.0	-100	0.0	-100
Arwal	0.0	-100	0.0	-100	0.0	-100
Aurangabad	0.0	-100	0.0	-100	**	**
Banka	0.0	-100	0.0	-100	**	**
Begusarai	0.0	-100	0.0	-100	0.0	-100
Bhabua	0.0	-100	0.0	-100	**	**
Bhagalpur	0.0	-100	0.0	-100	4.0	-19
Bhojpur	0.0	-100	0.0	-100	**	**
Buxar	0.0	-100	0.0	-100	**	**
Darbhanga	0.0	-100	0.0	-100	**	**
East Champaran	0.0	-100	0.0	-100	**	**
Gaya	0.0	-100	0.0	-100	0.0	-100
Gopalganj	0.0	-100	0.0	-100	**	**
Jahanabad	0.0	-100	0.0	-100	**	**

Jamui	0.0	-100	0.0	-100	**	**
Kathihar	0.0	-100	0.0	-100	**	**
Khagadia	0.0	-100	0.0	-100	**	**
Kishanganj	0.0	-100	0.0	-100	**	**
Lakhisarai	0.0	-100	0.0	-100	**	**
Madhepura	0.0	-100	0.0	-100	0.0	-100
Madhubani	0.0	-100	0.0	-100	**	**
Monghyar	0.0	-100	0.0	-100	**	**
Muzaffarpur	0.0	-100	0.0	-100	0.0	-100
Nalanda	0.0	-100	0.0	-100	**	**
Nawada	0.0	-100	0.0	-100	**	**
Patna	0.0	-100	0.0	-100	0.0	-100
Purnea	0.0	-100	0.0	-100	5.7	235
Rohtas	0.0	-100	0.0	-100	0.0	-100
Saharsha	0.0	-100	0.0	-100	**	**
Samstipur	0.0	-100	0.0	-100	**	**
Saran	0.0	-100	0.0	-100	0.0	-100
Sheikpura	0.0	-100	0.0	-100	**	**
Sheohar	0.0	-100	0.0	-100	**	**
Sitamarhi	0.0	-100	0.0	-100	**	**
Siwan	0.0	-100	0.0	-100	**	**
Supaul	0.0	-100	0.0	-100	0.0	-100
Vaishali	0.0	-100	0.0	-100	**	**
West Champaran	0.0	-100	0.0	-100	**	**
Jharkhand						
Bokaro	0.0	-100	0.0	-100	0.0	-100
Chatra	0.0	-100	0.0	-100	0.0	-100
Deoghar	0.0	-100	0.0	-100	0.0	-100
Dhanbad	0.0	-100	0.0	-100	0.0	-100
Dumka	0.0	-100	0.0	-100	0.0	-100
East Singbhum	0.0	-100	0.0	-100	0.0	-100
Garhwa	0.0	-100	0.0	-100	0.0	-100
Giridih	0.0	-100	0.0	-100	0.0	-100
Godda	0.0	-100	0.0	-100	0.0	-100
Gumla	0.0	-100	0.0	-100	0.0	-100
Hazaribagh	0.0	-100	0.0	-100	0.0	-100
Jamtara	**	**	**	**	**	**
Khunti	0.0	-100	0.0	-100	0.0	-100
Koderrna	0.0	-100	0.0	-100	0.0	-100
Latehar	0.0	-100	0.0	-100	0.0	-100
Lohardagga	0.0	-100	0.0	-100	0.0	-100
Pakur	0.0	-100	0.0	-100	0.0	-100
Palamau	0.0	-100	0.0	-100	0.0	-100
Ramgarh	**	**	**	**	**	**
Ranchi	0.0	-100	0.0	-100	0.0	-100
Sahebganj	0.0	-100	0.0	-100	0.0	-100
Saraikela	0.0	-100	0.0	-100	0.0	-100
Simdega	0.0	-100	0.0	-100	0.0	-100
West Singbhum	0.0	-100	0.0	-100	0.0	-100

East Rajasthan						
Ajmer	0.0	-100	0.0	-100	7.8	2508
Alwar	0.0	-100	0.0	-100	22.7	740
Banswara	0.0	-100	0.0	-100	0.0	-100
Baran	0.0	-100	0.0	-100	2.6	46
Bharatpur	0.0	-100	0.0	-100	21.0	951
Bhilwara	0.0	-100	0.0	-100	5.7	613
Bundi	0.0	-100	0.0	-100	4.7	289
Chittorgarh	0.0	-100	0.0	-100	4.5	395
Dausa	0.0	-100	0.0	-100	14.6	813
Dholpur	0.0	-100	0.0	-100	14.3	583
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	0.0	-100	0.0	-100	21.0	1300
Jhalawar	0.0	-100	0.0	-100	2.2	0
Jhunjhunu	0.0	-100	0.0	-100	14.3	583
Karauli	0.0	-100	0.0	-100	14.5	663
Kota	0.0	-100	0.0	-100	0.4	-72
Pratapgarh	0.0	-100	0.0	-100	0.8	33
Rajsamand	0.0	-100	0.0	-100	0.0	-100
Sawai Madhopur	0.0	-100	0.0	-100	12.3	717
Sikar	0.0	-100	0.0	-100	1.4	-11
Sirohi	0.0	-100	0.0	-100	0.0	-100
Tonk	0.0	-100	0.0	-100	13.5	2154
Udaipur	0.0	-100	0.0	-100	2.7	432
West Rajasthan						
Barmer	0.0	-100	0.0	-100	2.6	273
Bikaner	0.0	-100	0.0	-100	0.2	-89
Churu	0.0	-100	0.1	-96	20.6	1373
Hanumangarh	0.0	-100	0.0	-100	7.0	192
Jaisalmer	0.6	11	0.0	-100	2.5	409
Jalore	0.0	-100	0.0	-100	4.8	700
Jodhpur	0.0	-100	0.0	-100	9.3	1227
Nagaur	0.0	-100	0.0	-100	14.3	1330
Pali	0.0	-100	0.0	-100	4.0	400
Sri Ganganagar	0.0	-100	0.3	-73	3.1	55
Gujarat Region						
Ahmedabad	0.0	-100	0.0	-100	0.0	-100
Anand	0.0	-100	0.0	-100	0.0	-100
Aravalli	0.0	-100	0.0	-100	0.0	-100
Banaskantha	0.0	-100	0.0	-100	0.0	-100
Broach	0.0	-100	0.0	-100	0.0	-100
Chhota Udepur	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
Mahisagar	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
Vadodara	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
Botad	0.0	-100	0.0	-100	0.0	-100
Devbhoomi Dwarka	0.0	-100	0.0	-100	0.0	-100
Diu	0.0	-100	0.0	-100	0.0	-100
Gir Somnath	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
Morbi	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	1.0	-100	1.0	-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	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
Osmanabad	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	0.0	-100	0.0	-100
Bhandara	0.0	-100	0.0	-100	0.0	-100
Buldhana	0.0	-100	0.0	-100	0.3	-83
Chandrapur	0.0	-100	0.0	-100	0.0	-100
Gadchiroli	0.0	-100	0.0	-100	0.0	-100
Gondia	0.0	-100	0.0	-100	0.0	-100
Nagpur	0.0	-100	0.0	-100	0.0	-100
Wardha	0.0	-100	0.0	-100	0.0	-100
Washim	0.0	-100	0.0	-100	0.0	-100
Yeotmal	0.0	-100	0.0	-100	0.0	-100
Odisha						
Angul	0.0	-100	0.0	-100	0.0	-100
Balasore	0.0	-100	0.0	-100	0.0	-100
Bargarh	0.0	-100	0.0	-100	0.0	-100
Bhadrak	0.0	-100	0.0	-100	0.0	-100
Bolangir	0.0	-100	0.0	-100	0.0	-100
Boudh	0.0	-100	0.0	-100	0.0	-100
Cuttack	0.0	-100	0.0	-100	0.0	-100
Deogarh	0.0	-100	0.0	-100	0.0	-100
Dhenkanal	0.0	-100	0.0	-100	0.0	-100
Gajapati	0.0	-100	0.0	-100	0.0	-100
Ganjam	0.0	-100	0.0	-100	0.0	-100
Jagatsingpur	0.0	-100	0.0	-100	0.0	-100
Jajpur	0.0	-100	0.0	-100	0.0	-100
Jharsuguda	0.0	-100	0.0	-100	0.0	-100
Kalahandi	0.0	-100	0.0	-100	0.0	-100
Kandhamal	0.0	-100	0.0	-100	0.0	-100
Kendrapara	0.0	-100	0.0	-100	0.0	-100
Keonjhar	0.0	-100	0.0	-100	0.1	-98
Khurda	0.0	-100	0.0	-100	0.0	-100
Koraput	0.0	-100	0.0	-100	0.0	-100
Malkangiri	0.0	-100	0.0	-100	0.0	-100
Mayurbhanj	0.0	-100	0.0	-100	0.1	-98
Nawapara	0.0	-100	0.0	-100	0.0	-100
Nawarangpur	0.0	-100	0.0	-100	0.0	-100
Nayagarh	0.0	-100	0.0	-100	0.0	-100
Puri	0.0	-100	0.0	-100	0.0	-100
Rayagada	0.0	-100	0.0	-100	0.0	-100
Sambalpur	0.0	-100	0.0	-100	0.0	-100
Sonepur	0.0	-100	0.0	-100	0.0	-100
Sundargarh	0.0	-100	0.0	-100	0.0	-100

West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	58.3	243	210.8	1170	3.4	-88
North & Middle Andaman	1.0	-29	2.7	-51	0.0	-100
South Andaman	3.0	-44	51.8	825	0.0	-100
GWB						
Bankura	0.0	-100	0.0	-100	0.0	-100
Birbhum	0.0	-100	0.0	-100	0.0	-100
Burdwan	0.0	-100	0.0	-100	0.0	-100
East Midnapore	0.0	-100	0.0	-100	0.0	-100
Hooghly	0.0	-100	0.0	-100	0.0	-100
Howrah	0.0	-100	0.0	-100	0.0	-100
Kolkata	0.0	-100	0.0	-100	0.1	-98
Murshidabad	0.0	-100	0.0	-100	0.0	-100
Nadia	0.0	-100	0.0	-100	0.0	-100
24 Pargana (N)	0.0	-100	0.0	-100	0.0	-100
Purulia	0.0	-100	0.0	-100	0.0	-100
24 Pargana (S)	0.0	-100	0.0	-100	0.0	-100
West Midnapore	0.0	-100	0.0	-100	0.0	-100
SHWB & Sikkim						
Cooch Behar	0.0	-100	0.0	-100	0.1	-93
Darjeeling	0.7	-92	0.0	-100	0.0	-100
East Sikkim	0.0	-100	0.0	-100	1.8	-88
Jalpaiguri	1.0	-73	0.0	-100	0.0	-100
Malda	0.0	-100	0.0	-100	0.0	-100
North Dinajpur	0.0	-100	0.0	-100	0.0	-100
North Sikkim	2.2	-85	0.0	-100	0.9	-96
South Dinajpur	0.0	-100	0.0	-100	0.0	-100
South Sikkim	0.0	-100	0.0	-100	0.0	-100
West Sikkim	**	**	**	**	**	**
Karnataka						
Coastal Karnataka						
Dakshina Kannada	0.0	-100	0.0	-100	4.2	1296
Udupi	0.0	-100	0.0	-100	0.0	-100
Uttara Kannada	0.0	-100	0.0	-100	0.0	-100
NI Karnataka						
Bagalkote	0.0	-100	0.0	-100	0.0	-100
Belagavi	0.0	-100	0.0	-100	0.0	-100
Bidar	0.0	-100	0.0	-100	0.0	-100
Dharwad	0.0	-100	0.0	-100	0.0	-100
Gadag	0.0	-100	0.0	-100	0.0	-100
Haveri	0.0	-100	0.0	-100	0.0	-100
Kalaburgi	0.0	-100	0.0	-100	0.0	-100
Koppal	0.0	-100	0.0	-100	0.0	-100
Raichur	0.0	-100	0.0	-100	0.0	-100
Vijayapura	0.0	-100	0.0	-100	0.0	-100
Yadgir	0.0	-100	0.0	-100	0.0	-100
SI Karnataka						

Ballari	0.0	-100	0.0	-100	0.0	-100
Bangalore Rural	0.0	-100	0.0	-100	0.9	350
Bangalore Urban	0.0	-100	0.0	-100	0.4	6
Chamarajanagar	0.0	-100	0.0	-100	0.0	-100
Chikaballapur	0.0	-100	0.0	-100	0.7	33
Chikkamagaluru	0.0	-100	0.0	-100	0.3	40
Chitradurga	0.0	-100	0.0	-100	0.0	-100
Davangere	0.0	-100	0.0	-100	0.0	-100
Hassan	0.0	-100	0.0	-100	9.1	9011
Kodagu	0.0	-100	0.0	-100	54.7	9013
Kolar	0.0	-100	0.0	-100	15.0	2406
Mandya	0.0	-100	0.0	-100	3.3	3200
Mysuru	0.0	-100	0.0	-100	12.3	1657
Ramanagara	0.0	-100	0.0	-100	1.9	200
Shivamogga	0.0	-100	0.0	-100	0.2	200
Tumakuru	0.0	-100	0.0	-100	5.4	801
Kerala						
Alappuzha	0.0	-100	1.6	-64	28.3	1246
Kannur	0.0	-100	0.0	-100	11.5	11350
Ernakulam	0.0	-100	3.8	57	13.1	669
Idukki	0.0	-100	7.7	174	5.1	60
Kasaragod	0.0	-100	0.0	-100	18.1	2486
Kollam	0.0	-100	6.5	133	15.0	384
Kottayam	0.0	-100	0.0	-100	23.2	673
Kozhikode	0.0	-100	0.0	-100	7.7	2467
Malappuram	0.0	-100	0.0	-100	4.0	200
Palakkad	0.0	-100	0.0	-100	0.0	-98
Pathanamthitta	0.0	-100	1.6	-65	29.3	714
Thiruvananthapuram	0.0	-100	0.2	-92	4.7	-13
Thrissur	0.0	-100	0.0	-100	1.4	186
Wyand	0.0	-100	0.0	-100	14.5	4727
Tamil Nadu						
Ariyalur	0.0	-100	45.3	3673	63.0	4748
Chennai	0.0	-100	0.0	-100	4.0	65
Coimbatore	0.0	-100	0.5	364	9.9	1319
Cuddalore	0.0	-100	28.3	1471	85.8	4414
Dharmapuri	0.0	-100	0.0	-100	8.4	735
Dindigul	0.0	-100	17.8	1381	20.5	2173
Erode	0.0	-100	3.3	728	7.5	971
Kanchipuram	0.0	-100	0.1	-95	15.7	945
Kanyakumari	0.0	-100	0.4	-82	1.5	-64
Karaikal	0.0	-100	101.0	2490	78.5	3468
Karur	0.0	-100	9.4	1471	7.8	1460
Krishnagiri	0.0	-100	0.2	-17	5.5	2667
Madurai	0.0	-100	28.2	2718	4.5	224
Nagapattinam	0.0	-100	72.2	394	63.8	1893
Namakkal	0.0	-100	3.9	1836	2.4	496
Nilgiris	0.0	-100	11.0	214	47.2	1287
Perambalur	0.0	-100	6.3	1150	18.0	2471

Puducherry	2.1	-28	78.0	2416	25.8	1885
Pudukottai	0.0	-100	33.5	1575	20.4	2813
Ramanathapuram	0.5	-94	22.4	504	37.1	1961
Salem	0.0	-100	1.8	163	10.4	2500
Sivaganga	0.0	-100	44.6	2129	29.0	2796
Thanjavur	0.0	-100	55.5	2211	43.7	2813
Theni	0.0	-100	9.6	769	12.6	320
Tirunelveli	0.0	-100	27.3	583	37.7	1008
Tirupur	0.0	-100	3.4	3283	4.2	950
Tiruvallur	0.0	-100	0.0	-100	6.0	398
Tiruvannamalai	0.0	-100	0.0	-100	47.0	3036
Tiruvarur	0.0	-100	77.1	1506	44.5	2519
Toothukudi	0.0	-100	3.8	27	14.7	463
Trichy	0.0	-100	14.7	1234	10.0	1326
Vellore	0.0	-100	0.1	-76	23.1	1674
Villupuram	0.0	-100	2.8	244	37.5	3023
Virudhunagar	0.0	-100	11.8	592	11.5	421
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	0.0	-100	0.0	-100	0.0	-100
Guntur	0.0	-100	0.0	-100	0.0	-100
Krishna	0.0	-100	0.0	-100	0.0	-100
Nellore	0.0	-100	0.0	-100	6.6	452
Prakasam	0.0	-100	0.0	-100	0.3	-36
Sirkakulam	0.0	-100	0.0	-100	0.0	-100
Visakhapatnam	0.0	-100	0.0	-100	0.0	-100
Vizianagram	0.1	-96	0.0	-100	0.0	-100
West Godavari	0.0	-100	0.0	-100	0.0	-100
Rayalaseema						
Anantapur	0.0	-100	0.0	-100	0.2	-66
Chittoor	0.0	-100	0.0	-100	15.5	2996
Cuddapah	0.0	-100	0.0	-100	1.5	200
Kurnool	0.0	-100	0.0	-100	0.0	-100
Telangana						
Adilabad	0.0	-100	0.0	-100	0.0	-100
Hyderabad	0.0	-100	0.0	-100	0.0	-100
Karimnagar	0.0	-100	0.0	-100	0.0	-100
Khammam	0.0	-100	0.0	-100	0.0	-100
Mehabubnagar	0.0	-100	0.0	-100	0.0	-100
Medak	0.0	-100	0.0	-100	0.0	-100
Nalgonda	0.0	-100	0.0	-100	0.0	-100
Nizamabad	0.0	-100	0.0	-100	0.0	-100
Rangareddy	0.0	-100	0.0	-100	0.0	-100
Warangal	0.0	-100	0.0	-100	0.0	-100

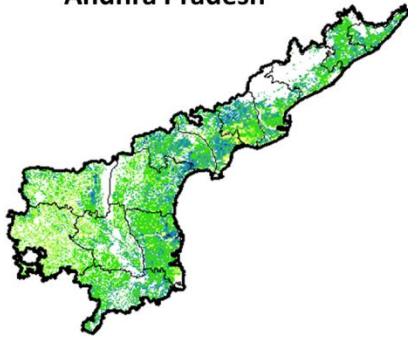
Legends

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

Annexure II

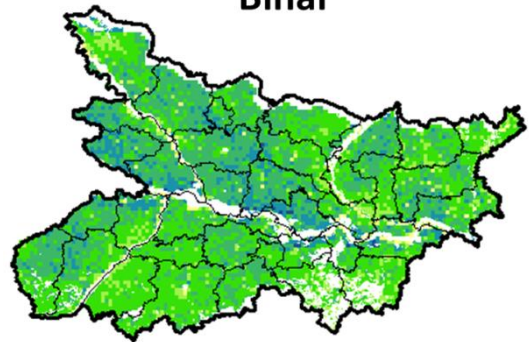
**NOAA/A VHRR NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON
02nd February 2017 FOR DIFFERENT STATES**

Andhra Pradesh



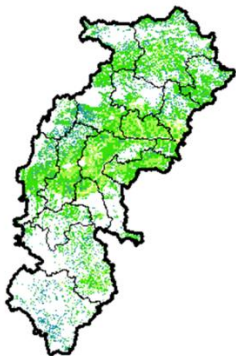
Agriculture vigour is moderate over southern and patches in costal part whereas, patches in central region and Rayalseema shows good to very good NDVI in the state of Andhra Pradesh.

Bihar



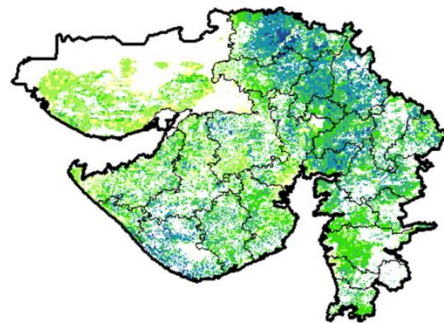
Agriculture vigour is moderate over entire state of Bihar, few patches in central and east shows good NDVI.

Chhattisgarh



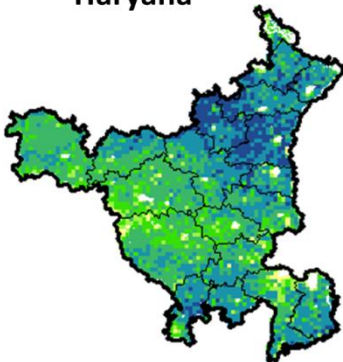
Agriculture vigour is good in southern region whereas, moderate vigour is seen in central and northern region of Chhattisgarh.

Gujarat



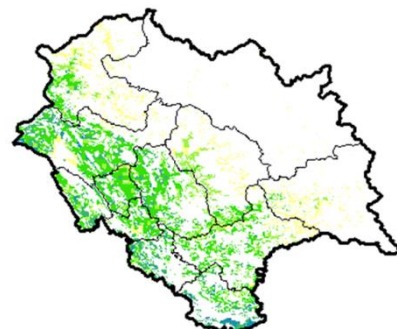
Moderate NDVI values are observed in patches in Kutch whereas, good to very good NDVI is observed in patches in Saurashtra and Gujarat.

Haryana



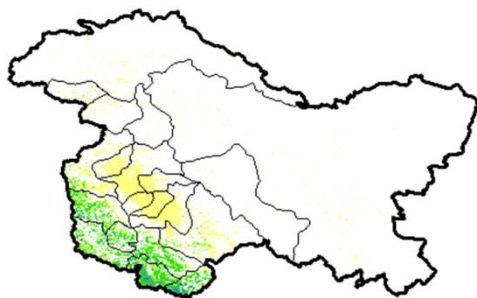
Good to very good agriculture vigour is observed over entire state of Haryana, moderate vigour is seen in patches in central and east part of Haryana.

Himachal Pradesh



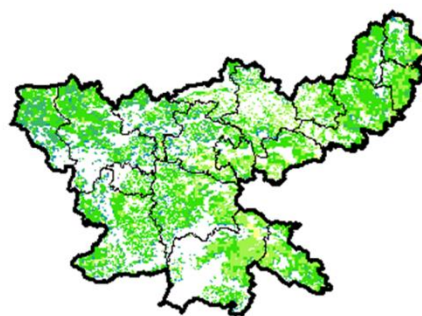
Agriculture vigour is moderate to good in few patches of Himachal Pradesh.

Jammu & Kashmir



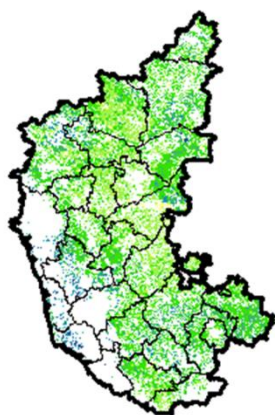
Agriculture vigour is moderate over entire state of Jammu & Kashmir.

Jharkhand



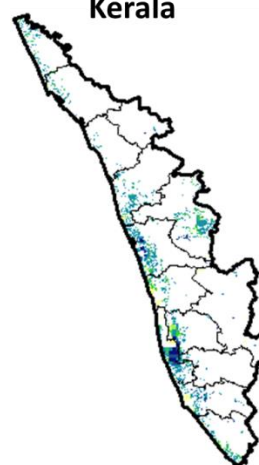
Agriculture vigour is good over patches in central region of Jharkhand whereas, remaining states shows moderate NDVI values.

Karnataka



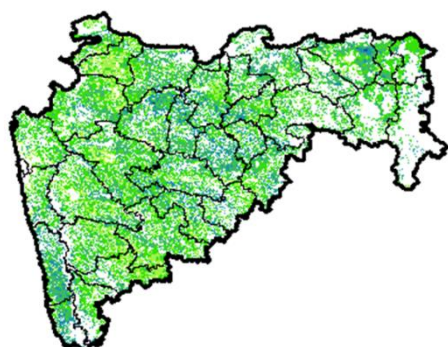
Agriculture vigour is good in patches over costal Karnataka and northern region of the state whereas rest of the state shows moderate vigour.

Kerala



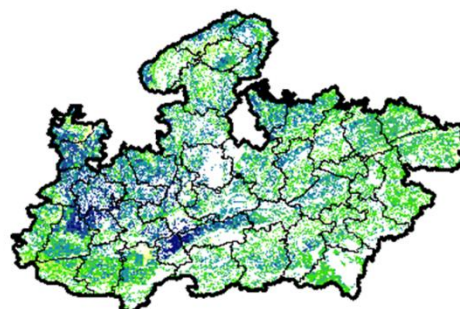
Agriculture vigour is good over entire state of Kerala except central part which shows moderate NDVI values.

Maharashtra



Agricultural vigour is moderate over central Maharashtra and eastern part of Vidharbha whereas, good to very good vigour is observed in the north, Konkan and eastern regions.

Madhya Pradesh



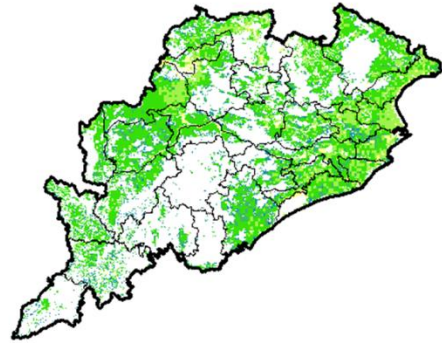
Agriculture vigour is good to very good over many places in state of Madhya Pradesh whereas, eastern and southern part shows moderate vigour.

North East Region



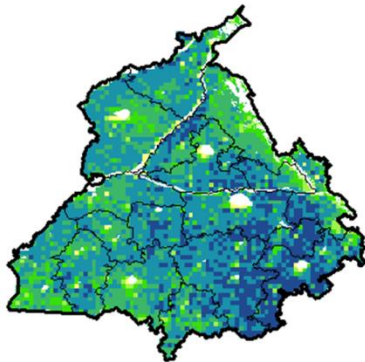
Agriculture vigour is moderate over most of the parts in North-Eastern states, whereas few patches in Assam, Manipur and Arunachal Pradesh show good vigour.

Odisha



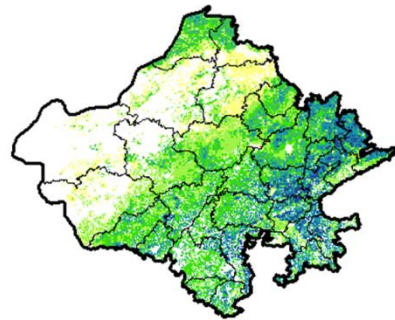
Agricultural vigour is good over many patches over of Odisha whereas, moderate vigour is observed over the entire state.

Punjab



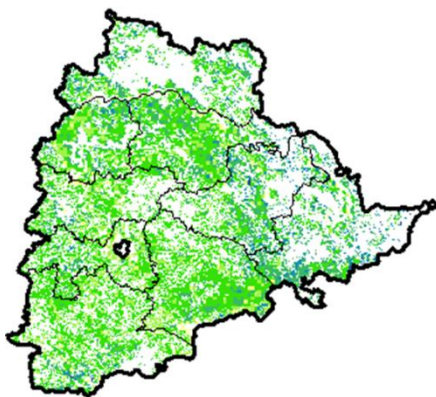
Agricultural vigour is good to very good in over entire state of Punjab, whereas few patches in north and west shows moderate vigour.

Rajasthan



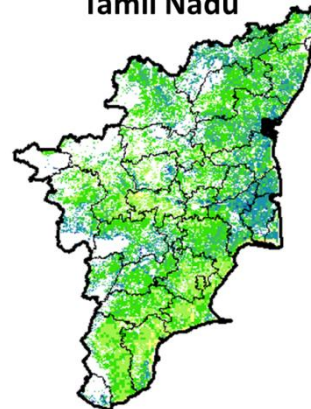
Agriculture vigour is good to very good over eastern and southern Rajasthan whereas, moderate vigour is observed over rest of the region.

Telangana

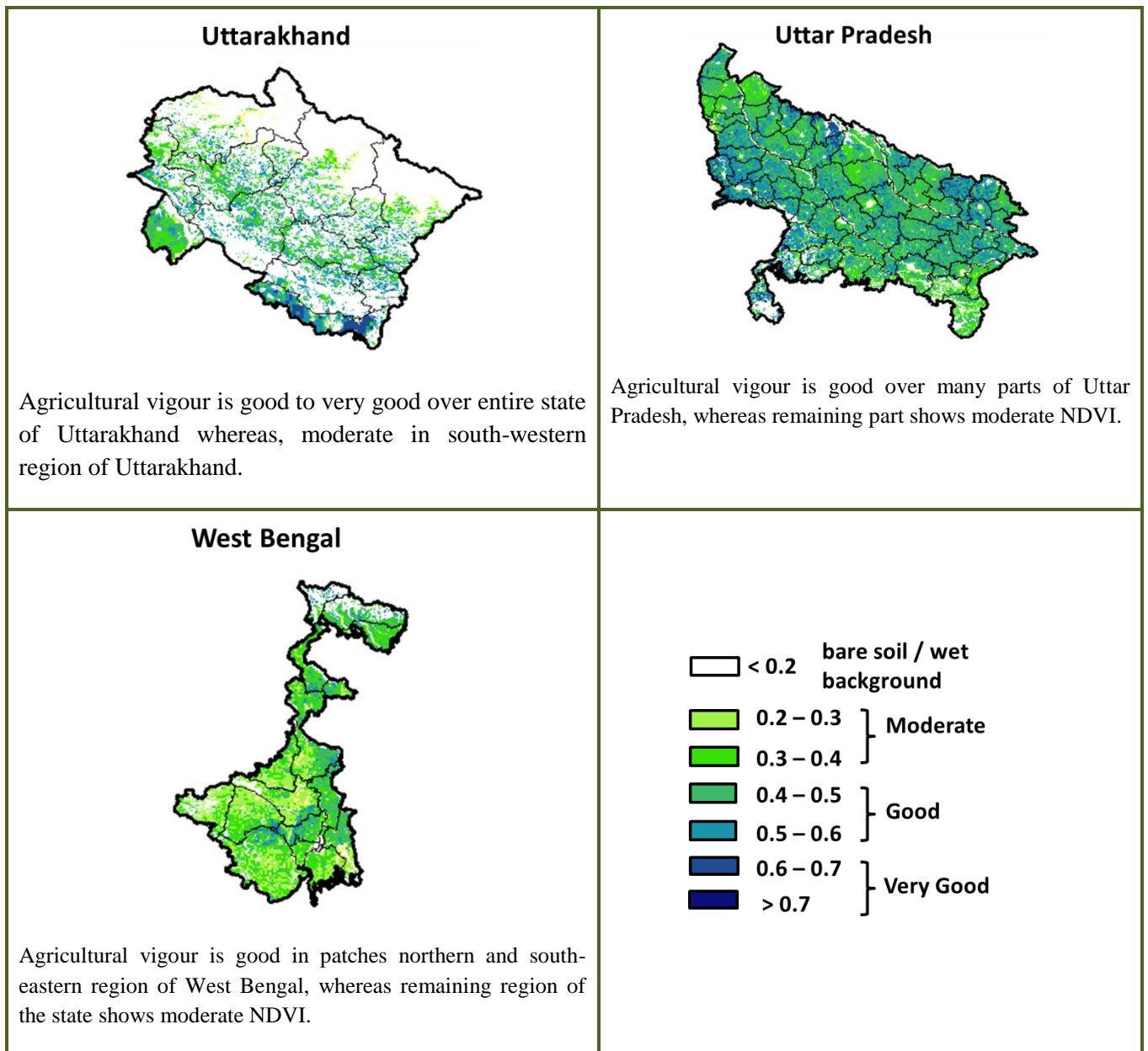


Agriculture vigour is good over northern and eastern region of Telangana whereas, moderate vigour is observed in rest of the region.

Tamil Nadu



Agricultural vigour is moderate over most region of Tamil Nadu, whereas central region and patches in north shows good to very good NDVI.



* For New Delhi NOAA/AVHRR NDVI COMPOSITE Map is not available due to some problem in data set.

Annexure III

- Assam**
- Winter brinjal:** Pusa Kranti, Pusa Purple Long, Pusa Purple Round, Pusa Vairab, Pant Samra.
- Tomato :** Punjab Chhuhara, S-12, Punjab Kesri, Pusa Early Dwarf, Sioux, Pusa Ruby, VC- 48-1, Arka Abha (BWR-1), Arka Alok (BWR-5), BT-1, Bilahi-1, Bilahi-2).
- Potato :** Kufri Chandramukhi, Kufri Jyoti, Kufri Megha, Kufri Badshah, Kufri Sindhuri.
- Onion :** Pusa Red, Pusa Ratnar, Pusa white (Round), Pusa white (Flat), N-53, Agrifound Light Red, Punjab Red Round, Pusa Madhuri, Arka Niketan.
- Cauliflower :** Early Kunwari, Pusa Katki and Pusa Deepali (for early maturity).
Improved Japanese, Pusa Synthetic, Pusa Snowhall (for mid maturity).
Snowball-16, Pusa Snowball, K-1 and Hissar 1 (for late maturity)etc.
- Cabbage :** Golden Acre, Pride of India, Pusa Mukta (Sel – 8) (for early maturity).
Drum Head and Eclipse Drum Head (for late maturity).
- Knol-Khol :** White Vienna (for early maturity).
Purple Viena (for late maturity).

Odisha:

- Green pea:** Rachana, Arkel. and T -163.
- Mustard:** Parbhathi, Anuradha, TS-29 & M-27.
- Garlic:** Phawari, Rajalbadi, Jamnagar and G-282
- Potato:** Kufri Chandramukhi, Kufri Chamatkar, Kufri Jyoti, Kufri Sinduri and Kufri Alankar, etc

Greengram- TARM1, OUM11-5, Hum-1
Blackgram-PU-19, LBG-17
Gram-Radhey, Annegiri, Sweta, Bharati, JG 11
Groundnut:are Smruti, AK 12-24, JL-24.

Bihar

Pigeon pea: Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13.
Sesame: Kanak, kalika, Uma, Usha, Tilottama, Neelima and Prachi
Green gram: K -851, PDM -54, PDM -11, OUM 11-5
Balck gram: T-9, Pant-U-19. Pant –U-30, Pant –U-11
Niger: Deomali
Horsegram : Urmi, DS 1-2-2, DS 1-2
Barseem:Pusa Vikash, Bundel and of Jai- Kent.
Garlic:Jamuna Safed-2(G-50), Jamuna Safed-3(G-282), and Jamuna Safed-4 (G-323), G-1 and G-41(Agri found safed).
Rai:Baruna, Pusa bold, Kranti, Pusa mahak and Rajendra suflam.
Coriander:Rajendra swati, Pant haritima, Kumarganj selection and Hisar anand.
Lentil:Mallika (K-75), Arun (PL77-12), KLS-218, HUL-57, PL-5.

Jharkhand

Potato: Kufri Ashoka, Kufri Pukhraj, Kufri Lalima, Kufri Pushkar and Kufri Kanchan.
Toria: BR-23, T.-9, P.T. 303, Panchali and Bhavani.
Green pea: Arkel or Azad pea.

West Bengal

Coconut: Eastcoastal, Hazari
Banana:Mortoman, Chapa, Kathali, Singapuri,
Mustard:Varuna, Sita and Bhagirathi.
Jute : Chaitali, Basudev, Naveen, Sonali, Sobujsona, Shyamali etc.
Cabbage :Pride of India, Pusa early, Kranti.
Cauliflower : Jawhar moti, Bharat Jyoti, Early banaras.
Potato :Ashoka, Chipsona 1,2, Kufri Jyoti, Kufri Alankar
Mustard: Agrani(B-54), Panchali (T.W.C.-3), B-9, Rai-5 and Bhagirothi (R.W.-351)

Uttarakhand

Onoin:VL-Pyaj-3,Nasik Red,Pusa Red
Pea: Vivek 10,Vivek 11,Pant 3,
Radish:Meenu early, Japanese white, PusaHimani.
Carrot:PusaVrishi,
Mentha: Koshi, Saksham, Kushal, Himalaya, Saryu, Sim kranti .

Jammu and Kashmir

Pea: AP-1, Bonnevillea, Rachna and Arkel
Chickpea: K-468, Gourav
Lentil: L-4147, L-9/12,PL-406.
Berseem:Vardan, mascavi, pusa giant, BL-1
Potato: Kufri Badshah, K.Sinduri, K.Chipsona & K.Sona

Himachal Pradesh

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

East Uttar Pradesh

Radish:kalyanpur No.1, Pusa Rashmi, Hisar selection-1, Japani Safed, pusa Chetaki, Pusa Himani,Pusa deshi, Arka Nishant and Jaunpuri.
Cabbage: Pusa snowball, Pusa snowball II, Snowball 16 and Pusa snowball K1

West Uttar Pradesh

Vegetable pea: Azad-3, Aakril
Pea: KPRM-522, KPRM-400, Vikas, Prakash

Punjab

Sugarcane: CoJ-85, CoJ-83, CoJ-64 (early maturing), COH-119, CoJ-88, CoS-8436 for and CoJ-89,CO118, COJ85, COJ64.
Radish: Punjab Pasand and Japanese white.

Turnip: L-1.

Carrot: Punjab Black Beauty, Punjab Carrot Red and PC-34.

Tomato: TH-1, Punjab Ratta, Punjab NR 7, Punjab Chuhara, Punjab Upma, Castle Rock.

Okra: Punjab-8 and Punjab-7

Cauliflower: Pusa Snow Ball-1, Pusa Snow Ball K-1

East Rajasthan:

Cauliflower: Pusa snow ball K-1, Hisar-1, Dania and Selection-7 are improved varieties.

Carrot: Pusa Keshar is improved variety.

Radish: Japanese white & hill queen.

Bottle gourd: Pusa summer prolific long, Pusa summer prolific round, Pusa manjri, Pusa Navin, Pusa Meghdoot, Arka vihar.

Pumpkin: Pusa viswas, Pusa alankar, arka chandan

Kheera : Balam khira, Pusa sayong

Bitter gourd: Coimbatore long, Pusa domosami, Priya, Ark harit, Pusa vishesh

Tinda: Bikaner green, Dil pasand, Tinda Ludhiana, Arka Tinda

Cucumber: Lakhnow Ageti, Arka sheetal

West Rajasthan

Cumin: RZ-19, RZ-209, GG-4, RZ-223.

Fenugreek : RMT 1 & RMT305.

Bhindi: Ark Anamika, varshauphar, Parbhanikranti, pusamakhmali.

Radish: Japanese white & hill queen.

Chhattisgarh

Sugarcane: CO 86032, CO 419, CO 1305, CO J 86-141, CO 6304, CO 8338, CO 6217, CO 775, CO J 2087.

Karnataka

Sugarcane: CO-86032, 740, 671.

Telangana

Sesamum: SwethaThil, Chandana, Hima, Gouri, Madhavi.

Tomato: Pusa rubi, Pusa early dwarf, Marutham, Arkha, meghali, Arkha sourab, Arkha vikas

Bhendi: Parbhani kranti, Arkha anamika, Arkha abhaya

Tamil Nadu:

Rice: Navarai season rice