



# *National Agromet Advisory Service Bulletin*



*Friday 27<sup>th</sup> January 2017*

*(For the period 27<sup>th</sup> to 31<sup>st</sup> January 2017)*



*Issued by*

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

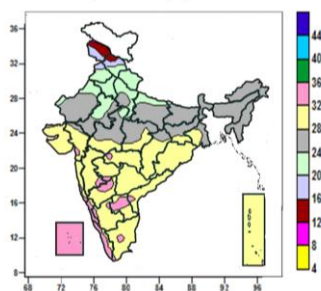
**Weblink For**

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

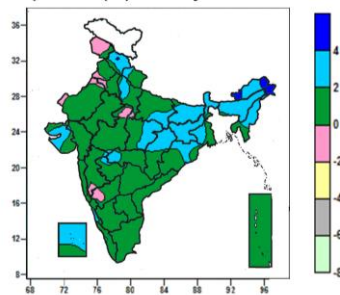
**State Composite AAS Bulletin:** <http://www.imdagrimet.gov.in/node/3544>

**Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 25.01.2017**

**Actual Mean Maximum Temperature ( $^{\circ}\text{C}$ ) in India for the week ending 25.01.2017**



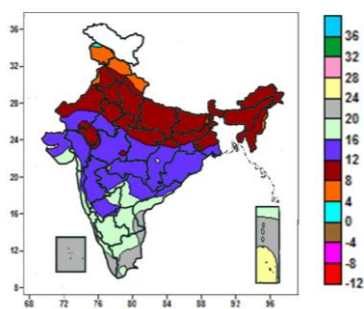
**Mean Maximum Temperature ( $^{\circ}\text{C}$ ) Anomaly in India for the week ending 25.01.2017**



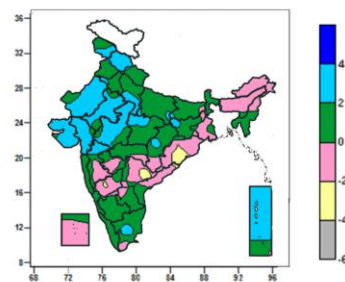
- Mean maximum temperature was between 32 to 36 $^{\circ}\text{C}$  over Lakshadweep, many parts of Coastal Karnataka, Kerala, some parts of North Interior Karnataka, Rayalaseema and isolated pockets of Gujarat Region, Maharashtra, South Interior Karnataka, Coastal Andhra Pradesh and Tamil Nadu.
- Mean maximum temperature was between 28 to 32 $^{\circ}\text{C}$  over Telangana, Odisha and Andaman & Nicobar Islands, many parts of Gujarat, Maharashtra, Chhattisgarh, Interior Karnataka, Rayalaseema, Coastal Andhra Pradesh, Tamil Nadu, some parts of Madhya Pradesh, Jharkhand and Gangetic West Bengal, Coastal Karnataka and Kerala.
- Mean maximum temperature was between 20 to 28 $^{\circ}\text{C}$  over rest of the Country except some parts of Jammu & Kashmir and Himachal Pradesh and Punjab where it was between 16 to 20 $^{\circ}\text{C}$  and many parts of Jammu & Kashmir and some parts of Himachal Pradesh, where it was between 12 to 16 $^{\circ}\text{C}$ .

- Mean maximum temperature was above normal by 4 to 6 $^{\circ}\text{C}$  over some parts of Arunachal Pradesh and isolated pocket of Himachal Pradesh and Assam.
- Mean maximum temperature was above normal by 2 to 4 $^{\circ}\text{C}$  over Sikkim, Jharkhand, Meghalaya, Nagaland, Manipur, many parts of Himachal Pradesh, Bihar, Sub Himalayan West Bengal, Arunachal Pradesh, Assam, Lakshadweep, some parts of Uttarakhand, Uttar Pradesh, Saurashtra & Kutch, Vidarbha, East Madhya Pradesh, Chhattisgarh, Gangetic West Bengal, Odisha, Mizoram and isolated pockets of Haryana & Delhi, Gujarat Region, West Madhya Pradesh, Madhya Maharashtra, Marathwada, Coastal Karnataka and Kerala.
- It was normal to near normal over rest of the country.

**Actual Mean Minimum Temperature ( $^{\circ}\text{C}$ ) in India for the week ending 25.01.2017**



**Mean Minimum Temperature ( $^{\circ}\text{C}$ ) Anomaly in India for the week ending 25.01.2017**



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

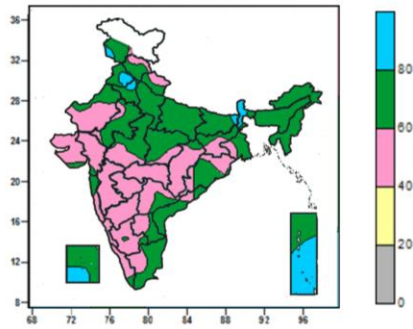
- Mean minimum temperature was above normal by 2 to 4 $^{\circ}\text{C}$  over many parts of Himachal Pradesh, Rajasthan, Gujarat, West Madhya Pradesh, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, West Uttar Pradesh, East Madhya Pradesh, Madhya Maharashtra and isolated pockets of Haryana, East Uttar Pradesh, Bihar, Jharkhand, Chhattisgarh and Tamil Nadu.
- Mean minimum temperature was normal to near normal over rest of the country except some parts of Telangana, Odisha and isolated pockets of North Interior Karnataka and Coastal Andhra Pradesh, where it was below normal by 2 to 4 $^{\circ}\text{C}$ .

Region.

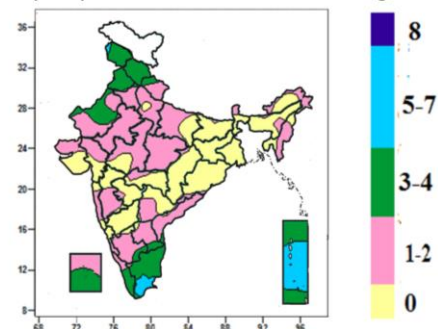
- Mean minimum temperature was between 12 to 20<sup>0</sup>C over rest of the Country except Lakshadweep, many parts of Kerala, Tamil Nadu, Andaman & Nicobar Islands, some parts of Coastal Andhra Pradesh, Rayalaseema and isolated pocket of Coastal Karnataka, where it was between 20 to 24<sup>0</sup>C and some parts of Andaman & Nicobar Islands, where it was between 24 to 28<sup>0</sup>C.

**Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 25.01.2017**

**Relative Humidity (%) over India for the week ending 25.01.2017**



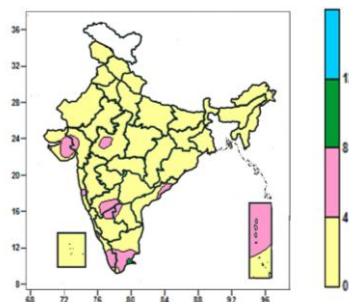
**Cloud amount (okta) over India for the week ending 25.01.2017**



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

- Sky remained generally cloudy (5-7okta) over many parts of Andaman & Nicobar Islands, some parts of Tamil Nadu and isolated pocket of Jammu & Kashmir.
- Sky remained partly cloudy (3-4 okta) over Himachal Pradesh, many parts of Jammu & Kashmir, Punjab, Kerala, Tamil Nadu, Lakshadweep, some parts of Uttarakhand, West Rajasthan, South Interior Karnataka, Rayalaseema, Andaman & Nicobar Islands and isolated pockets of Haryana and Coastal Andhra Pradesh.
- Sky remained mainly clear/clear sky (1-2 okta/0 okta) over rest of the country.

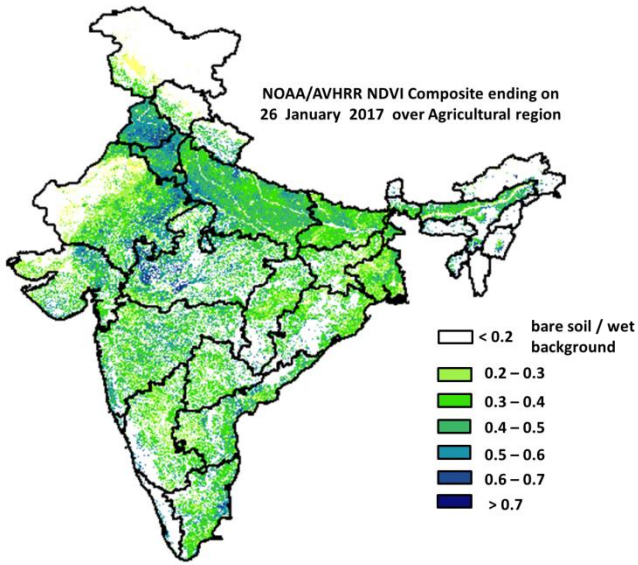
**Wind speed (knots) over India for the week ending 25.01.2017**



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

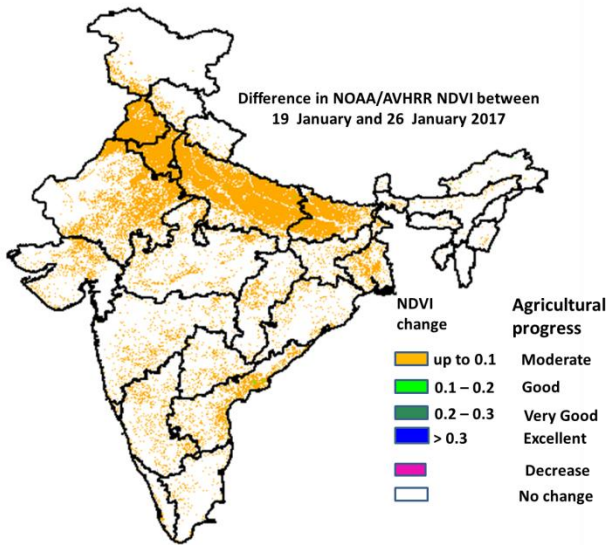


**NOAA/AVHRR NDVI composite ending on 26<sup>th</sup> January 2017 over Agricultural region of India**



- 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, West Uttar Pradesh and North-east, where NDVI value varies from 0.5 to 0.7. NDVI is moderate in rest Rajasthan, rest Punjab, rest 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 19<sup>th</sup> January and 26<sup>th</sup> January 2017**

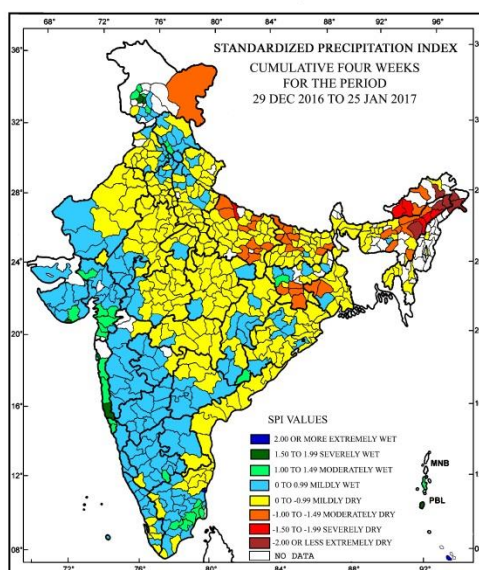


- Moderate progress in NDVI was observed in Punjab, Haryana, Madhya Pradesh, Rajasthan, Uttar Pradesh, Bihar, and patches in Maharashtra, Gujarat, Karnataka, Kerala, Tamil Nadu, Telangana, Andhra Pradesh, North-East Region, Jharkhand, West Bengal and Chhattisgarh. Good progress was observed in few patches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

- NOAA/AVHRR NDVI composite maps for the week ending on 26<sup>th</sup> January 2017 for different States are given in Annexure II.

## Standardised Precipitation Index Four Weekly for the period 29<sup>th</sup> December 2016 to 25<sup>th</sup> January 2017

MINISTRY OF EARTH SCIENCES  
INDIA METEOROLOGICAL DEPARTMENT  
HYDROMET SECTION, PUNE



- Extremely/severely wet conditions experienced in few districts of Konkan & Goa; South Andaman district of Andaman & Nicobar Islands; Badgam, Pulwama districts of Jammu & Kashmir; Diu district of Saurashtra & Kutch; Puducherry district of Tamil Nadu & Puducherry.
- Extremely/Severely dry conditions experienced in many districts of Arunachal Pradesh; few districts of Assam; Bahraich district of Uttar Pradesh.
- Moderately dry conditions experienced in few districts of Arunachal Pradesh and Assam; East Khasi Hills district of Meghalaya; Bankura, Purulia districts of West Bengal; Gumla, Ranchi, West Singhbhum, Khunti districts of Jharkhand; Bhagalpur, East Champaran, West Champaran, Katihar, Muzaffarpur, Patna, Saran, Siwan districts of Bihar; Allahabad, Basti, Faizabad, Ghazipur, Jaunpur, Kheri, Mirzapur, Siddharth Nagar, Sitapur, Varanasi districts of Uttar Pradesh; Ladakh (Leh) district of Jammu & Kashmir.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

## Weather Forecast for next 5 days valid upto 0830 hours of 1<sup>st</sup> February 2017

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- Minimum temperature very likely to fall by 2-3°C over Bihar, Gangetic West Bengal and Jharkhand and Central India from tomorrow onwards during subsequent 48 hours.
- Minimum temperature very likely to fall by 1-2°C over Gujarat, 2-3°C over north Madhya Maharashtra and 2-4°C over Punjab, Haryana, Chandigarh & Delhi, Rajasthan, West Uttar Pradesh during next 48 hours.
- Maximum temperature very likely to rise by 2-5°C over Punjab, Haryana, Chandigarh & Delhi, Rajasthan and Uttar Pradesh during next 48 hours.
- No significant change in temperature over rest of the country.
- Dense fog very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi, north Rajasthan, West Uttar Pradesh and north Madhya Pradesh during next 2 days and over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 29<sup>th</sup> and 30<sup>th</sup>. Shallow to Moderate fog very likely at isolated places over Bihar and West Bengal 28<sup>th</sup> & 29<sup>th</sup>.

### 5 Day Rainfall Forecast (MID DAY) 27<sup>th</sup> January 2017

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

#### % Station Reporting Rainfall

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

### Weather Warning during next 5 days

- **27 January (Day 1):** Heavy rain very likely at isolated places over Kerala and coastal Tamilnadu. Dense fog at isolated places over Punjab, Haryana, Chandigarh & Delhi, north Rajasthan, West Uttar Pradesh and

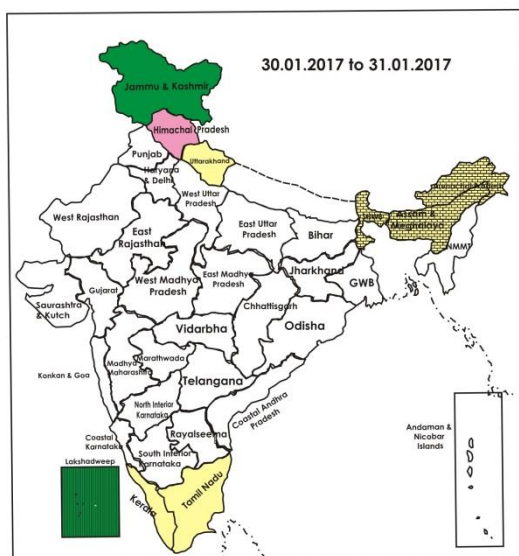
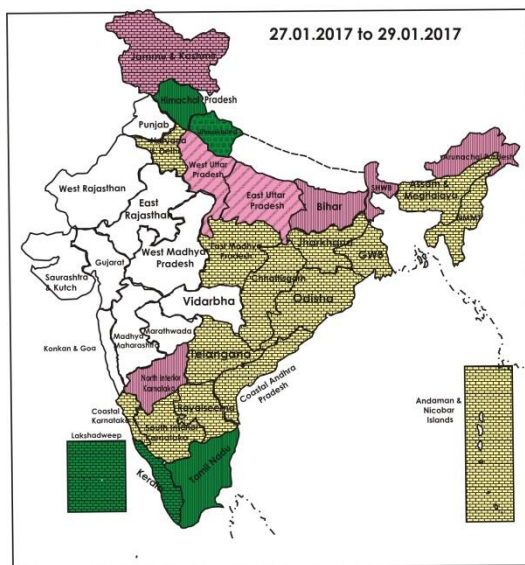
north Madhya Pradesh.

- **28 January (Day 2):** Heavy rain very likely at isolated places over Kerala, south coastal Tamilnadu and Lakshadweep. Dense fog at isolated places over Punjab, Haryana, Chandigarh & Delhi, north Rajasthan, Uttar Pradesh and north Madhya Pradesh.
- **29 January (Day 3):** Dense fog at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **30 January (Day 4):** Dense fog at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **31 January (Day 5):** No weather warning.

**Weather Outlook for subsequent 2 days from 1<sup>st</sup> to 3<sup>rd</sup> February 2017**

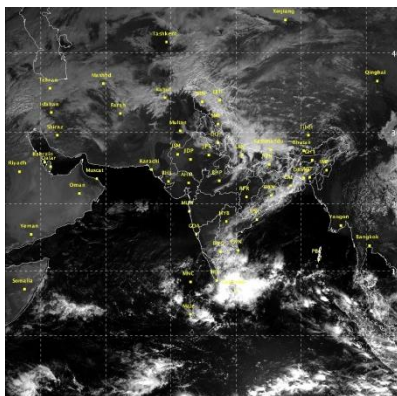
- Rain/snow at a few places very likely over Western Himalayan region.
- Rain at isolated places likely over Andaman & Nicobar Islands and extreme south Peninsular India.

**Weather Forecast Map (valid upto 0830 hours of 1<sup>st</sup> February 2017)**





### Satellite image dated, 27.01.2017, 0600 UTC



### Salient Advisories

- As rain/snow very likely at many places over **Uttarakhand** and **Himachal Pradesh** on 27<sup>th</sup> and over **Jammu & Kashmir** on 30<sup>th</sup> & 31<sup>st</sup> January, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Clean the drainage channels to avoid snow deposition and accumulation of water in the fields.
- In **Jammu & Kashmir**, in view of the heavy rain/snow during past few days, 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 **Tamil Nadu & Puducherry** and **Kerala** on 27<sup>th</sup> & 28<sup>th</sup> Jan., along with heavy rain at isolated places over Kerala, over coastal **Tamil Nadu** on 27<sup>th</sup> and **south coastal Tamil Nadu** on 28<sup>th</sup> Jan., postpone irrigation, application of fertilizers and plant protection measures in standing crops. Avoid harvesting of matured crops and keep already harvested produce at safer places.
- As dense fog very likely at isolated places over **Punjab, Haryana, Chandigarh & Delhi, north Rajasthan, West Uttar Pradesh** and **north Madhya Pradesh** during next 2 days and over **Assam & Meghalaya** and **Nagaland, Manipur, Mizoram & Tripura** on 29<sup>th</sup> & 30<sup>th</sup> ; shallow to moderate fog very likely at isolated places over **Bihar** and **West Bengal** on 28<sup>th</sup> & 29<sup>th</sup> Jan., 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.
- 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 infestation of yellow rust on wheat, if observed, apply prophylactic spray on the crop with Propiconazole (Tilt) 25 EC @ 0.1 % (1ml/litre of water) after current spells of rain. Also there may be incidence of wilt & blight in pulse crops( gram); if symptoms observed drench the affected spots with carbendazin @ 1 ml in 1 litre of water after current spells of rain.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts of **Himachal Pradesh**, present weather is conducive for attack of yellow rust in the wheat crop. Monitor the crop and if noticed, 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 after current spells of rain and repeat the spray after 15 days interval.
- In **Haryana**, due to prevailing high humidity, infection of early blight may occur in tomato and potato, constant monitoring is advised, if observed, then spray recommended pesticide.



## Detailed Zonewise Agromet Advisories

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



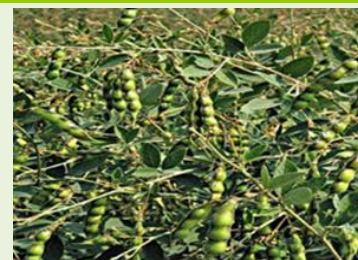
**Banana**



**Rice**



**Sugarcane**



**Red gram**

- **Realised Rainfall:** Rainfall occurred over Ariyalur, Cuddalore, Karaikal, Madurai, Nagapattinam, Puducherry, Pudukkottai, Ramanathapuram, Sivaganga, Thanjavur, Tirunelveli and Thiruvavur districts of Tamil Nadu. Weather was dry over rest of the region.
- **Realised Minimum Temperature:** Minimum temperatures are markedly above normal ( 5.1°C and above) at a few places over South Interior Karnataka and at isolated places over Tamilnadu; appreciably above normal (3.1°C to 5.0°C) at many places over Telangana, at a few places over Kerala; above normal (1.6°C to 3.0°C) at many places over Coastal Andhra Pradesh, at a few places over North Interior Karnataka, Coastal Karnataka and near normal over rest of the region.
- **Advisories:**
  - As rain/thundershowers very likely at many places over Tamil Nadu & Puducherry and Kerala on 27<sup>th</sup> & 28<sup>th</sup> Jan., along with heavy rain at isolated places over Kerala, over coastal Tamil Nadu on 27<sup>th</sup> and south coastal Tamil Nadu on 28<sup>th</sup> Jan., postpone irrigation, application of fertilizers and plant protection methods in standing crops. Avoid harvesting of matured crops and keep already harvested produce at safe places.
  - **Andhra Pradesh:**
    - In the North Coastal Zone, continue transplanting of ragi, planting of sugarcane after sett treatment with Propiconazol @ 1.0 ml/litre of water for 15 minutes before planting and sowing of sesame after seed treatment with Mancozeb @ 3 g/kg seed. Apply gypsum @ 200 kg/ac followed by hoeing in groundnut crop (flowering to pod development) to improve pod yield.
    - In the Krishna Godavari Zone, provide light irrigation to sugarcane and Bengal gram crop as dry weather is prevailing in all the districts.
    - In the High Altitude Tribal Zone, continue planting of sugarcane, before planting undertake hot water treatment of setts @ 52<sup>o</sup>C for 30 minutes to avoid diseases like whip smut and red rot and complete nursery sowing of rice and picking of cotton.
    - In Chittoor and Kadapa districts of the Southern Zone, continue planting of sugarcane.
    - In the Scarce Rainfall Zone of Rayalaseema, sucking pest and bud borer incidence was noticed in oranges. For control, spray Profenofos @ 2ml/litre or Imidacloprid @ 0.3ml/litre of water. Undertake spraying of formula-4 @ 2.5-3gm/litre of water on oranges (flowering & fruit setting stage) to minimize micro nutrients deficiency.
    - In Chittoor district of the Southern Zone, prevailing dry weather conditions are congenial for incidences of early blight and late blight in tomato. To control, spray Chlorothalonil @ 2 g. or Redomil MZ @ 2.5 ml/litre of water. In Kadapa district, as the temperatures are increasing, there is possibility of increase in incidence in sucking pests which will spread viral diseases in sunflower. To control the sucking pests, spray Thiomethoxam @ 40 g/acre.
    - In the Krishna Godavari Zone, prevailing weather condition (fog in morning, variation in minimum and maximum temperature) is congenial for incidence of rice blast in rabi rice. To control, spray Prophiconazole @ 1ml or Hexconazole @ 2ml or 0.4 g Treploxystobin @ 0.4mg/litre of water. If the intensity is more, it can be managed by spraying 1.5 ml Isoprothionale @ 1.5ml or Casucamicine @ 2.5 ml/per litre of water.
  - **Telangana:**
    - In North Telangana Zone, undertake sowing of sunflower and continue nursery sowing of tomato, bhendi, sesamum and transplanting of early sown rice. Provide one or two light irrigations at pre-flowering and seed formation stages in Bengal gram and spray 2% DAP or Urea at pre-flowering stage to increase yield.
    - In South Telangana Zone, incidence of diamond back moth is noticed in cabbage and cauliflower. To control, spray Acephate @ 1.5 g or Spinosad @ 0.3 ml/litre of water 15 days after harvesting of the crop. Prevailing weather conditions are congenial for the incidence of hoppers and powdery mildew in mango. To control, Hoppers, -Spray Chlorpyrifos @ 2.5ml or Carbaryl @ 3 g per litre of water and for Powdery Mildew, spray Wetable Sulphur @ 3 g or Karathane @ 1 ml per litre of water. Incidence of sterility mosaic virus is noticed in rabi red gram. To control, spray Wetable Sulphur @ 3g or Karathane @ 3 ml/litre of water twice at weekly interval.
    - In North Telangana Zone, ragi pink borer incidence was noticed in maize. To control, undertake whorl application of Carbofuran 3G @ 3 kg/acre at 25-30 DAS.

▪ **Tamil Nadu:**

- In Tamil Nadu, as rain is expected, avoid harvesting of matured samba rice, sorghum and maize cobs and keep already harvested produce at safe places.
- In the Cauvery Delta Zone, provide adequate drainage facilities to drain the excess rainwater present in the paddy and rice fallow pulse fields to improve better aeration in the root zone. Continue 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 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 fluorescens* @ 10 g/kg seed.
- In the Western Zone, moderate rain is anticipated rectify the ring basin in all the tree crops and ensure rain water harvest in the root zone. Avoid top dressing of fertilizer to Navarai rice. Ensure adequate drainage system. Utilizing the anticipated rainfall, apply 2<sup>nd</sup> top dressing @ 45kg urea and 16 kg potash/ha as dig and place method to 65 days old winter Combodia cotton, which is at boll bursting stage.
- In the North Western Zone, undertake sowing of castor under rainfed condition and apply enriched castor micronutrient mixture @ 3 kg/ac for varieties or 4 kg/ac for hybrid varieties.
- In the High Altitude Zone, form trenches in soil around the plants will facilitate to utilize the forth coming light to moderate rainfall.
- In the High Rainfall Zone, as heavy winds are expected, staking should be given to banana trees.
- In the High Altitude Zone, spray Neem oil or Quinosphos 25% EC @ 2.5ml/litre of water on a non rainy day to control scale insects and mealy bug in coffee plantation.

▪ **Kerala:**

- In the High Altitude Zone, undertake sowing of vegetables like amaranths, bitter gourd, cucumber, water melon, snake gourd, bottle gourd etc.
- In the Problem Area Zone, seedlings of vegetables may be treated with *Pseudomonas* @10 g/litre of water for 20 minutes before planting.
- In the Northern Zone, drain out water from rice fields completely for early and uniform hardening of the grains.
- In the Northern Zone, apply Azadiractin 3000ppm stock after diluting in water @ 3ml/litre of water to control gundhi bug noticed in late sown rice crops in eastern hilly tracts. To have better control, add and stir one to two ml. of Malathion 50EC/litre of the diluted Azadiractin solution before applying in the evening, immediately after sunset on a non rainy day.
- In Thiruvananthapuram district of the Southern Zone, after harvesting of rice, if sufficient water is available, cowpea and other vegetables can be raised after the second crop to increase the fertility of soil. Apply two tonnes of organic manure while land preparation.
- In the Central Zone, due to increase in temperature, there is increase in attack of insects such as aphids, white flies, hoppers, etc in vegetables. As a result of this, there is a chance of stunted growth in vegetables. It can be controlled by applying 5 gms of *Verticillium* or *Metarhizium* in 1litre of water on a non rainy day and add Neem cake as manure. Neem based insecticides can also be applied.
- In the Problem Area Zone, for white fly attack on chilly, tomato and other vegetables, spray undersurface of leaves with Neemoil emulsion/Econeem/Neem azal @ 2 ml/litre or *Lecanicillium* @ 10 g/litre or insecticides like Thiamethoxam @ 0.25 g/litre or Diafenthiuron 1.2 g/litre of water on a non rainy day.

▪ **Karnataka:**

- Undertake sowing of summer groundnut under irrigation in North East Dry Zone. Apply irrigation in wheat. Continue harvesting of Bengal gram, Safflower, continue picking of late sown seed cotton.
- In Southern Dry Zone, continue ploughing in the fields where rice has been harvested.
- Remove matured arecanut for making Chali preparation in Hill Zone.
- In Bidar district of North East Transition Zone, undertake planting of sugarcane. Provide irrigation to wheat and *rabi* sorghum. Complete harvesting of pigeon pea crop.
- In Southern Transition Zone, undertake land preparation for transplanting summer paddy, continue picking of matured pods of red gram.
- In North Transition Zone, use disease free sets from 8-10 month old plantation for new planting of sugarcane. Avoid picking of cotton during early morning hours. Continue harvesting of matured Bengal gram and chilli.
- Due to high humidity and low temperature, incidence of powdery mildew is noticed in Mango orchard in Southern Dry Zone; spray 4% wettable Sulphur in one liter of water.
- Due to low temperature forecast there is chance of infestation of hoppers in mango crop in North East Zone; spray Carbaryl 50WP @ 4 g or Malathion 50EC @ 2 ml or Monocrotophos 36SL @ 1.5 ml or Phosphamidon 40EC @ 0.5 ml in one litre of water.
- In Hill Zone, as a precautionary measure, in mango, spray Malathion @ 2ml/litre of water or Monocrotophos @ 1.25 ml/litre of water for control of hoppers.
- Suitable varieties for sowing are given in Annexure III.

- **Animal Husbandry**

- In the High Altitude Zone of Tamil Nadu, sheep and goats should be dewormed and allowed to graze in the morning after the dew dries off to prevent the endoparasitic infestation in animals.
- In the Southern Zone of Tamil Nadu, due to the prevailing drought 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 per the litre of milk it gives should be provided.
- Maintain optimum room temperature in poultry by providing electric bulb in Karnataka.

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



**Banana**



**Rice**



**Cauliflower**



**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 isolated places over Assam & Meghalaya. They are appreciably above normal (3.1°C to 5.0°C) at many places over Nagaland, Manipur, Mizoram & Tripura and near normal over rest of the region.
- **Advisories:**
  - As dense fog very likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 29<sup>th</sup> & 30<sup>th</sup> Jan., monitor potato, tomato and onion crops for early/late blight disease. If symptoms are noticed undertake plant protection measures.
    - **Assam, Meghalaya & Arunachal Pradesh:**
      - In Karimganj, Hailakandi and Cachar districts of Barak Valley Zone of Assam, farmers are advised to undertake earthing up in potato just before the first and second irrigation. Apply irrigation in rajmah and cole crops.
      - In Dhemaji, Lakhimpur, Sonitpur, Dibrugarh, Golghat, Jorhat and Sibsagar districts of Upper Brahmaputra Valley Zone of Assam, continue land preparation for sowing of okra, ridge gourd and sponge gourd.
      - In North Bank Plain Zone and Hill Zone of Assam, continue transplanting of *boro* paddy if the seedlings attained 5-6 leaf stage.
      - In Marigaon and Nagaon districts of Central Brahmaputra Valley Zone of Assam, continue transplanting of *boro* paddy seedlings at 4 to 5 leaf stage (45 days old seedling). Undertake 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, apply light irrigation in rapeseed/mustard as per requirement. Continue nursery raising of tomato.
      - In Hill Zone, there is chance of attack of rice hispa & stem borer in *boro* rice. Spray Chloropyriphos @ 2ml/litre of water or Carbofuran 3G @ 4kg/bigha to control the attack.
      - In Lower Brahmaputra Valley Zone of Assam, spray Dichlorvos @ 0.5 ml per litre or Malathion @ 2 ml per litre of water against pod borer, aphid and leaf miner attack in pea and Dimecron (1 ml) or Sumithion (1.5 ml) per litre of water against stem borer in *rabi* maize.
      - In Barak Valley Zone, there may be attack of stem borer in *boro* rice at the time of tillering. To control the pest, spray Chlorpyriphos 50 EC @ 2 ml per liter of water.
      - In Central Brahmaputra Valley Zone and Hill Zone of Assam, to control blast disease in wheat, spray 2 gm Bavistin /litre of water.
      - In Arunachal Pradesh, spray Azadirachtin 0.15% EC 2@ 6ml/litre against leaf eating insects in cabbage/cauliflower, pea & other vegetables. Drench with Dichlorvos 76 EC @ 0.05% against trunk-borer in citrus.
      - 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, continue sowing of *rabi* maize and land preparation and sowing of winter vegetables.
      - In Mizoram, continue transplanting of onion, capsicum and sowing of French bean, carrot and radish and sowing of



- Zero tillage pea, toria and lentil cultivation in rice fellow. Complete sowing of rabi maize and planting of potato.
- In Tripura, continue transplanting of *boro* rice in the main fields. 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 early 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 Assam and Arunachal Pradesh, put gunny bags or plastic sheath curtains on the side walls and bedding material should be increased to protect poultry from cold. Care should be taken not to restrict ventilation.
- In Tripura, pigs need housing to keep them warm during cold nights. Sanitation is important to keep the pigs disease free.
- 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 Barak Valley Zone of Assam, treat the fishes with Potassium Permanganent (2 mg/100ml of water) or common salt (3 gm/100 ml of water) to control all fungal and bacterial diseases.
- In Tripura, during winter season, to prevent the EUS diseases in fish, apply Cifax @ 200 ml/ kani.

### WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



*Maize*



*Mustard*



*Groundnut*



*Wheat*

- **Realised Rainfall:** Weather remained dry over the region.
- **Realised Minimum Temperature:** Minimum temperatures are above normal (1.6°C to 3.0°C) at a few places over Maharashtra and near normal over rest of the region.
- **Advisories:**
  - **Maharashtra:**
    - In Konkan, in transplanted *rabi* rice, maintain water level up to 5 cm. Continue harvesting of leafy vegetables. Continue transplanting of brinjal and chill seedlings. At the time of transplanting the seedlings may be dipped in Dimethoate @ 10 ml/10 liters of water and transplant it on ridges of main field with spacing of 60 x 60 cm.
    - In Madhya Maharashtra, continue harvesting of pigeon pea. Continue planting of suru sugarcane. To increase production of wheat crop spray 19:19:19 liquid fertilizer 2% @ 20 gm per 10 lit. of water after 55 & 70<sup>th</sup> days of sowing. Continue transplanting of chilli seedlings (Phule Jyoti, Phule Mukta). Continue land preparation for summer groundnut. Continue sowing of bhendi, bitter gourd, cucumber, ridge gourd, bottle gourd. Apply irrigation to jowar at grain filling stage.
    - In Marathwada, as dry weather is prevailing, apply light irrigation to suru sugarcane, wheat, gram, maize, jowar (at grain filling stage), vegetable crops and orchards. Continue harvesting of pigeon pea. Turmeric crop is at maturity stage, before harvesting all the leaves of the crop should be removed at ground level. Continue planting of suru sugarcane. Complete nursery sowing of tomato, brinjal and chilli. Continue transplanting and apply nitrogen after transplanting.
    - In Vidarbha, as dry weather condition is prevailing, apply irrigation in vegetables, sugarcane & orchards. Continue land preparation for summer groundnut. Continue transplanting of summer rice. For transplanting of rice use 12 to 15 cm tall seedling with age of 22 to 25 days age. Continue sowing of fenugreek, spinach, radish, capsicum and carrot and nursery sowing of onion/tomato with assured irrigation.
    - In Madhya Maharashtra, due to partly cloudy weather and prevailing temperature condition, there are chances of

thrips on onion, spray Cypermethrin 25% @ 5 ml + 10 liters of water at an interval of 10-15 days.

- In Marathwada, due to partly cloudy weather and prevailing temperature condition attack of aphids is observed on wheat crop; spray Metarhizium anisopliae (Phule metarizium) @ 40 g per 10 liters of water with an interval of 8 – 10 days.

▪ **Gujarat:**

- In North Gujarat Zone and North West Zone, undertake weeding in wheat. Continue harvesting of matured spikes of castor. Apply light irrigation in fruit crops and fennel.
  - In Middle Gujarat Zone, apply light irrigation in Indian rapeseed and mustard in the evening hours.
  - In South Gujarat Heavy Rainfall Zone, continue land preparation for transplanting of rice. Continue nursery raising of tomato. Apply irrigation in rabi pulses.
  - In South Saurashtra Zone, apply irrigation in wheat, chickpea crop and in wheat in North Saurashtra Zone.
  - 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; for effective control of aphid, spray Dimethoate @ 10 ml /10 litres of water.
  - Due to cold and cloudy weather condition there is chance of incidence of leaf rust in wheat in South Saurashtra Zone; if noticed, two to three sprays of Mencozeb 30 g in 10 litres of water at 12 to 15 days interval period are advised.
  - Due to rise in temperature, there is chance of occurrence of aphids in Indian rapeseed and mustard in Middle Gujarat Zone; spray 0.1% Dimethoate 30 EC @ 10 ml in 10 litres of water.
  - Due to present weather condition there are chances of blight disease in potato crop in North Gujarat Zone; for control of early blight in potato spray Mencozeb 0.25% @ 30 g/10 litres of water and for late blight spray Metalaxil MZ (Redomel gold) @ 20 g /10 litres of water.
  - Attack of thrips and aphids in cumin has been reported in North Saurashtra Zone; spray Imidacloprid @ 5 ml/10 litres of water. In brinjal and tomato constant monitoring of borers by using pheromone traps 4-6 per acre is advised; if insect population is above ETL, spray Spinosad @ 3.0 ml/10 litres of water against fruit borer.
  - 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]**



*Red gram*



*Okra*



*Maize*



*Wheat*

- **Realised Rainfall:** Rainfall occurred in Nicobar and South Andaman districts of Andaman & Nicobar Islands. Weather remained dry over rest of the region.
- **Realised Minimum Temperature:** Minimum temperatures are markedly above normal ( 5.1°C and above) at a few places over Bihar, Sub-Himalayan West Bengal & Sikkim; appreciably above normal (3.1°C to 5.0°C) at most places over Bihar; at many places over Andaman & Nicobar Islands; at a few places over rest Gangetic West Bengal; above normal (1.6°C to 3.0°C) at a few places over Jharkhand, Odisha and near normal over rest of the region.
- **Advisories:**
  - As shallow to moderate fog very likely at isolated places over Bihar and West Bengal on 28<sup>th</sup> & 29<sup>th</sup> Jan., 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, complete land preparation and sowing of summer groundnut and sunflower. Undertaking harvesting of sugarcane. The rice seedlings at 4-5 leaf stage are ready for transplanting. Plant 2 to 3 seedling per hill at shallow and upright in lines. Seedlings root should be dipped with 10 kg Azospirillum in 6 litre water before transplanting. Keep only a thin film of water while transplanting. In SRI method of rice culture, transplant only one seedling per hill in lines at 25 cm apart with 25 cm plant to plant distance. Spray

1500 ml Stomp or 1200 ml Saturn or Butachlor in 650 litre water per acre. 3 to 4 days after transplanting to kill weeds.

- In Deogarh and Sundargarh districts of North Eastern Plateau Zone, complete sowing of mung, Biri and Peas. Complete nursery sowing 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. If noticed spray Carbendazim or Matalaxyl + Mancozeb 2g/litre of water.
- In Western Undulating Zone, there is chance of Pod borer attack in gram crops at pod formation stage. Monitor the crops and spray Triazophos or profenophos 2ml/litre of water if attack is noticed.
- In Western Undulating Zone, Aphid and powdery mildew may infest the Greengram and Blackgram crop during vegetative growth stage. Keep watch on these diseases. Spray Acephate 75% SP 400g or imidacloprid 17.8% SL 50ml to control aphids. Spray sulphur 80% WP 600g mixing with 200lit water per acre crop area to control powdery mildew.
- In East and South Eastern Coastal Plain Zone, cloudy weather favours the infestation of aphids and thrips on Rabi Groundnut, spray 400 ml Dimethoate or 50 ml. Imidacloprid in 200 ml litre water per acre. Also to control Tikka disease, spray with 500g Blitox-50 powder in 200 litre water.
- In East and South Eastern Coastal Plain Zone, pod borer has occurred in gram and pea, spray 50 ml Imidacloprid or 400 ml Dimethoate or Metasystox in 200 litre water per acre. If the pest is not controlled by above, spray Prophenophos 200 ml / 200 litre of water/acre. Spray 2% DAP at 30 DAS or at pyra flowering stage. Cold and cloudy weather favours the infestation of powdery mildew. Spray 1 kg Sulfex WP in 200 litre per acre.
- In Mid Central Table Land Zone, due to large difference between day and night temperature, there is possibility of Aphid attack in mustard and groundnut. Spray Thiomethoxam @ 1g/3l of water if the infestation crosses ETL.

▪ **West Bengal:**

- In Purba Midnapore and South 24-parganas districts of Coastal Saline Zone, undertake transplanting the seedling of *boro* rice. Before transplanting apply Bavistin @1g/litre of water in the main field.
- In Burdwan, Murshidabad, Nadia, North 24 Parganas districts of New Alluvial Zone and Bankura, Bibhum, and Purulia districts of Laterite and Red soil Zone, complete the transplanting of *boro* rice within the end of this month. Keep 2-3 cm stagnant water for next seven days to complete the root establishment.
- 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 week. 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 field.
- In Malda & Dakshin Dinajpur districts of Old Alluvial Zone, cover the nursery bed of *boro* rice with Polythene or apply irrigation at night and drain the water in the morning to protect the seedlings from cold. Spray Carbendazim @ 2 g/litre of water as precaution measure.
- In Old Alluvial Zone, to control Mustard aphid, spray Imidachloropid @ 2 ml/5 litre water at evening hour. To Control the Diamond Black Moth of Mustard, spray, Spinosad @ 1ml per litre of water at evening hour. For controlling late blight in Potato, spray (Metalaxyl + Mancozeb) @ 2 g/litre of water.
- In New Alluvial Zone, due to cloudy weather situation, attack of aphid may be found in mustard. For prevention of aphid attack apply Imidacloprid 17.8 SL @ 3 ml. /10 litre or Quinalphos 25 EC @ 2 ml/litre of water. As a control of late blight in potato, spray Blitox or Mancozeb @ 2.5g /litre of water at an interval of 5-7 days.
- In Coastal Saline Zone, there may be attack of late blight and aphids in potato at tuber formation stage due to low temperature and morning fog. For control of aphids, spray Thiamithoxon @ 3g/10 litre of water and for late blight attack above threshold level, spray a mixture of 1.5ml Metasistox and 4g Copper oxi Chloride per liter of water.
- In laterite and Red soil Zone of West Bengal, due to Cool temperature favours 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, undertake land preparation and sowing of bhendi after seed treatment with Tricoderma viride @ 4 g/kg of seed. Dip seedling of chilli in 1 % Trichoderma for one hour before transplanting to the main field for management of diseases.
- In Nicobar islands, undertake periodical cleaning of coconut crown and garden to manage pest and diseases.

▪ **Bihar:**

- In Araria, Katihar, Kishanganj, Madhepura, Purnea, Saharsa and Supaul districts in North East Alluvial Zone, irrigate the wheat crop which is about 60-65 days old crop. Broadcasting urea 2-3 days after 2<sup>nd</sup> irrigation. Weeding must be done before application of urea. Weeding must be done before application of urea. 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. Apply light irrigation to vegetables plants to protect from cold winds.
- In Darbhanga, East Champaran, Gopalganj, Samastipur, West Champaran districts of North West Alluvial Plain



Zone, farmers are advised to undertake planting of healthy setts of sugarcane. Before planting, setts should be treated with Carbendazim @1 gram/litre of water for disease protection and Chlorpyrifos @ 2ml/litre of water for protection against soil borne insect pests.

- In South Bihar Alluvial Zone, first irrigation should be given to late sown wheat crop if it is 21-25 days old. In timely sown wheat crop, second irrigation is recommended if crop is at tillering stage.
- In North West Alluvial Zone of Bihar, monitoring is advised for infestation of leaf feeders in cabbage & cauliflower. If insect population is found above ETL (Economic Threshold Level), then spraying of Spinosad @ 1 ml/3 liters of water is advised.
- 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 Chlorpyrifos @ 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, there may be attack of termite in wheat crop. Application of mixture of 20 kg sand with Chlorpyrifos 20 EC @ 2 litre/acre should be done in evening hours and subsequent irrigation should be done.

▪ **Jharkhand:**

- In Jharkhand, continue nursery sowing of summer rice. In South Eastern Plateau Zone, undertake transplanting of onion.
- In Central and North Eastern Plateau Zone, prepare field for 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 of Jharkhand, continue harvesting of timely sown toria crop.
- 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 +Mancozeb @ 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 benzoate 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 Central and North Eastern Plateau Zone, there may be attack of pod borer and powdery mildew disease on Green Pea. Hence, spraying of Kairathen @ 1 ml or sulfex @ 3 ml per liter of water to prevent from further spreading. To control pod borer, spray Monochrotophos @ 1 ml per liter of water.
- 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.
- In Central and North Eastern Plateau Zone, in humid weather, there may be flower drop in gram crop due to fungal attack , to control, apply Metalaxyl MZ + Mancozeb @ 1.5g /litre water and planofix @ 1ml/10 litres of water.
- Suitable varieties for sowing are given in Annexure III.

• **Animal Husbandry**

- In Odisha, it is advised to keep the animals inside the sheds and provide dry bedding and use heaters inside cattle sheds to protect them from cold. Increase protein level and minerals in the feed concentrate to keep the animals healthy to cope up with the situation. To protect the poultry from cold weather, cover the poultry shed by gunny bags or polythene during the night time. Keep the chicks warm by providing artificial light in the poultry sheds.
- In Nicobar, provide at least 16 hours light during cloudy weather to poultry and back yard rearing by providing bulbs in the shed during night.
- 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 Terai Zone of West Bengal, Vaccination is the principal way to protect animals from Black Quarter (BQ) and Foot and Mouth Disease (FMD).

• **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]



*Maize*



*Cabbage*



*Mustard*



*Wheat*

- **Realised Rainfall:** Weather remained dry over the region.
- **Realised Minimum Temperature:** Minimum temperatures are markedly above normal ( 5.1°C and above) at a few places over north Madhya Pradesh; appreciably above normal (3.1°C to 5.0°C) at a few places over rest Madhya Pradesh; above normal (1.6°C to 3.0°C) at many places over Chhattisgarh and near normal over rest of the region.
- **Advisories:**
  - **Madhya Pradesh:**
    - As dense fog very likely at isolated places over north Madhya Pradesh during next 2 days, 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.
    - In Gwalior, Bhind, Morena, Guna, Ashoknagar and Shivpuri districts, as dry weather would prevail, apply irrigation in mustard, gram and vegetables. Apply irrigation in late sown wheat after 25-30 days of sowing and continue intercultural operations. Undertake nursery preparation for summer vegetables.
    - In Malwa Plateau Zone, apply irrigation in wheat at tillering stage and in coriander at flowering stage. Continue nursery preparation of summer vegetables like tomato, chilli, brinjal etc.
    - In Chhindwara and Betul districts, apply irrigation in wheat at tillering stage and in gram at flowering stage.
    - In Vindhya Plateau Zone, apply irrigation in gram and vegetables. Apply 3<sup>rd</sup> irrigation in wheat at booting stage.
    - In Jhabua, Alirajpur and Dhar districts, apply 2<sup>nd</sup> irrigation in gram and mustard at pod filling stage. Continue picking up of matured vegetables. Apply 3<sup>rd</sup> irrigation in wheat at booting stage. Undertake nursery preparation for cucurbitaceous crops.
    - In Jabalpur, Rewa, Satna districts, apply irrigation in gram and mustard as per requirement. Apply irrigation in wheat and undertake top dressing by recommended dose of urea. Undertake application of urea followed by weeding in vegetables.
    - In Jhabua Hill Zone, due to humid weather there are chances of attack of fruit and shoot borer in okra, tomato and brinjal, spray Triazophos @ 2ml/litre of water.
    - In Bundelkhand Zone, due to cloudy weather there are chances of leaf and fruit spot disease in tomato and chilly crops, if found, spray Copper oxychloride @ 3 g per litre of water.
  - **Chhattisgarh:**
    - In North Hill Zone, apply irrigation in wheat at tillering stage and apply second dose of urea. 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 Chhattisgarh Plain Zone, apply irrigation in late sown wheat and give 2<sup>nd</sup> dose of urea.
    - In Bastar Plateau Zone, apply irrigation in standing crops. Spray 2% urea after nipping in gram crop for better branching and yield.
    - In North Hill Zone, present weather is congenial for attack of aphids in the mustard crop, spray Methyl Demeton and Dimethioate @ 0.05% at evening hours.
    - 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 Anantnag, Baramula, Doda, Ganderbal, Kulgam, Kupwara, Rajouri, Ramban, Srinagar districts of Jammu & Kashmir, Kinnaur, Lahaul and Spiti districts of Himachal Pradesh. Weather remained mainly dry over rest of the region.
- **Realised Minimum Temperature:** Minimum temperatures are markedly above normal ( 5.1°C and above) at most places over Uttarakhand & East Uttar Pradesh; appreciably above normal (3.1°C to 5.0°C) at most places over Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, at isolated places over Jammu & Kashmir and north Rajasthan; above normal (1.6°C to 3.0°C) at many places over Jammu & Kashmir, Himachal Pradesh and near normal over rest of the region. The lowest minimum temperature of 5.5°C recorded at Phalodi (West Rajasthan) in the plains of the country.
- **Advisories:**
  - As rain/snow very likely at many places over Uttarakhand and Himachal Pradesh on 27<sup>th</sup> and over Jammu & Kashmir on 30<sup>th</sup> & 31<sup>st</sup> January, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
  - As dense fog very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi, north Rajasthan and West Uttar Pradesh during next 2 days, 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.
  - **Jammu & Kashmir:**
    - In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, in view of the heavy rain/snow during the past few days, drain out excess water/ remove snow from the vegetable fields and clear drainage channels in other standing crops. Shake off snow from young fruit plants and provide staking to garden pea. Undertake top dressing of Urea to normal sown wheat and mustard crop after current spells of rain. Start preparation of nursery of summer vegetables under protected structures.
    - 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.
    - 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%. Farmers are advised to schedule the spray after rains during clear weather.
    - In Cold Arid Zone of Leh district, continue harvesting of Chinese cabbage (namely Pakchoi, leafy palampur green), Palak, knolkhol and Lettuce in protected structures. Timely hoeing and weeding should be done in protected structure for proper root aeration. Apply second dose of nitrogenous fertilizer in Cabbage, Cauliflower and Broccoli in green houses. Timely irrigation should be applied at 7-10 days intervals. The current night temperature is below - 8.5oC. Therefore the trenches and poly houses should be covered with blankets. Transplanting of HaenzSaag and other cold tolerant vegetables should be done as a second crop under poly houses.
    - In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone and Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, weather is favourable for infestation of yellow rust on wheat, if observed, apply prophylactic spray on the crop with Propiconazole (Tilt) 25 EC @ 0.1 % (1ml/litre of water) after current spells of rain. Also there may be incidence of wilt & blight in pulse crops( gram); if symptoms observed drench the affected spots with carbendazin @1 ml in 1 litre of water after current spells of rain.
    - In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, weather is congenial for infestation of Alternia Blight on mustard crop. If spots of Alternia Blight isobserved, spray Mancozeb @ 2.5g /litre of water and Ridomil MZ @ 2.5g/litre alternatively after the current spell of rain. Also there may be out break of Aphid in mustard crop, spray Rogor(Dimethoate) 30Ec @ 1ml/litre of water or Chlorpyriphos 20EC @ 2ml/litre of water.
  - **Uttarakhand:**
    - In Udham Singh Nagar district of Bhabar and Tarai Zone, in lentil and gram crop, 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. Early sowing of Mentha should be started.



- Mentha varieties like- Koshi, Saksham, Kushal, Himalaya, Saryu, Simkranti should be selected for early sowing.
- In Nainital district of Bhabar and Tarai Zone, continue harvesting of mustard in clear weather. Undertake field preparation for summer Squash (Chappankaddu) in clear weather.
  - In Udham Singh Nagar district of 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.
  - 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.
  - 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/litre of water after current spells of rain.
  - In TehriGarhwal, Chamoli, Champawat, Pithoragarh, Rudraprayag and Uttarkashi districts of Hill Zone, there may be incidence of attack of thrips on onion crop. Spray Carbaryl @ 2g/litre in water mixed with sticking material like Teepol @ 1g/litre ghol after current spells of rain.
  - In Dehradun, Pauri and Haridwar districts of Sub Humid Sub Tropic Zone, there may be incidence of Hopper, Aphids and Thrips on vegetable nursery, spray Malathion 20ml or Dimethoate @ 12ml per litre of water.
- **Himachal Pradesh:**
- 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.
  - 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 aphid in mustard, for control in early stage cut and destroy the infested part of the plant, if insect population above ETL than spray Rogar or Quinalphos @ 2.0 ml per litre of water after current spells of rain. For pod borer in the gram crop, installation of Pheromone trap @ 3-4 traps per acre is advised if flowering has reached 10-15%. "T" shaped bird perches in and around crop field to be installed for controlling insect population.
  - 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.
- **Punjab, Haryana and Delhi:**
- In Western Plain zone, keep the wheat fields free from weeds by undertaking intercultural operations. Sulphur deficiency may appear in wheat grown on sandy soils due to winter rains. In this deficiency, the younger leaves turn yellow leaving the tip slightly green. If such symptoms are noticed, broadcast gypsum @ 100 kg per acre.
  - In Central Plain Zone of Punjab, continue sowing of sunflower (PSH 1962, DK 3849, PSH 996, PSH 569, PSFH 118 and SH 3322). 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.
  - In Western Zone of Punjab, to protect vegetable crops from frost damage, provide polythene sheet/sarkanda/kahi rice straw to save the young seedlings from frost.
  - In Haryana, due to prevailing high humidity in the environment, infection of early blight may occur in tomato, constant monitoring is advisable, if observed, then spray recommended pesticide.
  - In New Delhi, weather is suitable for growing of carrot seed crop in this week. In view of optimum weather conditions, farmers are advised for transplantation of onion seedling in this week. Nursery preparation should be done for chili, tomato and brinjal crops in poly house. Continue sowing of spinach, coriander and fenugreek. In present weather condition mustard crop is in grain filling stage farmers are advised to maintain optimum moisture for proper development of grains.

- In Western Zone of Punjab, due to prevailing favourable weather conditions, there may be incidence of late and early blight of potato, spray Indofil M 45 @ 500 g/acre to control the disease.
- 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. For monitoring of the pod borer in the gram crop, farmers are advised to install Pheromone trap @ 3-4 traps per acre, if flowering has reached 20-25%. "T" shaped bird perches in and around crop field to be installed for controlling insect population.
- **Uttar Pradesh:**
- In Central Plain Zone of Uttar Pradesh, in wheat crop, apply 2<sup>nd</sup> irrigation at 40-45 days of sowing, 3<sup>rd</sup> irrigation at 60-65 days of sowing and 4<sup>th</sup> irrigation at 80-85 days of sowing. Undertake sowing of summer maize and sugarcane after the harvesting of toria, pea, potato crops. Undertake transplanting of onion crop after proper field preparation and manure and fertilizers application. Apply first irrigation in late sown wheat crop at 18 to 20 days of sowing and second irrigation at 40 to 45 days of sowing at tillering stage. Complete transplanting of onion nursery and irrigate.
- In Western Plain Zone of Uttar Pradesh, continue transplanting of onion seedling. Seedling should not be older than six weeks. Transplanting should be done in small beds. Deep transplanting should be avoided. Present weather is suitable for growing of carrot seed crop. In present weather condition mustard crop is in grain filling stage farmers are advised to maintain optimum moisture for proper development of grains.
- In Bundelkhand Zone of Uttar Pradesh, apply light irrigation to timely sown mustard, linseed, lentil, pea, gram as per requirement. Apply 2% urea to gram crop at flowering stage. In Eastern part of Bundelkhand Zone Apply second irrigation in wheat, jou crop after 40 to 45 days of sowing and third irrigation at 60 to 65 days after sowing as per requirement. Continue transplanting of cauliflower, cabbage, tomato, chilli, brinjal. Apply light irrigation in brinjal, chilli, tomato, cabbage, cauliflower, spinach, fenugreek, radish, carrot, coriander as per requirement. Undertake sowing of bhindi, Cucurbitaceous vegetables.
- 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 after current spells of rain.
- In Central Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of powdery mildew in pea crop, for control apply soluble Sulphur @ 3 kg or Carbendazim @ 500gm or Tridomorph 80 EC @ 500ml per hectare at the interval of 12-12 days after current spells of rain.
- In Central Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of pod borer in gram crop, for control spray H.A.N.P.V. @ 250 ml in 350 to 400 litres of water per hectare after current spells of rain.
- In Central Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of late blight in potato and tomato crop for control spray Ridomil MZ 0.2 % @ 2 g per litre of water after current spells of rain.
- 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 after current spells of rain.
- In Bundelkhand Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of termite in wheat, for control, apply Chlorpyrifos @ 4 litre per hectare with irrigation after current spells of rain.
- 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 after current spells of rain.
- In North Eastern plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of blight in wheat crop at tillering stage, for control apply Mancozeb 0.2 % or redomil MZ 0.2 % after current spells of rain.
- In Western Plain Zone of Uttar Pradesh, due to foggy weather condition, there may be chances of attack of termite in wheat crop for control apply mixture of 20 kg sand with Chlorpyrifos 20 EC @ 2.0 litre per acre in the evening hours after current spells of rain.
- In Western Plain Zone of Uttar Pradesh, in prevailing weather condition, monitor the pod borer in the gram crop, for control install Pheromone trap @ 3-4 traps per acre if flowering has reached 10-15%. "T" shaped bird perches in and around crop field to be installed for controlling insect population.
- In Western Plain Zone of Uttar Pradesh, in prevailing weather condition, there may be chances of attack of thrips in timely sown onion crop, for control spray Carbaryl @ 2 grams per litre of water with sticky material (Tipol 1.0 gram /litre) is advised, when sky remains clear.
- In Western Plain Zone of Uttar Pradesh, due to foggy weather condition, there may be chances of attack of aphid in mustard crop, for control in early stage cut and destroy the infested part of the plant, if insect population is above ETL than spray Rogar or Quinalphos @ 2.0 ml per litre of water is recommended, when sky remains clear.

## ▪ **Rajasthan:**

- In East Rajasthan, in Sub Humid Southern Plain and Aravali Hill Zone, in Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts, apply irrigation to late sown wheat crop is at CRI stage and top dress of urea 50 kg / ha. and in timely sown wheat crop apply 2nd irrigation at booting stage. For the control of broad leaves weeds in wheat spray Sulphosulphuron 75% + Metsulfuron Methyl 5% @ 32gm a.i./ha at 30-35 days after sowing in 400 to 500 litre of water. Apply second irrigation in gram crop at pod formation stage. Apply irrigation in mustard crop at flowering and silique formation stage.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, apply first irrigation to late sown wheat crop at 25-30 days after sowing and in jou crop in irrigated areas first irrigation at 30 to 35 days after sowing and second irrigation at 60 to 70 days of sowing and third irrigation in mustard crop at pod formation stage. Apply first irrigation to gram crop at 50 to 55 days after sowing.
- In Arid Western Plain Zone, in Barmer, Churu, Jalore, Jodhpur, Pali districts, in late sown wheat, apply 2<sup>nd</sup> irrigation to standing crop at 40 days after sowing at tillering stages, irrigate the gram and mustard crop at 65-70 days after sowing and take care about an interval of 5-7 days between irrigation and hoeing-weeding operation, irrigate the fodder crops viz. oat, lucerne, berseem etc. at an interval of 15 to 20 days. Top dressing the urea @ 65-85 kg per ha in fodder oat after every cut. Increased temperature may increase the water demand of Rabi crops.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, this is suitable time for applying third irrigation in normal sown wheat (60-65 DAS at jointing stage), second irrigation in late sown wheat at tillering stage (40-45 DAS) and also apply irrigation to gram at pod formation stage.
- 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 pod borer in gram crop, for control apply Methyl Parathion 2% or Quinalphos 1.5 % dust @ 25 kg/ha.
- 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 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 powdery mildew in mustard crop for control apply Sulphur dust @ 20 kg/ha or Dinocap @ 750 ml in 500 litres of water per hectare.
- 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 leaf spot disease in cauliflower crop for control spray Mancozeb @ 2 gm per liter of water or Carbendazim @ 1 g per litre of water.
- In Dungarpur, Banswara and Pratapgarh districts of Southern Humid Plain Zone, prevailing weather condition is congenial for attack of Pod borer in gram for control dusting of Methyl Parathion 2% dust @ 25kg per hectare before flowering or spray Acephate 75 SP@ 650 gm per hectare.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, prevailing weather condition is congenial for attack of stem rot and blight in mustard crop for control spray mixture of Carbendazim 12% + Mancozeb 63% @ 2 gm per litre of water.
- Suitable varieties for sowing are given in Annexure III.

## • **Horticulture**

- In Central Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of white fly in papaya, for control spray Dimethoate @ 2 ml per litre of water after current spells of rain.
- In Central Plain Zone of East Uttar Pradesh, this is the best time for plantation of popular plants maintain the distance at 5X4 M.
- 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 Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of mango hopper in mango plants, for control spray Malathion 50 EC @ 1.0 ml per litre of water.
- In Punjab, undertake pruning of deciduous fruit trees like peach, plum and pear should be carried out during January. For grapes, the pruning is normally initiated in the second fortnight of January and completed by first week of February. 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 flower. Undertake harvesting of citrus fruits in clear weather.
- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, undertake plantation of peach, plum,



apricot, almond walnut and peacan nut. Protect young plants of mango, litchi, papaya, guava, citrus etc. from frost by covering it with suitable thatching material prepared with sarkanda or any other material. Burn dry leaves /grasses in the young orchards during evening time to create smoke & regular irrigation to minimize the frost effect specially in plain areas.

- In Nainital district of Bhabar and Tarai Zone, sowing of fruit crops like-apple, pear, plum, wall nut etc should be started. In high hills, pruning of temperate fruit trees like apple, pear, peach, plum etc should be done in clear weather. To control the Canker disease in the apple, 0.3% Copper-oxichloride should be used after cutting and pruning in clear weather. Tongue grafting should be started in the nursery for high quality temperate fruit plant.

- **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 gram/litre 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.
- 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 north Rajasthan, keep domestic animals in shelter during night and in early morning and increase the quantity of concentrates in their diet. Add mineral mixture in balance diet of the animals. Avoid excess feeding of berseem, lucerne etc to protect from bloat. Feed these green fodders along with dry roughages to prevent from bloat.
- 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, keep the animals in dry place and change the bedding material as and when required. Cover the animals with Jhull (Jute cloth) in extreme cold. 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. New born calves need special care in cold weather and they are susceptible to Pneumonia. Give them vitamin 'A' concentrate 1 ml daily in milk for three days to be repeated after a month.
- In Punjab, the temperature should not go below 15.5°C inside the poultry sheds and suitable measures like doubling of curtains should be taken. Keep the chicks warm by giving them artificial heat according to age. For the first week internal temperature of the shed should be 32-35° C.
- In Haryana, provide the cattle/animal 50 grams iodized salt and 50 to 100 grams mineral mixture daily with feed & green fodder to keep them healthy.
- In Bhabar and Tarai Zone of Uttarakhand, Toxocaravitulorum (patera) are found in the food tube of buffalo calf in the age of 1-4 month. More than 50% buffalo calf die because of delay in treatment. Piperazine should be given to the infected calf on identification of Patera disease. To save the buffalo calf from patera disease, 10-15cc Neem oil should be given to the calf immediately after 10 days of his birth. Again after 10 days, 10-15 CC Neem oil should be given. Chenopodium album oil can also be given as a fodder to animals to save the calf/animals from 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 cocksedia 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.

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

**Annexure I**

| Sub-Divisions              | 11.01.17    |        | 18.01.17    |        | 25.01.17    |        |
|----------------------------|-------------|--------|-------------|--------|-------------|--------|
|                            | Actual (mm) | % dep. | Actual (mm) | % dep. | Actual (mm) | % dep. |
| <b>Arunachal Pradesh</b>   |             |        |             |        |             |        |
| Anjaw                      | **          | **     | **          | **     | **          | **     |
| Changlang                  | 0.4         | -97    | 0.0         | -100   | 0.0         | -100   |
| Dibang Valley              | 19.0        | 27     | 1.0         | -94    | 0.0         | -100   |
| East Kameng                | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| East Siang                 | 2.3         | -59    | 0.0         | -100   | 0.0         | -100   |
| Kurung Kumey               | **          | **     | **          | **     | **          | **     |
| Lohit                      | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Lower Dibang Valley        | 10.3        | -31    | 2.1         | -87    | 0.0         | -100   |
| Lower Subansari            | **          | **     | **          | **     | **          | **     |
| Papumpare                  | 1.7         | -80    | 0.0         | -100   | 0.0         | -100   |
| Tawang                     | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Tirap                      | 0.8         | -89    | 0.0         | -100   | 0.0         | -100   |
| Upper Siang                | 5.2         | -45    | 0.8         | -94    | 0.0         | -100   |
| Upper Subansari            | 1.0         | -71    | 0.0         | -100   | 0.0         | -100   |
| West Kameng                | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| West Siang                 | 1.5         | -63    | 5.5         | -10    | 0.0         | -100   |
| <b>Assam&amp;Meghalaya</b> |             |        |             |        |             |        |
| <b>Assam</b>               |             |        |             |        |             |        |
| Baksa                      | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Barpeta                    | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Bongaigaon                 | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Cachar                     | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Chirang                    | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Darrang                    | **          | **     | **          | **     | **          | **     |
| Dhemaji                    | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Dhubri                     | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Dibrugarh                  | 1.3         | -69    | 0.0         | -100   | 0.0         | -100   |
| Goalpara                   | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Golaghat                   | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Hailakandi                 | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Jorhat                     | 0.2         | -96    | 0.0         | -100   | 0.0         | -100   |
| Kamrup(Rural)              | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Kamrup(Metro)              | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Karbi Anglong              | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Karimganj                  | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Kokrajhar                  | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| Lakhimpur                  | 5.6         | 31     | 0.0         | -100   | 0.0         | -100   |
| 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   | 0.0         | -100   |
| Sonitpur                   | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |

|                         |      |      |     |      |     |      |
|-------------------------|------|------|-----|------|-----|------|
| Sibsagar                | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Tinsukia                | 0.7  | -78  | 0.0 | -100 | 0.0 | -100 |
| Udalgiri                | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| <b>Meghalaya</b>        |      |      |     |      |     |      |
| East Garo Hills         | 0.0  | 0    | 0.0 | -100 | 0.0 | -100 |
| East Khasi Hills        | 0.5  | -90  | 0.0 | -100 | 0.0 | -100 |
| Jaintia Hills           | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Ribhoi                  | 10.9 | 60   | 0.3 | -89  | 0.0 | -100 |
| South Garo Hills        | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| West Garo Hills         | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| West Khasi Hills        | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| <b>NMMT</b>             |      |      |     |      |     |      |
| <b>Mizoram</b>          |      |      |     |      |     |      |
| Aizwal                  | 1.0  | 0    | 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 |
| <b>Manipur</b>          |      |      |     |      |     |      |
| 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                  | **   | **   | **  | **   | **  | **   |
| <b>Nagaland</b>         |      |      |     |      |     |      |
| Dimapur                 | 0.4  | -89  | 0.0 | -100 | 0.0 | -100 |
| Kephire                 | **   | **   | **  | **   | **  | **   |
| Kohima                  | 1.2  | -50  | 0.0 | -100 | 0.0 | -100 |
| Longleng                | **   | **   | **  | **   | **  | **   |
| Mokokchung              | **   | **   | **  | **   | **  | **   |
| Mon                     | **   | **   | **  | **   | **  | **   |
| Paren                   | **   | **   | **  | **   | **  | **   |
| Phek                    | 5.0  | 108  | 0.0 | -100 | 0.0 | -100 |
| Tuensang                | **   | **   | **  | **   | **  | **   |
| Wokha                   | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Zunheboto               | **   | **   | **  | **   | **  | **   |
| <b>Tripura</b>          |      |      |     |      |     |      |
| 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 |
| <b>Himachal Pradesh</b> |      |      |     |      |     |      |



|                          |       |      |      |      |      |      |
|--------------------------|-------|------|------|------|------|------|
| Bilaspur                 | 88.9  | 817  | 27.5 | 212  | 0.0  | -100 |
| Chamba                   | 47.4  | 86   | 39.3 | 94   | 14.9 | -56  |
| Hamirpur                 | 62.4  | 387  | 13.0 | 15   | **   | **   |
| Kangra                   | 43.7  | 160  | 15.2 | -20  | 0.5  | -97  |
| Kinnaur                  | 27.8  | 29   | 25.1 | 15   | 23.6 | 19   |
| Kullu                    | 74.9  | 357  | 26.3 | 38   | 18.2 | 2    |
| Lahaul and Spiti         | 17.5  | -37  | 21.8 | -19  | 40.3 | 30   |
| Mandi                    | 65.5  | 408  | 19.2 | 52   | 0.2  | -99  |
| Shimla                   | 64.7  | 386  | 17.2 | 16   | 3.4  | -77  |
| Sirmaur                  | 79.1  | 570  | 8.7  | -35  | 0.7  | -94  |
| Solan                    | 129.5 | 866  | 10.0 | -25  | 0.3  | -98  |
| Una                      | 42.9  | 338  | 7.2  | -29  | 0.0  | -100 |
| <b>Punjab</b>            |       |      |      |      |      |      |
| Amritsar                 | 0.0   | -100 | 7.0  | -3   | 0.8  | -85  |
| Barnala                  | 8.0   | 220  | 0.0  | -100 | 0.0  | -100 |
| Bhatinda                 | 0.0   | -100 | 1.0  | -17  | 0.0  | -100 |
| Faridkot                 | 0.0   | -100 | 0.0  | -100 | 4.6  | 31   |
| Fatehgarh Saheb          | 23.0  | 448  | 1.3  | -49  | 0.0  | -100 |
| Ferozpur                 | 0.0   | -100 | 0.3  | -94  | 2.4  | -1   |
| Gurdaspur                | 29.3  | 139  | 21.5 | 87   | 2.7  | -79  |
| Hoshiarpur               | 13.9  | 64   | 4.2  | -47  | 0.0  | -100 |
| Jalandhar                | 1.0   | -86  | 5.5  | 0    | 0.0  | -100 |
| Kapurthala               | 1.0   | -81  | 4.8  | 53   | 2.3  | -64  |
| Ludhiana                 | 8.6   | 82   | 1.8  | -57  | 0.0  | -100 |
| Mansa                    | 18.0  | 620  | 0.0  | -100 | 2.8  | 4    |
| Moga                     | 0.0   | -100 | 4.0  | 25   | 3.4  | -47  |
| Muktesar                 | 0.0   | -100 | 0.0  | -100 | 0.9  | -77  |
| Nawashahar               | 36.1  | 265  | 4.7  | -15  | 0.0  | -100 |
| Patiala                  | 15.9  | 160  | 1.8  | -20  | 1.0  | -82  |
| Ropar                    | 56.6  | 460  | 10.0 | 33   | 0.0  | -100 |
| Sangrur                  | 6.2   | 51   | 1.5  | -36  | 0.6  | -85  |
| Mohali                   | 62.0  | 685  | 2.0  | -65  | 0.0  | -100 |
| TarnTaran                | 0.0   | -100 | 11.0 | 378  | 0.0  | -100 |
| <b>Haryana,Chd,Delhi</b> |       |      |      |      |      |      |
| <b>Haryana</b>           |       |      |      |      |      |      |
| Ambala                   | 44.3  | 523  | 0.4  | -96  | 0.7  | -90  |
| Bhiwani                  | 0.0   | -100 | 0.0  | -100 | 0.0  | -100 |
| Chandigarh               | 78.2  | 929  | 1.9  | -65  | 0.1  | -99  |
| Faridabad                | 2.3   | -53  | 0.0  | -100 | 0.0  | -100 |
| Fatehabad                | 2.0   | -39  | 0.0  | -100 | 4.4  | -15  |
| Gurgaon                  | 0.4   | -84  | 0.0  | -100 | 1.2  | -8   |
| Hissar                   | 3.2   | 39   | 0.0  | -100 | 1.3  | -21  |
| Jhajar                   | 1.6   | -52  | 0.0  | -100 | 0.0  | -100 |
| Jind                     | 18.0  | 161  | 1.0  | -62  | 0.5  | -71  |
| Katihah                  | 14.5  | 326  | 0.3  | -94  | 0.0  | -100 |
| Karnal                   | 33.1  | 514  | 2.8  | -58  | 0.4  | -94  |
| Kurukshetra              | 17.3  | 189  | 0.0  | -100 | 1.7  | -64  |
| Mahendragarh             | 0.2   | -96  | 0.0  | -100 | 0.0  | -100 |
| Mewat                    | 0.0   | -100 | 0.0  | -100 | 0.0  | -100 |

|                            |       |      |      |      |       |      |
|----------------------------|-------|------|------|------|-------|------|
| Palwal                     | 2.0   | -20  | 0.0  | -100 | 0.0   | -100 |
| Panchkkula                 | 41.6  | 571  | 3.0  | -70  | 0.5   | -94  |
| Panipat                    | 9.0   | 109  | 0.0  | -100 | 0.0   | -100 |
| Rewari                     | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Rohtak                     | 3.4   | -8   | 0.0  | -100 | 0.0   | -100 |
| Sirsa                      | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Sonepat                    | 12.6  | 223  | 0.0  | -100 | 0.0   | -100 |
| Yamunanagar                | 48.3  | 503  | 0.3  | -97  | 1.3   | -86  |
| <b>Delhi</b>               |       |      |      |      |       |      |
| Central Delhi              | 2.0   | -53  | 0.0  | -100 | 0.0   | -100 |
| East Delhi                 | 2.0   | -53  | 1.0  | -69  | 0.0   | -100 |
| New Delhi                  | 3.3   | -23  | 0.0  | -100 | 0.0   | -100 |
| North Delhi                | 2.9   | -33  | 0.5  | -84  | 0.0   | -100 |
| North East Delhi           | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| North West Delhi           | 4.5   | 5    | 0.0  | -100 | 0.0   | -100 |
| South Delhi                | 1.8   | -58  | 1.5  | -53  | 0.0   | -100 |
| South West Delhi           | 3.2   | -27  | 0.0  | -100 | 0.0   | -100 |
| West Delhi                 | **    | **   | **   | **   | **    | **   |
| <b>Jammu &amp; Kashmir</b> |       |      |      |      |       |      |
| Anantnag                   | 49.1  | 256  | 32.8 | 73   | 30.3  | 38   |
| Badgam                     | 108.0 | 1465 | 21.2 | 74   | 17.2  | 29   |
| Bandipore                  | **    | **   | **   | **   | **    | **   |
| Baramula                   | 85.8  | 359  | 11.9 | -55  | 116.5 | 291  |
| Doda                       | 67.0  | 276  | 74.2 | 92   | 22.6  | -13  |
| Ganderbal                  | 48.6  | 452  | 17.2 | 74   | 44.6  | 179  |
| Jammu                      | 41.0  | 257  | 24.0 | 97   | 4.6   | -51  |
| Kargil                     | 0.2   | -96  | 0.1  | -97  | 0.0   | -100 |
| Kathua                     | 40.0  | 148  | 20.0 | -6   | 3.6   | -78  |
| Kistwar                    | **    | **   | **   | **   | **    | **   |
| Kulgam                     | 41.6  | 187  | 74.6 | 882  | 44.9  | 61   |
| Kupwara                    | 60.4  | 358  | 26.5 | 22   | 49.6  | 125  |
| Ladakh(Leh)                | 0.0   | -100 | 0.1  | -98  | 0.0   | -100 |
| Poonch                     | **    | **   | **   | **   | **    | **   |
| Pulwama                    | 81.8  | 799  | 60.2 | 871  | 11.0  | 11   |
| Rajouri                    | 50.0  | 395  | 8.6  | -56  | 28.4  | 193  |
| Ramban                     | 89.5  | 262  | 76.7 | 122  | 46.4  | 37   |
| Reasi                      | 56.5  | 409  | 39.7 | 127  | 13.8  | -43  |
| Samba                      | 18.6  | 62   | 16.7 | 37   | 1.9   | -79  |
| Shopian                    | **    | **   | **   | **   | **    | **   |
| Srinagar                   | 68.1  | 676  | 31.9 | 222  | 31.3  | 96   |
| Udhampur                   | 55.4  | 180  | 70.5 | 184  | 9.9   | -62  |
| <b>East Madhya Pradesh</b> |       |      |      |      |       |      |
| Anuppur                    | 1.2   | -81  | 0.0  | -100 | 0.0   | -100 |
| Balaghat                   | 7.7   | 40   | 0.0  | -100 | 0.0   | -100 |
| Chhatarpur                 | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Chindwara                  | 9.0   | 58   | 0.0  | -100 | 0.0   | -100 |
| Damoh                      | 1.5   | -46  | 0.0  | -100 | 0.0   | -100 |
| Dindori                    | 7.0   | 52   | 0.0  | -100 | 0.0   | -100 |

|                            |      |      |     |      |     |      |
|----------------------------|------|------|-----|------|-----|------|
| Jabalpur                   | 7.2  | 89   | 0.0 | -100 | 0.0 | -100 |
| Katni                      | 3.0  | -35  | 0.0 | -100 | 0.0 | -100 |
| Mandla                     | 3.0  | -40  | 0.0 | -100 | 0.0 | -100 |
| Narsingpur                 | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Panna                      | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Rewa                       | 3.2  | 45   | 0.0 | -100 | 0.0 | -100 |
| Sagar                      | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Satna                      | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Seoni                      | 6.5  | 37   | 0.0 | -100 | 0.0 | -100 |
| Shahdol                    | 6.0  | 62   | 0.0 | -100 | 0.0 | -100 |
| Sidhi                      | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Singrauli                  | 1.5  | -6   | 0.0 | -100 | 0.0 | -100 |
| Tikamgarh                  | 1.0  | -60  | 0.0 | -100 | 0.0 | -100 |
| Umaria                     | 10.2 | 104  | 0.0 | -100 | 0.0 | -100 |
| <b>West Madhya Pradesh</b> |      |      |     |      |     |      |
| Agar                       | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Alirajpur                  | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Asoknagar                  | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Badwani                    | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Betul                      | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Bhind                      | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Bhopal                     | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Burhanpur                  | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Datia                      | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Dewas                      | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Dhar                       | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Guna                       | 0.0  | -100 | 0.0 | -100 | 2.3 | -15  |
| Gwalior                    | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Harda                      | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Hoshangabad                | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| 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 | 0.0 | -100 |
| Morena                     | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Neemuch                    | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Raisen                     | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Rajgarh                    | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Ratlam                     | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Sehore                     | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Shajapur                   | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Sheopur Kalani             | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Shivpuri                   | 3.5  | 52   | 0.0 | -100 | 0.0 | -100 |
| Ujjain                     | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Vidisha                    | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| <b>Chhattisgarh</b>        |      |      |     |      |     |      |
| 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                  | 1.0 | -23  | 0.0 | -100 | 0.0 | -100 |
| Bijapur                   | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Bilaspur                  | 3.0 | -27  | 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                      | 1.8 | -5   | 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                   | 5.6 | 37   | 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                    | 5.9 | 157  | 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                   | 2.6 | -49  | 0.0 | -100 | 0.0 | -100 |
| <b>East Uttar Pradesh</b> |     |      |     |      |     |      |
| Allahabad                 | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Ambedkar Nagar            | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Azamgarh                  | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Bahraich                  | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Ballia                    | 2.8 | 20   | 0.0 | -100 | 0.0 | -100 |
| Balrampur                 | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Banda                     | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Barabanki                 | 0.3 | -89  | 0.0 | -100 | 0.0 | -100 |
| Basti                     | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Chandauli                 | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Deoria                    | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Faizabad                  | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Farrukhabad               | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Fatehpur                  | 2.5 | 56   | 0.0 | -100 | 0.0 | -100 |
| Gazipur                   | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Gonda                     | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Gorakhpur                 | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Hardoi                    | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Jaunpur                   | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Kannauj                   | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Kanpur City               | 0.6 | -81  | 0.0 | -100 | 0.0 | -100 |
| Kanpur Dehat              | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |

|                           |      |      |     |      |     |      |
|---------------------------|------|------|-----|------|-----|------|
| Kaushambi                 | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Kheri                     | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Kushi nagar               | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Lucknow                   | 0.9  | -74  | 0.0 | -100 | 0.0 | -100 |
| Maharajganj               | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Mau                       | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Mirzapur                  | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Pratapgarh                | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| RaiBareilly               | 0.3  | -80  | 0.0 | -100 | 0.0 | -100 |
| Sahuji Maharajnagar       | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Sant Kabirnnagar          | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Sant Ravidas Nagar        | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Shrawasti                 | **   | **   | **  | **   | **  | **   |
| Sidharthnagar             | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Sitapur                   | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Sonbhadra                 | 0.4  | -78  | 0.0 | -100 | 0.0 | -100 |
| Sultanpur                 | 0.6  | -67  | 0.0 | -100 | 0.0 | -100 |
| Unnao                     | 2.3  | -17  | 0.0 | -100 | 0.0 | -100 |
| Varanasi                  | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| <b>West Uttar Pradesh</b> |      |      |     |      |     |      |
| Agra                      | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Aligarh                   | 3.2  | -63  | 0.0 | -100 | 0.0 | -100 |
| Auraiya                   | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Badaun                    | 11.4 | 200  | 0.0 | -100 | 0.0 | -100 |
| Baghpat                   | 14.5 | 353  | 0.0 | -100 | 0.0 | -100 |
| Bareilly                  | 16.7 | 221  | 0.0 | -100 | 0.0 | -100 |
| Bijnor                    | 37.9 | 303  | 0.1 | -99  | 0.0 | -100 |
| Bulandsahar               | 4.8  | 28   | 0.0 | -100 | 0.0 | -100 |
| Etah                      | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Etawah                    | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Firozabad                 | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| GBNagar                   | 2.0  | -57  | 0.0 | -100 | 0.0 | -100 |
| Ghaziabad                 | 2.0  | -51  | 0.0 | -100 | 0.0 | -100 |
| Hamirpur                  | 3.0  | 0    | 0.0 | -100 | 0.0 | -100 |
| Jalaun                    | 2.7  | 71   | 0.0 | -100 | 0.0 | -100 |
| Jhansi                    | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Jotiba Phule Nagar        | 7.5  | 44   | 0.0 | -100 | 0.0 | -100 |
| Kanshiramnagar            | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Lalitpur                  | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Mahamaya Nagar            | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Mahoba                    | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Mainpuri                  | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Mathura                   | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Meerut                    | 28.2 | 452  | 0.0 | -100 | 0.0 | -100 |
| Moradabad                 | 3.9  | -29  | 0.0 | -100 | 0.0 | -100 |
| Muzaffarnagar             | 9.9  | 90   | 0.0 | -100 | 0.0 | -100 |
| Pilibhit                  | 1.7  | -67  | 0.0 | -100 | 0.0 | -100 |
| Rampur                    | 3.4  | -31  | 0.0 | -100 | 0.0 | -100 |

|                    |      |      |      |      |     |      |
|--------------------|------|------|------|------|-----|------|
| Saharanpur         | 23.7 | 404  | 0.0  | -100 | 0.0 | -100 |
| Shahjahanpur       | 5.8  | 14   | 0.0  | -100 | 0.0 | -100 |
| <b>Uttarakhand</b> |      |      |      |      |     |      |
| Almora             | 18.1 | 83   | 0.0  | -100 | 0.0 | -100 |
| Bageshwar          | 8.3  | -16  | 0.0  | -100 | 0.0 | -100 |
| Chamoli            | 11.6 | 38   | 3.3  | -69  | 0.0 | -100 |
| Champawat          | 18.5 | 73   | 0.0  | -100 | 0.0 | -100 |
| Dehradun           | 20.4 | 115  | 6.3  | -31  | 2.2 | -83  |
| Garhwal Pauri      | 23.4 | 260  | 0.8  | -88  | 0.0 | -100 |
| Garhwal Tehri      | 35.0 | 264  | 4.0  | -40  | 0.0 | -100 |
| Haridwar           | 24.8 | 282  | 0.6  | -89  | 0.0 | -100 |
| Nainital           | 19.2 | 106  | 0.0  | -100 | 0.0 | -100 |
| Pithorgarh         | 18.3 | 129  | 0.2  | -98  | 0.0 | -100 |
| Rudraprayag        | 15.6 | -3   | 6.9  | -31  | 0.0 | -100 |
| Udham Sing Nagar   | 13.1 | 96   | 0.0  | -100 | 0.0 | -100 |
| Uttarkashi         | 21.5 | 68   | 10.5 | -21  | 0.0 | -100 |
| <b>Bihar</b>       |      |      |      |      |     |      |
| 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 | 0.0 | -100 |
| Banka              | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Begusarai          | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Bhabua             | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Bhagalpur          | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Bhojpur            | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Buxar              | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Darbhanga          | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| East Champaran     | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Gaya               | 0.6  | -68  | 0.0  | -100 | 0.0 | -100 |
| Gopalganj          | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Jahanabad          | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Jamui              | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Kathihar           | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Khagadia           | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Kishanganj         | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Lakhisarai         | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Madhepura          | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Madhubani          | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Monghyar           | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Muzaffarpur        | 0.1  | -95  | 0.0  | -100 | 0.0 | -100 |
| Nalanda            | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Nawada             | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Patna              | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Purnea             | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Rohtas             | 0.5  | -80  | 0.0  | -100 | 0.0 | -100 |
| Saharsha           | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Samstipur          | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Saran              | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |
| Sheikpura          | 0.0  | -100 | 0.0  | -100 | 0.0 | -100 |



|                       |      |      |     |      |     |      |
|-----------------------|------|------|-----|------|-----|------|
| Sheohar               | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Sitamarhi             | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Siwan                 | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Supaul                | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Vaishali              | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| West Champaran        | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| <b>Jharkhand</b>      |      |      |     |      |     |      |
| Bokaro                | 2.9  | 15   | 0.0 | -100 | 0.0 | -100 |
| Chatra                | 12.0 | 422  | 0.0 | -100 | 0.0 | -100 |
| Deoghar               | 4.7  | 292  | 0.0 | -100 | 0.0 | -100 |
| Dhanbad               | 6.3  | 320  | 0.0 | -100 | 0.0 | -100 |
| Dumka                 | 12.0 | 193  | 0.0 | -100 | 0.0 | -100 |
| East Singbhum         | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Garhwa                | 4.8  | 55   | 0.0 | -100 | 0.0 | -100 |
| Giridih               | 12.2 | 1009 | 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 |
| Jamtara               | **   | **   | **  | **   | **  | **   |
| Khunti                | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Koderna               | 1.8  | -53  | 0.0 | -100 | 0.0 | -100 |
| Latehar               | 8.8  | 283  | 0.0 | -100 | 0.0 | -100 |
| Lohardagga            | 7.2  | 279  | 0.0 | -100 | 0.0 | -100 |
| Pakur                 | **   | **   | 0.0 | -100 | 0.0 | -100 |
| Palamau               | 6.4  | 93   | 0.0 | -100 | 0.0 | -100 |
| Ramgarh               | **   | **   | **  | **   | **  | **   |
| Ranchi                | 0.4  | -86  | 0.0 | -100 | 0.0 | -100 |
| Sahebganj             | **   | **   | 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 |
| <b>East Rajasthan</b> |      |      |     |      |     |      |
| Ajmer                 | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Alwar                 | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Banswara              | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Baran                 | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Bharatpur             | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Bhilwara              | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Bundi                 | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Chittorgarh           | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Dausa                 | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Dholpur               | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Dungarpur             | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Jaipur                | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Jhalawar              | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Jhunjhunu             | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Karauli               | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Kota                  | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |
| Pratapgarh            | 0.0  | -100 | 0.0 | -100 | 0.0 | -100 |

|                             |     |      |     |      |     |      |
|-----------------------------|-----|------|-----|------|-----|------|
| Rajsamand                   | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Sawai Madhopur              | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Sikar                       | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Sirohi                      | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Tonk                        | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Udaipur                     | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| <b>West Rajasthan</b>       |     |      |     |      |     |      |
| Barmer                      | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Bikaner                     | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Churu                       | 0.0 | -100 | 0.0 | -100 | 0.1 | -96  |
| Hanumangarh                 | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Jaisalmer                   | 0.0 | -100 | 0.6 | 11   | 0.0 | -100 |
| Jalore                      | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Jodhpur                     | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Nagaur                      | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Pali                        | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Sri Ganganagar              | 0.0 | -100 | 0.0 | -100 | 0.3 | -73  |
| <b>Gujarat Region</b>       |     |      |     |      |     |      |
| 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 | **  | **   |
| 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 |
| <b>S K &amp; Diu region</b> |     |      |     |      |     |      |
| 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                     | 0.1 | 31   | 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 |
| <b>Maharashtra</b>        |     |      |     |      |     |      |
| <b>Konkan &amp; Goa</b>   |     |      |     |      |     |      |
| 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 |
| <b>Madhya Maharashtra</b> |     |      |     |      |     |      |
| Ahmednagar                | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Dhule                     | **  | **   | 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 |
| 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 | 1.0 | -100 |
| Satara                    | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Solapur                   | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| <b>Marathwada</b>         |     |      |     |      |     |      |
| Aurangabad                | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Beed                      | **  | **   | 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 |
| <b>Vidarbha</b>           |     |      |     |      |     |      |
| Akola                     | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Amraoti                   | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Bhandara                  | 0.6 | -88  | 0.0 | -100 | 0.0 | -100 |
| Buldhana                  | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Chandrapur                | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Gadchiroli                | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Gondia                    | 2.1 | -61  | 0.0 | -100 | 0.0 | -100 |
| Nagpur                    | 0.6 | -88  | 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 |



|  |       |      |      |      |       |      |
|--|-------|------|------|------|-------|------|
| <b>Odisha</b>  |       |      |      |      |       |      |
| 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 | 0.0   | -100 |
| Khurda   | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Koraput  | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Malkangiri   | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Mayurbhanj   | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Nawapara   | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Nawarangpur  | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Nayagarh   | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Puri   | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Rayagada   | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Sambalpur  | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Sonepur  | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Sundargarh   | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| <b>West Bengal &amp; Andaman<br/>Nicobar Islands</b> |       |      |      |      |       |      |
| <b>A &amp; N ISLAND</b>                              |       |      |      |      |       |      |
| Nicobar  | 199.1 | 466  | 58.3 | 243  | 210.8 | 1170 |
| North & Middle Andaman                               | 56.9  | 262  | 1.0  | -29  | 2.7   | -51  |
| South Andaman  | 54.3  | 231  | 3.0  | -44  | 51.8  | 825  |
| <b>GWB</b>   |       |      |      |      |       |      |
| Bankura  | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Birbhum  | 5.9   | 56   | 0.0  | -100 | 0.0   | -100 |
| Burdwan  | 2.0   | 32   | 0.0  | -100 | 0.0   | -100 |
| East Midnapore                                       | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Hooghly  | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Howrah   | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Kolkata  | 0.0   | -100 | 0.0  | -100 | 0.0   | -100 |
| Murshidabad  | 3.0   | -40  | 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 |
| <b>SHWB &amp; Sikkim</b> |     |      |     |      |     |      |
| Cooch Behar              | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Darjeeling               | 0.4 | -95  | 0.7 | -92  | 0.0 | -100 |
| East Sikkim              | 4.3 | 85   | 0.0 | -100 | 0.0 | -100 |
| Jalpaiguri               | 0.0 | -100 | 1.0 | -73  | 0.0 | -100 |
| Malda                    | 0.2 | -96  | 0.0 | -100 | 0.0 | -100 |
| North Dinajpur           | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| North Sikkim             | 5.3 | -36  | 2.2 | -85  | 0.0 | -100 |
| South Dinajpur           | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| South Sikkim             | 5.6 | 143  | 0.0 | -100 | 0.0 | -100 |
| West Sikkim              | **  | **   | **  | **   | **  | **   |
| <b>Karnataka</b>         |     |      |     |      |     |      |
| <b>Coastal Karnataka</b> |     |      |     |      |     |      |
| Dakshina Kannada         | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Udupi                    | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Uttara Kannada           | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| <b>N I Karnataka</b>     |     |      |     |      |     |      |
| 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 |
| <b>S I Karnataka</b>     |     |      |     |      |     |      |
| Ballari                  | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Bangalore Rural          | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Bangalore Urban          | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Chamarajanagar           | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Chikaballapur            | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Chikkamagaluru           | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Chitradurga              | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Davangere                | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Hassan                   | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Kodagu                   | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Kolar                    | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Mandya                   | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Mysuru                   | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Ramanagara               | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Shivamogga               | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Tumakuru                 | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| <b>Kerala</b>            |     |      |     |      |     |      |
| Alappuzha                | 0.0 | -100 | 0.0 | -100 | 1.6 | -64  |

|                    |     |      |     |      |       |      |
|--------------------|-----|------|-----|------|-------|------|
| Kannur             | 0.0 | -100 | 0.0 | -100 | 0.0   | -100 |
| Ernakulam          | 0.0 | -100 | 0.0 | -100 | 3.8   | 57   |
| Idukki             | 0.0 | -100 | 0.0 | -100 | 7.7   | 174  |
| Kasaragod          | 0.0 | -100 | 0.0 | -100 | 0.0   | -100 |
| Kollam             | 0.0 | -100 | 0.0 | -100 | 6.5   | 133  |
| Kottayam           | 0.0 | -100 | 0.0 | -100 | 0.0   | -100 |
| Kozhikode          | 0.0 | -100 | 0.0 | -100 | 0.0   | -100 |
| Malappuram         | 0.0 | -100 | 0.0 | -100 | 0.0   | -100 |
| Palakkad           | 0.0 | -100 | 0.0 | -100 | 0.0   | -100 |
| Pathanamthitta     | 0.0 | -100 | 0.0 | -100 | 1.6   | -65  |
| Thiruvananthapuram | 0.1 | -98  | 0.0 | -100 | 0.2   | -92  |
| Thrissur           | 0.0 | -100 | 0.0 | -100 | 0.0   | -100 |
| Wyand              | 0.0 | -100 | 0.0 | -100 | 0.0   | -100 |
| <b>Tamil Nadu</b>  |     |      |     |      |       |      |
| Ariyalur           | 0.0 | -100 | 0.0 | -100 | 45.3  | 3673 |
| Chennai            | 0.0 | -100 | 0.0 | -100 | 0.0   | -100 |
| Coimbatore         | 0.0 | -100 | 0.0 | -100 | 0.5   | 364  |
| Cuddalore          | 0.0 | -100 | 0.0 | -100 | 28.3  | 1471 |
| Dharmapuri         | 0.0 | -100 | 0.0 | -100 | 0.0   | -100 |
| Dindigul           | 0.0 | -100 | 0.0 | -100 | 17.8  | 1381 |
| Erode              | 0.0 | -100 | 0.0 | -100 | 3.3   | 728  |
| Kanchipuram        | 0.0 | -100 | 0.0 | -100 | 0.1   | -95  |
| Kanyakumari        | 0.2 | -96  | 0.0 | -100 | 0.4   | -82  |
| Karaikal           | 0.0 | -100 | 0.0 | -100 | 101.0 | 2490 |
| Karur              | 0.0 | -100 | 0.0 | -100 | 9.4   | 1471 |
| Krishnagiri        | 0.0 | -100 | 0.0 | -100 | 0.2   | -17  |
| Madurai            | 0.0 | -100 | 0.0 | -100 | 28.2  | 2718 |
| Nagapattinam       | 0.0 | -100 | 0.0 | -100 | 72.2  | 394  |
| Namakkal           | 0.0 | -100 | 0.0 | -100 | 3.9   | 1836 |
| Nilgiris           | 0.0 | -100 | 0.0 | -100 | 11.0  | 214  |
| Perambalur         | 0.0 | -100 | 0.0 | -100 | 6.3   | 1150 |
| Puducherry         | 0.0 | -100 | 2.1 | -28  | 78.0  | 2416 |
| Pudukottai         | 0.0 | -100 | 0.0 | -100 | 33.5  | 1575 |
| Ramanathapuram     | 0.0 | -100 | 0.5 | -94  | 22.4  | 504  |
| Salem              | 0.0 | -100 | 0.0 | -100 | 1.8   | 163  |
| Sivaganga          | 0.0 | -100 | 0.0 | -100 | 44.6  | 2129 |
| Thanjavur          | 0.0 | -100 | 0.0 | -100 | 55.5  | 2211 |
| Theni              | 0.0 | -100 | 0.0 | -100 | 9.6   | 769  |
| Tirunelveli        | 0.0 | -100 | 0.0 | -100 | 27.3  | 583  |
| Tirupur            | 0.0 | -100 | 0.0 | -100 | 3.4   | 3283 |
| Tiruvallur         | 0.0 | -100 | 0.0 | -100 | 0.0   | -100 |
| Tiruvannamalai     | 0.0 | -100 | 0.0 | -100 | 0.0   | -100 |
| Tiruvarur          | 0.0 | -100 | 0.0 | -100 | 77.1  | 1506 |
| Toothukudi         | 0.0 | -100 | 0.0 | -100 | 3.8   | 27   |
| Trichy             | 0.0 | -100 | 0.0 | -100 | 14.7  | 1234 |
| Vellore            | 0.0 | -100 | 0.0 | -100 | 0.1   | -76  |
| Villupuram         | 0.0 | -100 | 0.0 | -100 | 2.8   | 244  |
| Virudhunagar       | 0.0 | -100 | 0.0 | -100 | 11.8  | 592  |



|                               |     |      |     |      |     |      |
|-------------------------------|-----|------|-----|------|-----|------|
| <b>Andhra Pradesh</b>         |     |      |     |      |     |      |
| <b>Coastal Andhra Pradesh</b> |     |      |     |      |     |      |
| 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 | 0.0 | -100 |
| Prakasam                      | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Sirkakulam                    | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Visakhapatnam                 | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Vizianagram                   | 0.0 | -100 | 0.1 | -96  | 0.0 | -100 |
| West Godavari                 | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| <b>Rayalaseema</b>            |     |      |     |      |     |      |
| Anantapur                     | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Chittoor                      | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Cuddapah                      | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| Kurnool                       | 0.0 | -100 | 0.0 | -100 | 0.0 | -100 |
| <b>Telangana</b>              |     |      |     |      |     |      |
| 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 |

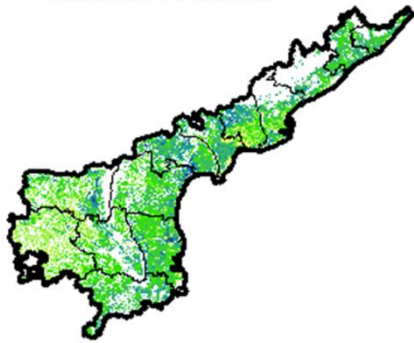
Legends

|  |                                  |    |                                |
|--|----------------------------------|----|--------------------------------|
|  | (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  
26<sup>th</sup> January 2017 FOR DIFFERENT STATES**

**Andhra Pradesh**



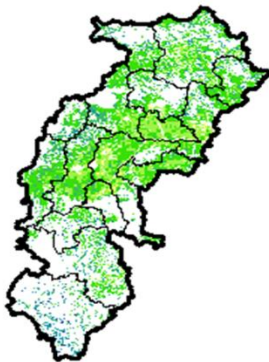
Agriculture vigour is moderate over southern and patches in coastal part whereas, patches in central region and Rayalseema show good to very good NDVI in the state of Andhra Pradesh.

**Bihar**



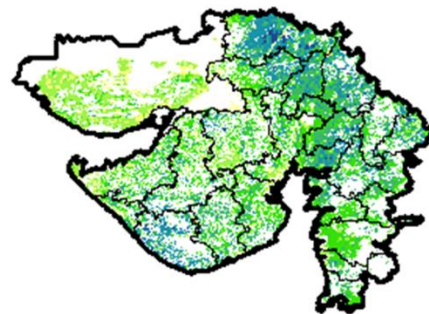
Agriculture vigour is moderate over entire state of Bihar, few patches in central and east shows good NDVI.

**Chhattisgarh**



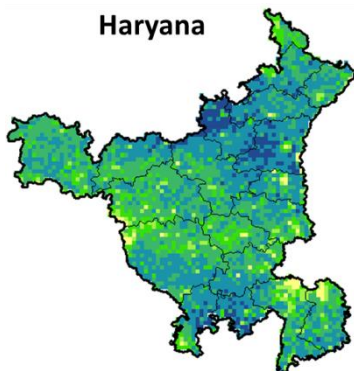
Agriculture vigour is good in southern region whereas, moderate vigour is seen in central and northern region of Chhattisgarh.

**Gujarat**



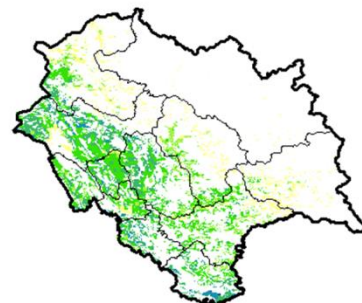
Moderate NDVI values are observed in patches in Kutch whereas, good to very good NDVI is observed in patches in Saurashtra and Gujarat.

**Haryana**



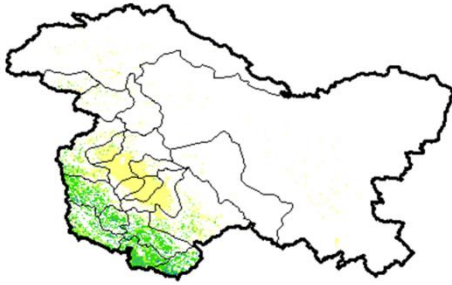
Good to very good agriculture vigour is observed over entire state of Haryana, moderate vigour is seen in patches in central and east part of Haryana.

**Himachal Pradesh**



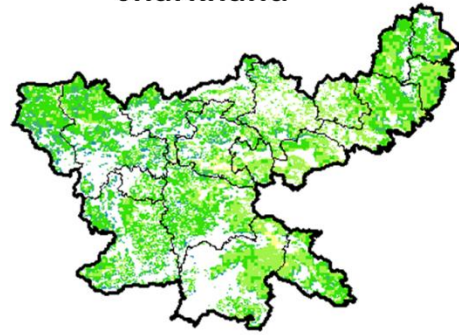
Agriculture vigour is moderate to good in few patches of Himachal Pradesh.

### Jammu & Kashmir



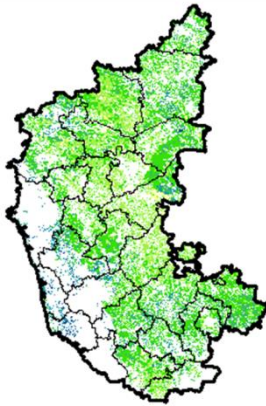
Agriculture vigour is moderate over entire state of Jammu & Kashmir.

### Jharkhand



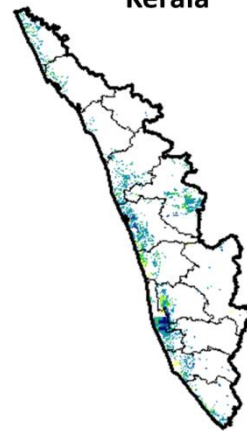
Agriculture vigour is good over patches in central region of Jharkhand whereas, remaining states shows moderate NDVI values.

### Karnataka



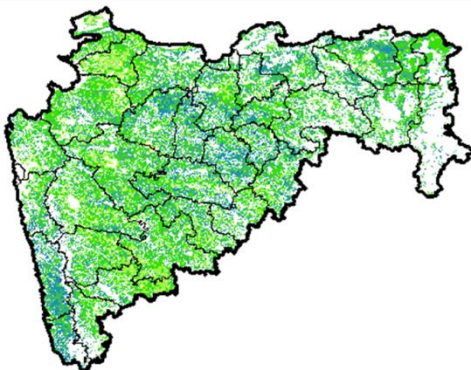
Agriculture vigour good in patches over southern and northern region of the state whereas rest of the state shows moderate vigour.

### Kerala



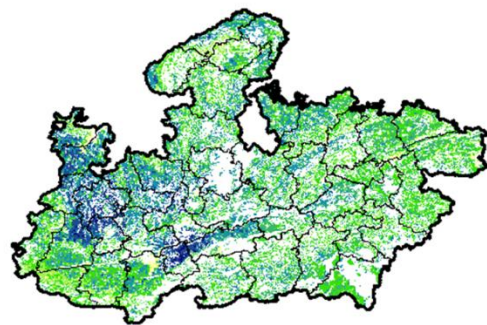
Agriculture vigour is good over entire state of Kerala except central part which shows moderate NDVI values.

### 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



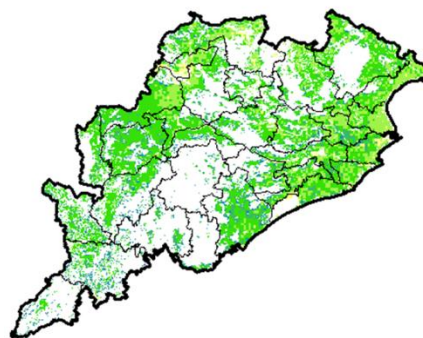
Agriculture vigour is good to very good over patches in western and central region of the state of Madhya Pradesh whereas, rest of the state shows moderate vigour.

### North East Region



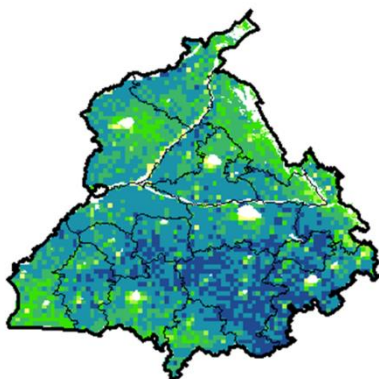
Agriculture vigour is good & very good over north-east states of country, whereas few patches in Assam, Manipur shows moderate vigour.

### Odisha



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

### Punjab



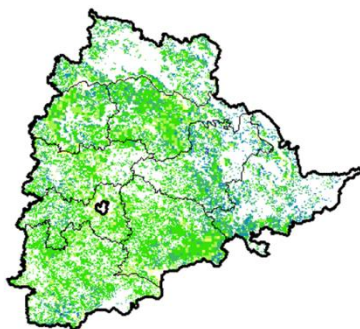
Agricultural vigour is good to very good in patches over entire state of Punjab, whereas few patches in north and west shows moderate vigour.

### Rajasthan



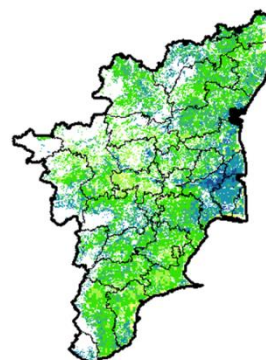
Agriculture vigour is good to very good over eastern and southern Rajasthan whereas, moderate vigour is observed over rest of the region.

### Telangana



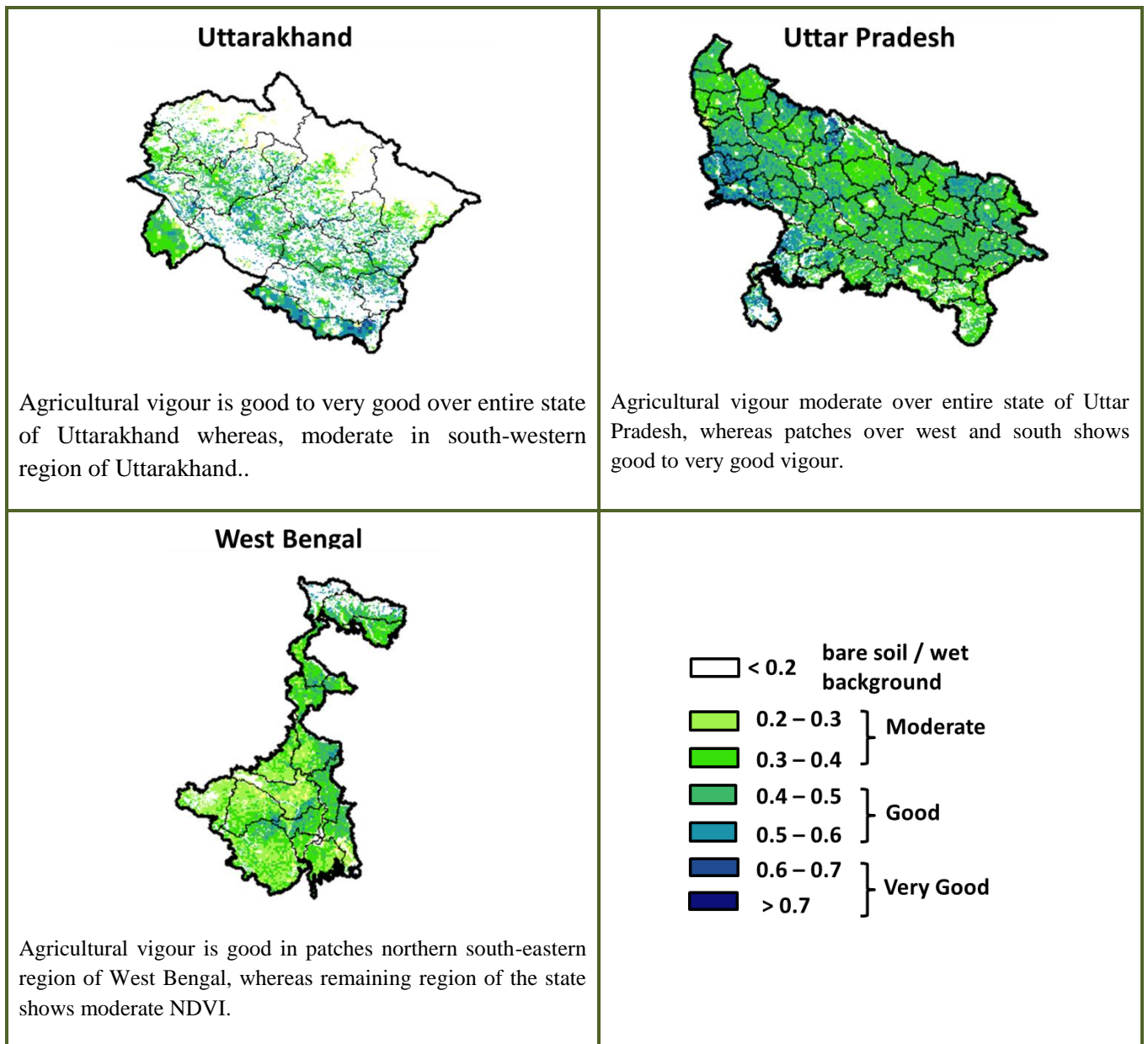
Agriculture vigour is good over northern and eastern region of Telangana whereas, moderate vigour is observed in southern and central region.

### 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 Chuhara, 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 Chhuhara, 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.

### **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