



# *National Agromet Advisory Service Bulletin*



*Friday 10<sup>th</sup> March 2017*  
*(For the period 10<sup>th</sup> to 14<sup>th</sup> March 2017)*

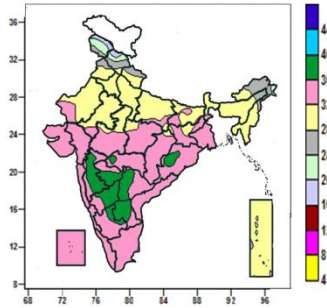


*Issued by*  
*National Agrometeorological Advisory Service Centre,*  
*Agricultural Meteorology Division,*  
*India Meteorological Department, Shivajinagar, Pune.*

**Weblink For**  
**District AAS Bulletin:** <http://www.imdagrimet.gov.in/node/3545>  
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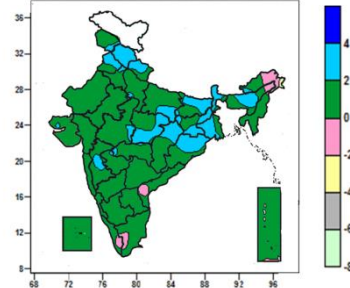
**Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 08.03.2017**

**Actual Mean Maximum Temperature ( $^{\circ}\text{C}$ ) in India for the week ending 08.03.2017**



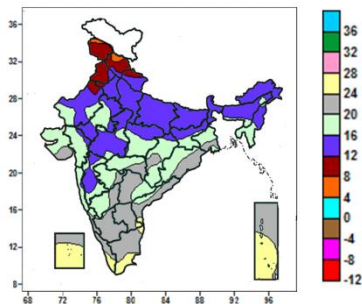
- Mean maximum temperature was between 36 to 40 $^{\circ}\text{C}$  over many parts of Madhya Maharashtra, Marathwada, North Interior Karnataka, Rayalaseema, some parts of Telangana, South Interior Karnataka and isolated pockets of Odisha and Vidarbha.
- Mean maximum temperature was between 32 to 36 $^{\circ}\text{C}$  over Gangetic West Bengal, Coastal Andhra Pradesh, Konkan & Goa, Coastal Karnataka, Kerala, Tamil Nadu, Lakshadweep, parts of Madhya Pradesh, Chhattisgarh, Jharkhand, Odisha, Vidarbha, Telangana, South Interior Karnataka, some parts of East Uttar Pradesh, Bihar, Sub Himalayan West Bengal, West Rajasthan, Madhya Maharashtra, Marathwada, Rayalaseema and isolated pockets of East Rajasthan Andaman & Nicobar Islands.
- Mean maximum temperature was between 24 to 32 $^{\circ}\text{C}$  over rest of the Country except many parts of Jammu & Kashmir and some parts of Himachal Pradesh where it was between 16 to 24 $^{\circ}\text{C}$ .

**Mean Maximum Temperature ( $^{\circ}\text{C}$ ) Anomaly in India for the week ending 08.03.2017**



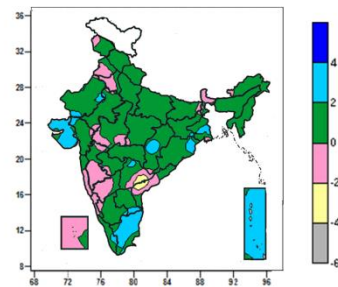
- Mean maximum temperature was above normal by 2 to 4 $^{\circ}\text{C}$  over Himachal Pradesh, Sikkim, many parts of Uttarakhand, Punjab, Bihar, West Bengal & Sikkim, Jharkhand, East Madhya Pradesh, some parts of Jammu & Kashmir, East Uttar Pradesh, Assam, Chhattisgarh, Odisha and isolated pockets of Haryana & Delhi, Arunachal Pradesh, West Uttar Pradesh, Saurashtra & Kutch, West Madhya Pradesh, Madhya Maharashtra, Marathwada and Vidarbha.
- It was normal to near normal over rest of the country except at isolated pocket of Arunachal Pradesh where it was below normal between 2 to 4 $^{\circ}\text{C}$ .

**Actual Mean Minimum Temperature ( $^{\circ}\text{C}$ ) in India for the week ending 08.03.2017**



- Mean minimum temperature was between 4 to 8 $^{\circ}\text{C}$  at isolated pocket of Jammu & Kashmir and Himachal Pradesh.
- Mean minimum temperature was between 8 to 12 $^{\circ}\text{C}$

**Mean Minimum Temperature ( $^{\circ}\text{C}$ ) Anomaly in India for the week ending 08.03.2017**



- Mean minimum temperature was above normal by 2 to 4 $^{\circ}\text{C}$  over many parts of Andaman & Nicobar Islands, Saurashtra & Kutch, Tamil Nadu, some parts of Gangetic West Bengal, Rayalaseema, Kerala and isolated pockets of Rajasthan, Jharkhand,

over many parts of Jammu & Kashmir, Himachal Pradesh, Punjab, some parts of Uttarakhand and isolated pockets of Haryana & Delhi and West Rajasthan.

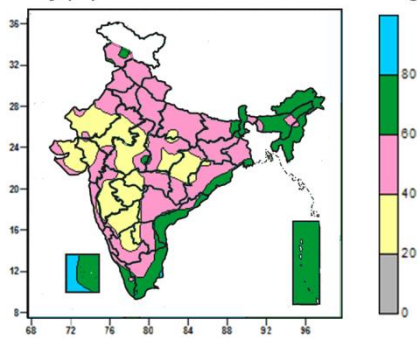
- Mean minimum temperature was between 12 to 20<sup>0</sup>C over rest of the Country except over Rayalaseema, Kerala, Tamil Nadu, Andaman & Nicobar Islands, Lakshadweep, many parts of Telangana, Coastal Andhra Pradesh, Coastal Karnataka, South Interior Karnata, some parts of Gangetic West Bengal, Saurashtra & Kutch, Odisha, Chhattisgarh, Vidarbha, North Interior Karnataka isolated pocket of Gujarat Region where it was between 20 to 28<sup>0</sup>C.

Chhattisgarh, Odisha, Gujarat Region, Telangana and South Interior Karnataka.

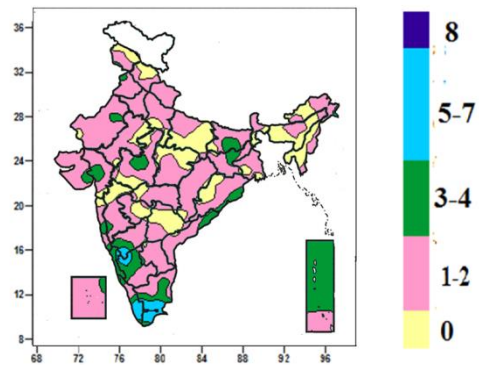
- Mean minimum temperature was normal to near normal over rest of the country except at isolated pockets of Odisha and Telangana where it was below normal by 2 to 4<sup>0</sup>C.

**Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 08.03.2017**

**Relative Humidity (%) over India for the week ending 08.03.2017**



**Cloud amount (okta) over India for the week ending 08.03.2017**

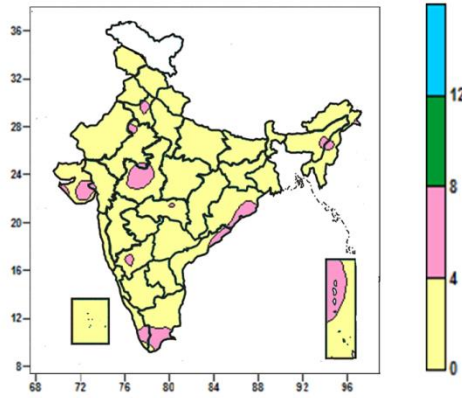


- Mean Relative Humidity was above 80% over some parts of Lakshadweep.
- Mean Relative Humidity was between 60 to 80% over Sikkim, Arunachal Pradesh, Mizoram, Tripura, Meghalaya, Andaman & Nicobar Islands, many parts of Sub Himalayan West Bengal, Assam, Nagaland, Manipur, Kerala, Tamil Nadu, Lakshadweep, some parts of Jammu & Kashmir, Bihar, Odisha, Rayalaseema and isolated pockets of Jharkhand, Gangetic West Bengal and Madhya Pradesh.
- Mean Relative Humidity was between 40 to 60% over rest of the Country except many parts of Rajasthan, Gujarat, West Madhya Pradesh, Madhya Maharashtra, Marathwada, North Interior Karnataka, Chhattisgarh, some parts of East Madhya Pradesh, Vidarbha, Rayalaseema, South Interior Karnataka and isolated pockets of East Uttar Pradesh, Odisha, Telangana and Konkan & Goa where it was between 20 to 40%.

- Sky remained cloudy (5-7 okta) over some parts of Kerala, Tamil Nadu and isolated pockets of Interior Karnataka.
- Sky remained partly cloudy (3-4 okta) over many parts of Coastal Karnataka, Andaman & Nicobar Islands, some parts of Bihar, Jharkhand, Gujarat, Odisha, Coastal Andhra Pradesh, Konkan & goa Interior Karnataka, Kerala, Tamil Nadu and isolated pockets of Jammu & Kashmir, Punjab, Rajasthan, West Madhya Pradesh and Lakshadweep
- Sky remained mainly clear/clear sky (1-2 okta/0 okta) over rest of the country.

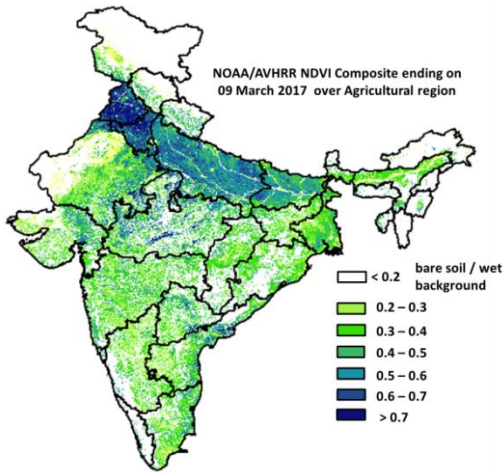


**Wind speed (knots) over India for the week ending 08.03.2017**



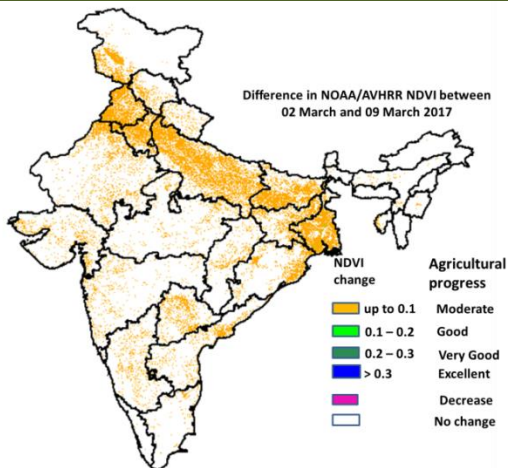
- Mean wind speed was between 0 to 4 knots over rest of the country except over some parts of Nagaland, Manipur, Saurashtra & Kutch, West Madhya Pradesh, Odisha, Coastal Andhra Pradesh, Kerala, Tamil Nadu, Andaman & Nicobar Islands and isolated pockets of Punjab, Haryana & Delhi, East Rajasthan, Assam, Arunachal Pradesh, Vidarbha and North Interior Karnataka where it was between 4 to 8 knots.

**NOAA/AVHRR NDVI composite ending on 9<sup>th</sup> March 2017 over Agricultural region of India**



- Agricultural vigour is good to very good in Haryana & Delhi, Punjab, patches in Madhya Pradesh, Uttar Pradesh, Bihar, Gujarat, Central Tamil Nadu, Coastal Andhra Pradesh, Kerala, Maharashtra, south-east Rajasthan and coastal Karnataka, where NDVI value varies from 0.5 to 0.7. NDVI is moderate in west Rajasthan, East Madhya Pradesh, Uttar Pradesh, Bihar, North-East Region, West Bengal, Madhya Maharashtra, southern region of Andhra Pradesh, Telangana and Tamil Nadu (NDVI 0.2 to 0.5).

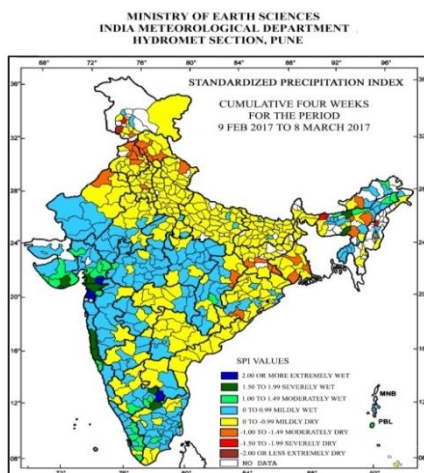
**Difference in NOAA/AVHRR NDVI between 2<sup>nd</sup> March and 9<sup>th</sup> March 2017**



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

- NOAA/AVHRR NDVI composite maps for the week ending on 9<sup>th</sup> March 2017 for different States are given in Annexure II.

### Standardised Precipitation Index Four Weekly for the period 9<sup>th</sup> February to 8<sup>th</sup> March 2017



- More extremely/severely wet conditions experienced in few districts of Gujarat Region; Saurashtra, Kutch Diu; Konkan & Goa; Udalguri district of Assam; East Khasi Hills district of Meghalaya; Krishnagiri, Karai districts of Tamil Nadu & Puducherry; Kolar, Chickballapur districts of Karnataka.
- Less extremely/Severely dry conditions experienced in Kokrajhar district of Assam; Kohima of Nagaland and Badgam, Rajori district of Jammu & Kashmir.
- Moderately dry conditions experienced in few districts of Himachal Pradesh and Punjab; East Kame district of Arunachal Pradesh; Karbi Anglong, Morigaon districts of Assam; Jaintia Hills districts Meghalaya; Burdwan, East Midnapore, North 24 Parganas districts of West Bengal; Rayagada district Odisha; Gumla, Ranchi, East Singhum, Seraikela-Khar districts of Jharkhand; Chandigarh; Rohtak district of Haryana; Chamoli district of Uttarakhand; Udhampur districts of Jammu & Kashmir; Sri Ganganag districts of Rajasthan; Raigarh, district of Chhattisgarh.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

**Weather Forecast for next 5 days valid upto 0830 hours of 15<sup>th</sup> March 2017**

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.

➤ No significant change in minimum and maximum temperatures likely over the country during next 2-3days.

**5 Day Rainfall Forecast (mid day)  
10<sup>th</sup> March 2017**

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

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



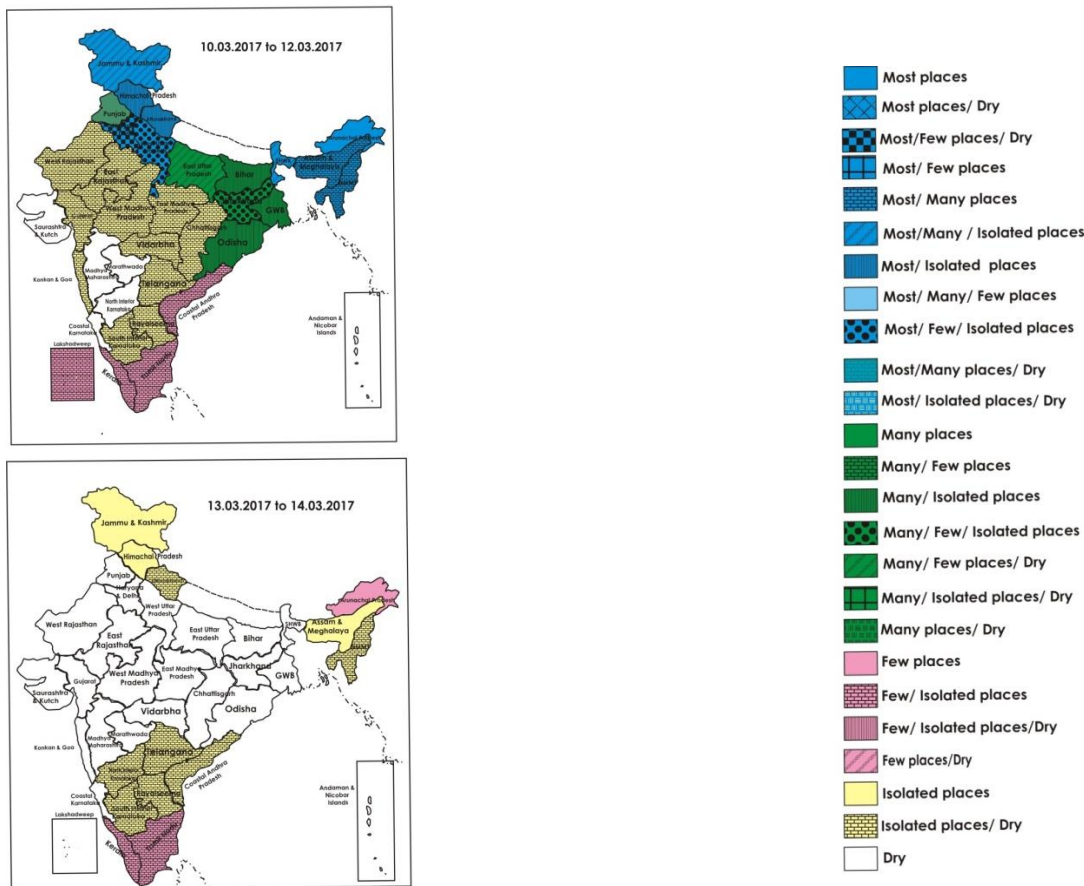
## Weather Warning during next 5 days

- **10 March (Day 1):**
  - Thundersquall accompanied with hail very likely at isolated places over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, East Rajasthan, north West Madhya Pradesh, SubHimalayan West Bengal & Sikkim, Bihar and Jharkhand.
  - Thundersquall very likely at isolated places over Gangetic West Bengal, north coastal Odisha, Coastal Andhra Pradesh, interior Tamilnadu and Kerala.
- **11 March (Day 2):**
  - Thundersquall with hail very likely at isolated places over SubHimalayan West Bengal & Sikkim, Bihar, Uttarakhand, Haryana, Chandigarh & Delhi and Uttar Pradesh.
  - Thundersquall very likely at isolated places over north coastal Odisha and Coastal Andhra Pradesh.
  - Heavy to very heavy rain very likely at isolated places over Assam & Meghalaya and Tripura; heavy rain very likely at isolated places over Arunachal Pradesh.
- **12 March (Day 3):**
  - Heavy rain very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya and Tripura.
- **13 March (Day 4):**
  - No weather warning.
- **14 March (Day 5):**
  - No weather warning.

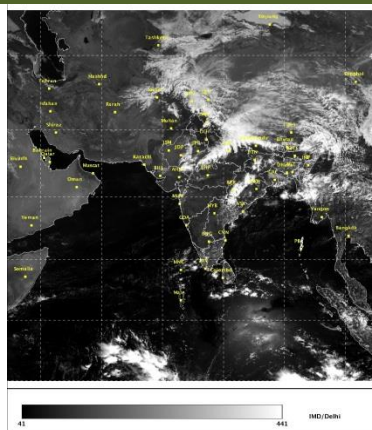
### Weather Outlook for subsequent 2 days from 15<sup>th</sup> to 17<sup>th</sup> March 2017

- Rain / snow at isolated places likely over western Himalayan region.
- Isolated to scattered rain / thundershower likely over Assam and Arunachal Pradesh.
- Rain at isolated places likely over South Interior Karnataka, Tamilnadu & Puducherry and Kerala.
- Another Western Disturbance likely to affect Western Himalayan region from 15<sup>th</sup> and plains of Northwest India from 16<sup>th</sup> onwards.

## Weather Forecast Map (valid upto 0830 hours of 15<sup>th</sup> March 2017)



## Satellite image dated 10.03.2017, 0600 UTC



### Salient Advisories

- As thundersquall accompanied with hail very likely at isolated places over **Jammu & Kashmir, Himachal Pradesh, Punjab, northwest Madhya Pradesh, East Rajasthan and Jharkhand** on 10<sup>th</sup> and over **Uttarakhand, Uttar Pradesh, Haryana, Chandigarh & Delhi, Sub-Himalayan West Bengal & Sikkim** and **Bihar** on 10<sup>th</sup> & 11<sup>th</sup> March, farmers are advised to arrange for hail net/ hail cap for orchard crops, provide support to young fruit plants and staking of vegetables to prevent the crops from lodging due to strong winds. Also undertake propping up in sugarcane. Keep already harvested produce at safe places.
  - As thundersquall very likely at isolated places over **interior Tamilnadu, Kerala** and **Gangetic West Bengal** on 10<sup>th</sup> and over **north Coastal Odisha** and **Coastal Andhra Pradesh** on 10<sup>th</sup> & 11<sup>th</sup> March, farmers are advised to arrange support to banana, propping up in sugarcane and staking of vegetables to prevent the crops from lodging due to strong winds.
  - Rain/ snow likely at most places over **Himachal Pradesh** and **Uttarakhand**, most/ many places over **Jammu and Kashmir** on 10<sup>th</sup> & 11<sup>th</sup> March, rain/thundershowers likely at most/many places over **Uttar Pradesh, Haryana, Chandigarh & Delhi** on 10<sup>th</sup> and over **Punjab** on 10<sup>th</sup> & 11<sup>th</sup> March, postpone irrigation, application of fertilizers and plant protection methods to standing crops. Keep already harvested produce at safe places.
  - As rain/thundershowers likely at most/many places over **Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram** and **Tripura** from 10<sup>th</sup> to 12<sup>th</sup> March, over **West Bengal & Sikkim**, over **Odisha** and **Bihar** on 10<sup>th</sup> & 11<sup>th</sup> and over **Jharkhand** on 11<sup>th</sup> March, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested produce at safer places.
  - As heavy/heavy to very heavy rain very likely at isolated places over **Assam & Meghalaya, Arunachal Pradesh** and **Tripura** on 11<sup>th</sup> & 12<sup>th</sup> March, provide adequate drainage in standing crop fields.
  - In view of prevailing dry weather, there may be premature fruit dropping in mango in **Maharashtra, Karnataka** and **Gujarat**. Apply adequate water (150-200 litres of water per mango tree at 15 days interval). Also provide shade arrangement, to protect the mango graft from bright sunshine. Cover banana bunches with porous gunny bags, apply mulch with trash in furrows. Young saplings may be protected by erecting temporary shade.
- Agromet Advisory for Pest and Disease**
- In Madhya Maharashtra, there may be attack of mango hoppers in mango orchards, spray Imidachloprid 17.8 SL @ 3 ml per 10 litres of water.
  - Due to prevailing weather, incidence of leaf spot was noticed in summer groundnut in North East Dry Zone of **Karnataka**; undertake spraying of Hexaconazole or Difenconazole @ 1 ml per litre of water.
  - In North Eastern Coastal Plain Zone of **Odisha**, due to rise in temperature, attack of stem borer may be aggravated in rice fields. Install Scirpo lure pheromone trap @ 15 no./ha to monitor its population. If the damage is above ETL, apply Chlorantraniliprole 0.4% GR @ 10 kg/ha.



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



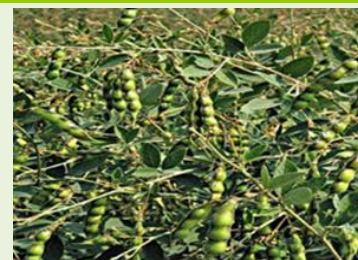
**Banana**



**Rice**



**Sugarcane**



**Red gram**

- **Realised Rainfall:** Significant rainfall occurred over Coimbatore, Karaikal, Krishnagiri, Madurai, Nagapattinam and Theni districts of Tamil Nadu; over Alapuzha, Ernakulam, Idukki, Kollam, Kottayam, Palakkad, Pathanamthitta and Thiruvananthapuram districts of Kerala. Weather was dry over rest of the region. .
- **Realised Temperatures:** Maximum temperatures were **above normal (1.6°C to 3.0°C)** at a few places over South Interior Karnataka, Rayalaseema and Tamilnadu & Pudducherry and at isolated places over south Coastal Andhra Pradesh. The highest **maximum temperature** of 39.2°C recorded at Anantapur (Rayalaseema). Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at many places over Coastal Andhra Pradesh and Rayalaseema; at a few places over Tamilnadu & Puducherry; **above normal (1.6°C to 3.0°C)** at many places over Telangana; at isolated places over Kerala and near normal over rest of the region.
- **Advisories:**
  - As thundersquall very likely at isolated places over **interior Tamilnadu and Kerala** on 10<sup>th</sup> March and over **Coastal Andhra Pradesh** on 10<sup>th</sup> and 11<sup>th</sup> March, farmers are advised to arrange support to banana, propping up in sugarcane and staking of vegetables to prevent the crops from lodging due to strong winds.
  - **Andhra Pradesh:**
    - In the Krishna Godavari Zone, continue providing light irrigation to rice fallow green gram and black gram, sugarcane and Bengal gram crops as per requirement.
    - In the North Coastal Zone, continue planting of sugarcane.
    - In Anantapur district of the Scarce Rainfall Zone, prevailing high temperatures may cause damage to the newly planted banana. Farmers are advised to protect by covering mulch or any other measures.
    - In the Southern Zone, undertake sett treatment with Malathion @ 2ml + Bavistin @ 1g/litre of water and soak the setts for 15-20 minutes before sowing of sugarcane.
    - In the Krishna Godavari Zone, prevailing dry weather condition is congenial for incidence of stem borer in the early stages of rabi maize crop. To control, apply of Carbofuron 3 granules @ 3 kg/acre.
    - In the North Coastal Zone, prevailing weather conditions (increase in temperature) is congenial for incidence of blast in ragi. To control, spray Carbendazim @ 1g/litre of water.
    - In the Southern Zone, due to increase in temperature, there is possibility of thrips incidence in mangoes (bud to fruit stage) which cause rough spots on the skin of button sized and slightly grown up mangoes and make them fall. To control, spray Dimethoate @ 2 ml/litre of water.
  - **Telangana:**
    - In North Telangana Zone, removing plant debris, avoid moisture stress after flowering and grow tolerant hybrids to control late wilt management in maize and continue harvesting of groundnut.
    - In South Telangana Zone, incidence of mealy bugs is noticed in grapes. To control, spray Dichlorovas @ 2 ml/ litre of water.
    - In North Telangana Zone, alternaria leaf spot is noticed in sesamum. To control, spray Carbendazim @ 1.0 g/litre of water twice at 15 days interval.
  - **Tamil Nadu:**
    - In the Cauvery Delta Zone, since isolated rainfall is expected in the next five days, take precaution while harvesting matured late *Samba/thaladi* rice and keep harvested produce at safe places. Continue nursery preparation for summer rice.
    - In the Western Zone, summer ploughing may be done to improve the infiltration rate of soil as well as to control the perennial weed growth.
    - In the Southern Zone, since there are chances for rainfall the coming days, harvest the rain water to irrigate during the dry season and recharge groundwater.
    - In the North Western Zone, apply farm yard manure or composted coir pith @ 5 ton/acre during last ploughing to improve the organic carbon content and water holding capacity of soil under rain fed condition.
    - In the High Altitude Zone, due to light to moderate rainfall expected in the next four days, undertake drenching with Copper oxy chloride @ 1 g/litre of water to prevent collar rot disease in beans.

- In the Western Zone, prevailing weather condition is congenial for fruit fly incidence in drumstick. To control, spray 5% Neem Seed Kernel Extract.
- In the Southern Zone, prevailing weather conditions (cloudy and light to moderate rains) is congenial for incidences of serpentine leaf miner in tomato and ash weevils in brinjal. To control serpentine leaf miner, collect and destroy mined leaves and spray NSKE 5%. To control ash weevil, collect and destroy adults, apply Neem cake @ 500 kg/ha at the time of last ploughing and apply Carbofuran 3 G @15 kg/ha on 15 days after planting in endemic areas.
- In the High Rainfall Zone, spray Carbendazim @ 1g /litre of water mixed with wetting agent to control leaf spot disease in banana.
- In the South Zone, high cloud cover, light to moderate rainfall and moderate to high humidity expected in the coming days is congenial for incidence of American bollworm (*Helicoverpa armigera*) in cotton. To control, apply Quinalphos 25 EC @ 2.0 l/ha.
- **Kerala:**
  - In the Problem Area Zone, undertake harvesting of *puncha* rice, drain out water from the rice fields completely for early and uniform hardening of the grains and continue planting of pepper.
  - In the High Altitude Zone, continue land preparation for ginger cultivation.
  - In the Northern Zone, undertake harvesting of matured rice, pepper, arecanut, cashew and mango. Continue applying coir pith/coir pith compost in the basins to increase water holding capacity, mulch the basins with dried leaves, smear the trunks (upto 2m height from bottom) with white lime solution and protect the newly planted young seedlings from direct sunlight falling on it by providing good shades.
  - In the Central Zone, undertake mulching to protect nutmeg trees.
  - In Pathanamthitta district of Southern Zone, undertake land preparation for planting of pepper.
  - In the Northern Zone, prevailing hot weather conditions are congenial for spread of leaf eating caterpillars in coconut in coastal areas. To control, cut and burn the affected leaves, release larval parasitoids, *Goniozus nephantidis*, @10 nos/palm (4-6 release) on the trunk. If infestation is very severe, spray the under surface of the fronds with Corragen® @ 1ml/5litre after current spells of rain.
  - In the Problem Area Zone, prevailing weather condition is congenial for incidences of leaf spot and leaf blight in amaranthus. To control leaf spot, irrigation should not be done by splash irrigation and pour water gently to the crop to avoid leaf spot incidence. Spray 2% *Pseudomonas* to control leaf blight.
  - In Thiruvananthapuram district of the Southern Zone, there is chance of mosaic disease in bhindi. Apply Rogour (Dimethoate) 1.5 ml / litre of water to control vectors like white fly, green hopper etc. Uprooting and destruction of affected plants and collateral hosts should be done.
- **Karnataka:**
  - In North East Dry Zone, undertake sowing of Bt cotton under irrigation facility. Apply irrigation in paddy, groundnut and watermelon. As dry weather is prevailing, provide irrigation to mango (fruit setting stage). Complete harvesting of wheat, rabi sorghum and safflower.
  - In Southern Transition Zone, continue hand weeding in already transplanted rice. Continue harvesting of matured arecanut, coconut and rhizomes of ginger, turmeric. Continue sowing of short duration pulses and land preparation for planting of Ginger/turmeric.
  - In North Transition Zone, harvest the crops (wheat, Bengal gram, sorghum) immediately after the maturity, to avoid reduction in quality of the produce due to exposure to unfavorable weather condition.
  - Carry out hoeing and hand weeding after harvesting of sugarcane crop in North Dry Zone. After harvesting the rabi crops, take up ploughing which will facilitate conservation of rainwater due to pre-monsoon showers. Since dry weather is prevailing, continue resin making in grapes.
  - Continue harvesting of matured black pepper in Hill Zone.
  - Due to dry weather, fruit dropping in mango is noticed in Eastern Dry Zone; to manage this, provide adequate quantity of irrigation water; adopt drip irrigation wherever it is possible.
  - Due to prevailing weather, infestation of leaf spot was noticed in summer groundnut in North East Dry Zone; take up spraying of Hexaconazole or Difenconazole @1.0 ml per litre of water.
  - Incidence of hoppers is noticed in mango crop in North East Transition Zone; for effective control, take up spraying of Carbaryl 50WP @4 gm or Malathion 50EC @2 ml or Monocrotophos 36SL @1.5 ml or Phosphamidon 40EC @0.5 ml in one litre of water.
  - Infestation of mealy bug in papaya plantations observed in Central Dry Zone; take up spraying of Dimethoate @2 ml/liter of water to control.
  - Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
  - In the Scarce Rainfall Zone of Andhra Pradesh, in poultry, in view of the increase in temperatures, cover water tank and lines with gunny bags to provide cool water, ensure that cool drinking water is available throughout the day, use foggers and sprinklers to reduce temperature, cover roof with coconut tree leaves or grass, white wash roof and

water tank to reduce heat absorption, ensure proper cross ventilation to avoid ammonia accumulation, use pedestrian fans to increase air flow and distribute feed in cooler parts of the day (early morning or late evening).

- In the Northern Zone of Kerala, heat stress causes reduced feed intake, panting reduced production and weight gain, onset of infectious diseases, deficiency diseases, diarrhea and sudden death among the birds. To combat heat stress, the poultry sheds should be protected from direct sunlight, roofing should be painted white to reflect heat, fans can be fitted, cool water can be sprayed, plenty of clean water can be provided with ice, glucose and 0.1 % sodium bicarbonate, feed offered during the cooler parts of the day can be supplemented with 20% extra vitamins, phosphorous and vitamin C.

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



*Mustard*



*Rice*



*Cauliflower*



*Wheat*

- **Realised Rainfall:** Rainfall occurred in Changlang, Dibang Valley, East Siang, Lohit, Lower Dibang Valley, Papumpara, Tawang, Upper Siang, Upper Subansari and West Siang districts of Arunachal Pradesh; Dhemaji, Dibrugarh, Lakhimpur, N.C.Hills and Tinsukia districts of Assam; Serchhip district of Mizoram and all districts of Tripura. Mainly dry weather prevailed over the rest of region.
- **Realised Temperatures:** Maximum temperatures were **appreciably below normal (3.1°C to 5.0°C)** at isolated places over Assam & Meghalaya; **below normal (1.6°C to 3.0°C)** at isolated places over Arunachal Pradesh and rest Assam & Meghalaya. Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Nagaland, Manipur, Mizoram & Tripura; **above normal (1.6°C to 3.0°C)** at isolated places over Assam & Meghalaya; and near normal over rest of the region.
- **Advisories:**
  - As rain/thundershowers likely at most places over **Arunachal Pradesh** and most/many places over **Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura** from 10<sup>th</sup> to 12<sup>th</sup> March, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested produce at safer places.
  - As heavy/heavy to very heavy rain very likely at isolated places over Assam & Meghalaya, Arunachal Pradesh & Tripura on 11<sup>th</sup> & 12<sup>th</sup> March, provide adequate drainage in standing crop fields.
  - **Assam, Meghalaya & Arunachal Pradesh:**
    - In Upper Brahmaputra Valley Zone of Assam, complete land preparation and sowing of direct seeded and nursery sowing of early *ahu* rice. Continue land preparation and planting sugarcane in upland fertile land. Undertake land preparation for sowing of *baou* rice in lowland.
    - In Lower Brahmaputra Valley Zone of Assam, continue transplanting of summer rice (early *ahu*).
    - In Dhemaji, Lakhimpur, Sonitpur, Dibrugarh, Golghat, Jorhat and Sibsagar districts of North Bank Plain Zone of Assam, as temperature condition are favorable, continue sowing of summer green gram and black gram and sowing of okra, ridge gourd and sponge gourd. Continue land preparation and sowing of directed seeded *ahu* rice. Undertake nursery bed preparation for transplanted early *ahu* rice.
    - In Hill Zone of Assam, continue land preparation for sowing of early *ahu* (direct seeded) and summer green gram/black gram. Continue land preparation and sowing of jute.
    - In Barak Valley Zone of Assam, continue land preparation for summer vegetables like okra, cucumber, ridge gourd, sponge gourd. Undertake sowing of early *ahu* (direct seeded) rice after current spells of heavy rain.
    - In Central Brahmaputra Valley Zone of Assam, continue sowing of summer green gram and black gram; nursery bed preparation for early *ahu* rice and land preparation for sowing of summer vegetables and Capsularis jute. Continue harvesting of rapeseed, mustard and matured wheat crop immediately.
    - In Barpeta, Bongaigaon, Dhubri and Goalpara districts of Lower Brahmaputra Valley Zone of Assam, continue nursery bed preparation for summer rice.
    - In Arunachal Pradesh, continue harvesting of potato and pea on a non rainy day. Continue transplanting of seedling of chillies, tomato, capsicum. Cover the tomato crop with polyethene/cloths to protect from heavy rain.
    - In Meghalaya, continue nursery raising of brinjal and transplanting of tomato. Continue harvesting of rapeseed, mustard, pea, chick pea, lentil and cabbage/ cauliflower.
    - In Upper Brahmaputra Valley Zone of Assam, soil and air temperatures are becoming favourable for the outbreak of



stem borer in *boro* rice. Spray Dursban at recommended dose against stem borer after current spells of rain.

- In Central Bramhaputra Valley Zone, North Bank Plain Zone and Barak Valley Zone of Assam, there is chance of attack of stem borer in *boro* rice at tillering stage. To control the pest spray Chlorpyriphos 50 EC @ 2 ml per litre of water or apply Darsban or Monocrotophos at the rate of 2 tea spoonful per 5 litre of water after current spells of rain.
- In Hill Zone of Assam, as the weather is favourable for thrips in seedling stage of *boro* rice, farmers are advised to monitor the thrips on leaves during morning hours. Spray Chloropyriphos @ 2ml/litre of water if the population of thrips is high.
- In North Bank Plain Zone of Assam, as prevailing minimum temperature favours occurrence of potato tuber moth in late potato crop (maghi aalu), spray Chloropyriphos 20EC @ 1ml/litre for control.
- **Nagaland, Manipur, Mizoram and Tripura:**
- In Nagaland, as rain/thundershowers likely at many places, continue harvesting of matured toria, rabi maize, vegetables, pea, and ginger immediately and keep harvested produce in safe places. Continue sowing of green gram, okra and planting of potato.
- In Manipur, continue harvesting of matured potato, pulses after current spells of rain and keep harvested produce in safe places. Continue nursery sowing and transplanting of pre-*kharif* rice. Undertake land preparation for planting of ginger and turmeric.
- In Mizoram, continue harvesting of early cole crops, carrot and radish in clear weather. Continue land preparation and sowing of maize (*jhum*), okra, cow pea, ginger and turmeric.
- In Tripura, transplant the young seedlings of summer brinjal & tomato to the main field and give light irrigation. Continue sowing of cowpea, urd, green gram.
- In Manipur, to control the infestation of stem borer in rabi maize at vegetative stage, apply few granules of Carbofuran 3G at maize whorl on a non rainy day.
- In Nagaland, treat the tubers of potato with bio-agent *Trichoderma* spp @ 20gm in 1 litre of water for 15-20 mins and shade dry before planting to save potato from early blight and late blight diseases. Undertake plant protection methods on a non rainy day.
- Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
- In Northeastern states, undertake regular immunization of cattle & buffaloes against Foot & Mouth disease, Hemorrhagic Septicemia & Black Quarter.
- In Barak Valley Zone of Assam, during this time goat may be attack by Blister disease in facial/ nasal area. Wash with Potassium permanganate and consult nearby veterinary dispensary for anti biotic cream and further treatment.
- **Fishery**
- In Barak Valley Zone of Assam, treat the fish ponds with Potassium Per Manganate (2 mg/100ml of water) or common salt (3 gm/ 100 ml of water) to control all fungal and bacterial diseases.

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



*Maize*



*Mustard*



*Sugarcane*



*Wheat*

- **Realised Rainfall:** Weather remained mainly dry over Vidarbha and dry over rest of the region.
- **Realised Temperatures:** Maximum temperatures were **below normal (1.6°C to 3.0°C)** at a few places over Saurashtra & Kutch and at isolated places over Gujarat region, Madhya Maharashtra. Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at a few places over Gujarat region; **above normal (1.6°C to 3.0°C)** at isolated places over Vidarbha and **below normal (1.6°C to 3.0°C)** at a few Places over Madhya Maharashtra and near normal over rest of the region.
- **Advisories:**
  - **Maharashtra:**
  - In Konkan, maintain water level up to 5-7 cm in transplanted rabi rice. In mango orchards apply 80-100 litres of water per tree at 7 days interval. Undertake mulching with grass to avoid the water loss. Continue sowing of seasonal fodder crops like cowpea, maize (African Tall), multicut sorghum and rice bean. Undertake irrigation to groundnut and vegetable crops.
  - In Madhya Maharashtra, as dry weather conditions prevail, apply irrigation and mulch with crop residue or plastic

sheet to vegetables and orchards like pomegranate and banana. Undertake irrigation in sugarcane using drip irrigation. Apply 100 kg Nitrogen in sugarcane after 6-8 weeks of planting in western Maharashtra scarcity zone. Also spread 5 tonnes trash per ha for maintaining soil moisture. Complete harvesting of jowar, safflower and red gram. Harvesting should be done during morning hours. Continue harvesting of matured wheat crop.

- In Marathwada, as dry weather conditions prevail apply irrigation to vegetable crops and orchards. Also apply mulch in orchards for soil moisture conservation. Complete harvesting of jowar, safflower and red gram. Harvesting should be done during morning hours. Continue harvesting of matured wheat crop. Undertake top dressing of Urea @ 65 kg / ha in sunflower crop (vegetative stage) sown in the month of January.
- In Vidarbha, as dry weather conditions prevail, maintain water level of 3-5 cm in summer rice field in East Vidarbha. Continue sowing of summer green gram with availability of irrigation facilities. Complete harvesting of red gram. Continue harvesting of matured wheat crop. Undertake intercultural operations in summer sesame on 30 days after sowing. Apply irrigation in groundnut at an interval of 10-12 days.
- In Madhya Maharashtra region, there may be attack of mango hoppers in mango orchards, spray Imidachloprid 17.8 SL @ 3 ml per 10 litres of water.

#### ▪ **Gujarat:**

- In South Gujarat Heavy Rainfall Zone, maintain water level of 2-3 cm in transplanted rice. Continue sowing of groundnut and pulses. Apply irrigation in already sown groundnut and pulses crop fields; keep the crops weed free. Undertake light earthing up after 2-3 months of sugarcane planting. Install pheromone trap for fruit & shoot borer monitoring in brinjal. Spray Naphthalene Acetic Acid (NAA) @ 2 g + Urea @ 2 kg in 100 litre of water to minimize mango fruit dropping at pea stage of fruit.
- In North Saurashtra Zone, as weather conditions are suitable, continue sowing of green gram and black gram.
- Undertake sowing of pearl millet, green gram, cowpea, groundnut, sesame, pulses in North Gujarat Zone and North West Zone. Carry out weeding in citrus orchards.
- In South Gujarat Zone, as there is increase in temperature, apply irrigation in vegetable (tomato, bhindi) crops at an interval of 3-4 days and in mango crop at an interval of 15 days. Spray 2% Potassium Nitrate in mango crop for effective control of fruit dropping and higher flower setting. Spray 0.5% Zinc Sulphate or 0.2% Ferrous Sulphate in banana crop for higher yield and good quality of banana fruit.
- In Middle Gujarat Zone of Gujarat, undertake sowing of sesame.
- In South Saurashtra Zone, complete harvesting of wheat, chickpea, cumin and coriander. Carry out sowing of summer sesame in time. Apply irrigation in vegetable crops at an interval of 6-8 days.
- Undertake sowing of sesame, sowing of summer groundnut, okra, cluster bean and cowpea for summer season vegetables in North West Zone of Gujarat. Apply irrigation in wheat.
- Under increasing temperature condition, there are chances of aphid infestation in cumin and mustard crops in North West Zone and North Gujarat Zone of Gujarat, in cumin in Middle Gujarat Zone and thrips attack in garlic and onion in Middle Gujarat Zone; for effective control of aphid, spray Dimethoate @ 10 ml or Phosphamidon @ 3 ml adding in 10 litres of water in North West Zone and North Gujarat Zone. Spray Spinosad 48 SC @ 2 ml or Clorfenpyre 10 EC @ 7.5 ml in 10 litres of water in garlic and onion in Middle Gujarat Zone against thrips. Keep irrigation interval short.
- Due to partly cloudy weather there is possibility of occurrence of pod borer in gram in North Gujarat Zone; if infestation is above ETL, spray Quinalphos @ 20 ml in 10 litres of water.
- Thrips infestation is observed above ETL in summer groundnut in North Saurashtra Zone; spray 500 ml of 5 % neem seed extract or neem seed oil @ 50 ml with Profenofos 20 ml or Imidacloprid 30.5 SC @ 3 ml or Lemda Cyheloethrin @ 10 ml / 10 liter of water.
- Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
- In Gujarat, provide adlib water to lactating animals. Provide healthy and nutritive feed to cattle to improve their health. FMD vaccination should be done. For prevention of anthrax disease in animals do vaccination with anthrax vaccine. Udder of milking animals must be properly cleaned with Zinc Oxide or Boric powder. Spray Deltamethrin or Amitraz @ 2 ml/litre of water for the control of tick and for prevention of foot & mouth disease in animals, do vaccination with FMD vaccine. For prevention of New castle disease/ranikhet disease do vaccination in poultry.

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



*Rice*



*Okra*



*Maize*



*Wheat*

- **Realised Rainfall:** Significant Rainfall occurred in South Andaman districts of Andaman & Nicobar Islands; Jajpur, Jagatsingpur, Deogarh, Kadhmal, Kendrapara and Nayagarh districts of Odisha; Weather remained mainly dry/dry over the region.
- **Realised Temperatures:** Maximum temperatures were **markedly below normal (5.1°C or less)** at isolated places over Sub Himalayan West Bengal & Sikkim; **appreciably below normal (3.1°C to 5.0°C)** at many places over Gangetic West Bengal and at isolated places over Odisha. Minimum temperatures are **above normal (1.6°C to 3.0°C)** at many places over Odisha; at a few places over Bihar, Jharkhand and Gangetic west Bengal and near normal over rest of the region.
- **Advisories:**
  - As thundersquall accompanied with hail very likely at isolated places over **Sub Himalayan West Bengal & Sikkim, Bihar and Jharkhand** on 10<sup>th</sup> and 11<sup>th</sup> March; thundersquall very likely at isolated places over **Gangetic West Bengal** on 10<sup>th</sup> and over **north Coastal Odisha** on 11<sup>th</sup> March, farmers are advised to arrange support to banana and staking of vegetables to prevent the crops from lodging due to strong winds.
  - As rain/thundershowers likely at most places over **Sub Himalayan West Bengal & Sikkim** on 10<sup>th</sup> and 11<sup>th</sup>, many places over **Gangetic West Bengal, Odisha and Bihar** on 10<sup>th</sup> and 11<sup>th</sup> March and over **Jharkhand** on 10<sup>th</sup> March, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested produce at safer places.
- **Odisha:**
  - In Eastern Ghat High Land Zone, continue preparation of nurseries of cauliflower for mid season (variety - Pusa Sharad, Pusa Hybrid-2, Pant Shubra). Transplanting of brinjal, tomato, chilli, cauliflower and cabbage are advised on raised bed if seedlings are ready.
  - In North Eastern Ghat Zone, continue sowing of cowpea.
  - In North Eastern Coastal Plain Zone, due to sunny weather and rise in temperature, apply irrigation in the maize and sunflower.
  - In Mid Central Table Land Zone, due to temperature fluctuation, infestation of Tobacco caterpillar will aggravate in cole crops. To control it, spray Flubendiamide @ 5g/15 litres of water.
  - In Mid Central Table Land Zone, the rise in temperature coupled with sunny weather favours attack of powdery mildew in pulses. To control spray Sulfex @ 5g/litre of water above ETL.
  - In Western Undulating Zone, spray planofix 0.2ml/litre of water after one month of flowering or at fruit initiation stage of Mango.
  - In North Eastern Coastal Plain Zone and North Central Plateau Zone, due to rise in temperature, attack of stem borer may be aggravated in rice field. Install Scirpo lure pheromone trap @ 15 no/ha to monitor its population. If the damage is above ETL, apply Chlorantraniliprole 0.4% GR @ 10 kg/ha.
  - In Western Undulating Zone, there may be attack of pod borer in gram crop at pod formation stage. Spray Triazophos or Profenophos 400ml or Chlorantraniliprole 18.5% SC 60ml in 200litres of water per acre.
  - In Western Undulating Zone, powdery mildew and YMV may infest the pulse crop during this period. Monitor the crops. Spray Sulphur 80% WP 600g mixing with 200lit water per acre crop area to control powdery mildew. To control YMV disease, uproot the infected plant and burn or bury. Spray Acephate 75% SP 400g or Imidacloprid 17.8% SL 50ml or Thiomethaxome 25% WG 60g mixing in 200 litre of water per acre to control the vector whitefly.
  - In Western Undulating Zone, there is chance of thrips infestation in onion during bulb formation stage. Spray Acephate 75% SP 400g or Imidacloprid 17.8% SL 50ml or Thiomethaxome 25% WG 60g mixing in 200 litres of water per acre. Also to control, purple blotch disease, spray Chorothalonil 75% WP 400g or Iprodione 50% WP 400g per acre with 200 litres of water.
- **West Bengal:**
  - In Burdwan, Murshidabad, Nadia, North 24 Parganas districts of New Alluvial Zone, continue sowing of improved variety of sesame and green gram, undertake weeding in boro rice at tillering stage after 21 days after transplanting. After weeding apply @ 15 kg urea per bigha as top dressing. At the time of topdressing it is better to keep the fields



dry.

- In Purba Mednipur and North 24 Parganas district of Coastal Saline Zone, undertake first top dressing in rice at tillering stage by urea @ 15kg/bigha and keep proper water level in the fields. Complete the harvesting process of potato as soon as possible.
- In Hill Zone, undertake land preparation for sowing of maize and round chilli.
- In Bankura, Birbhum and Purulia districts of Laterite & Red Soil Zone, at tillering stage of boro rice, farmer are advised to maintain the water level up to 2 cm in the fields. Complete the harvesting of potato as soon as possible.
- In Coastal Saline Zone, due to rising temperature, stem borer attack may be found in rice. Apply phorate granule for stem borer attack. Apply a mixture of Carbaryl (2.5g/liter of water)+Diethane M-45 (2.5g/liter of water) for control mango hopper on a non rainy day.
- In New Alluvial Zone, in the prevailing weather situation root-rot disease is may be prevalent in sunflower. To control, apply @ 1gm Brassicol per litre of water on a non rainy day.
- In Laterite and Red soil Zone, in this weather condition, stem borer may be found in rice. Spray Chlorpyrifos 20% EC @ 2 ml/lit of water to control stem borer. To control downy mildew in pointed gourd, apply Ridomil@2g/ litre of water at late afternoon. Undertake plant protection methods on a non rainy day.
- In Old Alluvial Zone, in this weather condition Control of Mango hopper, spray Carbaryl 50 W.P @ 2.5g /liter of water at pea stage of fruit set. To control chilli leaf curl, spray Imidachloropid @ 0.2ml/liter of water at evening hour. To control Tikka disease of ground nut sprays Carbendazim @ 1gm/liter of water. Undertake plant protection methods on a non rainy day.
- **Andaman and Nicobar Islands:**
  - In North, Middle and South Andaman, spray neem seed kernel extract @ 5 % to control white fly for the management of yellow vein mosaic disease in bhendi and repeat after 15 to 20 days interval. • Provide light irrigation in green gram and black gram during evening hours as the weather is dry with low humidity.
  - In Nicobar, Soil application of 2.5 kg Trichoderma viridae mixed with 12.5 tones farm yard manure in 1 ha of coconut palm.
- **Bihar:**
  - In Araria, Katihar, Kishanganj, Madhepura, Purnea, Saharsa and Supaul districts in North East Alluvial Zone, undertake land preparation for sowing of summer maize and green gram and continue land preparation for sowing of *Sada* Jute. Complete the sowing of sunflower up to this week and plantating of spring sugarcane as soon as possible. Undertake preparation of seedling of early cucurbitaceous crop, chilli, tomato and brinjal should be done in small polythene bags in poly house. Undertake harvesting of early sown potato immediately.
  - In South Bihar Alluvial Zone of Bihar, continue sowing of early crop of lady finger. Complete the transplanting of young seedlings of tomato, chilli and cole crop.
  - In Darbhanga, East Champaran, Gopalganj, Samastipur, West Champaran districts of North West Alluvial Plain Zone, undertake land preparation for sowing of elephant foot yam, green gram and black gram and complete the sowing of sweet potato. Continue sowing of summer maize. Complete sowing of summer maize (Suwan, Deevki, Ganga-11, Shaktiman-1 and Shaktiman-2) and summer sunflower (Mordane, Surya, CO-1 and Pairadevik and DRSF-108 are composite varieties and BSH-1, KBSH-1, MSFH-1, MSFH-8, MSFH-17 and KBSH-44). Undertake harvesting of matured potato immediately. Undertake land preparation for sowing of green gram (Pusa Vishal, Samrat, SML-668, Sona, HUM-16), black gram (Pant Urd-19, Pant Urd-31, Uttra and Navin) and elephant foot yam (Gajendra).
- **Jharkhand:**
  - In Jharkhand, normal sown wheat crop is at grain filling stage and this stage is very much sensitive of moisture stress. Hence, irrigate the field as per the status of soil moisture. Complete transplanting of summer rice in main field.
  - In Central and North Eastern Plateau Zone, continue sowing of green gram and land preparation for sowing of okra. Undertake sowing of high yielding variety of maize (Birsa Makka-1, Birsa Vikash Makka-2, Suwan-1(Hybrid),HQPM (Hybrid)) with assured irrigation. Continue harvesting of matured mustard. Apply irrigation to mango and litchi at a regular interval. Spray Harmone Planofix @ 5 ml per 10 litres of water to check dropping of tiny fruits.
  - In South Eastern Plateau Zone, dry with cool and low atmospheric temperature during morning time, favours the attack of variant leaf eating and sucking pests on pigeon pea crop. Hence, are advised to spray Monochrotophos @ 1 ml per liter of water or Ndoxacarb or Acocarb @ 0.5 – 1ml per liter of water by skipping one row or alternate row.
  - In South Eastern Plateau Zone, monitor the wheat crop against loose smut because prevailing high wind speed coupled cloudy weather, which favours the movement of loose smut spores hence, there is a chance of spread of disease in a more speedy way. So remove the affected plants and bury it very carefully inside the soil.
  - Suitable varieties for sowing are given in Annexure III
- **Animal Husbandry**
  - In Terai Zone of West Bengal, vaccination is the principal way to protect animals from Black Quarter (BQ) and

**CENTRAL INDIA [M.P., CHHATTISGARH]**



**Gram**



**Cabbage**



**Mustard**



**Wheat**

- **Realised Rainfall:** Rainfall occurred at Balod district of Chhattisgarh; Weather remained mainly dry over the region.
- **Realised Temperatures:** Maximum temperatures were **below normal (1.6°C to 3.0°C)** at isolated places over West Madhya Pradesh. Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Madhya Pradesh; **above normal (1.6°C to 3.0°C)** at isolated places over Chhattisgarh and near normal over rest of the region.
- **Advisories:**
  - **Madhya Pradesh:**
    - As thundersquall accompanied with hail very likely at isolated places over north West Madhya Pradesh on 10th March, farmers are advised to provide hali net/caps to orchard crops, arrange support to young fruit plants, propping up in sugarcane and staking of vegetables to prevent the crops from lodging due to strong winds. Keep already harvested produce at safer places.
    - In Betul and Chhindwara districts of Satpura Plateau Zone, undertake land preparation and sowing of moong and groundnut at the earliest. Undertake harvesting of matured wheat, oilseeds and gram crop in clear weather.
    - In Malwa Plateau Zone, apply irrigation in wheat at milk/ grain filling stage as per requirement. Continue nursery preparation of summer vegetables like tomato, chilli, brinjal etc and sowing of cucurbits and okra.
    - In Jhabua, Alirajpur and Dhar districts of Jhabua Hills Zone, apply irrigation in wheat at milk/dough stage. Undertake sowing of cucurbitaceous crops and transplanting of tomato, brinjal, cauliflower, cabbage etc in the main field. Continue harvesting of early sown semi irrigated/early maturing variety of wheat crop, early sown gram and mustard. Give irrigation to standing vegetable crops as per requirement.
    - In Gwalior, Bhind, Morena, Guna, Ashoknagar and Shivpuri districts of Gird Zone, give irrigation to normal sown wheat at milk stage. Undertake harvesting of matured sarson crop. Continue sowing of cucurbitaceous crops in the polythene bags and nursery preparation for summer vegetables. Undertake sowing of okra.
    - In Bundelkhand Zone, undertake harvesting and threshing of mature crops (lentil, mustard and linseed crops and potato) in clear weather and store in safe place. Continue sowing of vegetables like pumpkin, bitter gourd etc. Undertake direct sowing of summer vegetables like pumpkin, bitter gourd, water melon, muskmelon, cucumber, ladyfinger, bottle gourd.
    - In Nimar Valley Zone, continue sowing of summer moong and vegetables.
    - In Gwalior, Bhind, Morena, Guna, Ashoknagar and Shivpuri districts of Gird Zone, apply irrigation to wheat crop which is at ear head emergence/milking stage. Continue harvesting of matured sarson crop. Undertake earthing up of matured potato crop.
    - In Kymore Plateau and Satpura Hill Zone, due to present weather condition there may be chances of attack of caterpillar in chickpea crop, for control spray Quinolphos 25 EC @ 2 ml per litre of water.
    - In Bundel khand Zone, there may be incidence stem borer in the late sown wheat crop, for control spray Trizophos 40 EC @ 2.0 ml per liter of water.
    - In Jhabua, Alirajpur and Dhar districts of Jhabua Hills Zone, due to present weather there may be chances of attack of shoot and fruit borer in okra & brinjal, for control spray Triazophos @ 2.0 ml per litre of water.
    - In Gwalior, Bhind, Morena, Guna, Ashoknagar and Shivpuri districts of Gird Zone, due to present weather there may be chances of attack of aphid in cabbage, for control spray Neem oil @ 1.5 to 2 litres in 500 to 600 litres of water per ha.
  - **Chhattisgarh:**
    - In North Hill Zone, in view of prevailing dry weather, apply irrigation in wheat at milk/dough stage and maintain optimum water level in summer rice. Continue sowing of summer green gram and planting of spring sugarcane. Continue sowing of cucurbitaceous crop. Continue harvesting of matured potato and matured mustard. Give light irrigation to onion crop at an interval of 10-12 days as per requirement. Farmers having irrigation facility are advised to complete transplanting of summer rice by end of March.
    - In Bastar Plateau Zone, as temperature conditions are favourable, continue sowing of summer moong, til, summer vegetables like okra, sponge guard, cucumber, ridge guard watermelon, muskmelon and bitter gourd. Continue

- planting of summer sweet potato and harvesting of mustard.
- In Chhattisgarh Plain Zone, continue transplanting of summer rice. Continue sowing of summer green gram. Apply irrigation in wheat. Continue sowing of vegetables like pumpkin, bitter gourd, bottle gourd, okra etc. Give light irrigation to vegetable crops as per requirement.
- In North Hill Zone and Chhattisgarh Plain Zone, in summer paddy, farmers are advised to fix pheromone traps and light traps in the fields for the control of stem borer. Also farmers are advised to spray Saaf fungicide @ 2 g per liter of water to control of purple blotch in onion.
- In Bastar Plateau Zone, of Chhattisgarh, present weather is conducive for attack of caterpillar in all vegetables, for control spray NSKE @ 5ml per litre of water.
- In Chhattisgarh Plain Zone, present weather is conducive for attack of fruit fly in orchard for control use mixed Malathion insecticide with jaggery solution and pots of such solution should be kept hanging in different places in the orchard.
- Suitable varieties for sowing are given in Annexure III
- **Horticulture**
- In North Hill Zone of Chhattisgarh, presently mango crop is at flowering/fruit setting stage, at this stage powdery mildew is commonly observed in mango, which causes poor fruit setting and later on fruit dropping. Hence, it is advised to keep watch over the crop and whenever the symptoms appears, spray Carbendizim (Bavistin) @1.5g or Sulphex @3.0g per litre of water.
- In Bastar Plateau Zone, of Chhattisgarh, at present there is more infestation of sucking pests in mango, for control mix Diesel 10 parts and Malathian 1 part and smoke to irradiate the pest. To avoid flower drying due to tea mosquito bug in cashew spray Lamedasayalothrin.
- **Animal Husbandry**
- In Betul and Chhindwara districts of Satpura Plateau Zone, control of Ranikhet disease in bird vaccinates F-1 or Lasota strain vaccine. Vaccinate the cattle's for H.S and B.Q. Given cool drinking water three times a day to cattles/ birds. Sun stroke symptom present in cattle salt + sugar mix water should be given.
- In Bastar Plateau Zone of Chhattisgarh, to protect livestock from diseases like Hemorrhagic Septicaemia (H.S.), Black quarter (B.Q.), Anthrax, Theileriosis etc. consult the veterinary Doctor and vaccinate. Undertake de worming in cattle with medicines like Piparagen, Benminth & Panaraquar.
- **Fishery**
- In North Hill Zone of Chhattisgarh, as temperature is increasing and it will favour the growth of fishes. Hence, add cow dung and lime in the pond as natural food for fishes and alternative feeds may also be used like Rice Bran and Mustard cake (each of 5 kg per day per acre area of pond).

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



*Mustard*



*Maize*



*Cauliflower*



*Wheat*

- **Realised Rainfall:** Rainfall occurred at Anantnag, Baramula, Kulgam, Kupwara and Ramban districts of Jammu & Kashmir; at Kullu district of Himachal Pradesh, Weather remained mainly dry/dry over the region.
- **Realised Temperatures:** Maximum temperatures were **markedly below normal (5.1°C or less)** at many places over Jammu & Kashmir and Himachal Pradesh; **appreciably below normal (3.1°C to 5.0°C)** at a few places over Punjab and at isolated places over northeast Rajasthan; **below normal (1.6°C to 3.0°C)** at many places over Uttarakhand and at isolated places over rest East Rajasthan. Minimum temperatures are **above normal (1.6°C to 3.0°C)** at a few places over East Uttar Pradesh; at isolated places over Rajasthan. They are **appreciably below normal (3.0°C to 5.0°C)** at a few places over Jammu & Kashmir and Uttarakhand; **below normal (1.6°C to 3.0°C)** at a few Places over Haryana, Chandigarh & Delhi and near normal over rest of the region. The lowest **Minimum temperature of 7.7°C** recorded at **Ganganagar (Rajasthan)** in the plains of the country.
- **Advisories:**
  - As thundersquall accompanied with hail very likely at isolated places over Jammu & Kashmir, Himachal Pradesh, , Punjab, East Rajasthan on 10th March and over Uttarakhand, Uttar Pradesh, Haryana, Chandigarh & Delhi on 10<sup>th</sup> & 11th March, farmers are advised to arrange support to banana and staking of vegetables to prevent the crops



from lodging due to strong winds.

- As rain/ snow likely at most places over Uttarakhand and Himachal Pradesh on 10th and 11th and West Uttar Pradesh on 10th March, most/ many places over Punjab and Jammu and Kashmir on 10th & 11th March and at many places over East Uttar Pradesh on 10th March, postpone irrigation, application of fertilizers and plant protection methods to standing crops. Keep already harvested produce at safe places.

- **Jammu & Kashmir:**

- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, continue transplanting of tomato/Brinjal/chilli, direct sowing of cucurbits like cucumber, bottle ground, bitter gourd, pumpkin and okra after current spells of heavy rain. Undertake harvesting of matured mustard and gram after current spells of rain.
- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, clear drainage channels in standing crops, vegetable fields and in saffron fields. Provide staking with dry wooden branches to garden pea. Continue nursery preparation of summer vegetables under protected structures. Continue planting cucurbits in main field.
- In Valley Temperate Zone of Jammu and Kashmir, apply first dose of Urea (1.75Kg/kanal). In high frost condition, continue raising of nursery for sowing of summer vegetables in hot beds and poly house. Maintain drainage channels in the standing crop field of saffron, wheat, and other standing crop. Continue sowing of leafy vegetables in poly house.
- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, weather is favourable for infestation of yellow rust on wheat, Alternaria Blight and sucking pest on mustard, Wilt and blight on gram and pea and outbreak of sucking pest on vegetable crops, Monitor the crops and take appropriate plant protection measures to control above pest/disease after current spell of rain in clear weather.

- **Uttarakhand:**

- In Uttarakhand due to the chances of light to moderate rainfall farmers are advised to suspend irrigation and plant protection measures. Make necessary arrangement to drain out excess water from field crops under water stagnation condition.
- In Udham Singh Nagar district of Bhabar and Tarai Zone, complete sowing of urad crop and sowing of bottle gourd, bitter gourd, ridged gourd and pumpkin after current spell of heavy rain.
- In Nainital district of Bhabar and Tarai Zone, continue nursery sowing of tomato, capsicum and brinjal for sowing in mid and high hills after current spell of heavy rain. In valley region, undertake sowing of potato and Kufrijyoti variety of potato during the last week of this month. As temperature is increasing in coming days in the valleys, Arkakomal and Contender variety of French bean should be sown in clear weather condition.
- In TehriGarhwal, Chamoli, Champawat, Pithoragarh, Rudraprayag and Uttarkashi districts of Hill Zone, continue the weeding and hoeing in vegetable crops after current spells of rain. Continue nursery preparation for chilli, tomato and brinjal in poly houses. Prepare seedlings of early cucurbitaceous crops in small polythene bags in poly houses.
- In Bhabar and Tarai Zone, there may be occurrence of Mahu in mustard crop, spray Thiamethoxam 25 WSG @ 50-100g/ha. There may be attack of fruit borer in gram and lentil crop at the time of flowering, spray Melathion 50EC @ 2.0 litre/ha or Quinalphos 25 EC @ 1.5litre/ha in 500-600 liter of water 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.

- **Himachal Pradesh:**

- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, continue sowing of sunflower, as time is suitable for sowing of sunflower in low and mid-hill areas. In lower regions undertake sowing of green gram and black gram in second fortnight of March, undertake sowing of cucurbits crops, early okra, spinach, coriander, fenugreek. It is optimum time for nursery sowing of tomato, brinjal, chillies and capsicum crops in poly house. Cucurbits plantation may be done in polytubes under the polyhouse. Continue sowing of French bean, cluster bean, summer radish as present temperature is suitable for germination of seeds. Continue transplanting of young seedlings of tomato, chilli and cole crop. In mid hill region continue nursery sowing of cucurbits viz. cucumber, bitter gourd, bottle guard and summer squash in polytubes inside polyhouse. Do the earthing up operation in the early sown potato crop. Continue sowing of early crop of okra with seed rates 10-15 kilogram per acre. Sow chari and bajra for summer green fodder.
- In High Hills Temperate Dry Zone of Himachal Pradesh, in Kinnaur and Lahaul&Spiti, avoid pruning of apple trees when snow is fallen and until the weather is warm. Close the polyhouse properly as temperature will decrease and maintain temperature around 20°C.
- In High Hills Temperate Dry Zone of Himachal Pradesh, in Kinnaur and Lahaul&Spiti districts, in polyhouse there may be chances of attack of aphid in vegetables, for control spray Acetamiprid 20 SP @ 1 gm or Lambdaialotrina 5 EC @ 0.8 ml per liter of water.
- In Mild Hills Sub-Humid Zone of Himachal Pradesh, in Kullu and Mandi districts, undertake pruning up to half

branch and paste with Chaubatia paints to prevent the infection in apple and per orchards and stone fruits. Undertake preparation of tree basins and start pruning by removing diseased and dense unwanted branches etc. in pomegranate orchards.

- In Mild Hills Sub-Humid Zone of Himachal Pradesh, in Kullu and Mandi districts, present weather is conducive for attack of collar rot in apple, for control remove the soil around the collar region and expose the affected portion to sun. Remove the affected bark and apply Chaubatiapaint or Copper Oxochloride paint. Irrigate 30cm radius around tree trunk with Bavistin@ 30gms per 15 litre of water or Ridomil @ 75gm per 15litres of water or Dithane M-45 @ 90 to 100gms per 15litres 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 yellow rust in 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 of Punjab, weather is suitable for sowing of okra varieties Punjab Padmini/ Punjab 7/ Punjab 8. Undertake transplanting of CH-1, CH-3, Punjab Sindhuri, Punjab Tej, Punjab Guchhedar and Punjab Surakh varieties of Chilli.
- In Western Zone of Punjab, prepare the field for sowing of Okra. Varieties recommended for sowing are Punjab Padmini, Punjab-7 and Punjab-8.
- In Eastern zone of Haryana, undertake planting of spring season sugarcane.
- In New Delhi, undertake sowing of ladies finger- A-4, Parbani Kranti and Arka anamika cultivars. Seed rates should be 10-15 kilogram per acre. Undertake sowing of French bean, cluster bean, summer radish as present temperature is suitable for germination of seeds.
- Farmers in New Delhi are advised to procure quality seeds for green gram and black gram from certified source for sowing during first week of March. Variety: - Green gram – Pusa Visal, Pusa Baisakhi, PDM-11, SML-32 and Black gram – Pant Urd 19, Pant Urd 30, Pant Urd 35, PDU-1. Undertake planting of sugarcane in vacant fields. Choose the best varieties recommended for the region, such as Karnal-1, Karnal-2, Karnal-3, Karnal-4, Kernal-5, and Kernal-6 etc. Row to row spacing of 90 cm. Inter-cropping of short duration crops like lobia, guar, moong, spinach, amaranthus etc. may be done with sugarcane.
- In New Delhi, in present weather condition, constant monitoring of the wheat crop against rust disease is advised. If symptoms of black, brown or yellow rust appears, spray the crops with Dithane M-45 @ 2.5 g per litre of water on a non rainy day.
- In Western Zone and Western Plain zone of Punjab, to control purple blotch in onion, spray the crop with 600 g of Indofil M-45 mixed with 200 ml of Triton or linseed oil in 200 litres of water per acre as soon as first symptom of purple blotch appears in the crop. The spray should be repeated at 10 days interval.
- In Western Zone of Punjab, monitor the wheat fields for appearance of yellow rust. As soon as the disease appears, spray the crop with Tilt or Shine or Bumper or Stilt or Compass or Markzole @ 200 ml in 200 litres of water per acre. Repeat the spray at 15 days interval. Also observe the fields for appearance of aphids, if the population reaches the economic threshold level (ETL) i.e. 5 aphids/earhead, spray the crop with 40 ml Confidor 17.8 SL or 20g Actara 25 WG in 80-100 liter of water per acre. Undertake plant protection methods on a non rainy day
- Alternaria blight are noticed in the mustard field in Western Plain Zone of Punjab, farmers are advised to spray the crop with Blitox or Indofil m 45 @ 250 gm in 100 liters of water/acre followed by second spray of Score 25 EC @ 100ml and third spary of Blitox or Indofil M 45 @ 25 gm in 100 liters of water / acre at 15 days intervals. Spraying should be done in the afternoon when the pollinators are less active. Undertake plant protection methods on a non rainy day.
- Under prevailing cloudy weather conditions in Western Plain Zone of Punjab, aphids may severely attack on wheat crop. Therefore, farmers are advised to observe their fields, if the population reaches the economic threshold level (ETL) i.e. 5 aphids/earhead, spray the crop with 40 ml Confidor 17.8 SL (imidacloprid) or 20g Actara 25 WG (thiamethoxam) or 150 ml Rogar 30 EC (dimethoate) in 80-100 litres of water / acre on a non rainy day.

#### ▪ **Uttar Pradesh:**

- In Central Plain Zone of Uttar Pradesh, continue harvesting of matured barley and mustard crop in clear weather. Undertake sowing of bhindi, mung and urad. Undertake hoeing and weeding operation in maize crop which is at one month old on a non rainy day. Undertake sowing of urad crop. Undertake transplanting of ready plants of tomato and chilli in main field. Complete sowing of cucurbits, bhindi, pumpkin. Undertake planting of spring sugarcane.
- In Bundelkhand Zone of Uttar Pradesh, as temperature is rising apply irrigation to late sown jou and wheat crop at ears emergence stage and timely sown wheat crop at milking stage as per requirement. Continue harvesting of matured mustard, linseed, gram, pea crops on a non rainy day. Continue land preparation for sowing of urad and mung. Continue sowing of bhindi, Cucurbitaceous vegetables. Continue transplanting of tomato, chilli and brinjal.
- In Western Plain Zone of Uttar Pradesh, undertake sowing of cucurbitaceous and transplanting of young seedlings

- of tomato, chilli crop may be done in prepared fields.
- In North Eastern plain Zone of Uttar Pradesh, undertake harvesting of matured potato crop in clear weather.
  - In Central Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of fruit borer in gram crop, for control, spray Monocrotophos @ 0.75 litres in 700 to 800 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 fruit borer in brinjal and tomato crop, for control, spray Carbaryl @ 2 gm 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 fruit borer in Cucurbitaceous crop, for control spray Neem oil @ 1.5 to 2.0 ml per litre of water, 3 to 4 times at the 8 to 10 days of intervals after current spells of rain.
  - In Western Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of thrips and purple blotch in onion crop, for control thrips spray Confidor @ 0.5 ml per 3 litre of water with sticky material (Tipol 1.0 gram /litre) and for control of purple blotch spray Dithane-M -45 @ 3 gm per litre of water with sticky material (Tipol 1.0 gram /litre) after current spells of rain.
  - In Western Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of black, brown or yellow rust, for control spray Dithane M-45 @ 2.5 grams 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 aphid in late sown mustard, lentil, linseed and other *rabicrops*, for control spray Monocrotophos @ 1.25 litres in 600 litres of water per hectare 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 crop, for control, apply Chlorpyrifos @ 3.0 litres along with irrigation after current spells of rain.
- **Rajasthan:**
- In Sub Humid Southern Plain and Aravali Hill Zone, in Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts, continue harvesting of matured mustard crop. Continue sowing of summer okra and chilli. Apply irrigation in wheat crop at milking and maturity stage as per requirement.
  - In Dungarpur, Banswara and Pratapgarh districts of Southern Humid Plain Zone, farmers are advised to apply irrigation in wheat at milk stage and in maize crop at silking and grain filling stage as per requirement.
  - In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhapur districts of Flood Prone Eastern Plain Zone, Continue harvesting of matured mustard crop. Stop irrigation 10 days before digging of matured potato crop. Dig using potato digger after drying of leaves and hardening of skin to minimize labour cost and cut injury to tubers. It is right time for sowing cucurbitaceous vegetables like melon, bottle gourd, ridge gourd, bitter gourd, pumpkin and smooth gourd etc. Undertake nursery sowing of brinjal ( use 160-200 g/acre seed) summer chilli during February-March (use 400 – 600 g/acre seed), okra ( use 8 kg/acre seed). Undertake sowing of leafy vegetables like spinach (8-10 kg/acre seed) and amaranthus (800g-1.0 kg/acre seed).
  - In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather is favourable for sowing of Zaid Green gram, Zaid groundnut, Okra, Zaid sorghum (fodder), Zaid Pearl millet (fodder) & early summer cucurbits like bottle gourd, round guard, bitter guard, water melon and musk melon.
  - In Jaisalmer and Bikaner districts of Arid Western Plain Zone, early sown mustard may be at maturity stage. Protect it by harvesting and keeping in shelter. In timely sown wheat crop apply 5<sup>th</sup> irrigation to standing crop at 90-95 days after sowing on start of milking stages if no rain. Undertake sowing of fodder sorghum and pearl millet.
  - In Barmer, Churu, Jalore, Jodhpur, Pali districts of Arid Western Plain Zone, Apply irrigation to vegetable crops as per requirement. Continue harvesting of matured cumin, gram and mustard crop.
  - In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, undertake sowing of sugarcane. Apply fourth irrigation to timely sown wheat crop at 15-20 days after third irrigation at ears emergence stage and in late sown wheat crop apply third irrigation 25 to 30 days after second irrigation as per requirement.
  - In Southeastern Humid Plain Zone, in Jhalawar, Kota, Bundi, Baran districts, prevailing weather condition is congenial for attack of green grubs in gram crop, for control broadcast Quinalphos 1.5% @ 25 kg per hectare.
  - In Southeastern Humid Plain Zone, in Jhalawar, Kota, Bundi, Baran districts, prevailing weather condition is congenial for attack of moyla in mustard crop, for control broadcast Malathion or Carbaryl 5% dust @ 25 kg per hectare or Malathion 50 EC @ 1.25 litres or Dimethoet 30 EC @ 875 ml or Aciphate 75 SP @ 700 gm in sufficient amount of water per hectare. If required repeat spray 15 days intervals.
  - In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, prevailing weather condition is congenial for attack of yellow rust in wheat crop for control spray propiconazole 25 EC @ 1 ml per litre of water.
  - In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, prevailing weather condition is congenial for attack of termite in jou, wheat and gram crops for control spray Chlorpyrifos 20 EC @ 1 litre per bhiga along with irrigation water.
  - In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is



congenial for attack of termite in standing onion crop, for control, apply Chlorpyrifos 20 EC @ 4 litres per hectare with irrigation water.

- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of red pumpkin beetle in early sown summer cucurbits, for control, broadcast Carbaryl 5% @ 20 kg per hectare or spray Acephate 75 S.P. @ 0.5 gram 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 mango hopper in Mango trees, for control spray Monochrotophos 40 EC @ 1.5 ml or Chlorpyrifos 20 % EC @ 2 ml 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 wilt in guava, for control use Bawistin @ 20 to 30g in 10 to 15 litres of water near the root and also apply Zinc Sulfate @ 15g after current spells of rain.
- In Sub Humid Southern Plain and Aravali Hill Zone, in Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts of Rajasthan, prevailing weather condition is congenial for fruit dropping in ber crop, for control spray NAA or Planofix solution @ 100 ppm 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 leaf minor in Citrus. For control, spray Matasystox @ 10 ml or Malathion @ 10 ml in 10 litres of water after current spells of rain.
- In Bhabar and Tarai Zone of Uttarakhand, in high hilly regions where snow is melting, first half dose of Nitrogen fertilizer should be applied in the basins of temperate fruit trees. For pollination, at the time of flowering in the orchard of different varieties of temperate fruits, keep the boxes of bee @ 2-3/Ha.

- **Floriculture**

- In Himachal Pradesh, present weather is conducive for the attack of inflorescence rotting disease in marigold crop for control spray Bavistin @ 1 g per litre of water or Indofil-M 45 @ 2 ml per litre of water and undertake intercultural operations and weeding in flower beds. The flowers affected with aphids, for control spray Malathion @ 0.05% after current spells of rain.
- In Valley Temperate Zone of Jammu and Kashmir, provide drainage channels in flowerbeds to avoid water stagnation after snow melting.

- **Apiculture**

- In Himachal Pradesh, artificial feed of 50% sugar and 50% water solution should be given to honey bees. Insert the brood chamber without frame for ensuring aeration. The temperature is still low, keep the winter packing to colonies. Check the colonies for nectar 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, shift the bee colonies near the fields of mustard/gobisarson.
- In Bhabar and Tarai Zone of Uttarakhand, install honey boxes @3-9/ha in temperate fruit orchard at flowering stage.

- **Animal Husbandry**

- In Rajasthan, foot and mouth disease may spread in cows and buffaloes. Vaccinate the animals against FMD. If animal is affected then isolate the affected animal and wash its mouth with 0.1% potassium permanganate solution.
- In Himachal Pradesh, monitor the animals for FMD and advised Vaccination. Ecto-parasite attack is expected in this weather for control spray Butox @ 2ml per litre in cowshed and give mixture of hay & green fodder.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, give special care to young calves as they are more sensitive to pneumonia. Use dry gunny bags as bedding material for protection against low night temperatures. Provide dry bedding during night.
- In Bhabar and Tarai Zone of Uttarakhand, Toxocaravitulorum (patera) are found in the food tube of buffalo calf in the age of 1-4month. Piperazine should be given to the infected calf on identification of Patera disease as delay in treatment increases mortality on calves.

- **Poultry**

- In Himachal Pradesh, new lot of layers chicks follow recommended schedule of vaccination for IBD and Ranikhet disease because weather is conducive for the spread of these disease. Increase 10% feeding and add mineral in the diet.
- In Rajouri, Ramban, Poonch and Udhampur districts of Jammu & Kashmir, in poultry shed, light around 13-14 hours a day should be maintained in the layers houses with the help of electric bulbs for better egg production.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, cover the poultry shed with gunny bags in order to protect the birds from cold weather.

- **Fishery**

- In Himachal Pradesh, undertake renovation of ponds, preparation of new ponds, de-silting, manuring etc. to add stocking in by the next month.
- In Jammu & Kashmir, add supplementary feed (GNOC/mustard oilcake and Rice/Wheat bran) @ 3% of total body weight of fish biomass.

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

Annexure I

Sub-Divisions	22.02.17		01.03.17		08.03.17	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
<b>Arunachal Pradesh</b>						
Anjaw	**	**	**	**	**	**
Changlang	25.0	-56	13.8	-74	25.0	-63
Dibang Valley	69.0	35	71.0	39	226.0	237
East Kameng	0.0	-100	6.2	-71	0.0	-100
East Siang	34.3	65	18.5	-14	72.0	214
Kurung Kumey	**	**	***	**	**	**
Lohit	70.2	137	46.2	77	104.8	240
Lower Dibang Valley	53.5	4	32.9	-35	168.4	151
Lower Subansari	**	**	**	**	**	**
Papumpare	36.8	59	17.9	12	23.6	123
Tawang	35.0	197	5.0	-50	65.0	665
Tirap	**	**	**	**	10.8	-55
Upper Siang	12.8	-79	89.0	72	192.0	138
Upper Subansari	41.4	146	2.8	-76	49.8	383
West Kameng	14.1	19	3.1	-69	0.0	-100
West Siang	38.7	135	12.6	-43	51.6	139
<b>Assam&amp;Meghalaya</b>						
<b>Assam</b>						
Baksa	45.0	524	11.1	5	0.5	-89
Barpeta	36.0	401	5.4	-48	0.0	-100
Bongaigaon	50.8	350	0.0	-100	0.0	-100
Cachar	39.7	71	4.8	-71	4.1	-81
Chirang	26.6	135	0.0	-100	0.0	-100
Darrang	**	**	**	**	**	**
Dhemaji	40.0	205	30.0	116	48.0	371
Dhubri	8.2	413	0.0	-100	0.0	-100
Dibrugarh	62.8	351	33.5	99	22.2	35
Goalpara	22.4	300	0.0	-100	0.0	-100
Golaghat	44.3	387	2.6	-63	0.1	-99
Hailakandi	64.1	201	0.0	-100	6.3	-26
Jorhat	30.3	212	3.0	-65	6.4	-45
Kamrup(Rural)	24.6	246	11.0	57	0.0	-100
Kamrup(Metro)	10.4	46	0.0	-100	0.0	-100
Karbi Anglong	6.1	-46	0.2	-97	0.0	-100
Karimganj	68.9	499	9.9	25	1.3	-96
Kokrajhar	0.2	-98	0.0	-100	0.0	-100
Lakhimpur	39.6	202	5.4	-61	24.1	136
Morigaon	6.6	-26	0.0	-100	0.0	-100
N.C.Hills	22.5	61	49.2	180	1.3	-95
Nagaon	1.5	-71	11.1	99	2.4	-56
Nalbari	25.9	245	5.6	40	0.0	-100

Sonitpur	59.6	740	8.6	69	0.5	-91
Sibsagar	29.3	142	4.9	-36	8.3	-39
Tinsukia	56.4	200	29.9	70	37.3	111
Udalgiri	72.5	1015	14.0	250	1.2	-86
<b>Meghalaya</b>						
East Garo Hills	0.5	-89	2.8	-71	0.0	-100
East Khasi Hills	108.8	1136	103.7	1471	6.4	-76
Jaintia Hills	0.0	-100	0.0	-100	0.0	-100
Ribhoi	0.9	-84	0.0	-100	0.0	-100
South Garo Hills	0.0	-100	2.0	-65	0.0	-100
West Garo Hills	0.0	-100	0.0	-100	0.0	-100
West Khasi Hills	6.0	-57	2.0	-78	2.0	-33
<b>NMMT</b>						
<b>Mizoram</b>						
Aizwal	0.0	-100	15.4	32	10.3	-20
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	0.0	-100	0.0	-100	6.0	-30
Mamit	**	**	**	**	**	**
Saiha	0.0	-100	0.0	-100	0.0	-100
Serchhip	0.0	-100	0.0	-100	20.0	92
<b>Manipur</b>						
Bishnupur	**	**	**	**	**	**
Chandel	0.0	-100	0.0	-100	1.0	-88
Churachandpur	**	**	**	**	**	**
Imphal east	14.4	62	5.7	-51	0.4	-98
Imphal west	12.9	239	0.7	-95	3.5	-79
Senapati	12.0	650	37.0	461	0.0	-100
Tamenglong	**	**	**	**	**	**
Thoubal	7.0	218	4.0	-60	0.0	-100
Ukhrul	**	**	**	**	**	**
<b>Nagaland</b>						
Dimapur	0.0	-100	0.4	-88	1.1	-87
Kephire	0.0	-100	0.0	-100	2.0	-84
Kohima	0.0	-100	0.5	-95	2.6	-70
Longleng	**	**	**	**	**	**
Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paran	**	**	**	**	**	**
Phek	0.0	-100	1.0	-89	3.0	-65
Tuensang	**	**	**	**	**	**
Wokha	1.0	-88	1.0	-93	0.0	-100
Zunheboto	**	**	**	**	**	**
<b>Tripura</b>						
Dhalai	0.0	-100	24.2	66	25.0	74
North Tripura	0.0	-100	5.3	-70	34.0	105
South Tripura	0.0	-100	16.1	48	32.7	336
West Tripura	0.0	-100	33.8	259	37.9	522



<b>Himachal Pradesh</b>						
Bilaspur	8.2	-56	0.0	-100	1.5	-88
Chamba	39.3	74	2.6	-93	18.7	-45
Hamirpur	5.1	-67	0.0	-100	1.4	-91
Kangra	17.5	-6	0.1	-99	0.5	-97
Kinnaur	11.1	-63	2.4	-89	16.3	-9
Kullu	50.8	104	3.3	-88	29.6	13
Lahaul and Spiti	41.4	22	11.0	-71	16.7	-49
Mandi	21.3	-1	0.1	-99	1.8	-87
Shimla	10.9	-44	1.8	-91	5.5	-61
Sirmaur	2.0	-84	0.0	-100	5.7	-22
Solan	5.2	-76	0.0	-100	3.5	-74
Una	2.1	-84	0.0	-100	0.3	-97
<b>Punjab</b>						
Amritsar	0.0	-100	0.0	-100	0.2	-97
Barnala	0.0	-100	0.0	-100	0.0	-100
Bhatinda	0.0	-100	0.0	-100	0.0	-100
Faridkot	0.0	-100	0.0	-100	0.0	-100
Fatehgarh Sahib	0.0	-100	0.0	-100	0.0	-100
Ferozpur	0.0	-100	0.0	-100	0.0	-100
Gurdaspur	3.6	-68	0.0	-100	0.4	-97
Hoshiarpur	0.0	-100	0.0	-100	0.0	-100
Jalandhar	0.0	-100	0.0	-100	0.0	-100
Kapurthala	0.0	-100	0.0	-100	0.3	-95
Ludhiana	0.0	-100	0.0	-100	0.0	-100
Mansa	0.0	-100	0.0	-100	0.0	-100
Moga	0.0	-100	0.0	-100	0.0	-100
Muktesar	0.0	-100	0.0	-100	0.0	-100
Nawashahar	0.0	-100	0.0	-100	0.0	-100
Patiala	0.0	-100	0.0	-100	3.9	-34
Ropar	0.1	-99	0.0	-100	0.0	-100
Sangrur	0.0	-100	0.0	-100	0.4	-89
Mohali	0.0	-100	0.0	-100	4.0	-49
TarnTaran	0.0	-100	0.0	-100	0.5	-91
<b>Haryana,Chd,Delhi</b>						
<b>Haryana</b>						
Ambala	0.0	-100	0.0	-100	2.9	-42
Bhiwani	0.0	-100	0.0	-100	0.0	-100
Chandigarh	0.0	-100	0.0	-100	2.7	-62
Faridabad	0.0	-100	0.0	-100	0.0	-100
Fatehabad	0.0	-100	0.0	-100	1.0	-38
Gurgaon	0.0	-100	0.0	-100	0.0	-100
Hissar	0.0	-100	0.0	-100	0.4	-73
Jhajar	0.0	-100	0.0	-100	0.0	-100
Jind	0.0	-100	0.0	-100	0.1	-94
Katihah	0.0	-100	0.0	-100	0.2	-93
Karnal	0.0	-100	0.1	-99	0.8	-82
Kurukshetra	0.0	-100	0.0	-100	2.7	-52
Mahendragarh	0.0	-100	0.0	-100	0.0	-100

Mewat	0.0	-100	0.0	-100	0.0	-100
Palwal	0.0	-100	0.0	-100	0.0	-100
Panchkkula	0.0	-100	0.0	-100	2.3	-70
Panipat	0.0	-100	0.0	-100	0.0	-100
Rewari	0.0	-100	0.0	-100	0.0	-100
Rohtak	0.0	-100	0.0	-100	0.0	-100
Sirsa	0.0	-100	0.0	-100	0.5	-69
Sonepat	0.0	-100	0.0	-100	0.0	-100
Yamunanagar	0.0	-100	0.0	-100	2.0	-74
<b>Delhi</b>						
Central Delhi	0.0	-100	0.0	-100	0.0	-100
East Delhi	0.0	-100	**	**	**	**
New Delhi	0.0	-100	0.0	-100	0.0	-100
North Delhi	0.0	-100	0.0	-100	0.0	-100
North East Delhi	0.0	-100	0.0	-100	0.0	-100
North West Delhi	0.0	-100	0.0	-100	0.3	-91
South Delhi	0.0	-100	0.0	-100	0.0	-100
South West Delhi	0.0	-100	0.0	-100	0.0	-100
West Delhi	**	**	**	**	**	**
<b>Jammu &amp; Kashmir</b>						
Anantnag	71.7	134	6.9	-77	28.5	-19
Badgam	12.4	-36	2.0	-88	8.7	-54
Bandipore	**	**	**	**	**	**
Baramula	48.7	32	5.5	-87	31.6	37
Doda	78.0	37	8.2	-85	9.6	-80
Ganderbal	82.6	342	3.2	-80	12.6	-33
Jammu	11.8	-42	0.2	-99	2.8	-76
Kargil	0.0	-100	**	**	1.6	-88
Kathua	3.4	-83	0.0	-100	0.0	-100
Kistwar	**	**	**	**	**	**
Kulgam	40.6	33	4.4	-68	24.2	-31
Kupwara	102.2	200	7.6	-77	45.8	3
Ladakh(Leh)	3.2	58	0.2	-83	0.0	-100
Poonch	**	**	**	**	**	**
Pulwama	23.2	53	5.4	-56	10.5	-46
Rajouri	26.6	13	0.0	-100	7.6	10
Ramban	74.6	31	4.9	-91	37.8	-23
Reasi	8.6	-72	2.2	-88	5.6	-81
Samba	2.6	-87	0.0	-100	1.2	-90
Shopian	**	**	**	**	**	**
Srinagar	34.0	82	3.3	-80	13.9	-26
Udhampur	25.4	-17	0.0	-100	3.6	-88
<b>East Madhya Pradesh</b>						
Anuppur	0.0	-100	0.0	-100	0.0	-100
Balaghat	0.0	-100	0.0	-100	4.3	95
Chhatarpur	0.0	-100	0.0	-100	0.0	-100
Chindwara	0.0	-100	0.0	-100	0.0	-100
Damoh	0.0	-100	0.0	-100	0.0	-100

Dindori	0.0	-100	0.0	-100	0.0	-100
Jabalpur	0.0	-100	0.0	-100	0.0	-100
Katni	0.0	-100	0.0	-100	0.0	-100
Mandla	0.0	-100	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	0.0	-100	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	0.0	-100	0.0	-100	0.0	-100
Shahdol	0.0	-100	0.0	-100	0.0	-100
Sidhi	0.0	-100	0.0	-100	0.0	-100
Singrauli	0.0	-100	0.0	-100	2.5	14
Tikamgarh	0.0	-100	0.0	-100	0.0	-100
Umaria	0.0	-100	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	0.0	-100
Gwalior	0.0	-100	0.0	-100	0.1	-95
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	1.5	-36
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	0.0	-100	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	24.5	666
Baloda Bazar	0.0	-100	0.0	-100	0.0	-100
Balrampur	0.0	-100	0.0	-100	0.0	-100
Bastar	0.0	-100	0.0	-100	0.0	-100
Bemetara	0.0	-100	0.0	-100	0.0	-100
Bijapur	0.0	-100	0.0	-100	0.0	-100
Bilaspur	0.0	-100	0.0	-100	0.2	-94
Dantewara	0.0	-100	0.0	-100	0.0	-100
Dhamtari	0.0	-100	0.0	-100	15.6	721
Durg	0.0	-100	0.0	-100	11.4	256
Gariaband	0.0	-100	0.0	-100	0.0	-100
Janjgir	0.0	-100	0.0	-100	0.0	-100
Jashpurnagar	0.0	-100	0.0	-100	0.0	-100
Kabirdham	0.0	-100	0.0	-100	0.0	-100
Kanker	0.0	-100	0.0	-100	0.0	-100
Kondagaon	0.0	-100	0.0	-100	0.0	-100
Korba	0.0	-100	0.0	-100	0.0	-100
Koriya	0.0	-100	0.0	-100	0.0	-100
Mahasumund	0.0	-100	0.0	-100	0.0	-100
Mungeli	0.0	-100	0.0	-100	0.0	-100
Narayanpur	0.0	-100	0.0	-100	0.0	-100
Raigarh	0.0	-100	0.0	-100	0.0	-100
Raipur	0.0	-100	0.0	-100	8.0	165
Rajnandgaon	0.0	-100	0.0	-100	15.9	696
Sukma	0.0	-100	0.0	-100	0.0	-100
Surajpur	0.0	-100	0.0	-100	0.0	-100
Surguja	0.0	-100	0.0	-100	1.2	-62
<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	0.0	-100	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	0.0	-100	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	0.0	-100	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	0.0	-100	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	0.0	-100	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	0.0	-100	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	0.0	-100	0.0	-100	0.0	-100
Sultanpur	0.0	-100	0.0	-100	0.0	-100
Unnao	0.0	-100	0.0	-100	0.0	-100
Varanasi	0.0	-100	0.0	-100	0.5	-79
<b>West Uttar Pradesh</b>						
Agra	0.0	-100	0.0	-100	0.0	-100
Aligarh	0.0	-100	0.0	-100	4.9	186
Auraiya	0.0	-100	0.0	-100	0.0	-100
Badaun	0.0	-100	0.0	-100	5.4	145
Baghpat	0.0	-100	0.0	-100	0.0	-100
Bareilly	0.0	-100	0.0	-100	2.3	-24
Bijnor	1.3	-83	0.6	-89	0.0	-100
Bulandsahar	0.0	-100	0.0	-100	0.0	-100
Etah	0.0	-100	0.0	-100	0.3	-85
Etawah	0.0	-100	0.0	-100	0.0	-100
Firozabad	0.0	-100	0.0	-100	0.0	-100
GBNagar	0.0	-100	0.0	-100	0.0	-100
Ghaziabad	0.0	-100	0.0	-100	0.0	-100
Hamirpur	0.0	-100	0.0	-100	0.0	-100
Jalaun	0.0	-100	0.0	-100	0.0	-100
Jhansi	0.0	-100	0.0	-100	0.0	-100
Jotiba Phule Nagar	0.0	-100	0.0	-100	0.0	-100
Kanshiramnagar	0.0	-100	0.0	-100	0.5	-80
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	0.0	-100	0.1	-97	0.0	-100
Moradabad	0.0	-100	0.0	-100	0.0	-100
Muzzaffarnagar	0.0	-100	0.0	-100	0.0	-100
Pilibhit	0.0	-100	0.0	-100	0.0	-100

Rampur	0.0	-100	0.7	-91	0.0	-100
Saharanpur	0.0	-100	0.0	-100	0.0	-100
Shahjahanpur	0.0	-100	0.0	-100	1.1	-66
<b>Uttarakhand</b>						
Almora	2.5	-82	0.0	-100	3.4	-67
Bageshwar	0.0	-100	0.0	-100	0.0	-100
Chamoli	12.8	-45	0.0	-100	7.9	-48
Champawat	4.0	-68	0.0	-100	0.0	-100
Dehradun	4.2	-74	0.4	-96	5.7	-42
Garhwal Pauri	2.4	-79	0.7	-86	0.2	-97
Garhwal Tehri	7.5	-47	1.6	-97	7.1	-45
Haridwar	4.1	-60	0.2	-97	0.0	-100
Nainital	12.1	-3	0.5	-93	3.2	-64
Pithoragarh	9.4	-51	0.0	-100	5.9	-57
Rudraprayag	4.9	-80	0.5	-97	6.9	-55
Udham Sing Nagar	0.0	-100	0.7	-63	0.5	-87
Uttarkashi	10.0	-56	0.0	-100	15.6	-16
<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	1.4	8
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	0.9	-63
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	0.0	-100	0.0	-100	5.8	142
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	0.0	-100	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	0.0	-100	0.0	-100	2.2	-32
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	0.0	-100	0.0	-100	3.8	58
Chatra	0.0	-100	0.0	-100	5.9	144
Deoghar	0.0	-100	0.0	-100	2.8	133
Dhanbad	0.0	-100	0.0	-100	0.0	-100
Dumka	0.0	-100	0.0	-100	0.0	-100
East Singbhum	0.0	-100	0.0	-100	0.0	-100
Garhwa	0.0	-100	0.0	-100	0.0	-100
Giridih	0.0	-100	0.0	-100	**	**
Godda	0.0	-100	0.0	-100	0.0	-100
Gumla	0.0	-100	0.0	-100	0.0	-100
Hazaribagh	0.0	-100	0.0	-100	0.0	-100
Jamtara	**	**	**	**	**	**
Khunti	0.0	-100	0.0	-100	**	**
Koderrna	0.0	-100	0.0	-100	0.0	-100
Latehar	0.0	-100	0.0	-100	0.0	-100
Lohardagga	0.0	-100	0.0	-100	3.1	
Pakur	0.0	-100	0.0	-100	0.0	-100
Palamau	0.0	-100	0.0	-100	0.3	-42
Ramgarh	**	**	**	**	**	**
Ranchi	0.0	-100	0.0	-100	0.7	-87
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	0.6	-60
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	0.4	-71
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	2.2	69
Dholpur	0.0	-100	0.0	-100	2.8	102
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	0.0	-100	0.0	-100	1.7	177
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	1.6	103
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	0.0	-100
Hanumangarh	0.0	-100	0.0	-100	0.0	-100
Jaisalmer	0.0	-100	0.0	-100	2.2	2071
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.0	-100	0.0	-100	0.5	59
Nagaur	0.0	-100	0.0	-100	0.0	-100
Pali	0.0	-100	0.0	-100	0.0	-100
Sri Ganganagar	0.0	-100	0.0	-100	0.0	-100
<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	**	**	**	**	**	**
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	0.0	-100	0.0	-100	0.0	-100
Morbi	0.0	-100	0.0	-100	0.0	-100
Porbandar	0.0	-100	0.0	-100	0.0	-100
Rajkot	0.0	-100	0.0	-100	0.0	-100
Surendranagar	0.0	-100	0.0	-100	0.0	-100
<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	0.0	-100
<b>Madhya Maharashtra</b>						
Ahmednagar	0.0	-100	0.0	-100	0.0	-100
Dhule	0.0	-100	0.0	-100	0.0	-100
Jalgaon	0.0	-100	0.0	-100	0.0	-100
Kolhapur	0.0	-100	0.0	-100	0.0	-100
Nandurbar	0.0	-100	0.0	-100	0.0	-100
Nasik	0.0	-100	0.0	-100	0.0	-100
Pune	0.0	-100	0.0	-100	0.0	-100
Sangli	0.0	-100	0.0	-100	0.0	-100
Satara	0.0	-100	0.0	-100	0.0	-100
Solapur	0.0	-100	0.0	-100	0.0	-100
<b>Marathwada</b>						
Aurangabad	0.0	-100	0.0	-100	0.0	-100
Beed	0.0	-100	0.0	-100	0.0	-100
Hingoli	0.0	-100	0.0	-100	0.0	-100
Jalna	0.0	-100	0.0	-100	0.0	-100
Latur	0.0	-100	0.0	-100	0.0	-100
Nanded	0.0	-100	0.0	-100	0.0	-100
Osmanabad	0.0	-100	0.0	-100	0.0	-100
Parbhani	0.0	-100	0.0	-100	0.0	-100
<b>Vidarbha</b>						
Akola	0.0	-100	0.0	-100	0.0	-100
Amraoti	0.0	-100	0.0	-100	0.0	-100
Bhandara	0.0	-100	0.0	-100	9.4	162
Buldhana	0.0	-100	0.0	-100	0.0	-100
Chandrapur	0.0	-100	0.0	-100	11.3	176
Gadchiroli	0.0	-100	0.0	-100	5.4	101
Gondia	0.0	-100	0.0	-100	6.3	75
Nagpur	0.0	-100	0.0	-100	1.2	-66
Wardha	0.0	-100	0.0	-100	0.3	-91
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	10.9	23
Balasore	0.0	-100	0.0	-100	11.6	15
Bargarh	0.0	-100	0.0	-100	1.1	-75
Bhadrak	0.0	-100	0.0	-100	14.0	28
Bolangir	0.0	-100	0.0	-100	1.9	-56
Boudh	0.0	-100	0.0	-100	3.7	-71
Cuttack	0.0	-100	0.0	-100	9.3	30
Deogarh	0.0	-100	0.0	-100	27.7	501
Dhenkanal	0.0	-100	0.0	-100	9.5	13
Gajapati	0.0	-100	0.0	-100	11.8	16
Ganjam	0.0	-100	0.0	-100	3.0	-64
Jagatsingpur	0.0	-100	0.0	-100	21.6	332
Jajpur	0.0	-100	0.0	-100	21.1	53
Jharsuguda	0.0	-100	0.0	-100	0.0	-99
Kalahandi	0.0	-100	0.0	-100	17.0	581
Kandhamal	0.0	-100	0.0	-100	22.1	73
Kendrapara	0.0	-100	0.0	-100	44.3	241
Keonjhar	0.0	-100	0.0	-100	8.6	-42
Khurda	0.0	-100	0.0	-100	11.5	28
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	3.1	-64
Nawapara	0.0	-100	0.0	-100	0.0	-100
Nawarangpur	0.0	-100	0.0	-100	3.6	20
Nayagarh	0.0	-100	0.0	-100	25.0	267
Puri	0.0	-100	0.0	-100	5.5	10
Rayagada	0.0	-100	0.0	-100	2.0	-76
Sambalpur	0.0	-100	0.0	-100	4.1	-10
Sonepur	0.0	-100	0.0	-100	0.0	-100
Sundargarh	0.0	-100	0.0	-100	0.2	-96
<b>West Bengal &amp; Andaman Nicobar Islands</b>						
<b>A &amp; N ISLAND</b>						
Nicobar	9.3	-22	14.9	7	9.6	-14
North & Middle Andaman	0.0	-100	0.0	-100	0.0	-100
South Andaman	0.0	-100	0.0	-100	34.7	1726
<b>GWB</b>						
Bankura	0.0	-100	0.0	-100	0.6	-87
Birbhum	0.0	-100	0.0	-100	1.5	-62
Burdwan	0.0	-100	0.0	-100	0.0	-100
East Midnapore	0.0	-100	0.0	-100	0.0	-100
Hooghly	0.0	-100	0.0	-100	0.1	-94
Howrah	0.0	-100	0.0	-100	0.0	-100
Kolkata	0.0	-100	0.0	-100	0.0	-100
Murshidabad	0.0	-100	0.0	-100	0.0	-100
Nadia	0.0	-100	0.0	-100	0.0	-100
24 Pargana (N)	0.0	-100	0.0	-100	0.0	-100

Purulia	0.0	-100	0.0	-100	0.5	-90
24 Pargana (S)	0.0	-100	0.2	-97	1.4	-88
West Midnapore	0.0	-100	0.0	-100	0.4	-95
<b>SHWB &amp; Sikkim</b>						
Cooch Behar	0.0	-100	0.0	-100	0.0	-100
Darjeeling	0.0	-100	4.2	-35	0.0	-100
East Sikkim	0.9	-90	8.0	-39	6.2	-46
Jalpaiguri	0.4	-93	0.6	-88	0.0	-100
Malda	0.0	-100	0.0	-100	0.3	-90
North Dinajpur	0.0	-100	0.0	-100	0.0	-100
North Sikkim	19.9	-18	6.5	-76	19.2	-44
South Dinajpur	0.0	-100	0.0	-100	0.0	-100
South Sikkim	0.0	-100	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>NI 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>SI 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	29.4	345
Kannur	0.0	-100	0.0	-100	4.4	238
Ernakulam	0.0	-100	0.0	-100	53.9	1356
Idukki	0.0	-100	0.0	-100	57.6	611
Kasaragod	0.0	-100	0.0	-100	0.0	-100
Kollam	0.0	-100	0.0	-100	29.5	152
Kottayam	0.0	-100	0.0	-100	35.3	412
Kozhikode	0.0	-100	0.1	-94	8.9	217
Malappuram	0.0	-100	0.0	-100	12.6	1047
Palakkad	0.0	-100	0.0	-100	43.9	1190
Pathanamthitta	0.0	-100	0.0	-100	115.9	983
Thiruvananthapuram	0.0	-100	0.1	-99	55.8	896
Thrissur	0.0	-100	0.0	-100	19.2	735
Wyand	0.0	-100	0.0	-100	10.2	535
<b>Tamil Nadu</b>						
Ariyalur	0.0	-100	0.0	-100	2.5	-21
Chennai	0.0	-100	0.0	-100	0.0	-100
Coimbatore	0.0	-100	0.0	-100	21.4	346
Cuddalore	0.0	-100	0.0	-100	3.5	-34
Dharmapuri	0.0	-100	0.0	-100	11.7	178
Dindigul	0.0	-100	0.0	-100	18.5	231
Erode	0.0	-100	0.0	-100	14.4	299
Kanchipuram	0.0	-100	0.0	-100	0.0	-100
Kanyakumari	0.0	-100	0.0	-100	14.0	108
Karaikal	0.0	-100	0.0	-100	185.5	3933
Karur	0.0	-100	0.0	-100	14.7	38
Krishnagiri	0.0	-100	0.0	-100	35.1	903
Madurai	0.0	-100	0.0	-100	44.8	660
Nagapattinam	0.0	-100	0.0	-100	46.8	667
Namakkal	0.0	-100	0.0	-100	2.3	-26
Nilgiris	0.0	-100	0.0	-100	13.6	17
Perambalur	0.0	-100	0.0	-100	6.5	63
Puducherry	0.0	-100	0.0	-100	5.8	81
Pudukottai	0.0	-100	0.0	-100	7.3	59
Ramanathapuram	0.0	-100	0.0	-100	19.8	175
Salem	0.0	-100	0.0	-100	3.7	-18
Sivaganga	0.0	-100	0.0	-100	13.6	152
Thanjavur	0.0	-100	0.0	-100	13.5	118
Theni	0.0	-100	0.0	-100	26.2	185
Tirunelveli	0.0	-100	1.7	-80	12.6	-3
Tirupur	0.0	-100	0.0	-100	3.4	0
Tiruvallur	0.0	-100	0.0	-100	1.4	53
Tiruvannamalai	0.0	-100	0.0	-100	0.0	-100
Tiruvarur	0.0	-100	0.0	-100	8.9	98
Toothukudi	0.0	-100	0.0	-100	2.2	-74
Trichy	0.0	-100	0.0	-100	15.9	253
Vellore	0.0	-100	0.0	-100	0.4	-84
Villupuram	0.0	-100	0.0	-100	3.8	28

Virudhunagar	0.0	-100	0.0	-100	9.3	7
<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	0.1	-95
Krishna	0.0	-100	0.0	-100	0.2	-91
Nellore	0.0	-100	0.0	-100	0.0	-100
Prakasam	0.0	-100	0.0	-100	0.3	-89
Sirkakulam	0.0	-100	0.0	-100	4.5	-1
Visakhapatnam	0.0	-100	0.0	-100	2.3	-24
Vizianagram	0.0	-100	0.0	-100	3.0	-23
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	14.2	446
Cuddapah	0.0	-100	0.0	-100	4.0	302
Kurnool	0.0	-100	0.0	-100	0.0	-100
<b>Telangana</b>						
Adilabad	0.0	-100	0.0	-100	0.1	-97
Hyderabad	0.0	-100	0.0	-100	0.0	-100
Karimnagar	0.0	-100	0.0	-100	0.1	-92
Khammam	0.0	-100	0.0	-100	0.8	-62
Mehabubnagar	0.0	-100	0.0	-100	0.7	35
Medak	0.0	-100	0.0	-100	0.8	-36
Nalgonda	0.0	-100	0.0	-100	0.0	-100
Nizamabad	0.0	-100	0.0	-100	0.1	-88
Rangareddy	0.0	-100	0.0	-100	1.2	193
Warangal	0.0	-100	0.0	-100	0.5	-77

Legends

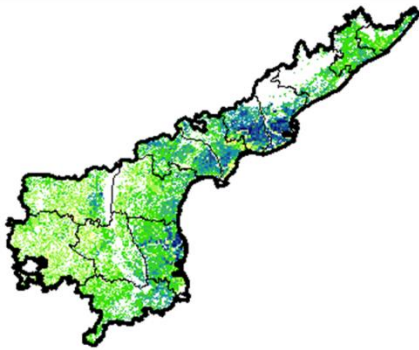
	(20% or more) excess rainfall		(-60 to -99 %) scanty rainfall
	(-19 to +19%) normal rainfall		(-100%) no rainfall
	(-20 to -59%) deficient rainfall	**	Data not available



**Annexure II**

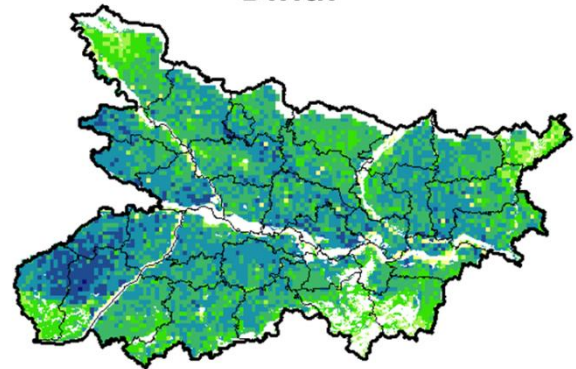
**NOAA/AVHRR NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON  
9<sup>th</sup> March 2017 FOR DIFFERENT STATES**

**Andhra Pradesh**



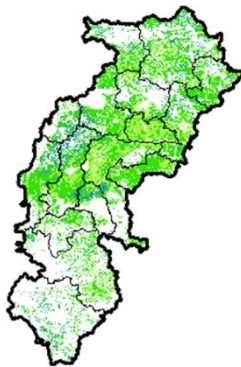
Agriculture vigour is moderate over Rayalseema and patches in costal part whereas, patches in central region and east of Rayalseema show good to very good NDVI in the state of Andhra Pradesh.

**Bihar**



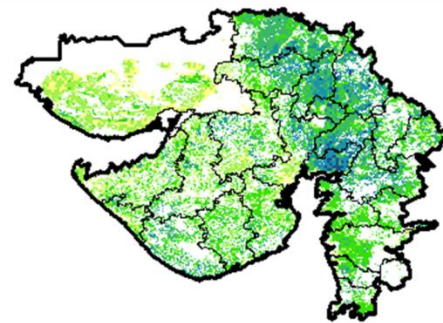
Agriculture vigour is good over most of the patches in state of Bihar, rest of the state shows moderate NDVI.

**Chhattisgarh**



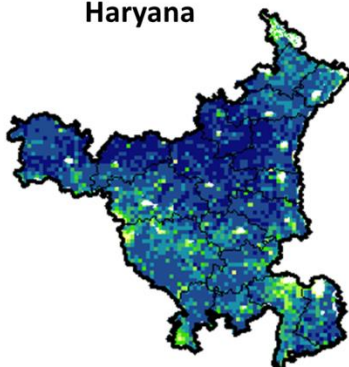
Agriculture vigour is good in southern and central region of Chhattisgarh, whereas, moderate vigour is seen in rest of the state.

**Gujarat**



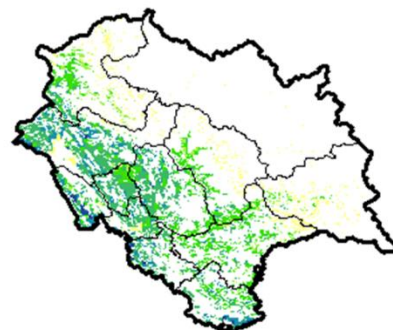
Moderate NDVI values are observed in patches in Kutch and Saurashtra whereas, good to very good NDVI is observed in many places in Saurashtra and Gujarat.

**Haryana**



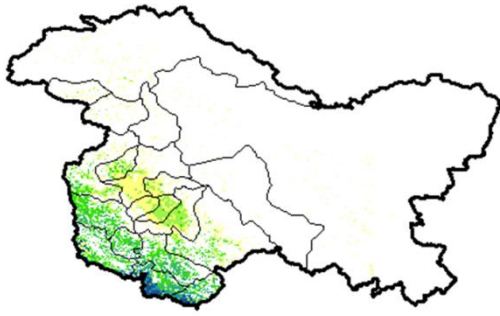
Good to very good agriculture vigour is observed over entire state of Haryana, moderate vigour is seen in patches in central and east part of Haryana.

**Himachal Pradesh**



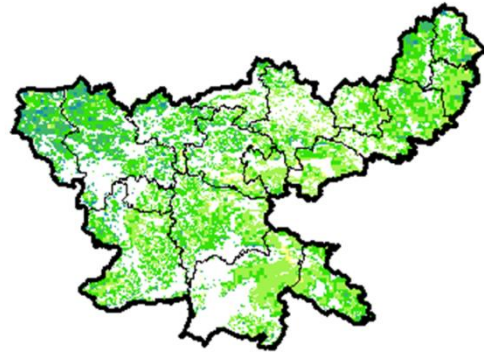
Agriculture vigour is moderate to good in few patches of Himachal Pradesh.

### Jammu & Kashmir



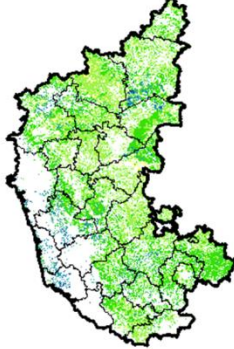
Agriculture vigour is moderate over entire state of Jammu & Kashmir, good NDVI values are observed in southern part of state.

### Jharkhand



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

### Karnataka



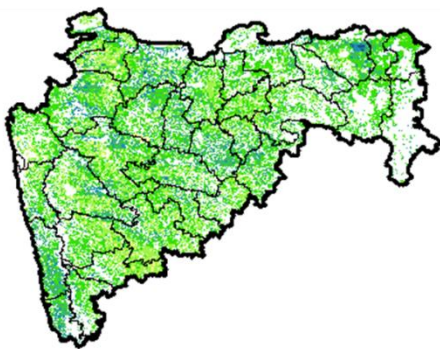
Agriculture vigour is good in patches over costal Karnataka and northern region of the state whereas rest of the state shows moderate vigour.

### Kerala



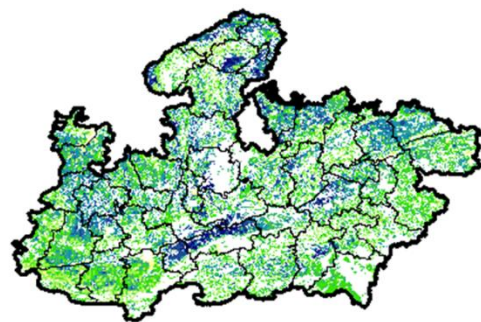
Agriculture vigour is good over entire state of Kerala except few patches in central and southern part shows moderate NDVI values.

### Maharashtra



Agricultural vigour is good to very good in few patches over central Maharashtra, Vidharbha ,north, Konkan, Marathwada, whereas rest of the state shows moderate NDVI.

### Madhya Pradesh



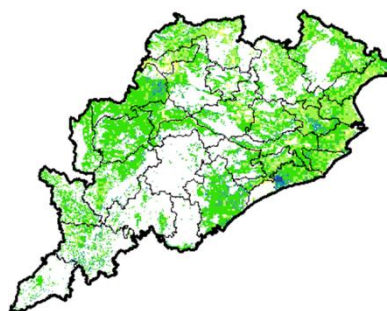
Agriculture vigour is good to very good over many places in state of Madhya Pradesh whereas, eastern and southern part shows moderate vigour.

### North East Region



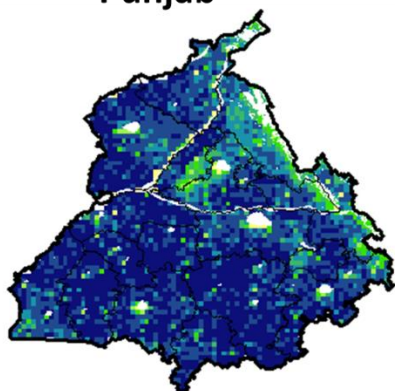
Agriculture vigour is moderate over most of the parts in North-Eastern states, whereas few patches in Assam, Manipur and Arunachal Pradesh show good vigour.

### Odisha



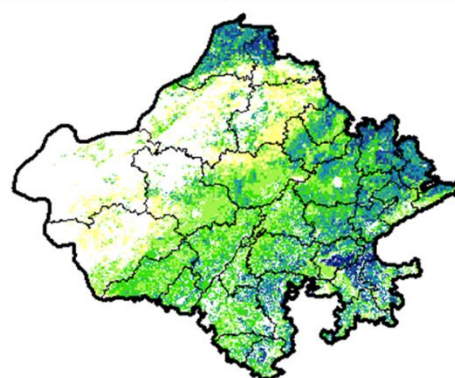
Agricultural vigour is good over eastern and northern parts of Odisha whereas, moderate vigour is observed over the entire state.

### Punjab



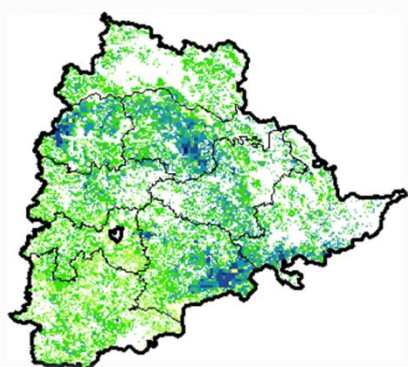
Agricultural vigour is good to very good in over entire state of Punjab, whereas few patches in north-east show moderate vigour.

### Rajasthan



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

### Telangana



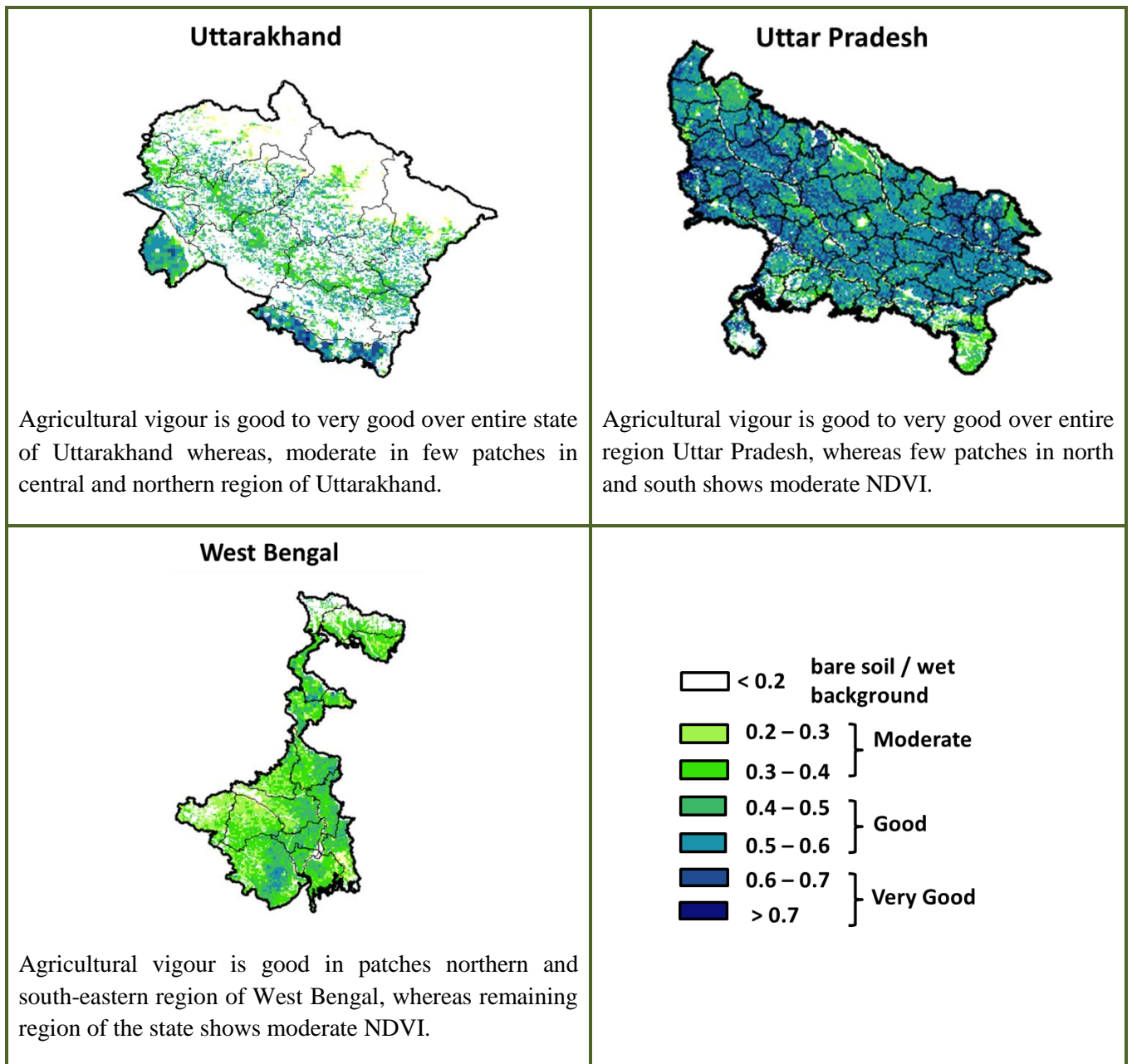
Agriculture vigour is good over many places of Telangana whereas, moderate vigour is observed in southern and northern region.

### 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

**Early Ahu Rice** : IR-50, Pusa 2-21, Rasi, Culture -1, Luit, Kopilee (Semi-dwarf varieties); Rongadoria, Dubaichenga, Nilajee (Tall varieties) etc.

**Summer rice** : Ratna, Cauvery, Luit and Kapilee.

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

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

**Okra** : Pusa Sawani, Arka Anamika, Parvani Kranti or other local varieties.

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

**Sponge gourd** : Pusa Chikni or other local varieties.

#### Meghalaya

**Chilli** : Pusa jwala & local.

**Brinjal** : Arka Nidhi, Singh Nath, Bholanath & local.



### Tripura

**Cow pea** :Maharaja, Kasi Kanchan.

**Urd** : T-9, Panth, Urd 35.

**Green Gram** : PDM 139 (Samrat), TMV 37.

### 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

**Mustard**: Shivani, Varuna, Pusa bold, Kranti, Pusa jaikisan , Vardan etc.

**Potato**: Kufri Ashoka, Kufri Pukhraj, Kufri Lalima, Kufri Pushkar and Kufri Kanchan.

**Toria**: BR-23,T.-9, P.T. 303, Panchali and Bhavani.

**Gram**: KAK-2, ICCC-2, HK94-134(Kabuli) and Pusa 256, Pusa 372, Pant G-114, KWR 108, ICCC 37.

**Lentil**:P.L.- 406, P.L.-639, D.P.L.-15, D.P.I.- 62 etc.

**Green pea**: Arkel or Azad pea.

**Wheat**: HDR-77, K-8027, C-306, Birsa genhu – 3 etc. HDR-77, K-8027, C-306, Birsa genhu – 3 etc.

**Linseed**:Sweta, Shubhra, T-397 etc.

### West Bengal:

**Mango**: Himsagar, Mallicka, Langra

**Guava**: Safeda, L-49

**Coconut**: Eastcoastal, Hazari

**Banana** :-Mortoman, Chapa, Kathali, Singapuri,

**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)

**Jute** :- Chaitali, Basudev, Naveen, Sonali, Sobujsona, Shyamali etc.

**Cabbage** :- Pride of India, Pusa early, Kranti.

**Cauliflower**:- Jawhar moti, Bharat Jyoti, Early banaras.

### Uttarakhand

**Mentha**:Koshi, Saksham, Kushal, Himalaya, Saryu, Simkranti.

**Onoin**:VL-Pyaj-3,Nasik Red,Pusa Red

**Pea**: Vivek 10,Vivek 11,Pant 3,

**Radish**:Meenu early, Japanese white, PusaHimani.

**Carrot**:PusaVrishi,

**Rai**:Varuna, Rohini, Krishna, Kanti, Vardan, Vaibhav, Basanti, Narendra, Early rai-4, Urvashi and varieties

**Yellow Mustard**:Ragini, Binoy (B-9), Pant peeli Sarso-1.

### 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:** KufriBadshah, K.Sinduri, K.Chipsona & K.Sona  
**Gram:** C-235, Gaurav, K-468, SCS-3, PBG-1  
**Toria:** RSPT-1 and RSPT-2

### **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**

**Sugarcane:** CO Pant 211, Co Sa 687 and Co Sa 8436 (The mid and late maturing varieties of sugarcane) B.O.54 and B.O.91. (The varieties recommended in areas with poor water drainage)  
**Urad:** T-9, Narendra Urad -1, Azad Urad-1, Uttara, Azad Urad-2, Shekhar-2.  
**Summer Moong:** K-85, JM-721.  
**Onion:** Kalyanpur Lalgol, Pusratnakar, Agrifoundlite red, bargandi, KP, Orient, Rosi.  
**Turmeric:** Kasturi, Paspu, Amlapuram, Madhukar, Sugna, Rajendra.  
**Ginger** -suprabha, suruchi, surbhi and Himgiri.  
**Moong:** Type-27, 56  
**Radish:** kalyanpur No.1, Pusa Rashmi, Hisar selection-1, Japani Safed, pusa Chetaki, Pusa Himani, Pusadeshi, Arka Nishant and Jaunpuri.  
**Cabbage:** Pusa snowball, Pusa snowball II, Snowball 16 and Pusa snowball K1.  
**Banana:** Harichhal, Alpan, Malbhog, Basrai dwarf, robasta, kothiya.  
**Tomato:** Kashi Amrit, Kashi Anupam, Avinash-2 & Rupali Azad, Punjab chuhara NDT 4&5.  
**Brinjal:** Pusa hybrid 5,6, Kasisandesh BR-14, KS-224.

### **West Uttar Pradesh**

**Bhindi:** A-4, Parbani Kranti and Arkaanamika.  
**Barseem:** V.L.1, V.L.10, maskavi, jai, K-8027, K-9565, Mandakini.  
**Baby corn:** M.H.-4.  
**Toria:** bhavani.  
**Mustard:** Urvashi, Rohini, Maya, Giriraj, Vardan, Vaibhav.  
**Linseed:** Parvati, sharda, Padmini.  
**Vegetable pea:** Azad-3, Aakril.  
**Gram:** Zaki-9218, KGD-1168, KWR-108, Uday.  
**Pea:** KPRM-522, KPRM-400, Vikas, Prakash  
**Lentil:** DPL-62, Malika.  
**Potato:** KufriBadshah, KufriBahar, KufriAanand, Chipsona-1, Chipsona-2, Chipsona-3.

### **Punjab**

**Sugarcane:** CoJ-85, CoJ-83, CoJ-64 (early maturing), COH-119, CoJ-88, CoS-8436 for and CoJ-89, CO118, COJ85, COJ64.  
**Onion:** Punjab Naroya, Punjab White and PRO 6.  
**Radish:** Punjab Pasand and Japanese white.  
**Turnip:** L-1.  
**Carrot:** Punjab Black Beauty, Punjab Carrot Red and PC-34.  
**Tomato:** TH-1, Punjab Ratta, Punjab NR 7, Punjab Chuhara, Punjab Upma, Castle Rock.  
**Okra:** Punjab-8 and Punjab-7  
**Cauliflower:** Pusa Snow Ball-1, Pusa Snow Ball K-1  
**Wheat:** PBW 725, PBW 677, HD-3086, WH 1105, PBW 621, HD 2967.  
**Kabuli gram:** L 552, L 550 & BG-1053.  
**Raya:** RLC3, PBR 357, PBR 210, RLC-1, , RLM-619, PBR-91  
**Gram:** C 235, HC 5  
un-irrigated/rainfed (HC 1)

## Delhi

**Gram:** Kabuli type - Pusa 267, Pusa 1003, PusaChamatkar; local type – C235, Pusa 246, P.B.G. 1, Pusa 372.

**Pea:** PusaPragati, Arkel, Azad Matar-3, Pant Matar-3 and Bournville.

**Potato:** KufriBadshah, KufriBahar, KufriAanand, Chipsona-1, Chipsona-2, Chipsona-3.

## East Rajasthan:

**Okra Summer:** PusaSavani, Arkaanamika, ArkaAbhya, Aajadkranti, Prabhnikranti, Pusa-A-4 ect.

**Summer groundnut:** T.A.G.24, T.G.37A, G.G.2, D.H.86

**Bottle gourd:** Pusa summer prolific long, Pusa summer prolific round, Pusamanjri, PusaNavin, PusaMeghdoot, Arkavihar

**Pumpkin:** Pusaviswas, Pusaalankar, arkachandan

**Kheera:** Balamkhira, Pusasayong

**Bitter gourd:** Coimbatore long, Pusadomosami, Priya, Ark harit, Pusavishesh

**Tinda:** Bikaner green, Dilpasand, Tinda Ludhiana, ArkaTinda

**Cucumber:** LakhnowAgeti, Arkasheetal

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

**Carrot:** PusaKeshar is improved variety.

**Radish:** Japanese white & hill queen.

**Cumin:** G. C. 4, RZ-223, RS-1, RZ-19, RZ-209 and Gujarat Jeera-2

**Musk Melon:** Durgapuramadhu, Punjab sunheri, Punjab hybrid, arkajeet, haramadhu, pusamadhras

**Water melon:** Durgapurameetha, durgapurakesar, arkajyoti(hybrid), madhu (hybrid)

**Tinda:** Beekaneri green, Dilpasand, arkatinda

**Cucumber:** Lucknowageti and arkasheetal

**Zaid Pearl millet (fodder):** rajbajrachari, rajkoZaint, L-72, L-74

## West Rajasthan

**Guar:** R.G.C.-936, R.G.M.-112, and R.G.C.-102

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

**Fenugreek :** RMt 1 & RMt305.

**Bhindi:** Ark Anamika, varshauphar, Parbhanikranti, pusamakhmali.

**Radish:** Japanese white & hill queen.

**Garlic:** lava, maleva

**Onion:** Pusa red, Nasik red, Udaipur-102, pusa white flate.

**Sugarcane:** CO 6617, CO 7717, COS 95255, COS 767.

## Madhya Pradesh

**Moong:** PDM-54, PDM-139, PS-16, PS-7, K-851

## Maharashtra

**Sunflower:** Improved varieties: S.S.56, Modern, E.C.68414, Bhanu.

Hybrid varieties : K.B.S.H.1, L.S.F.H.171, Phule Raviraj, M.S.F.H.17)

**Pearl millet:** shradha, saburi or shanti.

**Chilli:** Phule Jyoti, Phule Mukta.

## Gujarat

**Green gram:** Gujarat Mung-4, K-851.

**Black Gram:** Gujarat udad-1, T-9.

**Summer Groundnut:** TAG-24, TG-37-A, TPG-41, GG-2, GJG-31.

**Summer Sesame:** G.Til-2, G.Til-3.

**Pearl millet:** GHB-526 and GHB-558.

## Tamil Nadu

Summer rice- ADT 43 and ADT 45.