



National Agromet Advisory Service Bulletin



Friday 17th February 2017

(For the period 17th to 21st February 2017)



Issued by

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

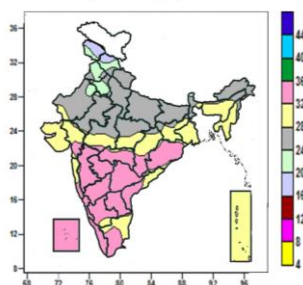
Weblink For

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

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

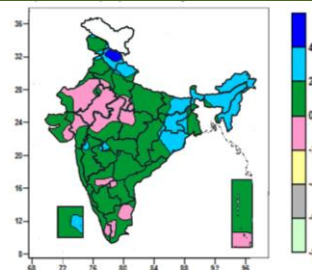
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 15.02.2017

Actual Mean Maximum Temperature (°C) in India for the week ending 15.02.2017



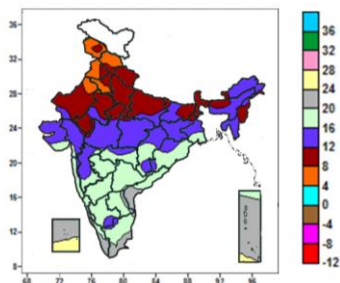
- Mean maximum temperature was between 32 to 36⁰C over Goa, Marathwada, Telangana, North Interior Karnataka, Coastal Karnataka, Rayalaseema, Lakshadweep, many parts of Madhya Maharashtra, Vidarbha, Odisha, Coastal Andhra Pradesh, South Interior Karnataka, Kerala, Tamil Nadu, some parts of Gujarat Region, Chhattisgarh, Konkan and isolated pockets of West Madhya Pradesh.
- Mean maximum temperature was between 24 to 32⁰C over rest of the Country except Jammu & Kashmir, many parts of Himachal Pradesh, Punjab, Haryana & Delhi, some parts of Sikkim and isolated pockets of Uttarakhand and Rajasthan, where it was between 16 to 24⁰C.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 15.02.2017



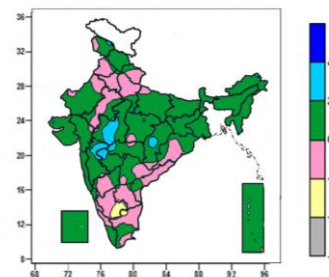
- Mean maximum temperature was above normal by 4 to 6⁰C over some parts of Himachal Pradesh.
- Mean maximum temperature was above normal by 2 to 4⁰C over Arunachal Pradesh, Meghalaya, Nagaland, Manipur, Mizoram, many parts of Himachal Pradesh, Uttarakhand, Bihar, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Tripura, Jharkhand, Odisha, some parts of Gangetic West Bengal, Lakshadweep and isolated pockets of Jammu & Kashmir, Punjab, Haryana, West Uttar Pradesh, Chhattisgarh, Gujarat Region, Madhya Maharashtra, Marathwada and Vidarbha.
- It was normal to near normal over rest of the country.

Actual Mean Minimum Temperature (°C) in India for the week ending 15.02.2017



- Mean minimum temperature was between 0 to 4⁰C at isolated pocket of Jammu & Kashmir.
- Mean minimum temperature was between 4 to 8⁰C over many parts of Jammu & Kashmir, Himachal Pradesh, Punjab, some parts of Haryana & Delhi, West Rajasthan and isolated pocket of East Rajasthan.
- Mean minimum temperature was between 8 to 12⁰C over Uttarakhand, West Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, many parts of Haryana & Delhi, East Uttar Pradesh, Manipur, Rajasthan, some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Bihar, Nagaland, Assam, West Madhya Pradesh and isolated pockets of Gujarat Region, East Madhya Pradesh, Arunachal Pradesh and Jharkhand.
- Mean minimum temperature was between 12 to 20⁰C over rest of the Country except Lakshadweep, many parts of Kerala, Andaman & Nicobar Islands, some parts of Coastal Andhra Pradesh, Tamil Nadu and isolated pockets of Coastal Karnataka, Telangana and Rayalaseema, where it was between 20 to 28⁰C.

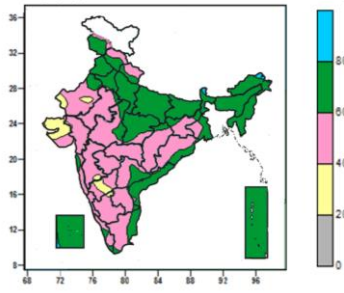
Mean Minimum Temperature (°C) Anomaly in India for the week ending 15.02.2017



- Mean minimum temperature was above normal by 2 to 4⁰C over some parts of West Madhya Pradesh, Madhya Maharashtra, Marathwada and isolated pockets of Jammu & Kashmir, East Rajasthan, Vidarbha and Chhattisgarh.
- Mean minimum temperature was normal to near normal over rest of the country except some parts of South Interior Karnataka and isolated pockets of Rayalaseema and Tamil Nadu, where it was below normal by 2 to 4⁰C.

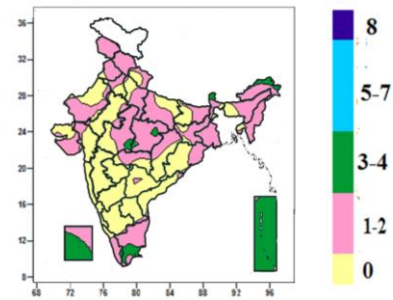
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 15.02.2017

Relative Humidity (%) over India for the week ending 15.02.2017



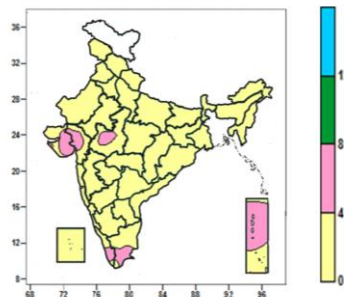
- Mean Relative Humidity was above 80% over many parts of Sikkim and isolated pockets of Arunachal Pradesh and Lakshadweep.
- Mean Relative Humidity was between 60 to 80% over Punjab, Uttar Pradesh, Sub-Himalayan West Bengal, Assam & Meghalaya, Nagaland, Manipur Mizoram, Tripura, Andaman & Nicobar Islands,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

Cloud amount (okta) over India for the week ending 15.02.2017



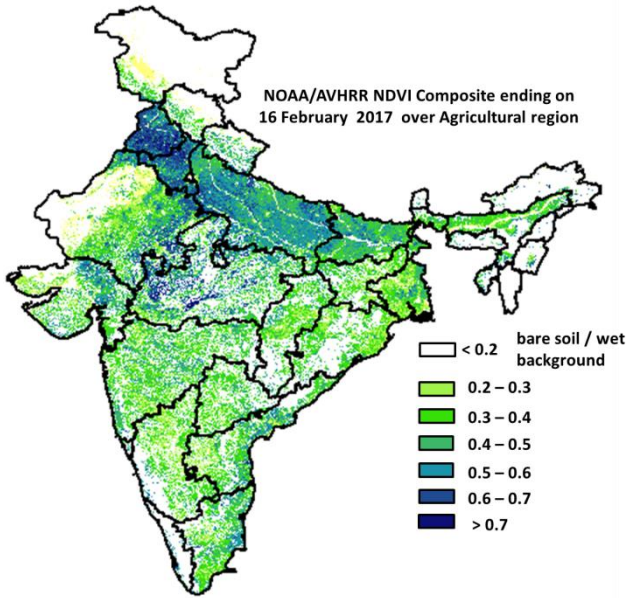
- Sky remained partly cloudy (3-4 okta) over many parts of Sikkim, Lakshadweep, Andaman & Nicobar Islands, some parts of Arunachal Pradesh, Tamil Nadu and isolated pockets of Madhya Pradesh and Kerala.
- Sky remained mainly clear/clear sky (1-2 okta/0 okta) over rest of the country.

Wind speed (knots) over India for the week ending 15.02.2017



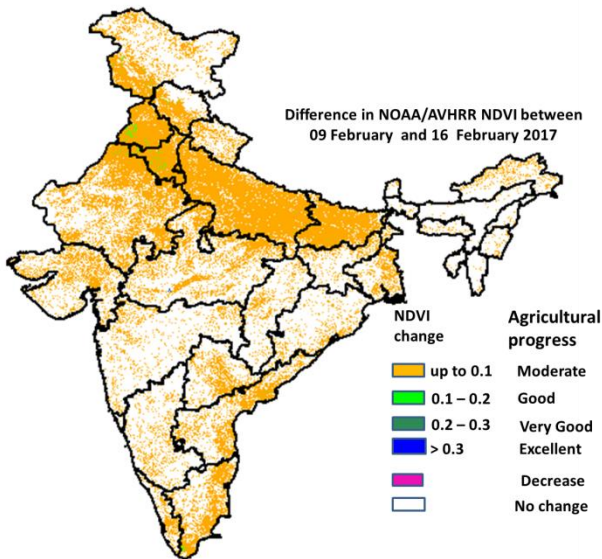
- Mean wind speed was between 0 to 4 knots over the country except many parts of Andaman & Nicobar Islands, some parts of Gujarat, Kerala and Tamil Nadu, isolated pocket of West Madhya Pradesh, where it was between 4 to 8 knots.

NOAA/AVHRR NDVI composite ending on 16th February 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, North Maharashtra, North-East Region and southern part of West Bengal, 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, Madhya Maharashtra, southern region of Andhra Pradesh, Telangana and Tamil Nadu (NDVI 0.2 to 0.5).

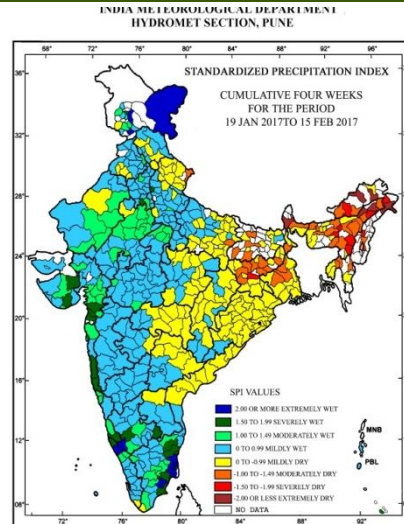
Difference in NOAA/AVHRR NDVI between 9th and 16th February 2017



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

- NOAA/AVHRR NDVI composite maps for the week ending on 16th February 2017 for different States are given in Annexure II.

Standardised Precipitation Index Four Weekly for the period 19th January to 15th February 2017



- Extremely/severely wet conditions experienced in few districts of Delhi; Jammu & Kashmir; Saurashtra, Kutch & Diu; Konkan & Goa; Tamil Nadu & Puducherry; Baghpat district of Uttar Pradesh; Rewari district of Haryana; Valsad, Navsari, Tapi districts of Gujarat Region; Dakshin Kannada, Hassan, Kodagu, Kolar districts of Karnataka; Kannur, Kasargod districts of Kerala.
- Extremely/Severely dry conditions experienced in many districts of Arunachal Pradesh; few districts of Assam; Darjeeling, district of West Bengal; Ranchi district of Jharkhand.
- Moderately dry conditions experienced in many districts of Meghalaya; Tripura; few districts of Arunachal Pradesh; Assam; West Bengal; Jharkhand; Aizwal district of Mizoram; Gaya, Muzaffarpur, Patna, Rohtas districts of Bihar; Ghazipur district of Uttar Pradesh; Pithoragarh district of Uttarakhand.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

Weather Forecast for next 5 days valid upto 0830 hours of 22nd February 2017

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- Maximum & minimum temperatures very likely to continue above normal over central India during next 3 days.
- Maximum temperatures likely to continue above normal by 3-4°C and no significant change in minimum temperatures likely over Western India during next 3 days.
- No significant change in maximum/minimum temperature over rest parts of the country.

5 Day Rainfall Forecast (MID DAY) 17th February 2017

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

% Station Reporting Rainfall

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

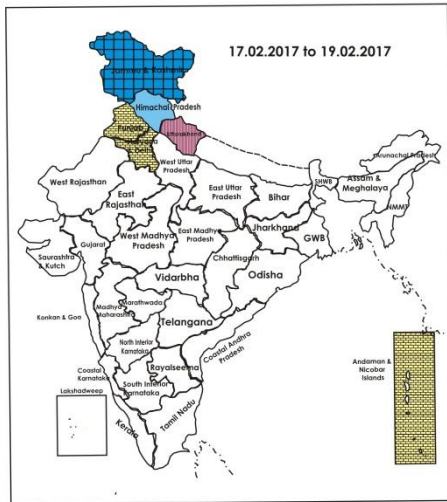
Weather Warning during next 5 days

- **17 February (Day 1):** Dense fog likely at isolated places over coastal Odisha.
- **18 February (Day 2):** Heavy rain/snow very likely at isolated places over Jammu & Kashmir. Dense fog likely at isolated places over coastal Odisha.
- **19 February (Day 3):** Heavy to very heavy rain/snow very likely at isolated places over Jammu & Kashmir and isolated heavy over Himachal Pradesh.
- **20 February (Day 4):** No weather warning.
- **21 February (Day 5):** No weather warning.

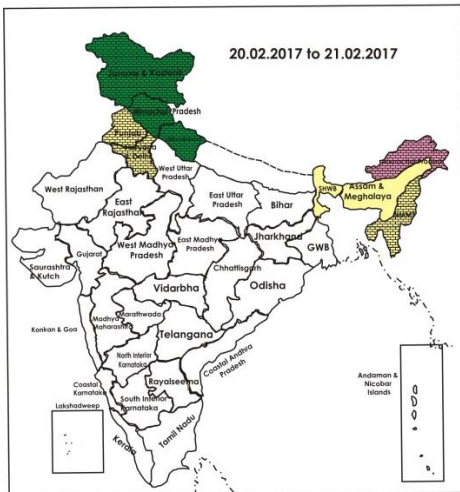
Weather Outlook for subsequent 2 days from 22nd to 24th February 2017

- Isolated rain/snow likely over Western Himalayan region.
- Rain/thundershower at isolated places likely over northeast India.

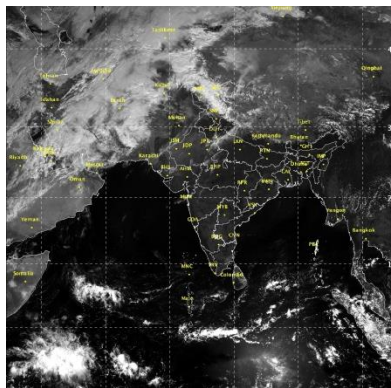
Weather Forecast Map (valid upto 0830 hours of 22nd February 2017)



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



Satellite image dated, 17.02.2017, 0600 UTC



Salient Advisories

- As rain/snow very likely at most/many places over **Jammu & Kashmir** and **Himachal Pradesh** from 18th to 20th and over **Uttarakhand** on 20th along with heavy rain/snow/heavy to very heavy rain/snow very likely at isolated places over Jammu & Kashmir on 18th & 19th and heavy rain/snow at isolated places over Himachal Pradesh on 19th February, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage/clean the drainage channels to avoid snow deposition and accumulation of water in the fields.
- In **Jammu & Kashmir**, as heavy to very heavy snowfall is expected during next two days, clear drainage channels in standing crops, vegetable fields and in saffron fields. Provide staking with dry wooden branches to garden pea. Undertake nursery preparation of summer vegetables under protected structures. Avoid pruning in apple and other stone fruit orchards.
- As dense fog likely at isolated places over **Coastal Odisha** on 17th & 18th February, monitor potato, tomato and onion crops for early/late blight disease. If symptoms are noticed undertake plant protection measures.
- As temperature conditions are favourable, continue planting of sugarcane in **Punjab**, continue sowing of groundnut in **Vidarbha** and continue sowing of summer green gram and black gram and sowing of okra, ridge gourd and sponge gourd in **Assam**. In North Saurashtra Zone and North Gujarat Zone of **Gujarat**, undertake sowing of summer groundnut and sesame.
- As dry weather conditions are prevailing, provide light irrigation to rice fallow green gram and black gram if crops are at pre flowering /pod formation stage in the Krishna Godavari Zone of **Andhra Pradesh**. In **Konkan**, due to prevailing dry weather conditions and rise in maximum temperature, maintain water level up to 5 cm in transplanted *rabi* rice (vegetative stage) and apply 150-200 litres of water per mango tree at 15 days interval. To avoid fruit drop in mango orchards, apply 20 ppm NAA @ 1g/50 litres of water on fruit bearing trees. In **Assam**, as dry weather is prevailing, maintain 3-5 cm standing water in *Boro* rice fields.
- Prevailing weather is conducive for severe attack of aphids in mustard in Western Plain zone of **Punjab**. Monitor the crop regularly, if pest population reaches to ETL, spray the crop with Actara 25 WG @ 40g/acre. Spraying should be done in the afternoon when the pollinators are less active.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone of **Jammu & Kashmir**, the prevailing weather conditions are favourable for infestation of yellow rust in wheat crop, outbreak of aphids in late sown mustard crop; monitor the crops regularly and take proper plant protection measures if noticed.
- In Coastal Plain Zone of **Odisha**, prevailing weather favours attack of powdery mildew in pulses, for control, spray Sulfex @ 5g per litre of water.

Detailed Zonewise Agromet Advisories

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



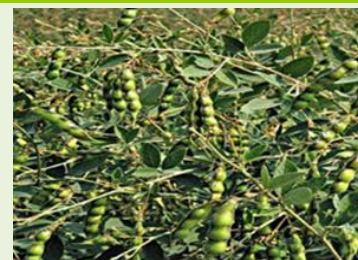
Banana



Rice



Sugarcane



Red gram

- **Realised Rainfall:** Weather remained dry over the region.
- **Realised Temperatures:** Maximum temperatures were appreciably above normal (3.1°C to 5.0°C) at most places over Coastal Karnataka and Kerala. They were below normal (1.6°C to 3.0°C) at isolated places over North Interior Karnataka & Tamilnadu and near normal over rest of the region. Minimum temperatures are below normal (1.6°C to 3.0°C) at many places over Rayalaseema; at a few places over Coastal Andhra Pradesh, Kerala and Tamilnadu and at isolated places over Telangana and near normal over rest of the region.
- **Advisories:**
 - **Andhra Pradesh:**
 - In the Krishna Godavari Zone, as dry weather conditions are prevailing, provide light irrigation to rice fallow green gram and black gram if crops are at pre flowering /pod formation stage and provide irrigation to sugarcane and Bengal gram crops as per requirement. In the North Coastal Zone, continue planting of sugarcane.
 - In the Scarce Rainfall Zone of Rayalaseema, prevailing weather conditions are favourable for incidence of hoppers in mango. For control, spray Imidacloprid 0.3ml/litre + Carbendazim 1gm/litre of water. If fruits are in marble size spray Fenthion @ 1ml/litre + Nuvan (dichlorvos) 0.5ml/litre of water.
 - In the Krishna Godavari Zone, prevailing dry weather conditions are congenial for attack of aphids and mites in rabi maize. If intensity is more, spray Acephate @ 1 g/litre of water.
 - In the Southern Zone, prevailing dry weather conditions are congenial for incidence of neck blast in rice. To control, spray Isoprothiolin @ 300 ml. or Kasugamycin @ 500 ml /200 litres of water/acre.
 - In the North Coastal Zone, sucking pests like thrips and leaf webber may damage sesame crop(vegetative stage), as day temperature is likely to increase during the next five days. Spray Monocrotophos @1.6 ml/litre of water or Chlorophyphos @ 2.5 ml/litre of water for control of the pests.
 - In the High Altitude Zone, incidence of hispa was noticed in rabi rice (vegetative to tillering stage). To control, spray Chlorpyrifos @ 2.5 ml/litre of water.
 - **Telangana:**
 - In North Telangana Zone, as dry weather would prevail, provide one irrigation to maize crop at tasseling stage, continue harvesting of groundnut and sowing of sunflower and sesamum. Whorl maggot incidence was noticed rice (tillering stage). To control, spray Monocrotophos @ 1.6 ml/litre of water.
 - In South Telangana Zone, incidence of thrips is noticed in grapes. To control, spray Dimethoate @ 2 ml/litre of water.
 - **Tamil Nadu:**
 - In the Cauvery Delta Zone Rice, as dry weather would prevail, continue harvesting of matured late samba/thaladi rice. Continue nursery preparation for summer rice and
 - In the Western Zone, proper support may be provided to banana plants of 5 months and above and propping in sugarcane crop. Continue ploughing the land immediately, so as to control weeds and also to make the soil friable to conserve summer monsoon rain after the harvesting of crops.
 - In Karaikal & Puducherry, continue sowing of green gram @ 25 kg/ha.
 - In the North Western Zone, undertake cotton cultivation with available irrigation facility.
 - In the High Altitude Zone, since no rain fall is expected in the coming days, maintain optimum moisture content in carrot field to prevent splitting disorder in carrot.
 - In the High Rainfall Zone, provide irrigation to fruit trees, spices, vegetables and other horticultural crops.
 - In the Southern Zone, prevailing slightly cloudy and dry weather is congenial for incidence of leaf blight in coconut. To control, spray Mancozeb @ 0.2 % (2 times at 45 days interval) and undertake root feeding of Hexaconazole @ 2 ml + 100 ml water (3 times at 3 months interval) along with application of an additional quantity of 2 kg of MOP.
 - In the South Zone, light cloud cover and moderate humidity expected in the coming days is congenial for incidence of fruit borer in chilli. To control, set up pheromone traps for helioverpa armigera or spodoptera litura at 12 nos/ha. Collect and destroy the damaged fruits and grown up caterpillars. When damage crosses ETL, spray Chlorpyrifos

@ 20 EC 3 ml/ litre or Quinolphos @ 25 EC 2.5 ml/litre of water.

▪ **Kerala:**

- In the High Altitude Zone, in view of the prevailing mainly dry weather conditions, provide heavy irrigation to cardamom once in a fortnight, apply mulch and provide irrigation in banana crop fields. Provide irrigation in vegetable crop fields once in 3-4 days and undertake pruning of coffee immediately after completion of harvest. Undertake planting of irrigated ginger.
- In the Problem Area Zone, for moisture conservation, continue mulching with crop residues/organic materials in nutmeg and pepper gardens to protect plants from sun scorching
- In Thiruvananthapuram of the Southern Zone, undertake sowing of *puncha* rice in areas where harvesting of mundakan rice has been completed. Take necessary steps to keep moisture in the rice field. Continue irrigating vegetables and banana plants @ 40 litres/plant in 2-3 days interval to prevent formation of weak bunches and mulching in coconut and banana fields.
- In the Northern Zone, prevailing dry weather is favourable for the spread of sucking pests like mealy bug, jassids, aphids, mites, bugs etc. on crops. To control the pests, apply Neem oil emulsion (5 ml neem oil mixed in one litre of lukewarm soap water solution).
- In the Central Zone, high temperature is congenial for cigar end disease in banana bunches. To control the disease, spray Copper oxychloride @ 2.5 g/litre of water.
- In the Problem Area Zone, spray Coragen @ 150 ml/ha (0.3 ml/litre of water) at 15 days interval to control fruit and shoot borer in brinjal.
- In the High Altitude Zone, attack of fruit fly may become severe in bitter melon and snake melon. To control, set fruit traps to reduce the attack. In large gardens, apply Carbaryl 50% (3-4 grams/litre of water) suspension fortnightly.

▪ **Karnataka:**

- In North Transition Zone, complete harvesting of matured Bengal gram and chilli. It is advised to carry out harvesting of Bengal gram during early morning hours to avoid shedding of the seeds. Apply irrigation in wheat. Continue new planting of sugarcane. After harvesting of cotton/chickpea undertake the deep ploughing.
- In Southern Transition Zone, continue transplanting of summer rice. Apply irrigation in ginger and turmeric once in a week and cover the partially opened rhizomes in the bed by mulches or soil in order to avoid rotting of rhizomes.
- Due to dry weather, fruit dropping in mango is noticed in Southern Dry Zone and Eastern Dry Zone; to manage this, provide adequate quantity of irrigation water; adopt drip irrigation wherever it is possible.
- In North East Dry Zone, undertake transplanting of paddy in the main field under irrigation. As dry weather is prevailing, provide irrigation to wheat and mango (fruit setting stage). Continue harvesting of Bengal gram, rabi sorghum and safflower.
- In North Dry Zone, after harvesting of rabi crops, take up ploughing which will facilitate conservation of rainwater due to pre-monsoon showers.
- In Bidar district of North East Transition Zone, continue harvesting of Bengal gram, safflower pigeon pea and niger. Continue planting of sugarcane. Provide irrigation to wheat (dough stage), rabi sorghum (grain filling stage) and sugarcane.
- Low temperature and high humidity observed in the morning hours is congenial for the occurrence of powdery mildew in grapes in Eastern Dry Zone; spray Carbendazim @ 1 g/litre or Tridemarf @ 0.5 ml/litre of water.
- In Southern Transition Zone, prevailing weather (cloudy condition and high humidity) is congenial for powdery mildew disease in mango; spray Sulphur @ 3 g or Tridemefon 50 W P @ 1 g or Carbendazim 50 WP @ 1 g or Hexaconazole 5 EC @ 1 ml per litre of water before flowering and at the time of fruit setting and repeat the spray if the incidence is more.
- Suitable varieties for sowing are given in Annexure III.

• **Animal Husbandry**

- In the Western Zone of Tamil Nadu, considering the dry weather, increase in temperature, provide adequate drinking water to dairy animals and poultry.
- In the Southern Zone of Tamil Nadu, due to the cool weather condition, allow the cattle to graze 2 hrs after sunrise, cover the cow shed with gunny bags, keep the floor in dry condition and feed greens without moisture to avoid the fungal infection.
- In the Northern Zone of Kerala, in view of the increase in maximum temperature, provide ad libitum pure drinking water to the dairy cattle (45 to 60 litres of water), grazing them during the cooler parts of the day, provide shade and thatched roofing of minimum 9 ft height especially for dark coloured animals, housing with ample ventilation, providing fans, misting and fogging arrangement within cattle sheds and ensuring feeding of high phosphorous containing mineral supplements along with adequate feed.
- Maintain optimum temperature in poultry houses in Karnataka.

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



Mustard



Rice



Cauliflower



Wheat

- **Realised Rainfall:** Rainfall occurred in Lower Dibang Valley district of Arunachal Pradesh. Weather remained dry over rest of the region.
- **Realised Temperatures:** Maximum temperatures were markedly above normal (5.1°C or more) at a few places over east Assam and east Arunachal Pradesh; appreciably above normal (3.1°C to 5.0°C) at most places over rest Assam, rest Arunachal Pradesh; above normal (1.6°C to 3.0°C) at a few places over Nagaland, Manipur, Mizoram & Tripura and near normal over rest of the region. Minimum temperatures are above normal (1.6°C to 3.0°C) at isolated places over Assam & Meghalaya and near normal over rest of the region.
- **Advisories:**
 - **Assam, Meghalaya & Arunachal Pradesh:**
 - In Upper Brahmaputra Valley Zone of Assam, as dry weather would prevail, maintain 5±2 cm standing water in *boro* rice fields. Continue land preparation and nursery sowing of early *ahu* rice, harvesting of rapeseed and mustard, if 75-80% of the silique starts yellowing.
 - In Karimganj, Hailakandi and Cachar districts of Barak Valley Zone of Assam, as dry weather would prevail, apply irrigation in cole crops.
 - In Dhemaji, Lakhimpur, Sonitpur, Dibrugarh, Golghat, Jorhat and Sibsagar districts of North Bank Plain Zone of Assam, as temperature condition are favorable, continue land preparation and sowing of summer green gram and black gram and sowing of okra, ridge gourd and sponge gourd.
 - In Hill Zone and North Bank Plain Zone of Assam, undertake land preparation for sowing of early *ahu* (direct seeded).
 - In Central Brahmaputra Valley Zone of Assam, continue sowing of summer green gram and black gram. Also apply irrigation in wheat at heading stage (70-75 days after sowing). Undertake harvesting of rapeseed and mustard. Undertake land preparation for sowing of summer vegetables and Capsularis jute
 - In Barpeta, Bongaigaoin, Dhubri and Goalpara districts of Lower Brahmaputra Valley Zone of Assam, continue nursery bed preparation for summer rice.
 - In Arunachal Pradesh, continue harvesting of potato. Undertake sowing of local/early maize, cowpea and pre summer vegetables.
 - In Meghalaya, as dry weather would prevail, apply light irrigation in rapeseed/mustard, pea, chick pea, lentil as per requirement. Continue nursery raising of tomato.
 - In Barak Valley Zone, due to increase in temperature, there may be attack of stem borer in *boro* rice at the time of tillering. To control the pest, spray Chlorpyrifos 50 EC @ 2 ml per litre of water.
 - In North Bank Plain Zone of Assam, weather conditions are favourable for attack of blast disease in *boro* rice at maximum tillering stage. Spray Mancozeb 0.2% @ 2g/litre or Carbendazim 0.1% @ 1g/litre of water for control.
 - In Hill Zone, there is chance of attack of thrips in *boro* rice. Spray Chlorpyrifos @ 2ml/litre of water if the attack is above ETL.
 - In Arunachal Pradesh, spray Azadirachtin 0.15% EC 2 @ 6ml/litre against leaf eating insects in cabbage/cauliflower, pea & other vegetables.
 - In Meghalaya, spray Wettable Sulphur @ 2 g/litre or Dinocap @ 1 ml/litre or Tridemorph @ 0.5 ml/litre or Dust Sulphur @ 25 kg/ha against powdery mildew and Dithane M-45 (0.2 %) against rust in pea.
 - **Nagaland, Manipur, Mizoram and Tripura:**
 - In Nagaland, soil moisture conservation techniques like mulching with crop residue is recommended in toria, rabi maize, pea and vegetables. Undertake harvesting of black pepper and ginger.
 - In Manipur, as dry weather would prevail, undertake harvesting of pulses. Continue land preparation for nursery raising of pre-*kharif* rice and undertake earthing up in maize.
 - In Mizoram, continue transplanting of onion and capsicum.
 - In Tripura, as dry weather is prevailing, provide light irrigation with mulching in cole crops, *rabi* maize. Transplant the young seedlings of summer brinjal & tomato to the main field and give light irrigation. Undertake harvesting of mustard and lentil.
 - In Manipur, spray Redomil MZ-72 WP @ 2 gm/litre against late blight in potato.

- In Tripura, due to cloudy weather condition, in the prevailing weather, there is chance of attack of stock rot in rabi maize. Spray Mancozeb 2ml per litre of water.
- Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
- In Meghalaya, undertake regular immunization of cattle & buffaloes against Foot & Mouth disease, Hemorrhagic Septicemia & Black Quarter.
- In Hill Zone of Assam, all pigs should be vaccinated against swine fever at the age of 2-4 weeks. Adequate clean water should be made available for livestock. Keep the vicinity of the farms clean to control parasitic infestation.
- 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 diseases fishes with Potassium Permanganate (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 dry over the region.
- **Realised Temperatures:** Maximum temperatures were markedly above normal (5.1°C or more) at most places over Saurashtra & Kutch and Konkan & Goa; at a few places over Gujarat region; above normal (1.6°C to 3.0°C) at many places over Madhya Maharashtra and near normal over rest of the region. Minimum temperatures are below normal (1.6°C to 3.0°C at isolated places over Vidarbha. They are markedly above normal (5.0°C or more) at isolated places over Konkan & Goa; above normal (1.6°C to 3.0°C) at most places over Gujarat; at many places over Madhya Maharashtra, Konkan & Goa and at isolated places over Marathwada and near normal over rest of the region.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, in transplanted *rabi* rice (vegetative stage), maintain water level up to 5 cm. Apply irrigation to summer groundnut and sunflower. In watermelon crop if symptoms of wilting is observed then drenching should be done with carbandazim @ 1 g per litre of water per plant. Apply straw mulch or polythene mulch to water melon crops. Due to prevailing dry weather conditions and rise in maximum temperature, apply 150-200 litres of water per mango tree at 15 days interval. To avoid fruit drop in mango orchards, apply 20 ppm NAA @ 1g/50 litre water on fruit bearing inflorescence.
 - In Madhya Maharashtra, as dry weather is prevailing, apply irrigation to wheat, vegetable crops and orchards like banana, pomegranate. Also apply mulch of crop residue to orchards. Apply irrigation to onion crop at an interval of 6-8 days. Continue harvesting of matured safflower in Western Maharashtra Scarcity Zone. Harvesting should be done during morning hours.
 - In Marathwada, as dry weather is prevailing, apply light irrigation to *suru* sugarcane, wheat, maize, vegetable crops and orchards like mango. Undertake harvesting of matured grapes and sapota. Continue harvesting of timely sown matured gram crop.
 - In Vidarbha, maintain water level of 3-5 cm in summer rice field in East Vidarbha. As dry weather is prevailing, apply irrigation to vegetable crops and orchards crops like orange and sweet lime in Central Vidarbha region. Also apply mulch of crop residue to the orchards. Continue sowing of summer groundnut.
 - In Madhya Maharashtra and Marathwada, for control of aphids in vegetable crops, spray Dimethoate 30 EC @ 15 ml or Imidachloprid @ 5ml per 10 litres of water.
 - In Western Maharashtra Scarcity Zone, there may be attack of thrips in onion, spray Carbosulphan @ 10 ml or Fipronil @ 15 ml or (Deltamethrin 1% + Triazofos 35%) @ 20 ml/10 litre water + @ 10 ml Sticker at an interval of 10-15 days using knapsack spray pump.
 - In Madhya Maharashtra and Marathwada, for the control of aphids in vegetable crops, spray Dimethoate 30 EC @ 15 ml or Imidachloprid @ 5ml per 10 litres of water.
 - In Marathwada region, to control attack of fruit borer in pomegranate, spray 5% NSKE or Azadirachtin (10,000

PPM) @ 2 ml per litre of water.

▪ **Gujarat:**

- Undertake sowing of summer groundnut and also land preparation for sowing of okra, cluster bean and cowpea for summer season vegetables in North West Zone of Gujarat. Apply irrigation in wheat.
 - In South Saurashtra Zone, undertake harvesting of wheat, chickpea, cumin and coriander. Procure good quality seeds of sesame; carry out sowing of summer sesame when minimum and maximum temperature rises to 19°C and 30°C respectively. Apply irrigation in vegetable crops.
 - In North Saurashtra Zone, continue harvesting of wheat, chick pea, cumin and coriander. Continue land preparation for sowing of summer groundnut and sesame ; carry out sowing of groundnut as temperature rises to 22-25° C and sowing of sesame when minimum temperature is around 19°C and maximum temperature around 30°C. Continue transplanting of brinjal, sowing of bottle gourd, bitter gourd, sponge gourd, ridge gourd, cluster bean and water melon.
 - As temperature conditions are favourable, undertake land preparation for sowing of groundnut, sesame, okra, cluster bean and cowpea for summer season vegetables in North Gujarat Zone. Transplant brinjal seedling during evening hours. Carry out weeding and earthing up operations in papaya and apply the irrigation as per requirement. Plan for sowing of summer fodder crops viz., sorghum and maize. Stop irrigation one week before harvesting of potato crop. Apply irrigation in wheat and gram.
 - In South Gujarat Zone, spray 2 % urea or Potassium Sulphate for proper pod growth in pea crop. For higher flowering in mango crop, spray 0.5 % urea solution. Apply irrigation in mango crop at an interval of 15 days and in vegetable crops at an interval of 3-4 days.
 - In South Gujarat Heavy Rainfall Zone, continue land preparation for sowing of groundnut, transplanting of rice. Continue nursery raising of tomato and transplanting of cole crops. Complete planting of sugarcane by end of February.
 - In North West Zone and Middle Gujarat Zone of Gujarat, continue harvesting of matured spikes of castor and picking of cotton.
 - Due to favorable weather condition there is a chance of blight disease in tomato crop in North Gujarat Zone; spray 0.25% Mencozeb @ 30 g in 10 litres of water with 10 g desi soap solution to manage the disease.
 - Under increasing temperature condition, there is chance of aphid infestation in mustard and cumin in North West Zone of Gujarat and in cumin, mustard and fennel in North Gujarat Zone; for effective control of aphid, spray Dimethoate @ 10 ml/10 litres of water.
 - In present weather conditions attack of thrips in garlic has been reported in North Saurashtra Zone; alternative sprays of Imidacloprid 30.5 SC @ 3 ml and Profenofos @ 20 ml in 10 litres of water at 10 days interval is recommended. Alternaria blight and purple blotch disease infestation is observed in garlic crop; increase periods between irrigations; provide two sprays of Mencozeb @ 27 g or Thiophanae Methyl @12 g/10 litres of water at 10 days interval.
 - Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
- In Gujarat, provide adlib water to lactating animals. Keep young calves indoors during night time.

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



Rice



Okra



Maize



Wheat

- **Realised Rainfall:** Weather remained dry over the region.
- **Realised Temperatures:** Maximum temperatures were above normal (1.6°C to 3.0°C) at many places over Odisha, at a few places over Jharkhand and near normal over rest of the region. Minimum temperatures are below normal (1.6°C to 3.0°C) at isolated places over Odisha. They are above normal (1.6°C to 3.0°C) at many places over Andaman & Nicobar Islands and near normal over rest of the region.
- **Advisories:**
 - **Odisha:**
 - As dense fog likely at isolated places over Coastal Odisha on 17th & 18th February, monitor potato, tomato and

- onion crops for early/late blight disease. If symptoms are noticed undertake plant protection measures.
- In East and South Eastern Coastal Plain Zone, as temperature conditions are favourable, complete sowing of summer groundnut and sunflower. Continue harvesting of sugarcane. Continue transplanting of rice seedlings at 4-5 leaf stage. Keep a thin film of water while transplanting.
 - In Deogarh and Sundargarh districts of North Eastern Plateau Zone, complete sowing of mung, Biri and Peas. Continue transplanting of rice.
 - In North Eastern Coastal Plain Zone, in view of prevailing dry weather conditions and increase in temperature, apply irrigation in rapeseed/mustard crops.
 - In East and South Eastern Coastal Plain Zone and North Eastern Coastal Plain Zone, current weather favours attack of powdery mildew in pulses, to control, spray Sulfex @ 5g per litre of water.
 - In Kalahandi and Nuapara districts of Western Undulating Zone, Fusarium wilt has been noticed in gram at pod formation stage at some places. To control the disease, go for soil drenching of root zone with Trichoderma viride/harzianum @ 5g/litre of water or Carbendazim 12% + Mancozeb 63% 2g/litre of water.
 - In North Eastern Coastal Plain Zone, rise in temperature may favour attack of stem borer in rice nurseries. To control it, spray Traizophos or Chloropyriphos @ 2ml/litre or Cartap hydrochloride@2g/litre of water.
 - In 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 Western Undulating Zone, in the present weather, *fusarium wilt* has been noticed in gram crop at pod formation stage at some places. To control the disease, undertake soil drenching in root zone with Trichoderma viride/harzianum @ 5g/litre of water or Carbendazim 12% + Mancozeb 63% @ 2g/litre of water.
- **West Bengal:**
- In Burdwan, Murshidabad, Nadia, North 24 Parganas districts of New Alluvial Zone, continue transplanting of *boro* rice, ensure 5 cm standing water in the field during transplanting and for next 7 days. Also apply irrigation in potato and mustard as per requirement. Apply irrigation in wheat during panicle initiation stage. Apply 2nd top dressing in late sown wheat crop.
 - In Purba Mednipur and North 24 Parganas district of Coastal Saline Zone, undertake land preparation for sowing of green gram and sesame.
 - In Hill Zone, continue harvesting of ginger, turmeric and undertake land preparation for sowing of maize.
 - 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 upto 2 cm in the fields. If weeds are noticed in the field, remove the weeds by hand weeding and keep the bunds clean.
 - In Malda & Dakshin Dinajpur districts of Old Alluvial Zone of West Bengal, continue transplanting of *boro* rice.
 - In New Alluvial Zone, in the prevailing weather condition, attack of late blight may be found in potato at vegetative stage. To control the disease, apply Cymoxanil 8% + mancozeb 64% 3g per litre of water.
 - In Coastal Saline Zone, blast attack may be found in *boro* rice due to dense morning fog. Apply Trycyclozole @ 5-6g/10 litre of water at 10 days interval.
 - In Old Alluvial Zone, to control the Diamond Black moth on late sown of mustard, spray Imidachloropid17.8% @ 0.2ml per liter of water at evening hour. To control Tikka disease of ground nut sprays Carbendazim @ 1gm/litre of water. Prevention of Potato early & late blight spray Mancozeb @ 2.5 g per litre of water.
 - In Laterite and Red Soil Zone of West Bengal, prevailing weather condition, aphids may be found in mustard and late blight disease in potato. For control of aphids, spray Imidacloprid @ 1ml/1.5litre of water. For control of late blight, spray Dimethoate 30 EC @ 2ml/litre of water.
- **Andaman and Nicobar Islands:**
- In North, Middle and South Andaman, spray Imidacloprid @ 2 ml /litre and Acephate 2g/litre of water alternatively once in two week to control thrips, leaf hopper and other sucking pests in vegetables. Remove and burn the affected plants.
 - In Nicobar, undertake 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, provide light irrigation to vegetables and apply irrigation to potato crop at an interval of 10-15 days.
 - In Darbhanga, East Champaran, Gopalganj, Samastipur, West Champaran districts of North West Alluvial Plain Zone, undertake sowing of summer maize and summer vegetables such as okra, pumpkin, cucumber, sponge gourd ridge guard, bitter guard. Provide irrigation in timely sown wheat crop which is in panicle initiation stage. Provide irrigation in standing vegetables such as brinjal, tomato, chilli, pea and cabbage.
 - In South Bihar Alluvial Zone, transplanting of young seedlings of tomato, chilli and cole crop may be done in this week. Provide light irrigation in standing vegetables crop.
 - In North West Alluvial Zone, in prevailing weather condition, aphid infestation may be found in mustard. If insect population is observed above ETL, spraying of Dimethoate 30 EC @ 1ml/litre of water. To control thrips

infestation in onion, spraying of Profenofos @ 1ml/litre of water or Imidacloprid @ 1ml/4 litre of water.

- In North East Alluvial Zone, in present weather condition, constant monitoring of aphids is advised in mustard crop. If insect population is above ETL, spraying of Rogar or Quinalphos @ 2 ml/litre of water is recommended. In present weather condition, powdery mildew disease is likely to be more prominent in pea. Spray of Kairathen @ 1ml or Sulfex @ 3ml/litre of water should be done to prevent it from further spreading.
- In South Bihar Alluvial Zone, in the present weather condition, in mustard crop, if there is attack of aphids, spray Cartap hydrochloride or Metasystox or Rogor @ 1.5 ml per litre water. In brinjal crop, to control shoot and fruit borer, spraying of Spinosad 48 EC @ 1 ml/4 litres of water is advised.

▪ **Jharkhand:**

- In Central and North Eastern Plateau Zone, continue nursery sowing of summer rice and prepare field for sowing of vegetable like long gourd, round gourd, bitter gourd, sponge gourd, cucumber, water melon and musk melon. Continue nursery sowing of onion.
- In Central and North Eastern Plateau Zone, due to high humidity and cold weather, there is chance of attack of late blight disease in potato, to control it, spray Metalaxyl MZ +Maancozeb @ 1.5g/litre of water.
- In South Eastern Plateau Zone, as dry weather is prevailing, apply irrigation in November sown wheat at grain formation stage. Timely sown arhar cop is at flowering to pod formation stage and at this stage if attack of leaf eating insect and pod borer are found, spray Monochrotophos @ 2 ml/litre of water two times at an interval of 10-12 days to control leaf eating insects. To control pod borer, spray Indoxacarb 14.5 % SC @ 120 ml/acre or Emamectin bencoate 5 % SG @ 5 g/acre or Spinosad 14.5 % SC @ 23-30 g/acre or Neem 1500 ppm @ 800 ml/acre or Profenofos 50 EC @ 800 ml/acre is recommended.
- In South Eastern Plateau Zone, prevailing temperature conditions coupled with cool, humid weather, there is chance of attack of aphids on mustard crop and where the crops are at post flowering to capsule formation stage, aphid attack is likely to be more. Hence, spraying of Metalaxil (Methyl dematone) or Roger (Dimethoate) @ 1ml per liter mixed with teepol @ 5 ml per liter of water is recommended. Due to variation in weather, there is chance of leaf blight, spray Mancozeb @ 2 g per liter of water during evening hours.
- 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 Foot and Mouth Disease (FMD). Vaccinate to poultry bird against Fowl pox and Ranikhet/ ND disease.

CENTRAL INDIA [M.P., CHHATTISGARH]



Gram



Cabbage



Mustard



Wheat

- **Realised Rainfall:** Rainfall occurred in Jabalpur district of East Madhya Pradesh. Weather remained mainly dry/dry over rest of the region.
- **Realised Temperatures:** Maximum temperatures were appreciably above normal (3.1°C to 5.0°C) at most places over West Madhya Pradesh; above normal (1.6°C to 3.0°C) at many places over East Madhya Pradesh and near normal over rest of the region. Minimum temperatures are below normal (1.6°C to 3.0°C) at isolated places over East Madhya Pradesh and near normal over rest of the region. The lowest minimum temperature of 09.0°C recorded at Rewa (East Madhya Pradesh) in the plains of the country.
- **Advisories:**
 - **Madhya Pradesh:**
 - In Gwalior, Bhind, Morena, Guna, Ashoknagar and Shivpuri districts, continue sowing of cucurbitaceous crops in the polythene bags and nursery preparation for summer vegetables.
 - In Malwa Plateau Zone, apply irrigation in wheat at milky stage as per requirement. Continue nursery preparation of summer vegetables like tomato, chilli, brinjal etc. Undertake sowing of cucurbits and okra.
 - In Nimar Valley Zone, undertake land preparation and sowing of summer moong.
 - In Vindhya Plateau Zone, undertake harvesting of early sown gram. Apply irrigation in wheat at milk/dough stage.
 - In Jabalpur, Rewa, Satna districts, apply irrigation in wheat at heading stage. Undertake harvesting of pea and potato.
 - In Jhabua, Alirajpur and Dhar districts, apply irrigation in wheat at milky stage. Continue nursery preparation for cucurbitaceous crops and tomato, brinjal, cauliflower, cabbage etc. Undertake harvesting of early sown gram and

mustard.

- In Bundelkhand Zone, as dry weather is prevailing, apply irrigation in wheat. Undertake sowing of vegetables like pumpkin, bitter gourd etc.
- In Jhabua Hill Zone, due to humid weather, there are chances of attack of sucking pest (aphid) in mustard, spray Acetamiprid @ 0.35-0.45 ml/litre.
- In Malwa Plateau Zone, due to humid weather there are chances of pod borer in gram, spray Quinolphos 25 EC @ 2 ml/litre of water.
- **Chhattisgarh:**
- In Chhattisgarh, in view of prevailing dry weather, apply irrigation in wheat at heading stage and apply remaining dose of fertilizer. Continue sowing of cucurbitaceous crop in the polythene bags, sowing of leafy vegetables and land preparation for sowing of summer vegetables like cowpea, okra. Continue digging of matured potato. Undertake harvesting of matured mustard in Hill Zone.
- In Bastar Plateau Zone, apply irrigation in chickpea, garden pea etc. at flowering stage. As temperature conditions are favourable, continue sowing of green gram and black gram.
- In Chhattisgarh Plain Zone, continue sowing of cucurbitaceous crop in the polythene bags
- In Bastar Plateau Zone, due to humid weather there are chances of white rust disease in mustard, spray Mancozeb + Metalycsil @ 2.5 g/litre of water.
- In Chhattisgarh Plain Zone, due to humid weather, there are chances of attack of pod borer in pigeon pea, spray Indoxacarb @ 120 g/acre dissolved in 200 litres of water.
- Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
- In Madhya Pradesh, provide green fodder, clean and fresh water to cattle twice a day. To control ecto parasite use Butox and also undertake deworming of cattle.
- In Chhattisgarh, protein enriched diet should be given to the animals and keep them in shed during night hours.

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



Mustard



Maize



Cauliflower



Wheat

- **Realised Rainfall:** Weather remained dry over the region.
- **Realised Temperatures:** Maximum temperatures were markedly above normal (5.1°C or more) at most places over West Rajasthan, at many places over Himachal Pradesh, at a few places over Jammu & Kashmir, Uttarakhand; appreciably above normal (3.1°C to 5.0°C) at most places over East Rajasthan; above normal (1.6°C to 3.0°C) at a few places over West Uttar Pradesh, Punjab, Haryana, Chandigarh & Delhi and near normal over rest of the region. Minimum temperatures are markedly above normal (5.0°C or more) at many places over Jammu & Kashmir, Himachal Pradesh and Uttarakhand; above normal (1.6°C to 3.0°C) at most places over Punjab; at many places over East Rajasthan and at isolated places over East Uttar Pradesh and near normal over rest of the region.
- **Advisories:**
 - As rain/snow very likely at most/many places over Jammu & Kashmir and Himachal Pradesh from 18th to 20th and over Uttarakhand on 20th along with heavy rain/snow/heavy to very heavy rain/snow very likely at isolated places over Jammu & Kashmir on 18th & 19th and heavy rain/snow at isolated places over Himachal Pradesh on 19th February, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage/clean the drainage channels to avoid snow deposition and accumulation of water in the fields.
 - **Jammu & Kashmir:**
 - In Jammu & Kashmir, 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.
 - In Valley Temperate Zone of Jammu and Kashmir, in high frost condition, mulching of seed crops of KnolKhol, cabbage and other root crops may be done. Undertake sowing of leafy vegetables in poly house. Farmers are advised to continue harvesting of Chinese cabbage (namely Pakchoi, leafy palampur green), Palak, knolkhol and Lettuce in

protected structures.

- In Cold Arid Zone of Leh, apply second dose of nitrogenous fertilizer in cabbage, cauliflower and broccoli in green houses. Timely irrigation should be applied at 7-10 days intervals.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, go for application of urea to very late sown wheat crop (25-30 days old) as top dress @ 1.5 kg/kanal in the afternoon hours after current spells of rain. Monitor Zinc deficiency in normal sown wheat crop, if symptoms observed like yellow patches between the mid-vein and edge of the leaf in young to middle leaves develop, spray Zinc Sulphate @ 0.2% after current spells of rain.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, the prevailing weather conditions are favourable for infestation of yellow rust in wheat crop, outbreak of aphids in late sown mustard crop; monitor the crops regularly and take proper plant protection measures if noticed.
- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, weather is favourable for infestation of Alternaria Blight to mustard crop, to control apply Mancozeb @ 2.5 g/litre of water and Redomil MZ @ 2.5 g/litre of water after current spells of rain.
- **Uttarakhand:**
- In Udham Singh Nagar district of Bhabar and Tarai Zone, undertake sowing of sunflower varieties like Mordan, Surya and Sankul variety of maize like Naveen, Shweta, Navjot, Kanchan, Surya, Gaurav, Sweet corn; Madhuri and hybrid maize variety Ganga-11. Continue field preparation for sowing bottle gourd, bitter gourd, ridged gourd and pumpkin. Continue harvesting of intercrops sown with winter season sugarcane crop in clear weather. To protect the newly transplanted seedlings of papaya, mango and litchi from snow/frost, these plants should be covered by straw.
- In Nainital district of Bhabar and Tarai Zone, continue harvesting of mustard and undertake harvesting of toria in clear weather. Continue field preparation for Chappankaddu (summer Squash), i.e. clearing and deep ploughing of field should be done as well as mulching should be done for moisture conservation. Continue nursery sowing of tomato, capsicum and brinjal.
- 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 on a non rainy day.
- In TehriGarhwal, Chamoli, Champawat, Pithoragarh, Rudraprayag and Uttarkashi districts of Hill Zone, continue the weeding and hoeing in vegetable crops. 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, 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 on a non rainy day.
- In Dehradun, Pauri and Haridwar districts of Sub Humid Sub Tropic Zone, in late sown wheat crop, Zinc deficiency is visible, if top dressing of urea was done, then soak 2.5 kg slaked lime with 10 litre of water in the evening, decant it next day and keep it separately, mix 5 kg zinc in decant lime water and apply the solution with 600-700 litre of water per hectare.
- **Himachal Pradesh:**
- In Himachal Pradesh, protect the Nurseries of vegetables and forests plants and crops from frost in lower regions. Cover Nursery with polythene sheet to protect from frost.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, continue land preparation for sowing of early crop of bhindi, seed rates should be 10-15 kilogram per acre. Apply mulch and well rotten FYM on Ginger, Turmeric, calcocasia and elephant foot and leafy vegetables crops. Continue earthing-up in potato if crop has attained a height of 15-22 cm on a non rainy day. Continue nursery sowing of chilli, tomato and brinjal crops in poly house. Prepare seedling of early cucurbitaceous crops in small polythene bags in poly houses. Undertake field preparation for sowing of early crop of ladies finger.
- In Mid Hills sub humid Zone of Himachal Pradesh, continue nursery sowing of tomato, capsicum, brinjal, chilli in lower hills area.
- In Mild Hills Sub-Humid Zone of Himachal Pradesh, in Kullu and Mandi districts, avoid pruning in apple and pear orchards and stone fruits as heavy snow fall is expected. Continue preparation of tree basins and start pruning by removing diseased and dense unwanted branches etc. in pomegranate orchards.
- In High Hills Temperate Dry Zone of Himachal Pradesh, in Kinnaur and Lahaul & Spiti, avoid pruning of apple trees when snow is fallen until the weather is warm. Close the polyhouse properly as temperature will decrease and maintain temperature around 20°C.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of blight in potato and tomato crops, for control, spray Carbendazim @ 1.0 gm per litre of water or Dithane-M-45 @ 2.0 gm per litre of water after current spells of rain.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of yellow rust in the wheat crop for control spray Tilt (Propiconazole) 25 EC/Folicure (Tebuconazole) 25 EC/Bayletan 25 WP @ 0.1% i.e. 30ml or 30 g per 30 litres of water per kanal and

repeat the spray after 15 days interval on a non rainy day.

- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of damping off disease in vegetable crop, for control mix thoroughly Dithane M 45 dust @ 10 to 15 g in 1 X 3 metre beds. For control of powdery mildew in peas, spray Celfex @ 25 g per 10 litres of water or Karathane @ 5 ml per 10 litres of water on a non rainy day.

▪ **Punjab, Haryana and Delhi:**

- Apply second irrigation in December sown wheat in Western zone of Punjab. In light textured soil, the third dose of nitrogen viz. 27 kg urea/acre may be applied after the second irrigation. Leaf color chart can be used to know nitrogen requirement of the crop. Remove “sarkanda” from the fields of vegetable crops like chilli, capsicum and cucumber. Undertake transplanting of the capsicum and chilli in fields under protection.
- As weather conditions are favourable, start planting of sugarcane in Western Plain zone of Punjab. Use recommended varieties i.e. Co-118, CoJ-85, CoJ-64 (early maturing), Co-238, CoPB-91, CoJ-88, CoS-8436 for mid season and CoJ-89 for late maturing. The planting sets should be free from diseases like red rot, wilt, ratoon-stunting and grassy shoot.
- In view of the anticipated dry weather conditions irrigate the wheat crop in Eastern zone of Haryana and there should be no water stress at anthesis stage. Undertake planting of spring season sugarcane. Apply irrigation and undertake cutting of fodder crops.
- In New Delhi, keeping in view of the increasing temperature, apply light irrigation in standing crops and vegetables, start field preparation for sowing of ladies finger- A-4, ParbaniKranti and Arkaanamika 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.
- 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.
- To control late blight in tomato in Western Zone of Punjab, spray the crop in the middle of February with Ridomil Gold @ 500 g per acre followed by 3 sprays of Indofil M-45 @ 600 g per acre in 200 litres of water at 7 days intervals. 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.
- Weather is conducive for severe attack of mustard aphid in Western Plain zone of Punjab. Monitor the crop regularly, if pest population reaches to ETL, spray the crop with Actara 25 WG @ 40g/acre. If crop is raised for vegetable (saag) purpose, use Malathion only @ 400g/acre. Wait for one week after spraying to pluck saag. Spraying should be done in the afternoon when the pollinators are less active.
- Due to congenial weather, farmers are advised to monitor the wheat crop for occurrence of yellow rust in Central and Western Plain Zone of Punjab. If its symptoms are noticed, spray the crop with Tilt/Shine/Bumper/Compass/Markzole @ 200 ml in 200 litres of water/acre. Repeat the spray at 15 days interval.
- Due to high moisture level in Western zone of Haryana, there may be attack of white rust in mustard crop. If observed, then spray 600 gram Mancozeb/Indophil M 45 in 250 litres of water per acre.

▪ **Uttar Pradesh:**

- In Central Plain Zone of Uttar Pradesh, undertake harvesting of matured toria crop. Give irrigation to late sown wheat crop as per requirement. Continue planting of sugarcane. Continue land preparation for sowing of maize. Complete transplanting of onion nursery and apply irrigation as per requirement. Continue sowing of cucurbits crops, Bitter gourd, bottle gourd, cucumber, pumpkin, muskmelon, ridge gourd, watermelon. Continue harvesting of matured toria crop.
- In Bundelkhand Zone of Uttar Pradesh, in Eastern part of Bundelkhand Zone apply third irrigation at 60 to 65 days after sowing and 4th irrigation after 80 to 85 days of sowing as per requirement. Continue transplanting of cauliflower, cabbage, tomato, chilli, brinjal. Continue sowing of bhindi, Cucurbitaceous vegetables.
- In Eastern plain Zone of Uttar Pradesh, apply irrigation in wheat crop at ear emergence stage as per requirement in clear weather to late sown wheat. Undertake planting of spring sugarcane. Continue transplanting of rabionion. Undertake digging of matured potato. Undertake sowing of vegetables like okra, bitter gourd, lobia, bottle gourd etc.
- In North Eastern plain Zone of Uttar Pradesh, continue transplanting of onion.
- In Central Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of pod borer in gram crop, for control spray H.A.N.P.V. @ 250 ml in 350 to 400 litres of water per hectare.
- In Bundelkhand Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of aphid in mustard, lentil, linseed and other rabi crops, for control spray Monocrotophos @ 1.25 litres in 600 litres of water per hectare.
- In 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.
- In North Eastern plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of

alternaria blight and mustard aphid in mustard crop at flowering stage, for control spray 0.2 % Ridomil MZ and 0.2 % monocrotophos

▪ **Rajasthan:**

- In East Rajasthan, In Sub Humid Southern Plain and Aravali Hill Zone, in Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts, apply irrigation in wheat crop at the time of ear head emergence stage. Continue nursery sowing of chilli, 1 to 1.5 kg chilli seed required for one hectare area. Before sowing, treat seeds with trichoderma viridae @ 4 g per kg seeds. Undertake sowing of summer okra with varieties Pusa Savani, Arka anamika, Arka Abhya, Aajad kranti, Prabhni kranti, Pusa-A-4 ect. Undertake sowing of summer groundnut with varieties are T.A.G.24, T.G.37A, G.G.2, D.H.86.
- In Dungarpur, Banswara and Pratapgarh districts of Southern Humid Plain Zone, apply third irrigation in wheat at jointing stage. Continue intercultural operation in maize crop and irrigate with top dressing of nitrogen at the knee high stage. Farmers are also advised to be applied irrigation in gram and mustard at pod formation stage.
- In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhopur districts of Flood Prone Eastern Plain Zone, stop irrigation 10 days before digging of matured potato crop. Dig using potato digger after drying of leaves and hardening of skin to minimise labour cost and cut injury to tubers.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of thrips in garlic & onion crop, for control spray Methyl Dematon 25 EC or Melathion 50 EC @ 1.0 ml per litre of 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 wheat & barley crop, for control apply Chlorpyriphos 20 EC @ 4.0 litres per hectare with irrigation water.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, undertake harvesting of matured sugarcane. Apply third irrigation to timely sown wheat crop at 25-30 days after sowing and in mustard crop at 90 to 100 days at grain filling stage. Apply second irrigation in gram at 90 to 100 days after sowing at pod formation stage. Apply second irrigation in jou crop at 65 to 70 days and third irrigation at 100 to 110 days after sowing
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of aphid in cumin & coriander crop, for control spray Dimethoate 30 EC or Melathion 50 EC @ 1.0 ml per litre water.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of powdery mildew in Methi, pea, cumin and coriander crops, for control, spray Karathion @ 1.0 ml or Calaxin @ 1.0 ml per litre water or dust Sulphur @ 25 kg per ha.
- In East Rajasthan, In Sub Humid Southern Plain and Aravali Hill Zone, in Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts, prevailing weather condition is congenial for attack of rust diseases in wheat, for control spray apply sulphur dust @ 25 kg per hectare or spray Mancozeb @ 2 kg per hectare at 15 days interval 2 to 3 times. The spray or dusting must be done in the morning or evening time.
- In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhopur districts of Flood Prone Eastern Plain Zone, due to cool and humid weather condition there may be chances of thrips and aphid attack in brinjal, tomato and chilli crop, to control spray 0.1 % Malathion solution to crops.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, prevailing weather condition is congenial for attack of stem rot and blight in mustard crop for control spray mixture of Carbendazim 12% + Mancozeb 63% @ 2 gm per litre of water.
- Suitable varieties for sowing are given in Annexure III.

• **Horticulture**

- In Central Plain Zone of East Uttar Pradesh, continue sowing of lady finger and lobia as intercrop in guava, and Anola orchards.
- In Western Plain Zone of Uttar Pradesh, in present weather, wrapping of plastic sheets around mango trunk should be done for preventing climbing of young (nymphs) mealy bugs. Apply grease to seal any cracks in the polythene sheets.
- In Himachal Pradesh, prepare the pits for planting the winter plants like peanut, walnut, almond plum and peach. The new plant planted in frost affected region may be protected with thatch of grass.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, do not remove the thatching material from the plants. Due availability of sufficient moisture, apply well rotten FYM/chemical fertilizer to the fruit plants.
- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, undertake plantation of stone fruits, almond, walnut and pecan nut etc. in the pits.
- In Cold arid Zone of Leh, the current night temperature is below -15°C. Therefore the trenches and poly houses should be covered with blankets. Transplanting of HaenzSaag and other cold tolerant vegetables should be done as a second crop under poly houses. Cover trenches and poly houses with blankets to avoid crop damaged.
- In Western Zone of Punjab, apply 500 g of urea and 400 g of murate of potash/plant to grapes after pruning. Similarly, apply 500 g urea/plant to pear and 180 g urea/plant to plum.

- Apply well rotten farm yard manure to all fruit plants except guava, ber and loquat in Eastern zone of Haryana.
- **Floriculture**
- In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhopur districts of Flood Prone Eastern Plain Zone, prevailing weather condition is congenial for attack of aphid in rose, for control spray Malathion @ 0.1% at the most three times at 10 day intervals.
- In 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%.
- In Valley Temperate Zone of Jammu and Kashmir, dug drainage channels to avoid water stagnation after snow melting.
- **Apiculture**
- In Himachal Pradesh, give the winter packing immediately to bee 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.
- **Animal Husbandry**
- In High Hills Temperate Dry Zone of Himachal Pradesh, protect the newly born calves and animals from cold. Feed pregnant and lactating cows and buffalos with balance feed including mineral mixture. For milch animals follow schedule of 1 kg feed+50g mineral mixtures per 2 litres of milk. Ensure to give 50 g mineral mixture to animals daily. Ensure cleanliness in cows having advanced pregnancy to avoid mastitis.
- In 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.
- **Fishery**
- In Himachal Pradesh, disinfect the fish tank by draining out the water and exposing the bottom floor of the tank to direct sunlight.
- In Jammu & Kashmir, add supplementary feed (GNOC/mustard oilcake and Rice/Wheat bran) @ 3% of total body weight of fish biomass.
- **Poultry**
- In Himachal Pradesh, replace the poultry houses with fresh litter to avoid wetting and keep the houses clean and ensure clean drinking water to the birds. Protect the birds from cold and increase the feed by 10%. For the attack of coccidiosis disease consult the nearby veterinarian. Temperature is falling so farmers are advised to make the arrangements for protection of cold in the poultry houses.
- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, in poultry shed, keep temperature 37 deg. Celsius for day old chicks in brooding house with the bukhari.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, cover the poultry shed with gunny bags in order to protect the birds from cold weather.
- In 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.

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

Annexure I

Sub-Divisions	01.02.17		08.02.17		15.02.17	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	3.9	-88	0.2	-99	0.0	-100
Dibang Valley	25.0	-26	20.0	-49	19.0	74
East Kameng	0.0	-100	0.0	-100	0.0	-100
East Siang	0.9	-94	0.1	-99	6.8	-51
Kurung Kumey	**	**	**	**	**	**
Lohit	5.6	-62	1.4	-91	0.8	-93

Lower Dibang Valley	6.2	-82	7.9	-80	29.9	174
Lower Subansari	**	**	**	**	**	**
Papumpare	1.4	-82	0.0	-100	0.0	-100
Tawang	6.0	-19	0.0	-100	**	**
Tirap	1.8	-86	0.0	-100	**	**
Upper Siang	25.2	-34	0.0	-100	12.6	1
Upper Subansari	8.0	-30	0.0	-100	0.0	-100
West Kameng	0.0	-100	0.0	-100	0.0	-100
West Siang	6.0	-52	0.7	-97	9.2	149
Assam&Meghalaya						
Assam						
Baksa	3.3	233	0.0	-100	0.0	-100
Barpeta	0.0	-100	0.0	-100	0.0	-100
Bongaigaon	0.0	-100	0.0	-100	0.0	-100
Cachar	0.0	-100	0.0	-100	0.0	-100
Chirang	0.4	-56	0.0	-100	0.0	-100
Darrang	**	**	**	**	**	**
Dhemaji	2.0	-82	0.0	-100	0.0	-100
Dhubri	0.8	-68	0.0	-100	0.0	-100
Dibrugarh	2.0	-83	0.4	-97	0.5	-95
Goalpara	0.8	-69	0.0	-100	0.0	-100
Golaghat	2.6	-40	0.0	-100	0.0	-100
Hailakandi	0.0	-100	0.0	-100	0.0	-100
Jorhat	2.4	-69	0.0	-100	0.0	-100
Kamrup(Rural)	0.0	-100	0.0	-100	0.0	-100
Kamrup(Metro)	0.0	-100	0.0	-100	0.0	-100
Karbi Anglong	0.0	-100	0.0	-100	0.0	-100
Karimganj	0.0	-100	0.0	-100	0.0	-100
Kokrajhar	0.0	-100	0.0	-100	0.0	-100
Lakhimpur	0.9	-92	0.0	-100	0.0	-100
Morigaon	0.0	-100	0.0	-100	0.0	-100
N.C.Hills	0.0	-100	0.0	-100	0.0	-100
Nagaon	0.0	-100	0.0	-100	0.0	-100
Nalbari	4.6	35	0.0	-100	0.0	-100
Sonitpur	2.2	-24	0.0	-100	0.0	-100
Sibsagar	1.2	-84	0.0	-100	0.0	-100
Tinsukia	5.9	-35	0.0	-100	1.5	-83
Udalgiri	0.5	-86	0.0	-100	0.0	-100
Meghalaya						
East Garo Hills	0.0	-100	0.0	-100	0.0	-100
East Khasi Hills	0.1	-98	2.0	-62	0.0	-100
Jaintia Hills	0.0	-100	0.0	-100	0.0	-100
Ribhoi	0.3	-89	0.0	-100	0.0	-100
South Garo Hills	4.0	700	0.0	-100	0.0	-100
West Garo Hills	1.0	100	0.0	-100	0.0	-100
West Khasi Hills	2.0	-55	0.0	-100	0.0	-100
NMMT						
Mizoram						
Aizwal	0.0	-100	0.0	-100	0.0	-100

Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	0.0	-100	0.0	-100	0.0	-100
Mamit	**	**	**	**	**	**
Saiha	0.0	-100	0.0	-100	0.0	-100
Serchhip	0.0	-100	0.0	-100	0.0	-100
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	**	**	**	**	0.0	-100
Churachandpur	**	**	**	**	**	**
Imphal east	0.0	-100	0.0	-100	0.0	-100
Imphal west	0.0	-100	0.0	-100	0.0	-100
Senapati	0.0	-100	0.0	-100	0.0	-100
Tamenglong	**	**	**	**	**	**
Thoubal	**	**	**	**	0.0	-100
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	0.0	-100	0.0	-100	0.0	-100
Kephire	**	**	**	**	0.0	-100
Kohima	0.0	-100	0.0	-100	0.0	-100
Longleng	**	**	**	**	**	**
Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	0.0	-100	0.0	-100	0.0	-100
Tuensang	**	**	**	**	**	**
Wokha	0.0	-100	0.0	-100	0.0	-100
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	0.0	-100	0.0	-100	0.0	-100
NorthTripura	0.0	-100	0.0	-100	0.0	-100
SouthTripura	0.0	-100	0.0	-100	0.0	-100
West Tripura	0.0	-100	0.0	-100	0.0	-100
Himachal Pradesh						
Bilaspur	90.3	210	12.7	-7	0.0	-100
Chamba	78.9	88	50.9	80	0.0	-100
Hamirpur	72.0	148	8.2	-44	0.0	-100
Kangra	53.8	101	13.4	-21	0.0	-100
Kinnaur	54.5	63	26.0	0	0.0	-100
Kullu	67.3	118	26.6	48	0.0	-100
Lahaul and Spiti	80.6	97	36.2	27	1.5	-96
Mandi	50.6	92	12.0	-6	0.0	-100
Shimla	32.5	36	9.5	-31	0.0	-100
Sirmaur	31.7	54	8.2	-33	0.0	-100
Solan	93.6	238	4.8	-68	0.0	-100
Una	44.1	127	11.6	36	0.0	-100
Punjab						
Amritsar	35.6	266	1.4	-74	0.0	-100

Barnala	13.0	21	5.0	127	0.0	-100
Bhatinda	10.6	88	0.0	-100	0.0	-100
Faridkot	8.9	65	0.0	-100	0.0	-100
Fatehgarh Saheb	51.7	338	3.0	-52	0.0	-100
Ferozpur	6.4	19	0.1	-94	0.0	-100
Gurdaspur	51.4	145	5.8	-48	0.0	-100
Hoshiarpur	32.8	119	13.6	99	0.0	-100
Jalandhar	24.5	119	3.3	-34	0.0	-100
Kapurthala	18.8	64	1.2	-73	0.0	-100
Ludhiana	25.7	160	2.6	-52	0.0	-100
Mansa	5.5	-2	0.0	-100	0.0	-100
Moga	9.0	20	0.0	-100	0.0	-100
Muktesar	4.4	-12	0.0	-100	0.0	-100
Nawashahar	51.5	184	1.7	-77	0.0	-100
Patiala	39.7	203	0.7	-84	0.0	-100
Ropar	60.8	399	4.8	-31	0.0	-100
Sangrur	32.7	314	3.2	-16	0.0	-100
Mohali	57.0	371	0.0	-100	0.0	-100
TarnTaran	40.0	441	5.0	-100	0.0	-100
Haryana,Chd,Delhi						
Haryana						
Ambala	56.7	333	1.3	-86	0.0	-100
Bhiwani	16.6	254	0.0	-100	0.0	-100
Chandigarh	56.9	187	1.6	-83	0.0	-100
Faridabad	14.0	159	0.0	-100	0.0	-100
Fatehabad	13.8	229	0.0	-100	0.0	-100
Gurgaon	27.2	635	0.0	-100	0.0	-100
Hissar	18.6	430	0.0	-100	0.0	-100
Jhajar	18.5	373	0.0	-100	0.0	-100
Jind	26.5	464	0.0	-100	0.0	-100
Katihah	37.2	552	1.0	-79	0.0	-100
Karnal	30.2	232	0.0	-100	0.0	-100
Kurukshetra	30.7	181	0.3	-95	0.0	-100
Mahendragarh	17.0	415	0.0	-100	0.0	-100
Mewat	26.0	863	0.0	-100	0.0	-100
Palwal	14.3	360	0.0	-100	0.0	-100
Panchkkula	38.8	119	1.2	-88	0.0	-100
Panipat	31.4	324	0.2	-96	0.0	-100
Rewari	36.7	1310	1.7	-12	0.0	-100
Rohtak	21.2	190	0.0	-100	0.0	-100
Sirsa	10.0	104	0.0	-100	0.0	-100
Sonepat	28.5	312	0.2	-95	0.0	-100
Yamunanagar	38.0	214	2.4	-74	0.0	-100
Delhi						
Central Delhi	17.0	204	0.0	-100	0.0	-100
East Delhi	29.0	418	0.0	-100	0.0	-100
New Delhi	28.3	405	0.0	-100	0.0	-100
North Delhi	23.6	321	0.0	-100	0.0	-100
North East Delhi	30.0	436	0.0	-100	0.0	-100

North West Delhi	37.3	567	0.0	-100	0.0	-100
South Delhi	33.8	504	0.0	-100	0.0	-100
South West Delhi	38.4	585	0.0	-100	0.0	-100
West Delhi	42.0	650	**	**	**	**
Jammu & Kashmir						
Anantnag	132.0	389	80.3	268	1.4	-93
Badgam	63.5	175	32.3	138	0.0	-100
Bandipore	**	**	**	**	**	**
Baramula	125.4	215	32.4	-42	1.2	-97
Doda	139.2	362	74.8	132	0.0	-100
Ganderbal	49.4	135	41.2	180	0.0	-100
Jammu	99.5	350	36.0	256	0.0	-100
Kargil	**	**	**	**	0.0	-100
Kathua	79.4	228	31.2	86	0.0	-100
Kistwar	**	**	**	**	**	**
Kulgam	131.4	495	119.0	446	0.4	-98
Kupwara	67.1	168	40.5	61	2.9	-90
Ladakh(Leh)	14.2	911	52.6	3946	0.0	-100
Poonch	**	**	**	**	**	**
Pulwama	79.0	367	35.2	278	0.0	-100
Rajouri	87.0	342	22.4	60	0.0	-100
Ramban	199.0	332	113.2	251	0.0	-100
Reasi	101.8	146	78.6	206	0.0	-100
Samba	67.5	205	24.3	141	0.0	-100
Shopian	**	**	**	**	**	**
Srinagar	68.4	225	108.3	637	0.0	-100
Udhampur	185.4	444	128.1	398	0.0	-100
East Madhya Pradesh						
Anuppur	0.0	-100	0.0	-100	12.6	46
Balaghat	0.0	-100	0.0	-100	2.8	-32
Chhatarpur	0.3	-95	0.0	-100	1.4	-69
Chindwara	0.0	-100	0.0	-100	5.6	60
Damoh	1.0	-83	0.0	-100	6.5	7
Dindori	1.0	-83	0.0	-100	4.0	-25
Jabalpur	1.0	-74	0.0	-100	20.2	531
Katni	3.0	-29	0.0	-100	3.0	-48
Mandla	0.0	-100	0.0	-100	6.8	7
Narsingpur	0.6	-81	0.0	-100	13.6	548
Panna	1.0	-81	0.0	-100	3.8	-23
Rewa	1.4	-75	0.0	-100	4.2	-27
Sagar	0.8	-81	0.0	-100	11.6	366
Satna	2.4	-59	0.0	-100	3.2	-38
Seoni	0.0	-100	0.0	-100	9.5	101
Shahdol	0.0	-100	0.0	-100	7.0	-10
Sidhi	1.4	-70	0.0	-100	2.0	-68
Singrauli	0.0	-100	0.0	-100	7.3	7
Tikamgarh	0.5	-91	0.0	-100	3.0	131
Umaria	0.3	-96	0.0	-100	10.2	28

West Madhya Pradesh						
Agar	0.3	200	0.0	-100	0.0	-100
Alirajpur	0.0	-100	0.0	-100	0.0	-100
Asoknagar	1.8	46	0.0	-100	0.0	-100
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	1.2	13	0.0	-100	5.9	245
Bhind	27.9	1016	0.0	-100	0.0	-100
Bhopal	3.4	0	0.0	-100	2.8	65
Burhanpur	3.1	338	0.0	-100	1.7	233
Datia	26.8	857	0.0	-100	0.0	-100
Dewas	0.7	-61	0.0	-100	0.0	-100
Dhar	0.1	-76	0.0	-100	0.0	-100
Guna	3.7	19	0.0	-100	7.7	175
Gwalior	30.1	736	0.0	-100	0.0	-100
Harda	0.0	-100	0.0	-100	6.0	200
Hoshangabad	1.7	-50	0.0	-100	8.8	202
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	0.5	-29	0.0	-100	0.0	-100
Morena	20.3	600	0.0	-100	0.0	-100
Neemuch	1.3	90	0.0	-100	0.0	-100
Raisen	2.8	77	0.0	-100	10.0	233
Rajgarh	0.0	-100	0.0	-100	0.4	-75
Ratlam	0.0	-100	0.0	-100	0.0	-100
Sehore	1.7	-25	0.0	-100	1.3	-30
Shajapur	0.0	-100	0.0	-100	0.0	-100
Sheopur Kalani	5.8	161	0.0	-100	0.0	-100
Shivpuri	16.0	264	0.0	-100	0.0	-100
Ujjain	0.0	-100	0.0	-100	0.0	-100
Vidisha	0.2	-93	0.0	-100	3.9	34
Chhattisgarh						
Balod	0.0	-100	0.0	-100	0.0	-100
Baloda Bazar	0.0	-100	0.0	-100	0.0	-100
Balrampur	0.0	-100	0.0	-100	0.0	-100
Bastar	0.0	-100	0.0	-100	0.0	-100
Bemetara	0.0	-100	0.0	-100	0.0	-100
Bijapur	0.0	-100	0.0	-100	0.0	-100
Bilaspur	0.0	-100	0.0	-100	8.6	94
Dantewara	0.0	-100	0.0	-100	0.0	-100
Dhamtari	0.0	-100	0.0	-100	0.2	-92
Durg	0.0	-100	0.0	-100	0.0	-100
Gariaband	0.0	-100	0.0	-100	0.0	-100
Janjgir	0.0	-100	0.0	-100	0.0	-100
Jashpurnagar	0.0	-100	0.0	-100	0.0	-100
Kabirdham	0.0	-100	0.0	-100	0.0	-100
Kanker	0.0	-100	0.0	-100	0.0	-100
Kondagaon	0.0	-100	0.0	-100	0.0	-100

Korba	0.0	-100	0.0	-100	0.0	-100
Koriya	0.0	-100	0.0	-100	2.9	110
Mahasumund	0.0	-100	0.0	-100	0.0	-100
Mungeli	0.0	-100	0.0	-100	1.8	-59
Narayanpur	0.0	-100	0.0	-100	0.0	-100
Raigarh	0.0	-100	0.0	-100	0.0	-100
Raipur	0.0	-100	0.0	-100	0.0	-100
Rajnandgaon	0.0	-100	0.0	-100	0.0	-100
Sukma	0.0	-100	0.0	-100	0.0	-100
Surajpur	0.0	-100	0.0	-100	0.0	-100
Surguja	0.0	-100	0.0	-100	3.8	-16
East Uttar Pradesh						
Allahabad	0.2	-97	0.0	-100	0.0	-100
Ambedkar Nagar	6.0	43	0.0	-100	0.0	-100
Azamgarh	8.3	93	0.0	-100	0.0	-100
Bahraich	21.7	295	0.3	-93	0.0	-100
Ballia	3.5	-20	0.0	-100	0.0	-100
Balrampur	7.0	17	0.0	-100	0.0	-100
Banda	0.0	-100	0.0	-100	0.0	-100
Barabanki	8.0	45	0.0	-100	0.0	-100
Basti	18.2	333	0.0	-100	0.0	-100
Chandauli	1.0	-88	0.0	-100	0.0	-100
Deoria	6.5	35	0.0	-100	0.0	-100
Faizabad	14.8	190	0.0	-100	0.0	-100
Farrukhabad	6.7	91	0.0	-100	0.0	-100
Fatehpur	4.7	-39	0.0	-100	0.0	-100
Gazipur	0.0	-100	0.0	-100	0.0	-100
Gonda	10.5	119	0.0	-100	0.0	-100
Gorakhpur	6.5	12	0.0	-100	0.0	-100
Hardoi	18.8	230	1.0	-70	0.0	-100
Jaunpur	3.9	-24	0.0	-100	0.0	-100
Kannauj	24.0	411	0.0	-100	0.0	-100
Kanpur City	14.5	154	0.0	-100	0.0	-100
Kanpur Dehat	7.0	30	0.0	-100	0.0	-100
Kaushambi	0.0	-100	0.0	-100	0.0	-100
Kheri	38.5	552	0.0	-100	0.0	-100
Kushi nagar	2.5	-47	0.0	-100	0.0	-100
Lucknow	7.0	30	0.0	-100	0.0	-100
Maharajganj	5.8	-14	0.0	-100	0.0	-100
Mau	10.0	108	0.0	-100	0.0	-100
Mirzapur	0.5	-92	0.0	-100	0.0	-100
Pratapgarh	1.7	-68	0.0	-100	0.0	-100
RaiBareilly	5.0	-13	0.0	-100	0.0	-100
Sahuji Maharajnagar	0.0	-100	0.0	-100	0.0	-100
Sant Kabirnagar	5.0	25	0.0	-100	0.0	-100
Sant Ravidas Nagar	22.0	175	0.0	-100	0.0	-100
Shrawasti	**	**	**	**	**	**
Sidharthnagar	0.0	-100	0.0	-100	0.0	-100
Sitapur	15.0	200	0.0	-100	0.0	-100

Sonbhadra	0.0	-100	0.0	-100	0.0	-100
Sultanpur	6.6	64	0.0	-100	0.0	-100
Unnao	14.0	130	0.0	-100	0.0	-100
Varanasi	4.9	-29	0.0	-100	0.0	-100
West Uttar Pradesh						
Agra	12.4	169	0.0	-100	0.0	-100
Aligarh	21.4	435	0.0	-100	0.0	-100
Auraiya	5.0	22	0.0	-100	0.0	-100
Badaun	17.6	403	0.0	-100	0.0	-100
Baghpat	54.0	757	0.0	-100	0.0	-100
Bareilly	20.8	206	0.8	-87	0.0	-100
Bijnor	5.3	-41	1.8	-63	0.0	-100
Bulandsahar	21.0	320	0.0	-100	0.0	-100
Etah	16.4	368	0.0	-100	0.0	-100
Etawah	8.0	40	0.0	-100	0.0	-100
Firozabad	13.8	331	0.0	-100	0.0	-100
GBNagar	2.0	-68	0.0	-100	0.0	-100
Ghaziabad	20.7	208	0.0	-100	0.0	-100
Hamirpur	3.3	-36	0.0	-100	0.0	-100
Jalaun	19.5	387	0.0	-100	0.0	-100
Jhansi	4.9	4	0.0	-100	0.0	-100
Jotiba Phule Nagar	16.0	227	0.0	-100	0.0	-100
Kanshiramnagar	21.0	425	2.0	-5	0.0	-100
Lalitpur	0.0	-100	0.0	-100	8.0	233
Mahamaya Nagar	20.0	525	0.0	-100	0.0	-100
Mahoba	0.0	-100	0.0	-100	0.0	-100
Mainpuri	9.1	203	0.0	-100	0.0	-100
Mathura	1.0	-63	0.0	-100	0.0	-100
Meerut	17.2	172	0.0	-100	0.0	-100
Moradabad	20.9	236	0.3	-93	0.0	-100
Muzzaffarnagar	41.4	418	0.6	-88	0.0	-100
Pilibhit	12.7	131	1.0	-84	0.0	-100
Rampur	8.6	32	0.0	-100	0.0	-100
Saharanpur	24.7	162	2.0	-68	0.0	-100
Shahjahanpur	15.6	289	0.5	-92	0.0	-100
Uttarakhand						
Almora	8.0	-50	4.5	-60	0.0	-100
Bageshwar	5.7	-65	0.0	-100	0.0	-100
Chamoli	14.7	-27	11.9	-25	0.0	-100
Champawat	10.5	-22	3.0	-69	0.0	-100
Dehradun	8.1	-53	6.5	-49	0.0	-100
Garhwal Pauri	10.0	-30	1.1	-89	0.0	-100
Garhwal Tehri	14.0	-31	10.0	-26	0.0	-100
Haridwar	2.3	-81	3.9	-54	0.0	-100
Nainital	26.9	78	1.3	-87	0.0	-100
Pithorgarh	7.7	-60	5.5	-50	0.0	-100
Rudraprayag	12.8	-41	3.1	-81	0.0	-100
Udham Sing Nagar	25.7	147	0.7	-88	0.0	-100

Uttarkashi	19.1	0	14.7	7	0.0	-100
Bihar						
Araria	0.0	-100	0.0	-100	0.0	-100
Arwal	0.0	-100	0.0	-100	0.0	-100
Aurangabad	**	**	0.0	-100	0.0	-100
Banka	**	**	0.0	-100	0.0	-100
Begusarai	0.0	-100	0.0	-100	0.0	-100
Bhabua	**	**	0.0	-100	0.0	-100
Bhagalpur	4.0	-19	0.0	-100	0.0	-100
Bhojpur	**	**	0.0	-100	0.0	-100
Buxar	**	**	**	**	**	**
Darbhanga	**	**	0.0	-100	0.0	-100
East Champaran	**	**	0.0	-100	0.0	-100
Gaya	0.0	-100	0.0	-100	0.0	-100
Gopalganj	**	**	0.0	-100	0.0	-100
Jahanabad	**	**	0.0	-100	0.0	-100
Jamui	**	**	0.0	-100	0.0	-100
Kathihar	**	**	0.0	-100	0.0	-100
Khagadia	**	**	0.0	-100	0.0	-100
Kishanganj	**	**	0.0	-100	0.0	-100
Lakhisarai	**	**	0.0	-100	0.0	-100
Madhepura	0.0	-100	0.0	-100	0.0	-100
Madhubani	**	**	0.0	-100	0.0	-100
Monghyar	**	**	**	**	**	**
Muzaffarpur	0.0	-100	0.0	-100	0.0	-100
Nalanda	**	**	0.0	-100	0.0	-100
Nawada	**	**	0.0	-100	0.0	-100
Patna	0.0	-100	0.0	-100	0.0	-100
Purnea	5.7	235	0.0	-100	0.0	-100
Rohtas	0.0	-100	0.0	-100	0.0	-100
Saharsha	**	**	0.0	-100	0.0	-100
Samstipur	**	**	0.0	-100	0.0	-100
Saran	0.0	-100	0.0	-100	0.0	-100
Sheikpura	**	**	0.0	-100	0.0	-100
Sheohar	**	**	0.0	-100	0.0	-100
Sitamarhi	**	**	0.0	-100	0.0	-100
Siwan	**	**	0.0	-100	0.0	-100
Supaul	0.0	-100	0.0	-100	0.0	-100
Vaishali	**	**	0.0	-100	0.0	-100
West Champaran	**	**	0.0	-100	0.0	-100
Jharkhand						
Bokaro	0.0	-100	0.0	-100	0.0	-100
Chatra	0.0	-100	0.0	-100	0.0	-100
Deoghar	0.0	-100	0.0	-100	0.0	-100
Dhanbad	0.0	-100	0.0	-100	0.0	-100
Dumka	0.0	-100	0.0	-100	0.0	-100
East Singbhum	0.0	-100	0.0	-100	0.0	-100
Garhwa	0.0	-100	0.0	-100	0.2	-90
Giridih	0.0	-100	0.0	-100	0.0	-100

Godda	0.0	-100	0.0	-100	0.0	-100
Gumla	0.0	-100	0.0	-100	0.0	-100
Hazaribagh	0.0	-100	0.0	-100	0.0	-100
Jamtara	**	**	**	**	**	**
Khunti	0.0	-100	0.0	-100	0.0	-100
Koderrna	0.0	-100	0.0	-100	0.0	-100
Latehar	0.0	-100	0.0	-100	0.0	-100
Lohardagga	0.0	-100	0.0	-100	0.0	-100
Pakur	0.0	-100	0.0	-100	0.0	-100
Palamau	0.0	-100	0.0	-100	1.3	-66
Ramgarh	**	**	**	**	**	**
Ranchi	0.0	-100	0.0	-100	0.0	-100
Sahebganj	0.0	-100	0.0	-100	0.0	-100
Saraikela	0.0	-100	0.0	-100	0.0	-100
Simdega	0.0	-100	0.0	-100	0.0	-100
West Singhum	0.0	-100	0.0	-100	0.0	-100
East Rajasthan						
Ajmer	7.8	2508	0.0	-100	0.0	-100
Alwar	22.7	740	0.0	-100	0.0	-100
Banswara	0.0	-100	0.0	-100	0.0	-100
Baran	2.6	46	0.0	-100	0.0	-100
Bharatpur	21.0	951	0.0	-100	0.0	-100
Bhilwara	5.7	613	0.0	-100	0.0	-100
Bundi	4.7	289	0.0	-100	0.0	-100
Chittorgarh	4.5	395	0.0	-100	0.0	-100
Dausa	14.6	813	0.0	-100	0.0	-100
Dholpur	14.3	583	0.0	-100	0.0	-100
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	21.0	1300	0.0	-100	0.0	-100
Jhalawar	2.2	0	0.0	-100	0.0	-100
Jhunjhunu	14.3	583	0.0	-100	0.0	-100
Karauli	14.5	663	0.0	-100	0.0	-100
Kota	0.4	-72	0.0	-100	0.0	-100
Pratapgarh	0.8	33	0.0	-100	0.0	-100
Rajsamand	0.0	-100	0.0	-100	0.0	-100
Sawai Madhopur	12.3	717	0.0	-100	0.0	-100
Sikar	1.4	-11	0.0	-100	0.0	-100
Sirohi	0.0	-100	0.0	-100	0.0	-100
Tonk	13.5	2154	0.0	-100	0.0	-100
Udaipur	2.7	432	0.0	-100	0.0	-100
West Rajasthan						
Barmer	2.6	273	0.0	-100	0.0	-100
Bikaner	0.2	-89	0.0	-100	0.0	-100
Churu	20.6	1373	0.0	-100	0.0	-100
Hanumangarh	7.0	192	0.0	-100	0.0	-100
Jaisalmer	2.5	409	0.0	-100	0.0	-100
Jalore	4.8	700	0.0	-100	0.0	-100
Jodhpur	9.3	1227	0.0	-100	0.0	-100
Nagaur	14.3	1330	0.0	-100	0.0	-100

Pali	4.0	400	0.0	-100	0.0	-100
Sri Ganganagar	3.1	55	2.1	48	0.0	-100
Gujarat Region						
Ahmedabad	0.0	-100	0.0	-100	0.0	-100
Anand	0.0	-100	0.0	-100	0.0	-100
Aravalli	0.0	-100	0.0	-100	0.0	-100
Banaskantha	0.0	-100	0.0	-100	0.0	-100
Broach	0.0	-100	0.0	-100	0.0	-100
Chhota Udepur	0.0	-100	0.0	-100	0.0	-100
DNH	**	**	**	**	**	**
Dahod	0.0	-100	0.0	-100	0.0	-100
Daman	0.0	-100	**	**	**	**
Dangs	0.0	-100	0.0	-100	0.0	-100
Gandhinagar	0.0	-100	0.0	-100	0.0	-100
Kheda	0.0	-100	0.0	-100	0.0	-100
Mahisagar	0.0	-100	0.0	-100	0.0	-100
Mehsana	0.0	-100	0.0	-100	0.0	-100
Narmada	0.0	-100	0.0	-100	0.0	-100
Navsari	0.0	-100	0.0	-100	0.0	-100
Panchmahal	0.0	-100	0.0	-100	0.0	-100
Patan	0.0	-100	0.0	-100	0.0	-100
Sabarkantha	0.0	-100	0.0	-100	0.0	-100
Surat	0.0	-100	0.0	-100	0.0	-100
Tapi	0.0	-100	0.0	-100	0.0	-100
Vadodara	0.0	-100	0.0	-100	0.0	-100
Valsad	0.0	-100	0.0	-100	0.0	-100
S K & Diu region						
Amreli	0.0	-100	0.0	-100	0.0	-100
Bhavnagar	0.0	-100	0.0	-100	0.0	-100
Botad	0.0	-100	0.0	-100	0.0	-100
Devbhoomi Dwarka	0.0	-100	0.0	-100	0.0	-100
Diu	0.0	-100	0.0	-100	0.0	-100
Gir Somnath	0.0	-100	0.0	-100	0.0	-100
Jamnagar	0.0	-100	0.0	-100	0.0	-100
Junagarh	0.0	-100	0.0	-100	0.0	-100
Kutch	0.0	-100	0.1	-46	0.0	-100
Morbi	0.0	-100	0.0	-100	0.0	-100
Porbandar	0.0	-100	0.0	-100	0.0	-100
Rajkot	0.0	-100	0.0	-100	0.0	-100
Surendranagar	0.0	-100	0.0	-100	0.0	-100
Maharashtra						
Konkan & Goa						
Mumbai City	0.0	-100	0.0	-100	0.0	-100
Mumbai Suburban	0.0	-100	0.0	-100	0.0	-100
North Goa	0.0	-100	0.0	-100	0.0	-100
Raigad	0.0	-100	0.0	-100	0.0	-100
Ratnagiri	0.0	-100	0.0	-100	0.0	-100
Sindhudurg	0.0	-100	0.0	-100	0.0	-100

South Goa	0.0	-100	0.0	-100	0.0	-100
Thane	0.0	-100	0.0	-100	0.0	-100
Madhya Maharashtra						
Ahmednagar	0.0	-100	0.0	-100	0.0	-100
Dhule	0.0	-100	0.0	-100	0.0	-100
Jalgaon	0.0	-100	0.0	-100	0.0	-100
Kolhapur	0.0	-100	0.0	-100	0.0	-100
Nandurbar	0.0	-100	0.0	-100	0.0	-100
Nasik	0.0	-100	0.0	-100	0.0	-100
Pune	0.0	-100	0.0	-100	0.0	-100
Sangli	0.0	-100	0.0	-100	0.0	-100
Satara	0.0	-100	0.0	-100	0.0	-100
Solapur	0.0	-100	0.0	-100	0.0	-100
Marathwada						
Aurangabad	0.0	-100	0.0	-100	0.0	-100
Beed	0.0	-100	0.0	-100	0.0	-100
Hingoli	0.0	-100	0.0	-100	0.0	-100
Jalna	0.0	-100	0.0	-100	0.0	-100
Latur	0.0	-100	0.0	-100	0.0	-100
Nanded	0.0	-100	0.0	-100	0.0	-100
Osmanabad	0.0	-100	0.0	-100	0.0	-100
Parbhani	0.0	-100	0.0	-100	0.0	-100
Vidarbha						
Akola	0.0	-100	0.0	-100	0.0	-100
Amraoti	0.0	-100	0.0	-100	0.0	-100
Bhandara	0.0	-100	0.0	-100	0.0	-100
Buldhana	0.3	-83	0.0	-100	0.0	-100
Chandrapur	0.0	-100	0.0	-100	0.0	-100
Gadchiroli	0.0	-100	0.0	-100	0.0	-100
Gondia	0.0	-100	0.0	-100	0.5	-84
Nagpur	0.0	-100	0.0	-100	0.0	-100
Wardha	0.0	-100	0.0	-100	0.0	-100
Washim	0.0	-100	0.0	-100	0.0	-100
Yeotmal	0.0	-100	0.0	-100	0.0	-100
Odisha						
Angul	0.0	-100	0.0	-100	0.0	-100
Balasore	0.0	-100	0.0	-100	0.0	-100
Bargarh	0.0	-100	0.0	-100	0.0	-100
Bhadrak	0.0	-100	0.0	-100	0.0	-100
Bolangir	0.0	-100	0.0	-100	0.0	-100
Boudh	0.0	-100	0.0	-100	0.0	-100
Cuttack	0.0	-100	0.0	-100	0.0	-100
Deogarh	0.0	-100	0.0	-100	0.0	-100
Dhenkanal	0.0	-100	0.0	-100	0.0	-100
Gajapati	0.0	-100	0.0	-100	0.0	-100
Ganjam	0.0	-100	0.0	-100	0.0	-100
Jagatsingpur	0.0	-100	0.0	-100	0.0	-100
Jajpur	0.0	-100	0.0	-100	0.0	-100
Jharsuguda	0.0	-100	0.0	-100	0.0	-100






Kalahandi	0.0	-100	0.0	-100	0.0	-100
Kandhamal	0.0	-100	0.0	-100	0.0	-100
Kendrapara	0.0	-100	0.0	-100	0.0	-100
Keonjhar	0.1	-98	0.0	-100	0.0	-100
Khurda	0.0	-100	0.0	-100	0.0	-100
Koraput	0.0	-100	0.0	-100	0.0	-100
Malkangiri	0.0	-100	0.0	-100	0.0	-100
Mayurbhanj	0.1	-98	0.0	-100	0.0	-100
Nawapara	0.0	-100	0.0	-100	0.0	-100
Nawarangpur	0.0	-100	0.0	-100	0.0	-100
Nayagarh	0.0	-100	0.0	-100	0.0	-100
Puri	0.0	-100	0.0	-100	0.0	-100
Rayagada	0.0	-100	0.0	-100	0.0	-100
Sambalpur	0.0	-100	0.0	-100	0.0	-100
Sonepur	0.0	-100	0.0	-100	0.0	-100
Sundargarh	0.0	-100	0.0	-100	0.0	-100
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	3.4	-88	0.3	-98	1.2	-93
North & Middle Andaman	0.0	-100	0.0	-100	0.0	-100
South Andaman	0.0	-100	0.0	-100	2.7	-76
GWB						
Bankura	0.0	-100	0.0	-100	0.0	-100
Birbhum	0.0	-100	0.0	-100	0.0	-100
Burdwan	0.0	-100	0.0	-100	0.0	-100
East Midnapore	0.0	-100	0.0	-100	0.0	-100
Hooghly	0.0	-100	0.0	-100	0.0	-100
Howrah	0.0	-100	0.0	-100	0.0	-100
Kolkata	0.1	-98	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	0.0	-100
24 Pargana (S)	0.0	-100	0.0	-100	0.0	-100
West Midnapore	0.0	-100	0.0	-100	0.0	-100
SHWB & Sikkim						
Cooch Behar	0.1	-93	0.0	-100	0.0	-100
Darjeeling	0.0	-100	0.0	-100	0.0	-100
East Sikkim	1.8	-88	0.0	-100	0.0	-100
Jalpaiguri	0.0	-100	0.0	-100	0.0	-100
Malda	0.0	-100	0.0	-100	0.0	-100
North Dinajpur	0.0	-100	0.0	-100	0.0	-100
North Sikkim	0.9	-96	0.0	-100	0.0	-100
South Dinajpur	0.0	-100	0.0	-100	0.0	-100
South Sikkim	0.0	-100	0.0	-100	0.0	-100
West Sikkim	**	**	**	**	**	**
Karnataka						
Coastal Karnataka						

Dakshina Kannada	4.2	1296	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
NI Karnataka						
Bagalkote	0.0	-100	0.0	-100	0.0	-100
Belagavi	0.0	-100	0.0	-100	0.0	-100
Bidar	0.0	-100	0.0	-100	0.0	-100
Dharwad	0.0	-100	0.0	-100	0.0	-100
Gadag	0.0	-100	0.0	-100	0.0	-100
Haveri	0.0	-100	0.0	-100	0.0	-100
Kalaburgi	0.0	-100	0.0	-100	0.0	-100
Koppal	0.0	-100	0.0	-100	0.0	-100
Raichur	0.0	-100	0.0	-100	0.0	-100
Vijayapura	0.0	-100	0.0	-100	0.0	-100
Yadgir	0.0	-100	0.0	-100	0.0	-100
SI Karnataka						
Ballari	0.0	-100	0.0	-100	0.0	-100
Bangalore Rural	0.9	350	0.0	-100	0.0	-100
Bangalore Urban	0.4	6	0.0	-100	0.0	-100
Chamarajanagar	0.0	-100	0.0	-100	0.0	-100
Chikaballapur	0.7	33	0.0	-100	0.0	-100
Chikkamagaluru	0.3	40	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	9.1	9011	0.0	-100	0.0	-100
Kodagu	54.7	9013	0.0	-100	0.0	-100
Kolar	15.0	2406	0.0	-100	0.0	-100
Mandya	3.3	3200	0.0	-100	0.0	-100
Mysuru	12.3	1657	0.0	-100	0.0	-100
Ramanagara	1.9	200	0.0	-100	0.0	-100
Shivamogga	0.2	200	0.0	-100	0.0	-100
Tumakuru	5.4	801	0.0	-100	0.0	-100
Kerala						
Alappuzha	28.3	1246	0.9	-85	0.0	-100
Kannur	11.5	11350	0.0	-100	0.0	-100
Ernakulam	13.1	669	0.0	-100	0.0	-100
Idukki	5.1	60	0.0	-100	1.1	-71
Kasaragod	18.1	2486	0.0	-100	0.0	-100
Kollam	15.0	384	0.0	-100	1.3	-83
Kottayam	23.2	673	0.0	-100	0.1	-98
Kozhikode	7.7	2467	0.0	-100	0.0	-100
Malappuram	4.0	200	0.0	-100	0.0	-100
Palakkad	0.0	-98	0.0	-100	0.0	-100
Pathanamthitta	29.3	714	0.0	-100	0.0	-100
Thiruvananthapuram	4.7	-13	0.0	-100	0.0	-100
Thrissur	1.4	186	0.0	-100	0.0	-100
Wyand	14.5	4727	0.0	-100	0.0	-100
Tamil Nadu						
Ariyalur	63.0	4748	0.0	-100	0.0	-100

Chennai	4.0	65	0.0	-100	0.0	-100
Coimbatore	9.9	1319	0.0	-100	0.0	-100
Cuddalore	85.8	4414	0.0	-100	0.3	-84
Dharmapuri	8.4	735	0.0	-100	0.0	-100
Dindigul	20.5	2173	0.0	-100	0.7	-71
Erode	7.5	971	0.0	-100	0.0	-100
Kanchipuram	15.7	945	0.0	-100	0.1	-97
Kanyakumari	1.5	-64	0.0	-100	0.0	-99
Karaikal	78.5	3468	0.0	-100	0.0	-100
Karur	7.8	1460	0.0	-100	0.0	-100
Krishnagiri	5.5	2667	0.0	-100	0.0	-100
Madurai	4.5	224	0.0	-100	0.5	-83
Nagapattinam	63.8	1893	0.0	-100	6.9	56
Namakkal	2.4	496	0.0	-100	0.0	-100
Nilgiris	47.2	1287	0.0	-100	0.0	-100
Perambalur	18.0	2471	0.0	-100	0.0	-100
Puducherry	25.8	1885	0.0	-100	0.0	-100
Pudukottai	20.4	2813	0.0	-100	1.3	-1
Ramanathapuram	37.1	1961	0.0	-100	7.1	65
Salem	10.4	2500	0.0	-100	0.0	-100
Sivaganga	29.0	2796	0.0	-100	1.1	-52
Thanjavur	43.7	2813	0.0	-100	4.0	42
Theni	12.6	320	0.0	-100	0.1	-96
Tirunelveli	37.7	1008	0.0	-100	5.0	-36
Tirupur	4.2	950	0.0	-100	0.0	-100
Tiruvallur	6.0	398	0.0	-100	0.0	-100
Tiruvannamalai	47.0	3036	0.0	-100	0.0	-100
Tiruvarur	44.5	2519	0.0	-100	2.0	-50
Toothukudi	14.7	463	0.0	-100	0.3	-89
Trichy	10.0	1326	0.0	-100	0.0	-100
Vellore	23.1	1674	0.0	-100	0.0	-100
Villupuram	37.5	3023	0.0	-100	0.0	-100
Virudhunagar	11.5	421	0.0	-100	6.2	63
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	0.0	-100	0.0	-100	0.0	-100
Guntur	0.0	-100	0.0	-100	0.0	-100
Krishna	0.0	-100	0.0	-100	0.0	-100
Nellore	6.6	452	0.0	-100	0.0	-100
Prakasam	0.3	-36	0.0	-100	0.0	-100
Sirkakulam	0.0	-100	0.0	-100	0.0	-100
Visakhapatnam	0.0	-100	0.0	-100	0.0	-100
Vizianagram	0.0	-100	0.0	-100	0.0	-100
West Godavari	0.0	-100	0.0	-100	0.0	-100
Rayalaseema						
Anantapur	0.2	-66	0.0	-100	0.0	-100
Chittoor	15.5	2996	0.0	-100	0.0	-100
Cuddapah	1.5	200	0.0	-100	0.0	-100

Kurnool	0.0	-100	0.0	-100	0.0	-100
Telangana						
Adilabad	0.0	-100	0.0	-100	0.0	-100
Hyderabad	0.0	-100	0.0	-100	0.0	-100
Karimnagar	0.0	-100	0.0	-100	0.0	-100
Khammam	0.0	-100	0.0	-100	0.0	-100
Mehabubnagar	0.0	-100	0.0	-100	0.0	-100
Medak	0.0	-100	0.0	-100	0.0	-100
Nalgonda	0.0	-100	0.0	-100	0.0	-100
Nizamabad	0.0	-100	0.0	-100	0.0	-100
Rangareddy	0.0	-100	0.0	-100	0.0	-100
Warangal	0.0	-100	0.0	-100	0.0	-100

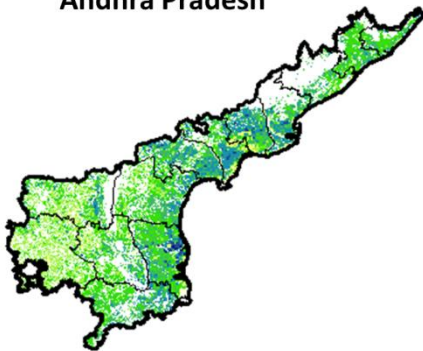
Legends

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

Annexure II

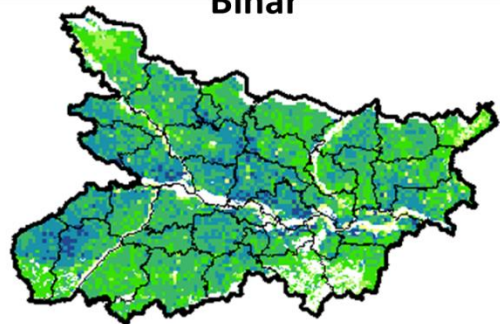
**NOAA/AVHRR NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON
16th February 2017 FOR DIFFERENT STATES**

Andhra Pradesh



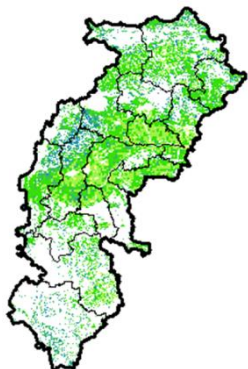
Agriculture vigour is moderate over southern and patches in costal part whereas, patches in central region and east of Rayalseema show good to very good NDVI in the state of Andhra Pradesh.

Bihar



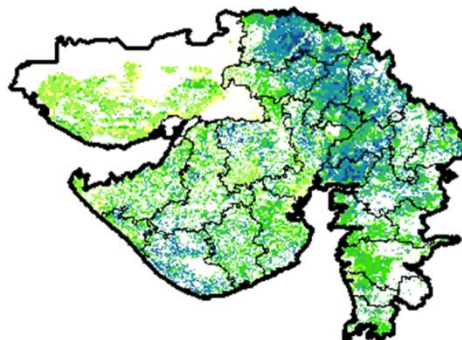
Agriculture vigour is good over most of the patches in state of Bihar, rest of the state shows moderate NDVI.

Chhattisgarh



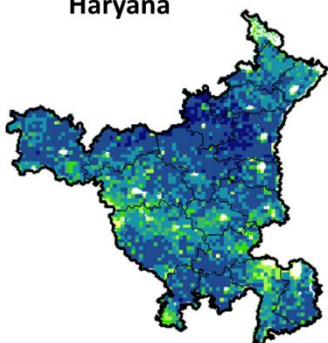
Agriculture vigour is good in southern and central region of Chhattisgarh, whereas, moderate vigour is seen in rest of the state.

Gujarat



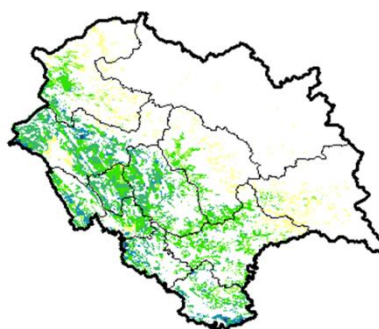
Moderate NDVI values are observed in patches in Kutch and whereas, good to very good NDVI is observed in patches in Saurashtra and Gujarat.

Haryana



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

Himachal Pradesh



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

Jammu & Kashmir



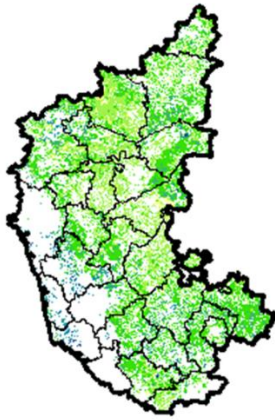
Agriculture vigour is moderate over entire state of Jammu & Kashmir, good NDVI values are observed in southern part of state.

Jharkhand



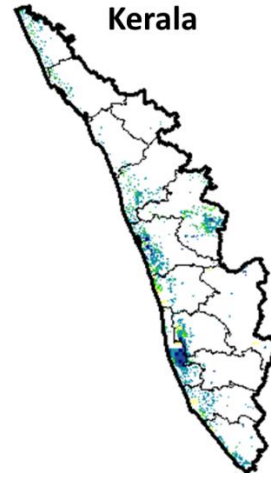
Agriculture vigour is good over patches in central and western region of Jharkhand whereas, remaining states shows moderate NDVI values.

Karnataka



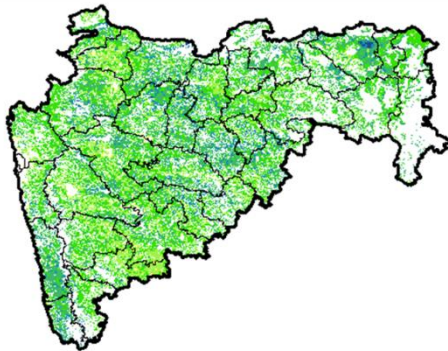
Agriculture vigour is good in patches over costal Karnataka and northern region of the state whereas rest of the state shows moderate vigour.

Kerala



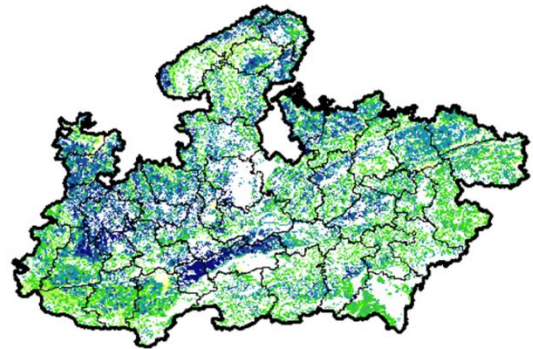
Agriculture vigour is good over entire state of Kerala except few patches in central and southern part shows moderate NDVI values.

Maharashtra



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

Madhya Pradesh



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

North East Region



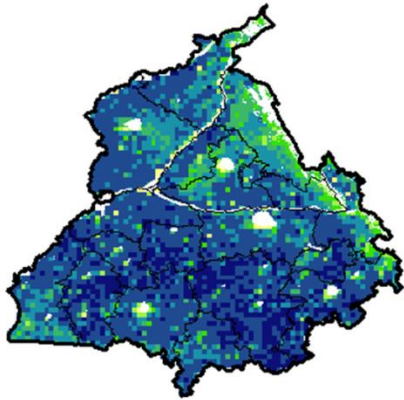
Agriculture vigour is moderate over most of the parts in North-Eastern states, whereas few patches in Assam, Manipur and Arunachal Pradesh show good vigour.

Odisha



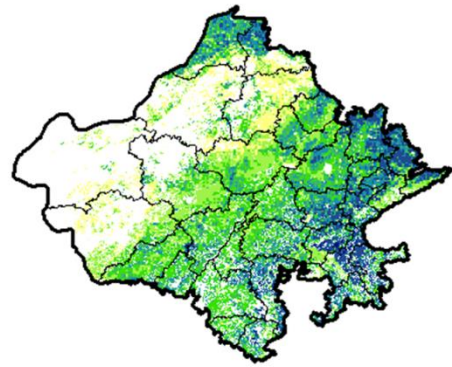
Agricultural vigour is good over many patches over state of Odisha whereas, moderate vigour is observed over the entire state.

Punjab



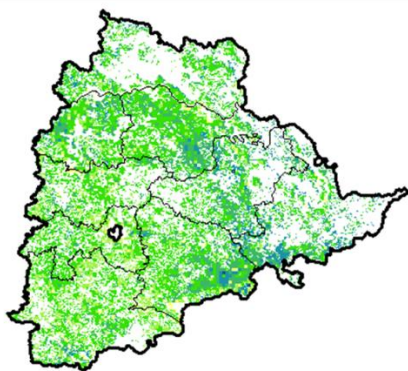
Agricultural vigour is good to very good in over entire state of Punjab, whereas few patches in north-east show moderate vigour.

Rajasthan



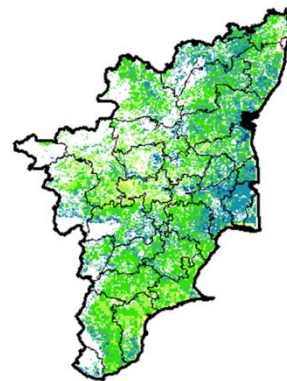
Agriculture vigour is good to very good over eastern and southern part and few patches in north of Rajasthan whereas, moderate vigour is observed over rest of the region.

Telangana



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

Tamil Nadu



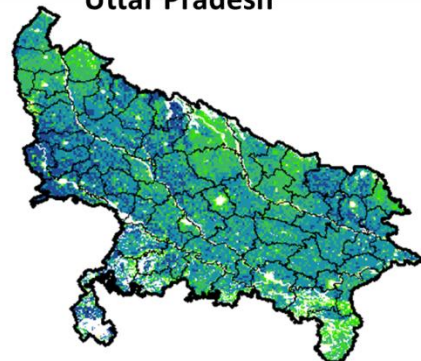
Agricultural vigour is moderate over most region of Tamil Nadu, whereas central region and patches in north shows good to very good NDVI.

Uttarakhand

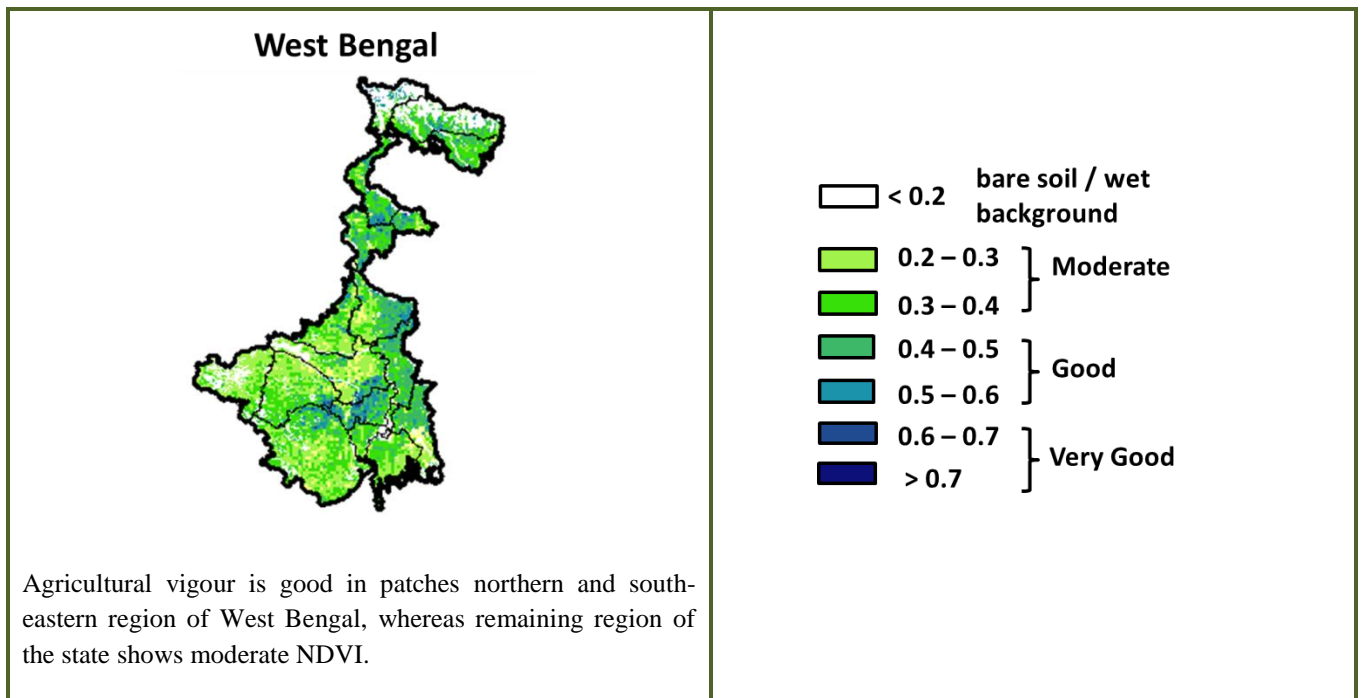


Agricultural vigour is good to very good over entire state of Uttarakhand whereas, moderate in south-western region of Uttarakhand.

Uttar Pradesh



Agricultural vigour is good to very good over many parts of Uttar Pradesh, whereas remaining part shows moderate NDVI.



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

Annexure III

Assam

Winter brinjal: Pusa Kranti, Pusa Purple Long, Pusa Purple Round, Pusa Vairab, Pant Samra.

Tomato : Punjab Chuhara, S-12, Punjab Kesri, Pusa Early Dwarf, Sioux, Pusa Ruby, VC- 48-1, Arka Abha (BWR-1), Arka Alok (BWR-5), BT-1, Bilahi-1, Bilahi-2).

Potato : Kufri Chandramukhi, Kufri Jyoti, Kufri Megha, Kufri Badshah, Kufri Sindhuri.

Onion : Pusa Red, Pusa Ratnar, Pusa white (Round), Pusa white (Flat), N-53, Agrifound Light Red, Punjab Red Round, Pusa Madhuri, Arka Niketan.

Cauliflower : Early Kunwari, Pusa Katki and Pusa Deepali (for early maturity).

Improved Japanese, Pusa Synthetic, Pusa Snowhall (for mid maturity).

Snowball-16, Pusa Snowball, K-1 and Hissar 1 (for late maturity) etc.

Cabbage : Golden Acre, Pride of India, Pusa Mukta (Sel – 8) (for early maturity).

Drum Head and Eclipse Drum Head (for late maturity).

Knol-Khol : White Vienna (for early maturity).

Purple Viena (for late maturity).

Odisha:

Potato: Kufri Chandramukhi, Kufri Chamatkar, Kufri Jyoti, Kufri Sinduri and Kufri Alankar, etc

Greengram- TARM1, OUM11-5, Hum-1

Blackgram- PU-19, LBG-17

Groundnut: are Smruti, AK 12-24, JL-24.

Bihar

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

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).

Coriander: Rajendra swati, Pant haritima, Kumarganj selection and Hisar anand.

Jharkhand

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

Green pea: Arkel or Azad pea.

West Bengal

Coconut: Eastcoastal, Hazari

Banana: Mortoman, Chapa, Kathali, Singapuri,

Cabbage : Pride of India, Pusa early, Kranti.

Cauliflower : Jawhar moti, Bharat Jyoti, Early banaras.

Uttarakhand

Onion:VL-Pyaj-3,Nasik Red,Pusa Red

Pea: Vivek 10,Vivek 11,Pant 3,

Radish:Meenu early, Japanese white, PusaHimani.

Carrot:Pusa Vrishi,

Mentha: Koshi, Saksham, Kushal, Himalaya, Saryu, Sim kranti .

Jammu and Kashmir

Pea: AP-1, Bonnevillea, Rachna and Arkel

Berseem:Vardan, mascavi, pusa giant, BL-1

Himachal Pradesh

Cauliflower: snowball and Giant snowball.

Radish:Japanese white, Chinese pink and mino early white

Turnip: PTWG-1

Carrot:Pusakesar

Peas :Mater ageta-6 (early variety).

Cabbage:Pride of India, golden achor and hybrid

East Uttar Pradesh

Radish:kalyanpur No.1, Pusa Rashmi, Hisar selection-1, Japani Safed, pusa Chetaki, Pusa Himani,Pusa deshi, Arka Nishant and Jaunpuri.

Cabbage: Pusa snowball, Pusa snowball II, Snowball 16 and Pusa snowball K1

West Uttar Pradesh

Vegetable pea: Azad-3, Aakril

Pea: KPRM-522, KPRM-400, Vikas, Prakash

Punjab

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

Radish: Punjab Pasand and Japanese white.

Turnip: L-1.

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

Tomato:TH-1,PunjabRatta, Punjab NR 7, Punjab Chhuhara, Punjab Upma, Castle Rock.

Okra: Punjab-8 and Punjab-7

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

East Rajasthan:

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

Carrot:PusaKeshar is improved variety.

Radish: Japanese white & hill queen.

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

Pumpkin: Pusa viswas, Pusa alankar, arka chandan

Kheera : Balam khira, Pusa sayong

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

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

Cucumber: Lakhnow Ageti, Arka sheetal

West Rajasthan

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

Fenugreek :RMt 1 & RMt305.

Bhindi: Ark Anamika, varshauphar, Parbhanikranti, pusamakhmali.

Radish: Japanese white & hill queen.

Madhya Pradesh

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

Chhattisgarh

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

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**Summer Groundnut:** TAG-24, TG-37-A, TPG-41, GG-2, GJG-31.**Summer Sesame:** G.Til-2, G.Til-3.**Brinjal:** Junagadh oblong, Junagadh long, Guj. Bringle-2.**Lady finger:** Guj. Hy.-1 & 2.**Ridge gourd:** Pusa nasdar, Jaipuri.**Bottle gourd:** Junagadh tender long, Pusa summer prolific long.**Sponge guard:** Pusa chikni.**Bitter guard:** Priya, Pusa domosmi.**Karnataka****Sugarcane:** CO-86032 and CO-740.**Telangana****Sesamum:** SwethaThil, Chandana, Hima, Gouri, Madhavi.**Tomato:** Pusa rubi, Pusa early dwarf, Marutham, Arkha, meghali, Arkha sourab, Arkha vikas.**Bhendi:** Parbhani kranti, Arkha anamika, Arkha abhaya.**Tamil Nadu:****Rice:** ADT 43 and ADT 45**Cotton:** Surbhi