



National Agromet Advisory Service Bulletin

Friday 4th March 2016

(For the period 4th to 8th March 2016)



Issued by

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

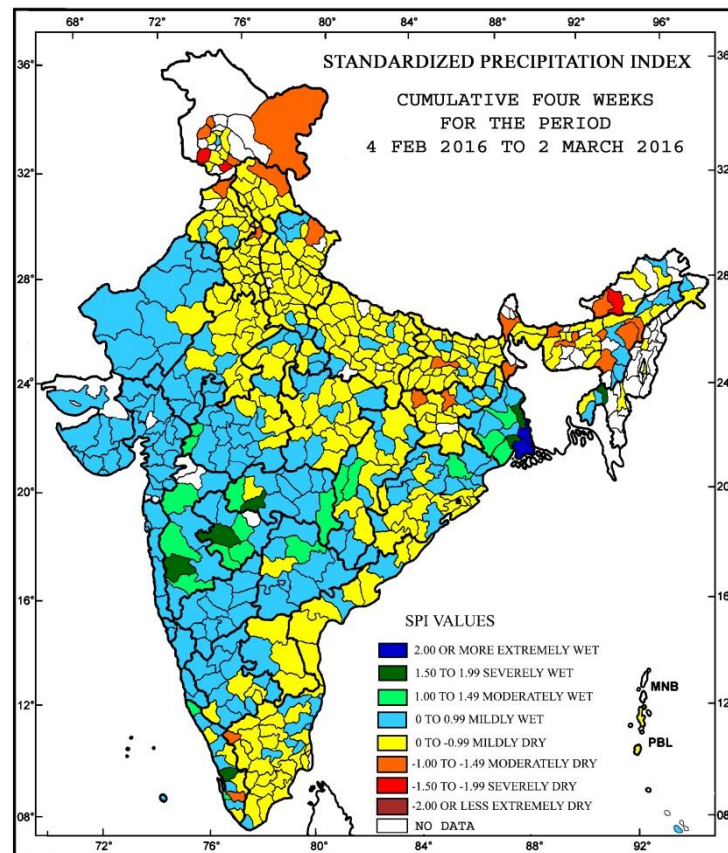
Weblink For

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

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

Standardised Precipitation Index
Four Weekly for the Period 4th February to 2nd March 2016

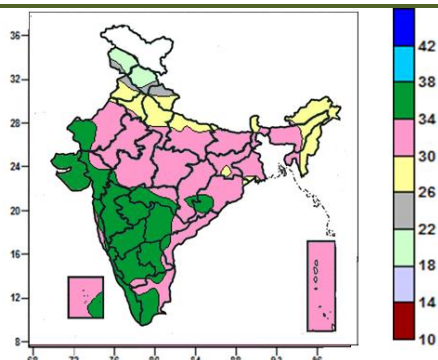
MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE



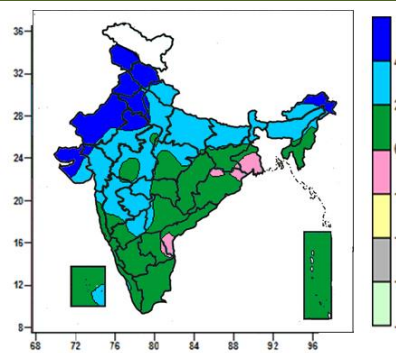
- Extremely/severely wet conditions experienced in few districts of West Bengal; North Tripura district of Tripura; Satara, Beed, Washim districts of Maharashtra; Ernakulam district of Kerala.
- Extremely/Severely dry conditions experienced in East Kameng district of Arunachal Pradesh; Udhampur, Rajouri districts of Jammu & Kashmir.
- Moderately dry conditions experienced in few districts of Assam; Delhi; Jammu & Kashmir; West Kameng district of Arunachal Pradesh; Jaintia Hills district of Meghalaya; Darjeeling, Malda districts of West Bengal; Hazaribag, Palamu districts of Jharkhand; Patna district of Bihar; Ambala, Chandigarh districts of Haryana; Chamoli district of Uttarakhand; Gurdaspur district of Punjab; Lahaul & Spiti district of Himachal Pradesh; Nilgiri district of Tamil Nadu; Pathanamthitta district of Kerala.
- Rest of the country experienced moderately wet/ mildly dry/mildly wet conditions.

Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 02.03.2016

Actual Mean Maximum Temperature ($^{\circ}\text{C}$) in India for the week ending 02.03.2016



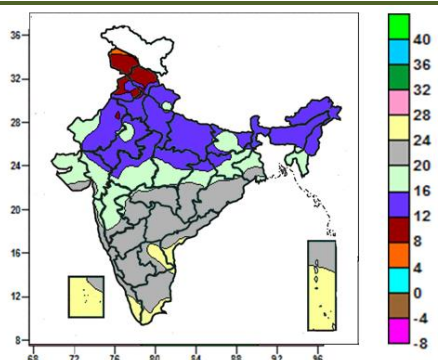
Mean Maximum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 02.03.2016



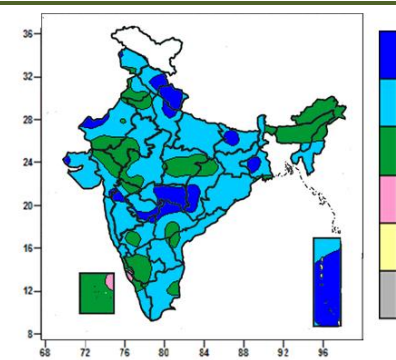
- Mean maximum temperature was between 34 to 38 $^{\circ}\text{C}$ over Saurashtra & Kutch, Madhya Maharashtra, Marathwada, Coastal & North Interior Karnataka, Kerala, many parts of Gujarat region, Konkan & Goa, Vidarbha, Telangana, Rayalaseema, South Interior Karnataka, Tamil Nadu, some parts of Odisha, West Rajasthan and isolated pockets of West Madhya Pradesh, Chhattisgarh, Coastal Andhra Pradesh, Lakshadweep.
- Mean maximum temperature was between 26 to 34 $^{\circ}\text{C}$ over rest of the country except Jammu & Kashmir, Himachal Pradesh, some parts of Uttarakhand and Punjab where it was between 18 and 26 $^{\circ}\text{C}$.

- Mean maximum temperature was above normal by 4 to 6 $^{\circ}\text{C}$ over Jammu & Kashmir, Punjab, many parts of Himachal Pradesh, Haryana & Delhi, West Rajasthan, Saurashtra & Kutch, some parts of East Rajasthan, Arunachal Pradesh and isolated pockets of Uttarakhand, West Uttar Pradesh, Gujarat region.
- Mean maximum temperature was above normal by 2 to 4 $^{\circ}\text{C}$ over Sub-Himalayan West Bengal & Sikkim, many parts of Uttarakhand, Uttar Pradesh, Bihar, Arunachal Pradesh, Assam & Meghalaya, East Rajasthan, Gujarat region, Marathwada, West Madhya Pradesh, Madhya Maharashtra, some parts of Nagaland, East Madhya Pradesh, Vidarbha, Saurashtra, North Interior Karnataka and isolated pockets of Himachal Pradesh, Haryana, Jharkhand, Konkan, Telangana and Lakshadweep.
- It was normal to near normal in remaining parts of the Country.

Actual Mean Minimum Temperature ($^{\circ}\text{C}$) in India for the week ending 02.03.2016



Mean Minimum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 02.03.2016



- Mean minimum temperature was between 4 to 8 $^{\circ}\text{C}$ over isolated pockets of Jammu & Kashmir.
- Mean minimum temperature was between 8 to 12 $^{\circ}\text{C}$ over many parts of Jammu & Kashmir, Himachal Pradesh, some parts of Punjab and isolated pockets of Haryana, West Rajasthan.
- Mean minimum temperature was between 12 to 20 $^{\circ}\text{C}$ over rest of country except Telangana, Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands, many parts of Odisha, Chhattisgarh, Vidarbha,

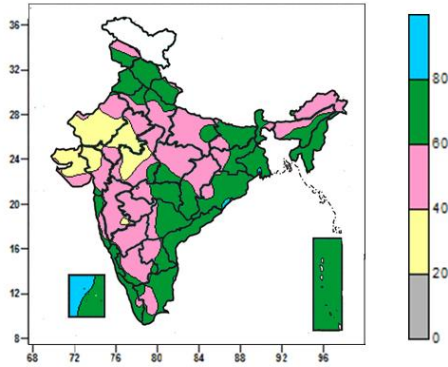
- Mean minimum temperature was above normal by 4 to 6 $^{\circ}\text{C}$ over many parts of Uttarakhand, Vidarbha, Andaman & Nicobar Islands, some parts of Himachal Pradesh, West Uttar Pradesh, Bihar, Gangetic West Bengal, Chhattisgarh and isolated pockets of Jammu & Kashmir, West Rajasthan, Kutch, Gujarat region, Madhya Maharashtra, Marathwada, Telangana, North Interior Karnataka.
- Mean minimum temperature was above normal by 2 to 4 $^{\circ}\text{C}$ over rest of country except Arunachal Pradesh, Nagaland, Lakshadweep, many parts of

Marathwada, Konkan & Goa, some parts of Gangetic West Bengal and isolated pockets of Saurashtra, Gujarat region, Madhya Maharashtra, where it was 20 to 28°C.

Punjab, Haryana, Assam & Meghalaya, South Interior Karnataka, some parts of Rajasthan, Central India, Gujarat region, Sub-Himalayan West Bengal, Telangana, Coastal & North Interior Karnataka, Kerala and isolated pockets of Jammu & Kashmir, Gangetic West Bengal, Coastal Andhra Pradesh, Tamil Nadu, where it was normal to near normal.

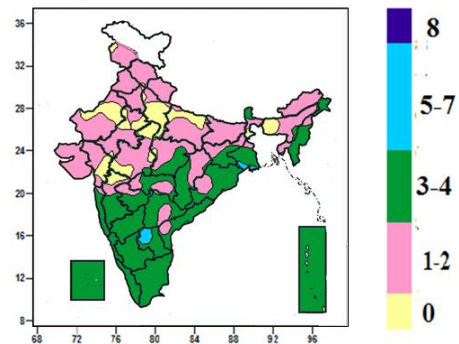
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 02.03.2016

Relative Humidity (%) over India for the week ending 02.03.2016



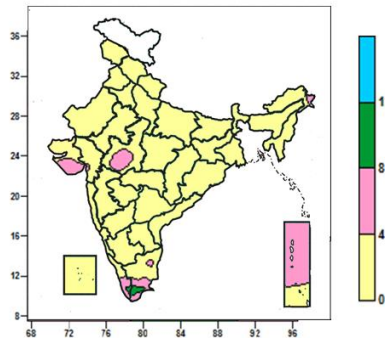
- Mean Relative humidity was above 80% over some parts of Lakshadweep.
- Mean Relative humidity was between 40 to 80% over rest of the country except many parts of Rajasthan, Saurashtra & Kutch, West Madhya Pradesh, some parts of Gujarat region and isolated pockets of Madhya Maharashtra where it was between 20 to 40%.

Cloud amount (okta) over India for the week ending 02.03.2016



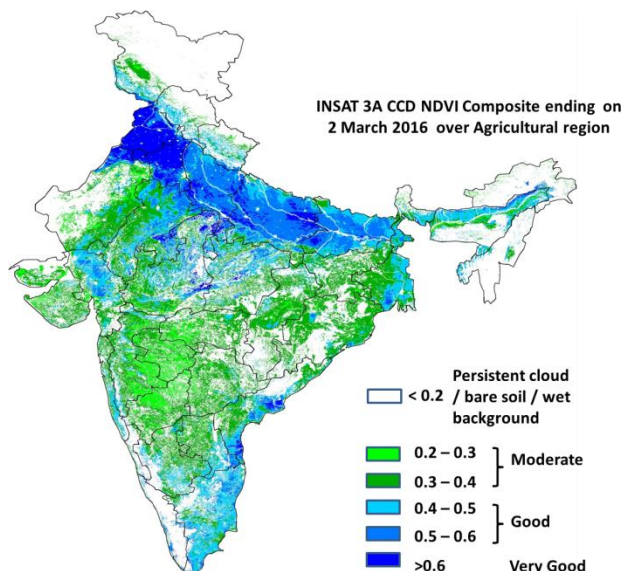
- Sky remained generally cloudy (5-7 okta) over some parts of Rayalaseema and isolated pockets of Gangetic West Bengal.
- Sky remained partly cloudy (3-4 okta) over Sikkim, Manipur, Mizoram, Tamil Nadu, Kerala, Karnataka, Lakshadweep, Andaman & Nicobar Islands, many parts of Gangetic West Bengal, Jharkhand, Odisha, Chhattisgarh, Andhra Pradesh, Telangana, Maharashtra, some parts of Arunachal Pradesh, Nagaland, East Madhya Pradesh and isolated pockets of Assam, Sub-Himalayan West Bengal, West Madhya Pradesh.
- Sky remained mainly clear/clear sky (1 to 2/0 okta) over rest of the country.

Wind speed (knots) over India for the week ending 02.03.2016



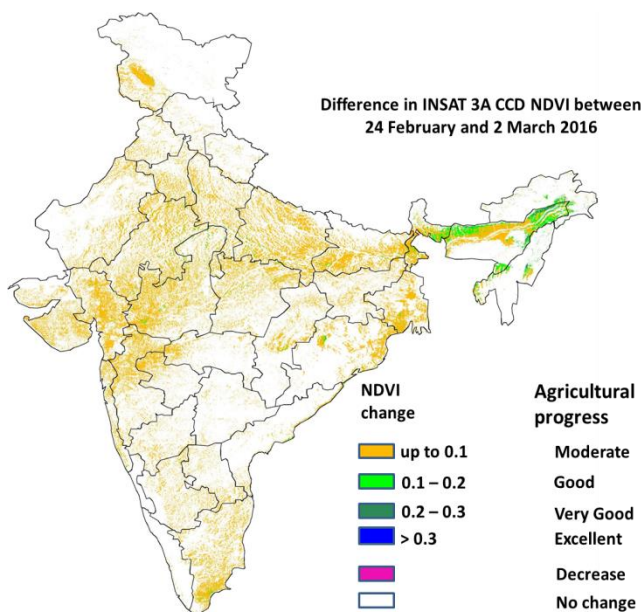
- Mean wind speed was 8 to 12 knots over isolated pockets of Kerala and Tamil Nadu.
- Mean wind speed was 4 to 8 knots over many parts of Andaman & Nicobar Islands, Saurashtra, some parts of West Madhya Pradesh, Tamil Nadu, Kerala and isolated pockets of Arunachal Pradesh, Gujarat region.
- It was less than 4 knots over rest of the country.

INSAT 3A CCD NDVI COMPOSITE ENDING ON 2nd March 2016 OVER AGRICULTURAL REGION OF INDIA



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

Difference in INSAT 3A CCD NDVI between 24th February and 2nd March 2016



- Good Progress in NDVI is observed in North-eastern States. Moderate progress in NDVI was observed in the States of Uttar Pradesh, Bihar, Punjab, Haryana, Rajasthan, Telangana, West Bengal, north coastal Odisha, South Interior Karnataka, Northern parts of Maharashtra and patches in Madhya Pradesh. No change in NDVI was observed in Kerala, Telangana, Andhra Pradesh, west Madhya Pradesh and eastern Maharashtra.

- INSAT 3A CCD NDVI composite maps for the week ending on 2nd March 2016 for different States are given below in Annexure II.

Weather Forecast for next 5 days valid upto 0830 hours of 9th March 2016

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- Fall in temperatures by 2-3°C over plains of northwest and adjoining central India from 6th March.

5 Day Rainfall Forecast (MID DAY) 4th March 2016

Met Sub-divisions	04 Mar	05 Mar	06 Mar	07 Mar	08 Mar
1. Andaman & Nicobar Islands	DRY	DRY	DRY	DRY	DRY
2. Arunachal Pradesh	SCT	SCT	FWS	FWS	SCT
3. Assam & Meghalaya	SCT	SCT	SCT	SCT	ISOL
4. N. M. M. & T.	SCT	ISOL	ISOL	ISOL	ISOL
5. S.H. West Bengal & Sikkim	SCT	ISOL	ISOL	ISOL	ISOL
6. Gangetic West Bengal	ISOL	DRY	ISOL	ISOL	DRY
7. Orissa	ISOL	ISOL	ISOL	ISOL	ISOL
8. Jharkhand	DRY	ISOL	ISOL	DRY	DRY
9. Bihar	DRY	ISOL	ISOL	ISOL	DRY
10. East Uttar Pradesh	ISOL	ISOL	ISOL	DRY	DRY
11. West Uttar Pradesh	ISOL	SCT	ISOL	ISOL	DRY
12. Uttarakhand	ISOL	FWS	FWS	ISOL	DRY
13. Haryana, Chd & Delhi	SCT	FWS	SCT	DRY	DRY
14. Punjab	SCT	FWS	SCT	DRY	DRY
15. Himachal Pradesh	SCT	WS	WS	ISOL	ISOL
16. Jammu & Kashmir	SCT	WS	FWS	ISOL	ISOL
17. West Rajasthan	ISOL	ISOL	ISOL	DRY	DRY
18. East Rajasthan	ISOL	ISOL	ISOL	DRY	DRY
19. West Madhya Pradesh	ISOL	ISOL	ISOL	ISOL	DRY
20. East Madhya Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
21. Gujrat Region	ISOL	ISOL	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	DRY	DRY	DRY	DRY
23. Konkan & Goa	ISOL	ISOL	DRY	DRY	DRY
24. Madhya Maharashtra	SCT	SCT	ISOL	ISOL	DRY
25. Marathawada	SCT	SCT	ISOL	ISOL	DRY
26. Vidharbha	ISOL	ISOL	ISOL	ISOL	DRY
27. Chhattisgarh	ISOL	ISOL	ISOL	ISOL	DRY
28. Coastal Andhra Pradesh	DRY	DRY	DRY	ISOL	ISOL
29. Telangana	ISOL	ISOL	ISOL	ISOL	ISOL
30. Rayalaseema	DRY	DRY	DRY	DRY	DRY
31. Tamilnadu & Puducherry	DRY	DRY	DRY	ISOL	ISOL
32. Coastal Karnataka	DRY	DRY	DRY	ISOL	ISOL
33. North Interior Karnataka	DRY	DRY	DRY	DRY	DRY
34. South Interior Karnataka	DRY	DRY	DRY	DRY	DRY
35. Kerala	DRY	DRY	DRY	ISOL	ISOL
36. Lakshadweep	DRY	DRY	DRY	DRY	ISOL

% Station Reporting Rainfall

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

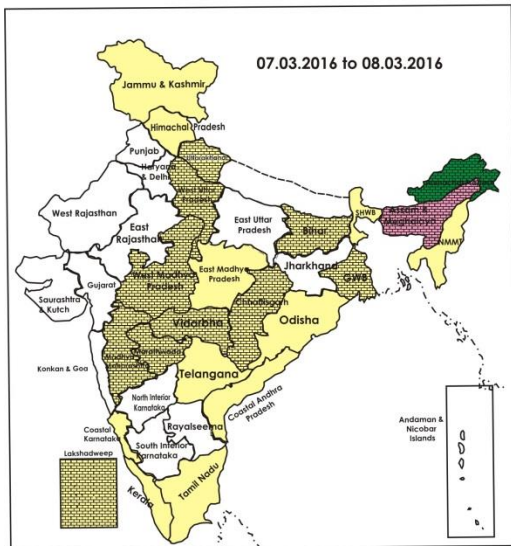
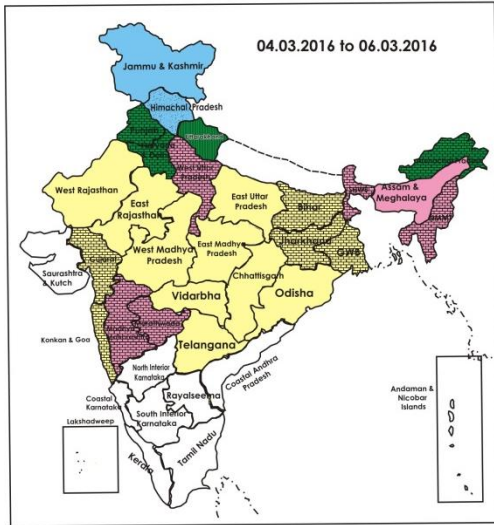
Weather Warning during next 5 days

- **04 March (Day 1):** Thundersquall accompanied with hail very likely at isolated places over Jammu & Kashmir; likely at isolated places over Punjab, Haryana, Chandigarh & Delhi, north Rajasthan, Madhya Pradesh, Vidarbhha, Madhya Maharashtra and Marathawada. Thundersquall likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.
- **05 March (Day 2):** Thundersquall accompanied with hail very likely at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, north Rajasthan. Thundersquall likely at isolated places over Madhya Pradesh, Vidarbhha, Madhya Maharashtra and Marathawada.
- **06 March (Day 3):** Thundersquall accompanied with hail likely at isolated places over Himachal Pradesh, Uttarakhand and West Uttar Pradesh.
- **07 March (Day 4):** Heavy Rain likely at isolated places over Arunachal Pradesh.
- **08 March (Day 5):** No weather warning.

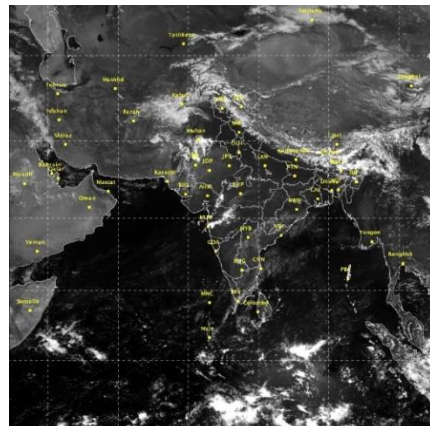
Weather Outlook for subsequent 2 days from 9th to 11th March 2016

- A fresh western disturbance likely to affect Western Himalayan Region and plains of northwest India from 9th (night) onwards.
- Rain/thundershowers likely at isolated places over northeastern states and extreme south peninsular India.

Weather Forecast Map (Valid upto 0830 hours of 9th March, 2016)



Satellite image dated 04.03.2016 0600 UTC



Salient Advisories

- As thundersquall accompanied with hail very likely to occur at isolated places over **Jammu & Kashmir** and **Madhya Pradesh** on 4th, over **Himachal Pradesh, Uttarakhand** and **West Uttar Pradesh** on 5th & 6th, over **Punjab, Haryana, Chandigarh & Delhi** and **North Rajasthan** on 4th & 5th March, farmers are advised to use hail nets/hail caps for orchard crops to protect from mechanical damage. Provide mechanical support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Undertake propping in sugarcane.
- As thundersquall accompanied with hail very likely to occur at isolated places over **Madhya Maharashtra, Marathwada** and **Vidarbha** on 4th and 5th March; grape growers in Madhya Maharashtra and Marathwada are advised to use hail nets/hail caps to protect vineyards from mechanical damage. Also it is advised to cover banana bunch with skirting bags. Provide mechanical support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Undertake propping in sugarcane. Keep harvested produce at safer places. In Vidarbha, farmers are advised to use hail nets/hail caps to protect orange and sweet lime orchards from mechanical damage. Also provide mechanical support to banana, papaya plants, young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep already harvested jowar and gram at safer place. Harvest the matured fruits and vegetables at the earliest and keep at safer place.
- As thundersquall is likely at isolated places over **Sub-Himalayan West Bengal & Sikkim, Assam, Meghalaya, Nagaland, Manipur, Mizoram and Tripura** on 4th and over **Madhya Maharashtra, Marathwada** and **Vidarbha** on 5th March, provide mechanical support to banana, young fruit plants and vegetables to prevent lodging due to strong winds.
- In **Maharashtra**, due to rain/hail storms during last 3-4 days, crop damage is reported at Hirapur (Beed district), Nandura (Buldhana district), Bhatkuli Tehsil, Saur, Mozri and Tivsa (Amravati district). In addition to this Neri, Peth villages (Hingna Tehsil, Nagpur District) received big sized hails which damaged wheat and channa crop. Also hailstorm occurred in Saswad near Pune, some parts of Nashik district, Sangmner, Ahmednagar, Pathardi region damaging grapes, onion and mango crops. Cracking in grapes and vineyard damage is reported. Also due to hail & squally wind, fruit dropping in oranges, sweet lime, pomegranate, papaya may occur in Marathwada & Madhya Maharashtra. Farmers are advised to collect & destroy the dropped & infested fruits and clean the orchards to prevent spread of pest and diseases.
- As rain/snow would occur at most/many places over **Jammu & Kashmir** on 5th and 6th and over **Himachal Pradesh** and **Uttarakhand** on 5th & 6th March, rain/thundershower would occur at many places over **Punjab** and **Haryana** on 5th March, to postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately and keep the harvested produces at safe places.
- As rain/thundershower would occur at many places over **Arunachal Pradesh** from 5th to 8th March alongwith heavy rain likely at isolated places on 7th March, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured maize, toria and mustard immediately and store the harvested produces at safe places. In view of likely occurrence of heavy rainfall, avoid sowing of cucumber, sponge gourd, bottle gourd, ladies finger, maize and cowpea on 6th and 7th March.
- Undertake land preparation/sowing of the following summer crops:
 - In **Assam**, continue land preparation for sowing of *capsularis* jute and sowing of summer green gram & black gram.
 - In **West Bengal**, in Hill Zone, continue field preparation for sowing of maize, planting of ginger and turmeric and in New Alluvial Zone, undertake sowing of sesame utilizing the realized rainfall.
 - In **Odisha**, in North Eastern Ghat Zone, continue sowing summer sunflower and groundnut. In North Eastern Plateau Zone, continue sowing of green gram & black gram.
 - In **Uttar Pradesh**, continue planting of autumn sugarcane, land preparation and sowing of cowpea, maize, urad, mung.
 - In South Saurashtra Zone of **Gujarat**, continue sowing of green gram, black gram, groundnut and sesame.
 - In **Bihar**, continue sowing of summer maize and in **Jharkhand**, continue sowing of green gram/black gram, maize and vegetables.
 - In Southern Zone of **Kerala**, continue direct sowing/transplanting of *Puncha* rice and sowing of cucurbits.
 - Continue cultivation of sesame in Nagapattinam, Thanjavur, Thiruvarur and Thiruchirapalli districts of **Tamil Nadu**.
- As mainly dry weather would prevail, continue harvesting of gram and mustard in **Madhya Pradesh** and

Chhattisgarh, mustard in **Odisha**, mustard, cotton and castor in **North Gujarat**, *Thaladi* rice in Cauvery Delta Zone of **Tamil Nadu** and *Mundakan* rice in Northern Zone of **Kerala**. In North East Transition Zone of **Karnataka**, continue harvesting of sorghum, wheat, safflower.

- In Sub Tropical Zone of **Jammu & Kashmir**, present weather is congenial for attack of alternaria blight and white rust in mustard crops, to control alternaria blight, spray Mancozeb @ 2.5 gm/litre of water. If attack of white rust is observed, apply Ridomil-MZ @ 2.0 gm/litre of water. Undertake plant protection measures after current spells of rain.

Detailed Zonewise Agromet Advisories

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



Banana



Groundnut



Sugarcane



Cotton

- **Realised Rainfall:** Rainfall occurred in Ernakulum district of Kerala; Karimnagar district of Telangana. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Tamil Nadu:**
 - In the Cauvery Delta Zone, continue harvesting of matured *thaladi* rice and harvesting of late *samba* rice in Ariyalur, Karur and Perambalur districts utilizing the expected mainly dry weather. Continue cultivation of sesame in Nagapattinam, Thanjavur, Thiruvarur and Thiruchirapalli districts. Apply Gypsum @ 160 kg per acre to encourage pod formation and better pod filling 40 to 60 days after sowing depending on soil moisture on rainfed groundnut. In rice fallow pulses, give one irrigation using mobile sprinkler wherever water sources are available (farm pond) during flowering stage.
 - In the Western Zone, prevailing wind speed, maximum and minimum temperatures and cloud cover are not favourable for soil application of N and K top dressing on transplanted Navarai rice (panicle initiation stage). Hence foliar application of Urea @ 1% + DAP @ 2% + KCL @ 1% may be done immediately followed by another spray @ 10 days interval. Irrigated germinated sesame is showing MnSO₄ deficiency. Hence apply 5kg of MnSO₄ mixed with 45kg of sand per hectare during evening with irrigation. Considering the wind speed of 12 kmph and saturated soil moisture due to irrigation, support may be given banana crops of five months old to prevent lodging.
 - In the South Zone, as dry weather is expected in the coming days, undertake harvesting of cotton(rainfed) and chillies(irrigated) and dryland cultivation to improve the quality of the soil.
 - In the High Rainfall Zone, discontinue tapping in rubber plants, as the trees started leaf shedding. Continue staking of banana plants with bamboo poles to protect from strong wind.
 - In the North Western Zone, prevailing dry weather conditions are congenial for incidences of woolly aphid and scales insects in sugarcane. To control the above insects, undertake foliar spray of Acephate or Triazophos or Profenophos @ 2 ml/litre of water at twice in 10 days interval.
 - In the Cauvery Delta Zone, powdery mildew disease would be more pronounced due to dew in the morning time in rice fallow blackgram. For the management of powdery mildew, spray Carbendazim @ 200g/acre or Wettable Sulphur @ 600g/acre.
 - In the South Zone, incidence of dieback and fruit rot is observed in chilli due to prevailing weather having moderate cloud cover and humidity. Collect and destroy the infected fruits. and spray Zineb @ 0.2% or Copper Oxy Chloride @ 0.25% solution.
 - In the High Altitude Hilly Zone, spray Neem oil (1% Azadirachtin) or Propargite @ 57% EC or Profenofos @ 50% EC or Dicofol @ 18.5% EC @ 2 ml/litre of water to control mites in tea crop which may occur due to prevailing conditions(low temperature).
 - In the High Rainfall Zone, prevailing increase in temperature and humidity is congenial for incidence of mite in coconut. Undertake root feeding with Azadiractin 50% formulation @ 7.5 ml in 7.5 ml water, if attack of mite is noticed.
 - Suitable varieties for sowing are given in Annexure III.
 - **Andhra Pradesh:**
 - In the Krishna Godavari Zone, continue harvesting of red gram and black gram. Prevailing dry/hot weather condition coupled with lack of moisture during flowering to grain formation may cause grain hardening in rice

fallow jowar. Give light irrigation immediately to prevent hardening. Continue providing light irrigation to *rabi* black gram and green gram at flowering or pod formation stage.

- In the North Coastal Zone, undertake harvesting of matured rice fallow green gram and black gram.
- In the Southern Zone, due to prevailing dry weather conditions, continue giving light and frequent irrigations to get synchronized flowering in mango crop. The present weather conditions are also favourable for early fruit drop in mango. If fruit drop is severe, spray Planofix @ 1 ml/litre of water.
- In the Krishna Godavari Zone, prevailing weather condition is congenial for attack of *turcicum* blight or rust on *rabi* maize. If intensity is more, spray Mencozeb @ 500 g per 200 litres of water two or three times in the evening time.
- In the North Coastal Zone, prevailing dry weather conditions are congenial for incidence of stem borer and leaf blight in maize. Spray Chlorantiniliprole @ 0.4 ml/litre of water to control stem borer and Propiconazole @ 1.0 ml/ litre of water to control leaf blight.
- In the Scarce Rainfall Zone, leaf folder incidence was noticed in rice (tillering stage). In the initial stages move the rope across the field 2-3 times so that the insects may fall off on the ground. To control, spray Chloropyriphos @ 2.5ml/Acphate or Plubendiamide 20wg @ 0.25g/litre of water or apply Kkartophydro chloride granules 4G @ 8kg/acre.
- In the Southern Zone, prevailing dry weather and rise in temperature is congenial for incidence of early shoot borer in 40-45 days sugarcane crop. To control, apply irrigation at regular intervals and spray Chloripyriphos @ 2.5 ml./litre of water

▪ **Telangana:**

- In the Southern Telangana Zone, continue sowing of fodder crops like sorghum, bajra and maize where irrigation facilities are available and fodder sorghum, bajra, maize, pillipesara, sunhemp and horsegram in rice fallows.
- In the Northern Telangana Zone, continue harvesting of tomato. Due to the present dry weather conditions, give frequent irrigations in mango orchards to get synchronized flowering.
- In the Northern Telangana Zone, late wilt incidence is noticed in rice-fallow maize under zero tillage and maize (Flag leaf emergence stage). To control late wilt, spray COC @ 3 g/litre of water. Sucking pests incidence is noticed in groundnut. To control, spray Monocrotophos @ 1.6 ml/litre of water or Dimethoate @ 2.0 ml/litre of water
- In the Southern Telangana Zone, prevailing high temperatures are congenial for incidences sucking pests in brinjal. To control, spray Diamethoate @ 2 ml or Methyl Demeton @ 2 ml or Fipronil @ 2 ml/ litre of water.

▪ **Karnataka:**

- In North East Transition Zone, continue harvesting of sorghum, wheat, safflower in clear weather.
- In Southern Dry Zone, due to increase in day temperature dropping of fruits in mango trees was noticed; to manage this provide adequate quantity of irrigation water (go for drip irrigation wherever possible). Clear the weeds in Mango orchard, put it under the basin as mulch. After harvesting of *rabi* crops, continue ploughing in the fields which will facilitate conservation of rainwater due to premonsoon showers.
- In North Transition Zone, complete harvesting of sorghum, chickpea, wheat, chilli, brinjal, tomato and matured fruits of sapota.
- In Southern Transition Zone, continue land preparation for planting of ginger/turmeric; raised beds with adequate drainage facility and repeated ploughing of land is advised.
- In Hill Zone, apply irrigation to coconut gardens either in furrows or by drip irrigation. Continue deep ploughing in rice fields. Continue harvesting of completely ripened bunches of black pepper and arecanut.
- In North East Dry Zone, as there is increase in temperatures, apply irrigation in watermelon. Complete sowing of Bt. cotton under irrigation facility. As mainly dry weather is prevailing, complete harvesting of wheat, Bengal gram sorghum and safflower as early as possible.
- The incidence of button dropping, inflorescence dieback is likely to occur in arecanut in Hill Zone; for control spray Carbendezim @ 1 g/litre or Mancozeb @ 2 g/litre of water.
- Due to cloudy weather followed by rising temperature attack of tea mosquito bug is noticed in cashew in Coastal Zone; spray the affected cashew plants with Rogar / Chloropyriphos / Quinolphos @ 2 ml/litre solution.
- In present weather condition there is chance of infestation of leaf spot in banana in Central Dry Zone; spray the crop with Hexaconazole @ 1 ml dissolved in one litre of water.
- Attack of hoppers was noticed in mango crop in North East Dry Zone; for effective control take up spraying of Carbaryl 50WP @ 4 g or Malathion 50EC @ 2 ml or Monocrotophos 36SL @ 1.5 ml in one litre of water.

▪ **Kerala:**

- In the Northern Zone, undertake harvesting of black pepper, arecanut and early fruit setting varieties of cashew. Protection should be given to the crops at their southern side to prevent sun scorching. Mulch the soil to prevent evaporation loss of water.
- In the Problem Area Zone, undertake harvesting of rice and continue providing irrigation to nutmeg, pepper and banana crops.
- In the Central Zone, banana plants may be given support so that the plantations can withstand high wind speed. Mulch the coconut basins with green/dry leaves to add organic matter to the soil and reduce the soil temperature and undertake drip irrigation.
- In the Southern Zone, since dry weather prevails, provide irrigation in coconut fields @ 400- 700 litres/palm to

double the yield and protect young seedlings from direct sun's rays by giving shade on the southwestern side. Irrigate Nendran banana plants to prevent formation of weak bunches.

- In the High Altitude Zone, continue cultivation of crops like ginger and turmeric etc as an intercrop in irrigated coconut gardens. Give heavy irrigation to cardamom once in a fortnight.
- In the Southern Zone, prevailing increase in temperature is congenial for blast disease in rice. To control, spray *Pseudomonas* culture 10- 15 g/litre of water 35 days after sowing.
- In the Problem Area Zone, prevailing weather condition (dry, warm with low wind speed) is congenial for incidence of bacterial leaf blight in rice. To control, spray fresh Cowdung extract (Dissolve 20g cowdung in 1litre water; allow to settle and sieve) by observing the bacterial ooze.
- In the Central Zone, due to high temperature and low humidity, there is a chance of Cigar end disease in banana bunches. Spray 3 g of Dithane M-45 @ 1 litre of water.
- In the Northern Zone, prevailing dry and humid weather condition is congenial for spread of cercospora leaf spot and fusarium wilt in cowpea. To control leaf spot spray Contaf @ 1 ml/litre of water and to control fusarium wilt, drench with Copper Oxyclozide @ 3g/litre of water as a prophylactic measure. If disease reappears, drench with Bavistin @ 2g/litre of water.
- **Animal Husbandry**
 - In the Northern Telangana Zone, vaccinate animals to prevent pneumonia, blue tongue disease in sheep and goats, birds to prevent kokkera disease, provide clean and fresh water daily & undertake deworming at regular intervals.
 - In the Western Zone of Tamil Nadu, considering the increase in temperature, artificial insemination to animals may be done in morning before 11 am after cooling the animals by bathing.
 - In the North Eastern Zone of Tamil Nadu, vaccinate livestock to protect them from foot and mouth disease.
 - In the North Western Zone of Tamil Nadu, due to rise in temperature, poultry, particularly heavy broiler and layer birds are likely to experience heat stroke and mortality. Supplement stress alleviating medicines such as electrolytes through feed and add vitamin-C in drinking water to reduce heat stress and death. Ensure cool drinking water available throughout the day to avoid low intake of water and associated loss in body weight and egg production.
 - In Southern Dry Zone of Karnataka, due to high day temperature there is a probability of drop in feed intake, drop in egg weight in poultry and deterioration in shell quality; maintain optimum temperature between 18°C to 29°C in poultry shed for better production.

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



Mustard



Rice



Okra



Cabbage

- **Realised Rainfall:** Rainfall occurred in Dhalai and North Tripura districts of Tripura. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As thundersquall is likely at isolated places over **Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura** on 4th, provide mechanical support to young banana, fruit plants and vegetables to prevent lodging.
 - As rain/thundershower would occur at many places over Arunachal Pradesh on 6th & 7th March alongwith heavy rain likely at isolated places on 7th March, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured maize, toria and mustard immediately and store the harvested produces at safe places.
 - **Assam, Meghalaya & Arunachal Pradesh:**
 - In Arunachal Pradesh, in view of likely occurrence of heavy rainfall, avoid sowing of summer vegetables like cucumber, sponge gourd, bottle gourd, ladies finger, maize and cowpea on 6th and 7th March.
 - In Hill Zone of Assam, continue sowing of recommended high yielding varieties of bhindi and ridge gourd, nursery sowing of early *ahu* rice and land preparation for sowing of summer black gram/green gram and jute. Maintain 5 cm standing water level around the boro rice field up to 7-10 days before harvest.
 - In Lower Bramhapurtra Valley Zone of Assam, continue sowing of early *ahu* rice (direct seeded), land preparation and sowing of *Capsularis* jute.
 - In Barak Valley Zone of Assam, maintain 6 cm standing water in the *boro* rice fields at tillering stage. Undertake transplanting of summer vegetables, tomato and brinjal.
 - In Upper Bramhaputra Valley Zone of Assam, continue land preparation for sowing of cucurbits and okra. Continue direct sowing of early *ahu* rice.

- In Central Bramhapurtra Valley Zone of Assam, continue land preparation and sowing of green gram/black gram, summer vegetables and *Capsularis* jute. Undertake nursery bed preparation for transplanted early *ahu*.
- In North Bank Plain Zone of Assam, continue land preparation and sowing of direct seeded *ahu* rice, green gram/black gram and bhindi.
- In Meghalaya, undertake harvesting of cabbage, cauliflower, broccoli, mustard and rapeseed. Undertake land preparation for sowing of maize.
- In Arunachal Pradesh, in prevailing weather condition, there is chance of incidence of powdery mildew in pea, spray Carbendazim 50WP @ 1g/litre of water or Difenconazole 5EC @ 0.5 ml/litre of water after current spells of rain.
- In North Bank Plain Zone of Assam, spray of Chloropyriphos 20EC @ 1ml/litre against potato tuber moth in standing potato crop. Spraying of Mancozeb @ 2.5g/litre of water a non rainy day should be continued against late blight management in late potato crop (maghi alu) as the minimum temperature favours occurrence of the disease.
- In Lower Bramhapurtra Valley Zone of Assam, there is chance of attack of blast and sheath blight in boro rice at tillering/vegetative stage. Spray Ediphenophos(0.1%)/Mancozeb(0.2%)/Cu-oxychloride(0.4%) against blast and Carbendazim(0.05%)/Hexaconazole(0.2%) against sheath blight. To control wilt disease and aphids in lentil and khesari fields at vegetative stage, farmers are advised to drench the soil with Bavistin @ 1mg/litre of water. They are also advised to apply Malathion 50EC @ 2 ml/litre of water a non rainy day.
- In Meghalaya, in the prevailing weather, there is chance of attack of powdery mildew in pea at flowering /pod formation stage. Spray wettable Sulphur @ 3 g/litre of water or Dinocap @ 1 ml/litre of water or dust Sulphur @ 25 kg/ha three rounds at 15 days interval for control powdery mildew. Undertake plant protection measures on a non rainy day.
- **Nagaland, Manipur, Mizoram and Tripura:**
 - In Manipur, undertake transplanting of tomato at 4 leaf stage.
 - In Nagaland, continue harvesting of chickpea, lentil, linseed, pea, tomato, mustard, maize and ginger.
 - In Manipur, due to humid weather condition there is chance of attack of aphids and powdery mildew in lentil/pea. Spray Cypermethrin @ 2ml/litre of water or Nuvan @ 0.5ml/litre of water against aphids. Spray Bayleton (Triademofon 25% WP) @ 7.5 g/pump (15litre capacity) or Dinocap (Karathane 46% EC) @ 7.5ml/ pump against powdery mildew.
 - In Tripura, undertake sowing of cowpea, green gram, urad and transplanting the seedling of brinjal and tomato in the main field. Maintain 4 to 5cm standing water in the *boro* rice fields.
 - In Tripura, there is chance of attack of stock rot in maize, to manage the attack, spray Mancozeb @ 2ml per liter of water. In case of attack of Yellow Stem Borer in rice, apply Fipronil @ 2g per litre of water to manage the attack.
 - Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
 - In Upper Bramhapurtra Valley Zone and North Bank Plain Zone, vaccination to control the Ranikhet disease in poultry should be done during this period.
 - In Lower Bramhapurtra Valley Zone of Assam; it is time to make ready the pond for new batch of fishes. Collect all the fishes. Dry up the bottom of the pond for 15-20 days and remove the upper layer of the bottom soil, then plough it and add lime. After 7 -15days of application of lime, add cow-dung and mix it properly.
 - In Manipur, vaccination against swine fever and must be carried out. -If the animals have not yet been vaccinated, give vaccine, now for Black Quarter, Haemorrhagic septicaemia, Foot & mouth Disease.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Gram



Sugarcane



Groundnut



Wheat

- **Realised Rainfall:** Rainfall occurred in Chandrapur, Gadchiroli and Washim districts of Vidarbha. Weather remained mainly dr/dry over rest of the region.
- **Advisories:**
 - **Maharashtra:**
 - As thundersquall accompanied with hail very likely to occur at isolated places over Madhya Maharashtra Marathwada and Vidarbha on 4th March and thundersquall likely at isolated places on 5th March;
 - In Madhya Maharashtra, grape growers are advised to use hail nets/hail caps to protect vineyards from mechanical damage. Farmers are advised to cover banana bunch with skirting bags. Farmers are advised

to provide mechanical support to banana, papaya plants, young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Undertake propping up in sugarcane crop. Keep already harvested jowar, gram and safflower at safer place. Undertake plucking of matured grapes, orange, sweet lime, banana, pomegranate, papaya and vegetables as early as possible during morning hours and keep the produce in safer place. Due to hail & squally wind, there may be dropping of fruits like oranges, sweet lime, pomegranate, papaya. Dropped & infested fruits may be collected & destroyed. Clean the orchards. Continue cultivation of summer vegetable crops like bitter gourd, cucumber, ridge gourd, bottle gourd, water melon, musk melon.

- In Marathwada, farmers are advised to use hail nets/hail caps to protect vineyards from mechanical damage. Farmers are advised to cover banana bunch with skirting bags. Farmers are advised to provide mechanical support to banana, papaya plants, young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Undertake propping up in sugarcane crop. Keep already harvested jowar, gram and safflower at safer place. Harvest the matured fruits and vegetables at the earliest and keep at safer place. Due to hail & squally wind, there may be dropping of fruits like oranges, sweet lime, pomegranate, papaya. Dropped & infested fruits may be collected & destroyed. Clean the orchards. Continue sowing of fodder crops like maize, jowar and bajra.
- In Vidarbha, farmers are advised to use hail nets/hail caps to protect orange and sweet lime orchards from mechanical damage. Farmers are advised to cover banana bunch with skirting bags. Farmers are advised to provide mechanical support to banana, papaya plants, young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep already harvested jowar and gram at safer place. Harvest the matured fruits and vegetables at the earliest and keep at safer place. Maintain water level of 5 cm in summer rice field in East Vidarbha.

➤ Due to rain/hail storms during last 3-4 days crop damage is reported at Hirapur (Beed district), Nandura (Buldhana district), Bhatkuli Tehsil, Saur, Mozri, Tivsa (Amravati district). In addition to this Neri, Peth villages (Hingna Tehsil, Nagpur District) received big sized hails which damaged wheat and Channa crop. Also hailstorm occurred in Saswad near Pune, some parts of Nashik district, Sangmer, Ahmednagar, Pathardi region damaged grapes, onion and mango crops. Cracking in grapes and vineyard damage is reported. Also due to hail & squally wind, fruit dropping in oranges, sweet lime, pomegranate, papaya may occur in Marathwada & Madhya Maharashtra. Farmers are advised to collect & destroy the dropped & infested fruits and clean the orchards to prevent spread of pest and diseases.

➤ In Konkan, maintain water level of 5 cm at tillering stage in *rabi* rice in Sindhudurg. Continue planting of seasonal fodder crops like cowpea, maize (African Tall), multicut sorghum, rice bean. Harvest matured summer okra and watermelon fruits. As mango is at fruit formation stage (pea/marble size) and considering the crop canopy, apply 150-200 litres of water per tree at 15 days interval to avoid fruit dropping.

➤ Due to humid weather conditions in Madhya Maharashtra region, there may be incidence of downy mildew in cucumber, ridge gourd, bottle gourd, pumpkin; spray Mencozeb @ 25 g per 10 litres of water on a non rainy day.

▪ Gujarat:

➤ In Middle Gujarat Zone, carry out sowing of bitter gourd, bottle gourd and pumpkin and transplanting of brinjal seedling during evening hours, complete sowing of green gram, continue land preparation for sowing of sesame.

➤ In South Saurashtra Zone, continue sowing of green gram, black gram, groundnut and sesame. Apply irrigation to standing crops as per requirement.

➤ In North Gujarat Zone and Northwest Zone, complete sowing of summer vegetable crops (ladies finger, cluster bean, cow pea, bitter gourd, bottle gourd, small gourd etc.), continue land preparation for sowing of pearl millet, pulses, sowing of groundnut and transplanting of brinjal seedling, sowing of okra. Continue harvesting of mustard, matured spikelet of castor, potato and picking of cotton and papaya in North Gujarat Zone.

➤ In South Gujarat Zone, undertake mulching in mango orchards to maintain the moisture and protect fruits from spongy tissue.

➤ In view of mainly dry weather, apply irrigation to vegetable crops at an interval of 3 to 4 days in South Gujarat Zone, to wheat (milking stage), isabgol, cumin, amaranth in North Gujarat Zone.

➤ In North Saurashtra Zone, continue land preparation for sowing of summer green gram and black gram, apply irrigation in already sown crops and vegetables.

➤ In South Gujarat Heavy Rainfall Zone, complete sowing of groundnut and green gram, vegetable cowpea, cluster bean, summer pigeon pea, okra, cucurbits and amaranth.

➤ In North Saurashtra Zone, thrips infestation is observed above ETL in summer groundnut; spray 500 ml of 5 % neem seed extract or neem seed oil @ 50 ml with Profenofos @ 20 ml or Imidacloprid 30.5 SC @ 3 ml or Lemda Cyhelothrin @ 10 ml/10 litres of water.

➤ In present weather condition constant monitoring of the wheat crop against brown and black rust is advised in South Gujarat Zone. If symptoms of brown or black rust appear, spray Dithane M- 45 @ 2.5 g or Carbendazim 1 g or Tilt 1 g per litre of water.

➤ Due to present weather condition there is chance of attack of thrips in garlic in South Saurashtra Zone; spray

Phosphamidon @ 3.0 ml or Dimethoate @10 ml or Methay-O-Demeton @10 ml in 10 litres of water at 10-12 days interval.

➤ Suitable varieties for sowing are given in Annexure III.

• **Animal Husbandry**

➤ Keep animals indoor during thundersquall/hail storm periods in Madhya Maharashtra, Vidarbha and Marathwada.

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



Rice



Wheat



Maize



Mustard

- **Realised Rainfall:** Rainfall occurred in Gumla and Simdega districts of Jharkhand; Angul, Balasore, Bhadrak, Dhenkanal, Jajpur, Keonjhar, Mayurbhanj districts of Odisha; Burdwan, East Midnapore, Hooghly, Howrah, Kolkata, Nadia, 24 Pargana North, 24 Pargana South, West Midnapore districts of Gangetic West Bengal. Weather remained mainly dry over rest of the region.

• **Advisories:**

▪ **West Bengal:**

- As thundersquall is likely at isolated places over Sub-Himalayan West Bengal & Sikkim on 4th March, provide mechanical support to young banana, fruit plants and vegetables to prevent lodging.
- In Old Alluvial Zone and Terai Zone, keep 5 cm water in the transplanted rice fields. Continue sowing of bitter gourd.
- In Hill Zone, continue land preparation for sowing of maize, bhindi and planting of ginger and turmeric. Undertake harvesting of cole crops in clear weather conditions.
- In Coastal Saline Zone, undertake harvesting of okra.
- In New Alluvial Zone, undertake sowing of improve variety sesame.
- In Hill Zone, due to hot and dry weather condition, fruit borer may attack in tomato. Spraying of Flubendiamide 20% WDG @ 0.3g/litre of water to control tomato fruit borer.
- In Laterite and Red soil Zone, in the prevailing weather condition, stem borer may damage *boro* rice at active tillering stage. Spray Methyl Parathion @1ml/litre of water on a non rainy day.
- In New Alluvial Zone, prevailing weather condition may cause late blight in potato and root-rot disease may be prevalent in sunflower. Spray Blitox or Mancozeb @ 2.5g/litre of water to control late blight and spray Brassicol @ 1gm per litre of water on a non rainy day to control root-rot.
- In Terai and Old Alluvial Zone, weather is congenial for attack of fruit and shoot borer in brinjal. Use 6-8 pheromone traps/bigha or apply Acephate + Fenvelarate mixture @ 1ml/litre water with 2g of detergent powder as sticker on a non rainy day.
- In Terai Zone, there may be attack of aphids and leaf blight in mustard, spray Thiamethoxam @1 g/3 litre of water. In case of Leaf blight, apply Mancozeb@2.5g/lt of water on a non rainy day.

▪ **Andaman and Nicobar Islands:**

- In South, North and Middle Andaman, apply mulching in vegetables to conserve moisture.
- In South, North and middle Andaman and Nicobar, make basin around the arecanut and coconut plantations and provide drip irrigation at evening hours.
- In South, North and Middle Andaman, leaf hopper and other sucking pests may attack in vegetables like brinjal and chilli during fruiting stage. Spray Imidacloprid @ 2 ml /litre of water to control leaf hopper and Acephate @ 2g/litre of water.

▪ **Odisha:**

- In East and South Eastern Coastal Plain Zone, as temperature conditions are favourable, continue sowing of sunflower, groundnut and summer maize. Continue harvesting of matured early sown mustard. As wheat crop is at flowering to milking stage, which are critical stages, apply irrigation depending upon the soil moisture status.
- In Western Undulating Zone, complete transplanting of summer rice. Provide irrigation at tillering stage. Alternate wetting and drying is advisable until hair line crack is seen in fields. Undertake planting of sugarcane.
- In North Eastern Coastal Plain Zone, in view of the prevailing dry weather, apply irrigation in rapeseed and mustard flowering to pod formation stage.
- In North Central Plateau Zone, complete sowing of summer pulses, continue sowing of summer sunflower and sesame.
- In East and South Eastern Coastal Plain Zone, increased temperature may favour the egg laying of stemborer in

rice in the main field. To attract the butterflies, place 4 Pheromon Traps/acre, collect the adults and destroy them by burning them under soil or by burying. Increased difference between daily maximum and minimum temperature favours the infestation of blast in main fields. Spray Beam @ 1 g in one litre of water.

- In East and South Eastern Coastal Plain Zone, the prevailing cloudy weather may aggravate the infestation of aphids in pulses and powdery mildew in pulses and cole crops. Spray Imidachloprid @ 5 ml or Metacystox @ 20 ml per 10 litres of water to control aphids and spray Sulfex @ 50 g per 10 litre of water to control powdery mildew.
- In East and South Eastern Coastal Plain Zone, stem borer infestation has been found on maize crop. Release 20,000 eggs of *Trycograma chilonies* twice at 10 days interval. If not controlled by the above method, undertake spraying of Chloropyriphos @ 2 ml or Monocrotophos @ 2 ml in 1 litre of water or go for whorl application of granular Carbofuran in the leaf whorls.
- In East and South Eastern Coastal Plain Zone, there is chance of mite attack in coconut resulting early fruit drop, small and unusual shape of coconut. Clean the coconut plants by cutting the dried leaves. Spray Neemajal @ 2 litre solution per plant @ 4 ml in 1 litre water.
- In Mid Central Table Land Zone, present temperature is favourable for attack of stem borer on summer rice crop. Apply granular insecticide like Carbofuran @ 33kg/ha or Kartap @ 20kg/ha to control stem borer. While applying granular insecticide maintain 1.5 to 2 inches water level in the field at least for 3 days.
- In Mid Central Table Land Zone, at present mango crop is at flowering/ fruit setting stage, at this stage infestation of mango hopper are commonly observed. Therefore farmers are advised to keep the mango orchards clean and if necessary spray recommended insecticides like Methyl Dematon @ 2 ml/litre water.

▪ **Bihar:**

- In South Bihar Alluvial zone, continue harvesting of matured potato and transplanting of sweet potato. Prepare the field for sowing of spring season maize and complete the planting of sugarcane.
- In North West Alluvial Plain Zone, continue harvesting of matured mustard and potato and sowing of summer maize, summer vegetables fodder crop and sunflower. Apply light irrigation in standing vegetable crops such as pea, tomato, brinjal, chilli, cabbage and onion. Undertake land preparation for sowing of green gram and black gram.
- In North East Alluvial Zone, continue sowing of cucumber, bottle gourd, musk melon, water melon, bitter gourd, ridge gourd and ladies finger and apply light irrigation to already sown onion crop. Continue transplanting of *boro* rice.
- In North West Alluvial Plain Zone, in the present weather condition, to protect onion from thrips, spray Emidacloprid @ 1 ml/litre of water.
- In South Bihar Alluvial Zone, there is chance of attack of pod borer in chickpea, apply Cypermethrin 400 ml and Chlorpyriphos 1.25 litre in 600 litre water to protect the crop from pod borer.

▪ **Jharkhand:**

- In Jharkhand, as normal sown wheat is at flowering/grain filling stage, in view of the prevailing above normal maximum temperature and expected dry weather conditions, apply irrigation in the wheat fields to keep optimum soil moisture conditions.
- In Western Plateau Zone, continue sowing of vegetables like sponge gourd, bottle gourd, pumpkin, water melon, musk melon etc.
- In South Eastern Plateau Zone, continue sowing of summer Moong.
- In Central, North Eastern Plateau and South Eastern Plateau Zone, due to variation in temperature and dew, spreading of powdery mildew disease is likely to be more prominent in pea. Hence, spraying of Karathen @ 1.5 ml or Sulfex @ 2.5 g per litre of water should be done to prevent it from further spreading.
- In South Eastern Plateau Zone, if dead tillers are observed on wheat crop, spray Imidachloprid @ 2 ml per litre of water or Acetamiprid @ 0.5 g per 8 litres of water. If termites are noticed in the fields, then broadcast mixture of 20 kg sand with Chlorpyriphos 20 EC @ 2 litres per acre during evening time. If small oval shaped yellowish-brown spots are seen on the leaves, spray Captafal or Mancozeb @ 2 g per litre of water.
- In South Eastern Plateau Zone, humid weather during morning hours and later on sunny weather favours infestation of white rust in late sown mustard (at flowering stage) crop and attack of aphids in timely sown crop at pod development stage. Monitor the crops frequently. In early stage, farmers are advised to remove and destroy the infected parts of the plants.
- In South Eastern Plateau Zone, to control hoppers in Mango, Litchi and Jack fruit, spray Metasystox @ 1ml or Kung-fu or Karate or Matador (Lambda Cyhalothrin) @ 2 g along with 0.5 g Carbendazim per litre of water before or just after flowering in to minimize the attack.
- Suitable varieties for sowing are given in Annexure III.

• **Animal Husbandry**

- In South, North and Middle Andaman, newly born piglets should be kept under brooding providing artificial light in the form of electric bulbs (40 watt) as required.

CENTRAL INDIA [M.P., CHHATTISGARH]



Cauliflower



Gram



Okra



Wheat

- **Realised Rainfall:** Rainfall occurred in Durg and Rajnandgaon districts of Chhattisgarh. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - As thundersquall accompanied with hail likely to occur at isolated places over Madhya Pradesh on 4th March, farmers are advised to use hail nets/hail caps for orchard crops to protect from mechanical damage. Provide mechanical support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places.
 - In Malwa Plateau Zone, continue nursery sowing of tomato, brinjal and chilli. Continue harvesting of matured gram, potato, cauliflower and cabbage in clear weather. Undertake land preparation for sowing of summer cucurbits and okra.
 - In Kymore Plateau and Satpura Hill Zone, undertake harvesting of matured lentil, field pea, linseed and sunflower in clear weather. Keep harvested produce at safer places.
 - In Central Narmada Valley Zone, continue harvesting of matured mustard, cauliflower, tomato, brinjal, chilli, capsicum, pea, etc.
 - In Nimar Valley Zone, continue sowing of green gram and cucurbits.
 - In Jhabua Hill Zone, continue harvesting of early sown mustard and gram. Continue transplanting of summer vegetables.
 - In Vindya Plateau Zone, continue nursery preparation of summer vegetables and sowing of cucurbits, okra, cowpea and cluster bean. Continue harvesting of matured gram in clear weather.
 - In Satpura Plateau Zone, continue sowing of okra, groundnut, maize and cucurbits and transplanting of vegetables like chilli, tomato and brinjal.
 - Continue harvesting of matured mustard and potato in Grid Zone. Undertake sowing of cucurbits and green gram.
 - In Bundelkhand Zone, continue sowing of vegetables like pumpkin, bitter gourd, okra etc. Undertake harvesting of matured lentil, linseed and mustard crops in clear weather.
 - In Central Narmada Valley Zone due to humid weather, there are chances attack of stem and fruit borer in vegetables, spray of Triazophos @ 800 ml/ha.
 - In Jhabua Hill Zone, to control termite attack in wheat, apply Chlorpyrifos 20 EC @ 3.5 litre/ha with irrigation.
 - Suitable varieties for sowing are given in Annexure III.
 - **Chhattisgarh:**
 - In North Hill Zone, continue sowing of maize, sunflower and cucurbits. Continue harvesting of matured mustard, pea, lentil and potato. Apply irrigation in wheat at heading stage. Undertake sowing of summer green gram.
 - In Bastar Plateau Zone, continue sowing of summer moong and urad. Continue harvesting of matured pea.
 - In Chhattisgarh Plain Zone, continue preparation of seedlings of cucurbitaceous vegetables in polythene bags and sowing of green gram. Apply irrigation in wheat at flowering stage. Undertake harvesting of lathyrus, mustard and toria.
 - Due to humid weather, there may be chances of powdery mildew disease in cucurbits in Bastar Plateau Zone, spray Karathan @ 1 g/litre of water.
 - **Animal Husbandry**
 - In Madhya Pradesh and Chhattisgarh vaccinate animals to prevent foot and mouth disease.

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



Wheat



Sugarcane



Cauliflower



Mustard

- **Realised Rainfall:** Weather remained mainly dry/dry over the region.
- **Advisories:**
 - As thundersquall accompanied with hail very likely to occur at isolated places over Jammu & Kashmir on 4th, over Himachal Pradesh, Uttarakhand and West Uttar Pradesh on 5th & 6th, over Punjab, Haryana, Chandigarh & Delhi and North Rajasthan on 4th & 5th March, farmers are advised to use hail nets/hail caps for orchard crops to protect from mechanical damage. Provide mechanical support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safer places. Undertake propping in sugarcane.
 - As rain/snow would occur at most/many places over Jammu & Kashmir on 5th and 6th, over Himachal Pradesh and over Uttarakhand on 5th & 6th March, rain/thundershower would occur at many places over Punjab and Haryana on 5th March, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest the matured crop immediately in Punjab and Haryana and keep the harvested produces at safe places.
 - **Jammu & Kashmir:**
 - In Valley Temperate Zone, maintain drainage channels in garlic/onion to avoid water logging. Undertake nursery sowing of tomato, brinjal, chilli, capsicum, knol khol, kale in hot beds as well as in raised beds under open conditions and continue sowing of cucurbits in polybags. Undertake transplanting of cauliflower, cabbage and knol khol. Apply first top dose of urea in brown sarson (1.75kg urea/kanal) after current spells of rain.
 - In Intermediate Zone, continue nursery sowing of tomato, brinjal and chilli.
 - In Sub Tropical Zone, present weather is congenial for attack of alternaria blight and white rust in mustard crops, to control alternaria blight, spray Mancozeb @ 2.5 gm/litre of water. If attack of white rust is observed, apply Ridomil-MZ @ 2.0 gm/litre of water. Undertake plant protection measures after current spells of rain.
 - In Intermediate Zone, keep strict vigil on yellow rust infestation in the wheat crop. If observed, spray Propiconazole @ 10ml in 20 litre of water after current spells of rain, repeat the spray after 10-15 days interval if the disease persists. Also if *alternaria* blight is observed in the mustard crops. apply Mancozeb @ 2.5 g/litre of water and Ridomil MZ @ 2.5 g/litre of water alternately as a curative measure.
 - **Uttarakhand:**
 - In Bhabar and Tarai Zone, continue planting of potato with varieties like Kufri Jyoti, Kufri Ashok & Kufri Anand etc. Also temperature conditions are favourable for planting of sugarcane crop. Continue nursery sowing of brinjal and tomato.
 - In Hill Zone, continue field preparation for sowing of okra, French bean, lady finger and also for planting of potato in mid hill region.
 - In Sub-Montane and Low Hills Sub-Tropical Zone, continue sowing of sunflower, fodder crops such as chari and bajra, cucurbits such as cucumber, bitter gourd, bottle gourd and summer squash. Complete nursery sowing of tomato, brinjal, chilli and capsicum.
 - In Mid Hills sub-Humid Zone, continue nursery preparation of tomato, brinjal and capsicum.
 - In Sub-Montane and Low Hills Sub-Tropical Zone, under prevailing weather conditions, there may be chances of attack of yellow rust and aphids in wheat and mustard crop respectively. For control of yellow rust, spray Tilt @ 1ml per litre of water and spray Cypermethrin @ 750 ml per 750 litre of water per hectare for aphids and spray Mancozeb or Redomil @ 2.5 g per litre of water to control purple blotch in garlic and onion. Undertake plant protection measures after current spells of rain.
 - In Hill Zone, keep strict vigil in the wheat crop on yellow rust infestation. If observed, spray Propiconazole @ 10ml in 20 litre of water after current spells of rain, repeat the spray after 10-15 days interval if the disease persists.
 - In Hill Zone, in the present weather, there may be incidence of thrips in garlic and onion, spray Imidacloprid @ 6-8 ml in 10 litres of water in garlic and onion after current spells of rain.
 - In Mid Hills sub-Humid Zone, weather is conducive for attack of aphids and cabbage butterfly in cole crops, apply Malathion @ 15ml per 15 litre of water after current spells of rain.
 - In Sub-Montane and Low Hills Sub-Tropical Zone, under prevailing weather conditions, there are incidence of purple blotch/stumpy leave in onion and garlic, spray Mancozeb or Redomil @ 2.5 g per litre of water after

current spells of rain.

▪ **Himachal Pradesh:**

- In Sub-Montane and Low Hills Sub-Tropical Zone, continue sowing of sunflower, fodder crops such as chari and bajra, cucurbits such as cucumber, bitter gourd, bottle gourd and summer squash. Complete nursery sowing of tomato, brinjal, chilli and capsicum utilising the expected rainfall.
- In Mid Hills sub-Humid Zone, continue nursery preparation of tomato, brinjal and capsicum.
- In Sub-Montane and Low Hills Sub-Tropical Zone, under prevailing weather conditions, there may be chances of attack of yellow rust and aphids in wheat and mustard crop respectively. For control of yellow rust, spray Tilt @ 1ml per litre of water and spray Cypermethrin @ 750 ml per 750 litre of water per hectare for aphids and spray Mancozeb or Redomil @ 2.5 g per litre of water to control purple blotch in garlic and onion. Undertake plant protection measures after current spells of rain.
- In Mid Hills sub-Humid Zone, weather is conducive for attack of aphids and cabbage butterfly in cole crops, apply Malathion @15ml per 15 litre of water after current spells of rain.
- In Sub-Montane and Low Hills Sub-Tropical Zone, under prevailing weather conditions, there are incidence of purple blotch/stumpy leave in onion and garlic, spray Mancozeb or Redomil @ 2.5 g per litre of water after current spells of rain.

▪ **Rajasthan:**

- In East Rajasthan, continue sowing of Zaid green gram, Zaid groundnut, Okra, Zaid sorghum (fodder), Zaid pearl millet (fodder) and early summer cucurbits like bottle gourd, round gourd, bitter gourd, water melon and musk melon in Semi-Arid Eastern Plain Zone.
- In Sub Humid Southern Plain and Aravali Hill Zone, undertake harvesting of mature mustard crop in clear weather and keep harvested produce at safer places. Continue sowing of summer okra and field preparation for sowing of summer groundnut.
- In West Rajasthan, in Arid Western Zone, due to increased temperature conditions, apply fifth irrigation in timely sown wheat, fourth irrigation in late sown wheat, third irrigation in barley. Continue harvesting of matured mustard in morning time and continue field preparation for sowing of guar crop, in Barmer, Churu, Jalore, Jodhpur and Pali districts.
- In Transitional Plain Zone of Inland drainage, apply irrigation (70 days after sowing; ear head emergence and jointing stage) in wheat and (milking stage) in barley, continue weeding manually. Undertake sowing of zaid moong, vegetables like loki, torai, kerela, tinda,(variety Bikaneri green, dilpasand) kakri (variety Lakhnau ageti and Arkasital), kharbuja (variety Durgapura madhu, Punjab sunehri, Punjab hybrid and pusa madhuras) tarbuja (variety sugar baby, Durgapura mitha, Durgapura lal) and khira.
- In Irrigated North western Plain Zone, apply second irrigation in late sown wheat (tillering stage); third irrigation in timely sown wheat (at jointing stage), third irrigation in mustard at pod formation stage and third irrigation in barley (100-110 days after sowing) and second irrigation in gram at pod formation stage (90-100 days after sowing).
- In Irrigated North Western Plain Zone, in the prevailing temperature, there is a chances of infestation of yellow rust in wheat; aphids and white rust in mustard; attack of termite in barley and gram; attack of pod borer in gram, spray Propiconazole 25 EC @ 1 ml/litre of water. repeat the spray after 15 days if required in wheat; spray Methyl Dimeton 25 EC @ 1 litre per hectare for aphids and Metalexcil (Redomil M.Z.) @ 2 g per litre of water for white rust in mustard; apply Chlorpyrifos 20 EC @ 4.0 litre per hectare with irrigation water in barley and gram also apply Quinalphos @ 1.5 per cent dust 24 kg/ha in gram.
- In Transitional Plain Zone of Inland drainage, due to change in temperature there is a chance of infestation of aphids on mustard and cumin, rust in wheat and barley also there is a chance of attack of pod borer in gram, spray Dimethoate 30 EC or Methyl Demeton 25 EC @1 litre/ha dissolved in water to control aphids, dust Sulphur powder @ 25 kg per ha to control rust in wheat and barley and spray Azadirachtin @ 5 ml per litre water at the time of flowering and pod formation or Dimethoate 30 EC or Methyl Demeton 25 EC @ 1 litre/ha dissolved in 500 litre of water.
- In Flood Prone Eastern Plain Zone, in the prevailing temperature condition, there is a chance of attack of aphids in mustard, spray Dimethoate 30 EC @ 875 ml/litre/ha water and to control termites in wheat and other crops, spray of solution of Chloropyrifos 20 EC @ 2 litre/ha with irrigation water.
- In Arid Western Plain Zone, prevailing weather is conducive for increase in attack of white rust in late sown mustard crop, for control spray Redomil MZ @ 2 g per litre of water per hectare.
- In Arid Western Plain Zone, prevailing weather is conducive for attack of heliothis infestation in gram, for control spray Quinalphos 25 EC @ 1200 ml per hectare or Indoxacarb @ 200 ml per hectare along with water at the time of flowering and if required, repeat it after 15 days interval.

▪ **Punjab, Haryana and Delhi:**

- In Western Plain Zone of Punjab, continue sowing of okra, spring maize and planting of sugarcane.
- In Central and Undulating Plain Zone of Punjab, undertake planting of sugarcane.
- In Central, Western and Undulating Plain Zone of Punjab, continue planting of peach, plum, pear, pomegranate and ber plants.
- In Western Zone of Punjab, prepare the field for transplanting summer vegetables of chilli, tomato, bell pepper and planting of evergreen fruit plants of kinnow, lemon, guava ber and Amla.

- In Western Semi-Arid Zone of Delhi, continue transplanting of *rabi* onion, tomato, cabbage, broccoli and early cauliflower on raised bed, sowing of garlic in raised bed, spinach, coriander, lady finger, French bean, cluster bean and fenugreek.
- In Western Zone of Haryana, undertake sowing of green gram and black gram. In Eastern Zone, undertake planting of sugarcane.
- In Western Semi-Arid Zone of Delhi, undertake sowing of green gram, black gram and transplanting of marigold.
- In Central and Undulating Plain Zone of Punjab, there is chance for occurrence of yellow rust in wheat fields in the present weather condition. Monitor the crop and spray with Tilt/Shine/Bumper/Compass/Markzole @ 200 ml in 200 litres of water/acre on a non rainy day if symptoms are noticed.
- In Central, Western, Sub-Montane and Undulating Plain Zone of Punjab, there may be chances of aphids in mustard crop; to control spray 40g Actara 25 WG or 400 ml Rogor 30EC in 80-125 litre of water per acre. Also in Undulating Plain Zone of Punjab, there may be chances of *alternaria* blight in mustard, spray Indofil M 45 @ 25 gm/acre in 100 litres of water on a non rainy day.
- In Western Plain Zone of Punjab, in the present weather, army worms may attack wheat and barley, spray Nuvan 85 SL (dichlorvos) or 400 ml Ekalux 25 EC (quinalphos) in 80-100 litres of water per acre on a non rainy day.
- Due favourable weather condition, there may be attack of pod borer in gram in Western Zone of Haryana, spray Carbaril 50 W.P. @ 400 gram or Monocrotophas 36 S.L @ 200 ml per 100 liter water per acre.
- **Uttar Pradesh:**
- In Central Pain Zone, continue harvesting of matured mustard, oats, barley (jau) and digging of matured potato crop in clear weather. Complete the harvesting of late variety of sugarcane. Keep harvested produce at safe places. Continue planting of autumn sugarcane, land preparation and sowing of cowpea, maize, urad, mung. Continue transplanting of onion and continue nursery sowing and transplanting of tomato, chili. Continue sowing of bhindi, tinda, cucurbits, water melon and bottle guard. Continue sowing of urad, mung, lobia, bhindi as inter crop in sugarcane.
- In Eastern Plain Zone, continue planting of autumn sugarcane. Continue sowing of lobia and maize. Continue sowing of urad, mung and cucurbits and transplanting of onion. Continue digging of matured potato crop.
- In Western Plain Zone, undertake digging of matured potato crop. Undertake transplanting of tomato, chilli and sowing of bhindi, cucurbits. Continue planting of autumn sugarcane and sowing of sunflower, urad, mung, maize.
- In Bundelkhand Zone, continue sowing of cucurbits, transplanting of cabbage, cauliflower, tomato, brinjal and chilli. Undertake land preparation for sowing of groundnut.
- In North Eastern Plain Zone, undertake harvesting of matured potato crop.
- In Bundelkhand Zone, due to prevailing temperature conditions, there may be chances of attack of pod borer in gram, for control spray Dimethoate or Cypermethrin @ 1 litre in 600 litres of water per hectare.
- In Central Plain Zone, due to prevailing weather condition, there may be chances of attack of pod borer in pea, for control, spray Quinalphos 25 % E.C. @ 2 litres or Monocrotophos 36 % S.L. @ 1 litre in 500 to 600 litres of water per hectare.
- In Central Plain Zone, due to prevailing weather condition, there may be chances of attack of thrips in onion, for control, spray Mencozeb 0.2 % or Dimethoate @ 1 ml per litre of water.
- In North Eastern Plain Zone, due to prevailing weather condition, there may be chances of attack of blight/aphids in toria, for control spray 0.2 % Redomil MZ + 0.2 % Monocrotophos @ 200 ml in 200 litres of water per acre.
- **Horticulture:**
- In Semi Arid Eastern Plain Zone, prevailing weather is conducive for attack of citrus cilla in citrus plants, for control spray Formethion 25 EC or Malathion 50 EC @ 1 ml per litre of water.
- In North Eastern Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of mango hopper and mealy bug in mango trees for control spray mixture of 0.2 % Emidacloprid @ 400 ml and 0.2 % Carbendazim @ 400 gm. per 200 litres of water per 20 plants.
- In Central Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of incidence of leaf spot and rot in banana, for control, spray Bavestin or Carbendazim @ 1 g per litre of water.
- In Central Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of maggot in mango, for control, spray 17.8 % Emidacloprid S.L. @ 1 ml in 3 litres of water or 25 % Quinalphos EC @ 2 ml per litre of water.
- In Eastern Plain Zone of Uttar Pradesh, there may be chances of fruit drop in mango, for control, spray Soluble Sulphur @ 2 g per litre of water.
- In Central Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of canker in citrus fruits, for control, spray Blitox 50 (0.25%).
- In Central Plain Zone of Uttar Pradesh, undertake transplanting of papaya plants in new orchard.
- **Animal Husbandry**
- In High Hill Temperate Dry Zone and in Sub-Montane and Low Hills Sub-Tropical Zone of Himachal Pradesh, give daily 40-50g Minerals mixture per cow and protect newly born calves from cold.

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

Annexure I

Week by week Rainfall Distribution

Sub-Divisions	17.02.16		24.02.16		02.03.16	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	12.3	-36	19.8	-68	1.2	-98
Dibang Valley	16.0	7	62.0	-3	15.0	-59
East Kameng	0.0	-100	0.2	-99	0.0	-100
East Siang	13.4	-4	38.8	91	1.7	-91
Kurung Kumey	**	**	**	**	**	**
Lohit	9.7	-41	92.2	217	11.1	-52
Lower Dibang Valley	16.1	8	107.0	67	3.8	-90
Lower Subansari	**	**	**	**	**	**
Papumpare	4.2	-85	15.2	-14	3.5	-77
Tawang	**	**	12.0	-2	6.0	-8
Tirap	6.4	-63	21.0	-24	4.2	-74
Upper Siang	47.4	142	83.4	42	11.6	-76
Upper Subansari	18.6	30	18.6	17	0.0	-100
West Kameng	1.6	-81	0.0	-100	0.0	-100
West Siang	18.0	165	42.0	103	2.0	-88
Assam&Meghalaya						
Assam						
Baksa	0.0	-100	0.0	-100	0.0	-100
Barpeta	0.0	-100	0.0	-100	0.0	-100
Bongaigaon	0.0	-100	0.0	-100	0.0	-100
Cachar	9.1	1	21.4	2	19.1	17
Chirang	0.8	-91	8.2	-39	0.0	-100
Darrang	**	**	**	**	**	**
Dhemaji	**	**	**	**	4.0	-69
Dhubri	0.0	-100	0.3	-89	0.0	-100
Dibrugarh	13.3	-1	23.9	77	8.1	-45
Goalpara	0.0	-100	0.0	-100	0.0	-100
Golghat	1.0	-91	0.0	-100	1.2	-79
Hailakandi	5.6	24	28.1	25	35.2	300
Jorhat	0.0	-100	0.7	-93	0.8	-89
Kamrup(Rural)	0.0	-100	0.0	-100	0.0	-100
Kamrup(Metro)	0.0	-100	0.0	-100	0.0	-100
Karbi Anglong	0.3	-95	0.0	-100	0.4	-94
Karimganj	8.9	22	30.9	239	7.6	-28
Kokrajhar	0.0	-100	0.0	-100	0.0	-100
Lakhimpur	5.8	-50	32.0	205	0.0	-100
Morigaon	0.0	-100	0.0	-100	0.0	-100
N.C.Hills	3.1	-55	19.5	17	3.4	-77
Nowgong	0.0	-100	0.0	-100	14.2	209
Nalbari	0.0	-100	0.0	-100	0.0	-100
Sonitpur	0.0	-100	0.1	-99	0.0	-100

Sibsagar	3.6	-51	2.1	-82	5.7	6
Tinsukia	17.9	41	37.5	148	4.9	-72
Udalgiri	0.0	-100	0.0	-100	0.0	-100
Meghalaya						
East Garo Hills	0.0	-100	0.0	-100	0.0	-100
East Khasi Hills	0.7	-82	0.0	-100	5.5	-21
Jaintia Hills	0.0	-100	0.0	-100	5.0	-29
Ribhoi	0.0	-100	0.0	-100	0.0	-100
South Garo Hills	**	**	**	**	0.0	-100
West Garo Hills	0.0	-100	0.0	-100	0.0	-100
West Khasi Hills	0.0	-100	0.0	-100	2.0	-76
NMMT						
Mizoram						
Aizwal	4.7	-20	9.7	-11	1.5	-86
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	0.0	-100
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	0.0	-100	14.0	-25	8.0	321
Serchhip	**	**	42.0		6.0	-18
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	**	**	**	**	0.0	-100
Churachandpur	**	**	**	**	**	**
Imphal east	7.0	-26	7.9	32	10.2	-15
Imphal west	9.0	210	27.8	341	15.2	21
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	**	**	**	**	**	**
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	1.7	-15	0.5	-38	2.6	8
Kephire	**	**	**	**	**	**
Kohima	0.0	-100	0.0	-100	2.0	-74
Longleng	**	**	**	**	**	**
Mokokchung	2.0	-86	0.0	-100	2.0	-66
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	**	**	**	**	**	**
Tuensang	**	**	**	**	**	**
Wokha	8.0	10	1.0	-88	1.0	-93
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	18.3	215	7.7	-54	36.0	275
NorthTripura	19.6	367	77.4	567	42.1	141
SouthTripura	17.2	420	14.6	10	5.2	-53
West Tripura	0.9	-77	5.6	-54	12.4	47
Himachal Pradesh						

Bilaspur	0.0	-100	9.6	-45	0.0	-100
Chamba	17.4	-37	21.4	-5	0.0	-100
Hamirpur	0.0	-100	11.5	-29	0.0	-100
Kangra	0.6	-98	12.9	-31	0.1	-99
Kinnaur	3.5	-88	27.0	-3	0.0	-100
Kullu	3.0	-89	40.2	73	0.4	-99
Lahaul and Spiti	5.7	-84	18.3	-44	0.0	-100
Mandi	0.6	-97	19.5	12	2.5	-84
Shimla	5.4	-71	16.3	-13	2.3	-86
Sirmaur	0.1	-99	3.0	-74	0.0	-100
Solan	1.0	-95	17.9	1	0.0	-100
Una	0.0	-100	9.4	-8	0.0	-100
Punjab						
Amritsar	0.0	-100	7.2	-17	0.0	-100
Barnala	0.0	-100	13.0	251	0.0	-100
Bhatinda	0.0	-100	7.5	15	0.0	-100
Faridkot	0.0	-100	12.0	314	0.0	-100
Fatehgarh Saheb	0.0	-100	0.0	-100	0.0	-100
Ferozpur	0.0	-100	2.8	-30	0.0	-100
Gurdaspur	0.1	-99	4.9	-59	0.0	-100
Hoshiarpur	0.0	-100	4.6	-55	0.0	-100
Jalandhar	0.0	-100	8.9	4	0.0	-100
Kapurthala	0.0	-100	5.8	33	0.0	-100
Ludhiana	0.0	-100	5.2	-36	0.0	-100
Mansa	0.0	-100	4.2	5	0.0	-100
Moga	0.0	-100	2.6	-29	0.0	-100
Muktesar	0.0	-100	6.0	43	0.0	-100
Nawashahar	0.0	-100	4.6	-60	0.0	-100
Patiala	0.3	-94	3.1	-62	0.0	-100
Ropar	0.0	-100	2.3	-79	0.0	-100
Sangrur	0.0	-100	6.0	6	0.0	-100
Mohali	0.0	-100	0.0	-100	0.0	-100
TarnTaran	0.0	-100	3.0	-53	0.0	-100
Haryana,Chd,Delhi						
Haryana						
Ambala	0.2	-97	1.0	-84	0.0	-100
Bhiwani	0.0	-100	0.0	-100	0.0	-100
Chandigarh	0.0	-100	1.1	-89	0.0	-100
Faridabad	0.0	-100	0.0	-100	0.0	-100
Fatehabad	0.0	-100	0.0	-100	0.0	-100
Gurgaon	0.0	-100	0.0	-100	0.0	-100
Hissar	0.1	-100	1.3	-72	0.0	-100
Jhajar	0.0	-100	0.0	-100	0.0	-100
Jind	1.0	-97	0.5	-79	0.0	-100
Katihah	0.0	-100	1.8	-58	0.0	-100
Karnal	0.0	-100	0.4	-92	0.0	-100
Kurukshetra	0.0	-100	0.3	-96	0.0	-100
Mahendragarh	0.0	-100	0.0	-100	0.0	-100
Mewat	0.0	-100	0.0	-100	0.0	-100

Palwal	0.0	-100	0.0	-100	0.0	-100
Panchkkula	0.0	-100	2.1	-79	0.0	-100
Panipat	0.0	-100	0.8	-81	0.0	-100
Rewari	0.0	-100	0.0	-100	0.0	-100
Rohtak	0.0	-100	0.2	-97	0.0	-100
Sirsa	0.0	-100	5.0	32	0.0	-100
Sonepat	0.2	-94	1.2	-73	0.0	-100
Yamunanagar	0.0	-100	0.1	-98	0.0	-100
Delhi						
Central Delhi	0.0	-100	1.0	-74	0.0	-100
East Delhi	0.0	-100	0.0	-100	0.0	-100
New Delhi	0.0	-100	1.3	-67	0.0	-100
North Delhi	0.0	-100	1.0	-74	0.0	-100
North East Delhi	0.0	-100	0.0	-100	0.0	-100
North West Delhi	0.0	-100	1.5	-61	0.0	-100
South Delhi	0.1	-98	0.5	-87	0.0	-100
South West Delhi	0.0	-100	1.6	-58	0.0	-100
West Delhi	0.0	-100	0.0	-100	0.0	-100
Jammu & Kashmir						
Anantnag	37.9	61	27.0	-4	0.0	-100
Badgam	22.2	24	27.0	56	0.0	-100
Bandipore	**	**	**	**	**	**
Baramula	29.1	-15	23.9	-39	0.0	-100
Doda	22.6	-48	15.2	-69	0.0	-100
Ganderbal	23.0	30	9.6	-44	0.0	-100
Jammu	4.3	-74	13.2	-34	0.0	-100
Kargil	**	**	**	**	**	**
Kathua	1.2	-80	6.2	-75	0.0	-100
Kistwar	**	**	**	**	**	**
Kulgam	28.8	22	25.2	-10	0.0	-100
Kupwara	30.2	-6	24.7	-26	0.0	-100
Ladakh(Leh)	0.0	-100	1.3	-22	0.0	-100
Poonch	**	**	**	**	**	**
Pulwama	22.8	33	31.5	142	0.0	-100
Rajouri	19.2	86	34.4	69	0.0	-100
Ramban	35.2	-19	22.1	-55	0.0	-100
Reasi	7.0	-71	23.7	-24	0.0	-100
Samba	0.6	-96	7.2	-64	0.0	-100
Shopian	**	**	**	**	**	**
Srinagar	19.7	11	28.1	65	0.0	-100
Udhampur	4.6	-81	11.6	-63	0.0	-100
East Madhya Pradesh						
Anuppur	0.0	-100	0.0	-100	0.0	-100
Balaghat	0.2	-95	0.0	-100	3.6	6
Chhatarpur	3.2	-15	0.0	-100	0.0	-100
Chindwara	0.0	-100	0.0	-100	9.6	167
Damoh	1.0	-82	0.0	-100	0.0	-100
Dindori	0.0	-100	0.0	-100	0.0	-100

Jabalpur	0.0	-100	0.0	-100	0.0	-100
Katni	0.0	-100	0.0	-100	2.0	-26
Mandla	0.0	-100	0.0	-100	4.3	-13
Narsingpur	0.0	-100	0.0	-100	0.4	-85
Panna	0.0	-100	0.0	-100	0.0	-100
Rewa	0.0	-100	0.0	-100	0.0	-100
Sagar	0.1	96	0.0	-100	0.0	-100
Satna	0.0	-100	0.0	-100	0.0	-100
Seoni	0.0	-100	0.0	-100	18.0	275
Shahdol	0.0	-100	0.0	-100	0.0	-100
Sidhi	0.0	-100	0.0	-100	0.0	-100
Singrauli	0.0	-100	0.0	-100	3.7	208
Tikamgarh	2.0	33	0.0	-100	0.0	-100
Umaria	0.2	-97	0.0	-100	2.6	-50
West Madhya Pradesh						
Agar	0.0	-100	0.0	-100	0.0	-100
Alirajpur	0.0	-100	0.0	-100	0.0	-100
Asoknagar	1.8	-24	0.0	-100	0.0	-100
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	0.0	-100	0.0	-100	8.8	213
Bhind	0.0	-100	0.6	-76	0.0	-100
Bhopal	0.4	-33	0.0	-100	0.0	-100
Burhanpur	0.0	-100	0.0	-100	0.0	-100
Datia	0.0	-100	0.0	-100	0.0	-100
Dewas	0.0	-100	0.0	-100	0.0	-100
Dhar	0.0	-100	0.0	-100	0.0	-100
Guna	0.0	-100	0.0	-100	0.0	-100
Gwalior	0.0	-100	0.0	-100	0.0	-100
Harda	0.0	-100	0.0	-100	0.0	-100
Hosangabad	0.0	-100	0.0	-100	0.0	-100
Indore	0.0	-100	0.0	-100	0.0	-100
Jhabua	0.0	-100	0.0	-100	0.0	-100
Khandwa	0.0	-100	0.0	-100	0.7	-17
Khargone	0.0	-100	0.0	-100	0.0	-100
Mandsaur	0.0	-100	0.0	-100	0.0	-100
Morena	0.0	-100	0.0	-100	0.0	-100
Neemuch	0.0	-100	0.0	-100	0.0	-100
Raisen	0.0	-100	0.0	-100	0.0	-100
Rajgarh	0.0	-100	0.0	-100	0.0	-100
Ratlam	0.0	-100	0.0	-100	0.0	-100
Sehore	0.0	-100	0.0	-100	0.0	-100
Shajapur	0.0	-100	0.0	-100	0.0	-100
Sheopur Kalani	0.0	-100	0.0	-100	0.0	-100
Shivpuri	0.0	-100	0.0	-100	0.0	-100
Ujjain	0.0	-100	0.0	-100	0.0	-100
Vidisha	0.3	-87	0.0	-100	0.0	-100
Chhattisgarh						
Bastar	0.0	-100	0.0	-100	2.2	-17

Bijapur	0.0	-100	0.0	-100	5.1	537
Bilaspur	1.2	-69	0.0	-100	3.7	-19
Dantewara	0.0	-100	0.0	-100	0.0	-100
Dhamtari	0.0	-100	0.0	-100	0.8	-65
Durg	0.0	-100	0.0	-100	23.4	1069
Janjgir	0.0	-100	0.0	-100	0.5	-83
Jashpurnagar	0.0	-100	0.0	-100	14.9	122
Kanker	0.0	-100	0.0	-100	0.0	-100
Korba	0.0	-100	0.0	-100	18.7	273
Koriya	0.0	-100	0.0	-100	0.0	-100
Kawardha	0.0	-100	0.0	-100	5.4	46
Mahasumund	0.0	-100	0.0	-100	5.5	83
Narayanpur	0.0	-100	0.0	-100	6.6	83
Raigarh	0.0	-100	0.0	-100	4.7	27
Raipur	0.0	-99	0.0	-100	2.2	-26
Rajnandgaon	0.0	-100	0.0	-100	29.6	919
Surguja	0.4	-90	0.0	-100	3.0	-22
East Uttar Pradesh						
Allahabad	0.8	-56	0.0	-100	0.0	-100
Ambedkar Nagar	0.0	-100	0.0	-100	0.0	-100
Azamgarh	0.0	-100	0.0	-100	0.0	-100
Bahraich	0.0	-100	0.7	83	0.0	-100
Ballia	0.0	-100	0.0	-100	0.0	-100
Balrampur	0.0	-100	0.0	-100	0.0	-100
Banda	7.9	163	0.0	-100	0.0	-100
Barabanki	0.0	-100	0.0	-100	0.0	-100
Basti	0.0	-100	0.0	-100	0.0	-100
Chandauli	0.0	-100	0.0	-100	0.0	-100
Deoria	0.0	-100	0.0	-100	0.0	-100
Faizabad	0.6	-69	0.0	-100	0.0	-100
Farrukhabad	0.0	-100	0.0	-100	0.0	-100
Fatehpur	0.0	-100	0.0	-100	0.0	-100
Gazipur	0.9	-53	0.0	-100	0.0	-100
Gonda	0.0	-100	0.0	-100	0.0	-100
Gorakhpur	0.0	-100	0.0	-100	0.0	-100
Hardoi	0.0	-100	0.4	-89	0.0	-100
Jaunpur	0.0	-100	0.0	-100	0.0	-100
Kannauj	0.0	-100	0.0	-100	0.0	-100
Kanpur City	1.0	-5	0.3	-94	0.0	-100
Kanpur Dehat	0.0	-100	0.0	-100	0.0	-100
Kaushambi	0.0	-100	0.0	-100	0.0	-100
Kheri	0.0	-100	1.9	-53	0.0	-100
Kushi nagar	0.0	-100	0.0	-100	0.0	-100
Lucknow	0.0	-100	0.2	-96	0.0	-100
Maharajganj	0.0	-100	0.0	-100	0.0	-100
Mau	0.0	-100	0.0	-100	0.0	-100
Mirzapur	0.0	-100	0.0	-100	0.0	-100
Pratapgarh	2.0	18	0.0	-100	0.0	-100
RaiBareilly	1.0	-11	0.1	-99	0.0	-100

Sahuji Maharajnagar	5.0	285	0.0	-100	0.0	-100
Sant Kabirnagar	0.0	-100	0.0	-100	0.0	-100
Sant Ravidas Nagar	4.0	-2	0.0	-100	0.0	-100
Shrawasti	**	**	**	**	**	**
Sidharthnagar	0.0	-100	0.0	-100	0.0	-100
Sitapur	0.0	-100	1.9	-33	0.0	-100
Sonbhadra	0.0	-100	0.0	-100	0.0	-100
Sultanpur	2.7	90	0.0	-100	0.0	-100
Unnao	0.0	-100	0.0	-100	0.0	-100
Varanasi	3.7	-18	0.0	-100	0.0	-100
West Uttar Pradesh						
Agra	0.0	-100	0.0	-100	0.0	-100
Aligarh	0.0	-100	0.3	-93	0.0	-100
Auraiya	0.0	-100	2.0	-56	0.0	-100
Badaun	0.0	-100	2.8	-35	0.0	-100
Baghpat	0.0	-100	0.4	-90	0.0	-100
Bareilly	0.0	-100	3.4	-33	0.0	-100
Bijnor	0.8	-91	0.0	-100	0.0	-100
Bulandsahar	1.7	-58	0.0	-100	0.0	-100
Etah	0.0	-100	0.0	-100	0.0	-100
Etawah	0.0	-100	1.5	-42	0.0	-100
Firozabad	0.0	-100	0.7	-79	0.0	-100
GBNagar	0.0	-100	0.0	-100	0.0	-100
Ghaziabad	0.0	-100	0.0	-100	0.0	-100
Hamirpur	1.0	0	0.0	-100	0.0	-100
Jalaun	0.0	-100	0.0	-100	0.0	-100
Jhansi	0.0	-100	0.0	-100	0.0	-100
Jotiba Phule Nagar	0.0	-100	0.5	-90	0.0	-100
Kanshiramnagar	0.0	-100	0.0	-100	0.0	-100
Lalitpur	1.0	-67	0.0	-100	0.0	-100
Mahamaya Nagar	0.0	-100	0.0	-100	0.0	-100
Mahoba	2.2	38	0.0	-100	0.0	-100
Mainpuri	0.0	-100	1.2	-59	0.0	-100
Mathura	0.0	-100	0.0	-100	0.0	-100
Meerut	0.3	-95	0.7	-84	0.0	-100
Moradabad	0.0	-100	3.5	-39	0.0	-100
Muzzaffarnagar	1.2	-78	2.0	-64	0.0	-100
Pilibhit	0.0	-100	3.7	-22	0.0	-100
Rampur	0.0	-100	2.1	-66	0.0	-100
Saharanpur	2.7	-66	0.0	-100	0.0	-100
Shahjahanpur	0.0	-100	4.7	-1	0.0	-100
Uttarakhand						
Almora	0.0	-100	5.8	-46	0.0	-100
Bageshwar	0.0	-100	0.0	-100	0.0	-100
Chamoli	0.5	-98	16.2	-24	0.0	-100
Champawat	0.0	-100	4.5	-57	0.0	-100
Dehradun	7.6	-46	2.0	36	0.0	-100
Garhwal Pauri	0.0	-100	2.7	-70	0.0	-100

Garhwal Tehri	15.5	2	8.7	-24	0.0	-100
Haridwar	1.5	-86	4.8	-43	0.0	-100
Nainital	0.0	-100	9.7	-4	0.0	-100
Pithorgarh	0.0	-100	13.8	-20	3.6	-74
Rudraprayag	0.0	-100	10.7	-52	0.1	-99
Udham Sing Nagar	0.0	-100	0.3	-94	0.0	-100
Uttarkashi	8.5	-67	8.6	-52	6.8	-44
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	0.0	-100
Banka	0.0	-100	0.0	-100	0.0	-100
Begusarai	0.0	-100	0.0	-100	0.0	-100
Bhabua	0.0	-100	0.0	-100	0.0	-100
Bhagalpur	0.0	-100	0.0	-100	0.9	-67
Bhojpur	0.0	-100	0.0	-100	0.0	-100
Buxar	0.0	-100	0.0	-100	0.0	-100
Darbhanga	0.0	-100	0.0	-100	0.0	-100
East Champaran	0.0	-100	0.0	-100	0.0	-100
Gaya	0.0	-100	0.0	-100	0.3	-80
Gopalganj	0.0	-100	0.0	-100	0.0	-100
Jahanabad	0.0	-100	0.0	-100	0.0	-100
Jamui	0.0	-100	0.0	-100	0.0	-100
Kathihar	0.0	-100	0.0	-100	0.0	-100
Khagadia	0.0	-100	0.0	-100	3.2	357
Kishanganj	0.0	-100	0.0	-100	0.0	-100
Lakhisarai	0.0	-100	0.0	-100	0.0	-100
Madhepura	0.0	-100	0.0	-100	0.0	-100
Madhubani	0.0	-100	0.0	-100	0.0	-100
Monghyar	0.0	-100	0.0	-100	0.0	-100
Muzaffarpur	0.0	-100	0.0	-100	5.9	351
Nalanda	0.0	-100	0.0	-100	0.0	-100
Nawada	0.0	-100	0.0	-100	0.0	-100
Patna	0.0	-100	0.0	-100	0.0	-100
Purnea	0.0	-100	0.0	-100	0.0	-100
Rohtas	0.0	-100	0.0	-100	1.7	-51
Saharsha	0.0	-100	0.0	-100	0.0	-100
Samstipur	0.0	-100	0.0	-100	0.0	-100
Saran	0.0	-100	0.0	-100	0.0	-100
Sheikpura	0.0	-100	0.0	-100	0.0	-100
Sheohar	0.0	-100	0.0	-100	0.0	-100
Sitamarhi	0.0	-100	0.0	-100	0.0	-100
Siwan	0.0	-100	0.0	-100	0.0	-100
Supaul	0.0	-100	0.0	-100	0.0	-100
Vaishali	0.0	-100	0.0	-100	0.0	-100
West Champaran	0.0	-100	0.0	-100	0.0	-100
Jharkhand						
Bokaro	0.0	-100	0.0	-100	2.4	-12
Chatra	0.0	-100	0.0	-100	0.0	-100

Deoghar	0.0	-100	0.0	-100	0.0	-100
Dhanbad	0.0	-99	0.0	-100	15.4	294
Dumka	0.0	-100	0.0	-100	0.0	-100
East Singbhum	0.0	-100	0.0	-100	3.5	-49
Garhwa	0.0	-100	0.0	-100	0.0	-100
Giridih	0.8	-73	0.0	-100	14.9	367
Godda	0.0	-100	0.0	-100	0.0	-100
Gumla	6.4	35	0.0	-100	42.3	540
Hazaribagh	0.0	-100	0.0	-100	0.0	-100
Jamtara	0.0	-100	0.0	-100	5.5	150
Khunti	**	**	0.0	-100	0.0	-100
Koderna	0.0	-100	0.0	-100	0.0	-100
Latehar	2.8	-28	0.0	-100	0.0	-100
Lohardagga	0.6	-84	0.0	-100	0.0	-100
Pakur	0.0	-100	0.0	-100	0.0	-100
Palamau	0.0	-100	0.0	-100	0.0	-100
Ramgarh	0.0	-100	0.0	-100	0.0	-100
Ranchi	4.4	-40	0.0	-100	0.8	-89
Sahebganj	0.0	-100	0.0	-100	0.0	-100
Saraikela	0.0	-100	0.0	-100	3.6	-42
Simdega	0.0	-100	0.0	-100	26.1	235
West Singbhum	0.0	-100	0.0	-100	5.2	-22
East Rajasthan						
Ajmer	0.0	-100	1.5	279	0.0	-100
Alwar	0.0	-100	1.0	-71	0.0	-100
Banswara	0.0	-100	0.0	-100	0.0	-100
Baran	0.0	-100	0.0	-100	0.0	-100
Bharatpur	0.0	-100	0.0	-100	0.0	-100
Bhilwara	0.0	-100	0.1	-92	0.0	-100
Bundi	0.0	-100	0.0	-100	0.0	-100
Chittorgarh	0.0	-100	0.0	-100	0.0	-100
Dausa	0.0	-100	0.0	-100	0.0	-100
Dholpur	0.0	-100	0.0	-100	0.0	-100
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	0.0	-98	1.9	-19	0.0	-100
Jhalawar	0.0	-100	0.0	-100	0.0	-100
Jhunjhunu	0.0	-100	0.4	-88	0.0	-100
Karauli	0.0	-100	0.2	-92	0.0	-100
Kota	0.0	-100	0.0	-100	0.0	-100
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
Rajsamand	0.0	-100	0.0	-100	0.0	-100
Sawai Madhopur	0.0	-100	0.0	-100	0.0	-100
Sikar	0.0	-100	1.1	-48	0.0	-100
Sirohi	0.0	-100	0.0	-100	0.0	-100
Tonk	0.0	-100	0.0	-100	0.0	-100
Udaipur	0.0	-100	0.0	-100	0.0	-100
West Rajasthan						
Barmer	0.0	-100	0.1	-67	0.0	-100
Bikaner	0.0	-100	2.5	10	0.0	-100

Churu	0.0	-100	2.8	15	0.0	-100
Hanumangarh	0.0	-100	5.0	52	0.0	-100
Jaisalmer	0.0	-100	1.1	10	0.0	-100
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.0	-100	1.0	48	0.0	-100
Nagaur	0.0	-100	0.1	-92	0.0	-100
Pali	0.0	-100	0.2	-50	0.0	-100
Sri Ganganagar	0.0	-100	7.8	200	0.0	-100
Gujarat Region						
Ahmedabad	0.0	-100	0.0	-100	0.0	-100
Anand	0.0	-100	0.0	-100	0.0	-100
Banaskantha	0.0	-100	0.0	-100	0.0	-100
Baroda	0.0	-100	0.0	-100	0.6	200
Broach	0.0	-100	0.0	-100	0.0	-100
DNH	**	**	**	**	**	**
Dahod	0.0	-100	0.0	-100	0.0	-100
Daman	**	**	**	**	0.0	-100
Dangs	0.0	-100	0.0	-100	0.0	-100
Gandhinagar	0.0	-100	0.0	-100	0.0	-100
Kheda	0.0	-100	0.0	-100	0.0	-100
Mehsana	0.0	-100	0.0	-100	0.0	-100
Narmada	0.0	-100	0.0	-100	0.0	-100
Navsari	0.0	-100	0.0	-100	0.0	-100
Panchmahal	0.0	-100	0.0	-100	0.0	-100
Patan	0.0	-100	0.0	-100	0.0	-100
Sabarkantha	0.0	-100	0.0	-100	0.0	-100
Surat	0.0	-100	0.0	-100	0.0	-100
Tapi	0.0	-100	0.0	-100	0.0	-100
Valsad	0.0	-100	0.0	-100	0.0	-100
S K & Diu region						
Amreli	0.0	-100	0.0	-100	0.0	-100
Bhavnagar	0.0	-100	0.0	-100	0.0	-100
Diu	0.0	-100	0.0	-100	0.0	-100
Jamnagar	0.0	-100	0.0	-100	0.0	-100
Junagarh	0.0	-100	0.0	-100	0.0	-100
Kutch	0.0	-100	0.0	-100	0.0	-100
Porbandar	0.0	-100	0.0	-100	0.0	-100
Rajkot	0.0	-100	0.0	-100	0.0	-100
Surendranagar	0.0	-100	0.0	-100	0.0	-100
Maharashtra						
Konkan & Goa						
Mumbai City	0.0	-100	0.0	-100	0.0	-100
Mumbai Suburban	0.0	-100	0.0	-100	0.0	-100
North Goa	0.0	-100	0.0	-100	0.0	-100
Raigad	0.0	-100	0.0	-100	0.0	-100
Ratnagiri	0.0	-100	0.0	-100	0.1	200
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	0.1	-38
Dhule	**	**	0.0	-100	1.5	200
Jalgaon	0.0	-100	0.0	-100	3.2	688
Kolhapur	0.0	-100	0.0	-100	1.4	364
Nandurbar	**	**	0.0	-100	0.6	200
Nasik	0.0	-100	0.0	-100	3.5	1669
Pune	0.0	-100	0.0	-100	2.9	2843
Sangli	0.0	-100	0.0	-100	5.0	2380
Satara	0.0	-100	0.0	-100	10.8	3508
Solapur	0.0	-100	0.0	-100	1.2	71
Marathwada						
Aurangabad	0.0	-100	0.0	-100	1.0	14
Beed	0.0	-100	0.0	-100	12.4	1141
Hingoli	**	**	**	**	10.3	832
Jalna	0.0	-100	0.0	-100	5.1	535
Latur	0.0	-100	0.0	-100	14.6	1223
Nanded	0.0	-100	0.0	-100	8.9	1168
Usmanabad	0.0	-100	0.0	-100	9.4	619
Parbhani	0.0	-100	0.0	-100	9.7	782
Vidarbha						
Akola	0.0	-100	0.0	-100	0.1	-94
Amraoti	0.0	-100	0.0	-100	11.4	777
Bhandara	0.0	-100	0.0	-100	10.4	352
Buldhana	0.0	-100	0.0	-100	8.2	725
Chandrapur	0.0	-100	0.0	-100	24.4	875
Gadchiroli	0.0	-100	0.0	-100	23.0	1540
Gondia	0.0	-100	0.0	-100	12.1	278
Nagpur	0.0	-100	0.0	-100	19.9	587
Wardha	0.0	-100	0.0	-100	15.1	344
Washim	0.0	-100	0.0	-100	21.3	1673
Yeotmal	0.0	-100	0.0	-100	9.8	603
Odisha						
Angul	0.4	-92	0.0	-100	24.2	285
Balasore	1.5	-85	5.9	-40	45.1	402
Bargarh	0.0	-100	0.0	-100	10.8	136
Bhadrak	0.0	-100	0.0	-100	39.9	587
Bolangir	0.0	-100	0.0	-100	8.6	139
Boudh	0.0	-100	0.0	-100	1.3	-77
Cuttack	0.0	-100	0.0	-100	1.1	-84
Deogarh	0.0	-100	0.0	-100	16.2	305
Dhenkanal	0.0	-100	0.0	-100	36.9	505
Gajapati	0.0	-100	0.0	-100	3.6	-49
Ganjam	0.0	-100	0.0	-100	17.3	321
Jagatsingpur	0.0	-100	0.0	-100	1.1	-80
Jajpur	0.0	-100	0.0	-100	31.9	177
Jharsuguda	0.0	-100	0.0	-100	19.5	195
Kalahandi	0.0	-100	0.0	-100	2.3	-52






Kandhamal	0.1	-99	0.0	-100	3.4	-42
Kendrapara	0.0	-100	0.0	-100	8.5	-11
Keonjhar	0.6	-93	0.5	-95	58.3	657
Khurda	0.0	-100	0.0	-100	3.5	-49
Koraput	0.0	-100	0.0	-100	0.0	-100
Malkangiri	0.0	-100	0.0	-100	8.8	200
Mayurbhanj	12.1	147	2.8	-53	34.4	189
Nawapara	0.0	-100	0.0	-100	2.4	-35
Nawarangpur	0.0	-100	0.0	-100	6.1	371
Nayagarh	0.0	-100	0.0	-100	13.6	119
Puri	0.0	-100	0.0	-100	1.5	-68
Rayagada	0.0	-100	0.0	-100	7.6	86
Sambalpur	0.0	-100	0.0	-100	6.9	72
Sonepur	0.0	-100	0.0	-100	15.0	285
Sundargarh	0.0	-100	0.0	-100	12.6	120
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	50.8	265	1.9	-83	1.7	-86
North & Middle Andaman	0.0	-100	0.0	-100	0.0	-100
South Andaman	0.0	-100	0.0	-100	0.0	-100
GWB						
Bankura	0.0	-100	0.0	-100	3.5	-1
Birbhum	0.0	-100	0.0	-100	6.0	150
Burdwan	0.0	-100	0.0	-100	29.0	780
East Midnapore	0.4	-90	0.0	-99	57.8	750
Hooghly	0.0	-100	1.7	-84	22.2	788
Howrah	0.0	-100	0.0	-100	101.4	1744
Kolkata	0.0	-100	0.0	-100	92.0	1143
Murshidabad	0.0	-100	0.0	-100	6.0	650
Nadia	0.0	-100	1.7	-55	40.6	1663
24 Pargana (N)	0.2	-94	2.6	-52	74.8	2099
Purulia	0.0	-100	0.0	-100	10.4	112
24 Pargana (S)	0.0	-100	0.0	-100	60.4	924
West Midnapore	0.0	-100	0.2	-95	37.2	464
SHWB & Sikkim						
Cooch Behar	0.0	-100	0.0	-100	0.0	-100
Darjeeling	0.0	-100	0.0	-100	0.9	-80
East Sikkim	0.3	-98	0.5	-95	1.4	-87
Jalpaiguri	0.0	-100	0.0	-100	0.7	-84
Malda	0.0	-100	0.0	-100	0.0	-100
North Dinajpur	**	**	**	**	**	**
North Sikkim	5.4	-74	0.0	-100	16.3	-26
South Dinajpur	0.0	-100	0.0	-100	0.0	-100
South Sikkim	0.0	-100	0.0	-100	2.0	-82
West Sikkim	0.0	-100	0.0	-100	1.0	-95
Karnataka						
Coastal Karnataka						
Dakshina Kannada	0.0	-100	0.0	-100	0.0	-100

Udupi	0.0	-100	0.0	-100	0.0	-100
Uttara Kannada	0.0	-100	0.0	-100	0.0	-100
NI Karnataka						
Bagalkote	0.0	-100	0.0	-100	0.0	-100
Belagavi	0.0	-100	0.0	-100	1.2	196
Bidar	0.0	-100	0.0	-100	1.8	41
Dharwad	0.0	-100	0.0	-100	0.1	-92
Gadag	0.0	-100	0.0	-100	0.0	-100
Haveri	0.0	-100	0.0	-100	0.4	100
Kalaburgi	0.0	-100	0.0	-100	1.2	189
Koppal	0.0	-100	0.0	-100	0.0	-100
Raichur	0.0	-100	0.0	-100	0.0	-100
Vijayapura	0.0	-100	0.0	-100	0.0	-100
Yadgir	0.0	-100	0.0	-100	0.0	-100
SI Karnataka						
Ballari	0.0	-100	0.0	-100	0.0	-100
Bangalore Rural	0.0	-100	0.0	-100	0.0	-100
Bangalore Urban	0.0	-100	0.0	-100	0.0	-100
Chamarajanagar	0.9	8	0.0	-100	0.0	-100
Chikaballapur	0.0	-100	0.0	-100	0.0	-100
Chikkamagaluru	0.0	-100	0.0	-100	1.3	163
Chitradurga	0.0	-100	0.0	-100	0.0	-100
Davangere	0.0	-100	0.0	-100	0.0	-100
Hassan	2.5	514	0.0	-100	0.0	-100
Kodagu	0.0	-100	0.0	-100	0.8	-14
Kolar	0.0	-100	0.0	-100	0.0	-100
Mandya	0.1	-91	0.0	-100	0.1	-90
Mysuru	0.0	-100	0.0	-100	2.1	433
Ramanagara	0.0	-100	0.0	-100	0.0	-100
Shivamogga	0.0	-100	0.0	-100	0.0	-100
Tumakuru	0.0	-100	0.0	-100	0.0	-100
Kerala						
Alappuzha	31.2	428	5.0	-35	12.2	104
Kannur	0.0	-100	0.0	-100	0.0	-100
Ernakulam	48.5	1177	3.1	-54	39.8	1036
Idukki	0.4	-88	0.0	-100	3.4	-53
Kasaragod	0.0	-100	0.5	-17	0.0	-100
Kollam	7.4	1	14.7	45	6.5	-16
Kottayam	21.8	137	7.9	-3	13.0	321
Kozhikode	0.0	-100	0.0	-100	0.0	-100
Malappuram	0.0	-100	1.8	-37	0.0	-100
Palakkad	0.0	-100	0.0	-100	0.0	-100
Pathanamthitta	0.0	-100	2.2	-88	1.0	-91
Thiruvananthapuram	0.4	-91	0.1	-99	0.0	-100
Thrissur	4.0	303	0.0	-100	0.0	-100
Wayanad	0.0	-100	0.0	-100	0.0	-100
Tamil Nadu						
Ariyalur	0.0	-100	0.0	-100	0.0	-100
Chennai	0.0	-100	0.0	-100	0.0	-100

Coimbatore	0.2	-93	0.0	-100	0.0	-100
Cuddalore	0.0	-100	0.1	-98	0.0	-99
Dharmapuri	0.0	-100	0.0	-100	0.0	-100
Dindigul	0.0	-100	0.2	-95	0.0	-99
Erode	0.0	-100	0.0	-100	0.0	-100
Kanchipuram	0.0	-100	0.0	-100	0.0	-100
Kanyakumari	12.2	122	4.2	-38	0.0	-92
Karikal	0.0	-100	0.1	-99	0.0	-100
Karur	0.0	-100	0.0	-100	0.0	-100
Krishnagiri	0.0	-100	0.0	-100	0.0	-100
Madurai	0.0	-100	0.0	-100	0.0	-99
Nagapattinam	0.0	-100	0.2	-98	0.0	-100
Namakkal	0.0	-100	0.0	-100	0.0	-100
Nilgiris	0.0	-100	0.0	-100	0.0	-100
Perambalur	0.0	-100	0.0	-100	0.0	-100
Pudukcherry	0.0	-100	0.0	-100	0.0	-100
Pudukottai	0.0	-100	0.0	-100	0.0	-100
Ramanathapuram	0.0	-100	0.0	-100	0.0	-26
Salem	0.0	-100	0.0	-100	0.0	-100
Sivaganga	0.0	-100	0.0	-100	0.0	-43
Thanjavur	0.0	-100	0.0	-100	0.0	-93
Theni	0.0	-100	0.0	-100	0.0	-70
Tirunelveli	0.0	-100	3.1	-69	0.0	-44
Tirupur	0.0	-100	0.0	-100	0.0	-100
Tiruvallur	0.0	-100	0.0	-100	0.0	-100
Tiruvannamalai	0.0	-100	0.0	-100	0.0	-100
Tiruvarur	0.0	-100	0.0	-100	0.0	-100
Toothukudi	0.1	-96	0.9	-89	0.0	-31
Trichy	0.0	-100	0.0	-100	0.0	-100
Vellore	0.0	-100	0.0	-100	0.0	-100
Villupuram	0.0	-100	0.2	-92	0.0	-100
Virudhunagar	0.0	-100	0.0	-100	0.0	-100
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	0.0	-100	0.0	-100	0.5	-87
Guntur	0.0	-100	0.0	-100	0.0	-100
Krishna	0.0	-100	0.0	-100	1.1	33
Nellore	0.0	-100	0.0	-100	0.0	-100
Prakasam	0.0	-100	0.0	-100	0.0	-100
Sirkakulam	0.0	-100	0.0	-100	7.4	113
Visakhapatnam	0.0	-100	0.0	-100	10.4	510
Vizianagram	0.0	-100	0.0	-100	1.5	-45
West Godavari	0.0	-100	0.0	-100	0.9	-57
Rayalaseema						
Anantapur	0.0	-100	0.0	-100	0.0	-100
Chittoor	0.0	-100	0.0	-100	0.0	-100
Cuddapah	0.0	-100	0.0	-100	0.0	-100
Kurnool	0.0	-100	0.0	-100	0.0	-100

Telangana						
Adilabad	0.0	-100	0.0	-100	12.5	494
Hyderabad	0.0	-100	0.0	-100	0.0	-100
Karimnagar	0.0	-100	0.0	-100	20.7	1052
Khammam	0.0	-100	0.0	-100	13.4	645
Mehabubnagar	0.0	-100	0.0	-100	0.1	-74
Medak	0.0	-100	0.0	-100	0.1	-95
Nalgonda	0.0	-100	0.0	-100	0.0	-100
Nizamabad	0.0	-100	0.0	-100	9.8	878
Rangareddy	0.0	-100	0.0	-100	0.0	-100
Warangal	0.0	-100	0.0	-100	17.1	2038

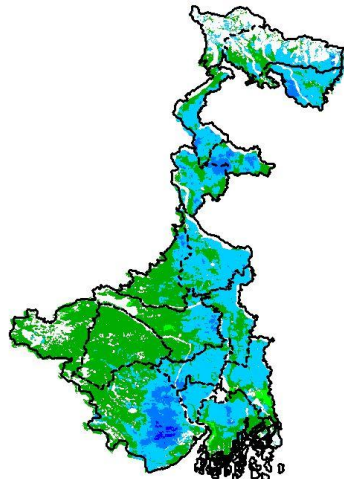
Legends

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

Annexure II

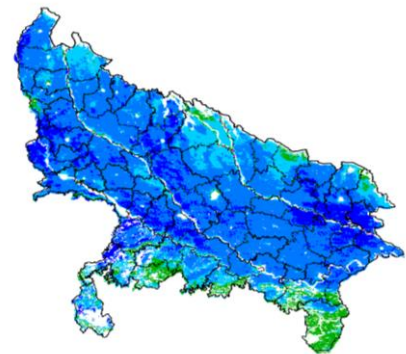
INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON 2nd March 2016 FOR DIFFERENT STATES

West Bengal



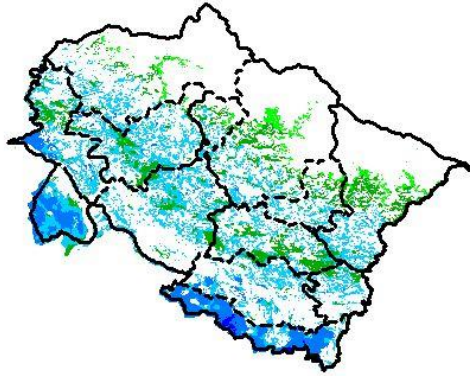
Agricultural vigour is good in central and Northern part of West Bengal, whereas rest of the state shows moderate NDVI.

Uttar Pradesh



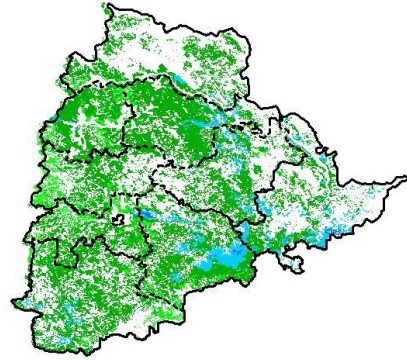
Agricultural vigour is very good in major parts of Uttar Pradesh. whereas few patches in southern part shows moderate values of NDVI.

Uttarakhand



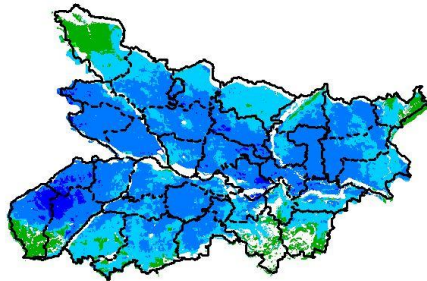
Agricultural vigour is moderate over entire state of Uttarakhand, whereas few patches in south and west part shows very good values of NDVI.

Telangana



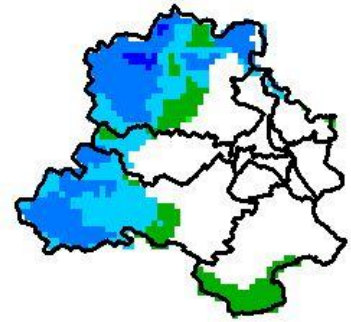
Agriculture vigour is good over Eastern parts of Telangana. Rest of the state shows moderate values of NDVI.

Bihar



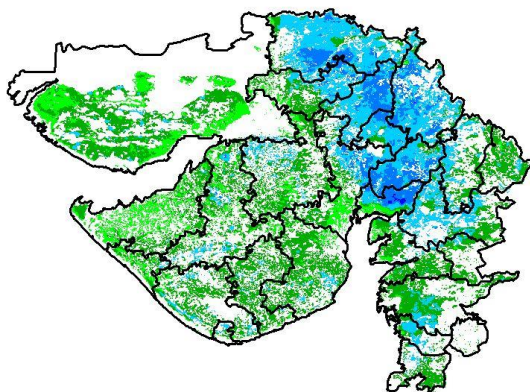
Agriculture vigour is very good over major parts of Bihar whereas south western part shows patches of moderate NDVI values.

Delhi



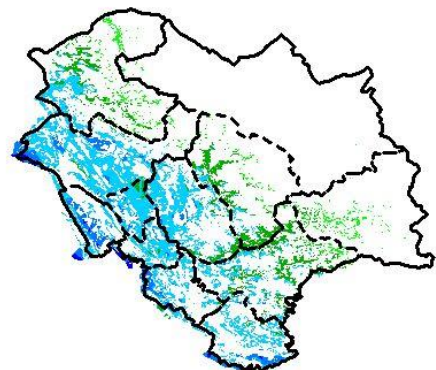
Agriculture vigour is moderate all over Delhi, whereas few patches over west show very good vigour of NDVI.

Gujarat



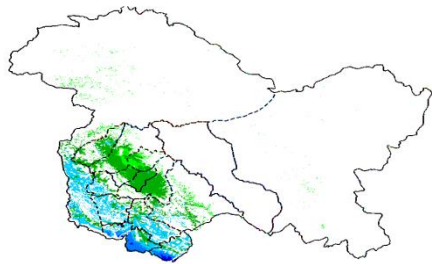
Agriculture vigour is moderate in Kutch and Saurashtra whereas, good agricultural vigour is observed over Gujarat region.

Himachal Pradesh



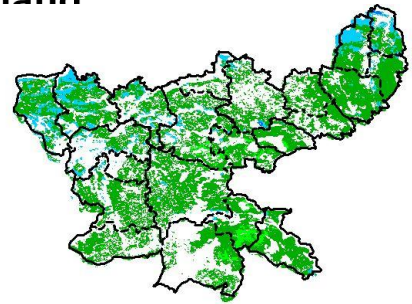
Agriculture vigour is good over western and southern parts of Himachal Pradesh, whereas rest of the state shows moderate values of NDVI.

Jammu & Kashmir



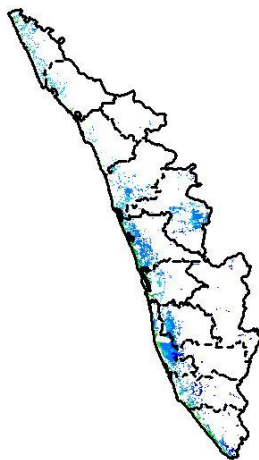
Agriculture vigour is good over entire state of Jammu & Kashmir.

Jharkhand



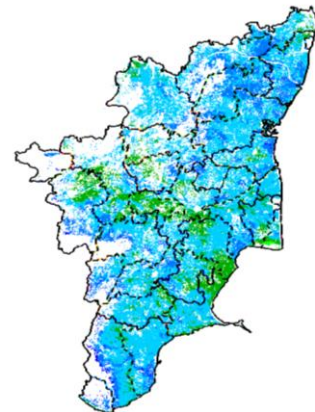
Agriculture vigour is moderate over entire state of Jharkhand.

Kerala



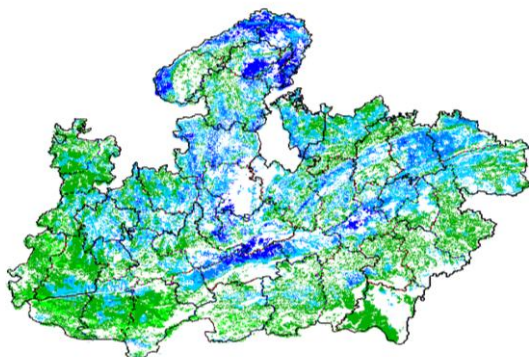
Agriculture vigour is good over entire state of Kerala.

Tamil Nadu



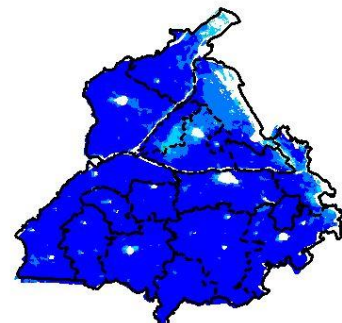
Agricultural vigour is good over major part of Tamilnadu.

Madhya Pradesh



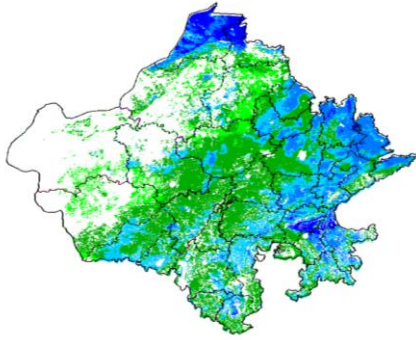
Agriculture vigour shows very good values over northern and central part of Madhya Pradesh in patches and rest of the state shows moderate values of NDVI.

Punjab



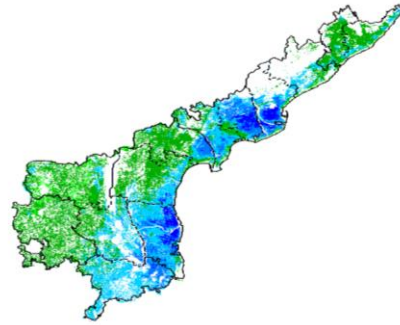
Agricultural vigour is very good over entire state of Punjab.

Rajasthan



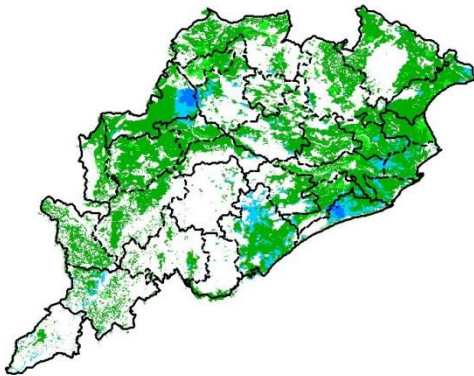
Agriculture vigour is moderate in central part , good agricultural vigour is observed over eastern region and very good in northern parts of Rajasthan.

Andhra Pradesh



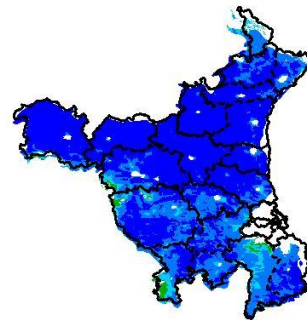
Agriculture vigour is very good over north-eastern part of Andhra Pradesh whereas western parts shows moderate values.

Odisha



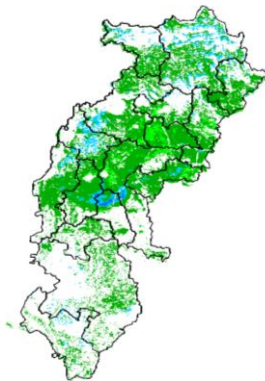
Agricultural vigour is good in patches of central parts of Odisha where North eastern part shows moderate values of NDVI.

Haryana



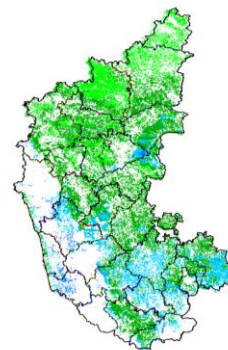
Agriculture vigour is very good over northern parts of Haryana and good values are observed in southern parts of state.

Chhattisgarh

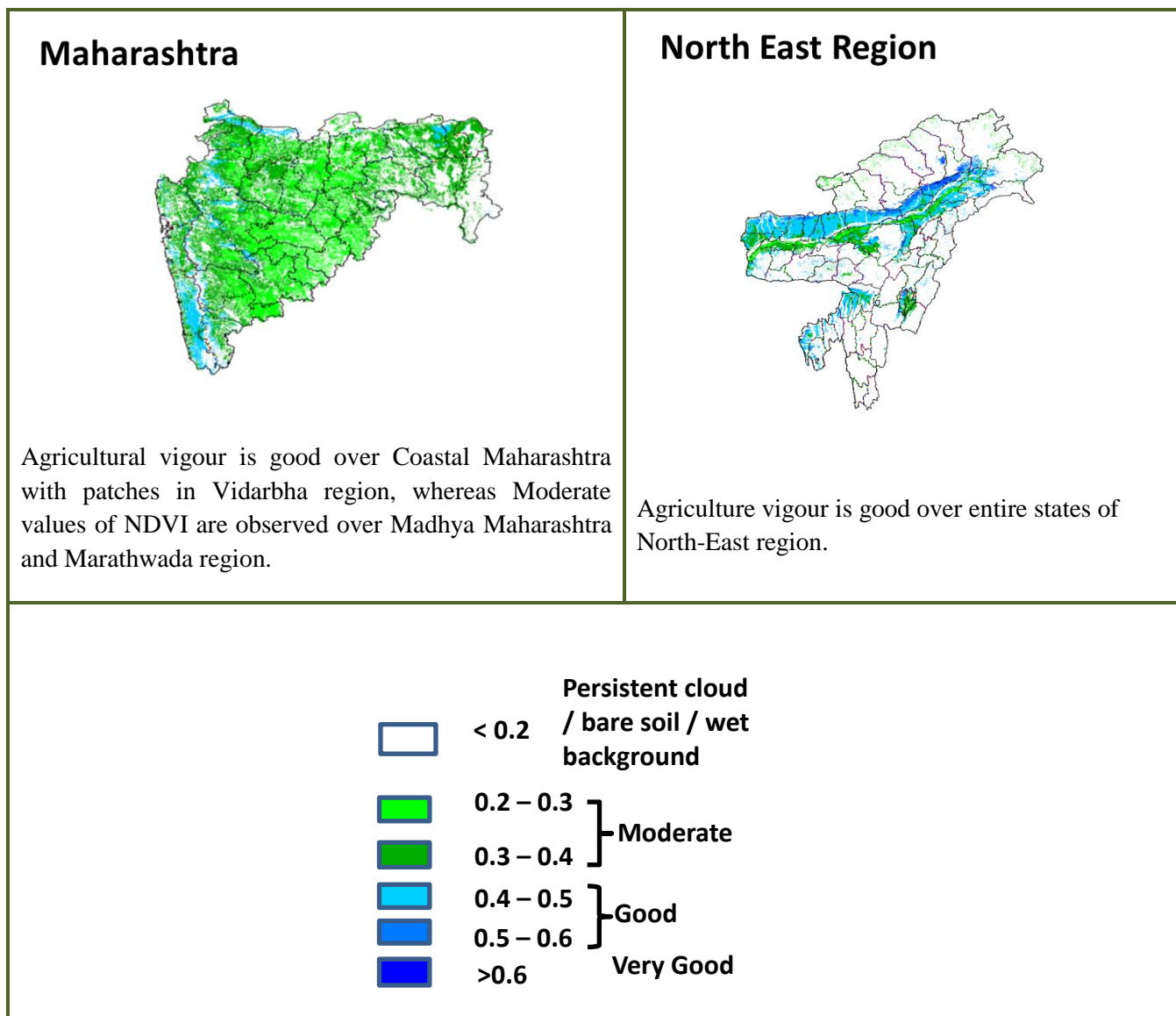


Agriculture vigour is good in patches of southern parts of state whereas agriculture vigour is moderate in major parts of Chhattisgarh.

Karnataka



Agriculture vigour is good over southern part of Karnataka state. Rest of the state shows moderate values of NDVI.



Annexure III

Tamil Nadu

Sesame: TMV 4, TMV 7 and VRI 1

Assam

Early *ahu* rice: semi dwarf *ahu* rice varieties like Luit, Kopilee, Cauvery, Culture -1, Rasi, Banglami, Puthichapali, Nilajee, Hasakumra.

Early *ahu* rice (for low lying area) : IR-50, Pusa 2-21, Rasi, Culture -1, Luit, Kopilee (Semi-dwarf varieties); Rongadoria, Dubaichenga, Nilajee (Tall varieties)

Capsularis jute: JRC 321 and UPC 94.

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

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

Sugarcane: Kolong, Luhit, Dhansiri, Co 1148.

Okra: Pusa Sawani, Arka Anamika, Parbhdani Kranti.

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

Sponge gourd: Pusa Chikni or other local varieties.

Bihar:

Spring maize: Suwan, Deevki, Ganga-11, Shaktiman-1 and Shaktiman-2.

Green gram: Pusa Vishal, Samrat, SML-668, Sona.

Black gram: Pant U-19 and Pant Urd-31, Uttra and Navin.

Odisha

Sugarcane: Nilamadhaha, Sabitri, Co 7508, Co 7704, Co 62175, Co 740, Co 7219, CoJ 8201, Co 975, Co 7706, Co 8402, Co 62175.

Groundnut: Smruti, AK 12-24 TAG

Jharkhand

Lentil: P.L.-406, P.L.-639, K.L.S -218,K-75
Barley: Jyoti,Ratna,D.L.-36,B.R.-32
Linseed: Sweta,Shubhra, T-397
Field Pea: Rachna,DDR-23, Swarnrekha
Onion: N-53,Pusa red,Arka nicketan, Arka kalian
Gram: KAK-2, ICC-2,Pusa 256, Pusa-372

Jammu & Kashmir

Cabbage: Golden Acre, Pride of India and PusaMukta.
Cauliflower: Giant Snow Ball, Pant Gobh 2 & 3 and Pusa Synthetic.
Pea: AP-1, Bonnevillea, Rachna and Arkel);
Lentil: L-4147, L-9/12,PL-406)
Wheat(late sown): PBW-175, PBW-396, RSP-81(Jitto)

Uttarakhand

Sugarcane: Pant 84211, Co-238, Co-241, Co Pant 3220, COS-8436, COS-88230 etc. and medium to late sown varieties like Co Pant 90223, Co Pant-96219, COS-97222, COS-767, COS-1148, COS-96268 etc.
Capsicum: California Vander, Pus Dipti, Anupam. Heera, Indira, Supriya & Bharat.
Brinjal: (brinjal-4, ARU-1 etc) and potato (Kufri Jyoti, Kufri Ashok & Kufri Anand etc.
Tomato: Tomato-3, Pant T-3, Him Sona, Him Shikhar etc variety in nursery).

Himachal Pradesh

Cauliflower: snowball and Giant snowball.
Radish:Japanese white, Chinese pink and mino early white
Turnip: PTWG-1
Carrot:Pusakesar
Fenugreek :I.C. 74, kasoori.
Peas :Mater ageta-6 (early variety).
Cabbage:Pride of India, golden achor and hybrid

East Uttar Pradesh

Sugarcane: coj-64, cos-96268, cos-98231, cos-767, cos-84, cos-32, copant-84212, Ko.Sha.-88230, 95255, Ko.Sha.-95436, 01235.
Tomato: pusa early, pusa ruby, HS 101, Pant Ta-2, Azad Ta-2, Narendra Tamatar-1,2,4,5,6
Cauliflower: pusaDipali.
Okra:PusaSawani, VarsaUphar, Azad kranti.
Brinjal: Pant Samrat, Pant Rituraj, Pusa hybrid-6.
Pea: Rachna, Pantmatar-5, Aparna, Malviya Matar-2, Malviya Matar-15, Shikha and Sapna(K.P.M.R.-144-1), Ta-163, Jay(K.P.M.R.522), Hariyal, Pant P-42, Aman 2009;
Cabbage: Japani, PusaDieepali, PusaKartiki
Potato: KufriChandramukhi, KufriSadabahar, KufriAshoka,kufrijawahar, kufirilalima, kufribahar, kufribadshah, kufrisatlaj, kufrianand, kufri chipsona-1, kufri chipsona-3, kufrisinduri, kufrisurya.
Lentil: Ta-8, Pant L-406, and 234.
cowpea: Lobia-263 & Pusa phaguni
Chilli: Pant C-1, Jwala and Sadabahar etc.
Grapes: parlet, beauty seedless, pusa seedless.
Maize: nawjyoti, kanchan, gaurav, surya, navin, shweta, Azad uttam, prakash, dikalb-7074, payridikalp-8144, dakkan-115, mmh-135, pro-4212, ganga-11, pusa, makka-2, J.H.-3459,
Urad: TA-9, narendra urad-1, Azad urad-1, Uttara, azad urad-2, shekhar-2
Mung: k-851 and JM-721.

West Uttar Pradesh

Ladies finger:VRO-6, VRO-5.
Pigeon pea:T-21, UPAS 120.
Sugarcane: ko.sha 88230, ko.sha 8436, ko 0238, ko.sha 07250 or U.P. 0512.
Barseem: V.L.1,V.L.10, maskavi, jai,K-8027, K-9565, Mandakini.
Onion: pusa red, pusa white.
Vegetable Pea: Azad P-3, arkil, Jai, Indra, Prakash.
Sugarcane:The mid and late maturing varieties of sugarcane: CO Pant 211, Co Sa 687 and Co Sa 8436.
The varieties recommended in areas with poor water drainage: B.O.54 and B.O.91.

Punjab

Sugarcane: CoJ-85, CoJ-83, CoJ-64 (early maturing), COH-119, CoJ-88, CoS-8436 for and CoJ-89,CO118, COJ85, COJ64.
Rice: Pusa-44, T.R-112 and T.R-113.
Onion: Punjab Naroya, Punjab White and PRO 6.
Radish: Punjab Pasand and Japanese white.
Turnip: L-1.
Carrot: Punjab Black Beauty, Punjab Carrot Red and PC-34.

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

Delhi

Oat : J.H.O-822, O.L.-9, Pusa oat-5.
Barseem: Vardan, Buland Barseem-1, Masakavi, J.B-3;
Lentil: Pusa Masoor -5 (L-4594).
Radish: Japani White, Hill queen, French Radish;
Spinach: Pusa Bharti.
Amaranths: Pusalal Chaulai, Pusa Kiran.
Ladyfinger: Pusa A-4.
Pea: Azad Matar-1, Pant Matar-3 and Bournville.
Carrot: Pusa Mridula, Japanese White and Pusa Himani.
Radish: Japani White, Hill queen, French Radish.
Spinach: All Green, Pusa Bharti;
Fenugreek: Pusa Kasuri;
Coriander: Pant Haritama, Hybrids.
Turnip: Pusa Swati, Local Red variety.

West Rajasthan

Isabgol: RI 89 & GI-2.
Fenugreek: R Mt 1 & R Mt 305.
Barley: RD 2052, RD 2035 (suitable for saline and alkali soils) and RD 2715 (dual purpose), RD 2058, 2503, 103, NDB 1173.
cumin: GC 4, RZ -19, RZ 223, RZ 19, 209, 223 and GC 4b.
Cowpea: RC-19, RC-101, RCP-27.
Oat: OS 6, OS 9.
Berseem: BL 10, BL 22.
Cauliflower: Pusa snow ball K-1, Hisar-1, Dania and Selection-7.
Radish: Pusa Rashmi.
Carrot: Pusa Keshar.
Zaid moong: K-851, PDM-11, SML-668 Pusa Baisakhi, RMG-62, RMG-268 etc.

East Rajasthan

Muskmelon Sugar baby: Durgapura madhu, Punjab sunheri, Punjab hybrid, arkajeet, hara madhu, pusa madhuras.
Water melon: Durgapura meetha, durgapura kesar, arka jyoti (hybrid), madhu (hybrid).
Tinda: Beekneri green, Dil pasand, arka tinda.
Kakri: Lucknow ageti and arka sheetal.
Zaid Pearl millet (fodder): raj bajra chari, rajko Zaint, L-72, L-74.
Zaid sorghum (fodder): Raj chari-3, Raj chari-1, Raj chari-2 for single cutting and SSG59-3, M.P. chari for many cutting.
Okra: Pusa Savani, Arka anamika, Arka Abhya, Aajad kranti, Prabhni kranti, Pusa-A-4.
Radish: Pusa Chetki, Japanese white & hill queen.
Carrot: Pusa Keshar
Cowpea: Short durC-152, RS-9, FS-68, RC-19 and RC-101, C-152, RS-9.
Gram: RSG-888, 895 (Anubhav), CSJD-884 (Aakash), RSG-44, Pusa-209, C-235, H-208, Pratap raj chana, RSG-888, Dahod yellow, ICCV-10 and Pratap Chana-1.
Cauliflower: Pusa snow ball K-1, Hisar-1, Dania and Selection-7.
Onion: Punjab safed goal, Udaipur 102, nasik red.
Lucerne : Anand-2, LLC-3, RL-88 & Type-9.
Berseem: Muskavivardan and Pusa Jiant.
Barley : RD-2552, RD-2052, RD-2035, RD-2503, RD-2715, RD-2660 and Jyoti.
Summer groundnut: T.A.G.24, T.G.37A, G.G.2, D.H.86.

Gujarat

Summer Groundnut: GG 2, GG 4 and GG 20.
Summer Sesame: G.Til-1, G.Til-2, G.Til-3.
Brinjal: Junagadh oblong, Junagadh long, Guj. Bringle-2.
Lady's finger: Guj. Hy.-1 & 2.
Ridge gourd: Pusa nasdar, Jaipuri.
Bottle gourd: Junagadh tender long, Pusa summer prolific long.
Sponge gourd: Pusa chikni.
Bitter gourd: Priya, Pusa domosmi.
Cluster bean: Pusa sadabahar, Pusa navbahar, IC-11388.
Water melon: Sugar baby, Arka jyoti.
Pearl millet: GHB-526 and GHB-558.
Green gram: GM-2, 3, GM-4.
Black gram: Guj-1, T-9.

Madhya Pradesh

Okra: Pusa Makhamali, Pusa Sawani, A-4, Parbhani Kranti.
Moong: HUM -1, PDM -139, TJM-3, SML-668.