



National Agromet Advisory Service Bulletin



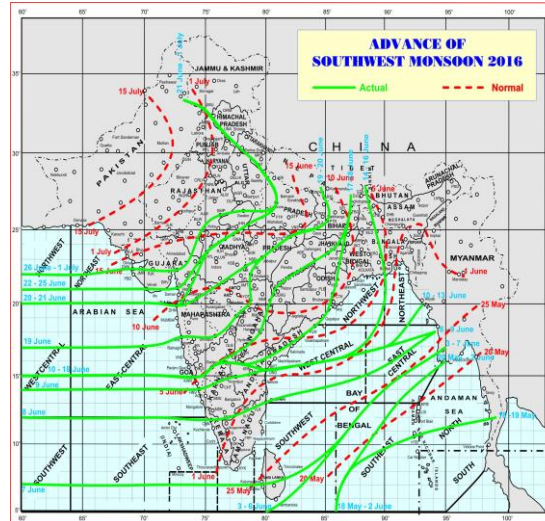
Friday 1st July 2016
(For the period 1st to 5th July 2016)



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

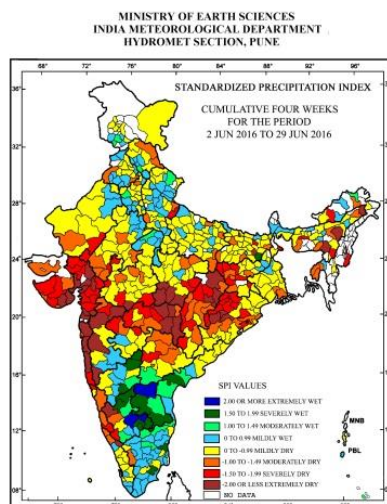
Weblink For
District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Monsoon Watch



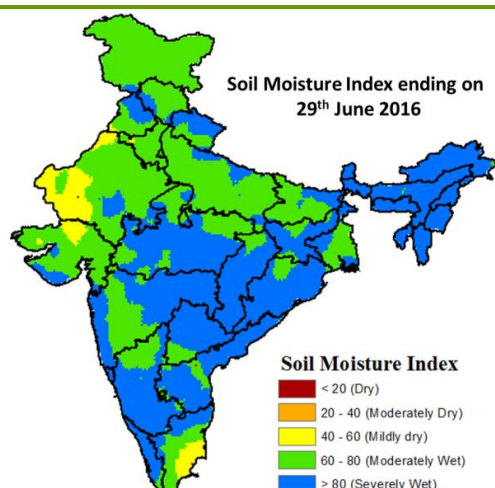
- The Northern Limit of Monsoon (NLM) continue to pass through Lat. 22.0°N/Long. 60.0°E, Lat. 22.0°N/Long.65.0°E, Dwarka, Vallabh,Vidyanagar, Sawai Madhopur, Gwalior, Lucknow, Pantnagar, Dehradun, Una and Jammu.
- Conditions are favourable for further advance of southwest monsoon in some more parts of East Rajasthan, remaining parts of Himachal Pradesh, Uttarakhand, West Madhya Pradesh, Uttar Pradesh and most parts of Punjab & Haryana, entire Chandigarh & Delhi and some parts of West Rajasthan during next 48 hours.

Standardised Precipitation Index Four Weekly for the Period 2nd to 29th June 2016



- Extremely/severely wet conditions experienced in few districts of Andhra Pradesh; Karnataka; Banka district of Bihar; Cuddalore, Sivaganga districts of TamilNadu.
- Extremely/Severely dry conditions experienced in most districts of Gujarat Region; Konkan; many districts of Saurashtra & Kutch; few districts of Odisha; Jharkhand; Madhya Pradesh; Maharashtra; Chhattisgarh; East Kameng district of Arunachal Pradesh; Cachar, Goalpara, Karbi Anglong, Tinsukia districts of Assam; Jaintia Hills district of Meghalaya; South Dinajpur district of West Bengal; Monghyr, Saharsa, Sheohar districts of Bihar; Shahjahanpur district of Uttar Pradesh; Pali, Sirohi, Pratapgarh districts of Rajasthan; North Goa district of Goa; Medak district of Telangana; Kodagu, Shimoga districts of Karnataka; Wynad district of Kerala.
- Moderately dry conditions experienced in most districts of Tripura; many districts of Meghalaya; Saurashtra & Kutch; few districts of Chhattisgarh; Telangana; East Siang district of Arunachal Pradesh; Nagaon, Dibrugarh districts of Assam; Howrah, South 24 Parganas, Kolkata districts of West Bengal; Cuttack, Kalahandi, Kendrapara, Nayagarh, Kandhamal districts of Odisha; Bokaro, Lohardaga, Simdega, Latehar districts of Jharkhand; Bhabua, Katihar, Nawada, Saran districts of Bihar; Chandauli, Deoria, Siddharth Nagar, Sonbhadra, Mathura, Pilibhit districts of Uttar Pradesh; Kurukshetra district of Haryana; Ferozepur, Patiala districts of Punjab; Kinnaur, Lahaul & Spiti districts of Himachal Pradesh; Barmer, Banswara, Dungarpur, Tonk, Udaipur, Baran districts of Rajasthan; Bhopal, Rajgarh, Ujjain, Rewa, Satna districts of Madhya Pradesh; Mumbai Suburban district of Konkan; Nandurbar, Jalna, Yeotmal, Gondia, Washim districts of Maharashtra; Coimbatore district of TamilNadu; Uttara Kannada, Udupi, Chikmagalur districts of Karnataka; Cannur, Kasargod district of Kerala.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

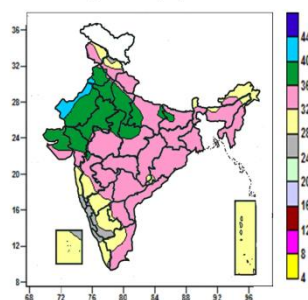
Soil Moisture Index for the week ending on 29th June 2016



- Soil Moisture Index indicates severely wet condition in North-East Region, Uttarakhand, Odisha, Kerala, Maharashtra, Karnataka, Andhra Pradesh, Telangana, Madhya Pradesh and Chhattisgarh. Mild dry condition in few districts of Rajasthan, Tamil Nadu and Gujarat. Rest parts of the country shows moderate wet condition.

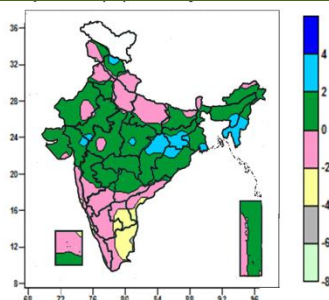
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 29.06.2016

Actual Mean Maximum Temperature (°C) in India for the week ending 29.06.2016



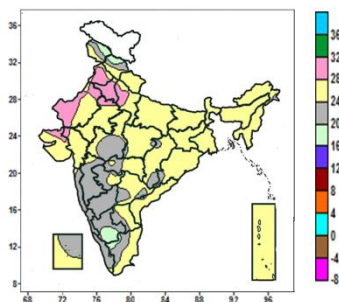
- Mean maximum temperature was between 40 to 44°C over some parts of West Rajasthan and isolated pockets of Punjab.
- Mean maximum temperature was between 32 to 40°C over rest of the country except over Sikkim, Coastal and South Interior Karnataka, Andaman & Nicobar Islands, Lakshadweep, many parts of Arunachal Pradesh, Konkan & Goa, North Interior Karnataka, Kerala, some parts of Jammu & Kashmir, Himachal Pradesh, Assam, Madhya Maharashtra, Tamil Nadu and isolated pockets of Chhattisgarh, Odisha, Sub-Himalayan West Bengal, Nagaland and Rayalaseema where it was between 24 to 32°C.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 29.06.2016



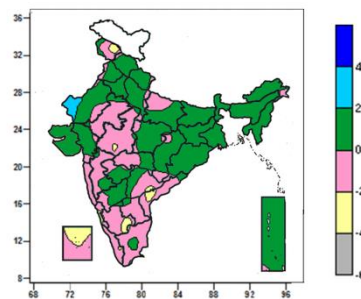
- Mean maximum temperature was above normal by 2 to 4°C over Manipur, Mizoram, Tripura, many parts of Jharkhand, some parts of Himachal Pradesh, Assam & Meghalaya, Chhattisgarh, Odisha and isolated pockets of East Rajasthan, Gujarat Region, East Madhya Pradesh, Gangetic West Bengal.
- It was normal to near normal over rest of the country except many parts of Rayalaseema, Tamil Nadu, some parts of South Interior Karnataka, Coastal Andhra Pradesh and isolated pockets of Konkan, Coastal Karnataka, Kerala and Lakshadweep where it was below normal by 2 to 6°C.

Actual Mean Minimum Temperature (°C) in India for the week ending 29.06.2016



- Mean minimum temperature was between 16 to 20°C over some parts of South Interior Karnataka, Jammu & Kashmir, Himachal Pradesh and isolated pockets of Tamil Nadu.
- Mean minimum temperature was between 20 to 28°C over rest of the country except many parts of Punjab, Haryana & Delhi, West Rajasthan, some parts of West Uttar Pradesh and isolated pockets of East Rajasthan, Gujarat Region where it was between 28 to 32°C.

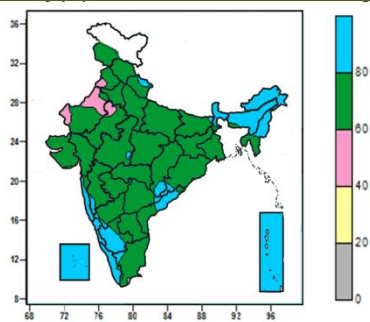
Mean Minimum Temperature (°C) Anomaly in India for the week ending 29.06.2016



- Mean minimum temperature was above normal by 2 to 4°C over some parts of West Rajasthan.
- Mean minimum temperature was normal to near normal over rest of the country except some parts of Lakshadweep, isolated pockets of Jammu & Kashmir, West Madhya Pradesh, Telangana, Coastal Andhra Pradesh, South Interior Karnataka, Coastal Karnataka, Kerala and Tamil Nadu where it was below normal by 2 to 4°C.

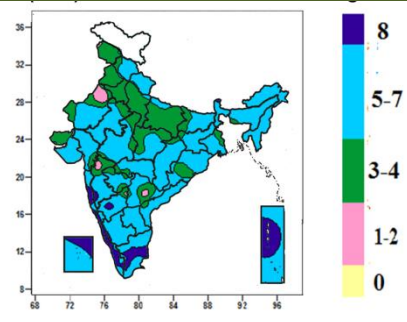
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 29.06.2016

Relative Humidity (%) over India for the week ending 29.06.2016



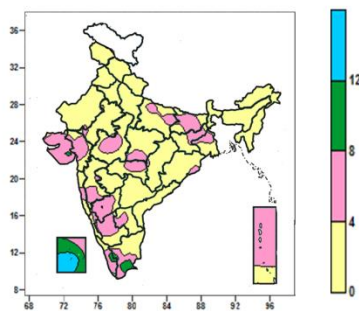
- Mean Relative humidity was above 80% over Sikkim, Arunachal Pradesh, Nagaland, Manipur, Coastal Karnataka, Lakshadweep, Andaman & Nicobar Islands, many parts of & Sub Himalayan West Bengal, Assam & Meghalaya, Konkan & Goa, South Interior Karnataka, Kerala, some parts of Uttarakhand, Chhattisgarh, Coastal Andhra Pradesh and isolated pockets of Bihar, West Madhya Pradesh, Madhya Maharashtra, Odisha, Telangana, North Interior Karnataka and Tamil Nadu.
- Mean Relative humidity was between 60 to 80% over rest of the country except some parts of West Rajasthan and isolated pocket of Punjab, East Rajasthan where it was between 40 to 60%.

Cloud amount (okta) over India for the week ending 29.06.2016



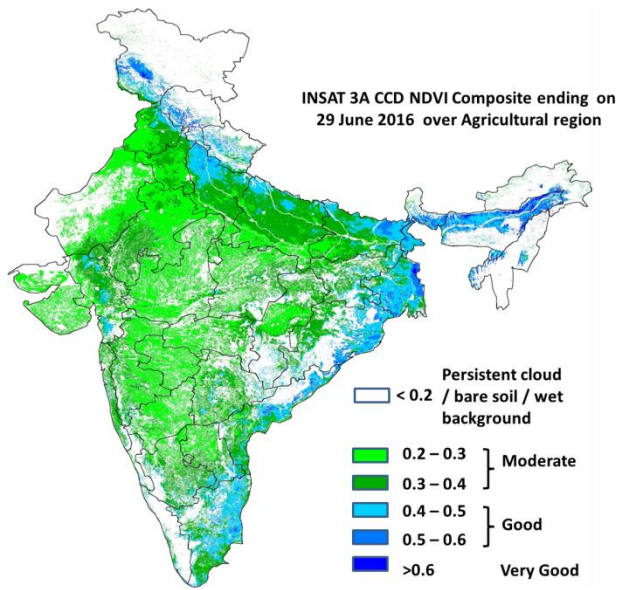
- Sky remained overcast (8 okta) over many part of Coastal Karnataka, Kerala, some parts of Sikkim, Konkan & Goa, Lakshadweep, Tamil Nadu, Andaman & Nicobar Islands and isolated pockets of Gangetic West Bengal, Madhya Maharashtra, Interior Karnataka.
- Sky remained generally cloudy (5-7okta) over Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Sub-Himalayan West Bengal, Saurashtra, Rayalaseema, many parts of Himachal Pradesh, Uttarakhand, Bihar, Sikkim, Assam & Meghalaya, Rajasthan, Gujarat Region, Madhya Pradesh, Chhattisgarh, Vidarbha, Jharkhand, Gangetic West Bengal, Odisha, Konkan & Goa, Madhya Maharashtra, Marathwada, Telangana, Coastal Andhra Pradesh, Interior Karnataka, Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands, some parts of Coastal Karnataka, isolated pockets of Jammu & Kashmir, Uttar Pradesh, Kerala.
- Sky remained partly cloudy/mainly clear (3-4 okta/1-2 okta) over rest of the Country.

Wind speed (knots) over India for the week ending 29.06.2016



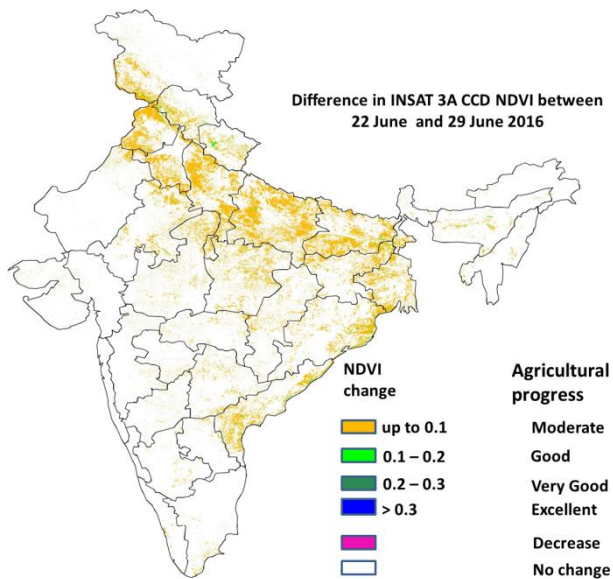
- Mean wind speed was between 12 to 16 knots over some part of Lakshadweep.
- Mean wind speed was between 8 to 12 knots over some parts of Lakshadweep, Tamil Nadu and isolated pockets of Saurashtra and Kerala.
- Mean wind speed was between 4 to 8 knots over many parts of Bihar, Gujarat, Interior Karnataka, Kerala, Andaman & Nicobar Islands, some parts of East Uttar Pradesh, Jharkhand, Gangetic West Bengal, Madhya Pradesh, Vidarbha, Konkan, Madhya Maharashtra, Rayalaseema, Tamil Nadu and isolated pockets of Rajasthan, Chhattisgarh, Odisha, Coastal Karnataka, Lakshadweep.
- Mean wind speed was less than 4 knots over rest of the country.

INSAT 3A CCD NDVI COMPOSITE ENDING ON 29th June 2016 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour is very good in West Bengal, some pockets of East Bihar, west Uttar Pradesh, coastal Kerala, patches in East Uttar Pradesh, Gujarat, Telangana, Coastal Andhra Pradesh and Tamil Nadu where NDVI varies from 0.4 to 0.6. Agricultural growth was good over most parts of Uttar Pradesh and Bihar and some parts of Gujarat, east Rajasthan, Punjab and Haryana, Coastal Odisha (NDVI: 0.3-0.4). NDVI remains within the range of 0.2 to 0.3 over most parts of rest of the country.

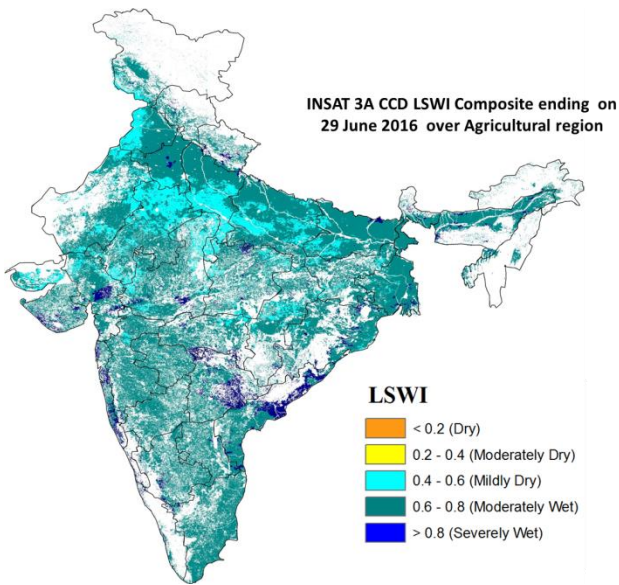
Difference in INSAT 3A CCD NDVI between 22nd and 29th June 2016



- Moderate progress (up to 0.1) in NDVI was observed over some patches in Haryana, Punjab, Uttar Pradesh, West Bengal, in some patches of East Madhya Pradesh, Coastal Odisha, Coastal Andhra Pradesh, Bihar and North East.

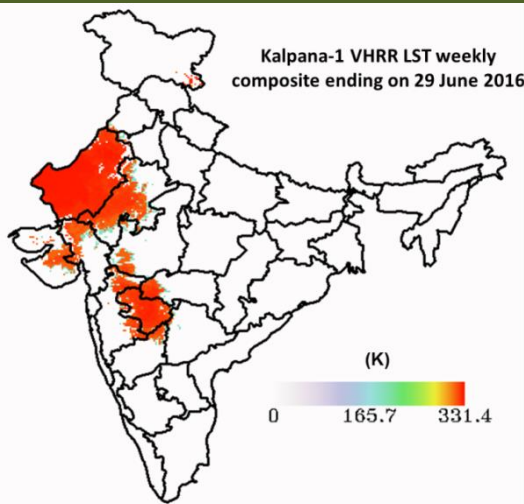
- INSAT 3A CCD NDVI composite maps for the week ending on 29th June 2016 for different States are given in Annexure II.

INSAT 3A CCD LSWI COMPOSITE ENDING ON 29th June 2016 OVER AGRICULTURAL REGION OF INDIA



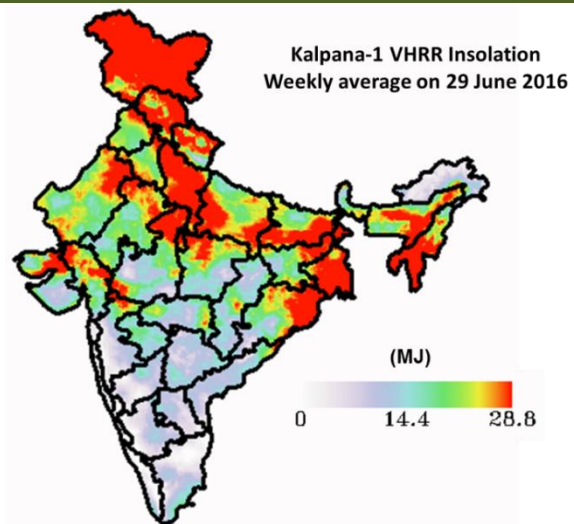
- Severely wet conditions are observed in coastal Andhra Pradesh, patches in Telangana, Gujarat and coastal Maharashtra. Moderately wet conditions are observed in Maharashtra, Karnataka, coastal Andhra Pradesh, West Bengal, Odisha, Uttar Pradesh, Bihar, Gujarat, west Rajasthan, Haryana and Punjab. Patches in east Rajasthan, north Madhya Pradesh, regions in Punjab and wet Uttar Pradesh show mild dry conditions.

Land Surface Temperature (LST)



- The LST is found to be high over the western region of India. LST range from 300-330 K over the States of Rajasthan, patches in Gujarat and Maharashtra.

Weekly Insolation



- The average surface insolation is found to be High (22-29 MJ) over parts in west Rajasthan, parts of north Madhya Pradesh, Jammu Kashmir, east Uttar Pradesh, Bihar, west Bengal and costa Odisha. Low Insolation is observed over the western Coastal region of India, entire southern peninsular region.

Weather Forecast for next 5 days valid upto 0830 hours of 6th July 2016

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- No significant change in maximum temperatures likely over northwest, west and central India.

5 Day Rainfall Forecast (MID DAY) 1st July 2016

Met Sub-divisions	01 July	02 July	03 July	04 July	05 July
1. Andaman & Nicobar Islands	FWS	FWS	SCT	SCT	SCT
2. Arunachal Pradesh	WS	WS	WS	FWS	SCT
3. Assam & Meghalaya	WS	WS	WS	WS	FWS
4. N.M.M. & T.	FWS	WS	WS	WS	FWS
5. S.H. West Bengal & Sikkim	WS	WS	WS	WS	FWS
6. Gangetic West Bengal	FWS	WS	WS	FWS	FWS
7. Odisha	FWS	WS	FWS	FWS	FWS
8. Jharkhand	SCT	WS	FWS	FWS	FWS
9. Bihar	SCT	WS	WS	WS	FWS
10. East Uttar Pradesh	FWS	WS	WS	FWS	FWS
11. West Uttar Pradesh	FWS	WS	WS	FWS	FWS
12. Uttarakhand	WS	WS	WS	FWS	FWS
13. Haryana, Chd & Delhi	FWS	WS	WS	FWS	FWS
14. Punjab	SCT	WS	WS	FWS	FWS
15. Himachal Pradesh	FWS	WS	WS	FWS	FWS
16. Jammu & Kashmir	SCT	WS	FWS	SCT	SCT
17. West Rajasthan	ISOL	ISOL	ISOL	ISOL	ISOL
18. East Rajasthan	FWS	WS	FWS	SCT	ISOL
19. West Madhya Pradesh	SCT	FWS	FWS	SCT	SCT
20. East Madhya Pradesh	SCT	FWS	FWS	SCT	SCT
21. Gujarat Region	ISOL	ISOL	FWS	FWS	SCT
22. Saurashtra & Kutch	SCT	FWS	FWS	ISOL	ISOL
23. Konkan & Goa	WS	WS	WS	WS	WS
24. Madhya Maharashtra	SCT	SCT	FWS	FWS	SCT
25. Marathwada	SCT	SCT	SCT	SCT	SCT
26. Vidarbha	SCT	SCT	SCT	SCT	SCT
27. Chhattisgarh	FWS	FWS	FWS	FWS	FWS
28. Coastal Andhra Pradesh	SCT	SCT	SCT	SCT	SCT
29. Telangana	SCT	SCT	ISOL	SCT	SCT
30. Rayalaseema	ISOL	ISOL	ISOL	ISOL	ISOL
31. Tamil Nadu & Puducherry	ISOL	ISOL	ISOL	ISOL	ISOL
32. Coastal Karnataka	WS	WS	WS	WS	WS
33. North Interior Karnataka	SCT	ISOL	SCT	SCT	SCT
34. South Interior Karnataka	SCT	SCT	SCT	FWS	FWS
35. Kerala	WS	WS	WS	WS	WS
36. Lakshadweep	SCT	SCT	FWS	FWS	FWS

% 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

- **01 July (Day 1):** Heavy to very heavy rain very likely at isolated places over Uttarakhand, Sub-Himalayan west Bengal & Sikkim and Konkan & Goa; heavy at isolated places over Himachal Pradesh, Haryana, Chandigarh & Delhi, Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Chhattisgarh, Odisha, Assam & Meghalaya, Arunachal Pradesh and Coastal Karnataka.
- **02 July (Day 2):** Heavy to very heavy rain very likely at a few places over Uttarakhand; at isolated places over Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya and Konkan & Goa; heavy at isolated places over Jammu & Kashmir, East Rajasthan, Madhya Pradesh, Chhattisgarh, Odisha, Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura and Coastal Karnataka.
- **03 July (Day 3):** Heavy to very heavy rain very likely at a few places over Sub-Himalayan West Bengal & Sikkim; at isolated places over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, Arunachal Pradesh, Assam & Meghalaya and Konkan & Goa; heavy at isolated places over Jammu &

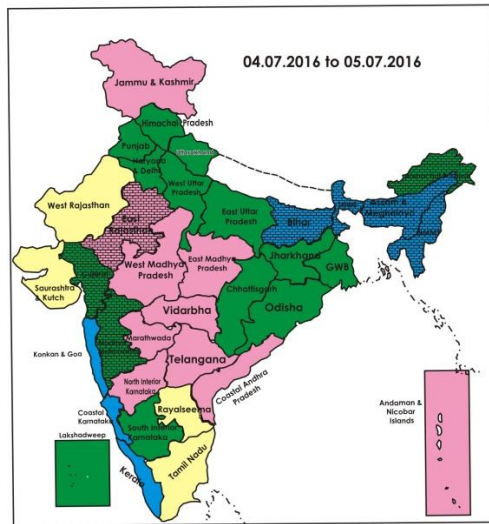
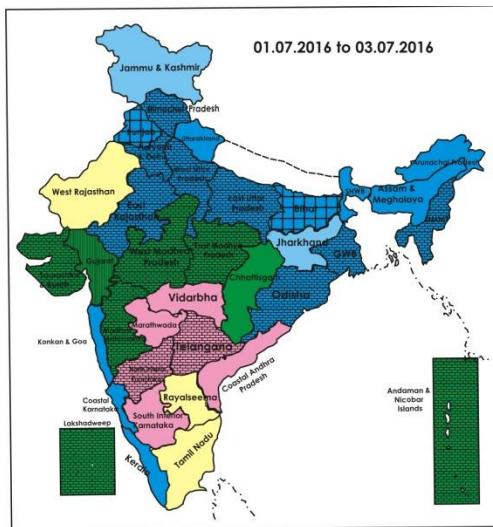
Kashmir, Himachal Pradesh, East Uttar Pradesh, Madhya Pradesh, Bihar, Jharkhand, Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura, Coastal Karnataka and Kerala.

- **04 July (Day 4):** Heavy to very heavy rain very likely at isolated places over Konkan & Goa; heavy at isolated places over Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Gangetic West Bengal, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Karnataka and Kerala.
- **05 July (Day 5):** Heavy rain very likely at isolated places over Bihar, Sub-Himalayan West Bengal & Sikkim, Konkan & Goa and Coastal Karnataka.

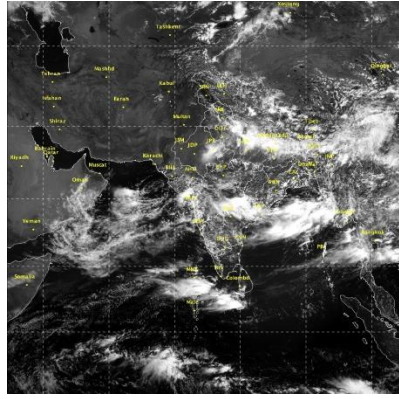
Weather Outlook for subsequent 2 days from 6th to 8th July 2016

- Rainfall at most places along west coast, centre, east & northeast India.
- Rainfall at many places very likely over northern plains and at a few places over Peninsular India.

Weather Forecast Map (valid upto 0830 hours of 6th July, 2016)



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



Salient Advisories

Major Advisories

- Utilising the realised and expected rainfall, undertake the following agricultural activities:
- In **Kerala**, continue transplanting of *Virippu* rice in Palakkad, Thrissur, Ernakulam, Thiruvananthapuram, Kollam, Kannur, Malappuram and Kozhikode districts and direct sowing of rice in Alappuzha, Kottayam districts.
 - In **Coastal Karnataka**, continue transplanting of rice in Dakshina Kannada and Udupi districts of Coastal Zone. Continue nursery sowing of rice and undertake land preparation for transplanting in Uttar Kannada district.
 - In **South Interior Karnataka**, continue nursery sowing of rice, sowing of maize in Chickmangaluru, Hassan, Shimoga districts, continue sowing of red gram, maize, groundnut and ragi in Bengaluru Rural, Chikaballapura and Kolar districts and direct sowing of ragi, red gram, maize, sesame, cowpea, green gram and black gram in remaining districts.
 - In **North Interior Karnataka**, in Bidar district, continue nursery sowing of rice and sowing of soybean, green gram, blackgram, sorghum, pigeon pea, continue sowing of red gram, black gram, green gram, cotton and maize in Koppal district. In Dharwad, Belagavi and Haveri districts of North Transition Zone of Karnataka, continue sowing of green gram black gram, soybean sorghum, maize, cotton.
 - In **Costal Andhra Pradesh**, continue land preparation and sowing of red gram, black gram, green gram and cotton. Continue nursery sowing of rice in Nellore district and sowing of *kharif* groundnut.
 - In **Royalaseema**, in Anantapur and Kurnool districts, continue land preparation and sowing of groundnut and undertake sowing of red gram, bajra and korra. In Chittoor and Kadappa districts, continue sowing of groundnut and red gram.
 - In **Telangana**, continue nursery sowing of rice. Undertake sowing of maize, soybean, green gram and black gram in North Telangana Zone and undertake sowing of rainfed jowar, maize green gram, black gram, red gram, soybean and cotton in the South Telangana Zone.
 - In **Assam**, continue nursery raising of *Sali* rice and sowing of groundnut in Lower Central and Upper Bramhaputra Valley Zone.
 - In **Meghalaya**, continue nursery sowing of *Sali* rice and sowing of groundnut, soybean, green gram, black gram and rajma.
 - In **Manipur**, continue nursery sowing of *kharif* rice and sowing of groundnut and black gram.
 - In **Mizoram**, continue nursery sowing of *kharif* rice, sowing of *kharif* green gram, black gram and rajma.
 - In **Tripura**, continue nursery sowing of *kharif* rice, sowing of groundnut and maize.

- In **West Bengal**: In Gangetic West Bengal, land preparation for nursery sowing of *Aman* rice and land preparation and direct sowing of rice in Coastal Zone. In Sub-Himalayan West Bengal, continue nursery sowing of *Aman* rice planting of ginger, turmeric and cardamom after current spells of heavy rain.
 - In **Odisha**, continue nursery sowing of medium duration rice varieties and undertake land preparation and sowing of cotton, groundnut, maize and arhar in uplands.
 - In **Bihar and Jharkhand**, continue nursery sowing of rice and onion, land preparation and sowing of maize.
 - In **Konkan**, continue transplanting with rice seedling of 21-25 days old in South Konkan. Drain out excess water from rice fields.
 - In **Madhya Maharashtra**, continue sowing of soybean and groundnut in Kolhapur, Satara and Sangli district. Continue nursery sowing of rice and sowing of maize, groundnut and soybean in Ahmednagar and Pune districts. Complete land preparation in Nasik, Nandurbar and Jalgaon districts and undertake sowing of soybean, red gram, green gram and onion only after receipt of sufficient rainfall. Undertake sowing of soybean, red gram, green gram in Dhule district at optimum soil moisture conditions in the field
 - In **Marathwada**, continue sowing of kharif soybean, pearl millet, cotton, tur and moong in Aurangabad, Latur, Osmanabad, Nanded, Parbhani, Hingoli, Beed and Jalna districts.
 - In **Vidarbha**, continue nursery sowing of *kharif* rice in Gondia, Chandrapur, Gadchiroli districts. Continue sowing of *kharif* soybean, cotton, tur and moong in Buldana, Akola, Washim, Amravati and Yavatmal districts.
 - In **East Madhya Pradesh**, continue nursery sowing of rice and sowing of red gram undertake sowing of soybean after receipt of sufficient rainfall.
 - In **Chhattisgarh**, continue nursery sowing of rice and direct sowing (broadcasting) of rice in Plain Zone. Undertake land preparation and sowing of red gram, soybean and maize.
 - In Eastern Plain Zone of **East Uttar Pradesh**, continue nursery sowing of rice and sowing of maize, urad and arhar.
 - In **Jammu & Kashmir**, continue transplanting of rice and sowing of maize.
 - In **Himachal Pradesh**, continue nursery sowing of rice and continue sowing of soybean and green gram.
 - In **Uttarakhand**, continue field preparation and transplanting of rice.
- Conditions are favourable for further advance of southwest monsoon in some more parts of East Rajasthan, remaining parts of Himachal Pradesh, Uttarakhand, West Madhya Pradesh, Uttar Pradesh and most parts of Punjab & Haryana, entire Chandigarh & Delhi and some parts of West Rajasthan during next 48 hours.
- In **West Madhya Pradesh**, continue land preparation and sowing of soybean and maize and in Gwalior, Bhind, Morena, Shivpuri, Guna, Ashoknagar and Sheopur districts, undertake sowing of pearl millet, red gram, green gram and black gram utilising the realised and expected rainfall.
 - In **West Uttar Pradesh**, continue land preparation and sowing of maize and pigeonpea expected rainfall.
 - In **Punjab and Haryana**, undertake field preparation and transplanting of rice.
 - In **East Rajasthan**, undertake land preparation and sowing of groundnut and maize.
 - In **Gujarat**, undertake land preparation and sowing of *kharif* crops like cotton and pigeon pea in Bharuch and Surat districts. Undertake sowing *kharif* crops in Narmada and Tapi districts after receipt of sufficient rainfall. Undertake sowing of cotton, groundnut, soybean, sesame, pigeon pea, and castor in Porbandar and Junagadh district of South Saurashtra Zone.

Detailed Zonewise Agromet Advisories

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



Banana



Land preparation/Sowing



Sugarcane



Rice

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala except Thiruvananthapuram, all districts of Coastal Karnataka, Haveri district of North Interior Karnataka, Ballari, Bengaluru Urban, Chikkamagaluru, Davangere, Hassan, Kodagu, Mysuru and Shivamogga districts of South Interior Karnataka, all districts of Coastal Andhra Pradesh except Prakasam, Cuddapah district of Rayalaseema; all districts of Telangana except Mahbubnagar, in Chennai, Coimbatore, Kancheepuram, Puducherry, Tiruvallur, Tiruvannamalai and Vellore districts of Tamil Nadu. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most places over Kerala and Coastal Karnataka during the period and at many places over South Interior Karnataka on 4th & 5th July, farmers are advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Undertake rain water harvesting.
 - As heavy rain is very likely at isolated places over Coastal Karnataka during the period and over Kerala on 3rd & 4th July, provide adequate drainage in standing crop fields to avoid water stagnation.
 - **Kerala:**
 - In Kerala, continue transplanting of *Virippu* rice in Thiruvananthapuram, Kollam, Kannur, Malappuram and Kozhikode districts and direct sowing of rice in Alappuzha, Kottayam districts. Provide adequate drainage in rice nurseries and avoid water stagnation in the planting pits/basins.
 - Continue planting of brinjal and chilli and planting of coconut seedlings in uplands with adequate drainage in Alappuzha, Kottayam districts. Continue tapping of rubber and planting of rubber seedlings in Thiruvananthapuram district. Avoid water logging at the base of the new plants.
 - In Wayanad and Idukki districts, continue planting of coconut, areca nut, pepper and cardamom.
 - In Palakkad, Thrissur and Ernakulam districts, high relative humidity is congenial for incidences of sheath blight, sheath rot, leaf spot diseases in rice. To control, dip the roots of seedling in *Pseudomonas* solution (*Pseudomonas* culture @ 20g/litre of water) for 30 minutes before transplanting.
 - In Alappuzha and Kottayam districts, prevailing weather conditions (humid conditions) are congenial for foot rot disease in pepper. If noticed, apply *Trichoderma* mixture around the base of the vine after current spells of rain.
 - In Thiruvananthapuram district, monitor for attack of red palm weevil in coconut, especially on young palms. As control measure, seal all the holes seen except the topmost one and pour Dichlorvos (Nuvan 100 EC) @ 10 ml/litre of water.
 - In Kannur, Malappuram and Kozhikode districts, monitor for incidence and spread of mahali disease in arecanut. To control, apply Bordeaux mixture @ 1% to the inflorescences if noticed after current spells of rain.
 - **Karnataka:**
 - Continue transplanting of rice utilising the realised and expected rainfall in Dakshina Kannada and Udupi districts of Coastal Zone of Karnataka. Continue nursery preparation for rice and also undertake land preparation for transplanting of rice, complete sowing of maize, continue cotton dibbling in Uttar Kannada district of Hill Zone; provide drainage in maize.
 - Continue nursery sowing of rice, sowing of red gram in Chikkamagaluru, Hassan, Shivamogga districts of Southern Transition Zone.
 - Undertake nursery preparation for rice and ragi, continue sowing of cowpea, green gram, black gram, sesame, hybrid jowar and vegetable crops (chilli, brinjal, radish, ladies finger, beans, carrot, onion etc.) in Kodagu, Mandya, Mysuru and Chamrajnagar districts of Southern Dry Zone utilizing realised and expected rainfall.
 - Continue sowing of red gram, maize, groundnut, ragi, cowpea and castor with realised rainfall in Bengaluru Rural, Bengaluru Urban, Ramnagara, Chickaballapura and Kolar districts of Eastern Dry Zone.
 - Continue nursery sowing of rice in Davangere district, sowing of cotton in Chitradurga, Tumakuru districts and minor millet in Chitradurga district. Undertake sowing of jowar, red gram, sunflower, groundnut, ragi etc. in Chitradurga, Davangere and Tumakuru districts of Central Dry Zone with realised rainfall.
 - Continue nursery sowing of rice and continue sowing of soybean, green gram, black gram, jowar and pigeon pea after seed treatment and apply weedicide after sowing in Bidar district of North East Transition Zone, utilising

realised rainfall. Take up the repair of bunds and check dam to reduce the runoff water.

- Continue sowing of red gram, black gram, green gram, maize, cotton and fresh plantation of fruit trees utilising realised and expected rainfall in Ballari, Kalaburgi, Koppal, Raichur and Yadgir district of North East Dry Zone.
- Continue sowing of green gram, black gram, soybean, maize and cotton wherever the soil moisture condition is favorable for sowing in Dharwad, Belagavi and Haveri districts, sowing of sorghum in Dharwad and Haveri districts, sowing of groundnut in Dharwad and Belagavi districts and planting of sugarcane in Belagavi district of North Transition Zone.
- Continue sowing of green gram, red gram, sunflower, maize, Bt. cotton, red gram, bajra, sorghum, groundnut (bunch type) and sesamum in Vijayapura, Bagalkote and Gadag districts of North Dry Zone with realised rainfall; use short and medium duration varieties of red gram for sowing; use wilt resistant variety TS-3R, wherever the region is susceptible for wilt disease. Intercropping of bajra + groundnut (bunch) in 2:4 row proportion; bajra + red gram in 2:1 row proportion; groundnut (bunch) + red gram in 3:1 or 4:2 row proportion, red gram + sesamum in 1:2 or 2:4 row proportion in light and medium black soils is advised for making efficient use of available soil and water resources and to get higher returns.

▪ **Andhra Pradesh:**

- In Srikakulam, Vizianagaram and Vishakapatnam districts, continue planting of rainfed sugarcane and sowing of bajra, pulses, ragi etc. and green manure crops utilizing the ensuing rains. As there is forecast of heavy rain, remove excess water from sesamum and mesta crop fields immediately as the crops are sensitive to excess moisture.
- In East Godavari district, continue sowing of maize, ragi and continue sowing of rice and groundnut.
- In West Godavari, Krishna, Prakasam and Krishna districts, continue sowing of rice, millets, maize and land preparation and sowing of red gram, black gram, green gram and cotton.
- In Rayalaseema, continue sowing of groundnut, red gram, bajra, jowar, ragi, chillies and kora. Undertake sowing of sunflower and rice in Kurnool district.
- In Chittoor and Kadappa districts, continue sowing of rainfed crops like groundnut, red gram, maize, jowar, bajra and pulses where sufficient moisture is available in the soil. Continue transplanting of rice, clip the tips of the leaves before transplanting to avoid attack of stemborer. In Nellore district, continue sowing of kharif groundnut.
- In Anantapur and Kurnool districts, helicoverpa incidence was noticed in June first week sown groundnut crop. To control, spray Quinolphos @ 2ml/litre of water on a non rainy day.

▪ **Telangana:**

- In Karimnagar, Nizamabad and Khammam districts (North Telangana Zone), continue nursery sowing of rice, maize, soybean, green gram and black gram, red gram and cotton.
- In Mahabubnagar, Nalgonda, Medak, Rangareddy, Khammam and Warangal districts (South Telangana Zone), undertake sowing of rice, maize, cotton, red gram, soybean and jowar. Drench vegetable nursery bed with Copper-Oxy-Chloride @ 3 g/litre of water and provide adequate drainage to prevent incidence of damping off in vegetable nurseries.

▪ **Tamil Nadu:**

- In Thanjavur, Nagapattinam, Thiruvarur, Karur, Perambalur, Trichy and Ariyalur districts, continue land preparation for nursery sowing of *Kuruvai* rice and SRI cultivation after appropriate seed treatment.
- In Coimbatore, Tiruppur, Erode districts, considering the anticipated rainfall, gypsum application @ 160kg/acre may be done in 40 days old rain fed groundnut of Pollachi taluka, followed by earthing up. Provide drainage in kar rice nursery to prevent rain damage to seedlings. Considering the anticipated rainfall and wind speed around 15 kmph, banana and sugarcane of 5 months old and above may be given propping to avoid lodging.
- In Tuticorin, Virudhunagar and Tirunelveli districts, as winds with high speed are expected in the coming days, give support to banana crop, remove the dry cane leaves and do double line propping with trash twist at the age of 210 days of the crop in case of sugarcane to prevent lodging.
- In Kanyakumari district, undertake planting of rubber and ginger.
- In Salem, Namakkal, Dharmapuri and Krishnagiri districts, undertake cultivation of black gram.
- In Tuticorin, Virudhunagar and Tirunelveli districts, moderate cloud cover, very light rainfall and moderate humidity is congenial for incidences of pod borer and aphids in chilli and white fly in tomato. Spray Chlorophyriphos @ 3 ml/litre of water to control pod borer, Monocrotophos @ 500 ml/ha or Dimethoate @ 2 ml/litre of water to control aphids and dimethoate 30% EC @ 1 ml/litre or Malathion 1.5 ml/litre of water to control white fly.
- In Nigiris district, spray Copper Oxy Chloride @ 2g/litre of water to control head rot disease in cabbage & cauliflower
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In the Scarce Rainfall Zone of Andhra Pradesh, vaccinate 2-3 years lambs to prevent Enterotoxianemia disease during the season.
- In the South Telangana Zone, prevailing weather conditions are favourable for Ranikhet disease in poultry, ET, Sheep Pox and PPR in sheeps, Hemorrhagic Septicemia, Foot and Mouth disease in cattle and buffaloes, to prevent the disease vaccinate the animals and birds.
- In North Dry Zone, vaccinate livestock against foot and mouth disease (FMD vaccination), Black Quarter disease (BC vaccination) and Haemorrhagic Septicemia, vaccinate (ET vaccine) sheep and goats against Enterotoxemia in

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



Banana



Rice



Land preparation/Sowing



Jute

- **Realised Rainfall:** Rainfall occurred in Changlang, East Siang, Lohit, Lower Dibang Valley, Papumpara, Tawang, Tirap, Upper Siang, Upper Subansari, West Kameng and West Siang districts of Arunachal Pradesh, in Baksa, Barpeta, Bongaigaon, Cachar, Chirang, Dhubri, Goalpara, Golghat, Hailakandi, Jorhat, Kamrup(Metro), Karbi Anglong, Karimganj, Kokrajhar, Lakhimpur, Nagaon, Nalbari, Sonitpur, Sibsagar and Tinsukia districts of Assam, in East Garo Hills, East Khasi Hills and West Garo Hills districts of Meghalaya, in Aizwal, Saiha and Sechhip districts of Mizoram, in Imphal East and Imphal West districts of Manipur, in Dimapur, Kohima and Phek districts of Nagaland and North Tripura, South Tripura and West Tripura districts of Tripura. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most/many places over Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura during the period and over Arunachal Pradesh from 1st to 4th July, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. As heavy/heavy to very heavy rain is very likely at isolated places over Assam & Meghalaya from 1st to 4th July, heavy rain at isolated places over Arunachal Pradesh, Nagaland, Manipur, Mizoram and Tripura from 2nd to 4th July, provide adequate drainage in standing crop fields to avoid water stagnation.
 - **Assam, Meghalaya & Arunachal Pradesh:**
 - In Assam, continue nursery raising of *Sali* rice with adequate drainage facilities. Continue land preparation for transplanting of *Sali* rice 20-25 days prior to transplanting. In flood prone areas Karimganj, Hailakhand and Cachar districts of Barak valley Zone, farmers are advised to collect the submerge tolerance rice variety which can withstand upto 15 days in submerged condition.
 - In Karbi Anglong and NC Hills districts of Hill Zone of Assam, continue sowing of arhar.
 - In Baksa, Barpeta, Bongaigaon, Chirang, Dhubri, Goalpara, Kamrup(Rural), Kamrup(Metro), Kokrajhar and Nalbari districts of Lower Bramhaputra Valley Zone of Assam, continue harvesting of *Ahu* rice after current spells of rain. In *Ahu* rice coincide with rainy weather due to which discolouration as well as sprouting of seed in the panicle itself or after harvest due to high moisture content of the seed, to overcome this, spray Diquat @ 0.05% or Paraquat @ 0.1% or Nacl @ 10% should be done on the earhead @1000litre/ha at 20-25 days after 50% flowering. Continue land preparation for sowing of arhar. Undertake transplanting of papaya.
 - In Upper Bramhaputra Valley Zone, undertake land preparation for sowing of sesame.
 - In Nagaon and Marigaon districts of Central Bramhaputra Valley Zone of Assam, continue land preparation and sowing of arhar.
 - In Dhemaji, Darrang, Lakhimpur, Sonitpur and Udalgiri districts of North Blank Plain Zone of Assam, continue planting of black pepper cuttings.
 - In East Garo Hills, East Khasi Hills, Jaintia Hills, Ri-Bhoi, South Garo Hills, West Garo Hills and West Khasi Hills districts of Meghalaya, continue nursery bed preparation for *Sali/kharif* rice and sowing of groundnut and soybean.
 - In Anjaw, Changlang, Dibang Valley, East Kameng, East Siang, Kurung Kumey, Lohit, Lower Dibang Valley, Lower Subansari, Papumpara, Tawang, Tirap, Upper Siang, Upper Subansari, West Kameng and West Siang districts of Arunachal Pradesh, follow proper drainage and earthing up practices in low land/plain areas to avoid water stagnation in fruit orchards. Remove excess sucker from banana in mother plant and give support in banana bunches to protect falling due to heavy weight or storm.
 - In Arunachal Pradesh, there is chnace of attack of leaf blast & leaf spot in *Jhum* rice. Spray Carbendazim @2g/litre water in *Jhum* field to control heavy infestation of leaf blast & leaf spot. Also for management of soft rot in ginger, undertake drenching of Metalaxyl 8% + Mancozeb 64% WP @ 2.5 g per litre of water and spray fungicide like Carbendazim @ 2g/litre water against *chirkey* disease in large cardamom at flowering stage. Undertake plant protection measures after current spells of rain.
 - In Hill Zone of Assam, there is chance of attack of stem borer/ rice bug in transplanted normal ahu rice and rhizome rot in ginger and turmeric due to the prevailing weather conditions. Apply Malathion 5% dust @ 20kg/ha against rice bug and Carbofuran 3G @ 30 kg/ha or Phorate 10G @ 10kg/ha against stem borer. To prevent rhizome rot in ginger and turmeric, drench the affected areas with 0.3% Mencozeb 75 WP @ 2g/litre of water. Undertake plant protection measures after current spells of rain.
 - In Upper Bramhaputra Valley Zone, present weather is favourable for fruit and stem rot disease in pineapple crop.

To prevent fruit and stem rot disease in pineapple crop, it is advised to make necessary provision to drain out the excess water from the fields.

- In Central Brahmaputra Valley Zone of Assam, present weather is favourable for occurrence of rotting of leaves and stems of beetle vine and quick wilt in black pepper. Undertake Prophylactic application of Bordeaux mixture in clear weather to prevent the spread/outbreak of the disease.
- In Meghalaya, high humidity with intermittent rain is favourable for development of blast in *jhum* rice. Spray Mancozeb @ 2g/litre of water or Carbendazime @ 1g/litre of water. Also apply Furandian 3G granules @ 2-3 granule to each whorl of maize plant at tasselling/cob formation stage against shoot fly/cob borer/stem borer incidence. Undertake plant protection measures after current spells of rain.

▪ **Nagaland, Manipur, Mizoram and Tripura:**

- In Dimapur, Kephire, Kohima, Longleng, Mokokchung, Mon, Paren, Phek, Tuensang, Wokha and Zunheboto districts of Nagaland, continue nursery preparation of lowland rice. Keep water to a depth of 2.5cm at the time of puddling. Avoid water logging to prevent rhizome rot in ginger.
- In Bishnupur, Chandel, Churachandpur, Imphal East, Imphal West, Senapati, Tamenglong, Thoubal and Ukhrul districts of Manipur, continue sowing of soybean, black gram and sowing of *kharif* rice. Avoid water logging in and around the ginger and turmeric field. Undertake transplanting of *kharif* rice of about 14-21 days old seedling.
- In Aizwal, Champhai, Chhimituipui, Kolasib, Lawngtlai, Lunglei, Mamit, Saiha and Serchhip districts of Mizoram, continue sowing of khasi mandarin/acid lime. Continue transplanting of rice and sowing of *kharif* pulses like green gram, black gram and rajma.
- In Dhalai, North Tripura, South Tripura and West Tripura districts of Tripura, complete nursery sowing of *Aman* rice at the earliest. Complete sowing maize. Continue sowing of *kharif* vegetables like ladies finger, cucurbits. Farmers are advised water conservation method, bunds may be made properly, Cono weeding may be followed in the transplanted fields and SRI method of rice cultivation may be adopted .
- In Mizoram, apply 60 to 100 g of neem seed powder or neem cake against Comb weevil and stem weevil in banana after current spells of rain.
- In Tripura, temperature above 30°C with humidity over 80 percent is highly favorable fungal diseases like brown Spot, rice blast in the nursery bed of *Aman* rice. Excess of nitrogen aggravates the disease severity. To manage the attacks, apply Carbendazim+Mancozeb @ 2.5g per litre of water into the seedbed. Also there is chance of sheath blight due to humid weather in *Jhum* rice. Spray Surf @ 1g per litre of water after current spells of rain.
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In Assam & Meghalaya, farmers are advised to keep animals in sheds during heavy rain fall period.
- In Assam, undertake proper vaccination schedule to protect livestock from viral and bacterial diseases.
- In Tripura, to protect the poultry from Coccidiosis disease, litter should be kept dry and hygienic, clean water should be provided to the poultry, balanced diet with sufficient minerals may be provided. The disease is contagious; hence the infected birds may kept in isolation. Poultry shed must be cleaned periodically if possible with phenyl solution.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Maize



Sugarcane



Land preparation/Sowing



Banana

- **Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa, in Dhule, Jalgaon, Kolhapur, Nashik and Satara districts of Madhya Maharashtra, in Aurangabad, Hingoli, Jalna, Latur, Nanded and Parbhani districts of Marathwada and in all districts of Vidarbha, in Dahod, Navsari, Valsad districts of Gujarat Region, in Amreli, Junagadh, Porbandar and Rajkot districts of Saurashtra & Kutch. Weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain/thundershowers likely at most places over Konkan & Goa during the period, at many places over Madhya Maharashtra and Gujarat region on 3rd & 4th and over Saurashtra & Kutch on 2nd & 3rd July, farmers are advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. It is also advised to undertake rain water harvesting.
- As heavy to very heavy rain likely at isolated places over Konkan & Goa during the period, provide adequate drainage in rice, ragi and vegetable nurseries.

▪ **Maharashtra:**

- In Konkan, in south Konkan region, farmers are advised to undertake transplanting of 21-25 days old rice seedling.

Drain out excess water from rice field. Continue new planting of fruit crops in orchards like mango, cashew and sapota. Also give mechanical support to newly planted grafts/plants. Farmers are advised to provide mechanical support to gourd crops. Also maintain proper drainage in vegetable crops like Bhendi and Guar. Undertake transplanting of chilli and brinjal.

- In Madhya Maharashtra, continue sowing of soyabean and groundnut in Kolhapur, Satara and Sangli district. Continue nursery sowing of rice and sowing of maize, groundnut and soyabean in Ahmednagar and Pune districts. Complete land preparation in Nasik, Nandurbar and Jalgaon districts and undertake sowing of soybean, red gram, green gram and onion only after receipt of sufficient rainfall. Undertake sowing of soyabean, red gram, green gram in Dhule district at optimum soil moisture conditions in the field.
- In Marathwada, continue sowing of *kharif* soybean, pearl millet, cotton, tur and moong in Aurangabad, Latur, Osmanabad, Nanded, Parbhani, Hingoli, Beed and Jalna districts. Continue nursery sowing of *kharif* vegetable crops like brinjal, chilli and tomato in raised bed. Undertake sowing of fodder crops like maize, jowar and bajra.
- In Vidarbha, continue nursery sowing of *kharif* rice in Gondia, Chandrapur, Gadchiroli districts. Continue sowing of *kharif* soybean, cotton, tur and moong in Buldana, Akola, Washim, Amravati and Yavatmal districts. Undertake sowing of vegetables like bitter gourd, tinda, cluster bean, cowpea and gourds.

▪ **Gujarat:**

- Continue nursery sowing of rice, also undertake direct sowing of rice (in uplands), ragi and red gram (on bunds) in Navasari, Valsad districts and continue nursery sowing of chilli and brinjal in Navasari, Valsad and Dangs districts of South Gujarat Heavy Rainfall Zone utilising realised and expected rainfall. Carry out earthing up in sugarcane. Arrange for rain water harvesting.
- Complete land preparation and undertake sowing of *kharif* crops like cotton and pigeon pea in Bharuch and Surat districts. Undertake sowing in Narmada and Tapi districts after receipt of sufficient rainfall.
- Undertake sowing of cotton, groundnut, soybean, sesame, pigeon pea, and castor in Porbandar and Junagadh district of South Saurashtra Zone. Keep vegetable crops weed free.
- Continue nursery preparation for rice and nursery sowing of *kharif* vegetable crops like tomato, brinjal and chilli; undertake sowing of cotton, pearl millet, groundnut, green gram after receipt of sufficient rainfall in Ahmedabad and Bhavnagar districts of Bhal and Coastal Zone.
- Undertake nursery preparation for rice; to protect from wilting give seed treatment @ 6 g Streptocyclin +12 g Mercury solution in 24 litre of water to seeds required for one ha. Complete land preparation for sowing of pearl millet, ground nut, cotton, green gram, black gram, cowpea and pigeon pea in Anand, Dahod, Kheda, Panchmahals and Vadodara districts of Middle Gujarat Zone and undertake sowing after receipt of sufficient monsoon rainfall. Carry out intercultural operations, weeding and gap filling in earlier sown cotton crop to conserve moisture and to maintain plant population.
- Complete land preparation and undertake sowing of pearl millet, cotton, groundnut, sesame, green gram, black gram, red gram and maize etc. after receipt of sufficient monsoon rainfall in Banaskantha, Sabarkantha, Mehsana, Patan and Gandhinagar districts of North Gujarat Zone and Kachchh district of North West Zone of Gujarat. Intercropping of green gram, pigeon pea, guar in pearl millet is advised for getting more income. Undertake nursery sowing of fennel. Continue gap filling in pre-sown groundnut and cotton; postpone irrigation and application of fertilisers in pre-sown *kharif* cotton, groundnut and vegetable crops as rain is expected. Undertake harvesting of matured fruits of mango, jamun, lemon etc. and carry out budding in aola and ber in Kachchh district of North West Zone.
- Undertake sowing of cotton, groundnut, pearl millet, sesame green gram, black gram, cowpea and pigeon pea in Amreli and Rajkot districts and in Jamnagar and Surendranagar districts of North Saurashtra Zone after receipt of sufficient rainfall. Continue nursery preparation for tomato, chilli, brinjal and early cauliflower; undertake transplanting of brinjal, chilli and early cauliflower where seedlings are ready. Continue sowing of cucurbits (bottle gourd, bitter gourd, ridge gourd and pumpkin), lady's finger, cluster bean, kidney bean, cowpea, tur and amaranthus. Remove excess water from field, harvest and store it in reservoir in the areas where heavy rain fall occurs in coming days.
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In Gujarat, increase green fodder quantity for feeding; provide supplementary feeding of vitamins A and D; spray Deltamethrin or Amitraz @2 ml/litre of water for the control of tick; keep animals indoors and keep fodder in safe place to avoid spoilage due to rainfall. Vaccinate animals against different diseases.

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



Rice



Okra



Maize



Land preparation/Sowing

- **Realised Rainfall:** Rainfall occurred in all districts of Andaman & Nicobar Islands, all districts of Sub-Himalayan West Bengal & Sikkim except South Dinajpur, in Bankura, Birbhum, Burdhan, 24 Parganas South and West Midnapore districts of Gangetic West Bengal, in Araria, Aurangabad, Begusarai, Darbhanga, Gopalganj, Kishanganj, Madhubani Nawda, Purnea, Samastipur, Sheikhpura, Supaul and West Champaran districts of Bihar, all districts of Jharkhand except Bokaro, Chatra, Giridih, Godda, Hazaribagh, Khunti, Koderma, Pakur, Sahebganj, Seraikela-Kharsawan, Simdega and West Signbhum, all districts of Odisha except Deogarh, Jharsuguda and Sambalpur. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most/many places over West Bengal & Sikkim and Odisha during the period, over Bihar and Jharkhand from 2nd to 5th and over Andaman & Nicobar Islands on 1st & 2nd July, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Undertake rain harvesting.
 - As heavy to very heavy rain very likely at isolated places over Sub-Himalayan West Bengal & Sikkim during the period, heavy rain at isolated places over Odisha on 1st & 2nd, over Gangetic West Bengal from 2nd to 4th and over Bihar and Jharkhand on 3rd & 4th July, provide adequate drainage in standing crop fields.
 - **Odisha:**
 - In East and South Eastern Coastal Plain Zone, continue nursery sowing of *kharif* rice and ragi and complete direct sowing of rice in low and medium low lands. Continue sowing of maize, pigeon pea and sesame utilizing the realized and expected rainfall. In uplands, for green cob purpose, undertake sowing of high yielding varieties of maize like Navjot, Shakti, Decan-107, Decan-109.
 - In Naupara and Kalahandi districts, continue nursery sowing of medium duration rice varieties in medium land and medium late duration varieties in low land. Continue land preparation and sowing of cotton, maize and arhar utilizing the realized and expected rainfall.
 - In Koraput and Nawarangpur districts, continue land preparation and sowing of maize and other non paddy crops in upland condition.
 - In Mayurbhanj and Keonjhar districts, continue land preparation in uplands for sowing of red gram, groundnut, ragi and planting Ginger and Turmeric.
 - In Balasore, Bhadrak and Jajpur districts, undertake sowing of direct seeded rice in low lands. In Angul and Dhenkanal districts, undertake sowing of upland direct seeded rice after receipt of sufficient rainfall (cumulative 100mm). In Malkangiri district, undertake sowing of maize (vari.Navjot, Shakti, Decan-107, Decan-109)
 - In East and South Eastern Coastal Plain Zone, fruit and shoot borer has been found in brinjal. To control it install Pheromone traps and spray Sevin WP @ 4 g or Malathion @ 2 ml in 1 litre water alternatively. Also to control fruit fly in bitter gourd, spray Sevin WP @ 3 ml in 1 litre of water after current spells of rain.
 - In Western Undulating Zone, there may be attack of early shoot borer in sugarcane crop at tillering stage. Spray Triazophos/Profenophos @ 2ml/litre of water after current spells of rain.
 - **West Bengal:**
 - In Gangetic West Bengal, continue seedbed preparation of *Aman* rice in Burdwan, Hooghly, Howrah, Nadia, Murshidabad and North 24-parganas districts. One and half katha of land is required for transplanting of one Bigha of land. At the time of last ploughing, apply 3Kg SSP and 3 Kg MOP in the nursery bed.
 - In South 24 Parganas and East Midnapore districts in Coastal Saline Zone, undertake seedbed preparation of *kharif* onion and sowing of wet seeded *Aman* paddy. Only long and medium variety should be sown, short duration variety should be sown some week later.
 - In West Midnapore and Bankura districts, complete land preparation for sowing of *Aman* rice in upland area. Apply 4.4kg Urea, 25kg SSP and 6.7kg MOP per bigha in the final land preparation. Treat the seed with Carbendazim @ 3g/kg seed before sowing and continue nursery bed preparation in low land area. Nursery should be protected with proper drainage channels.
 - In Sub-Himalayan West Bengal, undertake land preparation for continue nursery preparation for *kharif* rice and planting of ginger and turmeric after current spells of heavy rain. In South Dinajpur and Malda district in Old Alluvial Zone, undertake land preparation for sowing of *Aman* rice and seedbed preparation for *kharif* onion before sowing the seed it should be treated with Carbendazim or Mancozeb.

- In Darjeeling district, undertake sowing the nursery bed of rice, complete the land preparation for new plantation of large cardamom within 15th July. Proper drainage system should be maintained in the fields of turmeric, ginger, cardamom and in Mandarin orange gardens to prevent water stagnation during heavy rain.
- In Gangetic West Bengal, due to high humidity, occurrence of foot rot/stem rots can be seen in betel vine under present condition. Spray a mixture of Carboxin 37.5% WP and Thiram 37.5% @ 2g/litre of water.
- In South Dinajpur and Malda district in Old Alluvial Zone, in the prevailing weather condition, there is chance of hairy caterpillar may be seen in jute at vegetative stage. To control hairy caterpillar of jute, spray BT @ 1.5g/litre of water or NPV @ 2-4 ml/litre of water after current spells of rain.
- **Andaman and Nicobar Islands:**
 - In North, Middle and South Andaman, keep open the field bund of nursery rice to remove excess water as good amount of rainfall is expected during next five days. Apply Carbendazim @ 2 g/litre of water to the vegetable nursery during rain free days to avoid diseases.
 - In Nicobar, raise the green manure crop like Calapogonium muconoides for improving fertility of coconut garden and drain out the excess water from coconut plantation.
- **Bihar:**
 - In South Bihar Alluvial Zone, undertake sowing of cucurbits. Complete the sowing of long and short duration rice varieties. Undertake transplanting the seedling of brinjal, chilli and early cauliflower.
 - In Saharsa, Purnia, Supaul and Araria districts in North East Alluvial Zone, undertake nursery raising for upland rice varieties up to 10th July and land preparation for transplanting of low land rice and sowing of kharif maize. Start land preparation of nursery for chilli, brinjal and early cauliflower.
 - In Begusarai, Darbhanga, East Champaran, Gopalganj, Samastipur, West Champaran of North West Alluvial Plain Zone, continue nursery preparation for sowing of *kharif* paddy and *kharif* onion. Undertake land preparation of for sowing of sesamum, sunflower and pigeon pea and continue sowing of kharif vegetables such as lady's finger, pumpkin, cucumber, sponge gourd, bottle gourd.
 - In North East Alluvial Zone, in the present weather situation, attack of caterpillar and mite may be enhanced. For caterpillar control, no need of spraying insecticide. Only collect the insect for burning. Undertake plant protection methods after current spells of rain.
- **Jharkhand:**
 - In Central and North Eastern parts of Jharkhand, continue land preparation and sowing of upland rice, groundnut, arhar and maize.
 - In Saraikela, East & West Singhbhum districts in South Eastern Plateau Zone, continue land preparation and sowing of direct seeded upland rice, maize and pigeon pea. Continue sowing of groundnut. Complete sowing of French bean, lady finger, bottle gourd, cucumber, ridge gourd and radish.
 - In Western Plateau Zone, continue nursery sowing of rice in raised beds, undertake sowing of groundnut, arhar, black gram, maize and sowing of rainy season vegetables like Bhindi, Bean, French bean etc. Make channels in the field of different vegetables and other crops to keep the field well drained.
 - In South Eastern Plateau Zone, in cucurbitaceous crops, if attack of red pumpkin beetle is found, spraying of Diclorvos 76 EC (DDVP) @ 1 ml/litre of water is advised after current spells of rain.
 - Suitable varieties for sowing are given in Annexure III.
- ❖ **Animal Husbandry**
 - In North, Middle and South Andaman, keep newly hatched chicks under comfortable warm condition up to 3 weeks of age to prevent mortality by providing electric bulb under confined shelter.
 - In North Alluvial Zone of Bihar, vaccination of the animals must be followed by FMD, HS and BQ namely Trivac vaccine administered dose @ 2.5-3ml S/C per animal before onset and offset of the monsoon.
 - In North East Alluvial Zone, provide vaccination against Anthrax, Black quarter and Galghontu disease to animals.

CENTRAL INDIA [M.P., CHHATTISGARH]



Land preparation/sowing



Rice nursery



Okra



Sugarcane

- **Realised Rainfall:** Rainfall occurred in all districts of East Madhya Pradesh except Rewa, Satna and Sidhi, all districts of West Madhya Pradesh except Alirajpur, Burahnpur, Datia, Indore, Morena and Sheopur, all districts of Chhattisgarh except Korba and Surguja.
- **Advisories:**
 - As rain/thundershowers likely at many places over Chhattisgarh during the period, over Madhya Pradesh on 2nd &

3rd July, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. As heavy rain likely at isolated places over Madhya Pradesh on 2nd & 3rd and over West Madhya Pradesh on 1st and over Chhattisgarh on 1st & 2nd July, provide adequate drainage in crop fields to avoid water stagnation. Undertake rain water harvesting.

▪ **Madhya Pradesh:**

- In East Madhya Pradesh, continue nursery sowing of rice. Continue sowing of red gram. Continue land preparation for sowing of soybean and undertake sowing after receipt of sufficient rainfall. Continue nursery preparation for vegetables like onion, brinjal and tomato. In Chhindwara district continue sowing of moong, urad, maize and soybean. Continue nursery preparation for tomato, chilli, brinjal, papaya and early cauliflower.
- In West Madhya Pradesh, continue sowing of soybean and maize in Indore, Ujjain districts. Undertake transplanting of vegetables.
- In Gwalior, Bhind, Morena, Shivpuri, Guna, Ashoknagar and Sheopur districts, continue nursery preparation of rice. Continue sowing of pearl millet, soybean, red gram, green gram and black gram utilising the realised and expected rainfall.
- In Khargaoan, Khandwa and Barwani districts, continue nursery sowing of onion and chilli. Continue sowing of cotton and maize. Continue sowing of soybean using ridge and furrow method.
- In Narsingpur and Hoshangabad districts, continue preparation of rice nursery and continue sowing of *kharif* crops like, red gram, maize, soybean, sesame, groundnut utilising the realised and expected rainfall. Continue sowing of bottle gourd and bitter gourd in polythene bags.
- In Bhopal, Vidisha, Raisen, Sehore, Sagar and Damoh districts, continue nursery preparation of rice and continue sowing of red gram and soybean utilising the realised and expected rainfall. Continue planting of sugarcane.
- In Chhatarpur, Tikamgarh and Datia districts, continue seed bed preparation for sowing of *kharif* onion. Continue planting of ginger and turmeric. Continue sowing of vegetables like lady finger, bottle gourd, cucurbits, sponge gourd, bitter gourd and beans. Undertake sowing of soybean, sesame, moong, urad, maize and groundnut utilising the realised and expected rainfall.
- In Jhabua, Alirajpur and Dhar districts, continue nursery sowing of rice and sowing of soybean, black gram and maize utilising the realised and expected rainfall. Undertake transplanting of vegetables.
- In Grid Zone, due to humid weather, there are chances of attack of fruit borer in brinjal and okra, spray Dimethoate @ 1.5ml/litre of water after current spells of rain.

▪ **Chhattisgarh:**

- In North Chhattisgarh, continue nursery sowing of rice. Undertake line sowing of rice. Undertake planting of orchard crops like Papaya, Guava, Mango, Litchi and Pomegranate.
- In Central Chhattisgarh, continue line sowing of rice and nursery sowing of rice. Continue land preparation and sowing of red gram, sesame, soybean and maize. Continue nursery preparation for vegetables.
- In South Chhattisgarh, continue nursery sowing of rice, line sowing of rice and sowing of tuber crops. Continue land preparation and sowing of soybean, groundnut and sesame. Undertake nursery preparation for planting of orchards of papaya and custard apple.
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In Madhya Pradesh, to improve immunity power supply food mixed with vitamins and energy food material along with calcium content to animals. Vaccinate the cattle for control of FMD and HS disease.
- In Chhattisgarh, farmers are advised to carry out vaccination of their animals against the Black Quarter, HS and Anthrax disease.

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



Land preparation/sowing

Sugarcane

Rice nursery

Okra

- **Realised Rainfall:** Rainfall occurred in Kathua and Samba districts of Jammu and Kashmir, in Bilaspur, Hamirpur, Kangra, Mandi, Shimla, Una and Solan districts of Himachal Pradesh, in Almora, Bageshwar, Chamoli, Champawat, Nainital, Pithoragarh, Rudrapur and Uttarkashi districts of Uttarakhand, in Amritsar, Gurdaspur, Hoshiarpur, Kapurthala, Ludhiana, Moga, Nawashahar and Ropar districts of Punjab, in Chandigarh, Gurgaon and Yamunanagar districts of Haryana, in south Delhi and West Delhi district of Delhi, in Bhairaich, Balrampur, Barabanki, Kanpur city, Kaushambi, Lucknow, Maharajganj, Shrawasti, Sidharthnagar, Sonbhadra and Sultanpur districts of East Uttar Pradesh,

in Aligarh, Badaun, Bareilly, Etah, Kanshiramnagar, Muzaffarnagar, Pilibhit and Shahjahanpur districts of West Uttar Pradesh, in Ajmer, Baran, Bharatpur, Bhilwara, Chittorgarh, Jhalawar, Kota, Pratapgarh, Rajsamand, Sikar, Tonk and Udaipur districts of East Rajasthan, in Bikaner, Nagaur and Pali districts of West Rajasthan. Weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain/snow likely at most/many places over Uttarakhand and Himachal Pradesh during the period and over Jammu and Kashmir on 2nd & 3rd July, rain/thundershowers likely at most/many places over Punjab, Haryana, Chandigarh & Delhi and Uttar Pradesh during the period and over East Rajasthan on 1st & 3rd July, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops.
- As heavy/heavy to very heavy rain very likely at a few /isolated places over Uttarakhand and at isolated places over Himachal Pradesh from 1st to 3rd, heavy rain very likely at isolated places over Uttar Pradesh, Punjab, Haryana, Chandigarh & Delhi from 1st to 3rd and over East Rajasthan on 1st July, provide adequate drainage in standing crop fields to avoid water stagnation.
- **Jammu & Kashmir:**
 - In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, continue transplanting of rice in the main field. In view of the forecasted rain postpone the sowing of maize and harvesting of matured summer pulse crop. Postpone irrigation to vegetable and fruit plants.
 - In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, continue transplanting of rice seedlings at 4-6 leaf stage in the main fields. Continue sowing of maize.
 - In Srinagar, Badgam, Kupwara and Baramulla districts of Valley Temperate Zone, complete transplanting of paddy in the main fields. Open drainage channels to avoid water stagnation in maize, pulses and saffron fields.
 - In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, to avoid wilting in chilli, tomato and brinjal, farmers are advised to avoid water logging in the fields. Apply foliar spray of Carbendazim @ 1 g/litre of water on clear sunny day. Repeat the foliar spray after 7 - 10 days with copper oxychloride @ 2 g/litre of water on clear sunny day to prevent the crop from soft rot.
- **Uttarakhand:**
 - In Nainital district of Bhabar and Tarai Zone, continue transplanting of rice and sowing of urad and green gram. Undertake transplanting of cabbage in the main field if the seedlings are ready for transplanting. Complete sowing of beans (Rajma) and horse gram (Gahat) and soybean. Continue sowing of radish, rai, coriander, carrot, spinach and French bean.
 - In Udham Singh Nagar district of Bhabar and Tarai Zone, continue transplanting of paddy. Before transplanting the seedlings of paddy, roots should be dipped for half an hour in the solution of Carbendazim @ 1g/litre of water. Apply Zinc Sulphate @ 25Kg/ha in the field. Complete sowing of groundnut, soybean, okra and radish. Prepare nursery for rainy season chilli.
 - In Dehradun, Pauri and Haridwar districts of Sub Humid Sub Tropic Zone, undertake land preparation for transplanting of long duration varieties of rice.
 - In Tehri Garhwal, Uttarkashi, Chamoli, Rudraprayag, Pithoragarh, Bageshwar, Champawat and Almora district of Hill Zone, continue transplanting of irrigated paddy with seedlings of two three leaves stage. Continue transplanting of cauliflower, cabbage. Postpone sowing of finger millets and maize till weather gets clear. Drain out excess water from vegetable fields.
 - In Nainital district of Bhabar and Tarai Zone, there may be incidence of blight disease on tomato crop, spray Mencozeb 2.5g/litre or Copper-oxichloride per litre. If blight disease in tomato could not be controlled by the use of Copper-oxichloride then spray the mixture of 8% Mancozeb and 64% Cymoxanil @ 2g/litre. Undertake plant protection measures after current spells of rain.
 - In Udham Singh Nagar district, there may be incidence of cut worm in okra crop during rainy season, to protect the okra crop, apply Themate and Furadan @ 10Kg/Ha and 20-25 Kg/ha respectively after current spells of rain.
- **Himachal Pradesh:**
 - In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, continue nursery sowing of rice and sowing of maize. Complete sowing of baby corn. Continue sowing of *kharif* pulses mung, mash and Kulthi. Continue sowing of cluster bean, daincha, senai, lobia for green manuring. In mid hill areas, complete transplanting of tomato, brinjal, chilli and capsicum. Continue sowing of cucurbits such as cucumber, bitter gourd, bottle gourd and summer squash, ageti okra, French bean and radish. Continue planting of ginger, turmeric.
 - In Mid Hills Sub-Humid Zone of Himachal Pradesh, in Bilaspur, Solan, Shimla and Sirmaur districts, complete sowing of bhindi, cucurbits, French bean, moong and mash and nursery raising and transplanting of tomato, chilli, capsicum and brinjal. Continue sowing of fodder crops like maize, cowpea and soybean.
 - In High Hills Temperate Dry Zone of Himachal Pradesh, in Kinnaur and LahaulSpiti, continue nursery sowing of vegetables.
 - In Sub-Montane and Low Hills Sub-Tropical Zone, prevailing weather is conducive for attack of red pumpkin beetle in cucurbitaceous crops, for control spray Dichlorvos 76 EC (DDVP) @ 1 ml per litre of water after current spells of rain.

- In Mild Hills Sub-Humid Zone of Himachal Pradesh in kullu and mandi districts, prevailing weather is conducive for attack of mite in apple, for control spray Magister 10% @ 50 ml per 200 litres of water after current spells of rain.
- In High Hills Temperate Dry Zone of Himachal Pradesh, in Kinnaur, Lahaul & Spiti districts weather is conducive for attack of cut worm in cauliflower, for control spray Chlorpyrifos @ 2.5 ml per litre of water after current spells of rain.
- In Mid Hills Sub-Humid Zone, Bilaspur, Shimla, Sirmour, Solan districts, weather is conducive for attack of leaf spot in strawberry, for control, spray Hexaconazole or Carbendazim @ 100 g in 200 litres of water after current spells of rain.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, prevailing weather is conducive for attack of blast and brown spot in paddy nurseries, for control spray Carbendazim @ 2.0 gram per litre of water after current spells of rain.
- **Rajasthan:**
- In East Rajasthan, Bhilwara, Chitorgarh, Rajsamand, Sirohi, Udaipur districts of Sub Humid Southern Plain and Aravali Hill Zone, undertake sowing of groundnut and maize and continue nursery sowing of brinjal, tomato, rainy onion, cauliflower and chilli with expected rainfall.
- In Dungarpur and Banswara districts of Southern Humid Plain Zone, undertake sowing of *kharif* crops after receiving sufficient rainfall. Undertake sowing of cotton in irrigated areas. Treat seed before sowing with Carbendazim @ 2g/kg seeds and followed by Imidacloprid 70 FS or Thiamethoxam 30 FS @ 10ml/kg seeds.
- In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhopur districts of Flood Prone Eastern Plain Zone, undertake sowing of pearl millet and land preparation for sowing of sorghum.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, continue preparatory tillage for sowing of pearl millet, sorghum, maize, green gram, cowpea, moth and for sowing of khira, bottle gourd, ridge gourd, bitter gourd, cucumber & cluster bean. Continue nursery preparation of kharif onion.
- In Arid Western Plain Zone, in Jaisalmer and Bikaner districts, continue land preparation for sowing of groundnut, bajra, mung, cluster bean, moth and Guar. American cotton, jeera, bhindi and green fodder crops. In Barmer, Churu, Jalore, Jodhpur, Pali districts, undertake land preparation for sowing of bajra and mung.
- In Sriganganagar and Hanumangarh in Irrigated North Western Plain Zone, undertake transplanting of paddy and sowing of guar,
- In Arid Western Plain Zone, prevailing weather condition is congenial for attack of sap sucking pest in cotton crops, for control spray Dimethoate 30 EC @ 1litre per hectare.
- In Irrigated North Western Plain Zone, prevailing weather condition is congenial for attack of white fly in BT and Narma cotton for control spray mixture of Nimbesidin + Taral soap 5 ml @ 1 ml per litre of water.
- In Irrigated North Western Plain Zone, prevailing weather condition is congenial for attack of termite and root borer in sugarcane for control apply Emidacloprid 17.8 SL @ 125 ml per bhiga
- **Punjab, Haryana and Delhi:**
- In Punjab, continue transplanting of rice and sowing of maize. In Fazilka, Ferozepur and Faridkot districts and undertake nursery of short duration varieties and complete sowing of cotton. Continue sowing of okra, maize and planting of sugarcane. Continue transplanting of chilli and cucurbits on the ridges.
- In Moga, Bhatinda, Barnala, Mutsar, Sangrur and Mansa districts, continue transplanting of chilli, tomato, bell pepper. Continue sowing of cucurbits, round gourd, sponge gourd, okra, and cluster bean. Complete sowing of cotton and undertake transplanting of paddy, nursery of short duration varieties and sowing of fodder crops.
- In Gurdaspur district of Punjab, undertake transplanting of rice and continue sowing of maize.
- In Western Zone of Haryana, undertake transplanting of rice, continue sowing of green gram and black gram. Complete the direct sowing with certified seeds of leafy vegetables, bottle gourd, cucumber, ridge gourd summer radish. Continue sowing of arhar and complete the sowing of fodder crops such as bajra, guar, lobia, sudan and napiargrass.
- In Eastern Zone of Haryana, undertake transplanting of rice and continue sowing of fodder crops such as guwar, maize, bajra, cluster bean.
- In Western Semi-Arid Zone of Delhi, continue field preparation for sowing of maize, pigeon pea and continue sowing of cotton, green gram and black gram. Continue nursery sowing of rice, sowing of okra, French bean, cluster bean, baby corn and fodder crops such as sorghum, bajra, cluster bean and maize. Undertake nursery preparation of early cauliflower, tomato, chilli and brinjal and sowing of cucurbits, bottle gourd, bitter gourd, pumpkin, ridge gourd and cucumber. Undertake sowing of soybean.
- In Undulating Plain Zone of Punjab, due to prevailing weather condition, there may be chances of attack of spotted bollworm in Bhindi and fruit rot in chilli. Apply Sumicidin 20 EC (Fenvalerate) @ 100ml in 250 litres of water for spotted bollworm and for fruitrot, spray Indofil M45/Blitox 750g in 250 litres of water/acre after current spells of rain and repeat after 10 days interval.
- In Western Zone of Haryana, there is chance of infestation of white fly on cotton, spray 1 liter Nimbecidine mixed with 250 liter water per acre after current spells of rain.
- In Western Semi-Arid Zone of Delhi, monitor the cucurbitaceous crops against attack of fruit fly, use 'Methyl Eugenol trap, if symptoms seen, spray Rogor @ 2 ml + 10 g sugar or jaggary/litre water at 50 litres/ha after current spells of rain

▪ **Uttar Pradesh:**

- In Central Plain Zone of East Uttar Pradesh, continue nursery sowing of paddy. Undertake land preparation for transplanting of paddy nursery. Undertake sowing of maize, arhar, jowar, bajra, urad, mung, sesame, planting of sugarcane. Continue land preparation and sowing of cowpea, maize, sorghum, urad bean, garlic, turmeric, ginger and sunhemp, lobia and dhaincha for green manuring. Undertake nursery sowing of early mature varieties of brinjal, chilli, cauliflower and transplanting of brinjal, chilli. Continue sowing of bhindi, lobia, loushi, torai and tinda. Continue nursery sowing of brinjal and *kharif* onion and sowing of groundnut branching varieties and soybean.
- In Eastern Plain Zone of Uttar Pradesh, undertake transplanting of long and mid duration variety of paddy. Undertake nursery sowing of scented variety of paddy. Undertake sowing of arhar, jowar, bajra, urad, mung, maize.
- In North Eastern Plain Zone of East Uttar Pradesh, continue nursery sowing of paddy. Undertake sowing of *kharif* maize, pigeonpea, sesame, groundnut, jowar, cowpea.
- In Western Plain Zone of Uttar Pradesh, undertake land preparation for sowing of maize. Continue nursery sowing of paddy and sowing of pigeon pea. Continue transplanting of tomato, chilli and sowing of bhindi, cucurbits and sowing of sunflower, urad, mung.
- In Bundelkhand Zone of West Uttar Pradesh, undertake sowing of *kharif* crops, long duration varieties of groundnut, soybean, jowar, maize. Undertake sowing of dhaincha for green fodder. Continue nursery sowing of rice in irrigated areas and transplanting of cabbage, cauliflower, tomato, brinjal and chilli.
- In North Eastern Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of mosaic virus in bhindi, for control spray mixture of Redomil MZ and Monocrotophos 0.2 % @ 200 ml in 200 liters of water per acre after current spells of rain.
- In Central Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of fruit borer/leaf sheath in vegetables, for control, spray Neem oil @ 1.5 ml to 2 ml per litre of water, 3 to 4 times at 8 to 10 days of interval after current spells of rain.
- In Western Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of blast and brown spot in paddy nurseries, for control, spray Carbendazim @ 2.0 gram per litre of water after current spells of rain.
- Suitable varieties for sowing are given in Annexure III.

❖ **Horticulture:**

- In Bhilwara, Chitorgarh, Rajsamand, Sirohi, Udaipur districts, undertake planting of papaya seedlings in fields.
- In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhopur districts of Flood Prone Eastern Plain Zone, continue digging of pit for new plantation of pomegranate, aonla.
- In Semi-Arid Eastern Plain Zone of Rajasthan, there may be chances of attack of bark eating caterpillar in Mango, Ber & Guava, for control spray Malathion 50 EC @ 1 ml in per litre of water after current spells of rain.
- In Irrigated North Western Plain Zone of Rajasthan, there may be fruit drops in kinnow fruits, for control spray mixture of Propineb 70 WP @ 2 g and Gibbrellic acid @ 20 mg in 1 litre of water.
- In North Eastern Plain Zone of East 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 g per 200 litres of water per 20 plants after current spells of rain.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, weather is conducive for attack of fruit borer in litchi, for control spray Cypermethrin 10 EC @ 1 ml per litre of water on a non rainy day and repeat at 15 days of interval.
- Keeping in view chances of rainfall in coming days in Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, farmers are advised to postpone irrigation to the fruit plants for at least 4 – 5 days.

❖ **Animal Husbandry**

- In Valley Temperate Zone of Jammu and Kashmir, farmers are advised to vaccinate sheep and goats against Enterotoxaemia (ETV vaccine 2ml/sub cut) and FMD (FMD vaccine 1ml/Intra muscular).
- In Bhabar and Tarai Zone of Uttarakhand farmers are advised to give vaccination for Black Quarter and H S fever in animals. Before the vaccination, deworming should be given to the animals.
- In sub tropical Zone of Jammu Kashmir, livestock needs to be dewormed against strongyles in plain areas of Jammu. Increase protein content in animal ration by 2%. Mineral mixture should be supplemented in diet. Give vaccination against FMD.

❖ **Floriculture**

- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, Complete pinching and staking in carnation. Undertake transplanting of marigold seedling in fields for summer crop and earthing up operation in gladiolus and disbudding in carnation.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, weather is conducive for attack of fruit borer in litchi, for control spray Cypermethrin 10 EC @ 1ml per litres of water on a non rainy day after 15 days of intervals.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, weather is conducive for attack of Thrips in marigolds, for control spray Malathion @ 1ml per litres of water on a non rainy day.

- In Valley Temperate Zone of Jammu & Kashmir, complete planting of liliun, gladiolus and dahlia. Complete sowing of seeds for summer annuals nursery at the earliest.
- In Sub Tropical Zone of Jammu and Kashmir, continue transplanting of the seedlings of rainy seasonal annuals (gaillardia, balsam, cosmos, portulaca, kochia, sunflower, morning glory, gomphrena, celosia etc.) till weather gets clear.
- ❖ **Agroforestry:**
- In Himachal Pradesh, Una, Hamirpur, Kangra and Chambadistricts undertake nursery sowing of medicinal plants viz. aswagandha, tulsi, digitalis, janglibhindi and agarkara.
- ❖ **Apiculture:**
- In Himachal to control mites attack on honeybees, dust sulphur on sealed brood in the colony and not on larvae. Also insert empty frame /combs for egg laying to the queen as the population starts builds up. Keep the colonies in shady places and sprinkle water if possible to reduce the heat as temperature rising high in the region.

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

Annexure I

Week by week Rainfall Distribution

Sub-Divisions	15.06.16		22.06.16		29.06.16	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	71.5	-47	85.7	-31	37.9	-74
Dibang Valley	**	**	**	**	**	**
East Kameng	30.5	-64	53.5	-40	19.0	-77
East Siang	91.3	-49	312.4	57	103.6	-49
Kurung Kumey	**	**	**	**	**	**
Lohit	83.1	-21	98.5	-9	36.2	-73
Lower Dibang Valley	139.0	57	201.4	88	61.5	-44
Lower Subansari	**	**	**	**	**	**
Papumpare	156.4	25	322.8	132	61.5	-63
Tawang	94.0	-41	112.0	-31	31.0	-82
Tirap	79.8	-39	114.2	-34	98.0	-38
Upper Siang	161.0	-19	311.8	28	97.8	-38
Upper Subansari	73.0	69	99.4	147	32.1	-61
West Kameng	190.0	20	43.6	-73	57.2	-66
West Siang	87.8	-33	138.2	27	146.2	42
Assam&Meghalaya						
Assam						
Baksa	57.3	-66	178.8	7	77.4	-49
Barpeta	86.7	-49	155.3	-7	260.5	72
Bongaigaon	34.8	-78	200.6	37	350.6	150
Cachar	63.0	-48	79.9	-37	91.8	-27
Chirang	262.2	66	192.8	32	189.0	35
Darrang	**	**	**	**	**	**
Dhemaji	**	**	**	**	**	**
Dhubri	173.2	30	138.7	-20	234.3	103
Dibrugarh	75.6	-16	69.0	-31	115.2	6
Goalpara	59.6	-51	90.6	-37	148.2	9
Golaghat	50.6	-19	117.1	80	63.7	-3

Hailakandi	111.0	1	92.5	-16	72.8	-27
Jorhat	58.7	-26	134.7	105	30.7	-59
Kamrup(Rural)	127.3	50	112.5	16	14.8	-83
Kamrup(Metro)	39.3	-54	231.7	139	62.4	-28
Karbi Anglong	7.1	-86	44.3	-36	49.0	-11
Karimganj	47.1	-74	142.2	-10	136.1	-2
Kokrajhar	141.6	-26	173.7	-11	349.8	69
Lakhimpur	166.1	51	164.2	21	97.3	-25
Morigaon	153.4	155	42.1	-53	11.5	-88
N.C.Hills	52.8	-44	35.0	-59	27.7	-43
Nagaon	30.5	-53	73.4	-9	89.4	32
Nalbari	62.5	-57	162.9	-5	111.2	18
Sonitpur	66.3	-24	42.5	-50	35.6	-57
Sibsagar	59.7	-5	77.1	25	46.3	-32
Tinsukia	66.9	-27	52.0	-46	94.9	-10
Udalgiri	41.2	-61	69.2	-45	28.7	-68
Meghalaya						
East Garo Hills	49.8	-63	183.2	3	415.6	399
East Khasi Hills	191.3	-47	416.0	5	148.7	-57
Jaintia Hills	1.0	-99	14.0	-97	**	**
Ribhoi	64.8	-7	35.0	-63	27.4	-74
South Garo Hills	29.0	-74	22.0	-83	21.0	-80
West Garo Hills	121.4	10	123.8	-6	145.2	37
West Khasi Hills	**	**	75.0	-45	6.0	-97
NMMT						
Mizoram						
Aizwal	84.6	-28	110.2	-1	85.9	-15
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	192.0	120	120.0	28	70.0	-30
Serchhip	20.7	-78	53.4	-52	51.5	-42
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	12.0	-92	0.0	-100	**	**
Churachandpur	**	**	**	**	**	**
Imphal east	59.1	-46	26.2	-72	53.4	-35
Imphal west	231.4	155	120.0	23	114.3	77
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	18.0	-85	22.0	-64	**	**
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	29.7	-57	112.0	123	53.0	82
Kephire	**	**	**	**	**	**
Kohima	39.7	-53	**	**	32.1	-58
Longleng	**	**	**	**	**	**

Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	78.0	-7	47.0	-36	43.0	-43
Tuensang	**	**	**	**	**	**
Wokha	0.0	-100	**	**	**	**
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	1.0	-99	47.4	-60	13.8	-82
NorthTripura	76.7	-41	74.5	-29	77.9	-8
SouthTripura	98.9	-22	14.1	-87	58.6	-44
West Tripura	41.5	-63	9.2	-91	31.4	-63
Himachal Pradesh						
Bilaspur	57.5	143	32.7	51	46.8	9
Chamba	16.6	-42	28.3	1	19.9	-65
Hamirpur	45.2	91	47.1	25	48.3	-18
Kangra	22.2	-17	50.1	85	44.1	-29
Kinnaur	0.4	-97	0.8	-91	7.6	6
Kullu	10.1	-49	24.1	-7	8.3	-57
Lahaul and Spiti	2.2	-84	0.0	-100	9.5	-29
Mandi	20.9	-33	75.5	150	56.5	-14
Shimla	20.9	-7	35.6	34	34.0	7
Sirmaur	22.5	-5	72.9	123	14.1	-77
Solan	103.2	309	71.6	157	31.1	-39
Una	45.4	254	31.7	178	65.6	128
Punjab						
Amritsar	9.5	-12	16.0	54	73.2	434
Barnala	18.0	131	0.0	-100	9.0	14
Bhatinda	11.2	36	0.0	-100	8.5	-22
Faridkot	10.2	48	0.0	-100	16.0	62
Fatehgarh Saheb	4.7	-48	14.0	73	29.0	49
Ferozpur	1.0	-81	0.0	-100	3.8	-61
Gurdaspur	8.9	-8	36.8	179	60.6	202
Hoshiarpur	10.4	-37	21.6	45	41.0	43
Jalandhar	6.1	-35	3.1	-72	18.0	-7
Kapurthala	16.0	111	4.4	-21	39.6	140
Ludhiana	4.9	-48	5.6	-53	39.4	97
Mansa	12.0	74	0.0	-100	10.2	48
Moga	6.6	6	0.0	-100	62.0	421
Muktesar	0.0	-100	0.0	-100	3.2	-54
Nawashahar	18.6	-15	14.6	0	95.4	162
Patiala	3.3	-67	0.9	-92	23.7	8
Ropar	46.8	246	45.5	325	66.5	149
Sangrur	41.3	262	0.0	-100	11.9	-12
Mohali	3.0	-80	23.0	45	1.1	-97
TarnTaran	0.0	-100	16.0	158	18.5	157
Haryana,Chd,Delhi						
Haryana						
Ambala	6.5	-65	14.0	-49	24.9	-38

Bhiwani	13.0	41	1.8	-54	0.7	-94
Chandigarh	20.8	-8	55.9	78	54.1	30
Faridabad	33.6	860	2.7	-81	1.3	-91
Fatehabad	4.7	-26	0.0	-99	2.3	-73
Gurgaon	9.8	96	2.8	-68	31.8	98
Hissar	47.4	559	0.0	-100	0.1	-99
Jhajar	28.0	306	0.6	-91	7.8	-25
Jind	6.1	-37	13.7	55	20.0	60
Katihah	6.0	-35	0.8	-93	14.7	15
Karnal	5.2	-48	2.0	-88	8.7	-55
Kurukshetra	2.8	-82	0.0	-100	6.7	-69
Mahendragarh	23.1	146	5.3	-29	5.1	-70
Mewat	5.4	10	5.2	-21	29.3	41
Palwal	1.8	-64	0.0	-100	20.5	118
Panchkkula	9.8	-42	28.3	20	20.9	-50
Panipat	8.2	8	6.4	-48	4.6	-82
Rewari	31.5	443	2.6	-59	3.0	-78
Rohtak	10.5	9	2.0	-78	4.0	-72
Sirsa	4.0	-35	0.8	-90	0.0	-100
Sonepat	8.6	-9	16.6	38	4.6	-68
Yamunanagar	24.3	18	42.5	40	35.3	-17
Delhi						
Central Delhi	6.0	-44	4.0	-73	5.0	-80
East Delhi	1.0	-91	2.0	-86	**	**
New Delhi	1.6	-85	9.8	-33	10.1	-59
North Delhi	14.9	38	10.5	-28	4.8	-80
North East Delhi	5.0	-54	4.0	-73	1.0	-96
North West Delhi	26.7	147	6.5	-55	1.0	-96
South Delhi	7.1	-35	33.1	127	42.9	75
South West Delhi	17.1	58	10.1	-31	29.2	19
West Delhi	12.0	11	1.0	-93	61.0	149
Jammu & Kashmir						
Anantnag	12.7	-34	6.7	-7	0.5	-95
Badgam	2.6	-80	2.6	-35	0.0	-100
Bandipore	**	**	**	**	**	**
Baramula	12.6	-45	12.2	5	0.4	-97
Doda	1.4	-93	25.9	198	8.2	-21
Ganderbal	8.3	-31	2.4	-31	0.0	-100
Jammu	25.5	124	91.9	800	18.2	-23
Kargil	**	**	**	**	**	**
Kathua	26.6	186	62.8	437	82.2	217
Kistwar	**	**	**	**	**	**
Kulgam	3.4	-82	2.8	-61	0.0	-100
Kupwara	1.0	-93	18.5	225	0.4	-96
Ladakh(Leh)	1.8	200	0.6	20	0.0	-100
Poonch	**	**	**	**	**	**
Pulwama	1.6	-88	1.5	-64	0.0	-100
Rajouri	23.2	121	71.0	777	11.2	**
Ramban	35.6	77	8.8	1	1.2	-88

Reasi	14.4	-18	64.4	248	22.4	-39
Samba	8.1	-29	80.9	693	32.6	38
Shopian	**	**	**	**	**	**
Srinagar	0.0	-100	1.4	-59	0.0	-100
Udhampur	10.5	-40	58.0	214	18.1	-51
East Madhya Pradesh						
Anuppur	15.4	-49	28.6	-46	74.8	11
Balaghat	4.7	-80	17.7	-67	48.0	-43
Chhatarpur	8.2	-13	31.6	23	67.5	55
Chindwara	14.6	-44	25.3	-38	108.5	92
Damoh	0.5	-96	31.9	-10	45.5	-18
Dindori	0.0	-100	32.3	-47	90.0	17
Jabalpur	1.6	-90	11.4	-68	73.5	37
Katni	54.0	306	7.6	-76	35.3	-27
Mandla	6.0	-71	35.7	-8	102.3	42
Narsingpur	1.8	-89	5.6	-84	62.8	33
Panna	2.7	-69	78.2	164	37.9	-22
Rewa	2.0	-83	15.4	-49	26.6	-51
Sagar	4.3	-74	31.6	-21	60.5	11
Satna	0.0	-100	15.0	-55	10.6	-81
Seoni	2.1	-92	8.8	-85	73.7	18
Shahdol	14.0	20	66.0	81	70.0	26
Sidhi	1.0	-94	25.0	-11	0.0	-100
Singrauli	9.2	-50	19.8	-28	41.0	-25
Tikamgarh	13.5	44	16.0	-16	42.0	2
Umaria	38.2	134	16.0	-48	42.0	-26
West Madhya Pradesh						
Agar	0.0	-100	83.3	12	40.1	-56
Alirajpur	0.0	-100	31.3	42	18.2	-58
Asoknagar	0.0	-100	37.3	78	45.0	33
Badwani	0.0	-100	20.9	-15	53.1	55
Betul	0.0	-100	25.9	-34	37.5	-35
Bhind	1.8	-66	55.9	366	46.7	68
Bhopal	0.0	-100	13.8	-60	106.7	145
Burhanpur	0.0	-100	10.8	-73	10.0	-84
Datia	0.0	-100	62.9	334	24.6	-25
Dewas	5.7	-73	52.5	47	87.7	79
Dhar	0.0	-100	51.6	39	41.9	-5
Guna	1.8	-85	21.8	-1	54.6	41
Gwalior	4.0	-61	33.2	110	42.2	20
Harda	0.0	-100	46.6	30	42.3	-7
Hosangabad	5.5	-71	54.4	54	66.2	0
Indore	0.0	-100	75.6	116	28.6	-33
Jhabua	0.0	-100	13.2	-54	41.7	-1
Khandwa	0.0	-100	47.0	36	49.0	-4
Khargone	0.0	-100	25.8	-24	45.5	-4
Mandsaur	0.0	-100	56.0	130	53.6	67
Morena	20.5	205	61.3	552	18.1	-38

Neemuch	0.0	-100	16.3	-23	67.1	85
Raisen	6.8	-64	79.9	123	44.8	-24
Rajgarh	0.0	-100	37.7	45	65.7	70
Ratlam	0.0	-100	60.1	163	44.1	-11
Sehore	0.0	-100	96.9	183	58.4	8
Shajapur	0.5	-97	77.0	182	41.7	17
Sheopur Kalani	26.2	232	18.0	9	17.2	-47
Shivpuri	5.8	-33	46.6	136	36.4	17
Ujjain	0.0	-100	32.6	17	88.2	130
Vidisha	1.8	-88	44.9	52	80.4	62
Chhattisgarh						
Bastar	26.5	-18	50.3	-14	211.6	160
Bijapur	0.0	-100	5.7	-92	123.7	63
Bilaspur	24.4	-9	12.7	-75	61.3	-12
Dantewara	21.8	-28	63.8	18	93.6	29
Dhamtari	20.4	-22	53.6	17	105.0	67
Durg	7.4	-74	41.1	-8	153.2	105
Janjgir	0.1	-99	6.9	-86	46.2	-29
Jashpurnagar	13.5	-70	61.1	-1	65.2	-30
Kanker	21.7	-11	20.6	-65	63.6	-23
Korba	6.5	-80	8.8	-84	24.5	-65
Koriya	3.1	-85	13.0	-73	54.6	-14
Kawardha	2.0	-91	45.8	-4	81.4	48
Mahasumund	18.1	-33	46.2	-16	47.6	-20
Narayanpur	28.0	-4	31.2	-47	106.1	43
Raigarh	0.1	-99	9.8	-80	70.7	13
Raipur	16.1	-47	35.9	-26	61.2	-8
Rajnandgaon	9.3	-60	39.5	-27	97.6	38
Surguja	1.0	-97	8.6	-83	18.5	-78
East Uttar Pradesh						
Allahabad	0.4	-97	44.6	170	6.8	-81
Ambedkar Nagar	0.0	-100	34.0	44	6.0	-82
Azamgarh	0.0	-100	57.9	209	12.8	-67
Bahraich	17.2	-30	31.3	-12	34.9	-48
Ballia	6.2	-73	30.7	3	6.9	-82
Balrampur	3.7	-77	26.3	-40	63.9	23
Banda	1.2	-85	32.6	83	28.5	-35
Barabanki	6.6	-72	29.1	53	38.5	-22
Basti	32.3	102	7.0	-78	18.4	-63
Chandauli	0.0	-100	2.0	-90	22.0	-25
Deoria	5.5	-76	18.6	-40	4.0	-91
Faizabad	19.9	21	4.9	-84	7.1	-85
Farrukhabad	4.5	-37	23.5	85	0.0	-100
Fatehpur	0.0	-100	36.8	167	23.2	-44
Gazipur	0.0	-100	48.8	98	19.9	-46
Gonda	22.6		42.1	37	17.2	-73
Gorakhpur	19.4	-27	33.0	-26	10.1	-82
Hardoi	6.2	-37	17.8	13	15.5	-67
Jaunpur	0.3	-98	42.7	143	6.0	-84

Kannauj	1.0	-80	37.4	256	3.5	-89
Kanpur City	0.5	-89	29.2	138	30.3	-8
Kanpur Dehat	0.3	-90	11.6	-17	18.2	-55
Kaushambi	0.0	-100	63.1	344	33.2	6
Kheri	30.0	34	46.8	42	22.6	-57
Kushi nagar	11.0	-73	2.0	-96	0.0	-100
Lucknow	7.5	-14	53.9	231	30.6	-32
Maharajganj	28.0	-30	50.3	9	48.8	-14
Mau	0.0	-100	47.5	75	3.5	-92
Mirzapur	1.0	-92	39.4	76	18.7	-51
Pratapgarh	0.0	-100	45.0	166	9.3	-75
RaiBareilly	1.3	-84	9.0	-40	19.9	-38
Sahuji Maharajnagar	0.0	-100	78.0	400	29.5	-26
Sant Kabirnagar	31.0	73	13.0	-67	27.0	-50
Sant Ravidas Nagar	0.0	-100	77.0	277	0.0	-100
Shrawasti	43.6	78	34.7	-2	128.1	90
Sidharthnagar	14.8	-33	11.6	-71	104.4	113
Sitapur	11.0	-41	24.9	3	11.9	-76
Sonbhadra	3.4	-85	16.8	-46	50.1	-11
Sultanpur	1.5	-88	12.5	-31	38.9	4
Unnao	0.5	-94	93.9	476	14.3	-67
Varanasi	0.0	-100	81.4	342	14.9	-64
West Uttar Pradesh						
Agra	8.0	47	10.2	-1	16.5	-31
Aligarh	1.6	-71	15.8	61	48.3	115
Auraiya	2.1	-78	39.5	339	18.6	-39
Badaun	4.6	-34	45.4	229	39.2	25
Baghpat	5.2	13	8.7	-19	1.0	-93
Bareilly	10.0	-18	28.0	29	36.6	-11
Bijnor	3.5	-77	73.2	398	1.3	-97
Bulandsahar	9.4	51	22.7	86	24.0	6
Etah	2.7	-44	24.3	134	46.1	79
Etawah	0.3	-96	48.7	382	4.5	-85
Firozabad	0.0	-100	46.1	442	15.2	-46
GBNagar	1.0	-63	0.0	-100	3.0	-80
Ghaziabad	0.8	-88	28.8	193	26.8	39
Hamirpur	2.3	-46	16.5	5	12.0	-71
Jalaun	4.4	-21	29.9	138	27.1	-24
Jhansi	1.5	-80	22.0	45	21.3	-49
Jotiba Phule Nagar	0.0	-100	45.0	321	5.5	-79
Kanshiramnagar	0.0	-100	106.0	1004	39.0	51
Lalitpur	8.5	-23	70.5	330	7.5	-82
Mahamaya Nagar	7.5	88	15.5	58	14.0	-29
Mahoba	0.0	-100	12.0	21	8.4	-79
Mainpuri	0.0	-100	13.6	32	3.0	-90
Mathura	2.5	-36	0.6	-93	0.0	-100
Meerut	0.9	-86	41.2	157	16.0	-38
Moradabad	11.1	8	63.4	199	18.1	-53

Muzaffarnagar	0.0	-100	16.0	25	33.7	25
Pilibhit	1.7	-87	24.4	17	33.5	-35
Rampur	11.4	-36	36.6	50	23.9	-41
Saharanpur	0.0	-100	35.3	50	4.2	-89
Shahjahanpur	0.0	-100	3.4	-81	31.4	-38
Uttarakhand						
Almora	11.0	-55	72.3	130	32.9	-32
Bageshwar	37.3	54	81.7	160	45.8	-5
Chamoli	22.0	14	88.6	217	95.2	150
Champawat	19.7	-35	67.8	43	43.9	-52
Dehradun	25.9	-12	50.9	8	27.4	-63
Garhwal Pauri	22.0	55	43.9	95	15.1	-75
Garhwal Tehri	22.5	-12	38.3	30	3.9	-92
Haridwar	15.1	-23	75.3	145	0.3	-99
Nainital	74.9	141	90.5	80	36.9	-55
Pithorgarh	42.3	-35	62.9	-22	82.6	-12
Rudraprayag	28.1	-32	52.8	-15	93.7	23
Udham Sing Nagar	23.3	-12	32.7	-25	18.9	-64
Uttarkashi	21.7	-25	47.9	42	69.5	25
Bihar						
Araria	48.5	-11	78.9	2	118.7	60
Arwal	3.1	-83	80.2	206	16.0	-62
Aurangabad	0.2	-99	83.3	252	40.9	-19
Banka	80.3	179	122.8	209	28.6	-33
Begusarai	12.2	-55	35.7	-15	32.3	-40
Bhabua	0.0	-100	34.0	12	21.7	-59
Bhagalpur	27.0	-23	66.9	18	11.0	-83
Bhojpur	9.1	-64	6.2	-72	1.9	-95
Buxar	45.0	84	51.2	106	17.8	-54
Darbhanga	16.2	-42	57.9	44	51.6	13
East Champaran	22.3	-27	34.4	-15	29.7	-42
Gaya	4.8	-83	79.9	240	1.7	-97
Gopalganj	23.1	-32	26.3	-35	36.0	-20
Jahanabad	11.8	-52	58.9	91	1.4	-96
Jamui	9.6	-69	77.4	109	13.0	-81
Kathihar	20.7	-50	38.2	-35	8.4	-88
Khagadia	4.9	-87	31.0	-26	10.9	-83
Kishanganj	74.6	-1	129.1	22	167.6	65
Lakhisarai	17.8	-38	36.5	-14	17.9	-67
Madhepura	20.1	-55	107.3	100	19.8	-67
Madhubani	31.8	-23	54.5	32	61.9	14
Monghyar	0.0	-100	10.0	-76	5.0	-91
Muzaffarpur	9.6	-61	66.6	60	2.0	-96
Nalanda	27.9	27	56.7	105	14.5	-72
Nawada	4.9	-73	41.5	15	41.6	-20
Patna	16.8	-39	30.1	6	28.5	-35
Purnea	36.3	-31	119.7	88	59.6	-12
Rohtas	0.0	-100	41.2	148	12.8	-74
Saharsha	14.2	-71	35.9	-34	24.6	-72

Samstipur	17.3	-33	51.8	-8	48.4	-23
Saran	0.0	-100	34.1	16	9.2	-77
Sheikpura	25.1	-5	91.0	183	64.8	9
Sheohar	0.0	-100	13.8	-70	0.0	-100
Sitamarhi	35.5	-8	41.3	-12	27.8	-54
Siwan	4.8	-83	20.7	-22	2.7	-95
Supaul	55.8	32	114.7	147	119.9	142
Vaishali	10.7	-63	53.1	48	2.9	-93
West Champaran	52.8	22	83.3	26	79.3	7
Jharkhand						
Bokaro	54.6	61	12.5	-75	16.9	-74
Chatra	3.2	-88	26.5	-23	16.1	-77
Deoghar	65.4	89	66.9	35	45.4	-17
Dhanbad	44.0	7	49.9	1	44.3	-35
Dumka	141.8	275	69.8	21	37.5	-42
East Singbhum	25.4	-41	32.5	-46	88.4	14
Garhwa	0.0	-100	9.0	-64	34.5	-38
Giridih	60.0	36	47.0	-12	26.6	-63
Godda	19.9	-40	64.7	37	11.6	-80
Gumla	22.1	-55	19.8	-69	69.2	-14
Hazaribagh	44.0	4	13.1	-67	25.1	-61
Jamtara	130.5	216	46.7	-19	30.1	-56
Khunti	**	**	13.7	-81	19.4	-77
Koderna	33.4	-7	38.5	-17	7.8	-86
Latehar	13.7	-59	33.1	-20	66.4	-5
Lohardagga	12.9	-69	25.2	-45	65.3	-19
Pakur	50.8	2	37.0	-45	17.4	-71
Palamau	5.7	-80	22.6	-32	41.8	-27
Ramgarh	34.0	-24	64.2	34	31.2	-63
Ranchi	8.2	-81	18.0	-66	34.0	-61
Sahebganj	**	**	**	**	29.8	-66
Saraikela	15.0	-75	16.5	-73	10.4	-88
Simdega	42.0	-9	43.2	-39	2.7	-97
West Singbhum	85.5	74	38.2	-28	24.2	-65
East Rajasthan						
Ajmer	1.9	-70	18.4	121	47.0	133
Alwar	11.4	70	15.4	66	18.3	-2
Banswara	0.0	-100	19.8	-12	23.7	-43
Baran	0.0	-100	16.0	-17	60.9	110
Bharatpur	17.8	264	9.3	-20	41.4	157
Bhilwara	0.0	-100	16.5	20	68.2	176
Bundi	0.0	-100	33.2	96	27.8	12
Chittorgarh	0.0	-100	23.7	59	41.2	33
Dausa	9.6	26	27.8	142	8.8	-61
Dholpur	0.7	-90	5.0	-62	11.2	-49
Dungarpur	0.0	-100	13.5	-22	28.8	-14
Jaipur	2.3	-73	15.9	58	18.2	-23
Jhalawar	0.0	-100	48.0	113	37.5	13
Jhunjhunu	18.1	65	1.3	-89	23.9	26

Karauli	9.4	52	25.6	113	9.8	-56
Kota	0.0	-100	28.7	53	50.8	82
Pratapgarh	0.0	-100	13.8	-46	39.8	-17
Rajsamand	0.0	-100	26.0	86	66.3	125
Sawai Madhopur	16.3	83	11.5	-9	28.0	31
Sikar	5.1	-43	5.3	-47	30.4	48
Sirohi	0.0	-100	1.3	-92	17.7	-41
Tonk	0.0	-100	2.7	-81	31.5	29
Udaipur	0.0	-100	13.7	-6	40.4	29
West Rajasthan						
Barmer	0.0	-100	0.1	-99	7.4	-34
Bikaner	10.8	64	0.9	-89	32.8	277
Churu	16.9	134	0.3	-98	17.3	39
Hanumangarh	28.0	278	1.7	-81	8.4	-14
Jaisalmer	0.7	-79	0.7	-84	17.8	96
Jalore	0.0	-100	10.9	81	6.7	-56
Jodhpur	0.0	-100	9.2	34	25.3	136
Nagaur	0.0	-100	13.2	36	44.3	138
Pali	0.0	-100	4.5	-51	36.9	106
Sri Ganganagar	4.2	-17	0.0	-100	2.1	-72
Gujarat Region						
Ahmedabad	0.0	-100	0.4	-98	8.2	-80
Anand	0.0	-100	0.8	-97	8.4	-82
Banaskantha	0.0	-100	0.2	-98	7.3	-77
Baroda	0.0	-100	7.6	-71	16.5	-74
Broach	0.0	-100	3.5	-92	7.5	-84
DNH	**	**	12.3	-90	144.6	14
Dahod	0.0	-100	8.7	-62	31.6	-33
Daman	0.0	-100	6.0	-95	204.1	61
Dangs	0.0	-100	9.0	-89	9.5	-90
Gandhinagar	0.0	-100	1.2	-95	9.5	-66
Kheda	0.0	-100	1.9	-92	14.5	-70
Mehsana	0.0	-100	1.0	-94	4.0	-89
Narmada	0.0	-100	12.0	-75	15.0	-75
Navsari	0.0	-100	0.7	-99	37.2	-70
Panchmahal	0.0	-100	3.9	-84	19.6	-59
Patan	0.0	-100	0.0	-100	7.3	-73
Sabarkantha	0.0	-100	3.5	-81	23.1	-47
Surat	0.0	-100	24.4	-64	29.6	-69
Tapi	0.2	-100	19.8	-73	6.6	-93
Valsad	0.0	-98	17.5	-85	119.0	-15
S K & Diu region						
Amreli	0.0	-100	1.6	-95	36.6	-5
Bhavnagar	0.0	-100	0.6	-98	20.6	-42
Diu	0.0	-100	3.6	-90	114.9	24
Jamnagar	0.0	-100	0.4	-98	27.3	-28
Junagarh	0.0	-100	5.9	-90	63.9	-18
Kutch	0.0	-100	0.1	-99	10.1	-55
Porbandar	0.0	-100	0.1	-99	64.4	19

Rajkot	0.0	-100	3.8	-87	37.9	-4
Surendranagar	0.0	-100	10.5	-56	11.9	-77
Maharashtra						
Konkan & Goa						
Mumbai City	14.5	-86	167.6	-3	332.0	78
Mumbai Suburban	43.2	-59	182.1	5	456.6	145
North Goa	200.4	-10	249.2	-5	457.0	60
Raigad	48.3	-58	110.0	-43	483.4	93
Ratnagiri	145	-14	104.0	-56	641.3	123
Sindhudurg	230.6	13	183.7	-31	547.7	105
South Goa	328.5	56	291.6	17	496.8	114
Thane	5.8	-91	51.9	-60	297.2	72
Madhya Maharashtra						
Ahmednagar	5.8	-76	40.3	46	18.4	-29
Dhule	0.0	-100	28.4	-5	57.5	42
Jalgaon	0.0	-100	11.1	-71	44.9	-4
Kolhapur	51.7	-9	14.1	-85	81.1	-37
Nandurbar	0.0	-100	32.6	-5	14.3	-73
Nasik	0.3	-99	25.0	-42	34.2	-33
Pune	6.2	-78	12.9	-64	28.4	-47
Sangli	38.6	70	21.6	-21	10.7	-65
Satara	51.6	99	12.0	-67	30.4	-34
Solapur	26.5	3	29.2	25	8.7	-59
Marathwada						
Aurangabad	0.0	-100	35.1	1	53.1	44
Beed	11.2	-67	71.0	121	28.9	-8
Hingoli	3.0	-91	29.0	-56	69.0	20
Jalna	10.7	-70	31.5	-23	35.3	-3
Latur	45.0	46	26.6	-35	44.9	11
Nanded	26.3	-14	62.8	34	92.8	93
Osmanabad	26.1	-22	36.4	9	17.7	-34
Parbhani	10.5	-68	40.1	-17	41.7	-11
Vidarbha						
Akola	2.4	-92	49.9	14	73.1	44
Amraoti	5.1	-79	38.5	-7	52.0	5
Bhandara	6.3	-77	8.6	-82	57.1	-20
Buldhana	2.5	-91	37.3	-12	61.6	28
Chandrapur	13.1	-48	9.7	-82	119.8	52
Gadchiroli	9.7	-67	8.0	-88	145.7	67
Gondia	9.8	-60	23.8	-54	64.4	-14
Nagpur	16.7	-38	17.2	-64	93.7	55
Wardha	6.3	-78	26.9	-49	99.7	61
Washim	12.9	-60	39.6	-23	71.6	8
Yeotmal	8.5	-71	53.7	-6	64.8	8
Odisha						
Angul	37.6	-14	66.8	5	36.8	-37
Balasore	28.8	-50	114.5	63	42.0	-34
Bargarh	13.3	-67	146.5	151	85.3	31






Bhadrak	16.0	-71	58.9	-11	49.7	-10
Bolangir	13.3	-61	66.0	-2	45.8	-36
Boudh	15.7	-63	119.3	107	65.7	-1
Cuttack	3.9	-90	92.9	30	70.2	6
Deogarh	31.9	-26	84.7	9	5.7	-93
Dhenkanal	13.0	-69	72.5	-2	34.9	-48
Gajapati	13.9	-78	159.7	274	75.9	83
Ganjam	25.6	-30	150.1	270	72.6	85
Jagatsingpur	7.7	-87	37.8	-49	55.0	-8
Jajpur	18.6	-67	76.5	8	68.4	11
Jharsuguda	24.2	-46	76.1	-8	24.3	-70
Kalahandi	24.1	-33	101.6	32	38.8	-57
Kandhamal	14.2	-67	53.0	-8	75.2	13
Kendrapara	6.0	-88	61.8	8	86.8	63
Keonjhar	28.2	-53	91.8	41	47.0	-25
Khurda	6.2	-83	72.2	17	49.3	-7
Koraput	23.9	-34	178.5	237	174.4	153
Malkangiri	14.0	-58	461.4	174	63.4	-34
Mayurbhanj	25.6	-57	119.2	49	76.0	-6
Nawapara	27.4	-20	75.5	29	58.4	-20
Nawarangpur	57.0	6	186.1	208	146.3	80
Nayagarh	4.5	-91	97.3	35	72.8	32
Puri	17.8	-43	41.2	-31	40.3	-12
Rayagada	27.1	-44	115.2	140	71.2	70
Sambalpur	26.2	-40	126.3	62	22.3	-73
Sonepur	2.7	-92	153.9	193	53.5	6
Sundargarh	32.9	-29	82.5	11	40.3	-46
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	53.1	-20	242.7	285	112.8	66
North & Middle Andaman	45.6	-61	98.2	-2	110.3	4
South Andaman	27.3	-76	131.5	43	136.1	32
GWB						
Bankura	54.5	21	63.7	31	43.0	-41
Birbhum	106.6	134	40.0	-23	38.3	-48
Burdwan	79.4	96	40.1	-10	31.1	-53
East Midnapore	76.0	70	44.2	-39	17.7	-73
Hooghly	61.9	13	34.8	-31	5.3	-94
Howrah	40.5	-11	27.0	-56	6.2	-92
Kolkata	49.9	-19	13.4	-81	6.8	-91
Murshidabad	68.0	13	32.8	-36	8.5	-87
Nadia	38.1	-13	42.8	-38	19.0	-72
24 Pargana (N)	88.3	57	38.9	-42	20.5	-73
Purulia	49.9	12	41.5	-19	23.7	-68
24 Pargana (S)	62.4	-12	11.1	-88	38.8	-52
West Midnapore	47.9	-4	62.3	-4	35.8	-47
SHWB & Sikkim						
Cooch Behar	131.4	-10	276.5	43	374.1	143

Darjeeling	256.5	102	152.4	10	154.1	-1
East Sikkim	98.2	-16	77.5	-34	104.9	-15
Jalpaiguri	275.5	78	327.0	81	195.3	19
Malda	27.9	-34	85.8	44	43.4	-35
North Dinajpur	69.2	10	82.0	-19	**	**
North Sikkim	72.7	-43	185.7	49	150.3	29
South Dinajpur	31.3	-53	39.0	-51	0.0	-100
South Sikkim	128.5	10	60.5	-48	108.6	-12
West Sikkim	67.0	-48	103.5	-17	191.5	65
Karnataka						
Coastal Karnataka						
Dakshina Kannada	175.9	-19	236.7	-8	403.9	42
Udupi	202.9	-16	398.1	39	494.1	61
Uttara Kannada	193.7	20	175.5	-14	324.0	49
N I Karnataka						
Bagalkote	29.8	63	35.7	123	3.5	-80
Belagavi	37.9	84	28.2	-5	20.8	-50
Bidar	4.2	-87	72.8	100	29.8	-17
Dharwad	32.7	70	17.8	-32	21.8	-28
Gadag	34.6	95	35.7	126	12.2	-35
Haveri	49.2	193	14.5	-47	31.3	1
Kalaburgi	21.2	-17	73.0	158	11.7	-59
Koppal	41.5	115	26.4	87	22.3	49
Raichur	23.8	17	37.9	97	20.2	-6
Vijayapura	9.9	-58	39.4	113	1.8	-92
Yadgir	14.9	-47	37.6	43	14.3	-60
S I Karnataka						
Ballari	8.6	-51	23.6	67	31.8	108
Bangalore Rural	42.1	92	42.2	335	28.4	163
Bangalore Urban	21.6	7	22.0	116	39.6	253
Chamarajanagar	4.2	-67	4.9	-58	18.1	58
Chikaballapur	57.2	190	15.1	80	14.3	27
Chikkamagaluru	65.2	-2	27.7	-73	145.2	8
Chitradurga	30.7	167	10.5	17	18.9	108
Davangere	41.5	164	15.2	-2	31.2	68
Hassan	35.5	60	16.9	-47	59.0	70
Kodagu	119.0	21	60.0	-58	273.9	58
Kolar	42.4	103	9.6	45	20.8	104
Mandya	12.7	21	10.3	13	21.2	195
Mysuru	16.2	0	40.2	127	41.5	169
Ramanagara	21.4	12	7.6	-33	24.7	138
Shivamogga	90.8	50	78.9	-16	205.8	86
Tumakuru	47.7	206	19.6	90	21.9	149
Kerala						
Alappuzha	161.3	9	84.8	-31	67.0	-48
Kannur	119.7	-36	132.5	-38	286.2	22
Ernakulam	205.1	23	94.4	-38	127.8	-25
Idukki	118.8	-15	119.5	-19	199.5	6
Kasaragod	161.5	-33	205.4	-16	350.5	33

Kollam	196.0	79	70.7	-25	49.9	-52
Kottayam	198.7	25	117.6	-12	97.2	-38
Kozhikode	174.7	-12	139.9	-34	173.0	-24
Malappuram	179.5	25	110.9	-29	111.8	-37
Palakkad	111.2	14	100.9	-12	114.9	-15
Pathanamthitta	162.7	23	71.8	-40	71.6	-46
Thiruvananthapuram	181.9	113	64.0	7	26.5	-61
Thrissur	147.4	-10	60.9	-60	143.4	-23
Wyand	78.0	-42	40.3	-76	227.2	2
Tamil Nadu						
Ariyalur	0.0	-100	4.3	-56	4.3	-46
Chennai	12.8	-36	6.3	-59	38.8	140
Coimbatore	33.2	527	24.3	247	54.9	587
Cuddalore	1.1	-93	59.5	576	7.9	-7
Dharmapuri	6.1	-53	7.2	10	18.1	99
Dindigul	1.0	-89	2.5	-66	1.9	-73
Erode	2.8	-56	12.0	201	8.8	160
Kanchipuram	4.0	-82	10.1	-32	41.4	167
Kanyakumari	129.6	217	20.2	-40	18.2	-55
Karikal	1.0	-94	5.8	-14	8.4	140
Karur	0.5	-90	9.1	250	3.8	97
Krishnagiri	8.7	-41	5.1	-32	29.4	282
Madurai	0.3	-97	1.5	-86	1.2	-89
Nagapattinam	0.8	-93	8.4	25	6.5	15
Namakkal	1.8	-86	16.0	11	11.5	68
Nilgiris	38.6	37	14.3	-69	88.0	75
Perambalur	0.0	-100	6.5	2	10.5	304
Puducherry	0.6	-97	7.1	22	41.6	433
Pudukottai	0.4	-97	9.7	-5	0.7	-91
Ramanathapuram	0.0	-100	0.0	-100	0.7	-70
Salem	13.0	-18	30.1	130	25.4	92
Sivaganga	3.2	-72	0.1	-98	0.2	-98
Thanjavur	1.8	-84	23.1	182	3.1	-50
Theni	11.0	198	7.9	108	15.0	225
Tirunelveli	36.2	449	3.3	-61	15.3	44
Tirupur	4.4	-7	16.3	308	4.4	47
Tiruvallur	13.5	-40	47.6	266	43.6	143
Tiruvannamalai	5.9	-68	31.8	144	44.5	271
Tiruvarur	3.2	-68	8.1	0	4.0	-24
Toothukudi	0.6	-50	1.2	3	0.3	-73
Trichy	0.9	-90	11.6	163	2.2	-41
Vellore	14.6	-24	46.9	311	48.6	292
Villupuram	0.6	-95	23.8	134	19.0	81
Virudhunagar	0.3	-95	1.5	-69	0.0	-100
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	17.0	-22	28.6	-23	146.2	264
Guntur	2.4	-88	42.1	11	44.5	78

Krishna	2.6	-89	68.6	143	99.7	145
Nellore	1.6	-89	25.1	128	31.2	123
Prakasam	2.3	-86	36.7	194	19.9	37
Sirkakulam	6.5	-79	30.5	-28	72.4	88
Visakhapatnam	5.5	-80	39.1	11	74.4	101
Vizianagram	10.9	-65	41.6	22	65.1	64
West Godavari	11.9	-53	24.1	-34	156.5	257
Rayalaseema						
Anantapur	19.7	38	29.3	244	20.4	120
Chittoor	24.4	16	52.6	374	21.2	77
Cuddapah	15.4	-22	43.9	251	36.8	159
Kurnool	9.2	-60	58.9	280	26.4	40
Telangana						
Adilabad	20.8	-28	32.5	-46	81.5	33
Hyderabad	0.2	-99	7.5	-73	55.4	41
Karimnagar	8.5	-74	13.0	-70	84.9	76
Khammam	19.0	-34	13.8	-69	176.1	254
Mehabubnagar	10.2	-54	61.1	245	11.8	-53
Medak	3.4	-86	9.3	-76	38.1	-12
Nalgonda	2.6	-89	20.8	-7	68.0	115
Nizamabad	23.3	-27	47.4	-3	61.1	27
Rangareddy	7.8	-66	44.3	60	31.1	-6
Warangal	14.9	-51	8.6	-79	83.6	74

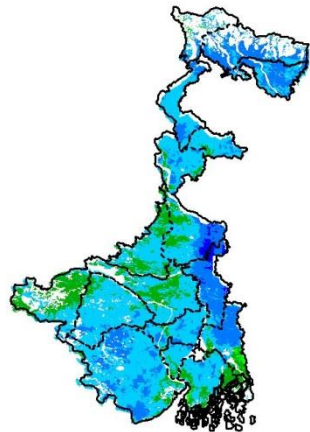
Legends

	(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

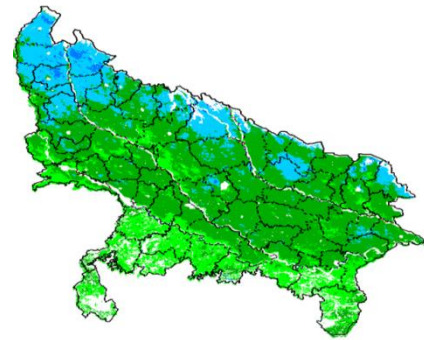
INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON 29th June 2016 FOR DIFFERENT STATES

West Bengal



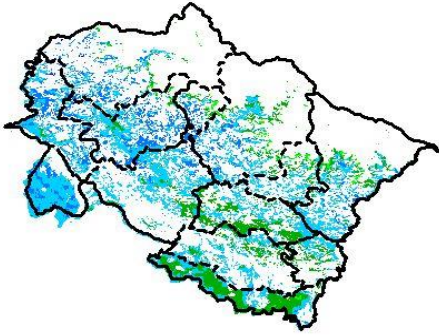
Agricultural vigour is good in West Bengal, whereas very few patches in eastern region of the state show very good NDVI.

Uttar Pradesh



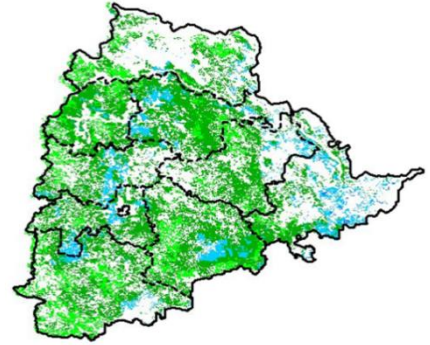
Agricultural vigour is moderate over entire state of Uttar Pradesh whereas, north western part shows patches of good NDVI.

Uttarakhand



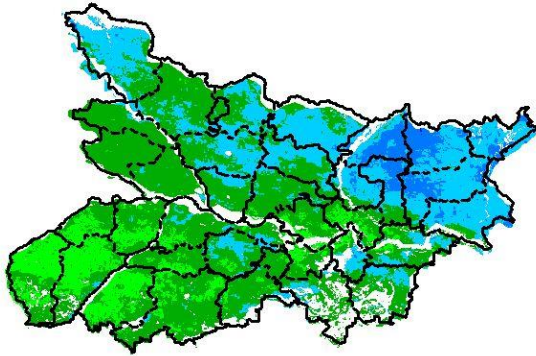
Agriculture vigour is good in major parts of state whereas southern region show good values of NDVI over state of Uttarakhand.

Telangana



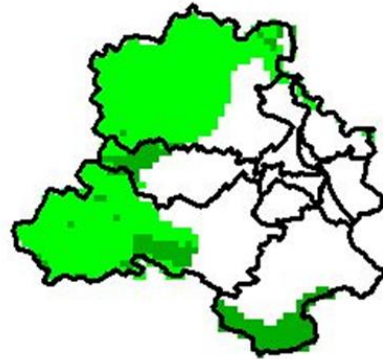
Agriculture vigour is moderate over entire state of Telangana except eastern part shows good NDVI.

Bihar



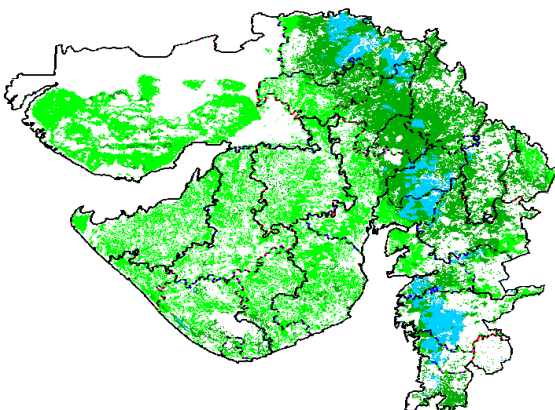
Agriculture vigour is moderate over major parts of Bihar whereas eastern part shows patches of good NDVI values.

Delhi



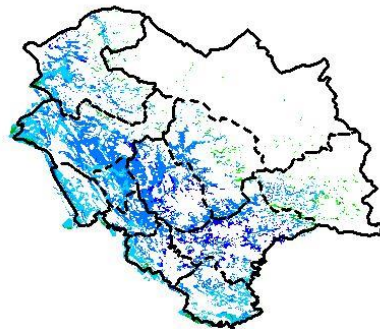
Agriculture vigour is moderate all over Delhi.

Gujarat



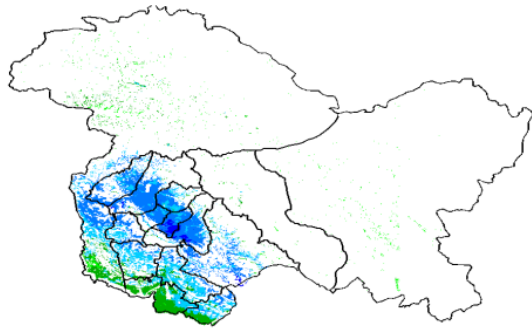
Moderate NDVI values are observed in Kutch, Saurashtra whereas patches of good NDVI observed in Gujrat region.

Himachal Pradesh



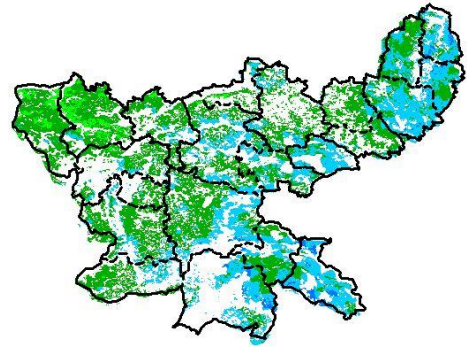
Agriculture vigour is good over major parts of Himachal Pradesh.

Jammu & Kashmir



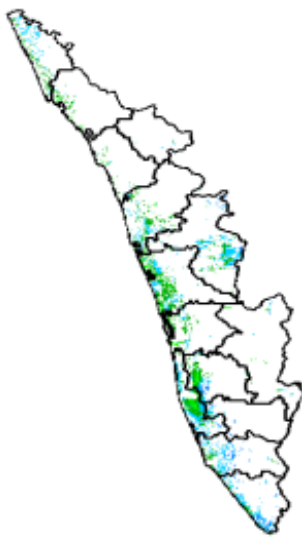
Agriculture vigour is good over major parts of Jammu & Kashmir, whereas the remaining region shows moderate NDVI.

Jharkhand



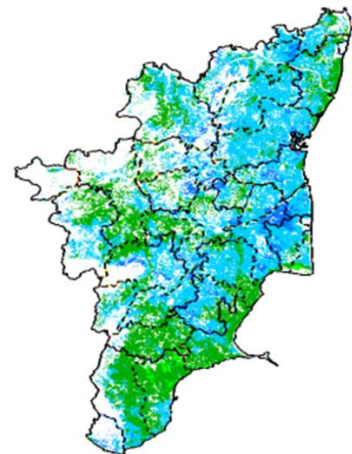
Agriculture vigour is moderate over entire state of Jharkhand whereas few patches of good NDVI observed in southern and eastern part of state.

Kerala



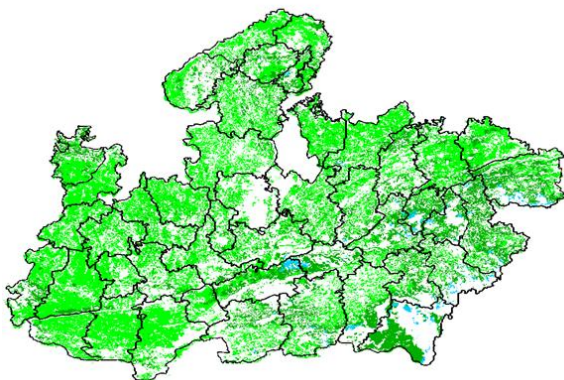
Agriculture vigour is moderate over major state of Kerala.

Tamil Nadu



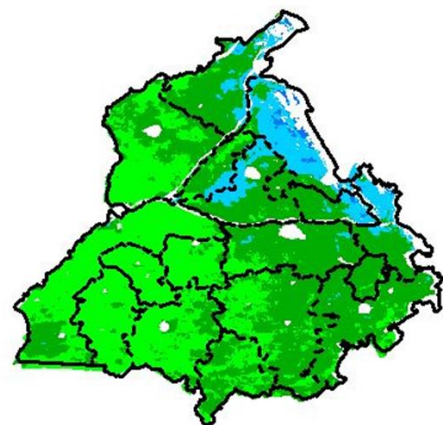
Agricultural vigour is good in major parts of Tamil Nadu, whereas rest of the part shows moderate NDVI.

Madhya Pradesh



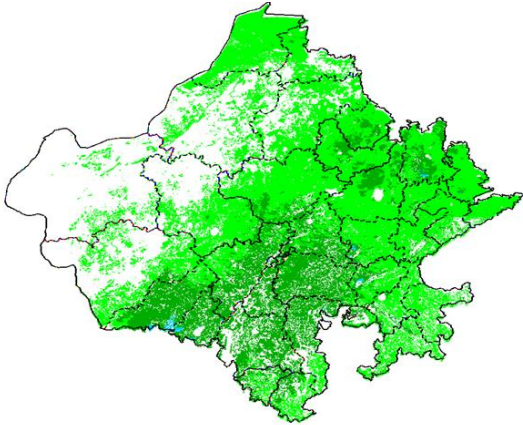
Agriculture vigour shows moderate values of NDVI over entire state of Madhya Pradesh.

Punjab



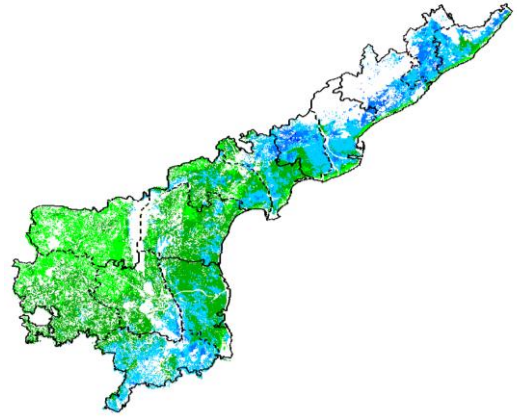
Agricultural vigour is moderate over the entire state of Punjab whereas northern region shows patches of good NDVI.

Rajasthan



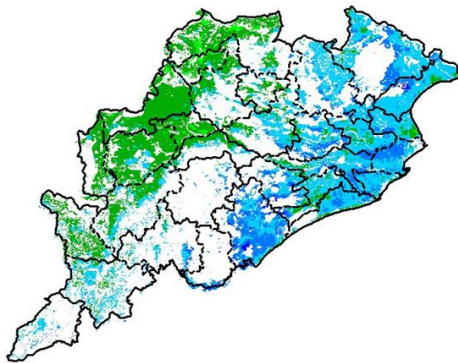
Agriculture vigour is moderate over the entire state of Rajasthan.

Andhra Pradesh



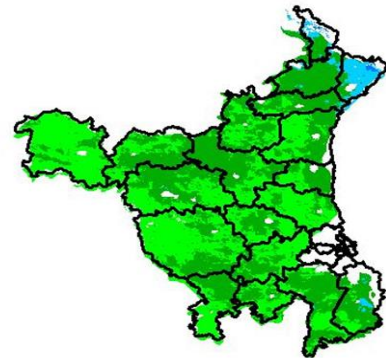
Agriculture vigour is moderate over central part whereas north eastern parts and southern parts shows good NDVI values in the state of Andhra Pradesh.

Odisha



Agricultural vigour is good in coastal parts of Odisha where rest of region shows moderate NDVI.

Haryana



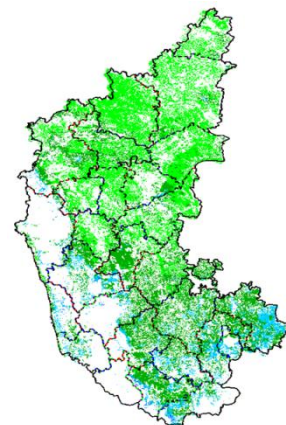
Agriculture vigour is moderate over entire state of Haryana.

Chhattisgarh

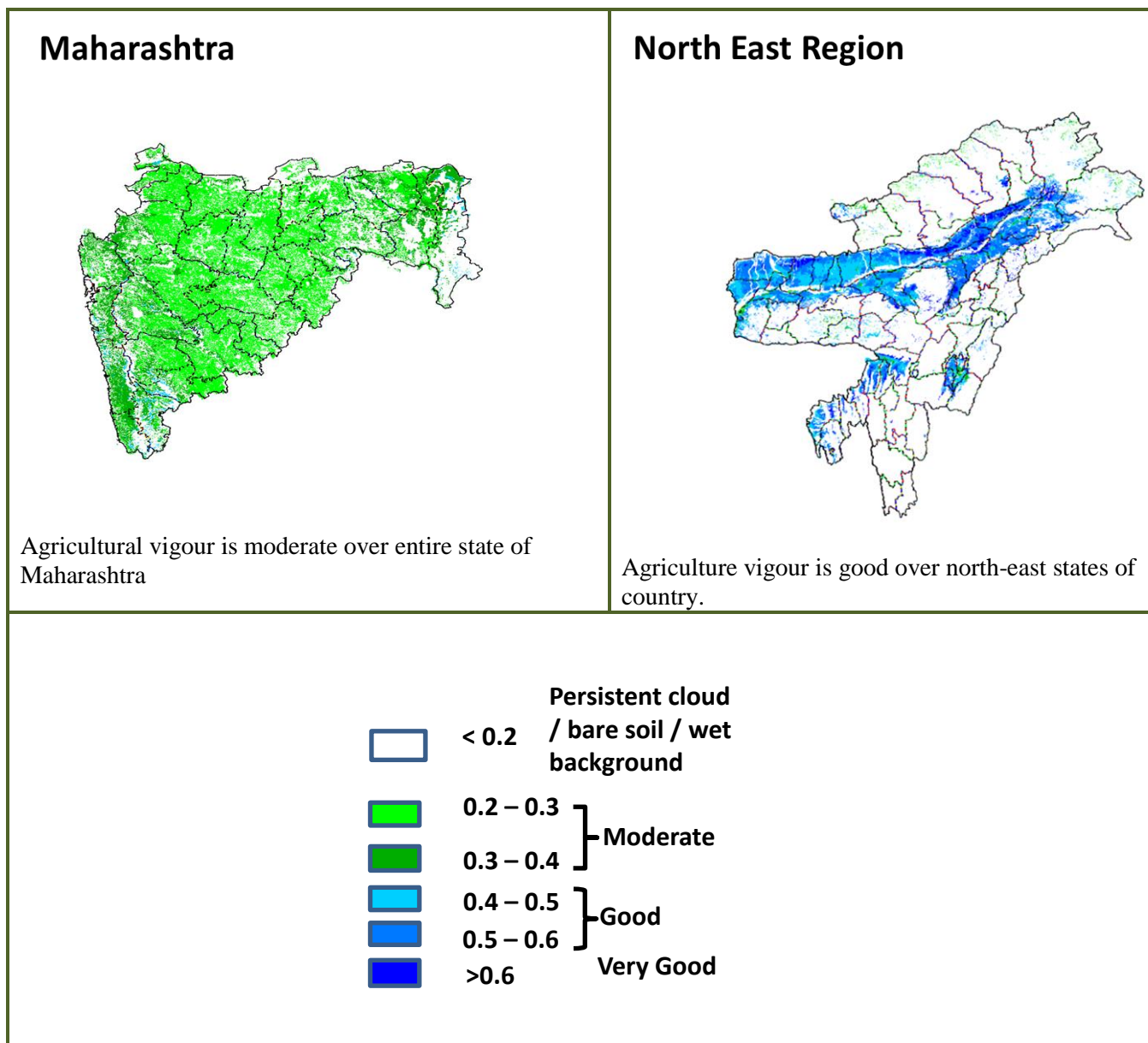


Agriculture vigour is moderate in the state of Chhattisgarh.

Karnataka



Agriculture vigour is moderate over Karnataka state except very few patches of good NDVI observed in southern region of the state.



Annexure III

- Assam**
- Sali rice:** Ranjit, Bahadur, Satyaranjan, Basundhara, Kushal, Mahsuri, Bhogali, Rangilee, Ketekijoha. Satyaranjan and Basundhara (in double cropping areas having crop duration of 130-135 days). Jalashree, Jalkunwari, Plawan (for flood affected areas). Ranjit, Gitesh, Bahadur, Kushal, Piolee (long duration). Satyaranjan, Bosundhora, T.T.B.-404, Mulagabharu, Kanaklata, Joymoti, IR-36, IR-64 etc and Disang, Luit, Kapilee, Dikhow (medium duration).
- Capsularis jute:** JRC 321 and UPC 94.
- Olitorious jute:** Navin (JRO 524), Basudev(JRO 7835), Baisakhtissa(JRO 632), Bahagi (sel-2) and Tarun.
- 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.
- Banana:** Dwarf Cavendish, Jahaji (Dwarf Cultivar), Cheni Champa, Malbhog, Chenichampa, Malbhog, Barjahaji (Medium Tall cultivars).
- Papaya:** Washington, Haflong, Rasi, KorgHoney Dew, Co-1, Co-2, Pusa Delicious, Pusa Majesty.
- Guava:** Alahabad Safeda, Lucknow-49, Chittidar, Seedless.
- Fodder crops:** Hybrid Napier, Setaria and Guinea.

- Meghalaya**
- Sali/ kharif rice:** Shahsarang -1, Lampnah, IR 64, Ranjit, RCPL 1-412, RCPL 1-410, RCPL 1- 411 & local varieties like Mendri, Manipuri.

Groundnut: ICGS 76, JL 24.
Soybean: JS 335, Bragg, Ankur, Pusa Soubean-1, Local JS 2.

Nagaland

Low land rice: CAU R1, CAU R3, RCM-9 and RCM-11 (Short to medium duration), Gitesh (short duration variety).

Tripura

Groundnut: TAG 24, TG 37A, ICGS 76.
Maize : DMH- 849, 117, HQPM 1, BQPM 9.

West Bengal

Coconut: Eastcoastal, Hazari
Banana : Mortoman, Chapa, Kathali, Singapuri,
Mustard: Varuna, Sita and Bhagirathi.
Jute : Chaitali, Basudev, Naveen, Sonali, Sobujsona, Shyamali etc.
Aman rice: Medium duration MTU-7029, MTU1001, Pratiksha, and for long duration CR1017, CR1018, Cr1019, Sabita.
Paddy : IET-4094, 2233, Ratna, Bikash, Kitish, Sasya-shree, IR-42, Swarna, Mashuri, IET-8002.

Odisha

Maize: Navjot, Shakti, Decan-107, Decan-109,
Hybrid: Megan-G, Megan, MM-1107, Highshell, Prabal, Proagro 4643, Bio9681, Pinnacle, DMH-7705,
Rice: Early: Jogesh, Siddant, Hazaridhan, Mandakini, Jyotirmayee, Virendra
Medium: Pratikshya, Manaswini, Tapaswini MAS, Konark, Surendra, Kharavela, Naveen, Abhisek
Late: Barsadhan, Ranidhan, Pooja, Mrinalini, RGL-2837, Moti, Ketakijoha, Padmini, Kanchana, Mahanadi, Jagabandhu
Hybrid varieties: CR Dhan 701, NK 5251, JKRH 401, Ajay, Rajalaxmi, Arize 6444G
Cotton: Suraj, Supriya, B.S.-30, B.S.-279, Surabhi, Sujata
Hybrid: Bunny, Diana, Bhaskra, Namaskara, Tulasi, Sigma, Chiruta, Takat

Bihar

Kharif onion: Agri Found Dark Red (ADR), N-53, Bhima super, Arka kalia.
Turmeric: Rajendra Sonia and Rajendra Sonali.
Ginger : Maran and Nadia.
Kharif Paddy: Seeta, Santosh, Saroj, Rajshri, Prabhat, Rajendra suvasni, Rajendra kasturi and Rajendra bhagwati.
Jute : JRO 8432, JRO 66, JRO 128 JRO 204 and JRO 66.
Bottle gourd: Pusa Naveen, Pusa Samridhi,
Bitter gourd: Pusa Visesh, Pusa-2 mosumi, Pumpkin- Pusa Visvash, Pusa Vikash,
Ridge gourd: Pusa Chikni,
Cucumber: Pusa Uday, Pusa Barkha

Jharkhand

Rice: Birsa Dhan 108, Birsa Vikash Dhan 109, 110, 111, Sahbhagi and Vandana, IR 36, 64, Lalat, Naveen, Sahbhagi, BR 10, Kanak, Rajendra Dhan 202, Sughanda, Birsa Vikash Sugandh Dhan 2, Birsa Vikash Dhan 203.
Maize: Suwan Composite 1(100 days) and hybrid variety- HQPM 1 (100 days), Composite variety- Birsa Makka 1 (80-85 days) and hybrid variety- Kanchan (80-85 days), Birsa vikash Makka 2(70-80 Days).
Red gram: Birsa Arhar (210 days), Bahar (240 Days) and ICPH 2671 (210 days).
Groundnut: AK 12-24, Birsa moongfali 1, 2, 3 and bold type – Birsa bold (BAU 13).
Urad: T 9, Pant U 19, 30, 35 and Birsa urd 1.
Moong: Pusa Vishal, S M L 668, K 885, P S 16 , Pant Moong 2 and P D M 11.

Jammu & Kashmir

Paddy (Sub Tropical Zone): Basmati370, Ranbir Basmati, China-1039, K-39, K-343, Giza-1.
Maize: Vivek-25, Vivek QOM-9 HM-5 and HQPM-1.

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.
Okra (Bhabar and Tarai Zone): Uphar, Punjab Padmini, Punjab-1, Punjab-7, Arka, Anamika, Abhay, Parbhani Kranti
Paddy: Sharbati, Pusa 1121, Pusa 1, Pusa 44, NDR 359.
Groundnut: TA-64, Chandras, Kaushal, Prakash, Ambar.
Dwarfs variety of paddy: Narendra-118, Narendra-97, Pant Sankar Dhan-1 and Pant Sankar Dhan-10.
Pigeon pea: Pant Arhar-3, Pant Arhar-291, UPAS-120, Pusa-992.
Maize: Tarun, Navin, Kiran, Navjot, Pratap maize-1, Pusa sankul-3 & 4 Kg seed of chilly crop.
Soybean: P.S.-1042, P.S.-1241, P.S.-1347, P.S.-1225, P.S.-19.
Groundnut: TA-64, Chandras, Kaushal, Prakash, Ambar.
Okra: Uphar, Punjab Padmini, Punjab-1, Punjab-7, Arka, Anamika, Abhay, Parbhani Kranti.
Radish: Pusha Chetki.

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

Kharif Maize: ganga-11, sartaj, H.Q.P.M.-5, H.Q.P.M.-8, Pro-316, Bio-9681, Wai-1402 K, Prabhat, hybrid varieties G-1, 5 and selective varieties of Tarun, Navin, Kanchan, Sweta and Jaunpuri for early sowing.
Rice: Narendra-359, Malvia dhan-36, Narendra dhan-2026, Narendra dhan-2064, Narendra dhan-2065, Narendra dhan-3112, Sarju-52, Pant dhan-4, seeta, Jalamagna, jalanidhi, jalparia, chakia 59.
Hybrid varieties : Pro. Agro-6444(2001) Eraese, P.H.B.-71, Narendra sankar dhan-2,3, K.R.H.-2, P.R.H.-10, U.S.-312, R.H.-312, V.S.R.-202, R.H.-1531,
Scented varieties: Type-3, Pusa basmati-1, Malvia sugandh-105, Malvia sugandh-4-3, Narendra sugandh or Narendra usar dhan-1, Narendra usar dhan-2, C.L.R.-10, or Narendra usar dhan-2008
Turmeric: Kasturi, Paspu, Amlapuram, Madhukar, Sugna, Rajendra
Ginger -suprabha, suruchi, surbhi and Hingiri
Urad Bean: Pant U-19, Azad URD-1, KU 91-2, Shekhar-1, KU-301
Arahar: Bahar, Amar, Narendra Arahar-1,2, pusa-2001, pusa-991, pusa-992, paras manak, UPAS 120.
Moong: Type-27, 56

West Uttar Pradesh

Ladies finger: VRO-6, VRO-5.
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.
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.
Baby corn: M.H.-4.

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.
Rice: Hybrid varieties: K. R. H 2, PHB 71, Pant hybrid Dhan1, Narendra hybrid dhan 1, P R H 10
High yielding varieties: Pusa 44, Pant Dhan-4, Pant Dhan-10, Pusa-834, Pusa basmati-1, Pusa basmati-1509, Pusa improved basmati, Pusa sugandha-5, Pusa sugandha-4 (Pusa 1121), Ranvir basmati and Taravadi basmati.
Pigeon pea: Pusa 2001, Pusa 992, Paras, Manak.
Maize: PMH1, Parbhat, PMH2
Paddy : PR-124, PR-123, PR-121, PR-122, PR-114, PR 113, PR-126, PR-115.
Okra: Punjab-8 and Punjab-7

Delhi

Oat : J.H.O-822, O.L.-9, Pusa oat-5.
Barseem: Vardan, Buland Barseem-1, Masakavi, J.B-3;
Radish: Japani White, Hill queen, French Radish;
Spinach: PusaBharti.
Amaranth: PusalalChaulai, PusaKiran.
Ladyfinger: Pusa A-4.
Radish: Japani White, Hill queen, French Radish.
Spinach: All Green, PusaBharti;
Fenugreek: PusaKasuri;
Coriander: PantHaritama, Hybrids.
Turnip: Pusa Swati, Local Red variety.
Bottle Gourd- Pusa Naveen, PusaSamridhi
Bitter Gourd- PusaVisesh, Pusa-2 mosumi
Pumpkin- PusaVisvash, PusaVikash
Ridge Gourd- PusaChikni
Cucumber- PusaUday, PusaBarkha

East Rajasthan:

pearl millet: HHB 67, HHB 60, Raj 171, ICMH 356 and ICTP 8201(improved varieties)
Raj-171, ICTP-8203, RHB-173, RHB-177, RHB-121, HHB-67(improved varieties)
Sorghum: CSH-6, CSH-9, CSV-10, CSV-15.
TG37-A, DH-86, Pratap Mungfali-1.

Rice: P.R. 106, B.K.190, Mahisugandha(Basmati)

kharif onion: N-53 & Agrifound dark red

Maize: Aravali Makka-1, Pratap Makka-1, Pratap Makka-5, Pratap Hybrid Maize-1, Pratap Hybrid Maize-2 and bio-9637.

Hybrid varieties are-Mahi Dhawal, PEHM- 2, Pratap Hybrid Maize-1, Pratap Makka-3, Pratap Makka-5, Bio-9637, Bio-9681, Pratap HQPM-1, Pratap Hybrid Maize-3, Pratap Makka-9

Ageti-76, Bassi Selected, Mahi Kanchan

Greengram:RMG-62, RMG-268. RMG-492 & RMG-344, IPM-02-3.

Cowpea: FS-68, RC-19 and RC-101.

Moth: RMO-40, IPCMO-912, RMO-257, RMO-225, RMO-435 (Vikash) (improved varieties)

West Rajasthan

Green fodder: Jwar/Bajra mixed with guar. popular varieties for Jwar are Raj Chari-1, Raj Chari -2, MP Chari, SSG 59-3, MSFH-3, MSFH-4 and Hara Sona; for Bajra: Raj Bajra Chari-2, Co -8, AvikaBajra Chari-19 and Giant bajra; for Guar: RGC-986, Bundel guar-1, Bundel Guar-2 and Bundel Guar-3.

Pearl millet: R.H.B.-177, ICTP-8203, RHB-121, RHB-173, RHB-154, GHB-538, HHB-67(improved varieties)

Bhindi: Ark Anamika, varshauphar, Parbhanikranti, pusamakhmali.

Groundnut: HNG-123, HNG-69, ICHG-00440, HNG-10, TG-37 A, Girnar-2, R.G.-425, GG-20, TG-39.

Sorghum: Girnar-2, RG-425, HNG-10, GG-20, TG-37-A, TG-39.

Narma cotton:R.S.T.-9, R.S.-810, R.S.-2013, Bikanerinarma, R.S.875, MaruVikas(Raj. H.H.16)

BT Narma cotton:M.R.C.H.6304, M.R.C.H.6025, R.C.H.650, Bioseed-6588, Bioseed-6488, R.C.H.-314, J.K.C.H. 1947, M.R.C.-7017 (BG-II) or N.E.C.H.6.

Madhya Maharashtra

Soybean:Phule kalyani, Phule agrani (K D S 344), J S 335, M A C S 11188.

Sorghum:Hybrid varieties – C S H 5, C S H 9, C S H 13, C S H 14, C S H 16, C S H 21, C S H 25,

Improved varieties – S P V 462, C S V 13, C S V 15, C S V 17, C S V 23.

Groundnut:Phule morana, Phule pragati, Phule vyas, Phule unnati, Phule R H R G 602.1.

Rice:Halava : Karjat 184, Ratnagiri 1, Karjat 4, Ratnagiri 711, Phule Radha.

Nimgarva : Jaya, Phule Maval, Phule samruddhi, Phule R G -N-6.

Garva : Ratnagiri 2, Karjat 2, Daranna, Suvarna.

Scented paddy : Basmati 370, Indrayani, Prabhavati, Sughandha.

Hybrid : Sahyadri 1, Sahyadri 2, Sahyadri 3, Sahyadri 4, Sahyadri 5, K R H 2.

Gujarat

Rice: NAUR-1, GNR-2 (Costal area), GNR-3 (N/V), GNR-4 (long duration), Jaya, Ghujari, GR-5, 7, 8, 9 (Oran) IR-28 and GAR-13).

Cotton: Bg-II GCH-8, 12 Jay Bt, Solar-66, 76, Sarju, Bg- II GCH-6, Mallika;hybrid cotton: G. cot. 6, 8, 10, Agritop-333, 777, 444, Jay, Beejdhan-2, Atom, Bhakti; Swapna.

Groundnut: GG-20 & 22, GUG-10, GG-2, 11, 13, TAG- 24, TAG-37 A, TPG-41, TLG-45; semi-spread - GG.20 or erect GG-2, GG.5, GG.7 and TG-26.

Greengram: GM-4, GM-4, K-851

Blackgram: T-9, GU-1.

Cowpea: Gujarat Cowpea-1,2,4, Pusa Falguni.

Pigeonpea: BDN-2, GT-100, GTH-1, Vaishali, GTH-1, BHSR-711 .

Sesame: GT-1, 2, GT-3, 10.

Pearl millet: GHB-528, GHB-577, GHB-316 GHB-183; late maturity - GBH-558, GBH-732 and for moderate maturity - GBH-744, GBH-905 and for early maturity - GHB-757, GHB-719, GHB- 538.

Bottle Gourd: Pusa Naveen, Pusa Samridhi.

Bitter Gourd: Pusa Visesh, Pusa-2 mosumi.

Pumpkin: Pusa Visvash, Pusa Vikash.

Ridge Gourd: Pusa Chikni.

Madhya Pradesh

Soybean: JS 335, JS 93-05, JS 95-60, JS 72-52, JS 90-41, JS 20-29.

Red gram: Jawahar -4, Ahsa (ICPL-87119), JKM-7,189,ICPL 88039, Pusa 2001,2002,992.

Rice: short duration (JR, 305, JR 201,Poornima,JD 201, JRH-5, JRH-8, Danteshwari).

medium duration (IR 64, IR 54,IR 36, Madhuri, Kranti, Mahamaya, Pusa Basmati).

Sugarcane: KO Jawahar-86141, 86572, 86032.

Cotton:H-777, H-974 and H-1098.

Maize: JM-8, JM-12, JM-216,Vivek-17, Navjot, HQPM-1,5, HM-4,10,11.

Sesame: TKG-21, TKG-22, TKG-55, TKG-306, JTS-8, RT-46.

Groundnut:AK 12-24, TG 124,TG 26, Jyoti, JL 24, UF70-103, JGN -3, GG 2, Ganga Puri .

Chhattisgarh

Rice:Abaya, Mahamaya, Danteswari, Samleswari,Chandrasasini, Indira Sona (Hybrid), Karma, Mashuri, Jaldoobi.,Pusa Basmati-1,Madhuri, Indira Sughandith Dhan-1.

Soybean:J.S. 335, Indira soya-9, J.S. 80-21, J.S.93-05.

Sesame:T.K.G. -21, T.K.G-22, T.K.G-55, and T.K.G - 8.

Tomato: Pusa early dwarf, Sweet 72, Pusa rubi, Pusa Gurab, Mangala, Naveen,Laxmi 5005 & NS 815.

Brinjal:Punjab Shadabahar, K S 331, P H 5, P H 6 ,KS224 ,A R B H -543.

Karnataka

Rice: Jaya, Rasi, BPT-5204 (in North East Transition Zone), Intan, Abhilash and Hemavati (for low land); Amrut or Prasanna variety (for upland); BI-33, KMP-1, IET-8116, IR-30864, MTU-1010, 1001, Rashi, MAS-946-1, MAS-26..

Jowar:CHS-5, CSH-9, DSV – 2, Hybrids – CSH-14, CSH-16, CSH-18, CSH-30, CSV-4 and CSV-15, DSV-3, DSV-6 and SSV- 74.

Groundnut:Bunch type of varieties (JL-24 and TMV-2), JL-24, KCG-6, GPBD-4, GPBD-5, G-2-52, R-2001-3 (Ajay), DH-3-30, PRI-2, TMV-2, GPBD-4, Chinthamani-2.

Cotton: DHH-11, NCH-145, NHH-44, DHB-105, DHB-915, and Sahana.

Green gram: PS-16, PDM-84,178, Pusa Baisaki.

Black gram:TU-1, TAU-1, DU-1, DBGV-5. Karegav-3, T-9, LBG-625.

Red gram:TTB-7, BRG-1and 2, Hyd-3c, TS-3R, ICP-7035, BSMR 736, TS-3R.

Ragi: Indaf -9, ML-365, GPU-66, Indaf-5, GPU-28, MR-6, PR-202, HR-911, And KMR-301.

Maize: Hybrids – DMH-2, Arjun, GH-0727, Renuka (G-25) and Private hybrids, Ganga-11, Deccon-101, Vijaya Composit, N.A.C-6002, N.A.C-6004, Nityashree, N.A.H-1137.

Popcorn: Ambar.

Sesame: Navile-1, T-7.

Cowpea: TVX-944, KBC-1, C-152, KM-5, PKB-4.

Soybean:JS-335, DSB-1, DSB-21, JS 93-05.

Sugarcane:S-4, Chainamung & Pusabaisaki, & DGGV-2, CO-419, CO-7804, CO-62175, COC-671, B-37172.

Sunflower: Morden, KBSH-1, 41, 42 & 44.

Beans: HA-3 & 4.

Andhra Pradesh

Maize:DHM 111, DHM 117, DHM-119, KH 510, Bio 9637, KH 9541, MCH 2, Kohinoor, Prabhal and Bisco 855,DHM 111, DHM 117, DHM-119, KH 510, Bio 9637, KH 9541, MCH 2, Kohinoor, Prabhal and Bisco 855

Ragi:Bharati, Srichaitanya, Vaula

Rice: MTU 1010, MTU 1075, NLR 34449, Srikakulam Sannalu, Swarna, Vasundhara, Suraksha, Vijetha,Srikakulam sannalu, Pushyami, Sridruthi, Pushkala, Sri Satya

Groundnut: Kadiri-7Bold & Kadiri-8,Bold, Abhaya and Kadiri-9.

Redgram:LRG-41, PRG-158, PRG-176, Lakshmi, and Asha

Bajra:P.H.B-3, I.C.M.H-356, Dhanashakthi

Korra:Prasad,SIA-3085,Krishnadevaraya,Surya nandi, Narasimharaya, srilakshmi and SIA 3156 and **castor:**PCH-111, PCH-222, Haritha, Kiran

Groundnut:Kadiri-6, Kadiri-9, Narayani and Dharani.

Telangana

Cotton:American Cotton varieties,Desi Cotton varieties (G. arboreum. L and G. herbaceum. L, Intra- / Inter – specific Cotton hybrids,Bt. cotton