



National Agromet Advisory Service Bulletin



Friday 8th July 2016

(For the period 8th to 12th July 2016)



Issued by

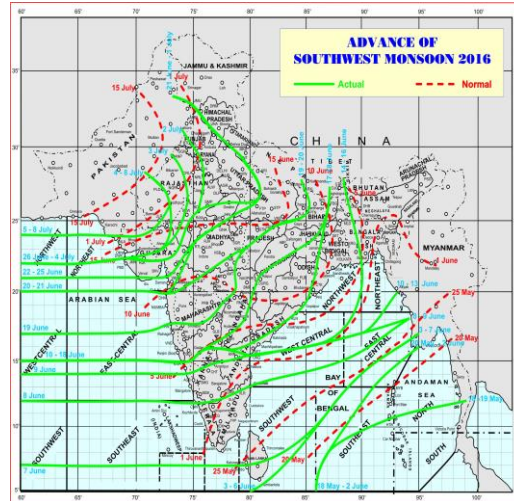
*National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division,
India Meteorological Department, Shivajinagar, Pune.*

Weblink For

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

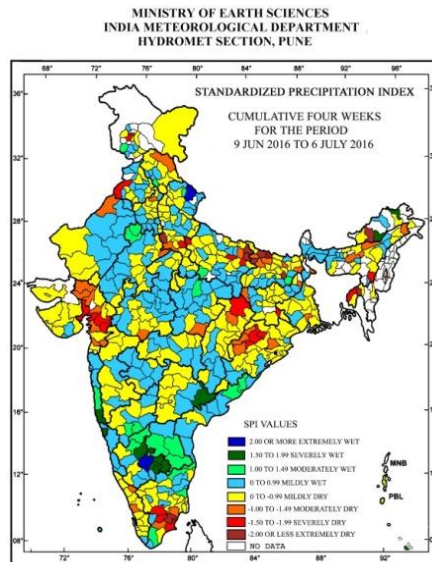
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Monsoon Watch



- The Northern Limit of Monsoon (NLM) continues to pass through Lat. 24.0°N/Long. 60.0°E, Lat. 24.0°N/Long. 70.0°E, Bhub, Jodhpur, Phalodi and Lat. 28.0°N/Long. 71.0°E.
- Conditions are becoming favourable for further advance of southwest monsoon into remaining parts of Kutch and West Rajasthan during next 4-5 days.
- Heavy to very heavy rain occurred at a few places with extremely heavy falls at isolated places over East Madhya Pradesh; heavy to very heavy at isolated places over Andaman & Nicobar Islands; heavy at isolated places over East Uttar Pradesh during past 24 hrs. ending at 0830 hrs. IST of today.

Standardised Precipitation Index Four Weekly for the Period 9th June to 6th July 2016

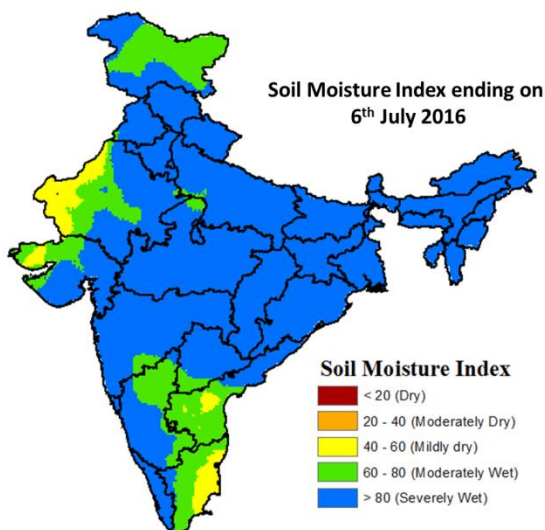


- Extremely/severely wet conditions experienced in Papumpara, Upper Siang districts of Arunachal Pradesh; Sindhudurg district of Maharashtra; South Goa; Chamoli districts of Uttarakhand; Khammam districts of Telangana; Bangalore Rural, Bangalore Urban, Chitradurga, Kolar, Tumkur, Chickballapur districts of Karnataka.
- Extremely/Severely dry conditions experienced in few districts of Gujarat Region; Dhalai, West Tripura districts of Tripura; East Kameng districts of Arunachal Pradesh; Cachar, districts of Assam; Deogarh, Sambalpur, Sonepur districts of Odisha;

Seraikela-Khar, districts of Jharkhand; East Champaran, Monghyr, Sitamarhi, Sheohar, Siwan districts of Bihar; Ambedkar Nagar, Deoria, Farrukhabad, Kushi Nagar, Mau, Mainpuri, Mathura districts of Uttar Pradesh; Ferozepur districts of Punjab; Badgam, Srinagar districts of Jammu & Kashmir; Surguja districts of Chhattisgarh; Dindigul, Madurai, Ramanathapuram, Sivaganga districts of Tamil Nadu & Puducherry.

- Moderately dry conditions experienced in few districts of Gujarat Region; Kamrup, Sonitpur, Morigaon, Tinsukia districts of Assam; Imphal East district of Manipur; South Dinajpur, Kolkata districts of West Bengal; Bolangir, Bargarh, Dhenkanal, Jharsuguda districts of Odisha; Garhwa, Pakur districts of Jharkhand; Gopalganj, Katihar, Muzaffarpur, Saharsa, Saran districts of Bihar; Gorakhpur, Agra districts of Uttar Pradesh; Kurukshetra district of Haryana; Lahaul & Spiti district of Himachal Pradesh; Sri Ganganagar, Dholpur districts of Rajasthan; Burhanpur, Balaghat districts of Madhya Pradesh; Korba district of Chhattisgarh; Pudukkottai, Virudhunagar districts of Tamil Nadu & Puducherry; Thrissur, Wayanad district of Kerala.
- Rest of the country experienced moderately wet/ mildly dry/mildly wet conditions.

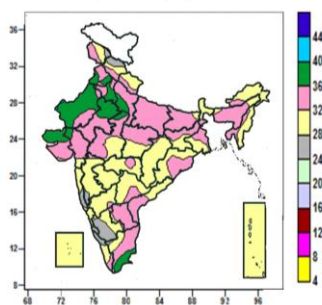
Soil Moisture Index for the week ending on 6th July 2016



- Soil Moisture Index indicates moderate wet condition in most parts of Rayalaseema, many parts of Jammu & Kashmir, North Interior Karnataka and Kutch, some parts of West Rajasthan, Tamil Nadu, few parts of South Marathwada, South Interior Karnataka and Mild dry condition in few parts of West Rajasthan, Tamil Nadu and patches in Kutch and Rayalaseema. Rest of the country shows Severely wet condition.

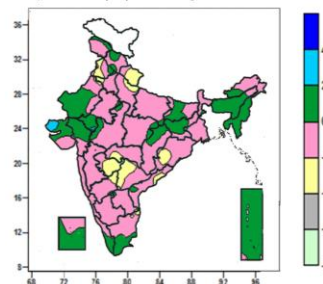
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 06.07.2016

Actual Mean Maximum Temperature (°C) in India for the week ending 06.07.2016



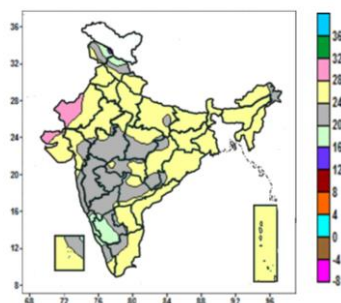
- Mean maximum temperature was between 36 to 40°C over many parts of West Rajasthan, Haryana & Delhi, some parts of Punjab, West Uttar Pradesh, East Rajasthan, Gujarat, Tamil Nadu and isolated pockets of West Madhya Pradesh.
- Mean maximum temperature was between 28 to 36°C over rest of the country except many parts of South Interior Karnataka, some parts of Himachal Pradesh, Konkan & Goa, Coastal Karnataka, Kerala and isolated pockets of Jammu & Kashmir, Madhya Maharashtra, North Interior Karnataka and Tamil Nadu where it was between 24 & 28°C.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 06.07.2016



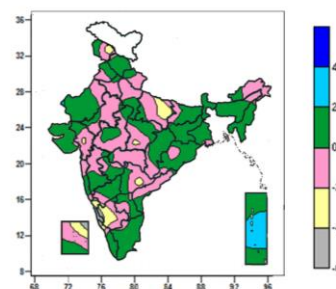
- Mean maximum temperature was above normal by 2 to 4°C over some parts of Kutch and isolated pockets of East Rajasthan.
- It was normal to near normal over rest of the country except many parts of Uttarakhand, Marathwada, some parts of Punjab, Telangana and isolated pockets of Haryana, West Rajasthan, West Uttar Pradesh, Odisha, Vidarbha, Coastal Andhra Pradesh, North Interior Karnataka, Rayalaseema and Tamil Nadu where it was below normal by 2 to 4°C.

Actual Mean Minimum Temperature (°C) in India for the week ending 06.07.2016



- Mean minimum temperature was between 12 to 16°C over isolated pocket of Jammu & Kashmir.
- Mean minimum temperature was between 16 to 20°C over many parts of South Interior Karnataka, Coastal Karnataka, some parts of Jammu & Kashmir, Himachal Pradesh, Kerala and isolated pocket of North Interior Karnataka and Lakshadweep.
- Mean minimum temperature was between 20 to 28°C over rest of the country except some parts of West Rajasthan and Kutch, where it was between 28 & 32°C.

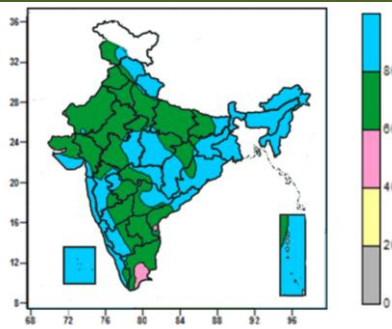
Mean Minimum Temperature (°C) Anomaly in India for the week ending 06.07.2016



- Mean minimum temperature was above normal by 2 to 4°C over many parts of Andaman & Nicobar Islands and isolated pockets of West Rajasthan.
- Mean minimum temperature was normal to near normal over rest of the country except many parts of Coastal Karnataka, some parts of East Uttar Pradesh, South Interior Karnataka, Lakshadweep and isolated pockets of Jammu & Kashmir, East Madhya Pradesh, Gujarat Region, Telangana and Kerala where it was below normal by 2 to 6°C.

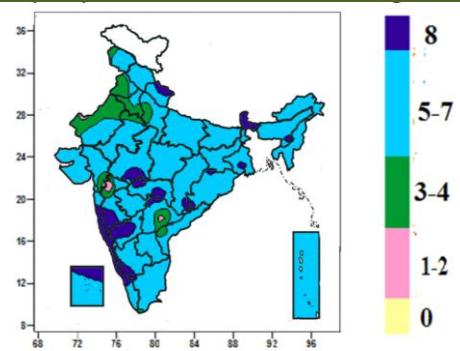
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 06.07.2016

Relative Humidity (%) over India for the week ending 06.07.2016



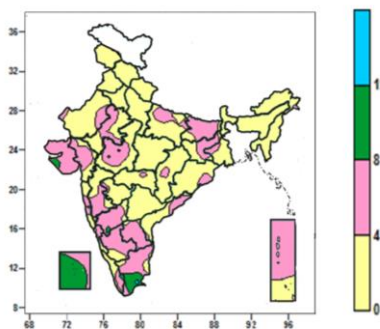
- Mean Relative Humidity was above 80% over West Bengal & Sikkim, North East India, Uttarakhand, Konkan & Goa, Coastal Karnataka, Lakshadweep, many parts of Himachal Pradesh, Jharkhand, East Madhya Pradesh, Saurashtra, Chhattisgarh, Odisha, Madhya Maharashtra, Vidarbha, Kerala, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Bihar, West Madhya Pradesh, Marathwada, Coastal Andhra Pradesh, Interior Karnataka and isolated pockets of Uttar Pradesh, West Rajasthan, Gujarat Region and Tamil Nadu.
- Mean Relative humidity was between 60 to 80% over rest of the country except some parts of Tamil Nadu and isolated pocket of Coastal Andhra Pradesh where it was between 40 to 60%.

Cloud amount (okta) over India for the week ending 06.07.2016



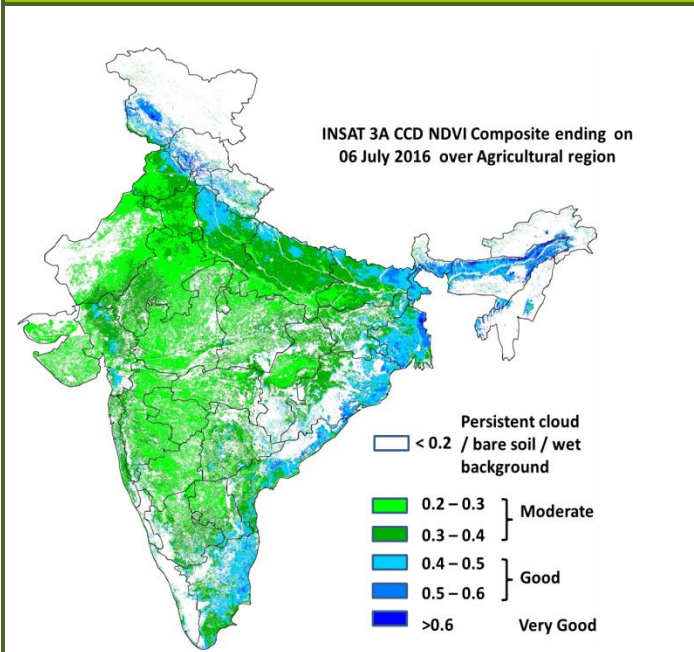
- Sky remained overcast (8 okta) over Sikkim, many part of Konkan & Goa, Sub Himalayan West Bengal, Coastal Karnataka, North Interior Karnataka, some parts of Uttarakhand, West Madhya Pradesh, Vidarbha, South Interior Karnataka, Kerala, Lakshadweep and isolated pockets of Manipur, Assam & Meghalaya, Gangetic West Bengal, Jharkhand, Odisha, Chhattisgarh, Marathwada, Telangana and Tamil Nadu.
- Sky remained generally cloudy (5-7okta) over rest of the Country except many parts of Punjab, Haryana & Delhi, West Rajasthan, some parts of West Uttar Pradesh, Madhya Maharashtra, Telangana, isolated pockets of Jammu & Kashmir, East Rajasthan, Gujarat Region and Coastal Andhra Pradesh, where it was partly cloudy/mainly clear (3-4/1-2 okta).

Wind speed (knots) over India for the week ending 06.07.2016



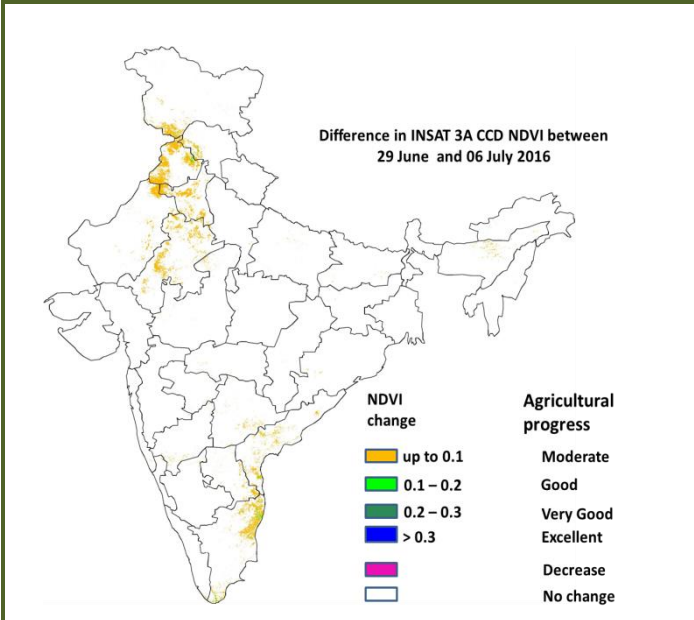
- Mean wind speed was 12 to 16 knots over isolated pocket of Tamil Nadu.
- Mean wind speed was 8 to 12 knots over many parts of Lakshadweep, some parts of Tamil Nadu and isolated pockets of Saurashtra, West Madhya Pradesh, Konkan, North Interior Karnataka and Kerala.
- Mean wind speed was 4 to 8 knots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

INSAT 3A CCD NDVI COMPOSITE ENDING ON 6th July 2016 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour is very good in West Bengal, Coastal Odisha, 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, (NDVI: 0.3-0.4). NDVI remains within the range of 0.2 to 0.3 over most parts of rest of India.

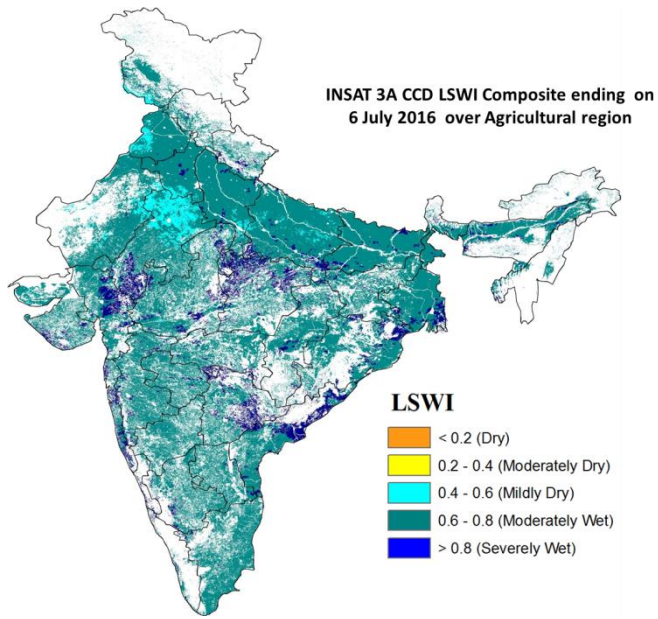
Difference in INSAT 3A CCD NDVI between 29th June and 6th July 2016



- Moderate progress (up to 0.1) in NDVI was observed over some patches in Haryana, Punjab, East Rajasthan, Andhra Pradesh and Coastal Tamil Nadu.

- INSAT 3A CCD NDVI composite maps for the week ending on 6th July 2016 for different States are given in Annexure II.

INSAT 3A CCD LSWI COMPOSITE ENDING ON 6th July 2016 OVER AGRICULTURAL REGIONS OF INDIA



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

Weather Forecast for next 5 days valid upto 0830 hours of 13th July 2016

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

5 Day Rainfall Forecast (MID DAY) 8th July 2016

Met Sub-divisions	08 July	09 July	10 July	11 July	12 July
1. Andaman & Nicobar Islands	WS	FWS	FWS	FWS	FWS
2. Arunachal Pradesh	SCT	SCT	SCT	FWS	WS
3. Assam & Meghalaya	SCT	FWS	FWS	FWS	WS
4. N.M.M. & T.	FWS	FWS	FWS	WS	WS
5. S.H. West Bengal & Sikkim	WS	WS	FWS	FWS	FWS
6. Gangetic West Bengal	FWS	FWS	FWS	FWS	SCT
7. Odisha	FWS	FWS	WS	FWS	FWS
8. Jharkhand	FWS	FWS	FWS	FWS	FWS
9. Bihar	SCT	SCT	SCT	SCT	FWS
10. East Uttar Pradesh	FWS	FWS	FWS	SCT	FWS
11. West Uttar Pradesh	SCT	SCT	FWS	FWS	FWS
12. Uttarakhand	FWS	FWS	FWS	WS	WS
13. Haryana, Chd & Delhi	ISOL	SCT	FWS	FWS	FWS
14. Punjab	ISOL	ISOL	SCT	SCT	FWS
15. Himachal Pradesh	ISOL	SCT	SCT	FWS	WS
16. Jammu & Kashmir	ISOL	ISOL	SCT	SCT	FWS
17. West Rajasthan	ISOL	ISOL	ISOL	SCT	FWS
18. East Rajasthan	SCT	FWS	FWS	WS	FWS
19. West Madhya Pradesh	WS	WS	WS	WS	SCT
20. East Madhya Pradesh	WS	WS	WS	FWS	SCT
21. Gujarat Region	SCT	FWS	FWS	WS	FWS
22. Saurashtra & Kutch	SCT	SCT	FWS	FWS	FWS
23. Konkan & Goa	WS	WS	WS	WS	WS
24. Madhya Maharashtra	FWS	FWS	FWS	SCT	SCT
25. Marathwada	FWS	FWS	SCT	SCT	ISOL
26. Vidarbha	FWS	FWS	FWS	SCT	SCT
27. Chhattisgarh	FWS	FWS	FWS	SCT	FWS
28. Coastal Andhra Pradesh	FWS	SCT	SCT	ISOL	ISOL
29. Telangana	FWS	FWS	SCT	ISOL	ISOL
30. Rayalaseema	ISOL	ISOL	ISOL	ISOL	DRY
31. Tamil Nadu & Puducherry	ISOL	ISOL	ISOL	ISOL	DRY
32. Coastal Karnataka	WS	WS	WS	WS	WS
33. North Interior Karnataka	SCT	SCT	FWS	ISOL	ISOL
34. South Interior Karnataka	FWS	SCT	SCT	SCT	ISOL
35. Kerala	WS	WS	WS	WS	FWS
36. Lakshadweep	WS	WS	FWS	SCT	SCT

% 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

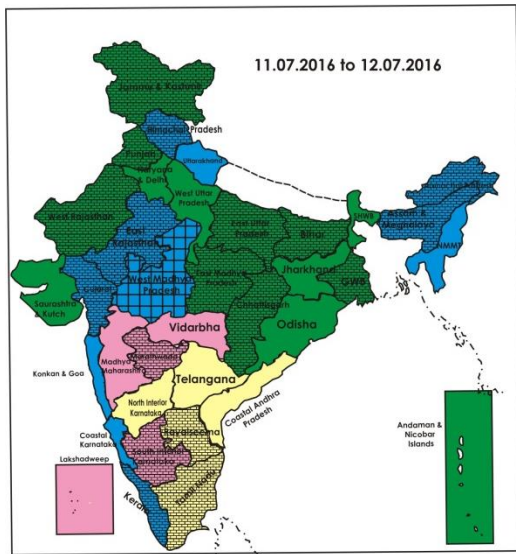
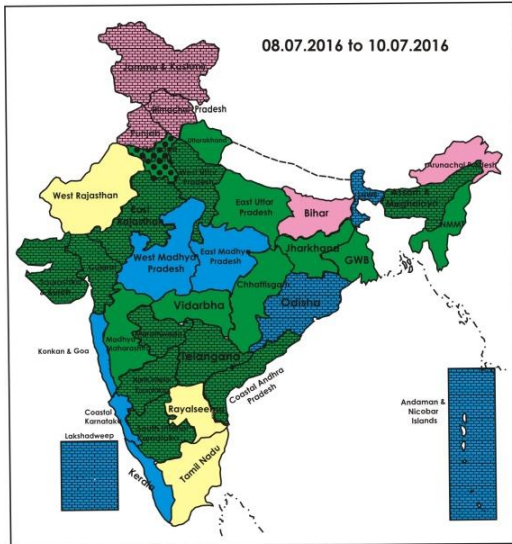
- 08 July (Day 1):** Heavy to very heavy rain very likely at isolated places over Madhya Pradesh; heavy at isolated places over Vidarbha, Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Konkan & Goa, Coastal Karnataka and Kerala.
- 09 July (Day 2):** Heavy to very heavy rain very likely at isolated places over Madhya Pradesh, Madhya Maharashtra, Konkan & Goa and Coastal Karnataka; heavy at isolated places over Vidarbha, Sub-Himalayan West Bengal & Sikkim, Odisha, Assam & Meghalaya, Marathwada, Telangana & Kerala.
- 10 July (Day 3):** Heavy to very heavy rain very likely at isolated places over Coastal Karnataka and Konkan & Goa; heavy at isolated places over Uttarakhand, West Uttar Pradesh, East Rajasthan, Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Odisha, Gujarat region, Madhya Maharashtra and Marathwada.
- 11 July (Day 4):** Heavy to very heavy rain very likely at isolated places over East Rajasthan; heavy at isolated places over Uttarakhand, West Uttar Pradesh, West Madhya Pradesh, Gujarat region, Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- 12 July (Day 5):** Heavy rain very likely at isolated places over Himachal Pradesh, Uttarakhand, Arunachal

Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

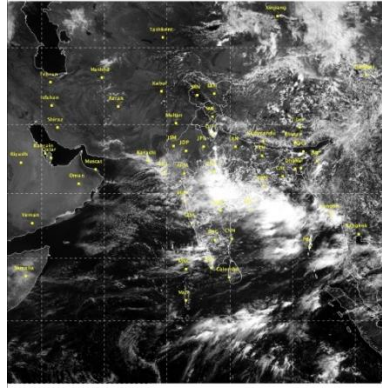
Weather Outlook for subsequent 2 days from 13th to 15th July 2016

- Rainfall at most places very likely over northwest, east and northeast India.
- Rainfall at many places very likely along west coast and over central India, Lakshadweep and Andaman & Nicobar Islands.
- Rainfall at a few places over Peninsular India.

Weather Forecast Map (valid upto 0830 hours of 13th 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 (late sown) in Thiruvananthapuram, Kollam, Kannur, Malappuram and Kozhikode districts and undertake sowing of rice (Uma variety) in Alappuzha, Kottayam districts.
 - In **Coastal Karnataka**, continue transplanting of rice in Dakshina Kannada and Udupi districts of Coastal Zone. Undertake 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**, complete sowing of groundnut (spreading type), red gram, onion, castor, bajra, navane, cowpea and horse gram as solo crop in shallow black and red soils and also in medium black and deep black soils in Vijayapura and Bagalkote districts. 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 nursery sowing of rice. Continue sowing of groundnut, medium duration varieties of maize in East Godavari district. In West Godavari, Krishna, Prakasam, Guntur and Krishna districts, continue nursery sowing of rice, sowing of millets, maize and land preparation and sowing of red gram, black gram, green gram and cotton. Continue sowing of groundnut in Nellore district.
 - In **Rayalaseema**, continue sowing of rainfed groundnut, red gram, bajra, korra and castor in Anantpur district. Undertake intercultural operations for weed control and conserving soil moisture in early sown groundnut. Continue sowing of groundnut, sunflower, red gram, bajra, kora, black gram and castor in Kurnool district. In Chittoor and Kadappa districts, continue sowing of groundnut, red gram, maize, jowar and bajra.
 - In **Telangana**, continue nursery sowing of rice. Continue sowing of maize, soybean, green gram and black gram in North Telangana Zone and continue 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 Brahmaputra Valley Zone. Undertake land preparation and transplanting of long duration *Sali* rice. Continue sowing of arhar and sesame
 - In **Meghalaya**, continue nursery sowing of *Sali* rice and sowing of groundnut, soybean, green gram, black gram and rajma.
 - In **Nagaland**, continue transplanting of TRC/WRC rice and In **Manipur**, undertake transplanting of rice and continue sowing of groundnut and black gram.

- In **Mizoram**, undertake transplanting of *kharif* rice, sowing of *kharif* green gram, black gram and rajma.
 - In **Tripura**, undertake transplanting of *kharif* rice and continue sowing of groundnut and maize.
 - In **West Bengal**: In Gangetic West Bengal, continue 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, direct sowing of rice and continue sowing of cotton, groundnut, maize and arhar in uplands.
 - In **Bihar** and **Jharkhand**, continue nursery sowing of rice and onion and sowing of maize and redgram.
 - In **Konkan**, continue transplanting with rice seedling of 21-25 days old in north Konkan. Drain out excess water from rice fields.
 - In **Madhya Maharashtra**, continue sowing of soybean in Pune, Ahmednagar, Satara and Sangli districts. Continue sowing of groundnut in Kolhapur, Pune and Ahmednagar districts. Continue sowing of maize in Pune and Ahmednagar districts. Continue sowing of cotton, maize, soybean, red gram, green gram and onion in Nasik, Dhule, Nandurbar and Jalgaon districts with realised and expected rainfall.
 - In **Marathwada**, complete 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 Bhandara district (adopt mat nursery method for nursery raising). Continue sowing of *kharif* soybean, cotton, tur and moong in Buldana, Akola, Washim, Amravati, Nagpur and Yavatmal districts.
 - In **East Madhya Pradesh**, continue nursery sowing of rice and sowing of red gram and soybean after current spells of heavy rain.
 - In **West Madhya Pradesh**, continue sowing of soybean and maize and in Gwalior, Bhind, Morena, Shivpuri, Guna, Ashoknagar and Sheopur districts, continue sowing of pearl millet, red gram, green gram and black gram utilising the realised and expected rainfall.
 - In **Chhattisgarh**, continue nursery sowing of rice and direct sowing of rice in Plain Zone. Continue 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.
 - In **West Uttar Pradesh**, continue land preparation and sowing of maize and pigeonpea expected rainfall.
 - In **Punjab and Haryana**, continue field preparation and transplanting of rice.
 - In **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.
 - In **East Rajasthan**, continue sowing of bajra, sorghum and guar, groundnut and blackgram in Jaipur district.
 - In **Gujarat**, in Navasari, Valsad and Dangs districts, continue nursery sowing of rice and direct sowing of rice in uplands, sowing of red gram, green gram and black gram, continue nursery sowing of chilli, brinjal and undertake sowing cucurbits like bottle gourd, ridge gourd, sponge gourd, bitter gourd. Continue sowing of pearl millet, cotton, groundnut, sesame, green gram, black gram, red gram and maize etc. in Banaskantha, Sabarkantha, Mehsana, Patan and Gandhinagar districts of North Gujarat Zone with realised and expected rainfall. Continue sowing of cotton, groundnut, soybean, sesame, pigeon pea, and castor in Porbandar and Junagadh district of South Saurashtra Zone and undertake sowing of *kharif* crops in Kutch district after receipt of sufficient rainfall.
- As conditions are becoming favourable for further advance of southwest monsoon into remaining parts of Kutch and West Rajasthan during next 4-5 days.
- In **West Rajasthan**, continue land preparation and sowing of bajra, mothbean, groundnut, green gram and cluster bean under sufficient soil moisture condition.

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, all districts of Coastal Karnataka, Belagavi, Dharwad and Haveri districts of North Interior Karnataka, Chikkamagaluru, Davangere, Hassan, Kodagu and Shivamogga districts of South Interior Karnataka, Coimbatore and Nilgiris districts of Tamil Nadu, East Godavari, Krishna, Sirkakulam, Visakhapatnam, Vizianagram and West Godavari districts of Coastal Andhra Pradesh, Adilabad, Karimnagar, Khammam, Medak, Nizamabad and Warangal districts of Telangana. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most places over Coastal Karnataka and at most/many places over Kerala during the period, at many places over Coastal Andhra Pradesh and over South Interior Karnataka on 8th, over North Interior Karnataka on 10th and over Telangana on 8th & 9th 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/heavy to very heavy rain is very likely at isolated places over Coastal Karnataka from 8th to 10th and heavy rain is very likely at isolated places over Kerala on 8th & 9th and over Telangana on 9th July, provide adequate drainage in standing crop fields to avoid water stagnation.
 - **Kerala:**
 - In Kerala, continue transplanting of *Virippu* rice (late sown) in Thiruvananthapuram, Kannur, Malappuram and Kozhikode districts. Undertake land preparation and sowing of rice (Uma variety) in Alappuzha and Kottayam districts. Provide adequate drainage in rice nurseries and avoid water stagnation in the planting pits/basins.
 - Continue planting of brinjal, bhindi and chilli and planting of coconut seedlings in uplands with adequate drainage in Alappuzha, Kottayam districts and continue planting cucurbits like pumpkin, cucumber, bottleguard in Pathanamthitta district.
 - In Wayanad and Idukki districts, continue planting of coconut, areca nut, pepper and cardamom.
 - In Palakkad, Thrissur and Ernakulam districts, due to increase in rainfall, there is a chance of rhizome rot in banana. As a control measure, pour 2 litre of *Pseudomonas* solution (20gm /litre of water) in the basin.
 - In Alappuzha and Kottayam districts, prevailing weather conditions (humid conditions) are congenial for fungal diseases in nutmeg. To control fungal diseases, spray Bordeaux mixture @ 1% and drench with Copper Oxy Chloride @ 0.2% after current spells of rain.
 - In Kannur, Malappuram and Kozhikode districts, there are chances of yellowing of coconut leaves due to deficiencies of secondary and micro nutrients in the hilly tracts which in turn causes bud rot disease in weak palms. To control, apply Lime @ 2 kg/palm and Ayar @ 500g (micro nutrient mixture) along with the recommended dose of NPK fertilizers, after two weeks of lime application, after current spells of rain.
 - **Karnataka:**
 - In Coastal Karnataka, continue transplanting of rice in Dakshina Kannada and Udupi districts. Undertake transplanting of rice, planting of pineapple and black pepper, continue planting of arecanut, turmeric and ginger and continue cotton dibbling in Uttar Kannada district. Carry out hand weeding in 25-35 days old maize and cotton crop; provide adequate drainage in maize, turmeric and ginger fields.
 - Continue nursery sowing of rice and sowing of red gram in Chikkamagaluru, Hassan, Shivamogga districts of Southern Transition Zone. Carry out intercultural operations in already sown maize and red gram fields on a non rainy day.
 - Continue nursery raising of rice, land preparation for transplanting of rice, planting of turmeric and ginger, complete sowing of cowpea, green gram, black gram, sesame, 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 rainfall.
 - Complete sowing of red gram in Chickballapur, Kolar and Ramnagara districts, Continue sowing of groundnut, maize, ragi, cowpea and castor with realised rainfall in Bengaluru Rural, Bengaluru Urban, Ramnagara, Chickaballapura and Kolar districts of Eastern Dry Zone.
 - Continue sowing of cotton in Chitradurga and Tumakuru districts, minor millet in Chitradurga district, jowar, red

gram, sunflower, groundnut in Chitradurga, Davengere and Tumakuru districts of Central Dry Zone with realised rainfall.

- Continue nursery sowing of rice and 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.
- Carry out puddling in the main field and transplanting of rice seedlings; continue sowing of red gram, black gram, green gram, maize and cotton with realised rainfall; plantation of fruit trees in Ballari, Kalaburgi, Koppal, Raichur and Yadgir district of North East Dry Zone. Undertake sowing of sorghum, maize (African tall), cowpea and short duration bajra for fodder purpose.
- Continue sowing of soybean, maize and cotton with realised rainfall 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.
- Complete sowing of groundnut (spreading type), red gram, onion, castor, bajra, navane, cowpea and horse gram as solo crop in shallow black and red soils and also in medium black and deep black soils; intercropping of bajra + red gram in 2:1 row proportion or bajra + castor in 2:1 row proportion may be taken up to make efficient use of available soil and water resources and to get higher returns in Vijayapura and Bagalkote districts. Take up sowing of bajra, spreading groundnut, red gram, castor, navane/savi, maize as solo crop and chilli + desi cotton, bajra + red gram (2:1 row proportion), navane/Savi + red gram (2:1 row proportion) in shallow black and sand mixed black soil; sowing of spreading groundnut as entire crop and chilli + onion as mixed crop in medium/deep black soils and sand mixed loamy soils in Gadag district of North Dry Zone with realised rainfall.
- In North Dry Zone, in order to withstand the crops even in long dry spells, adopt special cultivation practices before sowing as suggested below:
 - Bajra: Soak the seeds in water for 10 hours and dry under shade. Take up sowing in wider row spacing up to 135 cm.
 - Pigeon pea: Soak the seeds in CaCl_2 solution (2%) for 1 hour and dry under shade for 7 hours and then go for recommended seed treatment.
 - Spare some land exclusively for fodder crops or give preference for grain cum fodder crops.
 - Prepare ridges and furrows and compartment bunds in the fields reserved for rabi sowing.
- Sucking pests thrips were noticed in cotton and onion in almost all talukas of Raichur district; spray Imidachlorpid @ 0.3 ml/litre or Acetamid @ 0.2 g/litre of water on a non-rainy day. Incidence of leaf webber in red gram was found in and around Lingasugur taluka of Raichur district; take up spraying of Profenophos @ 2 ml/litre of water for control on a non-rainy day.
- Due to wet condition and relatively higher humidity, attack of millipede is noticed in the soybean fields at germination/seedling stage in some parts of Bidar district of North East Transition Zone, for control, hand pick and destroy the pests, heap farm waste at two to three corners near the bunds and make it wet; millipedes settle in the farm waste and after that destroy the heap; localized application/ drenching of Lambda Cyhalothrin 10 EC @ 2 ml/litre around 2 to 3 crop rows is advised on a non rainy day.
- Due to prevailing weather conditions there is chance of leaf eating caterpillar in ginger and turmeric in Southern Dry Zone; spray Dimethoate 30 EC @ 1.7 ml or Melathion 50 EC @ 2 ml/litre of water for control on a non-rainy day.
- **Andhra Pradesh:**
- In Srikakulam, Vizianagaram and Vishakapatnam districts, continue sowing of maize, red gram, green gram, black gram and groundnut.
- In East Godavari district, continue nursery sowing of ragi and rice. Continue sowing of groundnut in Nellore district.
- In West Godavari, Krishna, Prakasam, Guntur and Krishna districts, continue nursery sowing of rice, sowing of millets, maize and land preparation and sowing of red gram, black gram, green gram and cotton.
- In Rayalaseema, continue sowing of rainfed groundnut, red gram, bajra, korra and castor in Anantapur district. Continue intercultural operations for weed control and conserving soil moisture in early sown groundnut. Continue sowing of groundnut, sunflower, red gram, bajra, kora, black gram and castor in Kurnool district
- In Chittoor and Kadappa districts, continue sowing of groundnut, red gram, maize, jowar bajra and continue transplanting of rice.
- In Anantapur and Kurnool districts, ash weevil incidence was observed in seedlings of red gram. To control, undertake dusting of Malathion @ 5kg/acre on a non rainy day.
- **Telangana:**
- In Karimnagar, Nizamabad and Khammam districts (North Telangana Zone), continue nursery sowing of rice (medium and short duration varieties), sowing of maize, soybean, green gram and black gram, red gram and cotton.
- In Mahabubnagar, Nalgonda, Medak, Rangareddy, Khammam and Warangal districts (South Telangana Zone), undertake nursery sowing of short duration rice (cultivar Telangana sona) and sowing of maize, cotton, red gram, soybean and jowar. Drench vegetable nursery bed with Copper-Oxy-Chloride @ 3 g/litre of water.
- In Mahabubnagar, Nalgonda, Medak, Rangareddy, Khammam and Warangal districts (South Telangana Zone), incidence of stem borer is noticed in maize. To control, spray Monocrotophos @ 1.6 ml or Chloratraniliprole @ 0.3 ml/ litre of water to the 12-15 days old crop. If incidence is observed in above 15days old crop, apply Carbofuran

3G @ 4 kg per acre in the whorls after current spells of rain.

▪ **Tamil Nadu:**

- In Thanjavur, Nagapattinam, Thiruvarur, Karur, Perambalur, Trichy and Ariyalur districts, undertake transplanting of *Kuruvai* rice and SRI cultivation.
 - In Coimbatore, Tiruppur, Erode districts, complete transplanting *Kar* season rice transplanting. Considering the micro nutrient deficiency due to high cloud cover, apply each 375 g of Borax, Ferrous sulphate, Zinc sulphate and Urea in 250 lit of water/ha twice at 25 days interval. Provide support to banana and sugarcane of 5 months old and above may be given with propping to avoid lodging.
 - In Pudukottai, Madurai, Dindigul, Theni, Ramanathapuram and Sivaganga, since the vegetable crops are at flowering to fruiting stage and due to increase in temperature, to apply the nutrients through fertigation or foliar spray.
 - In Tuticorin, Virudhunagar and Tirunelveli districts, provide 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, continue planting of pineapple, banana, rubber and cinnamon.
 - In Salem, Namakkal, Dharmapuri and Krishnagiri districts, widespread deficiency of zinc, boron and iron is found in most of the cultivable lands. Deficiency can be corrected by the addition of Micronutrient mixture @ 2 kg/acre. Before application it should be enriched with farm yard manure @ 20 kg/acre kept for 1 month under shade.
 - In Nilgiris, spray *Pseudomonas* @ 10ml/ litre of water to prevent disease incidence in all the crops and continue cultivation of disease resistant potato variety (kufri girdhari) to avoid disease incidence during monsoon period. In Nilgiris district, since continuous rainfall is expected, 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, there is possibility of incidence of white diarrhoea disease in poultry birds. Vaccinate the poultry birds to prevent the disease.
 - In the Western Zone of Tamil Nadu, prevailing weather is conducive for mastitis disease in milch animals. To prevent the disease, wash the udder with 1 % KMnO₄ before and after milking.
 - In North Dry Zone, vaccinate livestock against foot and mouth disease (FMD vaccination), Black Quarter disease (BC vaccination) and Haemorrhagic Septicaemia, vaccinate (ET vaccine) sheep and goats against Enterotoxemia in North East Transition Zone.

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



Banana



Rice



Land preparation/Sowing



Jute

- **Realised Rainfall:** Rainfall occurred in Changlang, East Kameng, East Siang, Lohit, Lower Dibang Valley, Papumpara, Tawang, Tirap, Upper Siang, Upper Subansari, West Kameng and West Siang districts of Arunachal Pradesh, Barpeta, Bongaigaon, Cachar, Chirang, Dhubri, Dibrugarh, Goalpara, Golaghat, Hailakandi, Jorhat, Kamrup(Metro), Karbi Anglong, Karimganj, Kokrajhar, Lakhimpur, Morigaon, N.C.Hills, Nalbari, Sonitpur, Sibsagar, Tinsukia and Udalgiri districts of Assam, East Garo Hills, East Khasi Hills, Ri-Bhoi, West Garo Hills and West Khasi Hills districts of Meghalaya, Aizwal, Saiha and Sechhip districts of Mizoram, Imphal East and Imphal West districts of Manipur, Dimapur, Kohima and Phek districts of Nagaland and all districts of Tripura. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most/many places over Nagaland, Manipur, Mizoram and Tripura during the period, over Assam & Meghalaya from 9th to 12th and over Arunachal Pradesh on 11th & 12th July, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops.
 - As heavy to very heavy rain/heavy rain very likely at isolated places over Assam & Meghalaya on 8th, 11th & 12th, heavy rain very likely at isolated places over Nagaland, Manipur, Mizoram & Tripura on 11th & 12th and over Arunachal Pradesh on 11th & 12th July, provide adequate drainage in standing crop fields to avoid water stagnation.
- **Assam, Meghalaya & Arunachal Pradesh:**
 - In Assam, undertake land preparation and transplanting of *Sali* rice. Before transplanting of *Sali* rice seedlings, the uprooted seedlings should be washed and the root portion should be dipped in 0.02% solution of Chlorpyrifos along with 1% urea for 3 hrs as protective measure against stem borer, gall midge and hoppers.

- In flood prone areas Karimganj, Hailakhand and Cachar districts of Barak valley Zone of Assam, farmers are advised to plant banana sucker. Select the healthy and disease free sucker for planting of banana.
- In Karbi Anglong and NC Hills districts of Hill Zone and Nagaon and Marigaon districts of Central Bramhaputra Valley Zone of Assam, continue sowing of arhar and sesame. Proper drainage system should be maintained in orchards, vegetable, ginger and turmeric fields to avoid yellowing of plants.
- In Baksa, Barpeta, Bongaigaon, Chirang, Dhubri, Goalpara, Kamrup(Rural), Kamrup(Metro), Kokrajhar and Nalbari districts of Lower Bramhaputra Valley Zone of Assam, complete transplanting (2-3 seedlings/hill) of long durational varieties (Ranjit, Mashuri, Panka etc.) by the end of July. Continue sowing of arhar and planting of papaya. Undertake land preparation and sowing of groundnut.
- In Dibrugarh, Jorhat and Sibsagar districts of Upper Bramhaputra Valley Zone, continue sowing of sesame. Drain out excess water from early sown sesame fields.
- In Dhemaji, Darrang, Lakhimpur, Sonitpur and Udalgiri districts of North Blank Plain Zone of Assam, continue planting of black pepper cuttings. Farmers are advised to go for nursery sowing of medium duration and short duration varieties of rice if they were unable to sow long duration varieties. Undertake transplanting of long duration varieties of Sali rice.
- 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 sowing 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, continue nursery sowing of Wetland rice. Follow proper drainage and earthing up practices in fruit orchards in low land/plain areas to avoid water stagnation in fruit orchards. Remove excess sucker from banana mother plants and give support in banana bunches to protect from falling due to heavy weight or storm.
- In Arunachal Pradesh, there is chance of attack of leaf blast in upland/*Jhum* rice at tillering stage, spray Carbendazim @ 2g/litre water in *Jhum* field to control heavy infestation of leaf blast & leaf spot after current spells of rain.
- In Hill Zone of Assam, there is chance of red rot disease in sugarcane. Rouge out red rot affected canes and avoid water stagnation in the fields. Also to control sap sucking insects (aphids/mealy bug/scales) in khasi mandarin, spray Malathion (0.1%) after current spells of rain.
- In Upper Bramhaputra Valley Zone, due to high humidity and rainfall, there is chance of ‘Gummosis’ disease in the citrus orchard. To control this disease proper drainage facilities may be undertaken to drain out the excess water from the orchard. The affected portion should be scraped out with a small portion of healthy tissue without injuring the wood and smear with Bordeaux paste. Maintain proper drainage facilities.
- In Barak valley Zone of Assam, to control fungal disease like brown spot and blast in the nursery rice, spray Carbendazim + Mancozeb @ 2.5 g per litre of water. Maintain proper sanitation in the nursery beds and remove stagnant water.
- 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 Furandam 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 transplanting of TRC/WRC rice and also fill the gaps if any within 7-10 days after transplanting. Also continue land preparation for soybean. 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 and groundnut. Avoid water logging in and around the ginger and turmeric field. Continue transplanting of *kharif* rice of about 18-25 days old seedling. Drain the water from the field of pre *kharif* rice about 10-15 days before expected date of harvesting. Undertake nursery raising of early cauliflower in Manipur.
- In Aizwal, Champhai, Chhimtuipui, Kolasib, Lawngtlai, Lunglei, Mamit, Saiha and Serchhip districts of Mizoram, undertake planting of khasi mandarin/acid lime. Continue transplanting of *kharif* rice.
- In Dhalai, North Tripura, South Tripura and West Tripura districts of Tripura, undertake transplanting of *Aman* rice. Adopt suitable techniques for transplanting. Before transplanting the roots of the uprooted seedlings should be washed thoroughly and then dipped into 0.02% solution of Chloropyrophos along with 1% urea as protection measure against stem borer, gall midge and hoppers. Complete sowing maize at the earliest. Continue sowing of *kharif* vegetables like ladies finger, cucurbits.
- In Mizoram, weather is conducive for attack of rice yellow stem borer in pre-*kharif* rice. Apply insecticide like Imidacloprid @ 0.5 ml or Phosolone @ 1.5 ml or Dimethoate 2 ml/litre of water. Also apply foliar spray of 0.1 % Endosulfan 35 EC @ 2 ml/litre of water against maize cob borer in maize at tassling and silking stage. Apply insecticide like Imidacloprid 0.5 ml or Phosolone 1.5 ml or Acephate 1.0 g or Dimethoate 2 ml/litre of water against turmeric shoot borer in turmeric at vegetative stage. Undertake plant protection measures after current spells of rain.
- In Tripura, drench with Bavistin 1gm per litre of water against Panama disease or Panama wilt in banana at vegetative stage. Trichoderma viride and Pseudomonas Fluorescence may be incorporated in the soil. Spray Surf @

1g per litre of water in *Jhum* rice against infestation of sheath blight due to humid weather. Undertake plant protection measures after current spells of rain.

- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In Northeastern states, undertake proper vaccination schedule to protect livestock from viral and bacterial diseases. Farmers are advised to keep animals in sheds during heavy rain fall period. Changing weather could lead to viral diseases to the poultry. So farmers may provide sufficient water with 1% salt and mineral mixture. Farmers are also advice to clean the sanitary condition of poultry. Provide balanced feed, fresh water.
- In Tripura, monsoon weather could lead to gastrointestinal parasites infection in pig. It is advised to maintain good sanitary conditions of pig sheds.

❖ **Fishery**

- In Lower Brahmaputra Valley Zone of Assam, in flood affected areas, make arrangement of net around the fish pond, so that fishes can't come out from the pond to the outer water and at the same time disease-infected fishes can't enter to the pond.
- In Central Brahmaputra Valley Zone of Assam, apply cowdung at the rate of 500 gm per sq m. at least 15 days ahead of releasing fingerlings into the tanks. Farmers may release fish prawn in their ponds during this period.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Maize



Groundnut



Land preparation/Sowing



Red gram

- **Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa, all districts of Madhya Maharashtra except Dhule and Solapur, all districts of Marathwada except Osmanabad, all districts of Vidarbha, all districts of Gujarat Region except Ahmedabad, Anand, Banaskantha, Vadodara and Patan, all districts of Saurashtra & Kutch except Jamnagar, Kutch, Porbandar and Rajkot.
- **Advisories:**
 - As rain/thundershowers likely at most places over Konkan & Goa, at many places over Madhya Maharashtra and over Vidarbha from 8th to 10th and over Gujarat region from 9th to 12th, over on 8th and over Saurashtra & Kutch from 10th to 12th 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 rain very likely at isolated places over Konkan & Goa and Madhya Maharashtra from 8th to 10th, over Marathwada on 10th, over Vidarbha on 8th & 9th and over Gujarat region on 10th & 11th July, provide adequate drainage in rice, ragi and vegetable nurseries in Konkan and rice and vegetable nurseries in south Gujarat.
- **Maharashtra:**
 - In Konkan, in north Konkan region, farmers are advised to undertake transplanting of 21-25 days old rice seedling. Drain out excess water from rice field. Complete sowing of groundnut on *vapsa* condition. Complete sowing of biennial forage crops like Paragrass, Napier and Gajraj.
 - In Madhya Maharashtra, continue sowing of soybean in Pune, Ahmednagar, Satara and Sangli districts. Continue sowing of groundnut in Kolhapur, Pune and Ahmednagar districts. Continue sowing of maize in Pune and Ahmednagar districts. Continue sowing of cotton, maize, soybean, red gram, green gram and onion in Nasik, Dhule, Nandurbar and Jalgaon districts with realised and expected rainfall.
 - In Marathwada, complete sowing of *kharif* soybean, pearl millet, cotton, tur and moong in Aurangabad, Latur, Osmanabad, Nanded, Parbhani, Hingoli, Beed and Jalna districts. Complete nursery sowing of *kharif* vegetable crops like brinjal, chilli and tomato in raised bed. Complete plantation of fodder crops like Napier grass.
 - In Vidarbha, continue nursery sowing of *kharif* rice in Bhandara district. Farmers are advised to adopt mat nursery method wherever rice nursery could not be undertaken for reduction in cost of cultivation and to maintain crop productivity in Bhandara district. Continue sowing of *kharif* soybean, cotton, tur and moong in Buldana, Akola, Washim, Amravati, Nagpur and Yavatmal districts. Continue sowing of vegetable crops like bitter gourd, tinda, cluster bean, cowpea and gourds.
- **Gujarat:**
 - Continue nursery preparation for rice and nursery sowing of *kharif* vegetable crops like tomato, brinjal and chilli; continue sowing of cotton, pearl millet and sesame in Bhavnagar district with realised rainfall and in Ahmedabad district of Bhal and Coastal Zone; take green gram, pigeon pea, guar as an intercrop for getting more income.
 - Continue nursery sowing of rice and direct sowing of rice in upland, sowing of red gram, green gram and black gram, continue nursery sowing of chilli, brinjal and undertake sowing cucurbits like bottle gourd, ridge gourd,

sponge gourd, bitter gourd in Navasari, Valsad and Dangs districts of South Gujarat Heavy Rainfall Zone utilising the realised rainfall. Provide drainage facility in heavy rainfall area. Arrange for rain water harvesting.

- Continue sowing of cotton, pigeon pea and castor, undertake sowing of vegetable crops like bhindi, beans and cucurbits in Surat, Narmada, Tapi and Bharuch districts with realised and expected rainfall. Drain out excess water from rice and vegetable nurseries, maize, sugarcane, green gram, black gram, ginger and turmeric as stagnant water in the root zone is harmful to these crops.
- Continue sowing of cotton, groundnut, soybean, sesame, pigeon pea and castor in Porbandar and Junagadh districts of South Saurashtra Zone with available soil moisture and expected rainfall. Carry out thinning and intercultural operations in pre-sown groundnut and cotton.
- Under delayed onset of monsoon select short duration crops and varieties for sowing. Select bunch type groundnut varieties instead of spreading and semi spreading varieties. Continue sowing of castor, pigeon pea groundnut, cotton, pearl millet, sesame green gram, black gram and cowpea in Amreli, Rajkot and Surendranagar districts with realised rainfall and undertake sowing in Jamnagar district of North Saurashtra Zone with receipt of sufficient rainfall. Continue nursery preparation for tomato, chilli, brinjal and early cauliflower and sowing of cucurbits (bottle gourd, bitter gourd, ridge gourd and pumpkin), lady's finger, cluster bean, kidney bean, cowpea, tur and amaranthus; continue transplanting of brinjal, chilli and early cauliflower where seedlings are ready. Continue nursery preparation for rice; drain out excess water from rice nursery. Undertake sowing of groundnut, cotton, green gram, black gram, cowpea and pigeon pea in Dahod, Kheda and Panchmahals districts with realised rainfall and in Anand and Vadodara districts after receipt of sufficient rainfall.
- Undertake sowing of cotton, groundnut, pearl millet, sesame, maize, cluster bean, green gram and cowpea in Sabarkantha and Gandhinagar districts with realised and expected rainfall and in Banaskantha, Mehsana and Patan districts of North Gujarat Zone and Kachchh district of North West Zone of Gujarat after receipt of sufficient rainfall.
- 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 Bihar except East Champaran, Gopalganj, Madhubani, Monghyar, Sheohar and Sitamarhi, all districts of Jharkhand, all districts of Odisha except Kendrapara, all districts of Andaman & Nicobar Islands except North & Middle Andaman, all districts of West Bengal & Sikkim.
- **Advisories:**
 - As rain/thundershowers likely at most/many places over Sub-Himalayan West Bengal & Sikkim, Andaman & Nicobar Islands, Jharkhand and Odisha during the period, over Gangetic West Bengal from 8th to 11th, over Bihar on 12th July, it is 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 very likely at isolated places over Sub-Himalayan West Bengal & Sikkim on 9th and 10th 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 sowing of cotton, maize and arhar utilizing the realized and expected rainfall. In Gajapati, Kandhamal and Raigad districts, undertake planting of cashewnut trees.
 - In Koraput and Nawarangpur districts, continue sowing of maize and other non paddy crops in upland condition.
 - In Mayurbhanj and Keonjhar districts, continue sowing of groundnut, ragi, arhar, maize, green gram, black gram and sesame etc and planting ginger and turmeric in uplands areas. Undertake planting of fruit trees and sowing of

- rainy season vegetables like Bhindi (Lady's finger), Bean, French bean, Tomato, Cauliflower, Cabbage etc.
- In Balasore, Bhadrak and Jajpur districts, continue sowing of direct seeded rice in low lands.
 - In Angul and Dhenkanal districts, undertake sowing of upland direct seeded rice and undertake wet nursery raising for transplanted rice. In Malkangiri district, continue sowing of maize (vari.Navjot, Shakti, Decan-107, Decan-109) and complete sowing of direct seeded rice in shallow low land and upland conditions.
 - 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 nursery sowing 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. Prepare the land for planting Banana suckers. For planting 1 bigha of land 333 suckers are required.
 - In South 24 Parganas and East Midnapore districts in Coastal Saline Zone, continue nursery sowing of kharif onion and sowing of wet seeded *Aman* rice. Undertake land preparation for transplanting. Low land with medium water stagnated area should be chosen for cultivation of *Aschenomen aspera* and water chestnut. Prepare main field by ploughing and incorporate the daincha with the soil for increasing fertility status of soil.
 - In West Midnapore and Bankura districts, undertake sowing of *Aman* rice in upland area. Complete nursery bed preparation in low land area. Nursery should be protected with proper drainage channels.
 - In Sub-Himalayan West Bengal, In South Dinajpur and Malda district, undertake transplanting of *Aman* rice and seedbed preparation for kharif onion. Before sowing the seed it should be treated with Carbendazim or Mancozeb. In Darjeeling district, continue nursery sowing of *Aman* rice and planting of ginger and turmeric. Planting of new large cardamom plantation should be completed 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, Chital disease can be seen in betel vine due to high humidity and damp weather, apply 0.5% Bordeaux mixture at 15-20 days interval.
 - In the present weather condition in Gangetic West Bengal, attack of root and stem rot may be prevalent in jute. To control the diseases, apply 0.1 % Carbendazim or 0.25 % Mancozeb after current spells of rain. 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, undertake transplanting of 25 days old paddy seedlings with the spacing of 20X20 cm and treat the seedlings with biopesticides for pest control before transplanting into the main field. Undertake propping of fruit bearing banana plants and newly planted coconut and arecanut.
 - In Nicobar, undertake sowing the seed of leafy vegetables like Poi and Marsha in raised beds in uplands or home garden. Also, sowing green manure seeds like sunnhemp and daincha @ 50 kg/ha under coconut plantation to enhance soil fertility.
- **Bihar:**
- In South Bihar Alluvial Zone, complete the sowing of scented 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, complete nursery raising for upland rice varieties and undertake land preparation for transplanting of medium and low land rice. Continue sowing of maize and sunflower. Undertake sowing of lady's finger, pumpkin, cucumber, sponge gourd, bottle gourd etc and transplanting of chilli, brinjal, *kharif* onion and early cauliflower.
 - In Begusarai, Darbhanga, East Champaran, Gopalganj, Samastipur, West Champaran districts of North West Alluvial Plain Zone, complete the nursery sowing of rice and undertake land preparation transplanting of *kharif* paddy in medium and low land area and continue nursery sowing of *kharif* onion.
 - In North East Alluvial Zone, in the present weather situation, attack of root and stem rot may be enhanced in jute. For root and stem rot control, apply 0.1 % Carbendazim or 0.25 % Mancozeb. Spraying should be done on a non rainy day.
- **Jharkhand:**
- In Saraikela, East & West Singhbhum districts in South Eastern Plateau Zone of Jharkhand, continue sowing of direct seeded upland rice, maize, groundnut and pigeon pea. 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, continue 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 Central and North Eastern parts of Jharkhand, continue nursery raising of rice and start land preparation for transplanting and sowing arhar, groundnut, Marua, Maize and plantation of new trees. Repair the broken bunds of

- the field to conserve rain water and incorporate, daincha or sunhemp in soil for green manuring in the standing crop.
- In Western Plateau Zone, undertake sowing of Rice, Maize, Arhar, Urd, Groundnut etc. in uplands using recommended varieties and methods.
 - 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, and Nicobar Andaman, Humpsore in cattle should be treated with antiseptic cream and Nilverm powder. Cover with cotton and bandage to avoid flies and infection.
 - In Coastal Saline Zone of West Bengal, there may be attack by foot and mouth disease in Cattle due to rainy weather. Wash the wound with Potassium per Manganate solution.
 - 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

Red gram

- **Realised Rainfall:** Rainfall occurred in all districts of East Madhya Pradesh, all districts of West Madhya Pradesh except Bhind, Gwalior, Indore, Khargone, Neemuch and Sheopur, all districts of Chhattisgarh.
- **Advisories:**
 - As rain/thundershowers likely at most/many places over Madhya Pradesh from 8th to 11th and over Chhattisgarh from 8th to 10th & 12th, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops.
 - As heavy to very heavy rain very likely at isolated places over Madhya Pradesh on 8th & 9th and heavy rain very likely at isolated places over Madhya Pradesh on 10th July, provide adequate drainage in crop fields to avoid water stagnation.
 - **Madhya Pradesh:**
 - In East Madhya Pradesh, continue nursery sowing of rice, nursery raising of onion, brinjal and tomato and sowing of red gram and soybean after current spells of heavy rain. Provide adequate drainage in rice nurseries, ginger and turmeric fields.
 - 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. Continue transplanting of vegetables and planting of saplings of orchard crops.
 - In Gwalior, Bhind, Morena, Shivpuri, Guna, Ashoknagar and Sheopur districts, continue nursery sowing of rice. Continue sowing of pearl millet, soybean, red gram, green gram and black gram. Provide adequate drainage in crop fields wherever sowing has already been completed.
 - In Khargone, 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 Bhopal, Vidisha, Raisen, Sehore, Sagar and Damoh districts, continue nursery sowing of rice and sowing of red gram, maize 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 sowing of vegetables like lady finger, bottle gourd, cucurbits, sponge gourd, bitter gourd and beans. Continue sowing of red gram, soybean, sesame, moong, urad, maize and groundnut utilising the realised and expected rainfall. Undertake field preparation and transplanting of rice.
 - 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. Continue transplanting of vegetables. Provide adequate drainage in ginger and turmeric fields.
 - 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.
 - In Satpura Plateau zone, due to cloudy weather there are chances of attack of sucking pest in brinjal and chilli, spray Thiomethaxim/Acetameprid @ 0.3 g/litre of water after current spells of rain.

▪ **Chhattisgarh:**

- In North Chhattisgarh, continue nursery sowing of rice. Continue line sowing of rice. Continue planting of orchard crops like Papaya, Guava, Mango, Litchi and Pomegranate. Undertake transplanting of vegetables.
- In Central Chhattisgarh, continue line sowing of rice and nursery sowing of rice. Continue 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 sowing of soybean, groundnut and sesame. Continue 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 of cattle's, 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

Maize

Rice

Okra

- **Realised Rainfall:** Rainfall occurred in Jammu, Kathua, Reasi, Udhampur districts of Jammu & Kashmir, all districts of Himachal Pradesh except Kinnaur and Lahaul & Spiti, all districts of Uttarakhand, all districts of Punjab except Bhatinda, Faridkot, Ferozpur, Hoshiarpur, Mansa and Moga, all districts of Haryana except Chandigarh, Faridabad, Gurgaon, Kathial, Kurukshetra, Panipat, Rohtak and Sonapat, in New Delhi, North Delhi, South Delhi and South West Delhi districts of Delhi; all districts of East Uttar Pradesh except Ambedkar Nagar, Deoria, Farrukhabad, Kanpur City, Kanpur Dehat, Kushinagar, Mau and Sahuji Maharajnagar, all districts of West Uttar Pradesh except Agra, Etawah, GB Nagar, Ghaziabad, Mainpuri and Mathura, all districts of East Rajasthan except Ajmer, Bharatpur, Bundi, Dausa, Dholpur, Tonk, in Churu, Hanumangarh and Pali districts of West Rajasthan. Weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain/snow would occur at most/many places over Uttarakhand during the period, over Jammu & Kashmir on 12th and over Himachal Pradesh on 11th & 12th July, rain/thundershowers would occur at many places over East Uttar Pradesh from 8th to 10th & 12th, over West Uttar Pradesh and over Haryana, Chandigarh & Delhi from 10th to 12th, over East Rajasthan from 9th to 12th and over West Rajasthan and Punjab on 12th July, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops.
- As heavy rain would occur at isolated places over Himachal Pradesh on 12th, over Uttarakhand from 10th to 12th over East Rajasthan on 10th & 11th, over West Uttar Pradesh on 10th & 11th 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 paddy in the main field which have 4-6 leaves. Apply the basal dose of fertilizer at time of transplanting. In the areas where farmers could not raise the nursery, direct seed sowing can be done. Continue sowing of maize. Undertake sowing of mixed fodder crop (maize+Cowpea+ Charri) using optimum soil moisture.
- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, continue transplanting of rice seedlings at 4-6 leaf stage in the main fields. Do the first weeding and hoeing after 15 days of transplanting. Complete sowing of sowing of maize as early as possible in clear weather with availability of optimum soil moisture in the field.
- In Srinagar, Badgam, Kupwara and Baramulla districts of Valley Temperate Zone, complete transplanting of paddy in the main fields. Apply first dose of Nitrogen @ 3.35kg Urea per kanal after 15-18 days of transplanting. 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 a non rainy day. Repeat the foliar spray after 7 - 10 days with copper oxychloride @ 2 g/litre of water 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. Continue 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. Undertake sowing of short duration varieties of cauliflower, knol-Khol and broccoli in this month.

- In Udham Singh Nagar district of Bhabar and Tarai Zone, continue transplanting of paddy. Direct seed sowing of paddy can also be undertaken during the week. Complete sowing of groundnut, soybean, okra and radish. Prepare nursery for rainy season chilli. Before sowing the seed of chilly in nursery, mix 2-3g Thiram and Kepton in 1 Kg seed of chilly crop.
- In Dehradun, Pauri and Haridwar districts of Sub Humid Sub Tropic Zone, undertake transplanting of paddy in the main field.
- In Tehri Garhwal, Uttarkashi, Chamoli, Rudrapur, 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 and cabbage. Complete sowing of finger millets and maize after current spells of heavy rain. Drain out excess water from vegetable fields.
- In Nainital district of Bhabar and Tarai Zone, there may be attack of fruit borer insect in Brinjal and tomato crops, it is advised to spray Malathion @ 15ml/10litre of water during the day time. To save the standing crop of potato from the blight disease, spray Mancozeb @ 2g/litre of water after current spells of rain.

▪ **Himachal Pradesh:**

- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, undertake transplanting of rice. Continue sowing of *kharif* pulses mung, mash, soybean, cowpeas and kulthi. 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 Sirmour 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 Lahaul Spiti, continue nursery sowing of vegetables.
- 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.
- In Mild Hills Sub-Humid Zone of Himachal Pradesh in kullu and mandi districts, weather is conducive for attack of alternaria leaf spot in apple, for control spray Hexaconazole (Contaf) in 200 litres 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 Mild Hills Sub-Humid Zone of Himachal Pradesh, weather is conducive for leaf curl disease in peach orchards, for control spray Hexaconazole 0.05% (Contaf/Hexole 100 ml) in 200 litres of water after current spells of rain and repeat at 10 days of interval.

▪ **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 realized and expected rainfall.
- In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhopur districts of Flood Prone Eastern Plain Zone, undertake sowing of sorghum and pearl millet. Before sowing sorghum, treat seed with 3g Thiram/kg seed followed by azotobacter and PSB culture before sowing.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, undertake sowing of pearl millet, sorghum, maize, green gram, cowpea, moth and sowing of khira, bottle gourd, ridge gourd, bitter gourd, cucumber & cluster bean. Continue nursery preparation of kharif onion.
- In Jhalawar, Kota, Bundi, Baran of Southern Humid Plain Zone, continue nursery sowing of paddy. Continue sowing of soybean, maize, urad, mung.
- In Arid Western Plain Zone, in Jodhpur and Bikaner districts, continue land preparation and sowing of groundnut, bajra, cluster bean, moth bean and mung under sufficient soil moisture condition. In Barmer, Churu, Pali districts, undertake land preparation for sowing of bajra and mung with realized rainfall.
- In Irrigated North Western Plain Zone, continue transplanting of rice in Hanumangarh district and undertake sowing of guar, bajra, sesame, mung, moth and arhar Sriganganagar and.
- 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 on a non rainy day.
- 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 @ 1 litre per ha on a non rainy day.

▪ **Punjab, Haryana and Delhi:**

- In Punjab, in Fazilka, Ferozepur and Faridkot districts, complete the transplanting of short duration varieties of rice and sowing of cotton. Continue sowing of okra, maize and planting of sugarcane. Continue transplanting of chilli and cucurbits on the ridges. Complete the sowing of moong during the second fortnight of July.
- 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, transplanting of paddy and undertakesowing of fodder crops. Drain out the excess water from the cotton fields.
- In Gurdaspur district of Punjab, continue transplanting of rice and continuesowing of maize. Drain out excess water from field of maize after rainfall.
- In Ajitgarh, Rupnagar and SBS Nagar, undertake sowing of maize, mash, okra, cucurbits, cowpea and nursery raising of early varieties of cauliflower.
- In Western Zone of Haryana, continue transplanting of rice, sowing of arhar, green gram and black gram. Complete the direct sowing of leafy vegetables, bottle gourd, cucumber, ridge gourd summer radish. Undertake intercultural/hoeing operations in cotton crops for conserving the moisture and removing the weeds on a non rainy day.
- In Eastern Zone of Haryana, continue 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 at 10 days interval on a non rainy day.
- In Western Zone of Haryana, there is chance of infestation of white fly on cotton, spray 1 litre Nimbecidine mixed with 250 litre water per acre on a non rainyday.
- 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 on a non rainy day.

▪ **Uttar Pradesh:**

- In Central Plain Zone of East Uttar Pradesh, continue nursery sowing of short duration variety of paddy. Continue land preparation and or transplanting of paddy nursery. Continue sowing of maize, arhar, jowar, bajra, urad, mung, sesame. Continue nursery sowing of early maturing varieties of brinjal, chilli, cauli flower and transplanting of brinjal, chilli. Continue sowing of bhindi, lobia, louki, 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, continue transplanting of long and mid duration variety of paddy. Continue nursery sowing of short duration and scented variety of paddy. Continue sowing of arhar, jowar, bajra, urad, mung, maize.
- In North Eastern Plain Zone of East Uttar Pradesh, undertake transplanting of paddy and sowing of kharif maize, pigeonpea, seaseme, groundnut, jowar, cowpea.
- In Western Plain Zone of Uttar Pradesh, undertake land preparation for sowing of maize. Undertake transplanting 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, soyabean, jowar, arhar, maize, urad, bajra, mung, sesame. Undertake land preparation for nursery sowing of early maturing varieties of tomato, cabbage, brinjal, chilli, cauli flower and transplanting of brinjal, chilli, tomato, cabbage, cauli flower. Continue nursery sowing of paddy in irrigated areas.
- In North Eastern Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of Insect & aphid in cowpea, for control spray Monocrotophos @ 500 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 intervals 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, Sawaimadhapur districts of Flood Prone Eastern Plain Zone, continue digging of pit for new plantation of pomegranate, aonla.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, undertake planting of fruit crops like mango, plum, pomegranate, Aonla.

- 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 Gibberellic acid @ 20 mg in 1 litre of water after current spells of rain. In North Eastern Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of anthracnose in banana crop, for control spray 0.3 % Copper oxo chloride on a non rainy day.
- ❖ **Animal Husbandry**
- In Valley Temperate Zone of Jammu and Kashmir, farmers are advised to vaccinate sheeps 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 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 Chamba districts 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.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, to control the mite, dust sulphur on top bars @ 1g/frame/Oxalic acid treatment @ 3.5% per litre of water.

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

Annexure I

Week by week Rainfall Distribution

Sub-Divisions	22.06.16		29.06.16		06.07.16	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	85.7	-31	37.9	-74	67.7	-39
Dibang Valley	**	**	**	**	**	**
East Kameng	53.5	-40	19.0	-77	37.7	-61
East Siang	312.4	57	103.6	-49	252.4	23
Kurung Kumey	**	**	**	**	**	**
Lohit	98.5	-9	36.2	-73	115.6	-18
Lower Dibang Valley	201.4	88	61.5	-44	334.7	294
Lower Subansari	**	**	**	**	**	**
Papumpare	322.8	132	61.5	-63	290.1	46
Tawang	112.0	-31	31.0	-82	86.0	-54
Tirap	114.2	-34	98.0	-38	131.8	-34
Upper Siang	311.8	28	97.8	-38	328.8	88
Upper Subansari	99.4	147	32.1	-61	112.4	70

West Kameng	43.6	-73	57.2	-66	205.2	10
West Siang	138.2	27	146.2	42	131.4	1
Assam&Meghalaya						
Assam						
Baksa	178.8	7	77.4	-49	22.4	-91
Barpeta	155.3	-7	260.5	72	253.3	6
Bongaigaon	200.6	37	350.6	150	216.8	-7
Cachar	79.9	-37	91.8	-27	85.6	-29
Chirang	192.8	32	189.0	35	199.2	-15
Darrang	**	**	**	**	**	**
Dhemaji	**	**	**	**	**	**
Dhubri	138.7	-20	234.3	103	111.2	8
Dibrugarh	69.0	-31	115.2	6	99.0	-14
Goalpara	90.6	-37	148.2	9	316.4	116
Golaghat	117.1	80	63.7	-3	119.5	66
Hailakandi	92.5	-16	72.8	-27	133.2	52
Jorhat	134.7	105	30.7	-59	90.8	1
Kamrup(Rural)	112.5	16	14.8	-83	27.0	-68
Kamrup(Metro)	231.7	139	62.4	-28	37.3	-56
Karbi Anglong	44.3	-36	49.0	-11	91.0	96
Karimganj	142.2	-10	136.1	-2	110.0	-36
Kokrajhar	173.7	-11	349.8	69	122.8	-55
Lakhimpur	164.2	21	97.3	-25	189.6	20
Morigaon	42.1	-53	11.5	-88	47.8	-46
N.C.Hills	35.0	-59	27.7	-43	50.4	-32
Nagaon	73.4	-9	89.4	32	22.9	-64
Nalbari	162.9	-5	111.2	18	41.5	-70
Sonitpur	42.5	-50	35.6	-57	73.7	-28
Sibsagar	77.1	25	46.3	-32	78.0	-21
Tinsukia	52.0	-46	94.9	-10	95.4	-9
Udalgiri	69.2	-45	28.7	-68	57.5	-35
Meghalaya						
East Garo Hills	183.2	3	415.6	399	331.6	252
East Khasi Hills	416.0	5	148.7	-57	465.8	24
Jaintia Hills	14.0	-97	**	**	**	**
Ribhoi	35.0	-63	27.4	-74	61.8	-36
South Garo Hills	22.0	-83	21.0	-80	8.0	-93
West Garo Hills	123.8	-6	145.2	37	161.6	47
West Khasi Hills	75.0	-45	6.0	-97	68.0	-79
NMMT						
Mizoram						
Aizwal	110.2	-1	85.9	-15	58.4	-45
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	120.0	28	70.0	-30	131.0	27
Serchhip	53.4	-52	51.5	-42	486.1	318

Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	0.0	-100	**	**	**	**
Churachandpur	**	**	**	**	**	**
Imphal east	26.2	-72	53.4	-35	76.3	9
Imphal west	120.0	23	114.3	77	170.9	170
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	22.0	-64	**	**	**	**
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	112.0	123	53.0	82	91.2	98
Kephire	**	**	**	**	**	**
Kohima	**	**	32.1	-58	61.0	-15
Longleng	**	**	**	**	**	**
Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	47.0	-36	43.0	-43	133.0	86
Tuensang	**	**	**	**	**	**
Wokha	**	**	**	**	**	**
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	47.4	-60	13.8	-82	37.3	-58
NorthTripura	74.5	-29	77.9	-8	64.7	-27
SouthTripura	14.1	-87	58.6	-44	133.6	11
West Tripura	9.2	-91	31.4	-63	85.6	-6
Himachal Pradesh						
Bilaspur	32.7	51	46.8	9	61.9	19
Chamba	28.3	1	19.9	-65	61.8	-8
Hamirpur	47.1	25	48.3	-18	77.7	16
Kangra	50.1	85	44.1	-29	136.6	57
Kinnaur	0.8	-91	7.6	6	7.5	-49
Kullu	24.1	-7	8.3	-57	39.0	40
Lahaul and Spiti	0.0	-100	9.5	-29	5.1	-82
Mandi	75.5	150	56.5	-14	85.2	41
Shimla	35.6	34	34.0	7	51.6	41
Sirmaur	72.9	123	14.1	-77	54.2	-37
Solan	71.6	157	31.1	-39	152.5	147
Una	31.7	178	65.6	128	73.5	18
Punjab						
Amritsar	16.0	54	73.2	434	58.2	67
Barnala	0.0	-100	9.0	14	99.0	247
Bhatinda	0.0	-100	8.5	-22	25.0	16
Faridkot	0.0	-100	16.0	62	11.5	-48
Fatehgarh Saheb	14.0	73	29.0	49	39.7	4
Ferozpur	0.0	-100	3.8	-61	0.7	-96
Gurdaspur	36.8	179	60.6	202	47.3	-8
Hoshiarpur	21.6	45	41.0	43	21.6	-59

Jalandhar	3.1	-72	18.0	-7	57.1	61
Kapurthala	4.4	-21	39.6	140	79.7	166
Ludhiana	5.6	-53	39.4	97	75.7	103
Mansa	0.0	-100	10.2	48	9.8	-37
Moga	0.0	-100	62.0	421	10.6	-54
Muktesar	0.0	-100	3.2	-54	55.6	170
Nawashahar	14.6	0	95.4	162	56.5	-3
Patiala	0.9	-92	23.7	8	46.9	22
Ropar	45.5	325	66.5	149	52.6	12
Sangrur	0.0	-100	11.9	-12	46.8	34
Mohali	23.0	45	1.1	-97	43.0	21
TarnTaran	16.0	158	18.5	157	52.0	139
Haryana,Chd,Delhi						
Haryana						
Ambala	14.0	-49	24.9	-38	32.1	-31
Bhiwani	1.8	-54	0.7	-94	60.4	270
Chandigarh	55.9	78	54.1	30	13.9	-74
Faridabad	2.7	-81	1.3	-91	29.7	23
Fatehabad	0.0	-99	2.3	-73	33.7	80
Gurgaon	2.8	-68	31.8	98	23.3	-1
Hissar	0.0	-100	0.1	-99	62.0	194
Jhajar	0.6	-91	7.8	-25	33.0	33
Jind	13.7	55	20.0	60	85.2	218
Katihah	0.8	-93	14.7	15	21.0	38
Karnal	2.0	-88	8.7	-55	59.4	68
Kurukshetra	0.0	-100	6.7	-69	23.1	-18
Mahendragarh	5.3	-29	5.1	-70	56.5	164
Mewat	5.2	-21	29.3	41	42.2	69
Palwal	0.0	-100	20.5	118	40.0	96
Panchkkula	28.3	20	20.9	-50	44.5	-21
Panipat	6.4	-48	4.6	-82	14.2	-29
Rewari	2.6	-59	3.0	-78	58.0	245
Rohtak	2.0	-78	4.0	-72	28.6	-26
Sirsa	0.8	-90	0.0	-100	39.8	126
Sonepat	16.6	38	4.6	-68	10.8	-58
Yamunanagar	42.5	40	35.3	-17	99.5	65
Delhi						
Central Delhi	4.0	-73	5.0	-80	23.0	-23
East Delhi	2.0	-86	**	**	**	**
New Delhi	9.8	-33	10.1	-59	89.0	199
North Delhi	10.5	-28	4.8	-80	97.5	228
North East Delhi	4.0	-73	1.0	-96	9.0	-70
North West Delhi	6.5	-55	1.0	-96	19.0	-36
South Delhi	33.1	127	42.9	75	46.4	56
South West Delhi	10.1	-31	29.2	19	48.8	64
West Delhi	1.0	-93	61.0	149	18.0	-39
Jammu & Kashmir						
Anantnag	6.7	-7	0.5	-95	8.0	-59
Badgam	2.6	-35	0.0	-100	0.5	-94

Bandipore	**	**	**	**	**	**
Baramula	12.2	5	0.4	-97	7.7	-59
Doda	25.9	198	8.2	-21	14.4	-30
Ganderbal	2.4	-31	0.0	-100	6.8	-38
Jammu	91.9	800	18.2	-23	73.9	57
Kargil	**	**	**	**	**	**
Kathua	62.8	437	82.2	217	40.0	-27
Kistwar	**	**	**	**	**	**
Kulgam	2.8	-61	0.0	-100	2.6	-87
Kupwara	18.5	225	0.4	-96	22.1	44
Ladakh(Leh)	0.6	20	0.0	-100	0.0	-100
Poonch	**	**	**	**	**	**
Pulwama	1.5	-64	0.0	-100	5.0	-56
Rajouri	71.0	777	11.2	**	20.0	-37
Ramban	8.8	1	1.2	-88	13.0	-37
Reasi	64.4	248	22.4	-39	144.2	108
Samba	80.9	693	32.6	38	20.5	-56
Shopian	**	**	**	**	**	**
Srinagar	1.4	-59	0.0	-100	2.6	-76
Udhampur	58.0	214	18.1	-51	69.0	0
East Madhya Pradesh						
Anuppur	28.6	-46	74.8	11	37.5	-53
Balaghat	17.7	-67	48.0	-43	98.1	8
Chhatarpur	31.6	23	67.5	55	115.2	82
Chindwara	25.3	-38	108.5	92	129.7	105
Damoh	31.9	-10	45.5	-18	235.5	235
Dindori	32.3	-47	90.0	17	126.3	45
Jabalpur	11.4	-68	73.5	37	173.4	139
Katni	7.6	-76	35.3	-27	104.1	44
Mandla	35.7	-8	102.3	42	149.6	61
Narsingpur	5.6	-84	62.8	33	202.2	188
Panna	78.2	164	37.9	-22	253.2	243
Rewa	15.4	-49	26.6	-51	155.9	151
Sagar	31.6	-21	60.5	11	226.4	222
Satna	15.0	-55	10.6	-81	184.6	164
Seoni	8.8	-85	73.7	18	189.9	155
Shahdol	66.0	81	70.0	26	72.0	7
Sidhi	25.0	-11	0.0	-100	124.7	88
Singrauli	19.8	-28	41.0	-25	104.0	98
Tikamgarh	16.0	-16	42.0	2	41.3	-24
Umaria	16.0	-48	42.0	-26	134.2	93
West Madhya Pradesh						
Agar	83.3	12	40.1	-56	104.2	-7
Alirajpur	31.3	42	18.2	-58	97.9	112
Asoknagar	37.3	78	45.0	33	189.0	217
Badwani	20.9	-15	53.1	55	31.7	-10
Betul	25.9	-34	37.5	-35	129.2	138
Bhind	55.9	366	46.7	68	2.6	-92

Bhopal	13.8	-60	106.7	145	103.6	61
Burhanpur	10.8	-73	10.0	-84	41.0	-11
Datia	62.9	334	24.6	-25	37.9	-1
Dewas	52.5	47	87.7	79	48.0	-13
Dhar	51.6	39	41.9	-5	78.0	75
Guna	21.8	-1	54.6	41	173.8	172
Gwalior	33.2	110	42.2	20	16.3	-54
Harda	46.6	30	42.3	-7	73.5	29
Hosangabad	54.4	54	66.2	0	213.0	160
Indore	75.6	116	28.6	-33	27.7	-44
Jhabua	13.2	-54	41.7	-1	51.8	20
Khandwa	47.0	36	49.0	-4	54.7	13
Khargone	25.8	-24	45.5	-4	28.1	-33
Mandsaur	56.0	130	53.6	67	43.8	-4
Morena	61.3	552	18.1	-38	36.1	11
Neemuch	16.3	-23	67.1	85	29.4	-37
Raisen	79.9	123	44.8	-24	216.1	203
Rajgarh	37.7	45	65.7	70	151.8	214
Ratlam	60.1	163	44.1	-11	78.7	72
Sehore	96.9	183	58.4	8	88.1	67
Shajapur	77.0	182	41.7	17	55.0	8
Sheopur Kalani	18.0	9	17.2	-47	27.9	-32
Shivpuri	46.6	136	36.4	17	118.2	154
Ujjain	32.6	17	88.2	130	45.1	-12
Vidisha	44.9	52	80.4	62	211.1	229
Chhattisgarh						
Bastar	50.3	-14	211.6	160	111.8	44
Bijapur	5.7	-92	123.7	63	130.4	57
Bilaspur	12.7	-75	61.3	-12	74.7	-8
Dantewara	63.8	18	93.6	29	119.1	63
Dhamtari	53.6	17	105.0	67	47.2	-40
Durg	41.1	-8	153.2	105	74.6	-10
Janjgir	6.9	-86	46.2	-29	137.8	57
Jashpurnagar	61.1	-1	65.2	-30	184.7	88
Kanker	20.6	-65	63.6	-23	179.0	124
Korba	8.8	-84	24.5	-65	96.6	-1
Koriya	13.0	-73	54.6	-14	78.3	-7
Kawardha	45.8	-4	81.4	48	59.0	-1
Mahasumund	46.2	-16	47.6	-20	50.3	-30
Narayanpur	31.2	-47	106.1	43	145.4	99
Raigarh	9.8	-80	70.7	13	124.4	44
Raipur	35.9	-26	61.2	-8	89.5	8
Rajnandgaon	39.5	-27	97.6	38	86.5	16
Surguja	8.6	-83	18.5	-78	74.0	1
East Uttar Pradesh						
Allahabad	44.6	170	6.8	-81	117.0	148
Ambedkar Nagar	34.0	44	6.0	-82	0.0	-100
Azamgarh	57.9	209	12.8	-67	60.6	-5
Bahraich	31.3	-12	34.9	-48	212.7	331

Ballia	30.7	3	6.9	-82	57.5	15
Balrampur	26.3	-40	63.9	23	95.4	79
Banda	32.6	83	28.5	-35	215.5	275
Barabanki	29.1	53	38.5	-22	76.9	86
Basti	7.0	-78	18.4	-63	187.7	228
Chandauli	2.0	-90	22.0	-25	202.0	317
Deoria	18.6	-40	4.0	-91	25.5	-60
Faizabad	4.9	-84	7.1	-85	81.8	57
Farrukhabad	23.5	85	0.0	-100	17.7	-52
Fatehpur	36.8	167	23.2	-44	80.7	58
Gazipur	48.8	98	19.9	-46	113.1	138
Gonda	42.1	37	17.2	-73	145.9	192
Gorakhpur	33.0	-26	10.1	-82	85.5	32
Hardoi	17.8	13	15.5	-67	83.8	100
Jaunpur	42.7	143	6.0	-84	82.4	33
Kannauj	37.4	256	3.5	-89	46.8	19
Kanpur City	29.2	138	30.3	-8	19.8	-45
Kanpur Dehat	11.6	-17	18.2	-55	28.2	-9
Kaushambi	63.1	344	33.2	6	108.5	125
Kheri	46.8	42	22.6	-57	169.8	221
Kushi nagar	2.0	-96	0.0	-100	16.0	-80
Lucknow	53.9	231	30.6	-32	34.2	0
Maharajganj	50.3	9	48.8	-14	106.5	32
Mau	47.5	75	3.5	-92	10.5	-82
Mirzapur	39.4	76	18.7	-51	210.3	270
Pratapgarh	45.0	166	9.3	-75	112.2	96
RaiBareilly	9.0	-40	19.9	-38	52.0	16
Sahuji Maharajnagar	78.0	400	29.5	-26	17.5	-75
Sant Kabirnmagar	13.0	-67	27.0	-50	201.0	267
Sant Ravidas Nagar	77.0	277	0.0	-100	146.0	202
Shrawasti	34.7	-2	128.1	90	144.7	193
Sidharthnagar	11.6	-71	104.4	113	114.4	114
Sitapur	24.9	3	11.9	-76	33.8	-15
Sonbhadra	16.8	-46	50.1	-11	232.7	275
Sultanpur	12.5	-31	38.9	4	62.4	25
Unnao	93.9	476	14.3	-67	46.0	27
Varanasi	81.4	342	14.9	-64	151.4	158
West Uttar Pradesh						
Agra	10.2	-1	16.5	-31	7.7	-81
Aligarh	15.8	61	48.3	115	41.0	53
Auraiya	39.5	339	18.6	-39	42.4	48
Badaun	45.4	229	39.2	25	79.6	119
Baghpat	8.7	-19	1.0	-93	62.8	139
Bareilly	28.0	29	36.6	-11	150.1	228
Bijnor	73.2	398	1.3	-97	112.4	139
Bulandsahar	22.7	86	24.0	6	95.5	204
Etah	24.3	134	46.1	79	31.3	3
Etawah	48.7	382	4.5	-85	0.0	-100

Firozabad	46.1	442	15.2	-46	42.7	-6
GBNagar	0.0	-100	3.0	-80	13.0	-60
Ghaziabad	28.8	193	26.8	39	15.8	-47
Hamirpur	16.5	5	12.0	-71	59.8	60
Jalaun	29.9	138	27.1	-24	72.2	80
Jhansi	22.0	45	21.3	-49	102.7	110
Jotiba Phule Nagar	45.0	321	5.5	-79	87.5	111
Kanshiramnagar	106.0	1004	39.0	51	62.0	62
Lalitpur	70.5	330	7.5	-82	47.0	-28
Mahamaya Nagar	15.5	58	14.0	-29	45.5	34
Mahoba	12.0	21	8.4	-79	123.4	206
Mainpuri	13.6	32	3.0	-90	3.6	-91
Mathura	0.6	-93	0.0	-100	9.1	-70
Meerut	41.2	157	16.0	-38	76.6	92
Moradabad	63.4	199	18.1	-53	112.7	143
Muzaffarnagar	16.0	25	33.7	25	51.8	28
Pilibhit	24.4	17	33.5	-35	80.7	48
Rampur	36.6	50	23.9	-41	59.1	25
Saharanpur	35.3	50	4.2	-89	73.7	52
Shahjahanpur	3.4	-81	31.4	-38	128.3	171
Uttarakhand						
Almora	72.3	130	32.9	-32	120.6	176
Bageshwar	81.7	160	45.8	-5	149.8	243
Chamoli	88.6	217	95.2	150	109.2	113
Champawat	67.8	43	43.9	-52	189.5	145
Dehradun	50.9	8	27.4	-63	171.9	62
Garhwal Pauri	43.9	95	15.1	-75	99.6	46
Garhwal Tehri	38.3	30	3.9	-92	85.3	39
Haridwar	75.3	145	0.3	-99	74.4	36
Nainital	90.5	80	36.9	-55	217.4	155
Pithoragarh	62.9	-22	82.6	-12	155.0	31
Rudraprayag	52.8	-15	93.7	23	159.4	57
Udham Sing Nagar	32.7	-25	18.9	-64	88.8	34
Uttarkashi	47.9	42	69.5	25	82.0	34
Bihar						
Araria	78.9	2	118.7	60	47.5	-47
Arwal	80.2	206	16.0	-62	99.0	118
Aurangabad	83.3	252	40.9	-19	86.6	88
Banka	122.8	209	28.6	-33	118.8	93
Begusarai	35.7	-15	32.3	-40	83.7	34
Bhabua	34.0	12	21.7	-59	104.8	73
Bhagalpur	66.9	18	11.0	-83	162.3	120
Bhojpur	6.2	-72	1.9	-95	110.3	78
Buxar	51.2	106	17.8	-54	85.8	53
Darbhanga	57.9	44	51.6	13	42.0	-43
East Champaran	34.4	-15	29.7	-42	3.3	-95
Gaya	79.9	240	1.7	-97	132.9	132
Gopalganj	26.3	-35	36.0	-20	9.9	-85
Jahanabad	58.9	91	1.4	-96	55.4	19

Jamui	77.4	109	13.0	-81	166.1	108
Kathihar	38.2	-35	8.4	-88	109.6	30
Khagadia	31.0	-26	10.9	-83	87.1	23
Kishanganj	129.1	22	167.6	65	127.3	-2
Lakhisarai	36.5	-14	17.9	-67	81.1	8
Madhepura	107.3	100	19.8	-67	115.3	36
Madhubani	54.5	32	61.9	14	16.9	-82
Monghyar	10.0	-76	5.0	-91	0.0	-100
Muzaffarpur	66.6	60	2.0	-96	50.0	-34
Nalanda	56.7	105	14.5	-72	104.4	78
Nawada	41.5	15	41.6	-20	133.4	71
Patna	30.1	6	28.5	-35	72.5	1
Purnea	119.7	88	59.6	-12	93.9	3
Rohtas	41.2	148	12.8	-74	131.0	231
Saharsha	35.9	-34	24.6	-72	98.3	-36
Samstipur	51.8	-8	48.4	-23	102.1	53
Saran	34.1	16	9.2	-77	41.5	-46
Sheikpura	91.0	183	64.8	9	104.7	49
Sheohar	13.8	-70	0.0	-100	23.4	-77
Sitamarhi	41.3	-12	27.8	-54	15.1	-85
Siwan	20.7	-22	2.7	-95	30.7	-61
Supaul	114.7	147	119.9	142	38.1	-54
Vaishali	53.1	48	2.9	-93	67.7	-13
West Champaran	83.3	26	79.3	7	80.0	-5
Jharkhand						
Bokaro	12.5	-75	16.9	-74	84.0	41
Chatra	26.5	-23	16.1	-77	120.1	87
Deoghar	66.9	35	45.4	-17	110.3	79
Dhanbad	49.9	1	44.3	-35	84.4	6
Dumka	69.8	21	37.5	-42	55.6	-25
East Singbhum	32.5	-46	88.4	14	69.5	10
Garhwa	9.0	-64	34.5	-38	54.0	-7
Giridih	47.0	-12	26.6	-63	79.8	8
Godda	64.7	37	11.6	-80	121.6	97
Gumla	19.8	-69	69.2	-14	143.7	68
Hazaribagh	13.1	-67	25.1	-61	131.7	95
Jamtara	46.7	-19	30.1	-56	80.9	2
Khunti	13.7	-81	19.4	-77	164.8	97
Koderrna	38.5	-17	7.8	-86	127.4	100
Latehar	33.1	-20	66.4	-5	123.8	100
Lohardagga	25.2	-45	65.3	-19	108.5	140
Pakur	37.0	-45	17.4	-71	51.4	-34
Palamau	22.6	-32	41.8	-27	165.9	200
Ramgarh	64.2	34	31.2	-63	83.4	55
Ranchi	18.0	-66	34.0	-61	136.5	83
Sahebganj	**	**	29.8	-66	95.6	-5
Saraikela	16.5	-73	10.4	-88	67.6	-2
Simdega	43.2	-39	2.7	-97	117.7	34
West Singbhum	38.2	-28	24.2	-65	76.2	1

East Rajasthan						
Ajmer	18.4	121	47.0	133	16.3	-37
Alwar	15.4	66	18.3	-2	57.2	117
Banswara	19.8	-12	23.7	-43	95.6	102
Baran	16.0	-17	60.9	110	113.1	159
Bharatpur	9.3	-20	41.4	157	22.4	-7
Bhilwara	16.5	20	68.2	176	30.5	-24
Bundi	33.2	96	27.8	12	29.7	-21
Chittorgarh	23.7	59	41.2	33	72.4	70
Dausa	27.8	142	8.8	-61	26.2	-15
Dholpur	5.0	-62	11.2	-49	25.5	-28
Dungarpur	13.5	-22	28.8	-14	116.4	153
Jaipur	15.9	58	18.2	-23	101.1	309
Jhalawar	48.0	113	37.5	13	55.6	7
Jhunjhunu	1.3	-89	23.9	26	131.2	546
Karauli	25.6	113	9.8	-56	31.6	22
Kota	28.7	53	50.8	82	35.7	-18
Pratapgarh	13.8	-46	39.8	-17	67.8	35
Rajsamand	26.0	86	66.3	125	64.6	84
Sawai Madhopur	11.5	-9	28.0	31	71.1	96
Sikar	5.3	-47	30.4	48	121.4	467
Sirohi	1.3	-92	17.7	-41	61.2	-1
Tonk	2.7	-81	31.5	29	29.7	1
Udaipur	13.7	-6	40.4	29	108.7	145
West Rajasthan						
Barmer	0.1	-99	7.4	-34	13.9	-27
Bikaner	0.9	-89	32.8	277	11.0	-17
Churu	0.3	-98	17.3	39	84.5	375
Hanumangarh	1.7	-81	8.4	-14	53.9	198
Jaisalmer	0.7	-84	17.8	96	1.2	-87
Jalore	10.9	81	6.7	-56	10.3	-70
Jodhpur	9.2	34	25.3	136	21.2	19
Nagaur	13.2	36	44.3	138	26.7	38
Pali	4.5	-51	36.9	106	35.9	6
Sri Ganganagar	0.0	-100	2.1	-72	4.3	-72
Gujarat Region						
Ahmedabad	0.4	-98	8.2	-80	22.6	-48
Anand	0.8	-97	8.4	-82	21.9	-58
Banaskantha	0.2	-98	7.3	-77	18.0	-55
Baroda	7.6	-71	16.5	-74	23.3	-62
Broach	3.5	-92	7.5	-84	43.7	-32
DNH	12.3	-90	144.6	14	284.4	58
Dahod	8.7	-62	31.6	-33	49.1	-6
Daman	6.0	-95	204.1	61	299.8	67
Dangs	9.0	-89	9.5	-90	130.5	5
Gandhinagar	1.2	-95	9.5	-66	77.9	35
Kheda	1.9	-92	14.5	-70	47.6	-18
Mehsana	1.0	-94	4.0	-89	41.0	-15
Narmada	12.0	-75	15.0	-75	35.7	-53

Navsari	0.7	-99	37.2	-70	190.9	17
Panchmahal	3.9	-84	19.6	-59	124.5	130
Patan	0.0	-100	7.3	-73	16.9	-57
Sabarkantha	3.5	-81	23.1	-47	69.9	36
Surat	24.4	-64	29.6	-69	176.0	68
Tapi	19.8	-73	6.6	-93	164.2	47
Valsad	17.5	-85	119.0	-15	279.5	61
S K & Diu region						
Amreli	1.6	-95	36.6	-5	119.5	161
Bhavnagar	0.6	-98	20.6	-42	119.7	187
Diu	3.6	-90	114.9	24	151.4	83
Jamnagar	0.4	-98	27.3	-28	13.1	-72
Junagarh	5.9	-90	63.9	-18	72.1	-21
Kutch	0.1	-99	10.1	-55	2.9	-91
Porbandar	0.1	-99	64.4	19	10.5	-83
Rajkot	3.8	-87	37.9	-4	28.1	-35
Surendranagar	10.5	-56	11.9	-77	32.3	2
Maharashtra						
Konkan & Goa						
Mumbai City	167.6	-3	332.0	78	238.2	12
Mumbai Suburban	182.1	5	456.6	145	336.2	58
North Goa	249.2	-5	457.0	60	426.2	53
Raigad	110.0	-43	483.4	93	550.3	86
Ratnagiri	104.0	-56	641.3	123	630.0	110
Sindhudurg	183.7	-31	547.7	105	469.0	78
South Goa	291.6	17	496.8	114	324.2	32
Thane	51.9	-60	297.2	72	469.3	112
Madhya Maharashtra						
Ahmednagar	40.3	46	18.4	-29	43.6	95
Dhule	28.4	-5	57.5	42	26.8	-21
Jalgaon	11.1	-71	44.9	-4	52.0	34
Kolhapur	14.1	-85	81.1	-37	215.6	30
Nandurbar	32.6	-5	14.3	-73	88.4	68
Nasik	25.0	-42	34.2	-33	122.8	120
Pune	12.9	-64	28.4	-47	150.5	120
Sangli	21.6	-21	10.7	-65	47.7	66
Satara	12.0	-67	30.4	-34	122.4	126
Solapur	29.2	25	8.7	-59	10.6	-39
Marathwada						
Aurangabad	35.1	1	53.1	44	64.5	111
Beed	71.0	121	28.9	-8	32.8	22
Hingoli	29.0	-56	69.0	20	82.8	43
Jalna	31.5	-23	35.3	-3	67.2	102
Latur	26.6	-35	44.9	11	42.5	0
Nanded	62.8	34	92.8	93	81.7	71
Osmanabad	36.4	9	17.7	-34	24.2	-22
Parbhani	40.1	-17	41.7	-11	70.9	61
Vidarbha						

Akola	49.9	14	73.1	44	75.5	80
Amraoti	38.5	-7	52.0	5	126.6	162
Bhandara	8.6	-82	57.1	-20	114.7	35
Buldhana	37.3	-12	61.6	28	52.8	32
Chandrapur	9.7	-82	119.8	52	180.7	114
Gadchiroli	8.0	-88	145.7	67	179.3	98
Gondia	23.8	-54	64.4	-14	160.2	69
Nagpur	17.2	-64	93.7	55	117.1	78
Wardha	26.9	-49	99.7	61	137.7	145
Washim	39.6	-23	71.6	8	67.9	26
Yeotmal	53.7	-6	64.8	8	97.4	73
Odisha						
Angul	66.8	5	36.8	-37	69.9	20
Balasore	114.5	63	42.0	-34	78.1	22
Bargarh	146.5	151	85.3	31	40.1	-48
Bhadrak	58.9	-11	49.7	-10	132.6	119
Bolangir	66.0	-2	45.8	-36	72.7	-9
Boudh	119.3	107	65.7	-1	66.8	6
Cuttack	92.9	30	70.2	6	53.0	-22
Deogarh	84.7	9	5.7	-93	39.5	-59
Dhenkanal	72.5	-2	34.9	-48	71.3	12
Gajapati	159.7	274	75.9	83	76.0	115
Ganjam	150.1	270	72.6	85	39.5	-1
Jagatsingpur	37.8	-49	55.0	-8	53.7	24
Jajpur	76.5	8	68.4	11	94.3	70
Jharsuguda	76.1	-8	24.3	-70	87.7	9
Kalahandi	101.6	32	38.8	-57	81.2	9
Kandhamal	53.0	-8	75.2	13	74.3	18
Kendrapara	61.8	8	86.8	63	29.3	-52
Keonjhar	91.8	41	47.0	-25	98.3	83
Khurda	72.2	17	49.3	-7	70.2	26
Koraput	178.5	237	174.4	153	141.3	62
Malkangiri	461.4	174	63.4	-34	137.0	76
Mayurbhanj	119.2	49	76.0	-6	61.9	5
Nawapara	75.5	29	58.4	-20	47.8	-35
Nawarangpur	186.1	208	146.3	80	103.5	-3
Nayagarh	97.3	35	72.8	32	55.8	-3
Puri	41.2	-31	40.3	-12	56.6	-2
Rayagada	115.2	140	71.2	70	83.3	69
Sambalpur	126.3	62	22.3	-73	61.9	-36
Sonepur	153.9	193	53.5	6	43.6	-56
Sundargarh	82.5	11	40.3	-46	112.5	53
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	242.7	285	112.8	66	50.8	-11
North & Middle Andaman	98.2	-2	110.3	4	17.6	-84
South Andaman	131.5	43	136.1	32	42.3	-48
GWB						

Bankura	63.7	31	43.0	-41	62.5	-14
Birbhum	40.0	-23	38.3	-48	92.8	25
Burdwan	40.1	-10	31.1	-53	81.6	22
East Midnapore	44.2	-39	17.7	-73	92.9	28
Hooghly	34.8	-31	5.3	-94	89.2	18
Howrah	27.0	-56	6.2	-92	130.6	70
Kolkata	13.4	-81	6.8	-91	69.5	-19
Murshidabad	32.8	-36	8.5	-87	147.5	63
Nadia	42.8	-38	19.0	-72	89.0	39
24 Pargana (N)	38.9	-42	20.5	-73	131.8	80
Purulia	41.5	-19	23.7	-68	87.3	16
24 Pargana (S)	11.1	-88	38.8	-52	127.4	15
West Midnapore	62.3	-4	35.8	-47	147.6	82
SHWB & Sikkim						
Cooch Behar	276.5	43	374.1	143	116.4	-46
Darjeeling	152.4	10	154.1	-1	211.6	39
East Sikkim	77.5	-34	104.9	-15	168.8	60
Jalpaiguri	327.0	81	195.3	19	222.1	-11
Malda	85.8	44	43.4	-35	266.8	229
North Dinajpur	82.0	-19	**	**	70.3	-11
North Sikkim	185.7	49	150.3	29	86.5	-33
South Dinajpur	39.0	-51	0.0	-100	93.1	1
South Sikkim	60.5	-48	108.6	-12	168.2	59
West Sikkim	103.5	-17	191.5	65	196.0	52
Karnataka						
Coastal Karnataka						
Dakshina Kannada	236.7	-8	403.9	42	312.6	3
Udupi	398.1	39	494.1	61	447.9	35
Uttara Kannada	175.5	-14	324.0	49	322.6	28
NI Karnataka						
Bagalkote	35.7	123	3.5	-80	4.9	-51
Belagavi	28.2	-5	20.8	-50	59.9	25
Bidar	72.8	100	29.8	-17	14.8	-61
Dharwad	17.8	-32	21.8	-28	34.1	1
Gadag	35.7	126	12.2	-35	8.2	-29
Haveri	14.5	-47	31.3	1	61.7	45
Kalaburgi	73.0	158	11.7	-59	8.6	-73
Koppal	26.4	87	22.3	49	1.6	-81
Raichur	37.9	97	20.2	-6	2.3	-87
Vijayapura	39.4	113	1.8	-92	4.3	-66
Yadgir	37.6	43	14.3	-60	3.1	-87
SI Karnataka						
Ballari	23.6	67	31.8	108	14.7	25
Bangalore Rural	42.2	335	28.4	163	1.5	-86
Bangalore Urban	22.0	116	39.6	253	3.2	-74
Chamarajanagar	4.9	-58	18.1	58	1.3	-90
Chikaballapur	15.1	80	14.3	27	17.5	25
Chikkamagaluru	27.7	-73	145.2	8	205.3	14
Chitradurga	10.5	17	18.9	108	21.8	130

Davangere	15.2	-2	31.2	68	34.9	72
Hassan	16.9	-47	59.0	70	65.9	27
Kodagu	60.0	-58	273.9	58	251.5	-1
Kolar	9.6	45	20.8	104	6.3	-42
Mandya	10.3	13	21.2	195	12.0	62
Mysuru	40.2	127	41.5	169	20.5	-17
Ramanagara	7.6	-33	24.7	138	6.7	-40
Shivamogga	78.9	-16	205.8	86	356.4	118
Tumakuru	19.6	90	21.9	149	10.9	9
Kerala						
Alappuzha	84.8	-31	67.0	-48	69.3	-53
Kannur	132.5	-38	286.2	22	235.0	-19
Ernakulam	94.4	-38	127.8	-25	95.6	-48
Idukki	119.5	-19	199.5	6	93.1	-58
Kasaragod	205.4	-16	350.5	33	261.6	-6
Kollam	70.7	-25	49.9	-52	46.5	-57
Kottayam	117.6	-12	97.2	-38	89.9	-46
Kozhikode	139.9	-34	173.0	-24	188.6	-26
Malappuram	110.9	-29	111.8	-37	156.4	-29
Palakkad	100.9	-12	114.9	-15	106.2	-35
Pathanamthitta	71.8	-40	71.6	-46	50.5	-66
Thiruvananthapuram	64.0	7	26.5	-61	31.8	-52
Thrissur	60.9	-60	143.4	-23	110.8	-49
Wyand	40.3	-76	227.2	2	114.2	-64
Tamil Nadu						
Ariyalur	4.3	-56	4.3	-46	0.0	-100
Chennai	6.3	-59	38.8	140	3.6	-84
Coimbatore	24.3	247	54.9	587	36.7	222
Cuddalore	59.5	576	7.9	-7	0.9	-93
Dharmapuri	7.2	10	18.1	99	0.5	-95
Dindigul	2.5	-66	1.9	-73	0.3	-97
Erode	12.0	201	8.8	160	0.3	-95
Kanchipuram	10.1	-32	41.4	167	2.0	-90
Kanyakumari	20.2	-40	18.2	-55	17.3	-51
Karikal	5.8	-14	8.4	140	0.3	-97
Karur	9.1	250	3.8	97	0.0	-100
Krishnagiri	5.1	-32	29.4	282	4.5	-52
Madurai	1.5	-86	1.2	-89	0.0	-100
Nagapattinam	8.4	25	6.5	15	0.1	-99
Namakkal	16.0	11	11.5	68	1.6	-83
Nilgiris	14.3	-69	88.0	75	35.5	-48
Perambalur	6.5	2	10.5	304	0.0	-100
Puducherry	7.1	22	41.6	433	0.0	-100
Pudukottai	9.7	-5	0.7	-91	1.8	-84
Ramanathapuram	0.0	-100	0.7	-70	0.2	-95
Salem	30.1	130	25.4	92	0.0	-100
Sivaganga	0.1	-98	0.2	-98	0.0	-100
Thanjavur	23.1	182	3.1	-50	0.1	-99
Theni	7.9	108	15.0	225	6.6	7

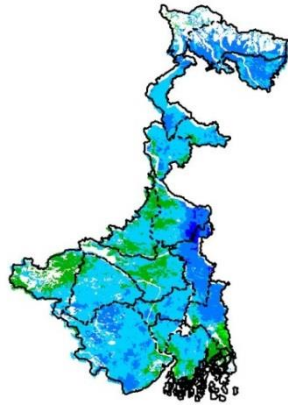
Tirunelveli	3.3	-61	15.3	44	10.5	2
Tirupur	16.3	308	4.4	47	2.1	-63
Tiruvallur	47.6	266	43.6	143	9.1	-62
Tiruvannamalai	31.8	144	44.5	271	2.3	-82
Tiruvarur	8.1	0	4.0	-24	0.0	-100
Toothukudi	1.2	3	0.3	-73	0.0	-100
Trichy	11.6	163	2.2	-41	0.0	-10
Vellore	46.9	311	48.6	292	5.5	-68
Villupuram	23.8	134	19.0	81	1.5	-89
Virudhunagar	1.5	-69	0.0	-100	0.0	-100
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	28.6	-23	146.2	264	72.4	47
Guntur	42.1	11	44.5	78	11.5	-63
Krishna	68.6	143	99.7	145	38.6	-20
Nellore	25.1	128	31.2	123	10.8	-40
Prakasam	36.7	194	19.9	37	1.0	-95
Sirkakulam	30.5	-28	72.4	88	53.7	24
Visakhapatnam	39.1	11	74.4	101	79.5	109
Vizianagram	41.6	22	65.1	64	93.3	112
West Godavari	24.1	-34	156.5	257	71.5	36
Rayalaseema						
Anantapur	29.3	244	20.4	120	2.0	-77
Chittoor	52.6	374	21.2	77	7.3	-56
Cuddapah	43.9	251	36.8	159	0.9	-94
Kurnool	58.9	280	26.4	40	6.3	-68
Telangana						
Adilabad	32.5	-46	81.5	33	84.4	31
Hyderabad	7.5	-73	55.4	41	29.3	-11
Karimnagar	13.0	-70	84.9	76	67.2	15
Khammam	13.8	-69	176.1	254	111.9	103
Mehabubnagar	61.1	245	11.8	-53	6.4	-79
Medak	9.3	-76	38.1	-12	54.2	25
Nalgonda	20.8	-7	68.0	115	25.2	-15
Nizamabad	47.4	-3	61.1	27	76.7	24
Rangareddy	44.3	60	31.1	-6	21.9	-40
Warangal	8.6	-79	83.6	74	91.9	63

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

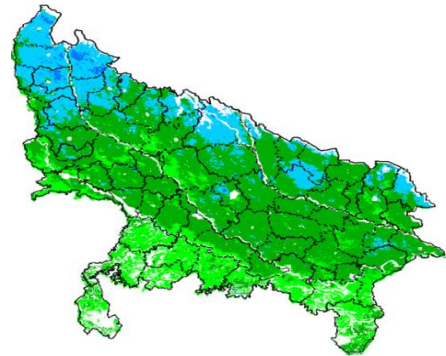
**INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON
6th July 2016 FOR DIFFERENT STATES**

West Bengal



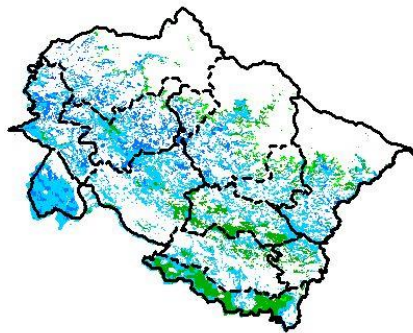
Agricultural vigour is good in West Bengal, whereas very few patches in eastern region of the state show very good NDVI.

Uttar Pradesh



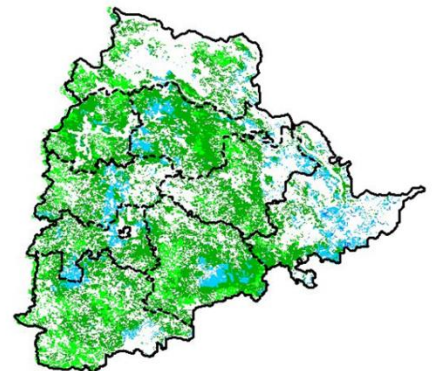
Agricultural vigour is moderate over entire state of Uttar Pradesh whereas, north western part shows patches of good NDVI.

Uttarakhand



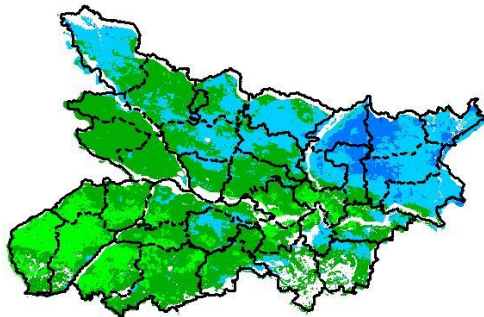
Agricultural vigour is good in major parts of state whereas southern region show good values of NDVI over state of Uttarakhand.

Telangana



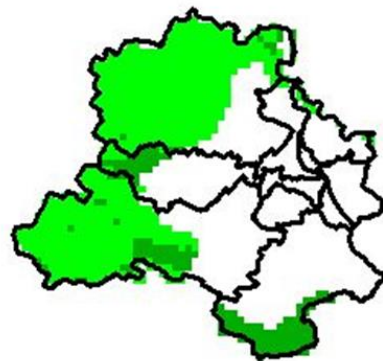
Agriculture vigour is moderate over entire state of Telangana except eastern part shows good NDVI.

Bihar



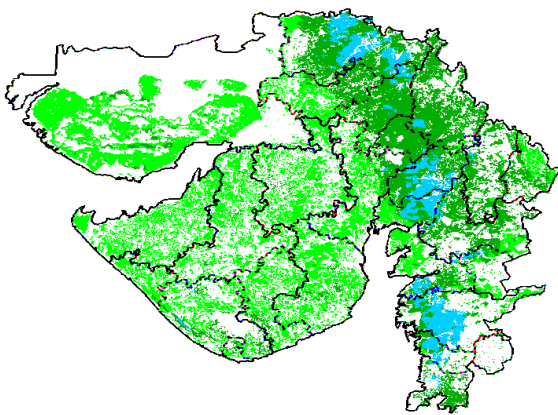
Agriculture vigour is moderate over major parts of Bihar whereas eastern part shows patches of good NDVI values.

Delhi



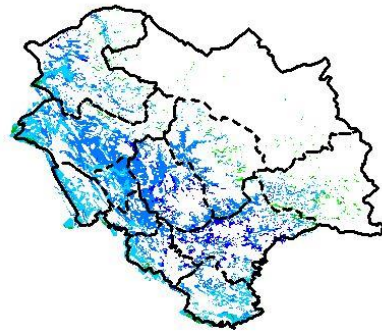
Agriculture vigour is moderate all over Delhi.

Gujarat



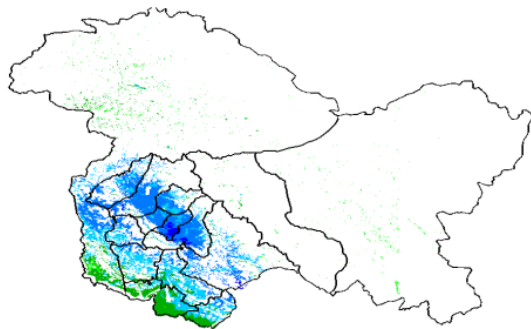
Moderate NDVI values are observed in Kutch, Saurashtra whereas patches of good NDVI observed in Gujrat region.

Himachal Pradesh



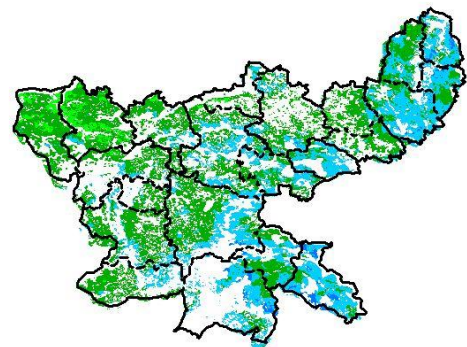
Agriculture vigour is good over major parts of Himachal Pradesh.

Jammu & Kashmir



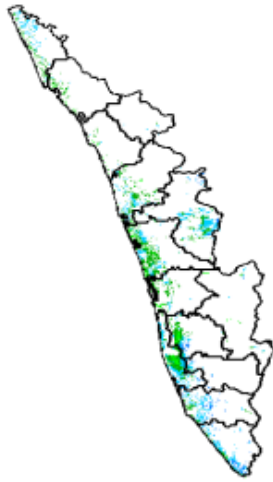
Agriculture vigour is good over major parts of Jammu & Kashmir, whereas the remaining region shows moderate NDVI.

Jharkhand



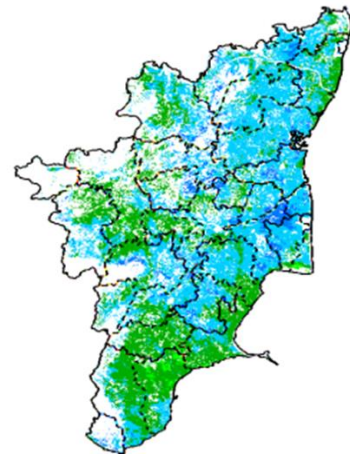
Agriculture vigour is moderate over entire state of Jharkhand whereas few patches of good NDVI observed in southern and eastern part of state.

Kerala



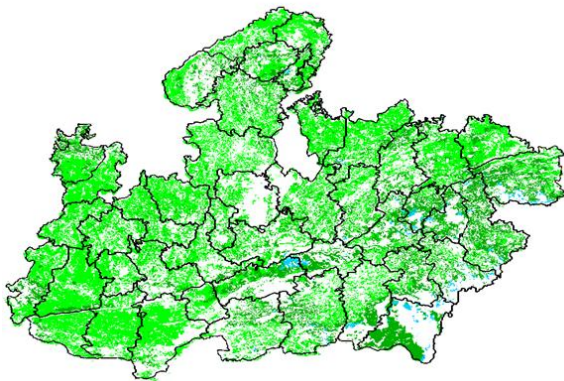
Agriculture vigour is moderate over major state of Kerala.

Tamil Nadu



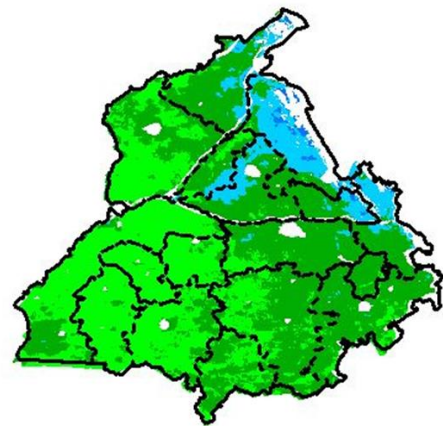
Agricultural vigour is good in Tamilnadu, except southern coastal part shows patches of moderate NDVI.

Madhya Pradesh



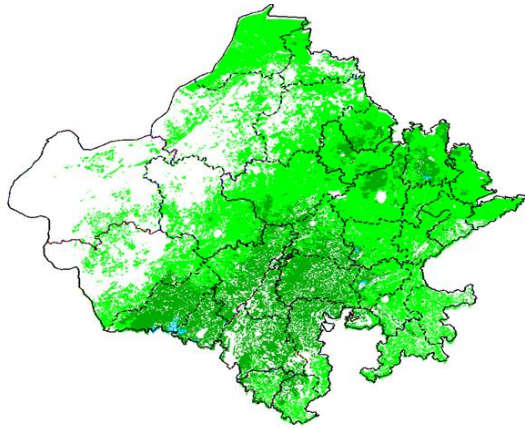
Agriculture vigour shows moderate values of NDVI over entire state of Madhya Pradesh.

Punjab



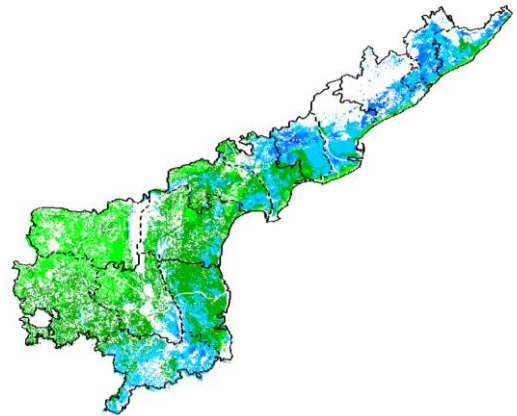
Agricultural vigour is moderate over the entire state of Punjab whereas northern region shows few patches of good NDVI.

Rajasthan



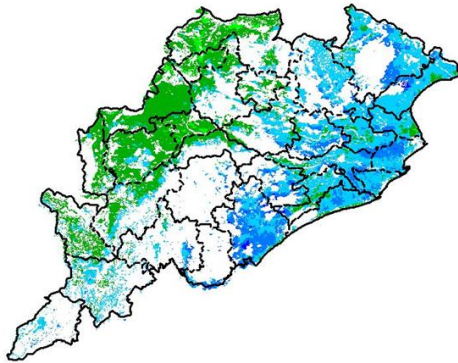
Agriculture vigour is moderate over the entire state of Rajasthan.

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



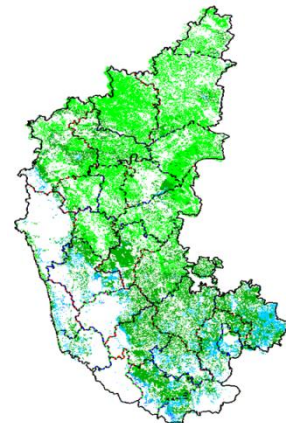
Agriculture vigour is moderate over entire state of Haryana.

Chhattisgarh

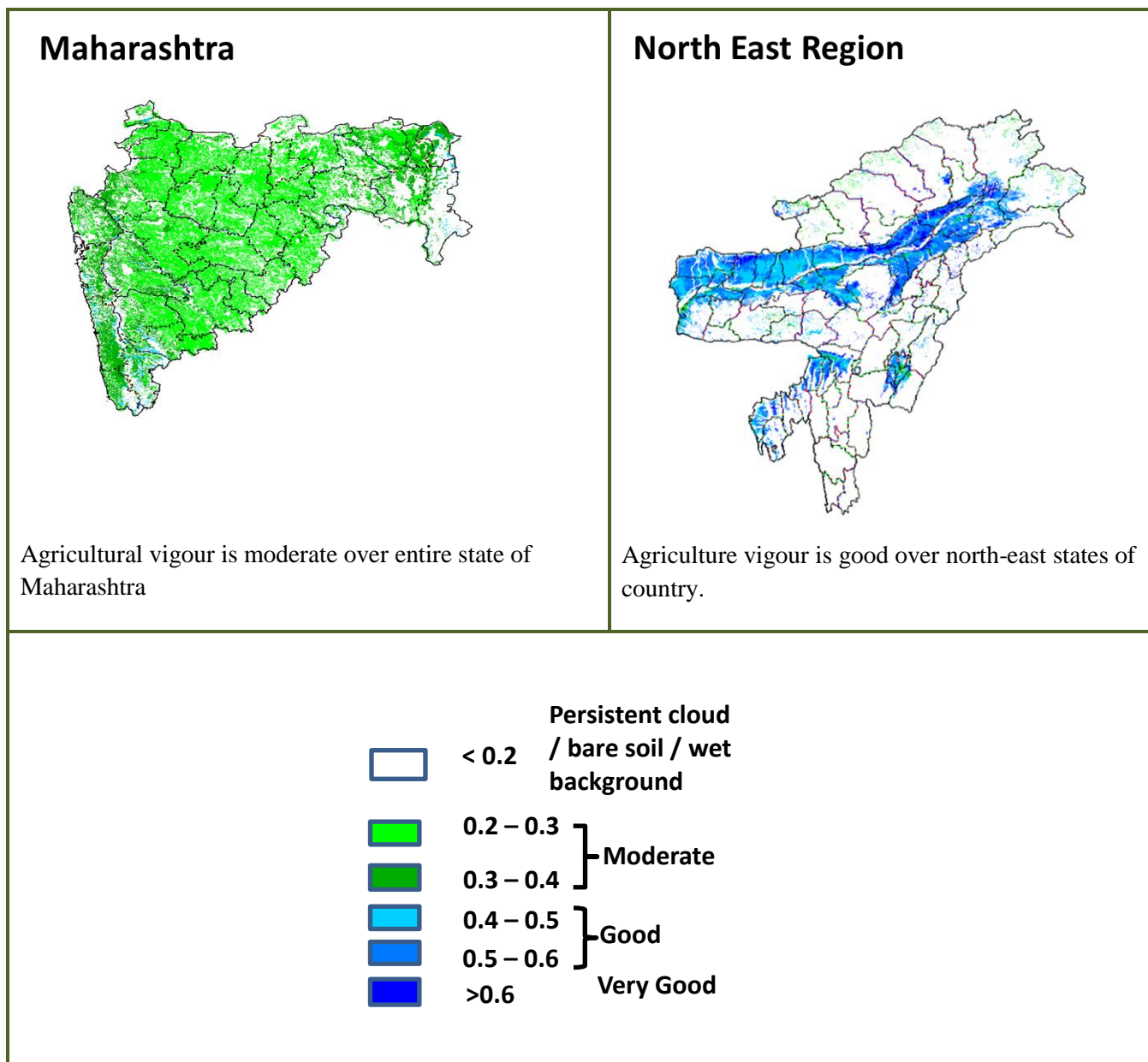


Agriculture vigour is moderate in the state of Chhattisgarh.

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:** Shaksarang -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, jalandi, 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 Himgiri
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 Shadabahr, 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