



National Agromet Advisory Service Bulletin



Friday 10th June 2016
(For the period 10th to 14th June 2016)



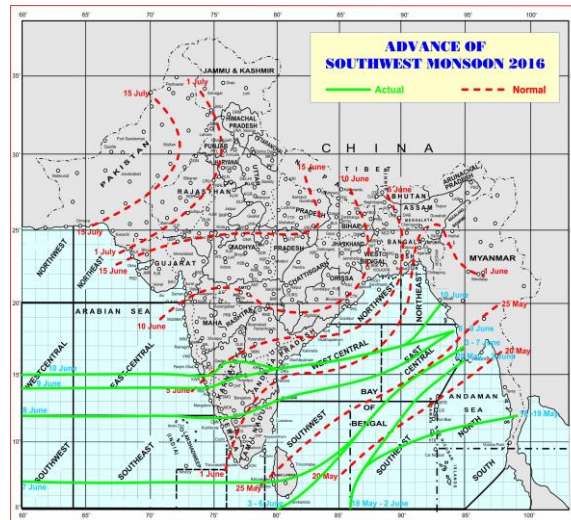
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National Agrometeorological Advisory Service Centre,
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India Meteorological Department, Shivajinagar, Pune.

Weblink For

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

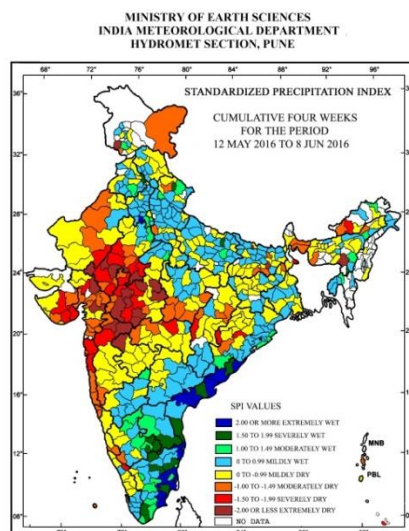
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Monsoon Watch



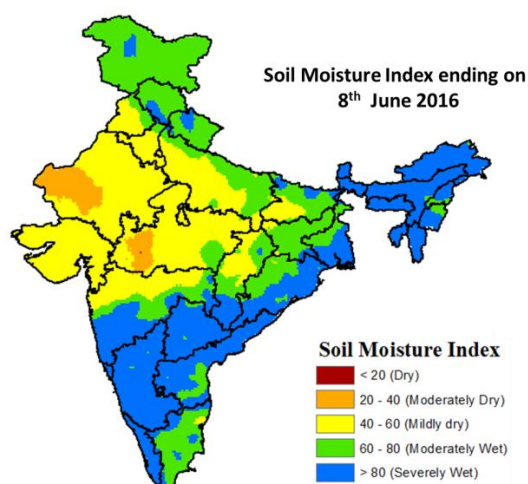
- The Southwest Monsoon has further advanced into some more parts of central Arabian sea, remaining parts of Coastal & South Interior Karnataka and some parts of North Interior Karnataka, some more parts of Rayalaseema and south Coastal Andhra Pradesh and eastcentral Bay of Bengal and some parts of northeast Bay of Bengal.
- The Northern Limit of Monsoon (NLM) passes through Lat. 15.0°N/ Long.60.0°E, Lat. 15.0°N/Long.70.0°E, Karwar, Gadag, Ongole, Lat.16.0°N/Long. 85.0°E, Lat. 17.0°N/Long. 90.0°E and Lat. 20.0°N/Long. 93.0°E.
- Conditions are favourable for further advance of southwest monsoon into some more parts of central & north Bay of Bengal and some parts of northeastern states during next 3-4 days.

Standardised Precipitation Index Four Weekly for the Period 12th May to 8th June 2016



- Extremely/severely wet conditions experienced in many districts of Andhra Pradesh; Tamil Nadu & Puducherry; Sant Kabir Nagar district of Uttar Pradesh; Rudraprayag district of Uttarakhand; Sas Nagar Mohali district of Punjab; Bangalore Urban, Kolar, Chickballapur districts of Karnataka.
- Extremely/Severely dry conditions experienced in few districts of Rajasthan, Madhya Pradesh, Saurashtra & Kutch and Konkan. East Kameng district of Arunachal Pradesh; Jaintia Hills district of Meghalaya; South Dinajpur district of West Bengal; Boudhgarh, Nawapara districts of Odisha; Monghyr, Sheohar districts of Bihar; Rajouri district of Jammu & Kashmir; Baroda, Mehsana, Sabarkantha districts of Gujarat Region; Dhule, Jalgaon, Nashik, Aurangabad, Nagpur districts of Maharashtra; Rajnandgaon district of Chhattisgarh; Wynad district of Kerala.
- Moderately dry conditions experienced in many districts of Gujarat Region; Konkan & Goa; few districts of Saurashtra & Kutch; West Kameng district of Arunachal Pradesh; Lakhimpur district of Assam; West Garo Hills district of Meghalaya; Cooch Behar, Jalpaiguri districts of West Bengal; Kalahandi district of Odisha; Sahibganj district of Jharkhand; Jamui, Nawada, Saharsa districts of Bihar; Mathura district of Uttar Pradesh; Garhwal Tehri district of Uttarakhand; Jammu, Ladakh (Leh) districts of Jammu & Kashmir; Bikaner, Sri Ganganagar, Jodhpur, Bundi, Dungarpur, Tonk, Pratapgarh districts of Rajasthan; Harda, Jhabua, Neemuch, Alirajpur, Balaghat, Chhindwara, Narsinghpur, Seoni, Anuppur districts of Madhya Pradesh; Kolhapur, Nandurbar, Amraoti, Buldhana districts of Maharashtra; Janjgir, Kowardha, Raigarh districts of Chhattisgarh; Dakshin Kannada, Kodagu, districts of Karnataka; Lakshadweep district of Lakshadweep;
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

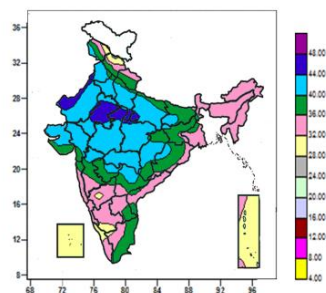
Soil Moisture Index ending on 8th June 2016



- Soil Moisture Index indicates severely wet condition in North-East Region, West Bengal, Karnataka, Kerala, Andhra Pradesh and Telangana, few districts of Tamil Nadu, Maharashtra and Chhattisgarh. Moderate wet condition in Jharkhand, Uttar Pradesh, Bihar, Jammu & Kashmir, Uttarakhand and Himachal Pradesh. Rest of the country shows mild dry condition of soil moisture.

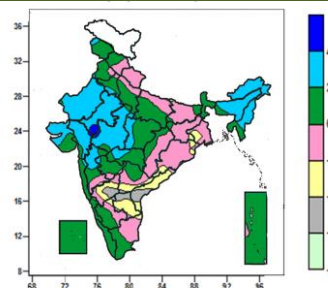
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 08.06.2016

Actual Mean Maximum Temperature (°C) in India for the week ending 08.06.2016



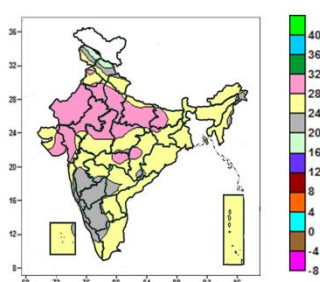
- Mean maximum temperature was between 44 to 48⁰C over many parts of East Rajasthan, some parts of West Rajasthan, West Madhya Pradesh and isolated pockets of Punjab, Uttar Pradesh and East Madhya Pradesh.
- Mean maximum temperature was between 40 to 44⁰C over Vidarbha, many parts of Punjab, Haryana & Delhi, Uttar Pradesh, West Rajasthan, Madhya Pradesh, Gujarat, some parts of Bihar, Chhattisgarh, Odisha, East Rajasthan, Madhya Maharashtra, Marathwada, Telangana, and isolated pockets of Jammu & Kashmir and Jharkhand.
- Mean maximum temperature was between 32 to 40⁰C over rest of the country except over Lakshadweep, many parts of Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Himachal Pradesh, South Interior Karnataka and Kerala and isolated pockets of North Interior Karnataka, Tamil Nadu where it was between 28 to 32⁰C.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 08.06.2016



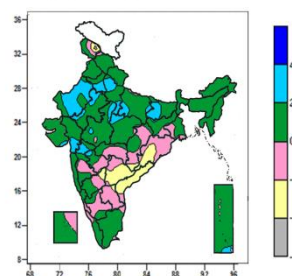
- Mean maximum temperature was above normal by 4 to 6⁰C over isolated pockets of East Rajasthan, West Rajasthan and Gujarat region.
- Mean maximum temperature was above normal by 2 to 4⁰C over Arunachal Pradesh, Nagaland, Manipur, many parts of Assam & Meghalaya, Rajasthan, Gujarat, West Madhya Pradesh, some parts of Mizoram, East Madhya Pradesh, Madhya Maharashtra, Vidarbha and isolated pockets of Jammu & Kashmir, Punjab, Haryana, Uttar Pradesh, Konkan and Marathwada.
- It was normal to near normal over rest of the country except many parts of Coastal Andhra Pradesh, Rayalaseema, North Interior Karnataka, some parts of Gangetic West Bengal, Odisha, Telangana and isolated pockets of Madhya Maharashtra, South Interior Karnataka and Tamil Nadu where it was below normal by 2 to 4⁰C and over some parts of North Interior Karnataka, Rayalaseema, Coastal Andhra Pradesh and isolated pockets of Telangana South Interior Karnataka and Tamil Nadu where it was below normal by 2 to 6⁰C.

Actual Mean Minimum Temperature (°C) in India for the week ending 08.06.2016



- Mean minimum temperature was between 12 to 16⁰C over isolated pockets of Jammu & Kashmir.
- Mean minimum temperature was between 16 to 20⁰C over some parts of Jammu & Kashmir and Himachal Pradesh.
- Mean minimum temperature was between 20 to 28⁰C over rest of the country except over West Rajasthan, many parts of Haryana & Delhi, Uttar Pradesh, East Rajasthan, Gujarat, some parts of Bihar, Madhya Pradesh, Vidarbha, Chhattisgarh and isolated pockets of Punjab, Jharkhand and Konkan, where it was between 28 to 32⁰C.

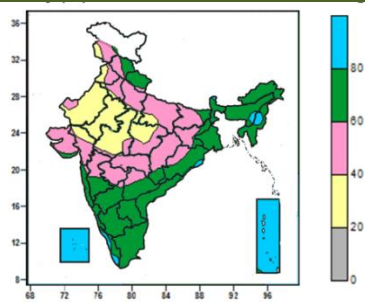
Mean Minimum Temperature (°C) Anomaly in India for the week ending 08.06.2016



- Mean minimum temperature was above normal by 2 to 4⁰C over many parts of Haryana & Delhi, West Rajasthan, some parts of Uttar Pradesh, Bihar, East Rajasthan, Madhya Pradesh, Gujarat Region, Madhya Maharashtra and isolated pockets of Jammu & Kashmir, Uttarakhand, Punjab, Jharkhand, Saurashtra, Marathwada and Andaman & Nicobar Islands.
- Mean minimum temperature was normal to near normal over rest of the country except many parts of Coastal Andhra Pradesh, Telangana, some parts of Odisha, North Interior Karnataka and isolated pockets of Chhattisgarh and Rayalaseema where it was below normal by 2 to 4⁰C.

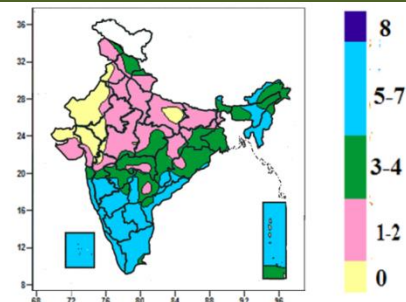
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 08.06.2016

Relative Humidity (%) over India for the week ending 08.06.2016



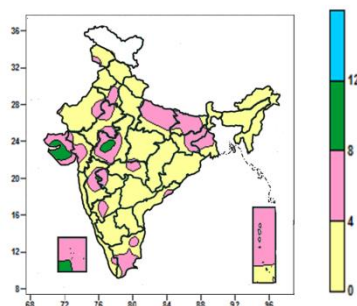
- Mean Relative humidity was above 80% over Lakshadweep many parts of Manipur, Andaman & Nicobar Islands, some parts of Sikkim, Kerala and isolated pockets of Assam & Meghalaya, Nagaland Odisha and Coastal Andhra Pradesh.
- Mean Relative humidity was between 60 to 80% over Arunachal Pradesh, Mizoram, Tripura, Gangetic West Bengal, Rayalaseema, South Interior Karnataka, Coastal Karnataka, Tamil Nadu, many parts of Himachal Pradesh, Uttarakhand, Sub Himalayan West Bengal & Sikkim, Odisha, Coastal Andhra Pradesh, Telangana, North Interior Karnataka, Konkan & Goa, some parts of Manipur, Bihar, Jharkhand, Chhattisgarh, Madhya Maharashtra and Kerala and isolated pockets of Jammu & Kashmir and Gujarat.
- Mean Relative humidity was between 20 to 60% over rest of the country.

Cloud amount (okta) over India for the week ending 08.06.2016



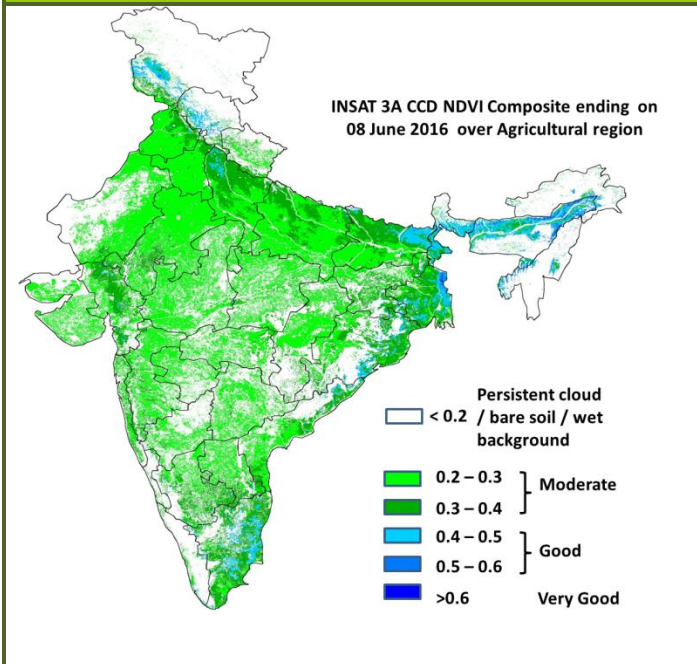
- Sky remained generally cloudy (5-7 okta) over Manipur, Mizoram & Tripura, Coastal Karnataka, South Interior Karnataka, Kerala, Lakshadweep, many parts of Konkan & Goa, Madhya Maharashtra, North Interior Karnataka, Rayalaseema, Coastal Andhra Pradesh, Tamil Nadu and Andaman & Nicobar islands, some parts of Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Odisha, Chhattisgarh, Telangana and isolated pockets of Marathwada.
- Sky remained partly cloudy/mainly clear/clear sky (3-4 okta/1 to 2 okta/0 okta) over rest of the country.

Wind speed (knots) over India for the week ending 08.06.2016



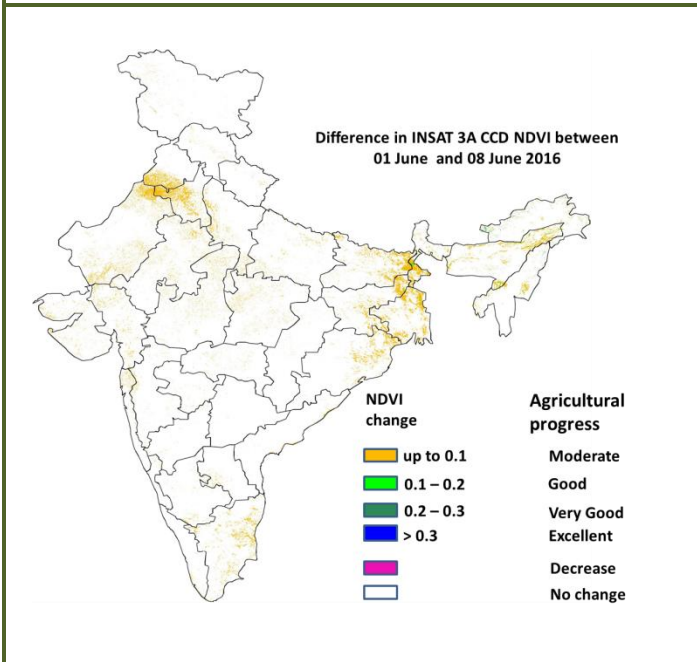
- Mean wind speed was 8 to 12 knots over some parts of Saurashtra & Kutch, Lakshadweep and isolated pockets of West Madhya Pradesh, Madhya Maharashtra.
- Mean wind speed was 4 to 8 knots over many parts of East Uttar Pradesh, Saurashtra & Kutch, Bihar, Jharkhand, Gangetic West Bengal, Lakshadweep, Andaman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

INSAT 3A CCD NDVI COMPOSITE ENDING ON 8th June 2016 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour is good over Tamil Nadu, patches in east Bihar, Coastal Odisha, West Bengal, Assam, patches in west Uttar Pradesh and Himachal Pradesh where NDVI varies from 0.4 to 0.6. Agricultural growth was moderate 0.2 to 0.4 over few patches in Punjab, Haryana, Uttar Pradesh, Bihar, Rajasthan, Madhya Pradesh, Gujarat, Telangana, Maharashtra, Karnataka and Odisha.

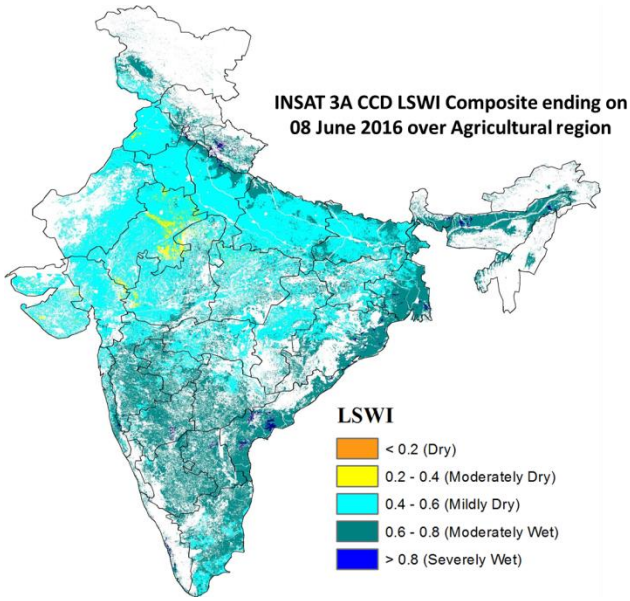
Difference in INSAT 3A CCD NDVI between 1st and 8th June 2016



- Moderate progress in NDVI is observed over the regions of Punjab, Haryana, Rajasthan, Bihar, West Bengal, Odisha, Tamil Nadu and North East. The rest of region in India shows no change in NDVI.

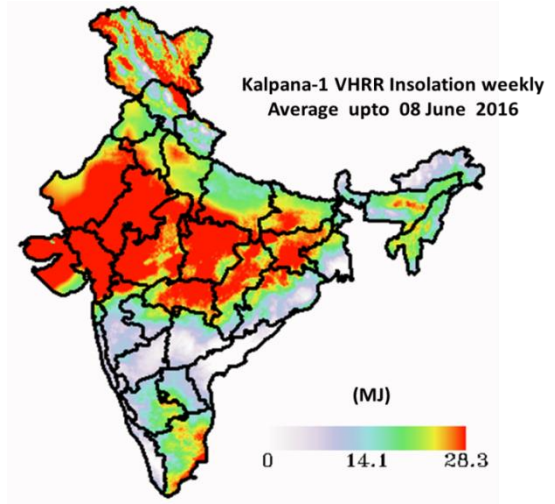
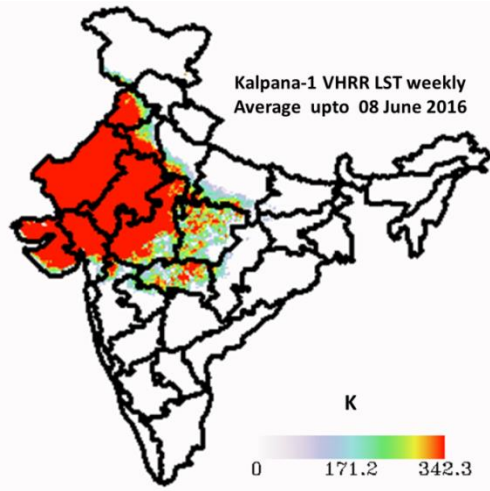
- INSAT 3A CCD NDVI composite maps for the week ending on 8th June 2016 for different States are given in Annexure II.

INSAT 3A CCD LSWI COMPOSITE ENDING ON 8th June 2016 OVER AGRICULTURAL REGION OF INDIA



- Moderately wet conditions are observed in Maharashtra, Karnataka, Andhra Pradesh, Tamil Nadu, West Bengal, coastal Odisha and North east region. The states of Punjab, Haryana, Rajasthan, Uttar Pradesh, Bihar and Madhya Pradesh show mild dry conditions. Moderately dry conditions are observed in patches in east Rajasthan and few patches in Gujarat.

Other SAT MET Products



Weather Forecast for next 5 days valid upto 0830 hours of 15th June 2016

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- No significant change in maximum temperatures over northwest and central India during next 2-3 days.

5 Day Rainfall Forecast (MID DAY) 10th June 2016

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

% Station Reporting Rainfall

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

Weather Warning during next 5 days

- **10 June (Day1):** Heat wave conditions very likely at isolated places over Rajasthan and West Madhya Pradesh. Heavy rain very likely at isolated places over Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Coastal Karnataka and Kerala. Dust/thunderstorm accompanied with squall very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and Rajasthan. Thunderstorm accompanied with squall very likely at isolated places over Himachal Pradesh, Uttarakhand and Vidarbha.
- **11 June (Day 2):** Heat wave conditions very likely at isolated places over Rajasthan and West Madhya Pradesh. Heavy rain very likely at isolated places over Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Coastal Karnataka and Kerala. Dust/thunderstorm very likely at isolated places over Rajasthan. Thunderstorm accompanied with squall very likely at isolated places over Himachal Pradesh, Uttarakhand, Punjab and Haryana, Chandigarh & Delhi.
- **12 June (Day 3):** Heavy to very heavy rain very likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; heavy at isolated places over Sub-Himalayan West Bengal &

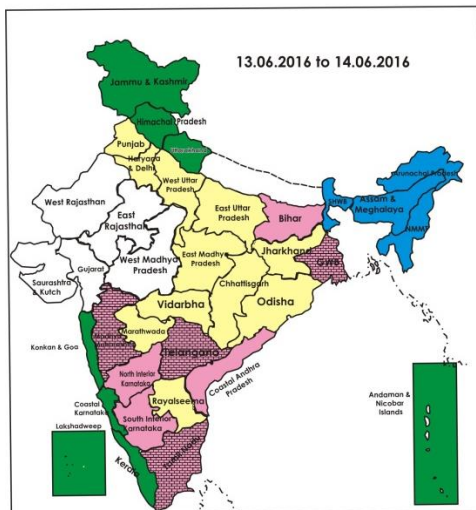
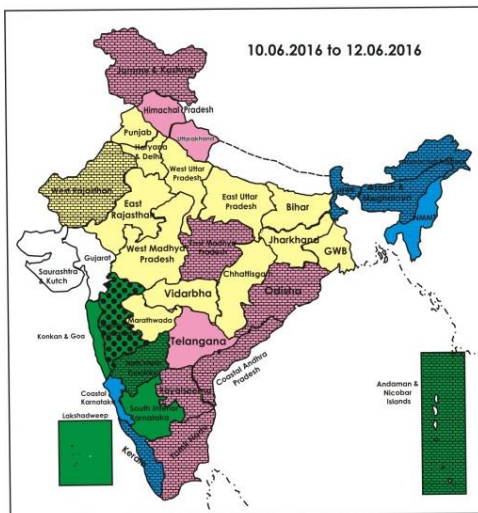
Sikkim, Arunachal Pradesh and Coastal Karnataka. Dust/thunderstorm very likely at isolated places over West Rajasthan. Thunderstorm accompanied with squall very likely at isolated places over Himachal Pradesh and Uttarakhand.

- **13 June (Day 4):** Heavy to very heavy rain very likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; heavy at isolated places over Sub-Himalayan West Bengal & Sikkim and Arunachal Pradesh. Dust/thunderstorm very likely at isolated places over West Rajasthan.
- **14 June (Day 5):** Heavy to very heavy rain very likely at isolated places over Assam & Meghalaya; heavy at isolated places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura. Dust/thunderstorm very likely at isolated places over West Rajasthan.

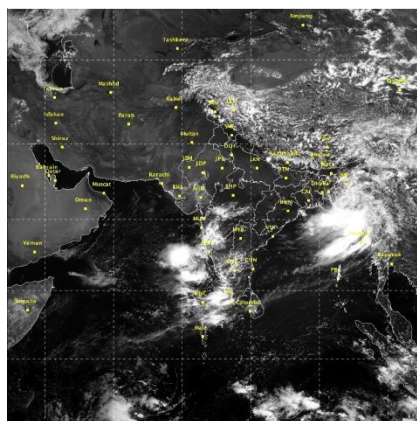
Weather Outlook for subsequent 2 days from 15th to 17th June 2016

- Rain/thunderstorms activity very likely at most places with isolated heavy fall over Sub-Himalayan West Bengal & Sikkim and northeastern states.
- Rain/thunderstorms likely at most places along west coast and at a few places over rest peninsular India.
- Rain/snow likely at a few places over western Himalayan region.

Weather Forecast Map (valid upto 0830 hours of 15th June, 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

- As the Southwest Monsoon has covered Kerala and further advanced into some more parts of central Arabian sea, remaining parts of Coastal & South Interior Karnataka and some parts of North Interior Karnataka, some more parts of Rayalaseema and south Coastal Andhra Pradesh and conditions are favourable for further advance of southwest monsoon into some more parts of central & north Bay of Bengal and some parts of northeastern states during next 3-4 days, farmers are advised to undertake the following agricultural activities:
- In **Kerala**, continue nursery sowing of *Virippu* rice and undertake direct sowing of rice. Provide adequate drainage in rice nurseries. Undertake land preparation and transplanting of rice with seedlings of 2-3 leaves stage.
 - In **Coastal Karnataka**, continue land preparation and nursery sowing of rice and sowing of *kharif* maize and cotton.
 - In **South Interior Karnataka**, undertake nursery sowing of rice, sowing of red gram (TTB-7, BRG-1, 2, 4, 5) and maize, continue land preparation for sowing of *kharif* ragi (Indaf-9), sesame (Navile-1, T-7), cowpea (TVX-944, KBC-1), green gram (PS-16, PDM-84,178) and black gram (Karagao-3, T-9, Rashmi (LBG-625).
 - In **North Interior Karnataka**, continue of land preparation and nursery sowing of rice, sowing of *kharif* crops like jowar, red gram, black gram, pearl millet, maize, groundnut, soybean, sunflower, sesame, and utilising realised and expected rainfall.
 - In **Andhra Pradesh**, continue land preparation and sowing of red gram (LRG- 38, LRG- 41, laksmi, Abhaya, Asha, Maruthi and PRG-158,LRG 52), black gram(LBG-752, LBG-20, T-9, LBG-623, PU-31, LB-402, LBG-709 and LBG-787,TBG 1,GBG 104), green gram (LGG-407, LGG-460, LGG-450, LGG-410, TM-96-2) and cotton (cotton dorasannaalu). Continue nursery sowing of rice (MTU 1010, Nellore Masuri) in Nellore district and land preparation for sowing of *kharif* groundnut (Narayani, Abhaya, Dharani, K-6, Grishma, TPT-4, K-6).
 - In **Assam**, continue nursery raising of *Sali* rice and land preparation and sowing of groundnut.
 - In **Meghalaya**, continue nursery bed preparation for *Sali/ kharif* rice and land preparation and sowing of groundnut and soybean.
 - In **Konkan**, continue nursery sowing of *kharif* rice and nagli on raised bed. Continue sowing of *kharif* vegetables like okra, cucumber, bittergourd, snakegourd and ridge gourd. As monsoon is expected to advance soon, in **Madhya Maharashtra**, undertake nursery sowing of *kharif* rice on raised bed/direct sowing in Sangli, Satara and Kolhapur districts and land preparation and sowing of *kharif* jowar, soybean, cotton, redgram, greengram and black gram. In **Marathwada**, utilizing recent pre monsoon showers, continue nursery cultivation of *kharif* vegetable crops like brinjal, chilli and tomato seed on raised bed.Undertake intercropping of soybean + Pigeonpea (2:1 or 4:2) in rainfed condition and soybean + cotton

(1:1 or 2:1) for irrigated. Undertake *khariif* intercropping of sorghum + soybean (2:4 or 3:6) with assured rainfall by keeping 45 cm row to row spacing. Also undertake intercropping of *khariif* sorghum + Pigeonpea (3:3 or 4: 2). In medium soil Pearl millet + Pigeonpea (2:1) and in light soil, Pearl millet + Kidney beans (2:1) mix cropping.

- As rain/thundershowers likely at most/many places over **Kerala, Coastal Karnataka and Konkan & Goa** during the period, over **South Interior Karnataka** from 10th to 12th and at many places over **North Interior Karnataka and Madhya Maharashtra** on 10th June, farmers are advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. As heavy rain is very likely at isolated places over Coastal Karnataka from 10th to 12th and over Kerala and Konkan & Goa on 10th & 11th June, provide adequate drainage in standing crop fields to avoid water stagnation.
- As rain/thundershowers likely at most places over **Nagaland, Manipur, Mizoram & Tripura**, at most/many places over **Arunachal Pradesh, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim** during the period and at many places over **Andaman & Nicobar Islands** from 12th to 14th June, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. As heavy/heavy to very heavy rain is very likely at isolated places over, Nagaland, Manipur, Mizoram & Tripura from during the period, over Assam & Meghalaya and Arunachal Pradesh from 12th to 14th and heavy rain at isolated places over Sub-Himalayan West Bengal & Sikkim from 12th to 14th June, provide adequate drainage in standing crop fields to avoid water stagnation. Undertake rain water harvesting.
- As rain/snow likely at many places over **Himachal Pradesh and Uttarakhand** on 13th & 14th June, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Farmers are advised to undertake rain water harvesting.
- As thunderstorm accompanied with squall very likely at isolated places over **Himachal Pradesh and Uttarakhand** from 10th to 12th and over **Punjab, Haryana, Chandigarh, Delhi** on 11th & 12th and over **Vidarbha** on 10th June, it is advised to provide support to young fruit plants, staking in vegetables and propping in sugarcane to prevent the crops from lodging due to strong winds. Keep already harvested produce at safer places.
- As dust/thunderstorm accompanied with squall very likely at isolated places over **Punjab, Haryana, Chandigarh, Delhi** on 10th and over **Rajasthan** on 10th & 11th and over **west Rajasthan** from 12th to 14th June, it is advised to provide support to young fruit plants, staking in vegetables and propping in sugarcane to prevent the crops from lodging due to strong winds. Keep already harvested produce at safer places.
- As heat wave conditions is very likely at isolated places over **Rajasthan and West Madhya Pradesh** on 10th & 11th June, apply light and frequent irrigations to standing crops, preferably during evening hours. Apply mulches in fruit crops to conserve soil moisture. Young plantation should be protected with thatches and mulching of basins. Postpone sowing of crops till heat wave conditions prevail.

Detailed Zonewise Agromet Advisories

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



Banana



Land preparation/Sowing



Sugarcane



Cotton

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala except Wynad; all districts of Coastal Karnataka, all districts of North Interior Karnataka except Gadag and Yadgir; Ballari, Bengaluru Rural & Urban, Davangere, Kodagu, Kolar, Shivamogga and Tumakuru districts of South Interior Karnataka; all districts of Coastal Andhra Pradesh except Nellore, all districts of Telangana; all districts of Rayalaseema except Anantapur; Chennai, Cuddalore, Kanyakumari, Krishnagiri, Nagapattinam, Nilgiris, Sivaganga and Tiruvallur districts of Tamil Nadu. Weather remained mainly dry

over rest of the region.

• **Advisories:**

- As rain/thundershowers likely at most/many places over Kerala and Coastal Karnataka during the period, over South Interior Karnataka from 10th to 12th and at many places over North Interior Karnataka on 10th June, farmers are advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. As heavy rain is very likely at isolated places over Coastal Karnataka from 10th to 12th and over Kerala on 10th and 11th June, provide adequate drainage in standing crop fields to avoid water stagnation.
- **Kerala:**
 - In Kerala, continue nursery sowing of *Viruppu* rice. Mix *Pseudomonas* @ 10g/1kg of seeds and sow after 12-14 hours to control diseases like brown leaf spot, blast etc. in rice in the early stages of growth before sowing. Provide adequate drainage in rice nurseries. Undertake land preparation and transplanting of rice at 2-3 leaves stage.
 - In the Central Zone, continue land preparation and sowing of rice (Jyothi and Kanchana variety).
 - In the Problem Area Zone, continue direct sowing of rice after current spells of heavy rain. In places where salinity is a serious problem, apply lime @ 140 kg/acre as basal, letting for 24 hrs and drain out water after 12 hrs. Continue transplanting of bhindi, brinjal and chilli and planting of coconut seedlings with adequate drainage.
 - In the Southern Zone, undertake planting of new pepper cuttings in Pathanamthitta district, complete planting of new rubber seedlings, sowing of bhindi and raise nurseries for brinjal and chilli after current spells of heavy rain. Avoid water logging in the pits where the coconut seedlings are planted.
 - In the Northern Zone, continue land preparation for sowing of rice and raising of vegetable seedlings in poly bags filled with potting mixtures. Undertake planting of coconut seedlings, provide good support and shade to planted young seedlings and avoid water stagnation in the planting pits/basins of Robusta, Poovan, Njalipooan, Palayankodan like cultivars of banana and cashew. Provide support to Nendran banana to prevent lodging.
 - In the High Altitude Zone, continue planting of coconut, arecanut, pepper and cardamom.
 - In the High Altitude Zone, undertake necessary phyto-sanitary measures to manage capsule rot (Azhukal disease) in cardamom and spray 1% Bordeaux mixture (500-1000 ml/plant).
 - In the Problem Area Zone prevailing weather conditions (humid conditions) are congenial for quick wilt/fungal diseases in pepper. If noticed, as a prophylactic measure, spray 1% Bordeaux mixture against fungal diseases after current spells of rain.
 - In the Central Zone, incidence of swarming caterpillar is noticed in rice nursery and early stages of rice crop. To control, apply Carbaryl @ 3-4g/litre of water after current spells of rain. Spray Quinalphos @ 2 ml/ litre of water to control incidence of epilachna beetle in vegetables.
 - In the Northern Zone, remove the hanging leaves in banana fields, clean the fields and monitor for borers and pseudo stem weevil attack. If any incidence is noticed, swab the pseudostem and fill the leaf axils with diluted Aceptate® + wetting agent (Acetaf® 75SP @ 2g + wetting agent 1ml/litre of water after current spells of rain.
 - In the Southern Zone, prevailing humid conditions are congenial for occurrence of bunchy top disease in banana. The disease affected plants must be uprooted and burnt. As a control measure against the vector, spray Rogor 1.5 ml/litre of water after current spells of rain.
- **Karnataka:**
 - Undertake sowing of red gram, black gram, green gram, cotton and maize in North East Dry Zone. Undertake new plantation of fruit trees, teak, neem trees on the bunds, uncultivated and marginal land in North East Dry Zone.
 - In North Dry Zone, undertake sowing of green gram, sunflower, maize, Bt. cotton, red gram (TS-3R), bajra, sorghum, sesamum, navane and groundnut (bunch type) in Vijayapura and Bagalkote districts immediately which received sufficient rainfall. Continue land preparation and undertake sowing of following crops after receipt of sufficient rainfall: Intercropping of bajra + groundnut (bunch) in 2:4 row proportion; bajra + red gram in 2:1 row proportion; groundnut (bunch) + red gram in 3:1 or 4:2 row row proportion, red gram + sesamum in 1:2 or 2:4 row proportion in light and medium black soils is suggested to make efficient use of available soil and water resources and to get higher returns and use short duration varieties of red gram for sowing.
 - In North East Transition Zone, undertake land preparation and nursery sowing of rice (Jaya, Rasi, BPT-520) and other *kharif* sowing. Continue harvesting of mango fruits to avoid damage caused by rain/wind.
 - In Hill Zone of Karnataka, continue transplanting of areca nut seedlings. Continue nursery raising of rice (for low land: Intan, Abhilash and Hemavati and for upland: Amrut or Prasanna variety). To control the weeds in drill sown rice area, spray Butachlor @ 4 ml/litre of water on the day of sowing or next day. Continue land preparation for planting of ginger/turmeric. Clean all the drainage channels.
 - In Coastal Zone of Karnataka, continue nursery sowing of rice.
 - In Central Dry Zone, continue sowing of cotton.
 - In Eastern Dry Zone of Karnataka, continue sowing of red gram (TTB-7, BRG-1, 2, 4, 5) and maize, undertake sowing of ragi (Indaf - 9, ML-365), groundnut (TMV-2, JL-24, KCG-6), cowpea (TVX-944, KBC-1), continue land preparation and sowing of long duration crops (under monocropping) castor (DCS-9 (Jyothi), DCH-177 & 32), short duration crops (under double cropping) sesame (Navile-1, T-7), green gram (PS-16, PDM-84, 178) and black gram (Karagao-3, T-9, Rashmi (LBG-625)). Keep the inputs ready for sowing of *kharif* crops.
 - In Southern Transition Zone, undertake nursery sowing of rice, sowing of ragi, red gram, groundnut, sunflower etc.

and utilizing realised and expected rainfall. Continue planting of ginger/turmeric.

- In Southern Dry Zone, undertake sowing of *kharif* crops like pulses (cowpea, green gram, black gram, horse gram, field bean etc.), ragi, sorghum and maize.
- In North Interior Karnataka, continue land preparation and nursery sowing of rice and sowing of *kharif* crops like jowar, red gram, black gram, pearl millet, maize, groundnut, soybean, sunflower, sesame utilising realised and expected rainfall.

▪ **Andhra Pradesh:**

- In the Krishna Godavari Zone, undertake sowing of green manure crops, collect suitable and good quality seed materials for rice(BPT-5204, vijetha, IR-64 and Bavapuri sannaalu), millets and maize(DCH-111, DCH-113, DCH-115, Maandhuri & Priya (sweet varieties) and continue land preparation and sowing of red gram (LRG- 38, LRG-41, laksmi, Abhaya, Asha, Maruthi and PRG-158,LRG 52), black gram(LBG-752, LBG-20, T-9, LBG-623, PU-31, LB-402, LBG-709 and LBG-787 ,TBG 1,GBG 104), green gram (LGG-407, LGG-460, LGG-450, LGG-410, TM-96-2) and cotton (cotton dorasannaalu).
- In the North Coastal Zone, continue planting of rainfed sugarcane, intercultivation in planted and ratoon crops of sugarcane in between rows and land preparation and sowing of bajra and green manure crops.
- In the Scarce Rainfall Zone, continue land preparation and sowing of redgram (LRG-41, PRG-158, PRG-176, Lakshmi, and Asha) as inter crop or as a main crop and castor (PCH-111, PCH-222, Haritha, Kiran).
- In the Southern Zone, undertake transplanting of rice in Chittoor and Kadapa districts, clip the tips of the leaves before transplanting to avoid attack of stemborer and leave 20cm. spacing between the rows to avoid Brown plant hopper attack in rice before transplanting. Continue nursery sowing of rice (MTU 1010, Nellore Masuri) in Nellore district and land preparation for sowing of *kharif* groundnut (Narayani, Abhaya, Dharani, K-6, Grishma, TPT-4, K-6).
- In the High Altitude Tribal Zone, procure seeds for sowing of rice (Srikakulam sannaalu, Pushyami, Sridruthi, Pushkala) and ragi(Bharati, Srithaitanya, Vaula), maize (medium duration hybrids/varieties (90-100 days): DHM 111, DHM 117, DHM-119, KH 510, Bio 9637, KH 9541, MCH 2, Kohinoor, Prabhal and Bisco 855) and groundnut(Kadiri-7 Bold, Kadiri-8, Bold, kadiri-6 Kadiri-9, Kadiri Harithandra,Kadiri Anantha).

▪ **Telangana:**

- In the Northern Telangana Zone, undertake land preparation and sowing of jowar (CSH 6,9,10,11,CSV -15, PNV-1), maize (DHM-101, 103,107 and other private hybrids), green gram (ML-267, LGG 407,410,450,460), black gram(T-9, LGG-20, 623, PBG-1), red gram(LRG 30, ICPL 8863, 332,87119, 85063) and soybean (JS 335, MACS-13,58), digging of pits for planting new orchards, deep summer ploughings and harvesting of matured vegetables. Continue sowing of green manure crops like sunnhemp, dhaincha, pillipesara and other pulse crops.
- In the Southern Telangana Zone, procure and keep ready the seeds, fertilizers and pesticides for timely sowing of rained crops, utilizing the realized and expected rainfall.
- In the Southern Telangana Zone, incidence of mites and thrips are noticed in chillies. To control mites, spray Spiromesifen @ 1.25 ml or Fenpyroximate @ 2ml per litre or Wettable Sulphur @ 3 g or Dicofol @ 5 ml per litre of water and to control thrips, spray Fipronil @ 2 ml or Spinosad @ 0.3 ml per litre of water on a non rainy day.

➤ **Tamil Nadu:**

- In the Cauvery Delta Zone, undertake land preparation for kuruvai rice and SRI cultivation (varieties ADT 36, ADT 43, ADT 45 and ADT 47) after appropriate seed treatment.
- In the North Eastern Zone, continue summer ploughing to increase soil fertility and cover the root zone of horticulture crops with coir pith to conserve moisture.
- In the Western Zone, considering the rainfall with high wind speed, provide adequate propping to banana aged more than 5 months and early season sugarcane. Undertake sowing of small millets in the foothills of western ghats areas.
- In the North Western Zone, undertake cultivation of small onion utilizing the realized rainfall and bulb treatment @ Trichoderma viride – 4g/kg of Bulb and Pseudomonas-10g/kg of Bulb for control of bulb rot before sowing.
- In the South Zone, fruit fly incidence is noticed in guava due to moderate cloud cover and light rainfall. To control, spray Quinalphos 25 EC or Malathion 50 EC @ 1 ml/litre of water four times on a non rainy day and repeat at 15 days interval.
- In the High Altitude Hilly Zone, due to continuous rain,there is increase of incidence of carrot wilt disease at maturity stage of the crop. To control, drench the soil with Copper oxy Chloride @ 1 g per litre of water on anon rainy day.
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In the North Eastern Zone of Tamil Nadu, sprinkle water to high yielding dairy cows 2 or 3 time to reduce heat stress during day time.
- In the Western Zone, considering high relative humidity in milching animals, wash the udder with potassium permanganate solution before and after milking .
- In the North Western Zone, during southwest monsoon, be careful while procuring maize and groundnut cake about the aflatoxin content, since few samples have shown high content of the mycotoxins.
- In the Scarce Rainfall Zone of Andhra Pradesh, vaccinate 2-3 years lambs to prevent Enterotoxianemia disease during the season.

- 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.

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



Banana

Rice

Land preparation/Sowing

Jute

- **Realised Rainfall:** Rainfall occurred in Changlang, Lohit, Tirap, Upper Siang, Upper Subansari and West Siang districts of Arunachal Pradesh; Baksa, Barpeta, Bongaigaon, Cachar, Chirang, Dhubri, Goalpara, Hailakandi, Jorhat, Kamrup(Metro), Karimganj, Kokrajhar, Lakhimpur, N.C.Hills and Nalbari districts of Assam; East Garo Hills, East Khasi Hills and Ri-Bhoi districts of Meghalaya; Aizwal and Saiha districts of Mizoram; Imphal West district of Manipur; Phek district 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 Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during the period, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. As heavy/heavy to very heavy rain is very likely at isolated places over Nagaland, Manipur, Mizoram & Tripura from during the period, over Assam & Meghalaya and Arunachal Pradesh from 12th to 14th June, provide adequate drainage in standing crop fields to avoid water stagnation. Undertake rain water harvesting.
 - **Assam, Meghalaya & Arunachal Pradesh:**
 - In Assam, continue nursery raising of *Sali* rice with adequate drainage facilities.
 - In Lower Brahmaputra Valley Zone and North Bank Plain Zone of Assam, continue nursery sowing of *Sali* rice. Farmers should select suitable long duration high yielding varieties of *Sali* rice like Ranjit, Bahadur, Peoli, Moniram, Pankaj, Kushal etc. for growing in typical lowland paddy area and in medium lowland areas, select medium duration paddy varieties like Satya and Basundhara which may facilitate them to grow toria/mustard after harvesting of *Sali* paddy. Undertake sowing of pigeon pea (variety of T-21).
 - In Barak Valley Zone of Assam, for flood prone areas, farmers are advised to collect the submerge tolerance rice variety like Swarna Sub 1 which can withstand upto 15 days in submerged condition. Continue sowing of *okra* of varieties Arka, Anamika.
 - In Central Brahmaputra Valley Zone of Assam, continue planting of ginger and turmeric and papaya seedlings with adequate drainage facilities.
 - In North Bank Plain Zone of Assam, continue planting of sucker and crown of pine apple. Undertake earthing up in early planted sugarcane (45-60 days after planting of sets) after current spells of rain.
 - In Meghalaya, continue nursery bed preparation for *Sali/ kharif* rice and sowing of groundnut and soybean.
 - In Arunachal Pradesh, undertake transplanting of rice, sowing of pulses, vegetables like cucumber, sponge gourd, bottle gourd and ladies finger, planting of ginger. Continue planting of saplings of fruits/fodder and timber trees.
 - In Arunachal Pradesh, if heavy infestation of leaf blast & leaf spot is noticed in *jhum rice*, spray Carbendazim @ 2g/litre of water for control. Undertake plant protection measures after current spells of rain.
 - In Hill Zone of Assam, there is chance of attack of rice bug/stem borer in transplanted early *ahu* rice due to the prevailing weather conditions. Spray Carbofuran 3G @ 30 kg/ha or Phorate 10G @ 10kg/ha to control stem borer in rice and spray Malathion 5% dust @ 20kg/ha against rice bug and Monocrotophos 40 EC @ 0.04% or Fenitrothion 50 EC @ 0.05% against stem borer in transplanted early *ahu* rice. Also spray Phosphamidon @ 400-500ml/ha in 800 litre of water against stem borer in sugarcane (spring). Undertake plant protection measures after current spells of rain.
 - In Lower Brahmaputra Valley Zone of Assam, present weather is favourable for the attack of leaf & root rot in Betel vine. Apply four drenches and eight sprays of Bordeaux mixture @ 1.0% & 0.5% respectively at fifteen days interval if symptoms are severe after current spells of rain.
 - In Central Brahmaputra Valley Zone of Assam, due to high humidity, there is chance of mite and tip blight infestation in chilli crop. Spray Ethion 1.5 ml or Rogor 2 ml/litre to reduce mite infestation and spray Malathion 2 ml per litre of water against tip blight.
 - In Meghalaya, high humidity with intermittent rain is favourable for development of blast in *jhum* rice. Spray Mencozeb @ 2g/litre of water or Carbendazime @ 1g/litre of water after current spells of rain.
 - **Nagaland, Manipur, Mizoram and Tripura:**
 - In Nagaland, avoid water stagnation in the fields of ginger. Undertake nursery preparation of lowland rice. Short to medium duration HYV rice varieties like CAU R1, CAU R3, RCM-9 and RCM-11 should be taken up for timely

harvesting. Gitesh, short duration variety can also be incorporated as it can be transplanted with 40 – 60 days old seedlings. Rain water harvesting ponds should be dug at low land to collect the rain water

- In Manipur, continue sowing of soybean, groundnut, black gram. Continue land preparation for sowing of *kharif* rice.
- In Mizoram, continue sowing of khasi mandarin/acid lime. Undertake transplanting of rice and sowing of *kharif* pulses like green gram, black gram and rajma.
- In Nagaland, spray neem oil 5ml/litre of water to control leaf eating caterpillars in cucurbits.
- In Tripura, continue sowing of groundnut, land preparation and sowing maize.
- In Mizoram, apply 60 to 100 g of neem seed powder or neem cake against Comb weevil and stem weevil in banana.
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In Northeastern states, farmers are advised to keep animals in sheds during heavy rain fall period.
- In Lower Bramhapurtra Valley Zone and Upper Bramhaputra Valley Zone of Assam, undertake immunizations against FMD, HS and BQ in cattle & buffaloes and swine-fever in pigs.
- In Barak Valley Zone of Assam, changing weather could lead to viral diseases in the poultry. So farmers may provide sufficient water with 1% salt and mineral mixture. Farmers are also advised to vaccinate poultry with R2B @ 0.5 ml against Ranikhet disease by eye drop route.
- In Hill Zone of Assam, undertake vaccination (RDF1) against Ranikhet disease in one week old chicks.

❖ **Fishery**

- In Assam, prepare the fingerling rearing tanks and nurseries by cleaning them and applying agricultural lime for raising fingerlings. 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]



Green gram



Sugarcane



Land preparation/Sowing



Banana

- **Realised Rainfall:** Rainfall occurred in North Goa, Ratnagiri, Sindhudurg, South Goa districts of Konkan & Goa; Kolhapur, Sangli, Satara and Solapur districts of Madhya Maharashtra; Hingoli, Latur, Nanded and Osmanabad districts of Marathwada. Weather remained mainly dry/dry over the region.

• **Advisories:**

▪ **Maharashtra:**

- As rain/thundershowers likely at most/many places over Konkan & Goa during the period and at many places over Madhya Maharashtra on 10th June along with heavy rain likely at isolated places over Konkan & Goa on 10th and 11th June, farmers are advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Undertake rain water harvesting.
- In Konkan, in view of expected rain, farmers are advised to complete sowing of *kharif* crops (paddy, nagli and vari) as early as possible. Continue sowing of *kharif* vegetables like okra, cucumber, bittergourd, snakegourd and ridgegourd. Complete sowing of dhaincha (green manure crop) @ 40 kg per ha. Continue sowing of biennial forage crops like Paragrass, Napier and Gajraj.
- In Madhya Maharashtra, continue nursery sowing of *kharif* rice on raised bed/direct sowing in Sangli and Kolhapur districts utilizing the realized and expected rainfall. Continue sowing of soyabean in Sangli and Kolhapur districts utilizing the realized and expected rainfall. Undertake sowing of *kharif* jowar, groundnut, cotton, redgram, greengram and black gram on receipt of rainfall. Continue nursery sowing of vegetable crops like tomato, chilli and bitter gourd in *kharif* season. Continue cultivation of sorghum, bajra, maize, cowpea and hybrid Napier as green fodder for livestock.
- In Marathwada, utilizing recent pre monsoon showers, continue nursery cultivation of *kharif* vegetable crops like brinjal, chilli and tomato seed on raised bed. Undertake intercropping of soybean + Pigeonpea (2:1 or 4:2) in rainfed condition and soybean + cotton (1:1 or 2:1) for irrigated. Undertake *kharif* intercropping of sorghum + soybean (2:4 or 3:6) with assured rainfall by keeping 45 cm row to row spacing. Also undertake intercropping of *kharif* sorghum + Pigeonpea (3:3 or 4: 2). In medium soil Pearl millet + Pigeonpea (2:1) and in light soil Pearl millet + Kidney beans (2:1) mix cropping can be used for cultivation of Pearl millet crop. For intercropping use MBS-27 variety of Kidney beans and ICPL-87, Vipula, BSMR-853 variety of pigeonpea. Continue nursery preparation for *kharif* onion. Continue sowing of fodder crops like African Tall, Ganga-5, Vijay and Manjari.
- In Vidarbha, as thunderstorm accompanied with squall very likely at isolated places on 10th June, to provide support to young fruit plants, staking in vegetables and propping in sugarcane to prevent the crops from lodging due to

strong winds. Continue land preparation for nursery sowing of *kharif* rice in Bhandara, Gondia, Chandrapur, Gadchiroli districts. Continue sowing of vegetables like bitter gourd, tinda, ridgegourd, smoothgourd, bottlegourd, cowpea, clusterbean and coriander with irrigation facilities. Complete preparatory tillage for sowing of *kharif* jowar, soybean, cotton, redgram, greengram and black gram and keep inputs ready for the *kharif* season. Continue planting of binneal forage crops like Paragrass, Napier and Gajraj.

▪ **Gujarat:**

- In South Saurashtra Zone, continue land preparation for sowing of *kharif* cotton (Bg-II GCH-8, 12 Jay Bt, Solar-66, 76, Sarju, Bg- II GCH-6, Mallika), groundnut (GG-20 & 22, GUG-10, GG-2,11,13, TAG- 24 & 37, TPG-41). Continue harvesting of sesame and groundnut. Apply irrigation in vegetable crops.
 - In South Gujarat Heavy Rainfall Zone, continue land preparation for *kharif* rice (NAUR-1, GNR-2 (Costal area), GNR-3 (N/V), GNR-4 (long duration), Jaya, Ghujari, GR-5, 7, 8, 9, IR-28 and GAR-13) and for nursery sowing of ragi. Continue summer ploughing in fallow land. If irrigation facility is available nursery sowing of rice may be undertaken.
 - In Middle Gujarat Zone, carry out land preparation for sowing of ground nut. Continue sowing of irrigated hybrid cotton (G. cot. 6, 8, 10) and approved varieties of B.T. cotton with irrigation. Pluck matured fruits of mango. Make necessary arrangements for water harvesting in fields. As there is chance of high wind speed, provide support to the banana plants.
 - In Bhal and Coastal Zone, continue land preparation for *kharif* crops like cotton, pearl millet, green gram. As high temperatures are prevailing apply irrigation to cluster bean. Undertake threshing of pearl millet, green gram and cowpea. Continue harvesting of fruits of papaya, sapota, citrus and pomegranate etc.
 - In South Gujarat Zone, as the wind speed is expected to increase, provide support to banana and papaya, staking in vegetables and undertake propping in sugarcane to counteract the effect of wind speed.
 - In North Gujarat Zone and North West Zone of Gujarat, under high temperature condition, postpone sowing of irrigated hybrid/B.T. cotton. Apply light and frequent irrigation in pre-monsoon sown cotton and undertake gap filling to maintain soil moisture for better plant stand; apply light and frequent irrigation in cluster bean, vegetable crops Undertake mulching with straw/polythene to conserve soil moisture. Carry out harvesting and threshing of late sown pearl millet, green gram, cow pea and black gram. Continue land preparation for sowing of *kharif* crops like pearl millet, groundnut, green gram, black gram, maize etc. Keep seeds and other inputs ready for sowing. Prepare pits for plantation of horticultural crops (mango, sapota, lemon, pomegranate, ber, guava). Undertake picking of matured fruits of vegetable and fruit crops.
 - In North Saurashtra Zone, postpone sowing of groundnut (GG-20, GG-11, GG-7) till heat wave conditions prevail, continue land preparation for sowing of pearl millet, pulses (green gram, black gram, cow pea, pigeon pea), sesame and cotton. Keep seeds ready for sowing of *kharif* crops like pearl millet (GHB-558,577,538,719,732,744), groundnut (semi spreading, GG-20 Bunch, GG-2, GG-5, TAG-24, TG-37 A, TPG-41, TLG-45), sesame (GT-2 or GT-3), pulses (green gram: GM-4, K-85, black gram: T-9, GU-1; cowpea: Gujarat Cowpea-1,2,4, Pusa Falguni; pigeon pea: BDN-2, GT-100, GTH-1), and cotton (early: Bg-II GCH-8, Agritop-333, 777, 444, Jay, Beejdhan-2, Sarju, Atom, Bhakti, Medium Late: Bg-II GCH-6, Agritop-444, Solar-76, Swapna, Mallika).
- ❖ **Animal Husbandry**
- In Madhya Maharashtra region, cattle should be vaccinated for black quarter disease by alum precipitate vaccine before monsoon season.
 - In Gujarat, in view of prevailing high temperature conditions, take special care of animals during noon in Bhal and Coastal Zone, North Saurashtra Zone, North Gujarat Zone and North West Zone. Keep the animals under shade, cover roof with paddy straw and provide cool drinking water 4-5 times a day. Provide cool drinking water to animals.

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



Rice



Okra



Maize



Land preparation/Sowing

- **Realised Rainfall:** Kishanganj, Madhubani districts of Bihar; Bhadrak, Cuttack, Dhenakanal, Gajapati, Jagatsingpur, Jajpur, Kandhamal, Kendrapara, Khurda, Koraput, Malkangiri, Mayurbhanj, Nawarangpur, Puri and Rayagada districts of Odisha; all districts of Andaman & Nicobar Islands; Howrah, Kolkata and 24 Pargana North districts of Gangetic West Bengal; all districts of Sub-Himalayan West Bengal & Sikkim except Malda and South Dinajpur. Weather remained mainly dry over rest of the region.

- **Advisories:**

- As rain/thundershowers likely at most places over Sub-Himalayan West Bengal & Sikkim during the period and at many places over Andaman & Nicobar Islands from 12th to 14th June, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. As heavy rain very likely at isolated places over Sub-Himalayan West Bengal & Sikkim from 12th to 14th June, provide adequate drainage in standing crop fields. Farmers are advised to undertake rain water harvesting for agricultural activities.

- **Odisha:**

- In East and South Eastern Coastal Plain Zone, undertake land preparation for sowing of *kharif* rice in low lands and continue sowing of green manure crops and land preparation for sowing of pigeon pea. In uplands, continue land preparation planting of ginger and turmeric, sowing of maize, groundnut, sunflower, cotton etc. For green cob purpose, grow high yielding varieties of maize like Navjot, Shakti, Decan-107, Decan-109 under irrigation. Use 6 kg seeds/acre. Apply one third of N and all P & K of the recommended dose of 50:24:24 kg.
- In South Eastern Ghat Zone, undertake land preparation for sowing of maize and other non paddy crops in upland condition and take up early sowing as soon as monsoon rain occurs.
- In North Eastern Ghat Zone, undertake sowing of green manure crops, sowing of maize for green cob purpose, sowing of okra and planting of yam. Continue harvesting of matured sunflower immediately in clear weather.
- In North Central Plateau Zone, go for land preparation in uplands for sowing of non paddy crops of around three to four months duration like maize, groundnut, sunflower, cotton etc.
- 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 water on non-rainy day.
- In East and South Eastern Coastal Plain Zone, YMV infestation has been found in summer pulses. Spray 20 ml Rogor/10 litre water on non-rainy day to control the white fly.
- In South Eastern Ghat Zone, there may be chances of infestation of Gundhi bug and Ear cutting caterpillar in summer rice. To control Gundhi bug, spray Ethofenprox 10% EC @ 1 ml/litre of water or Lamda Cyhalothrin 5% EC @ 0.5 ml/litre of water (200 litre water for one acre) uniformly during morning hours when there is no or minimum wind. To control Ear cutting caterpillar, spray Quinolphos 25% EC @ 2 ml/litre or Chloropyriphos 20% EC @ 2.5 ml/litre of water (200 litre water for one acre). Undertake plant protection measures on non-rainy day
- In Western Undulating Zone, early shoot borer may attack the sugarcane crop at tillering stage. Spray Triazophos/ Profenophos @ 2ml/litre of water on non-rainy day.

- **West Bengal:**

- In Coastal Saline Zone, continue sowing of green manuring crop like cluster bean, daincha etc. after harvesting of boro paddy in order to fertilize the field and conserve moisture in soil.
- In Laterite and Red Soil zone, complete harvesting of sesame in clear weather at the earliest. Keep the bundles erect on the threshing floor for 5-7 days for drying. Undertake land preparation of paddy in upland area and nursery preparation in low land area.
- In New Alluvial Zone, undertake intercultural operations (weeding & thinning) in jute on non-rainy day.
- In Hill Zone, continue land preparation for new plantation of large cardamom. Proper drainage system should be maintained in the fields to prevent water stagnation during rain.
- In Old Alluvial Zone, continue nursery preparation for *kharif* rice and provide adequate drainage in rice nurseries.
- In Terai Zone, continue land preparation and planting of ginger and turmeric.
- In Hill Zone, avoid water stagnation at the base of Mandarin orange to avoid foot rot. Plug the freshly bored hole with Dichlorvos 76% EC (0.5%) for management of trunk borer. Spray Dimethoate 30% EC @ 1ml/litre of water for management of black citrus aphid.
- In Laterite and Red soil zone, in this weather condition fruit and shoot borer attack may be dominant in brinjal and ladies finger and fruit rot in chilli. To control fruit and shoot borer, Spray Neem Seed Kernal Extract solution @ 50ml/litre of water. To control fruit rot, spray Carbendazim (Bavistin) @ 1g/litre of water at clear weather condition. Undertake plant protection measures.
- In New Alluvial Zone, weather is congenial for stem and fruit borer in brinjal. To control the attack of stem rot, apply Bavistin or Benlate @ 1 gm per litre of water on non-rainy day.
- In Terai Zone, weather is congenial for attack of gundhi bug in rice and aphid, jassid, mosaic and white fly in legume vegetables. For gundhi bug, spray Fipronil 5 EC @ 1ml/litre of water and aphid, jassid, mosaic and white fly in legume vegetables, apply Thiamethoxam @1g/3litre or Acetamiprid @1ml/litre of water if infestation is above ETL after current spells of rain.
- In Old Alluvial Zone, in the prevailing weather condition, there is chance of stem rot in jute at vegetative stage. To control stem rot of jute, drench the soil at the base of the stem with Copper Oxychloride @ 4g/litre of water after current spells of rain.

- **Andaman and Nicobar Islands:**

- In North, Middle and South Andaman, continue land preparation and sowing of vegetables in Broad Bed and Furrow system. Undertake intercropping of spices like clove, cinnamon, pepper and nutmeg in coconut plantations.

▪ **Bihar:**

- In North East Alluvial Zone, undertake nursery preparation for paddy crop (hybrid varieties: - KRH 2, PHB 71, PUSA RH 10, Pant hybrid Dhan1). For low lying land (Long duration varieties): Rajendra mehsoori 1, MTU 7029 (Swarna) etc. Before sowing seeds in nursery, seed treatment by Captan @ 2g /kg of seed should be done. Undertake nursery preparation for *kharif* onion, chilli, brinjal and continue planting of ginger and turmeric as sole crop and also intercrop with Mango, Litchi, Banana and Guava orchards. Undertake sowing of dhaincha, moong (green gram), senai crop for green manuring purpose.
- In South Bihar Alluvial Zone, undertake sowing of direct seeded rice and seed bed for *kharif* onion to transplant. Optimum moisture level should be maintained in cucurbitaceous crops by light and frequent irrigation.
- In North West Alluvial Plain Zone, complete nursery preparation of *kharif* paddy at the earliest. Continue planting of ginger, turmeric, elephant foot yam and green manuring crops like dhaincha, moong (green gram), senai and fodder crops such as sorghum, maize and bajra. Undertake nursery preparation for *kharif* onion. Also undertake harvesting of matured pods of black gram/green gram.
- In South Bihar Alluvial Zone, in present weather conditions, there is chance of viral infection in chilli. Infected crop should be uprooted and buried in the soil. Spray Imidacloprid @ 0.3 ml per litre of water to control the vector on non-rainy day.
- In North East Alluvial Zone, prevailing weather is congenial for attack of Bihar hairy caterpillar in jute crop. To control, spray DDVP @ 2 ml/litre of water on a non-rainy day.

▪ **Jharkhand:**

- In South Eastern Plateau Zone, start land preparation for timely (15 to 30 June) sowing of direct seeded upland rice, maize and pigeon pea. Sowing of French bean, lady finger, bottle gourd, cucumber, ridge gourd and radish should be done during this week.
- In Central and North Eastern Plateau Zone, undertake land preparation for sowing of upland rice, arhar and Maize after receipt sufficient rains. Arrange for seed, fertilizer and other inputs for timely sowing of crops.
- In Central and North Eastern Plateau Zone, cultivate high yielding varieties of maize like Birsa Makka-1, Birsa Makka-2, Suwan-1(Hybrid) and HQPM (Hybrid)
- In Western Plateau Zone, farmers are advised to plough their fallow land as sufficient moisture is present in the soil and also complete the planting of turmeric or ginger.
- In Western Plateau Zone, farmers are advised to prefer the upland in respect of preparation of field, so that various crops may be sown immediately after onset of monsoon. Also prepare the land to cultivate ginger/turmeric.
- 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.
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In Old Alluvial Zone of West Bengal, undertake de-worming in proper dose to all live stock & poultry birds to control parasite load. Animals should be given nutritious feed containing vitamins and essential minerals.
- In North, Middle and South Andaman, provide light to chicks preferably 40 watt bulb to keep warm up to 3 weeks of age to avoid mortality during this period.
- In North West Alluvial Plain Zone of Bihar, vaccinate cattle against Anthrax, Black Quarter etc.
- In South Bihar Alluvial Zone, provide vaccination against Galghontu disease to animals, which will protect them in rainy season from this disease.

CENTRAL INDIA [M.P., CHHATTISGARH]



Land preparation

Green gram

Okra

Sugarcane

- **Realised Rainfall:** Rainfall occurred in Bastar, Bijapur, Dantewada and Narayanpur districts of Chhattisgarh. Weather remained mainly dry over rest of the region.

• **Advisories:**

▪ **Madhya Pradesh:**

- As heat wave conditions is very likely at isolated places over West Madhya Pradesh on 10th and 11th June, apply light and frequent irrigations to standing crops, preferably during evening hours. Apply mulches in fruit crops to conserve soil moisture. Young plantation should be protected with thatches and mulching of basins.
- In Satpura Plateau Zone, as heat wave conditions is continue to prevail, postpone sowing of cotton till heat wave conditions prevail. Continue nursery preparation for cauliflower and land preparation for sowing of red gram and

maize.

- In Malwa Plateau Zone, apply irrigation in vegetables. Continue picking up of matured okra and cucurbit crops. Continue nursery preparation for *kharif* vegetables. Undertake harvesting of matured moong and picking up of mango fruit.
- In Kymore Plateau and Satpura Hill Zone continue harvesting of matured moong and urad. Undertake land preparation for sowing of *kharif* crops.
- In Grid Zone continue harvesting of matured moong and land preparation for sowing of red gram. Continue land preparation for rice nursery.
- In Vindya Plateau Zone, continue nursery preparation of rice and harvesting of matured moong and urad.
- In Bundelkhand Zone, continue seed bed preparation for sowing of *kharif* onion. Undertake nursery preparation for rice with irrigation facility.
- In Jhabua Hill Zone, continue planting of turmeric and ginger and harvesting of matured moong. Continue field preparation for nursery sowing of rice. Continue nursery preparation for *kharif* onion and cauliflower.
- In Bundelkhand Zone, due to prevailing hot weather, there are chances of attack of fruit borer in brinjal and tomato, spray Malathion 50 E.C. @ 1ml/litre of water.
- In Jhabua Hill Zone due to humid weather there may be chances of attack of shoot and fruit borer in vegetables, spray Triazophos @ 2ml/litre of water.
- Suitable varieties for sowing are given in Annexure III.
- **Chhattisgarh:**
 - In North Hill Zone, continue nursery preparation for sowing of long duration varieties of rice. Continue land preparation for sowing of *kharif* vegetables.
 - In Bastar Plateau Zone, continue nursery preparation of *kharif* vegetables.
 - In Chhattisgarh Plain Zone, apply irrigation in vegetables and orchards. Continue digging of pits for planting new orchards. Undertake line sowing of rice.
- ❖ **Animal Husbandry**
 - In West Madhya Pradesh, in view of the prevailing heat wave conditions, special attention should be given to milch animals, provide adequate water and green fodder to animals and keep them in shade during noon hours. Cover poultry house with mat and keep it wet to maintain normal temperature.

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



Land preparation



Sugarcane



Maize



Okra

- **Realised Rainfall:** Rainfall occurred in Bilaspur, Mandi, Sirmour, Solan districts of Himachal Pradesh; Haridwar, Rudraprayag, Udhamasinghnagar districts of Uttarakhand; Azamgarh, Kushinagar, Santkabirnagar, Shrawasti districts of East Uttar Pradesh. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As dust/thunderstorm accompanied with squall very likely at isolated places over Punjab Haryana, Chandigarh, Delhi on 10th and over Rajasthan on 10th & 11th and over west Rajasthan from 12th to 14th June, it is advised to provide support to young fruit plants, staking in vegetables and propping in sugarcane to prevent the crops from lodging due to strong winds. Keep already harvested produce at safer places.
 - As thunderstorm accompanied with squall very likely at isolated places over Himachal Pradesh and Uttarakhand from 10th to 12th and over Punjab, Haryana, Chandigarh, Delhi on 11th & 12th June, it is advised to provide support to young fruit plants, staking in vegetables and propping in sugarcane to prevent the crops from lodging due to strong winds. Keep already harvested produce at safer places.
 - As rain/snow likely at many places over Uttarakhand and Himachal Pradesh on 13th and 14th June, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Farmers are advised to undertake rain water harvesting.
- **Jammu & Kashmir:**
 - In Sub Tropical Zone, complete nursery raising of early transplanted rice at the earliest. Maintain optimum moisture in the vegetable crop and other crop fields by weeding, hoeing and applying irrigation at regular intervals. Undertake land preparation for sowing of maize.
 - In Intermediate Zone, continue transplanting of tomato, chilli, capsicum and cucurbits. Continue sowing of okra in lower to mid hill regions. Continue nursery sowing of paddy for timely transplanting of seedlings. Undertake land

preparation /sowing of maize.

- In Valley Temperate Zone, continue transplanting of paddy in the main fields. Complete transplanting of cole, solanaceous and cucurbits crops in the main field. Continue sowing of maize and okra in the field. Undertake harvesting of onion and garlic in clear weather.
- In Cold Arid Zone of Jammu and Kashmir, continue transplanting of cruciferous crops and onion in the main field in middle belts. Undertake transplanting of rare vegetables like celery, parsley and leek in the main field. Undertake transplanting of tomato, capsicum and chilli in the lower belts of the district under open field and preferably under open protected structures in the middle belts. Undertake direct sowing of cucurbits under greenhouses and trenches and radish, carrot, beet root, coriander and fenugreek. Give irrigation at 4 to 6 days intervals as per moisture conditions of the soil.
- **Uttarakhand:**
 - In Bhabar and Tarai Zone of Uttarakhand, raise the nursery for medium duration variety of rice upto 10th June. Raise the nursery for early maturing dwarfs varieties of paddy during 10 to 20th June. Undertake sowing of pigeon pea. Undertake sowing of maize, okra and prepare the nursery for chilli.
 - In Hill Zone, continue nursery raising of paddy after proper seed treatment. Undertake transplanting of irrigated paddy, if nursery plants have two three leaves. Continue transplanting of tomato, capsicum, chilli and brinjal and land preparation for nursery sowing of cauliflower, cabbage, knol-khol, broccoli. Continue land preparation and sowing of finger millet.
 - In Sub Humid and Sub tropic Zone of Uttarakhand, prepare field for nursery raising of long duration varieties of paddy.
 - In Bhabar and Tarai Zone of Uttarakhand, present weather is favourable for occurrence of leaf blight disease in summer maize, mung, cow pea, tomato and chilli. Spray Mancozeb 75% WP @ 2.5-3g/liter of water to control the disease.
- **Himachal Pradesh:**
 - In Sub-Montane and Low Hills Sub-Tropical Zone, continue nursery sowing of rice and treat the seed before sowing with Bavistin @ 2.5 g per kg of seed and sowing of maize. Continue sowing of cluster bean, daincha, senai, lobia for green manuring. Complete sowing of sunflower and fodder crops such as maize, cowpea, chari and bajra in irrigated and rainfed areas. In high hilly regions continue harvesting of matured onion and garlic. In mid hill areas continue direct sowing and 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. Complete sowing of zaidmoong and mash in irrigated areas. Continue planting of ginger, turmeric.
 - In Mid Hills Sub-Humid Zone, 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, continue sowing of potato. Prepare the basin in apple orchard. Continue sowing of vegetable seeds in nursery beds. Continue sowing of peas. Sowing of peas may be done by using 250 kg seed/hectare in lines at least a feet apart. Apply seed treatment with Bavistin 2.5g/kg of seed carefully to avoid yellowing of the plants which occur at lower stage.
 - In Sub-Montane and Low Hills Sub-Tropical Zone, weather is conducive for attack of red pumpkin beetle in cucurbitaceous crops, for control spray Dichlorvos 76 EC (DDVP) @ 1 ml per litre of water after current spells of rain.
 - In Sub-Montane and Low Hills Sub-Tropical Zone, weather is conducive for attack of shoot and fruit borer in brinjal and tomato crops, for control spray Spinosad 48 EC @ 1 ml per 4 litres of water after current spells of rain.
 - In Mild Hills Sub-Humid Zone of Himachal Pradesh, 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 of Himachal Pradesh, weather is conducive for attack of fruit rot in tomato, for control, spray Dimethoate M-45 @ 250 g in 100 litres of water or Blitox-50 @ 300 g in 100 litres of water after current spells of rain and repeat at 7 to 10 days interval.
- **Rajasthan:**
 - As heat wave conditions is very likely at isolated places over Rajasthan on 10th and 11th June, apply light and frequent irrigations to standing crops, preferably during evening hours. Apply mulches in fruit crops to conserve soil moisture. Young plantation should be protected with thatches and mulching of basins. Postpone sowing of crops.
 - In Southern Humid Plain Zone, apply irrigation in zaid moong, fodder crops and vegetable as per requirement. In Sub Humid Southern Plain and Aravali Hill Zone, apply irrigation in vegetables.
 - In Arid Western Plain Zone, postpone sowing of bhindi, groundnut, American cotton, jeera and green fodder crops till heat wave conditions prevail. Apply irrigation in cucurbits, tomato, chilli, brinjal, fruit plants and fodder crops as per requirement. Apply irrigation at regular intervals and increase the frequency of irrigation at critical growth stages of summer vegetable and forage crops. Undertake soil mulching/mulching with straw/polythene to conserve soil moisture in dry land areas.
 - In Irrigated North Western Plain Zone, postpone sowing of groundnut, cotton and nursery sowing of rice till heat wave conditions prevail.
 - In Semi-Arid Eastern Plain Zone, continue land preparation for sowing of irrigated groundnut and, cotton.

Undertake nursery sowing of kharif onion, treat seeds with Dithane M-45 @ 2 g or Thiram @ 2 g per kg seeds. Use 10 kg seed for raising nursery in one hectare.

- In Flood Prone Eastern Plain Zone, prevailing weather condition is congenial for attack of leaf curl & mosaic disease in chilli, for control spray Dimethoate 30EC @ 1 ml per litre of water.
- In Flood Prone Eastern Plain Zone, prevailing weather condition is congenial for attack of pod borer in moong, for control spray Quinalphos 25 EC @ 1.25 litres in 600 to 800 litres of water per hectare.
- In Sub Humid Southern Plain and Aravali Hill Zone, prevailing weather condition is congenial for attack of fruit borer in brinjal, for control spray Carbaryl @ 0.025 % at twice in 15 days of interval.
- In Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of yellow mosaic virus in okra, for control spray Malathion 50 EC @ 1 ml per litre of water.
- **Punjab, Haryana and Delhi:**
- In Western Plain Zone of Punjab, complete sowing of cotton, continue sowing okra, spring maize and planting of sugarcane. Continue transplanting of chilli and cucurbits on the ridges. Undertake nursery sowing of rice. Irrigate the standing vegetables crops and harvest the matured vegetable crops.
- In Undulating Plain Zone and Central Plain Zone of Punjab, continue nursery preparation for rice. In Undulating Plain Zone of Punjab complete the sowing of direct seeded rice during the first fortnight of June and harvest the summer pulses and keep in proper place..
- In Central, Western and Undulating Plain Zone of Punjab, continue planting of peach, plum, pear, pomegranate and ber plants.
- In Western Zone of Punjab, undertake nursery sowing of rice , transplanting of chilli, tomato, bell pepper. Continue sowing of cucurbits, round gourd, sponge gourd, and other summer vegetables viz. okra, and cluster bean. Complete the sowing of cotton.
- In Western Zone of Haryana, continue sowing of green gram and black gram. Complete the direct sowing with certified seeds of leafy vegetables, bottle gourd, cucumber, ridge gourd summer radish. Undertake intercultural operations and apply irrigation as per the requirement in vegetables crops. Complete the sowing of cotton. Continue transplanting of young seedlings of brinjal and chilli. Irrigation should be done after transplantation. Undertake sowing of arhar and complete the sowing of fodder crops such as bajra, lobia, sudan and napiargrass. As per requirement of crops apply light irrigation in vegetable, fruits and horticultural crops.
- In Eastern zone of Haryana, 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 pigeon pea and continue sowing of cotton, green gram and black gram. Undertake nursery sowing of rice, sowing of okra, French bean, cluster bean, baby corn and fodder crops such as sorghum, bajra, cluster bean and maize. Continue harvesting of mature vegetables at morning and evening hours.
- In Western Plain Zone of Punjab, due to prevailing weather condition, there may be chances of attack of red pumpkin beetle in cucurbits, for control spray Sevin/Hexavin 50 WP, 75 to 150 g per acre in 50 to 100 litres of water. Also there may be powdery mildew in cucurbit, spray Karathane 50-80 ml/acre at the appearance of powdery patches on the leaves and avoid sprays of sulphur or copper based fungicide on cucurbits.
- In Undulating Plain Zone of Punjab, due to prevailing weather condition, there may be chances of attack of fruit borer in tomato, for control, spray Fame 480 SL @ 30 ml or Fenvalerate 20 EC @ 100 ml or Deltamethrin 2.8 EC @ 160 ml or Cypermethrin 25 EC @ 80 ml. in 80 to 100 litres of water per acre.
- **Uttar Pradesh:**
- In Central Plain Zone, continue nursery sowing of paddy in irrigated area and land preparation for nursery sowing of paddy. Continue sowing of jowar, bajra, maize, urad, mung, sesame. Undertake sowing of arhar in irrigated areas. Continue planting of sugarcane. Continue sowing of summer fodder crops like cowpea, maize, lobia and sowing of urad, mung, lobia, bhindi as inter crop in sugarcane, land preparation and sowing of cowpea, maize, garlic, turmeric, ginger. Continue sowing of sunhemp, lobia and dhaincha for green manuring. Continue nursery sowing of brinjal and kharifonion and transplanting of guava.
- In Central Plain Zone, Complete nursery sowing of paddy seeds up to 15th June and for sowing of scented paddy in nursery upto 25th June. Continue sowing of of groundnut and branching varieties of soybean. Cover the sown field of turmeric, ginger for better germination and conservation of moisture.
- In Eastern Plain Zone, continue direct sowing of rice and sowing of maize in irrigated areas.
- In Western Plain Zone, undertake nursery sowing of paddy and sowing of pegion pea. Continue sowing baby corn and summer fodder crops jowar, bajra, lobia, maize. Continue sowing of sunhemp and dhaincha, sanai, jwar, lobia, mung for green manuring. Continue transplanting of tomato, chilli and sowing of bhindi, cucurbits and sowing of sunflower, urad, mung, maize.
- In Bundelkhand Zone, apply irrigation in moong, bhindi, torai, cucurbits, cabbage, cauliflower, tomato, brinjal and chilli as per requirement.
- In Central Plain Zone, 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.
- In Central Plain Zone, due to prevailing weather condition, there may be chances of attack of khaira in rice nursery, for control spray solution of Urea @ 20 gm. & zinc sulphate @ 5gm. per 10 square meter.

- In North Eastern plain Zone, due to prevailing weather condition, there may be chances of attack of blight and aphids in bottle guard, for control, spray mixture of Mencozeb 0.2% @ 400 g or Carbendazim 0.2% @ 400 g and 0.2% Monocrotophos @ 200 ml in 200 litres of water per acre.
- Suitable varieties for sowing are given in Annexure III.
- ❖ **Horticulture:**
- In Central Plain Zone of Uttar Pradesh, continue plantation of banana.
- In North Eastern Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of mango hopper and mealy bug in mango trees for control spray mixture of 0.2 % Emidacloprid @ 400 ml and 0.2 % Carbendazim @ 400 g per 200 litres of water per 20 plants.
- Flood Prone Eastern Plain Zone, continue pruning operation in ber crop.
- In Semi-Arid Eastern Plain Zone, there may be chances of attack of bark eating caterpillar in Mango, Ber & Guava, for control spray Malathion 50 EC @ 1 ml In per litre of water.
- In Irrigated North Western Plain Zone, there may be fruit drops in kinnow fruits, for control spray mixture of Propineb 70 WP @ 2 gm. and Gibbrellic acid @ 20 mg. in 1 litre of water.
- In Sub-Montane and Low Hills Sub-Tropical Zone of Himachal Pradesh, weather is conducive for attack of fruit borer in litchi, for control spray Cypermethrin 10 EC @ 1 ml per litre of water after current spells of rain and repeat at 15 days of interval.
- In Intermediate Zone of Jammu and Kashmir, there are chances of attack of mealy bug on fruit plants. To control spray Chloropyriphos 20EC or Dichlorbos(Nuvan 30 EC) @ 2ml/litre of water on a non rainy day and repeat at fifteen days interval.
- ❖ **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 sub tropical Zone of Jammu Kashmir, provide clean water for drinking to the animals at frequent intervals to save animals from heat stroke. Keep all the animals under shade and if possible provide coolers to cross breed cattle during the day time If not vaccinated yet, get the animals vaccinated against foot and mouth and Gal Gotu diseases.
- 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.
- ❖ **Floriculture**
- In Sub-Montane and Low Hills Sub-Tropical Zone of Himachal Pradesh, 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 of Himachal Pradesh, weather is conducive for attack of Thrips in marigolds, for control spray Malathion @ 1ml per litres of water on a non rainy day.
- In Sub Tropical Zone of Jammu and Kashmir, undertake land preparation and sowing of seeds for raising nursery of rainy annuals after receipt of sufficient rain.
- In Valley Temperate Zone of Jammu & Kashmir, continue planting of liliun, gladiolus and dahlia. Continue sowing of seeds for summer annuals nursery at the earliest.
- ❖ **Apiculture:**
- In Sub Tropical and intermediate Zone of Jammu and Kashmir, to protect the bee colonies from high temperature shift it to shady areas or migrate to cooler places or cover with wet gunny bags. Check the colonies for mite infestation and brood to avoid the mortality of honey bees.

Annexure I

Week by week Rainfall Distribution

Sub-Divisions	25.05.16		01.06.16		08.06.16	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	27.5	-61	18.4	-77	36.1	-65
Dibang Valley	0.0	-100	**	**	**	**
East Kameng	12.1	-70	20.5	-50	23.4	-63
East Siang	99.5	36	52.4	-45	5.7	-95
Kurung Kumey	**	**	**	**	**	**
Lohit	79.4	17	13.0	-82	32.1	-55
Lower Dibang Valley	57.9	-13	28.2	-73	10.8	-80

Lower Subansari	**	**	**	**	**	**
Papumpare	55.1	20	109.3	-34	29.3	-81
Tawang	12.5	-83	18.0	-84	14.0	-89
Tirap	52.0	-25	38.6	-63	68.0	-39
Upper Siang	193.8	120	84.4	-35	124.4	-27
Upper Subansari	31.6	-30	3.0	-83	132.4	185
West Kameng	2.1	-97	58.6	-47	17.8	-86
West Siang	1.7	-96	17.1	-77	40.0	-22
Assam&Meghalaya						
Assam						
Baksa	2.3	-97	129.2	6	57.0	-65
Barpeta	25.3	-69	81.8	-33	45.4	-72
Bongaigaon	2.2	-98	140.6	20	92.2	-36
Cachar	121.4	63	42.4	-59	82.7	-33
Chirang	16.1	-83	247.0	110	62.6	-57
Darrang	0.0	-100	0.0	-100	**	**
Dhemaji	**	**	**	**	0.0	-100
Dhubri	86.4	-3	118.3	4	48.3	-67
Dibrugarh	84.1	50	38.0	-50	15.8	-79
Goalpara	11.2	-86	52.7	-56	30.7	-76
Golaghat	53.2	31	33.8	-40	20.5	-55
Hailakandi	197.9	145	59.8	-49	100.1	-16
Jorhat	56.4	-2	77.4	27	51.6	0
Kamrup(Rural)	0.6	-99	42.6	-49	22.0	-71
Kamrup(Metro)	10.9	-80	98.3	18	34.6	-54
Karbi Anglong	34.8	-3	10.0	-70	14.2	-66
Karimganj	125.7	-5	71.5	-55	117.1	-5
Kokrajhar	6.9	-93	159.8	0	73.5	-56
Lakhimpur	32.9	-59	57.8	-33	32.0	-73
Morigaon	10.2	-72	85.2	11	25.0	-51
N.C.Hills	247.0	317	58.6	-31	51.0	-39
Nagaon	32.3	5	40.2	-11	13.3	-77
Nalbari	2.6	-96	93.4	6	33.8	-71
Sonitpur	11.4	-79	98.0	29	13.5	-83
Sibsagar	141.3	237	38.0	-41	13.9	-69
Tinsukia	57.3	-2	17.7	-70	9.4	-87
Udalgiri	17.7	-70	39.8	-52	13.2	-83
Meghalaya						
East Garo Hills	144.0	165	184.2	111	41.2	-62
East Khasi Hills	96.6	-33	52.5	-75	57.6	-80
Jaintia Hills	0.0	-100	0.0	-100	5.0	-98
Ribhoi	57.7	42	32.8	-58	65.1	31
South Garo Hills	16.0	-80	7.0	-91	0.0	-100
West Garo Hills	16.9	-78	50.0	-39	23.8	-80
West Khasi Hills	0.0	-100	1.0	-99	**	**
NMMT						
Mizoram						
Aizwal	153.9	92	46.4	-53	125.0	22
Champhai	**	**	**	**	**	**

Kolasib	0.0	-100	**	**	**	**
Lawngtlai	0.0	-100	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	192.0	104	79.0	14	176.0	117
Serchhip	2.6	-97	**	**	**	**
Manipur						
Bishnupur	0.0	-100	**	**	**	**
Chandel	151.0	340	38.0	-47	15.0	-87
Churachandpur	**	**	**	**	**	**
Imphal east	147.9	233	4.6	-92	7.4	-90
Imphal west	174.4	818	32.8	1	58.3	-9
Senapati	**	**	**	**	**	**
Tamenglong	**	**	0.0	-100	**	**
Thoubal	55.5	59	21.0	-30	18.0	-80
Ukhrul	1.0	-95	1.0	-98	0.0	-100
Nagaland						
Dimapur	44.2	75	34.3	7	10.0	-81
Kephire	**	**	**	**	**	**
Kohima	78.0	112	12.4	-71	23.8	-62
Longleng	0.0	-100	**	**	**	**
Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	58.0	58	17.0	-60	35.0	-44
Tuensang	**	**	**	**	**	**
Wokha	3.0	-96	5.0	-95	4.0	-93
Zunheboto	**	**	0.0	-100	**	**
Tripura						
Dhalai	159.8	101	126.6	16	66.6	-45
NorthTripura	133.2	56	226.4	87	58.1	-52
SouthTripura	170.9	143	94.5	12	33.4	-64
West Tripura	177.4	156	78.9	-11	51.3	-50
Himachal Pradesh						
Bilaspur	17.6	28	4.8	-32	40.0	228
Chamba	22.0	127	18.4	148	17.2	70
Hamirpur	20.6	63	5.5	-28	16.9	18
Kangra	18.9	115	11.8	31	10.8	-18
Kinnaur	5.1	-62	2.3	-77	0.1	-98
Kullu	11.6	-39	3.7	-63	5.7	-49
Lahaul and Spiti	4.9	-69	3.7	-74	2.3	-78
Mandi	33.3	100	25.2	68	39.2	108
Shimla	17.0	16	12.4	3	21.3	30
Sirmaur	13.1	57	12.9	81	36.4	180
Solan	18.5	48	10.3	19	51.4	194
Una	16.5	189	6.2	21	12.1	27
Punjab						
Amritsar	7.6	145	16.2	669	0.0	-100
Barnala	5.0	127	36.0	1340	0.0	-100

Bhatinda	1.0	-63	24.8	1207	0.0	-100
Faridkot	0.0	-100	27.8	1221	0.0	-100
Fatehgarh Saheb	9.7	184	2.0	-9	2.0	-55
Ferozpur	0.0	-100	0.5	-68	0.0	-100
Gurdaspur	10.6	186	3.0	-29	0.7	-88
Hoshiarpur	7.2	43	3.3	3	1.2	-83
Jalandhar	5.0	11	9.0	350	0.0	-100
Kapurthala	16.8	786	7.5	317	0.3	-94
Ludhiana	3.4	-18	4.4	143	0.8	-86
Mansa	0.0	-100	14.8	771	0.0	-100
Moga	3.6	50	4.7	292	0.0	-100
Muktesar	0.0	-100	22.0	1367	0.0	-100
Nawashahar	7.1	20	4.8	332	1.8	-64
Patiala	16.0	309	7.9	243	4.4	-22
Ropar	10.0	37	9.5	252	15.0	159
Sangrur	16.0	232	16.8	393	0.0	-100
Mohali	12.0	131	14.1	834	15.0	400
TarnTaran	20.0	770	0.0	-100	0.0	-100
Haryana,Chd,Delhi						
Haryana						
Ambala	17.3	261	14.1	313	17.4	19
Bhiwani	3.4	111	14.5	560	0.3	-94
Chandigarh	14.5	63	21.9	164	2.8	-76
Faridabad	10.0	335	17.5	695	0.0	-100
Fatehabad	0.3	-86	6.3	76	0.0	-100
Gurgaon	0.0	-100	13.6	312	0.0	-100
Hissar	9.2	301	13.6	384	0.2	-96
Jhajar	8.0	473	10.1	287	0.0	-100
Jind	12.5	331	37.0	1221	0.0	-100
Katihah	3.3	156	7.3	169	0.0	-100
Karnal	14.1	354	14.3	521	0.2	-97
Kurukshetra	16.8	782	3.0	-6	2.3	-64
Mahendragarh	11.1	126	19.6	377	0.0	-100
Mewat	25.0	558	7.6	404	3.8	36
Palwal	7.5	295	0.5	-64	0.0	-100
Panchkkula	4.3	-41	5.3	9	3.3	-74
Panipat	9.8	476	12.4	518	0.0	-100
Rewari	41.6	3100	23.6	638	0.0	-100
Rohtak	6.6	154	14.8	236	0.0	-100
Sirsa	1.2	-54	0.3	-90	3.0	11
Sonepat	9.0	210	9.3	246	0.0	-100
Yamunanagar	19.5	191	27.7	738	15.9	1
Delhi						
Central Delhi	8.0	60	8.0	167	0.0	-100
East Delhi	3.0	-40	4.0	33	0.0	-100
New Delhi	6.2	25	8.3	178	0.0	-100
North Delhi	6.5	30	10.5	250	0.0	-100
North East Delhi	3.0	-40	8.0	167	1.0	-78
North West Delhi	2.5	-50	6.0	100	0.5	-89

South Delhi	9.1	82	26.9	795	0.0	-100
South West Delhi	12.7	154	20.5	583	2.0	-56
West Delhi	0.0	-100	0.0	-100	**	**
Jammu & Kashmir						
Anantnag	23.2	-4	6.7	-58	6.8	-49
Badgam	10.8	-40	5.9	-39	13.8	97
Bandipore	**	**	**	**	**	**
Baramula	41.6	71	8.8	-53	0.1	-99
Doda	16.2	-25	6.6	-53	8.9	7
Ganderbal	19.4	30	6.7	-36	2.8	-67
Jammu	3.4	-32	0.8	-83	0.0	-100
Kargil	**	**	**	**	**	**
Kathua	5.8	142	2.3	28	1.9	-68
Kistwar	**	**	**	**	**	**
Kulgam	23.6	-2	10.7	-1	0.0	-100
Kupwara	26.6	12	0.7	-96	3.1	-76
Ladakh(Leh)	0.0	-100	0.1	-86	0.0	-100
Poonch	**	**	**	**	**	**
Pulwama	20.6	10	3.7	-21	3.2	-56
Rajouri	0.0	-100	0.0	-100	6.2	-23
Ramban	16.6	-24	8.1	-18	0.9	-90
Reasi	30.4	266	41.4	475	0.0	-100
Samba	2.6	-48	2.4	-47	0.0	-100
Shopian	**	**	**	**	**	**
Srinagar	21.4	43	3.6	-65	15.6	81
Udhampur	2.4	-71	20.2	211	0.0	-100
East Madhya Pradesh						
Anuppur	0.0	-100	1.0	-81	0.0	-100
Balaghat	0.0	-100	1.5	-42	3.7	-71
Chhatarpur	5.5	265	11.4	373	0.1	-99
Chindwara	0.0	-100	0.0	-100	4.2	-74
Damoh	0.0	-100	23.0	597	0.0	-100
Dindori	0.0	-100	7.0	233	1.6	-87
Jabalpur	0.6	-25	50.2	1014	0.5	-96
Katni	0.0	-100	11.3	129	0.6	-94
Mandla	0.0	-100	1.4	-55	16.0	40
Narsingpur	0.0	-100	3.6	-27	0.0	-100
Panna	0.0	-100	4.3	105	0.0	-100
Rewa	3.5	285	1.3	-16	0.0	-100
Sagar	0.1	-94	17.0	270	0.0	-100
Satna	13.8	2653	1.1	-19	3.4	-49
Seoni	0.0	-100	4.5	2	1.1	-89
Shahdol	0.0	-100	6.0	186	1.0	-90
Sidhi	9.4	840	7.8	179	9.6	-47
Singrauli	0.0	-100	2.0	233	2.0	-61
Tikamgarh	0.0	-100	21.5	594	0.0	-100
Umaria	6.0	275	25.6	814	4.8	-63
West Madhya Pradesh						

Agar	0.0	-100	**	**	0.0	-100
Alirajpur	0.0	-100	0.0	-100	0.0	-100
Asoknagar	0.0	-100	0.0	-100	0.0	-100
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	0.0	-100	0.0	-100	15.8	48
Bhind	0.0	-100	15.3	989	0.8	-85
Bhopal	0.0	-100	0.0	-100	21.1	109
Burhanpur	0.0	-100	0.0	-100	0.0	-100
Datia	1.9	-7	35.1	3804	0.0	-100
Dewas	0.0	-100	0.0	-100	1.3	-90
Dhar	0.0	-100	0.0	-100	0.0	-100
Guna	0.0	-100	4.2	-29	0.0	-100
Gwalior	9.8	713	26.2	870	0.0	-100
Harda	0.0	-100	0.0	-100	0.0	-100
Hosangabad	0.0	-100	0.0	-100	10.9	-4
Indore	0.0	-100	0.0	-100	0.0	-100
Jhabua	0.0	-100	0.0	-100	0.0	-100
Khandwa	0.0	-100	0.0	-100	0.0	-100
Khargone	0.0	-100	0.0	-100	1.4	-90
Mandsaur	0.0	-100	0.0	-100	0.0	-100
Morena	2.0	-5	10.6	382	0.0	-100
Neemuch	0.0	-100	0.0	-100	0.0	-100
Raisen	0.0	-100	0.0	-100	0.0	-100
Rajgarh	0.0	-100	0.0	-100	0.0	-100
Ratlam	0.0	-100	0.0	-100	0.0	-100
Sehore	0.0	-100	0.0	-100	6.8	-44
Shajapur	0.0	-100	0.0	-100	0.0	-100
Sheopur Kalani	0.0	-100	18.0	445	0.0	-100
Shivpuri	0.3	-87	8.3	143	0.0	-100
Ujjain	0.0	-100	0.0	-100	0.0	-100
Vidisha	0.0	-100	0.0	-100	0.0	-100
Chhattisgarh						
Bastar	0.0	-100	1.6	-83	31.5	51
Bijapur	0.0	-100	0.0	-100	60.8	508
Bilaspur	9.6	200	17.7	269	0.6	-95
Dantewara	1.7	-61	0.0	-100	61.3	323
Dhamtari	0.4	-87	0.0	-100	14.0	63
Durg	6.7	316	1.1	-62	13.9	-9
Janjgir	0.0	-100	1.3	-52	0.0	-100
Jashpurnagar	0.5	-91	0.0	-100	26.8	-17
Kanker	0.0	-100	0.0	-100	2.3	-81
Korba	0.0	-100	8.7	200	14.0	30
Koriya	**	**	**	**	0.0	-100
Kawardha	0.0	-100	0.0	-100	2.4	-74
Mahasumund	0.0	-100	1.2	-56	2.7	-85
Narayanpur	0.0	-100	0.0	-100	55.4	204
Raigarh	0.0	-100	0.0	-100	6.9	-55
Raipur	0.3	-89	6.7	60	7.1	-46
Rajnandgaon	0.0	-100	0.5	-89	1.6	-85

Surguja	2.9	22	5.6	35	3.8	-78
East Uttar Pradesh						
Allahabad	2.8	78	0.4	-75	0.0	-100
Ambedkar Nagar	35.0	797	2.0	-60	0.0	-100
Azamgarh	29.5	852	16.7	209	40.9	205
Bahraich	29.5	467	55.2	406	10.4	-36
Ballia	39.1	1121	5.7	-12	4.5	-60
Balrampur	11.6	71	19.2	25	3.4	-82
Banda	11.5	149	4.7	96	9.1	-9
Barabanki	5.2	26	13.9	246	6.3	-44
Basti	14.2	264	26.3	324	28.4	39
Chandauli	2.0	18	0.0	-100	8.0	18
Deoria	13.0	145	29.9	340	0.0	-100
Faizabad	2.2	-41	0.0	-100	23.1	53
Farrukhabad	0.0	-100	4.7	26	0.0	-100
Fatehpur	4.9	208	0.0	-100	1.4	-84
Gazipur	21.1	1139	0.5	-91	21.6	122
Gonda	3.9	15	42.0	445	27.2	59
Gorakhpur	31.0	546	55.8	597	10.2	-62
Hardoi	1.1	-63	11.1	147	3.1	-66
Jaunpur	9.4	328	5.6	17	6.1	-49
Kannauj	0.0	-100	0.0	-100	0.0	-100
Kanpur City	20.0	1896	5.0	138	2.3	-63
Kanpur Dehat	0.4	-75	3.4	79	0.0	-100
Kaushambi	0.0	-100	0.0	-100	0.0	-100
Kheri	46.9	668	28.6	281	16.1	12
Kushi nagar	26.7	260	47.5	260	44.5	67
Lucknow	8.2	172	7.1	47	0.0	-100
Maharajganj	29.5	198	51.5	485	6.3	-82
Mau	32.5	948	6.5	23	13.5	-2
Mirzapur	1.0	-66	1.0	-60	24.5	198
Pratapgarh	31.2	1257	4.7	41	2.7	-67
RaiBareilly	8.0	519	7.4	290	1.6	-80
Sahuji Maharajnagar	3.0	50	0.0	-100	0.0	-100
Sant Kabirnagar	18.0	227	63.0	1365	87.0	307
Sant Ravidas Nagar	0.0	-100	0.0	-100	6.0	-12
Shrawasti	**	**	**	**	49.0	201
Sidharthnagar	18.0	205	18.1	178	10.3	-48
Sitapur	10.3	256	24.7	418	1.6	-86
Sonbhadra	1.5	-9	7.7	164	4.1	-60
Sultanpur	15.9	287	21.4	262	7.3	-5
Unnao	8.8	447	2.5	-24	0.5	-94
Varanasi	10.0	525	4.5	53	16.0	116
West Uttar Pradesh						
Agra	5.7	305	7.3	127	1.1	-74
Aligarh	11.9	324	15.9	342	0.0	-100
Auraiya	5.0	127	4.0	-5	0.0	-100
Badaun	1.4	-46	21.4	355	0.0	-100

Baghpat	4.4	10	9.0	543	0.0	-100
Bareilly	24.4	526	5.2	5	11.4	-19
Bijnor	17.5	257	22.3	265	28.0	126
Bulandsahar	12.0	264	6.8	144	0.0	-100
Etah	2.7	90	2.2	-47	0.0	-100
Etawah	5.8	311	5.1	42	0.0	-100
Firozabad	6.9	145	2.0	-44	0.0	-100
GBNagar	0.0	-100	3.0	173	0.0	-100
Ghaziabad	11.4	337	0.0	-100	0.0	-100
Hamirpur	1.3	-33	7.7	107	0.0	-100
Jalaun	2.3	30	6.0	101	2.4	-53
Jhansi	0.5	-72	9.1	192	0.0	-100
Jotiba Phule Nagar	15.0	500	19.0	363	0.0	-100
Kanshiramnagar	4.0	90	11.0	150	0.0	-100
Lalitpur	0.0	-100	9.0	246	0.0	-100
Mahamaya Nagar	6.5	195	1.5	-44	0.0	-100
Mahoba	0.0	-100	0.8	-67	0.0	-100
Mainpuri	9.6	405	0.6	-78	0.0	-100
Mathura	1.0	-58	0.0	-100	0.0	-100
Meerut	14.6	355	18.2	726	0.0	-100
Moradabad	21.4	589	10.6	212	6.3	-57
Muzaffarnagar	27.3	551	15.4	492	0.5	-95
Pilibhit	4.4	33	8.6	10	7.7	-63
Rampur	16.1	221	17.6	232	9.2	-51
Saharanpur	34.3	358	21.0	250	7.3	-43
Shahjahanpur	23.7	717	12.6	120	0.0	-100
Uttarakhand						
Almora	0.0	-100	27.2	79	10.3	-51
Bageshwar	5.4	-44	77.5	410	25.8	22
Chamoli	25.9	70	26.9	119	16.9	6
Champawat	11.0	1	52.5	286	10.7	-65
Dehradun	7.9	-36	17.9	11	24.3	26
Garhwal Pauri	10.7	33	30.8	135	7.3	-58
Garhwal Tehri	1.9	-87	15.8	-8	4.0	-78
Haridwar	25.0	541	17.7	190	44.0	267
Nainital	38.4	262	60.0	200	19.5	-30
Pithorgarh	30.2	42	56.4	127	21.0	-48
Rudraprayag	54.8	175	38.0	79	75.7	228
Udham Sing Nagar	25.2	218	25.1	95	32.1	114
Uttarkashi	11.1	-59	24.9	-5	11.1	-42
Bihar						
Araria	82.9	244	33.8	-7	17.3	-64
Arwal	3.2	28	2.5	-37	0.0	-100
Aurangabad	0.0	-100	6.6	36	0.0	-100
Banka	8.7	16	40.6	162	25.2	51
Begusarai	7.9	-35	42.9	254	0.0	-100
Bhabua	2.9	-69	0.0	-100	0.0	-100
Bhagalpur	9.5	-45	52.7	168	0.0	-100
Bhojpur	6.3	-9	29.4	444	3.1	-69

Buxar	0.0	-100	**	**	3.8	-71
Darbhangha	30.5	148	28.0	49	15.5	-34
East Champaran	42.7	244	75.4	416	21.5	-18
Gaya	0.4	-90	2.6	-54	0.0	-100
Gopalganj	0.0	-100	43.2	275	19.1	-6
Jahanabad	0.0	-100	5.3	-18	0.0	-100
Jamui	2.5	-73	2.0	-79	0.0	-100
Kathihar	75.4	317	21.6	-30	0.0	-100
Khagadia	7.7	-36	57.2	415	0.0	-100
Kishanganj	33.7	-16	116.7	117	41.0	-17
Lakhisarai	0.0	-100	28.2	159	0.0	-100
Madhepura	25.8	55	0.0	-100	29.4	-22
Madhubani	8.5	-58	30.0	45	42.8	38
Monghyar	0.0	-100	0.0	-100	0.0	-100
Muzaffarpur	36.0	159	19.1	63	6.5	-75
Nalanda	14.1	111	18.6	133	0.0	-100
Nawada	0.0	-100	2.4	-78	0.0	-100
Patna	22.8	300	37.0	387	0.5	-96
Purnea	116.9	362	13.1	-66	2.1	-95
Rohtas	4.6	92	3.6	24	0.0	-100
Saharsha	0.0	-100	0.0	-100	12.7	-70
Samstipur	42.6	273	32.1	157	4.2	-75
Saran	23.9	113	18.2	98	0.0	-100
Sheikpura	0.0	-100	15.3	37	0.0	-100
Sheohar	0.0	-100	0.0	-100	0.0	-100
Sitamarhi	0.0	-100	34.4	44	21.2	-34
Siwan	24.8	163	64.4	570	4.4	-72
Supaul	47.7	147	13.1	-32	18.7	-63
Vaishali	22.9	270	34.6	276	0.0	-100
West Champaran	60.3	310	66.8	291	24.1	-20
Jharkhand						
Bokaro	22.1	163	21.3	142	4.8	-84
Chatra	0.0	-100	4.2	-32	0.0	-100
Deoghar	2.6	-71	7.8	-55	1.1	-95
Dhanbad	0.0	-100	9.0	-38	7.9	-70
Dumka	34.0	150	66.4	259	11.3	-58
East Singbhum	18.9	50	46.7	142	17.4	-46
Garhwa	40.0	6567	18.0	429	4.0	-65
Giridih	16.6	91	12.8	17	18.5	-14
Godda	11.1	-7	32.2	101	4.3	-81
Gumla	21.6	181	17.9	47	1.1	-96
Hazaribagh	1.2	-89	23.7	216	9.7	-48
Jamtara	14.4	2	43.0	71	2.1	-91
Khunti	0.0	-100	0.0	-100	**	**
Koderna	0.0	-100	22.0	45	1.6	-92
Latehar	0.0	-100	0.0	-100	0.0	-100
Lohardagga	4.4	-53	9.0	-32	21.0	58
Pakur	6.8	-53	45.1	58	1.7	-95
Palamau	0.0	-100	4.1	13	0.5	-97

Ramgarh	9.4	-27	19.8	82	6.6	-68
Ranchi	18.8	46	26.8	93	9.6	-59
Sahebganj	0.0	-100	18.6	-34	0.0	-100
Saraikela	16.3	57	20.6	48	20.9	-15
Simdega	17.7	293	17.3	144	0.0	-100
West Singhbhum	24.9	117	14.5	-3	13.2	-48
East Rajasthan						
Ajmer	0.0	-100	0.0	-100	0.0	-100
Alwar	9.3	145	15.3	350	6.2	34
Banswara	0.0	-100	0.0	-100	0.0	-100
Baran	1.3	14	0.0	-100	0.0	-100
Bharatpur	11.2	251	6.8	143	11.0	233
Bhilwara	0.0	-100	3.5	-39	0.0	-100
Bundi	0.0	-100	0.0	-100	0.0	-100
Chittorgarh	0.0	-100	0.0	-100	0.0	-100
Dausa	11.0	244	8.8	83	1.0	-81
Dholpur	11.3	567	9.3	233	3.7	-27
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	3.4	-14	0.9	-83	0.6	-88
Jhalawar	0.0	-100	0.0	-100	0.0	-100
Jhunjhunu	3.8	-40	14.8	209	1.4	-81
Karauli	6.5	211	2.0	-43	0.4	-89
Kota	0.9	-20	0.6	-86	0.0	-100
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
Rajsamand	0.0	-100	0.0	-100	0.0	-100
Sawai Madhopur	0.1	-94	6.8	84	0.0	-100
Sikar	5.0	4	1.0	-79	0.3	-96
Sirohi	0.0	-100	0.0	-100	0.0	-100
Tonk	0.0	-100	0.3	-90	0.0	-100
Udaipur	0.0	-100	0.0	-100	0.0	-100
West Rajasthan						
Barmer	0.0	-100	0.0	-100	0.0	-100
Bikaner	0.6	-86	0.0	-100	0.0	-100
Churu	0.7	-85	19.5	414	3.4	-39
Hanumangarh	0.0	-100	0.6	-82	0.0	-100
Jaisalmer	0.0	-100	0.0	-100	0.0	-100
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.0	-100	0.0	-100	0.0	-100
Nagaur	1.1	-71	0.0	-100	0.0	-100
Pali	0.0	-100	0.0	-100	0.0	-100
Sri Ganganagar	0.0	-100	0.5	-81	0.2	-96
Gujarat Region						
Ahmedabad	0.0	-100	0.0	-100	0.0	-100
Anand	0.0	-100	0.0	-100	0.0	-100
Banaskantha	0.0	-100	0.0	-100	0.0	-100
Baroda	0.0	-100	0.0	-100	0.0	-100
Broach	0.0	-100	0.5	-90	0.0	-100
DNH	**	**	**	**	**	**
Dahod	0.0	-100	0.0	-100	0.0	-100

Daman	0.0	-100	0.0	-100	0.0	-100
Dangs	0.0	-100	0.0	-100	0.0	-100
Gandhinagar	0.0	-100	0.0	-100	0.0	-100
Kheda	0.0	-100	0.0	-100	0.0	-100
Mehsana	0.0	-100	0.0	-100	0.0	-100
Narmada	0.0	-100	0.0	-100	0.0	-100
Navsari	0.0	-100	0.0	-100	0.0	-100
Panchmahal	0.0	-100	0.0	-100	0.0	-100
Patan	0.0	-100	0.0	-100	0.0	-100
Sabarkantha	0.0	-100	0.0	-100	0.0	-100
Surat	0.0	-100	0.0	-100	0.0	-100
Tapi	0.0	-100	0.0	-100	0.2	-100
Valsad	0.0	-100	0.0	-100	0.0	-99
S K & Diu region						
Amreli	0.0	-100	0.0	-100	0.0	-100
Bhavnagar	0.0	-100	0.0	-100	0.0	-100
Diu	0.0	-100	0.0	-100	0.0	-100
Jamnagar	0.0	-100	0.0	-100	0.0	-100
Junagarh	0.0	-100	0.0	-100	0.0	-100
Kutch	0.0	-100	0.0	-100	0.0	-100
Porbandar	0.0	-100	0.1	-98	0.0	-100
Rajkot	0.0	-100	0.0	-100	0.0	-100
Surendranagar	0.0	-100	0.0	-100	0.0	-100
Maharashtra						
Konkan & Goa						
Mumbai City	2.4	-62	1.3	-90	0.2	-99
Mumbai Suburban	0.0	-100	0.0	-100	0.0	-100
North Goa	1.7	-95	6.2	-86	98.9	-18
Raigad	0.2	-95	0.1	-99	19.4	-66
Ratnagiri	0.0	-100	0.5	-98	46.5	-46
Sindhudurg	0.8	-96	1.0	-97	88.2	-28
South Goa	0.9	-97	2.0	-95	116.4	-2
Thane	0.0	-100	0.3	-97	0.0	-100
Madhya Maharashtra						
Ahmednagar	0.0	-100	3.6	-59	27.6	18
Dhule	0.0	-100	0.0	-100	0.0	-100
Jalgaon	0.0	-100	0.0	-100	0.5	-97
Kolhapur	2.5	-86	0.9	-95	39.9	-9
Nandurbar	0.0	-100	0.0	-100	0.0	-100
Nasik	0.0	-100	0.0	-100	0.0	-100
Pune	0.1	-99	0.0	-100	28.3	-3
Sangli	8.4	-45	1.8	-89	54.1	70
Satara	1.0	-91	2.8	-79	73.8	134
Solapur	1.2	-85	4.5	-66	46.3	66
Marathwada						
Aurangabad	0.0	-100	0.0	-100	6.2	-72
Beed	0.5	-93	1.9	-80	41.6	70
Hingoli	0.0	-100	0.0	-100	25.8	45

Jalna	0.0	-100	0.0	-100	24.8	42
Latur	0.0	-100	0.5	-95	35.1	56
Nanded	0.0	-100	0.0	-100	32.6	64
Osmanabad	0.0	-100	8.1	-36	42.6	41
Parbhani	0.0	-100	0.4	-95	29.0	51
Vidarbha						
Akola	0.0	-99	0.0	-100	12.2	-7
Amraoti	0.0	-100	0.0	-100	10.9	-24
Bhandara	1.1	-29	4.9	48	0.6	-95
Buldhana	0.0	-100	2.1	-60	8.5	-38
Chandrapur	0.0	-100	0.5	-86	14.6	24
Gadchiroli	0.0	-100	0.0	-100	20.5	32
Gondia	6.7	294	3.9	86	18.3	62
Nagpur	0.0	-100	0.3	-94	2.1	-85
Wardha	0.0	-100	0.0	-100	13.5	-20
Washim	0.4	-76	0.0	-100	14.8	12
Yeotmal	0.0	-100	0.0	-100	26.5	55
Odisha						
Angul	9.6	-15	21.5	39	27.5	-11
Balasore	138.0	511	16.2	-59	18.9	-62
Bargarh	1.6	-53	9.2	73	11.8	-23
Bhadrak	101.5	452	44.3	77	51.8	64
Bolangir	0.0	-100	4.6	-54	4.5	-74
Boudh	2.8	-76	10.4	-19	0.0	-100
Cuttack	64.9	423	17.2	-20	30.0	-26
Deogarh	4.8	-27	2.8	-74	6.3	-68
Dhenkanal	40.1	218	32.9	64	32.1	-3
Gajapati	52.6	163	27.7	44	49.3	52
Ganjam	77.4	453	10.8	-35	27.7	-4
Jagatsingpur	197.0	948	5.5	-82	35.5	4
Jajpur	70.3	340	17.2	-26	59.0	32
Jharsuguda	3.4	-40	6.9	-34	2.5	-87
Kalahandi	2.8	-56	2.0	-84	6.9	-75
Kandhamal	2.8	-79	1.2	-91	30.4	6
Kendrapara	172.0	962	5.5	-79	53.2	34
Keonjhar	54.7	216	34.5	22	16.3	-55
Khurda	53.5	277	6.2	-60	48.0	81
Koraput	56.2	241	6.7	-61	52.6	97
Malkangiri	8.0	-33	0.0	-100	133.4	820
Mayurbhanj	44.5	76	29.7	12	45.6	4
Nawapara	0.8	-82	4.8	-83	8.2	-49
Nawarangpur	8.0	-79	21.1	19	39.8	34
Nayagarh	48.4	281	0.0	-100	29.9	6
Puri	117.2	1484	3.8	-78	32.3	21
Rayagada	12.5	-10	7.6	-62	49.2	146
Sambalpur	8.2	26	12.6	20	4.4	-77
Sonepur	1.0	-86	7.8	12	0.3	-99
Sundargarh	9.5	9	7.0	-50	4.9	-78

West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	29.6	-71	80.8	-9	40.2	-45
North & Middle Andaman	89.2	-10	89.6	23	67.1	-54
South Andaman	95.8	-5	174.1	43	135.1	7
GWB						
Bankura	16.7	37	42.9	91	4.2	-88
Birbhum	0.4	-97	69.4	185	2.3	-93
Burdwan	19.0	-2	31.0	35	15.7	-50
East Midnapore	109.5	345	14.2	-64	26.6	-44
Hooghly	11.4	-59	29.1	2	24.7	-37
Howrah	18.8	-45	19.2	-45	33.4	-21
Kolkata	111.7	296	21.6	-40	43.4	-23
Murshidabad	0.0	-100	74.5	153	2.0	-95
Nadia	4.8	-82	65.7	148	21.5	-42
24 Pargana (N)	44.9	58	46.5	27	36.5	-32
Purulia	15.8	27	58.1	230	10.4	-71
24 Pargana (S)	74.8	214	15.0	-51	24.9	-52
West Midnapore	36.0	61	18.3	-53	27.2	-28
SHWB & Sikkim						
Cooch Behar	11.4	-87	92.7	-17	74.8	-44
Darjeeling	44.0	-32	88.0	13	61.7	-22
East Sikkim	69.7	26	119.6	52	56.7	-32
Jalpaiguri	25.6	-66	116.5	-1	115.2	-4
Malda	6.3	-75	29.0	-9	7.6	-78
North Dinajpur	**	**	**	**	**	**
North Sikkim	96.8	15	81.1	-16	105.4	-2
South Dinajpur	22.8	-42	8.3	-84	0.0	-100
South Sikkim	69.0	25	96.8	23	49.8	-40
West Sikkim	70.0	-17	63.5	34	78.0	-27
Karnataka						
Coastal Karnataka						
Dakshina Kannada	13.8	-75	68.7	-9	70.2	-55
Udupi	10.1	-85	38.8	-52	143.1	-20
Uttara Kannada	11.8	-68	16.1	-65	94.3	-13
NI Karnataka						
Bagalkote	29.8	93	0.8	-96	39.1	63
Belagavi	24.5	26	3.2	-84	30.7	8
Bidar	0.0	-100	1.6	-87	129.7	425
Dharwad	18.2	-20	4.4	-72	40.8	46
Gadag	27.3	43	0.0	-100	15.2	-43
Haveri	5.9	-71	11.1	-48	56.9	98
Kalaburgi	7.3	-25	2.9	-75	73.6	213
Koppal	28.4	83	1.6	-91	55.3	181
Raichur	15.1	20	7.0	-50	40.6	146
Vijayapura	11.0	-29	7.6	-35	42.8	57
Yadgir	5.3	-46	0.0	-100	26.2	32
SI Karnataka						

Ballari	37.7	134	18.2	-4	66.6	223
Bangalore Rural	53.0	140	15.8	-29	49.3	99
Bangalore Urban	81.3	220	15.3	-40	78.3	182
Chamarajanagar	2.2	-93	41.3	73	28.9	39
Chikaballapur	76.8	341	54.8	213	16.8	-15
Chikkamagaluru	3.5	-88	28.6	6	26.2	-57
Chitradurga	6.5	-61	26.6	50	14.4	-16
Davangere	21.3	14	21.1	16	60.6	183
Hassan	0.4	-98	25.9	20	28.6	15
Kodagu	5.9	-86	16.2	-58	41.1	-51
Kolar	73.9	279	12.3	-37	49.6	133
Mandya	1.2	-96	24.4	21	25.3	34
Mysuru	0.0	-100	60.6	173	10.4	-55
Ramanagara	45.1	45	35.3	19	16.0	-40
Shivamogga	3.6	-82	8.0	-62	58.7	11
Tumakuru	32.2	69	88.9	72	32.6	49
Kerala						
Alappuzha	70.7	-12	102.9	15	176.7	12
Kannur	19.4	-73	112.1	36	141.3	-10
Ernakulam	53.2	-41	146.0	53	178.6	8
Idukki	45.6	-34	62.4	-5	115.6	-13
Kasaragod	8.6	-88	138.8	59	101.0	-48
Kollam	75.0	23	61.6	-10	169.8	36
Kottayam	45.4	-37	131.4	38	188.2	18
Kozhikode	36.8	-50	193.6	103	369.3	89
Malappuram	26.0	-58	89.7	40	94.7	-28
Palakkad	32.7	-28	59.8	47	75.2	-10
Pathanamthitta	42.5	-36	87.3	8	122.8	-13
Thiruvananthapuram	196.3	236	19.6	-69	106.4	-1
Thrissur	53.2	-39	109.6	26	189.5	19
Wyand	1.2	-98	19.1	-64	26.7	-76
Tamil Nadu						
Ariyalur	46.2	223	6.4	-29	13.3	-10
Chennai	45.6	231	0.0	-100	48.6	386
Coimbatore	1.4	-92	12.0	18	9.2	2
Cuddalore	20.5	120	4.4	-55	32.1	189
Dharmapuri	48.4	104	15.0	-41	28.9	37
Dindigul	2.3	-88	26.9	82	25.8	79
Erode	0.7	-97	23.1	99	18.7	60
Kanchipuram	29.5	178	1.6	-83	24.2	74
Kanyakumari	153.1	370	7.5	-80	58.9	-6
Karikal	46.2	949	0.0	-100	17.9	-17
Karur	1.0	-91	15.7	51	2.0	-77
Krishnagiri	64.6	161	29.3	44	39.7	80
Madurai	0.8	-95	10.0	-15	6.4	-49
Nagapattinam	41.8	335	0.0	-100	38.1	249
Namakkal	9.5	-55	13.8	-22	5.2	-65
Nilgiris	0.0	-100	42.6	83	36.9	14
Perambalur	26.0	66	17.3	54	21.8	115

Puducherry	19.2	225	48.4	612	0.4	-96
Pudukottai	4.8	-59	3.7	-64	19.0	67
Ramanathapuram	0.0	-100	2.8	-37	10.0	169
Salem	31.1	46	48.2	120	13.2	-34
Sivaganga	7.6	-35	64.0	521	32.1	174
Thanjavur	53.8	327	5.5	-51	28.0	157
Theni	0.6	-96	2.0	-75	7.4	2
Tirunelveli	2.6	-62	1.5	-74	11.4	7
Tirupur	0.0	-100	10.6	16	0.0	-100
Tiruvallur	49.6	262	0.7	-92	42.7	231
Tiruvannamalai	25.0	50	14.8	3	15.0	-4
Tiruvarur	73.9	521	1.7	-75	18.1	108
Toothukudi	1.5	-57	3.9	9	0.1	-97
Trichy	28.3	113	17.3	53	11.2	-8
Vellore	35.5	75	13.6	-27	26.1	35
Villupuram	26.1	127	13.8	71	4.7	-61
Virudhunagar	3.3	-74	18.9	97	2.9	-62
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	122.9	591	3.4	-71	45.7	102
Guntur	62.3	321	14.4	34	105.2	431
Krishna	78.9	460	12.0	43	100.7	427
Nellore	45.4	226	4.4	-39	29.2	159
Prakasam	27.8	84	14.7	50	37.2	128
Sirkakulam	155.1	1024	7.9	-22	56.2	146
Visakhapatnam	116.1	560	7.8	-51	59.2	154
Vizianagram	95.7	371	15.7	0	44.7	67
West Godavari	75.7	525	10.3	11	92.4	342
Rayalaseema						
Anantapur	34.6	143	39.8	128	24.1	23
Chittoor	44.9	133	5.9	-55	38.9	104
Cuddapah	13.9	-1	15.3	24	34.7	81
Kurnool	6.4	-54	40.2	172	52.3	174
Telangana						
Adilabad	1.0	-75	0.0	-100	43.7	133
Hyderabad	14.8	68	6.8	-23	33.5	97
Karimnagar	1.5	-70	0.9	-82	50.7	145
Khammam	2.6	-83	13.4	25	61.4	213
Mehabubnagar	10.4	-1	9.6	32	49.0	137
Medak	0.9	-85	2.2	-74	41.6	86
Nalgonda	0.9	-90	6.8	-25	51.4	152
Nizamabad	1.1	-76	0.1	-99	41.2	68
Rangareddy	7.3	10	2.4	-74	42.9	116
Warangal	0.5	-92	5.1	-22	59.5	196

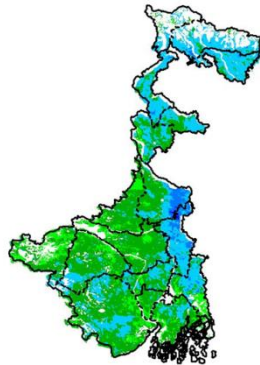
Legends

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

Annexure II

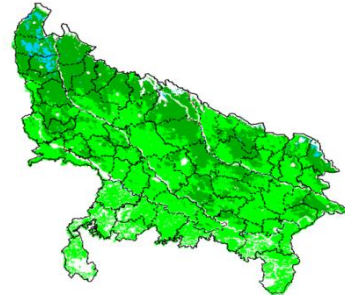
INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON
8th June 2016 FOR DIFFERENT STATES

West Bengal



Agricultural vigour is good in West Bengal, whereas western region of the state shows moderate NDVI.

Uttar Pradesh



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

Uttarakhand



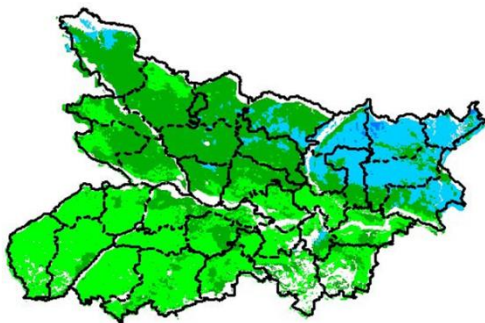
Agricultural vigour is moderate over entire state of Uttarakhand.

Telangana



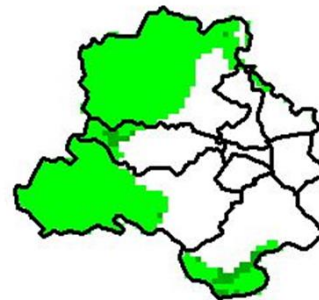
Agriculture vigour is moderate over entire state of Telangana.

Bihar



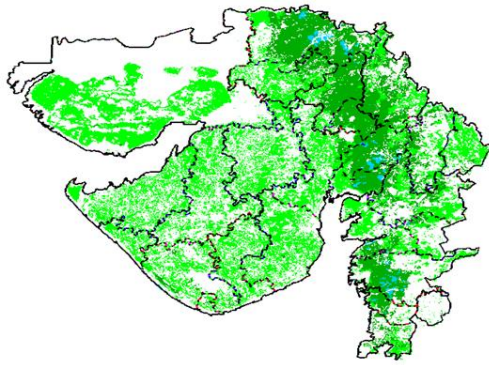
Agriculture vigour is moderate over major parts of Bihar whereas eastern part shows patches of good NDVI values.

Delhi



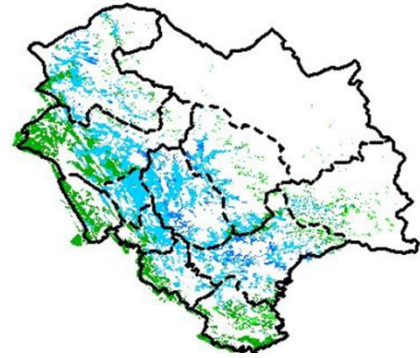
Agriculture vigour is moderate all over Delhi.

Gujarat



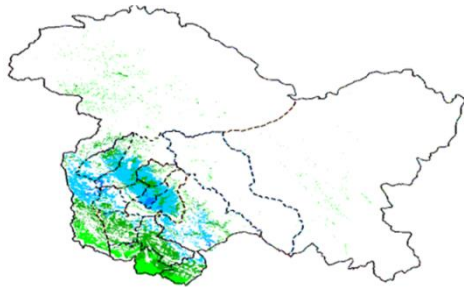
Moderate NDVI values are observed in Kutch, Saurashtra and Gujrat.

Himachal Pradesh



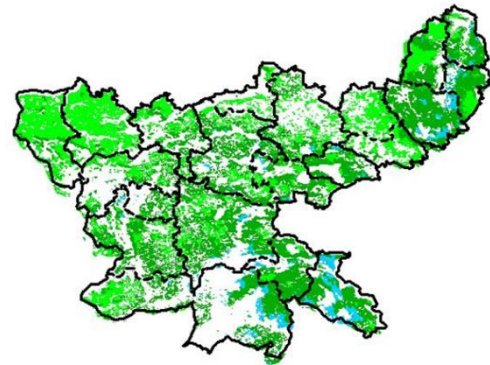
Agriculture vigour is good over entire state of Himachal Pradesh whereas south western part show patches of moderate values.

Jammu & Kashmir



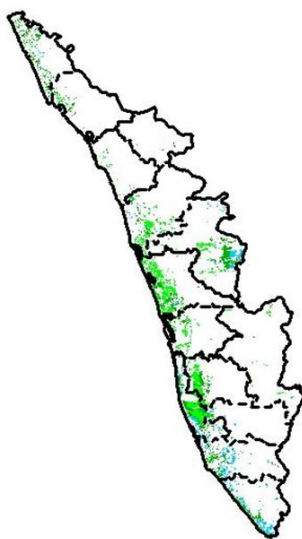
Agriculture vigour is good over central part of Jammu & Kashmir, whereas the remaining region shows moderate NDVI.

Jharkhand



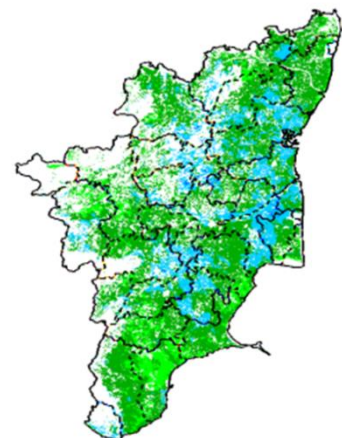
Agriculture vigour is moderate over entire state of Jharkhand.

Kerala



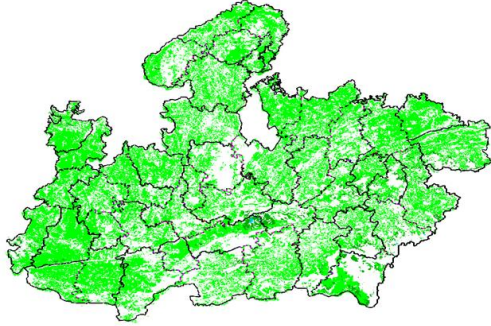
Agriculture vigour is moderate over entire state of Kerala.

Tamil Nadu



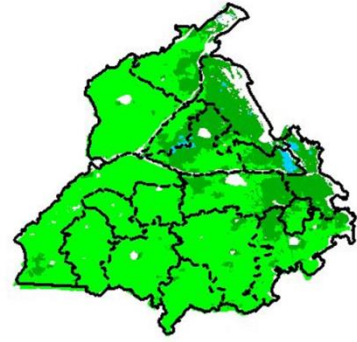
Agricultural vigour is good in patches of central part of Tamil Nadu, whereas rest of the part shows moderate NDVI.

Madhya Pradesh



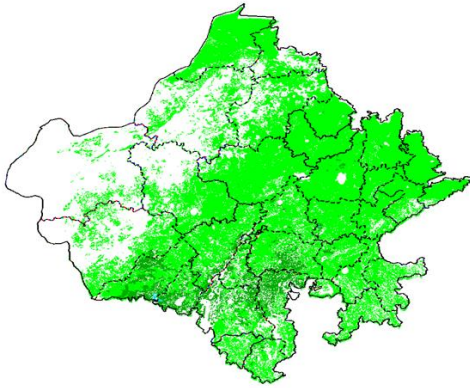
Agriculture vigour shows moderate values of NDVI over entire state of Madhya Pradesh.

Punjab



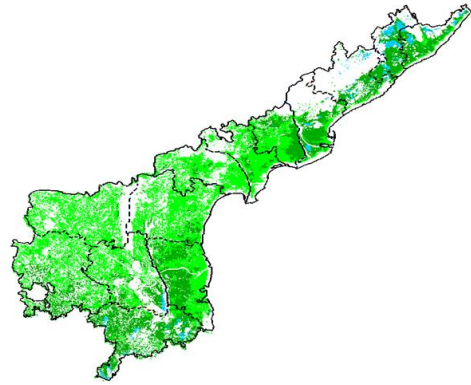
Agricultural vigour is moderate over the entire state of Punjab.

Rajasthan



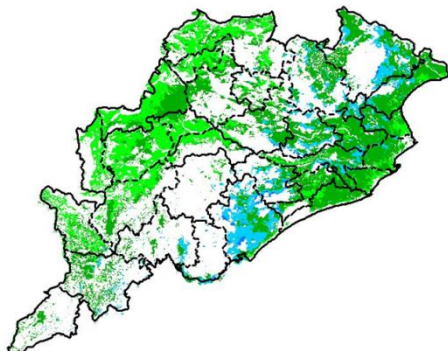
Agriculture vigour is moderate over the entire state of Rajasthan.

Andhra Pradesh



Agriculture vigour is moderate over the entire state of Andhra Pradesh.

Odisha



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

Haryana



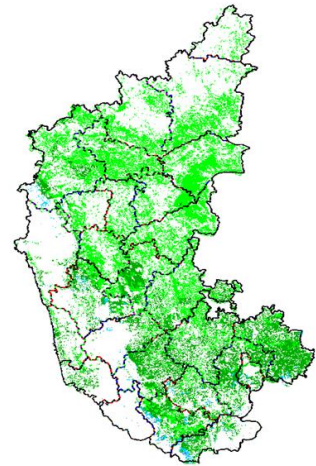
Agriculture vigour is moderate over entire state of Haryana.

Chhattisgarh



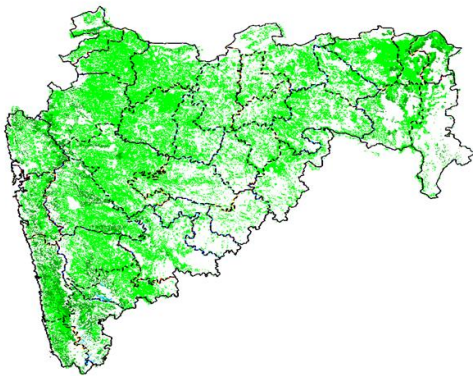
Agriculture vigour is moderate in the state of Chhattisgarh.

Karnataka



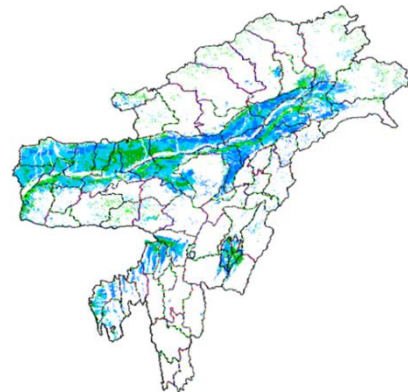
Agriculture vigour is moderate over Karnataka state.

Maharashtra

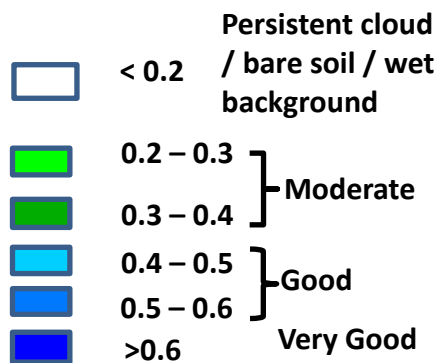


Agricultural vigour is moderate over entire state of Maharashtra

North East Region



Agriculture vigour is good over north-east states of country.



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, Basundhara, T.T.B.-404, Mulagabharu, Kanaklata, Joymoti, IR-36, IR-64 etc and Disang, Luit, Kapilee, Dikhov (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, Korg Honey Dew, Co-1, Co-2, Pusa Delicious, Pusa Majesty.
- Guava:** Alahabad Safeda, Lucknow-49, Chittidar, Seedless.
- Fodder crops :** Hybrid Napier, Setaria and Guinea.

Meghalaya

- Sali/ kharif rice:** Shahsarang -1, Lampnah, IR 64, Ranjit, RCPL 1-412, RCPL 1-410, RCPL 1- 411 & local varieties like Mendri, Manipuri.
- Groundnut:** ICGS 76, JL 24.
- Soybean:** JS 335, Bragg, Ankur, Pusa Soubean-1, Local JS 2.

Nagaland

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

Tripura

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

Odisha

- Sugarcane:** Nilamadhaha, Sabitri, Co 7508, Co 7704, Co 62175, Co 740, Co 7219, CoJ 8201, Co 975, Co 7706, Co 8402, Co 62175.
- Groundnut:** Smruti, AK 12-24 TAG

Bihar

- Kharif onion:** Agri Found Dark Red (ADR), N-53, Bhima super, Arka kalian.
- Turmeric:** Rajendra Sonia and Rajendra Sonali.
- Ginger :** Maran and Nadia.
- Rice:** Hybrid varieties: - KRH 2, PHB 71, PUSA RH 10.
Pant hybrid: Dhan1.
For low lying land (Long duration varieties): Rajendra mehsoori 1, MTU 7029 (Swarna) etc.
- Kharif maize:** Devki, Suwan, Shaktimaan-1, Shaktimaan-2, Rajendra shanker makka-3 and Ganga 11

Jharkhand

- Lentil:** P.L.-406, P.L.-639, K.L.S -218, K-75
- Barley:** Jyoti, Ratna, D.L.-36, B.R.-32
- Linseed:** Sweta, Shubhra, T-397
- Onion:** N-53, Pusa red, Arka nikan, Arka kalian

Jammu & Kashmir

- Cabbage:** Golden Acre, Pride of India and Pusa Mukta.
- Cauliflower:** Giant Snow Ball, Pant Gobh 2 & 3 and Pusa Synthetic.

Uttarakhand

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

Himachal Pradesh

- Cauliflower:** snowball and Giant snowball.
- Radish:** Japanese white, Chinese pink and mino early white
- Turnip:** PTWG-1

Carrot:Pusakesar
Fenugreek :I.C. 74, kasoori.
Peas :Mater ageta-6 (early variety).
Cabbage:Pride of India, golden achor and hybrid

East Uttar Pradesh

Sugarcane: coj-64, cos-96268, cos-98231, cos-767, cos-84, cos-32, copant-84212, Ko.Sha.-88230, 95255, Ko.Sha.-95436, 01235.
Tomato: pusa early, pusa ruby, HS 101, Pant Ta-2, Azad Ta-2, Narendra Tamatar-1,2,4,5,6
Cauliflower: pusaDipali.
Okra:PusaSawani, VarsaUphar, Azad kranti.
Brinjal: Pant Samrat, Pant Rituraj, Pusa hybrid-6.
Cabbage:Japani, PusaDieepali, PusaKartiki
cowpea: Lobia-263 & Pusa phaguni
Chilli: Pant C-1, Jwala and Sadabahar etc.
Grapes: parlet, beauty seedless, pusa seedless.
Maize: nawjyoti, kanchan, gaurav, surya, navin, shweta, Azad uttam, prakash, dikalb-7074, payridikalp-8144, dakkan-115, mmh-135, pro-4212, ganga-11, pusa, makka-2, J.H.-3459,
Urad: TA-9, narendra urad-1, Azad urad-1, Uttara, azad urad-2, shekhar-2, pant. u. 19, pant u. 30, pant u. 35, P.D.U.-1
Mung: k-851 and JM-721, Narendra mung-1, Malviya jagruti, Janpriya, Meha, H.U.M.-16, Malviya Jyoti, T.M.V.-37, Samrat, P.D.M.-139, H.U.M.-12, pusa vaishakhi, T.A.-44, Pant mung 12, pusa vishal, pusa-9531, P.D.M.-11, S.M.L.668
Onion: Agrifound light red, Nashik selection-1
Radish: pusa chetaki, pusa himani, pusa saris, pusa reshmi, japanis white radish.

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 Chuhara, 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 sughanda-4 (Pusa 1121), Ranvir basmati and Taravadi basmati.
Pigeon pea: Pusa 2001, Pusa 992, Paras, Manak.

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.
Amaranths: 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.

West Rajasthan

Isabgol: RI 89 & GI-2.
Fenugreek:RMt 1 & RMt 305.
Barley: RD 2052, RD 2035 (suitable for saline and alkali soils) and RD 2715 (dual purpose), RD2058, 2503, 103, NDB1173.
cumin: GC 4, RZ -19, RZ 223, RZ19, 209, 223 and GC4b.
Cowpea:RC-19, RC-101, RCP-27.
Oat:OS 6, OS 9.
Berseem: BL 10, BL 22.
Cauliflower:Pusa snow ball K-1, Hisar-1, Dania and Selection-7.
Radish:PusaRashmi.
Carrot: PusaKeshar.

Zaid moong: K-851, PDM-11, SML-668 Pusa Baisakhi, RMG-62, RMG-268 etc.
Tinda: Bikaneri green, dilpasand
Cucurbit: Lakhnau ageti and Arkasital,
Muskmelon: Durgapura madhu, Punjab sunehri, Punjab hybrid and pusa madhuras
Watermelon: sugar baby, Durgapura mitha, Durgapura lal and khira
Sugarcane: CO-6617, 7717; COS- 95255, 767
Desi cotton: RG-8, 18, HD-123, hyb Raj- DH 9

East Rajasthan

Muskmelon: Durgapura madhu, Punjab sunehri, Punjab hybrid, arkajeet, hara madhu, pusa madhuras.
Water melon: Sugar baby, Durgapura meetha, durgapura kesar, arka jyoti(hybrid), madhu (hybrid).
Tinda: Beekaneri green, Dil pasand, arka tinda.
Kakri: Lucknow ageti and arka sheetal.
Zaid Pearl millet (fodder): raj bajra chari, rajko Zaint, L-72, L-74.
Zaid sorghum (fodder): Raj chari-3, Raj chari-1, Raj chari-2 for single cutting and SSG59-3, M.P. chari for many cutting.
Okra: Pusa Savani, Arka anamika, Arka Abhya, Aajad kranti, Prabhni kranti, Pusa-A-4, Pusa Makhmali.
Cowpea: Short durC-152, RS-9, FS-68, RC-19 and RC-101, C-152, RS-9.
Onion: Punjab safed goal, Udaipur 102, nasik red.
Lucerne : Anand-2, LLC-3, RL-88 & Type-9.
Berseem: Muskavivardan and PusaJiant.
Summer groundnut: T.A.G.24, T.G.37A, G.G.2, D.H.86.

Tamil Nadu

Cotton: Surabhi and SVPR-2

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.
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.

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.