



National Agromet Advisory Service Bulletin



Friday 26th August 2016

(For the period 26th to 30th August 2016)



Issued by

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

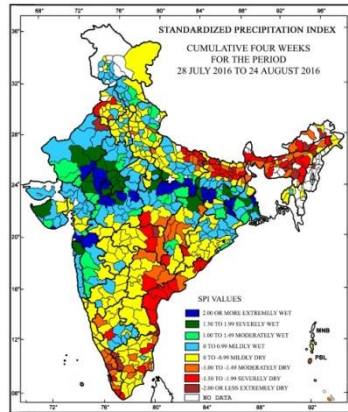
Weblink For

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

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

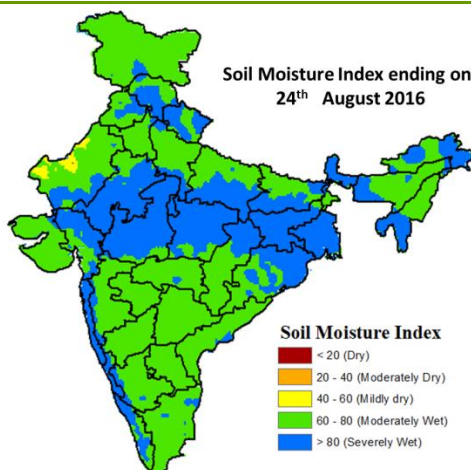
Standardised Precipitation Index Four Weekly for the Period 28th July to 24th August 2016

MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE



- Extremely/severely wet conditions experienced in few districts of West Bengal; Jharkhand; Rajasthan; Bhabua districts of Bihar; Banda, Mirzapur, Sonbhadra, Hamirpur districts of Uttar Pradesh; Mandsaur, Neemuch, Rajgarh, Ratlam, Shajapur, Ujjain, Vidisha, Chhatarpur, Panna, Rewa, Satna districts of Madhya Pradesh; Valsad, Dadara & Nagar Haveli districts of Gujarat Region; Jamnagar and Diu district of Saurashtra & Kutch; Thane district of Konkan & Goa; Nashik districts of Maharashtra; Surguja districts of Chhattisgarh.
- Extremely/Severely dry conditions experienced in most districts of Meghalaya; many districts of Assam; Andhra Pradesh; few districts of Arunachal Pradesh, Bihar; Darjeeling, Jalpaiguri, South Dinajpur districts of West Bengal; Nawarangpur, district of Odisha; Balrampur, Basti, Deoria, Kushi Nagar, Maharajganj, Siddharth Nagar districts of Uttar Pradesh; Ferozepur, Jalandhar districts of Punjab; Hanumangarh district of Rajasthan; Chhindwara district of Madhya Pradesh; Bhandara, Chandrapur, Nagpur districts of Maharashtra; Bijapur district of Chhattisgarh; Nalgonda district of Telangana; Chennai, Coimbatore, Kanyakumari, Nilgiri, Pudukkottai, Tiruvallur, Viluppuram districts of Tamil Nadu & Puducherry; Hassan district of Karnataka; Kottayam, Thrissur, Trivandrum districts of Kerala.
- Moderately dry conditions experienced in few districts of Arunachal Pradesh; Assam; Chhattisgarh; Telangana; Kerala; East Khasi Hills district of Meghalaya; Cooch Behar, Malda districts of West Bengal; Sahibganj district of Jharkhand; Darbhanga, Kishanganj, Purnea, Saran, Sheohar districts of Bihar; Farrukhabad, Gorakhpur, Mau, Sant Kabir Nagar, Ghaziabad districts of Uttar Pradesh; Udham Singh Nagar district of Uttarakhand; Mansa district of Punjab; Balaghat district of Madhya Pradesh; Gadchiroli district of Maharashtra; East Godavari district of Andhra Pradesh; Dindigul, Kanchipuram, Madurai, Namakkal, Thanjavur, Tiruvarur, Karaikal, districts of Tamil Nadu & Puducherry; Shimoga, district of Karnataka; district of Lakshadweep.
- Rest of the country experienced moderately wet mildly dry/mildly wet conditions.

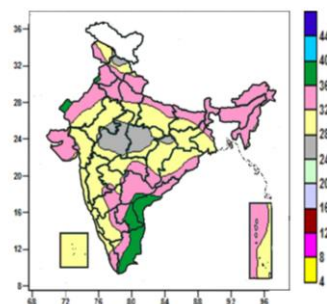
Soil Moisture Index for the week ending on 24th August 2016



- Soil Moisture Index indicates severely wet condition in many parts of Madhya Pradesh, Jharkhand, East Rajasthan, West Bengal, Konkan & Goa, Coastal Karnataka, Kerala, some parts of North-East Region, Bihar, Odisha, Uttar Pradesh, Himachal Pradesh, Uttarakhand, Chhattisgarh, Gujarat Region. Mild dry condition in few parts of West Rajasthan. Rest of the country shows Moderately wet condition.

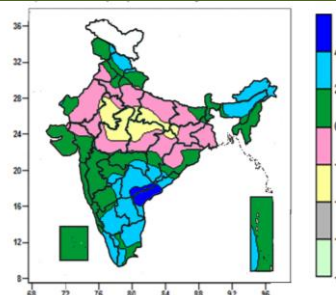
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 24.08.2016

Actual Mean Maximum Temperature (°C) in India for the week ending 24.08.2016



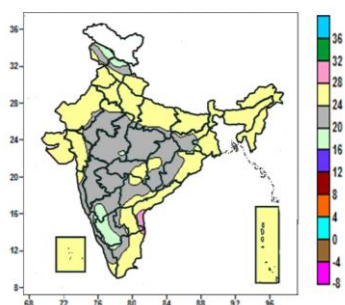
- Mean maximum temperature was between 36 to 40°C over many parts of Coastal Andhra Pradesh, Tamil Nadu, Rayalaseema and isolated pockets of Punjab, West Rajasthan and Telangana.
- Mean maximum temperature was between 28 to 36°C over rest of the country except many parts of Madhya Pradesh, some parts of Himachal Pradesh and isolated pockets of Jammu & Kashmir, East Rajasthan, Chhattisgarh and Jharkhand, where it was between 24 to 28°C.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 24.08.2016



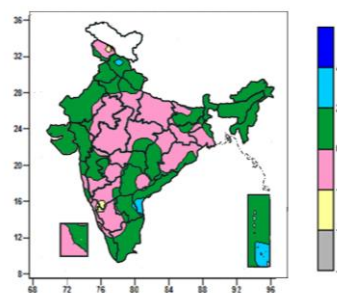
- Mean maximum temperature was above normal by 4 to 6°C over many parts of Coastal Andhra Pradesh, some parts of Telangana and isolated pockets of Rayalaseema.
- Mean maximum temperature was above normal by 2 to 4°C over Arunachal Pradesh, many parts of Himachal Pradesh, Assam & Meghalaya, Telangana, Rayalaseema, South Interior Karnataka, Tamil Nadu, Kerala, some parts of Vidarbha, Chhattisgarh, Marathwada, North Interior Karnataka, Coastal Andhra Pradesh and isolated pockets of Jammu & Kashmir, Uttarakhand, Odisha and Andaman & Nicobar Islands.
- It was normal to near normal over rest of the country except many parts of East Rajasthan, some parts of Uttar Pradesh, Madhya Pradesh and isolated pockets of West Rajasthan, Jharkhand and Chhattisgarh, where it was below normal by 2 to 4°C.

Actual Mean Minimum Temperature (°C) in India for the week ending 24.08.2016



- Mean minimum temperature was between 16 to 20°C over many parts of South Interior Karnataka, some parts of Jammu & Kashmir, Himachal Pradesh, North Interior Karnataka and isolated pockets of West Madhya Pradesh, Coastal Karnataka and Tamil Nadu.
- Mean minimum temperature was between 20 to 28°C over rest of the country except some parts of Coastal Andhra Pradesh, isolated pockets of Rayalaseema, and Tamil Nadu, where it was between 28 to 32°C.

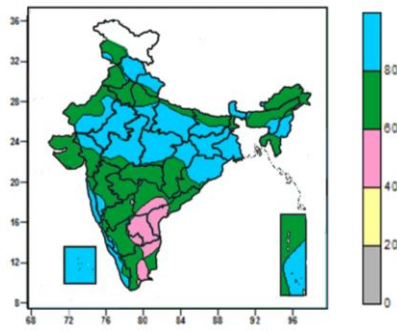
Mean Minimum Temperature (°C) Anomaly in India for the week ending 24.08.2016



- Mean minimum temperature was above normal by 2 to 4°C in some parts of Andaman & Nicobar Islands, Coastal Andhra Pradesh and isolated pockets of Himachal Pradesh and Rayalaseema.
- Mean minimum temperature was normal to near normal over rest of the country except isolated pockets of Jammu & Kashmir and Karnataka, where it was below normal by 2 to 4°C.

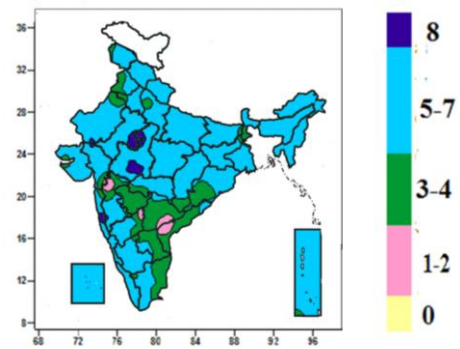
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 24.08.2016

Relative Humidity (%) over India for the week ending 24.08.2016



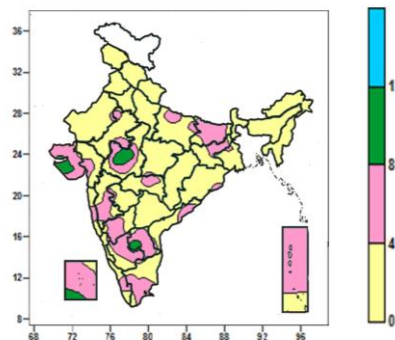
- Mean Relative Humidity was above 80% over Sikkim, Manipur, Jharkhand, Gangetic West Bengal, Lakshadweep, many parts of Himachal Pradesh, Uttarakhand, East Uttar Pradesh, East Rajasthan, Madhya Pradesh, Bihar, Odisha, Sub-Himalayan West Bengal, Konkan & Goa, Coastal Karnataka, Kerala, some parts of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

Cloud amount (okta) over India for the week ending 24.08.2016



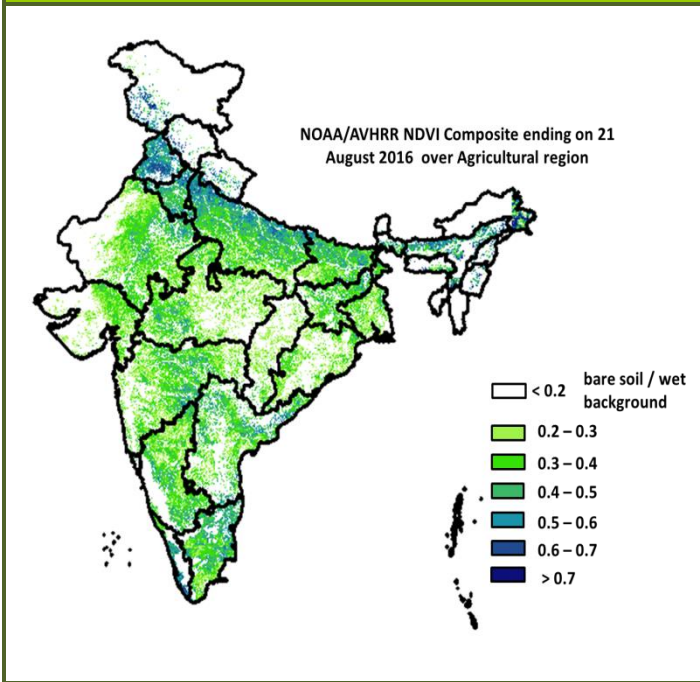
- Sky remained overcast (8 okta) over some parts of West Madhya Pradesh and isolated pockets of Rajasthan, Gujarat Region, Madhya Maharashtra and Konkan.
- Sky remained generally cloudy (5-7okta) over rest of the country except many parts of Marathwada, Telangana, Rayalaseema, Coastal Andhra Pradesh, Tamil Nadu, some parts of Punjab, Sub Himalayan West Bengal, Madhya Maharashtra, Vidarbha, Chhattisgarh, Odisha, North Interior Karnataka and isolated pockets of Jammu & Kashmir, Haryana, West Uttar Pradesh, Bihar, Jharkhand, Gangetic West Bengal, West Rajasthan, Gujarat, Konkan, South Interior Karnataka and Andaman & Nicobar Islands, where it was partly cloudy/mainly clear sky (3-4/1-2 okta).

Wind speed (knots) over India for the week ending 24.08.2016



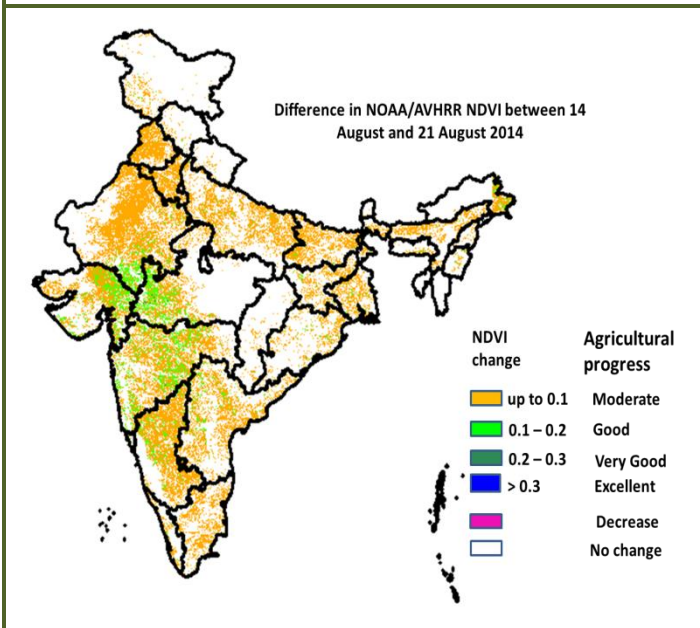
- Mean wind speed was between 8 to 12 knots over some parts of West Madhya Pradesh, Saurashtra & Kutch, Rayalaseema, Lakshadweep and isolated pockets of South Interior Karnataka.
- Mean wind speed was between 0 to 4 knots over rest of the country except many parts of Bihar, Saurashtra & Kutch, Interior Karnataka, Rayalaseema, Lakshadweep, Andaman & Nicobar Islands, some parts of East Uttar Pradesh, Jharkhand, East Rajasthan, West Madhya Pradesh, Gujarat Region, Madhya Maharashtra, Vidarbha, Coastal Andhra Pradesh, Konkan, Tamil Nadu, Kerala and isolated pockets of Gangetic West Bengal, West Rajasthan, East Madhya Pradesh, Odisha, Marathwada and Coastal Karnataka, where it was between 4 to 8 knots.

NOAA/AVHRR NDVI COMPOSITE ENDING ON 21st AUGUST 2016 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour is good in most parts of Kerala, North Tamil Nadu, Coastal Andhra Pradesh, northern parts of Uttar Pradesh, Punjab, Haryana, parts of east Bihar, North east region where NDVI varies from 0.5 to 0.7. NDVI is moderated in few parts of Bihar, Haryana, Gujarat, East Rajasthan, East Madhya Pradesh, Telangana, Andhra Pradesh, Karnataka, Tamil Nadu, Odisha, West Bengal and Jharkhand (NDVI 0.3 to 0.5). Agricultural growth was below moderate (< 0.3) over some patches of west Rajasthan, east Madhya Pradesh and some patches in Maharashtra.

DIFFERENCE IN NOAA/AVHRR NDVI BETWEEN 14th and 21st AUGUST 2016



- Good progress was observed in patches over Maharashtra, Karnataka, patches in west Madhya Pradesh, southern Rajasthan and Gujarat where, NDVI change ranges from 0.1-0.2. Moderate progress in NDVI was observed in Rajasthan, Punjab, Haryana, Uttar Pradesh, Bihar, Karnataka and patches in West Bengal, Odisha, Andhra Pradesh, Tamil Nadu, Maharashtra and Gujarat.

- NOAA/AVHRR NDVI composite maps for the week ending on 25th August 2016 for different States are given in Annexure II.

Monsoon Watch

- Southwest monsoon was vigorous over Punjab, Saurashtra & Kutch, active over West Rajasthan and Gujarat Region.

Weather Forecast for next 5 days valid upto 0830 hours of 31st August 2016

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

5 Day Rainfall Forecast (MID DAY) 26th August 2016

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

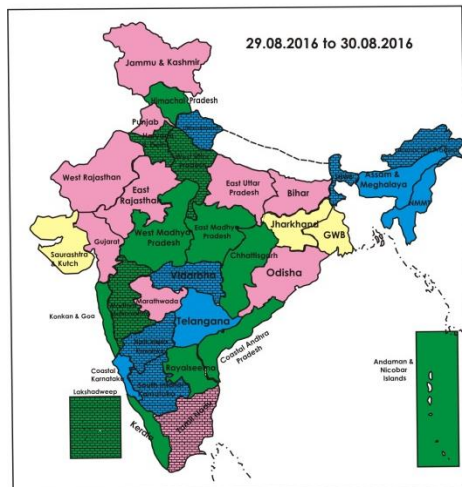
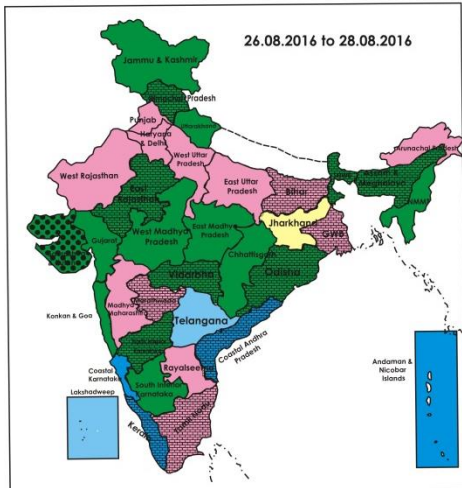
- 26 August (Day 1):** Heavy rain at isolated places very likely over Madhya Pradesh, Chhattisgarh, Odisha, Coastal Andhra Pradesh, Coastal Karnataka and Kerala.
- 27 August (Day 2):** Heavy rain at isolated places very likely over southeast Rajasthan, East Madhya Pradesh, Chhattisgarh, Coastal Andhra Pradesh and Kerala.
- 28 August (Day 3):** Heavy rain at isolated places very likely over southeast Rajasthan, Coastal Andhra Pradesh and Telangana.
- 29 August (Day 4):** Heavy rain at isolated places very likely over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Telangana and North Interior Karnataka.
- 30 August (Day 5):** Heavy rain at isolated places very likely over Sub-Himalayan West Bengal & Sikkim,

Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Telangana, North Interior Karnataka and South Interior Karnataka.

Weather Outlook for subsequent 2 days from 31st August to 2nd September 2016

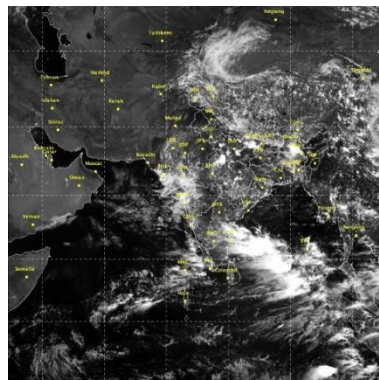
- Rain at most places very likely over northeastern states.
- Rain at many places very likely over central & adjoining northwest India, interior peninsular, along west coast and Andaman & Nicobar Islands and at a few places over rest peninsular India.

Weather Forecast Map (valid upto 0830 hours of 31st August, 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

Satellite image dated, 26.08.2016 0600 UTC



Salient Advisories

- In **Bihar**, the districts of Vaishali, Bhojpur, Patna, Saran, Buxar, Samastipur (4 blocks), Begusarai, Lakhisarai, Khagaria, Bhagalpur, Munger and Bhagalpur are affected by floods due to the rising water level of river Ganga. The flood has damaged the standing crops like rice, maize, arhar, banana and vegetables. In case of severe damage, after receding of flood water, in the upland areas, sowing of arhar, black gram and early cauliflower, tomato, radish, brinjal, pointed gourd and in medium land situation sowing of toria, sunflower by the end of this month is suggested. Maintain 2-3 cm water level in transplanted rice fields.
- Due to heavy rain during past three days, flood was reported in Rewa, Satna, Damoh and Panna districts of East **Madhya Pradesh** and rainfall is likely to continue during next 5 days, in the flood affected districts, drain out excess water and maintain upto 5 cm water level in transplanted rice fields. In **West Madhya Pradesh**, as flood was also reported in Vidisha, Agar, Rajgarh and Ujjain districts, drain out excess water from *kharif* soybean, maize, pulses and vegetable fields.
- In Hooghly and Howrah districts of **Gangetic West Bengal**, in view of excess rainfall and flooding, drain out excess water from maize and vegetables crop fields. Maintain 3-5 cm of water level in *Aman* rice fields.
- In **East Rajasthan** due to heavy rain during the week water logging was observed in maize, pearl millet, cotton, green gram, black gram and cotton fields in Banswara, Jhalawar, Chittorgarh and Pratapgarh, drain out excess water from the crop fields.
- In **Madhya Maharashtra**, in view of subdued rainfall activity during last few days, apply light protective irrigation in red gram, groundnut, cotton, jowar and soybean. Farmers are advised to maintain water level of 3-5 cm in transplanted rice fields in Western Ghat Region.
- In **Marathwada**, in view of subdued rainfall activity during last few days, apply light protective irrigation to soybean, late sown sorghum, pearl millet, cotton, sugarcane, turmeric and vegetables. Spray Potassium Nitrate 2 % (200 g per 10 litre of water) in soybean and late sown sorghum crop. Apply irrigation to soybean and late sown sorghum by sprinkler irrigation system. In cotton crop, spray Magnesium Sulphate @ 20 g per 10 litres of water at 55 to 60 DAS (Square formation to flowering stage). Also spray Potassium Nitrate (13:00:45) @ 100 to 150 g per 10 litres of water during water stress condition. Undertake dust mulching in horticultural crops to reduce the loss of water by evaporation from soil.
- In **Rajalaseema**, as there is no significant rain since last three weeks and also rain is expected only at a few places during next 3 days, give light protective irrigation to groundnut, castor and korra crops by utilizing rain guns or sprinklers. In Chittoor district, as groundnut crop is suffering from water stress conditions, to protect the crop, spray 2% Urea solution @ 20 g/litre of water on the crop. Give light protective irrigation through sprinkler or rain guns wherever irrigation facility is available.
- As rain/thundershowers likely at most places over **Coastal Karnataka**, most/many places over **Kerala**, **South Interior Karnataka** and **Coastal Andhra Pradesh** during the period, over **Telangana** from 27th to 30th and over **North Interior Karnataka** from 28th to 30th August, do not apply irrigation, fertilizers and plant protection measures to the standing crops. Undertake rain water harvesting.
- As heavy rain very likely at isolated places over **Coastal Andhra Pradesh** from 26th to 28th, over **Telangana** on 28th, 29th and 30th, over **Kerala** on 26th & 27th, over **Coastal Karnataka** on 26th, over **South Interior Karnataka** on 30th and over **North Interior Karnataka** on 29th & 30th August, provide adequate drainage in standing crop fields.
- As rain/thundershowers likely at most/many places over **Arunachal Pradesh** on 29th & 30th, over **Assam & Meghalaya** from 28th to 30th August and over **Nagaland, Manipur, Mizoram and Tripura** during the period, over **Andaman & Nicobar Islands** during the period, over **Sub-Himalayan West Bengal & Sikkim** on 26th, 29th and 30th, at many places over **Odisha** on 26th, over **Madhya Pradesh** and **Chhattisgarh** during the period, do not apply irrigation, application of plant protection measures and fertilizers to the standing crops. As heavy rain likely at isolated places over Arunachal Pradesh and Nagaland, Manipur, Mizoram and Tripura on 30th, over Assam &

Meghalaya on 29th & 30th August, provide adequate drainage in standing crop fields.

- As heavy rain very likely at isolated places over **Odisha** on 26th, over **Sub-Himalayan West Bengal & Sikkim** on 29th & 30th, over **Madhya Pradesh** on 26th, over **East Madhya Pradesh** on 27th and over **Chhattisgarh** on 26th and 27th August, provide adequate drainage in standing crop fields.
- As rain is very likely at most/many places over **Uttarakhand** during the period, at many places over **Himachal Pradesh** from 27th to 30th, over **Jammu and Kashmir** from 26th to 28th, over **west Uttar Pradesh** on 30th, over **Haryana, Chandigarh & Delhi** on 30th and over **East Rajasthan** on 27th & 28th August, 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 **Southeast Rajasthan** on 27th and 28th August, provide adequate drainage in standing crop fields.
- Normal agricultural activities are continued in rest part of the country.

Detailed Zonewise Agromet Advisories

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



Banana



Rice



Sugarcane



Red gram

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala except Alappuzha, Malappuram, Palakkad, Thiruvananthapuram and Thrissur, in all districts of Coastal Karnataka, Chikkamagaluru, Kodagu and Shivamogga districts of South Interior Karnataka, Kancheepuram and Puducherry districts of Tamil Nadu. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most places over Coastal Karnataka, most/many places over Kerala, South Interior Karnataka and Coastal Andhra Pradesh during the period, over Telangana from 27th to 30th and over North Interior Karnataka from 28th to 30th August, do not apply irrigation, fertilizers and plant protection measures to the standing crops.
 - As heavy rain very likely at isolated places over Coastal Andhra Pradesh from 26th to 28th, over Telangana on 28th & 29th & 30th, over Kerala on 26th & 27th, over Coastal Karnataka on 26th, over South Interior Karnataka on 30th and over North Interior Karnataka on 29th & 30th August, provide adequate drainage in standing crop fields.
 - **Kerala:**
 - In Kannur, Kasaragod, Malappuram and Kozhikode districts, spread lime in the main vegetable fields prior to transplanting and use *Trichoderma* enriched farm yard manures as a preventive measure against soil borne pathogens.
 - Continue harvesting of Nendran bananas and tapping of rubber in Thiruvananthapuram district in clear weather.
 - In Kottayam district, undertake strict field surveillance to monitor the incidence of black bug in rice. If pest population level exceeds threshold level, spray Acephate @ 1.6 g/litre of water for control. Care should be taken to spray at basal portion of plants and drain water for 2-3 days.
 - In Palakkad, Ernakulam and Thrissur districts of Central Zone of Kerala, (due to high humidity), there is a chance of sigatoka disease in banana. As a precaution, spray *Pseudomonas* @ 20g/litre of water. In case of severe attack, spray Bavistin @ 1 gm by mixing it with gum in 1 litre of water on lower surface of the leaves after current spells of rain.
 - In Kannur, Kasaragod, Malappuram and Kozhikode districts, prevailing weather conditions are congenial for incidence of case worm in rice. Drain off water from rice fields and apply Takumi @ 3g/10 litres of water if infestation is severe.
 - In Thiruvananthapuram district, in fields where sigatoka disease is a problem in bananas, apply Propiconazole (Tilt) 1ml/ litre on the lower side of leaves after cutting and removing the badly affected leaves. Farmers are advised to ensure that the cut leaves are not left in the field. Also, spray 2% neem oil-garlic emulsion or Dimethoate 30 EC @ 1.5 ml/litre of water to control stunted growth in chillies. Undertake plant protection methods after current spells of rain.
 - **Karnataka:**
 - In Karnataka, maintain 3-5 water level in rice. Complete transplanting of rice by end of August in Uttar Kannada district of Hill Zone.
 - Provide protective irrigation to soybean, red gram, sugarcane and ginger in Bidar district of North East Transition

Zone. Undertake harvesting of green gram in clear weather. Carry out weeding/intercultural operations to conserve soil moisture and earthing-up of rows in soybean and pigeon pea. Spray 2% urea (20 g urea in one liter of water) in soybean at 50% flowering stage.

- Undertake harvesting of matured green gram in clear weather in Dharwad, Belagavi and Haveri districts of North Transition Zone. Carry out intercultural operations in maize, cotton, groundnut and sugarcane crops.
- Continue harvesting of green gram and black gram in Ballari, Kalaburgi, Koppal, Raichur and Yadgir districts of North East Dry Zone. Take up spraying of 19:19:19 dissolved in one litre of water in red gram for better growth.
- Complete sowing of desi cotton, sunflower and fodder crops in medium black to deep black soils and sowing of sunflower, horsegram in shallow and red soils in Vijayapura, Gadag and Bagalkote districts of North Dry Zone with sufficient moisture condition. Complete harvesting of matured green gram in clear weather. Carry out weeding in groundnut crop and intercultivation in sugarcane.
- Complete sowing of short duration crops like ragi (HR-911, Indaf-5, 9, GPU-26, 28, 45, 48 and 66, PR-202) and sowing of contingent crops like miner millet viz. foxtail millet, kodo millet, proso millet, ragi, jowar, maize and pulses like avare, cowpea except green gram, black gram, niger and sesamum in Chamrajnagar, Mandya and Mysuru districts of Southern Dry Zone.
- Carry out sowing of ragi in Bengaluru Rural and Bengaluru Urban districts of Eastern Dry Zone under sufficient moisture condition. Provide protective irrigation to standing crops. Undertake residue mulch to standing crops like red gram, maize etc. to conserve soil moisture. Carry out intercultural operations in earlier sown maize and groundnut crops on a non-rainy day to control the weeds and to increase the moisture availability to crops.
- Reddening of leaves in cotton was noticed in cotton in North East Dry Zone; to manage, take up spraying of 19:19:19 and MgSO₄ both 10 g dissolved in one litre of water on a non rainy day.
- Due to cloudy weather thrips and leaf roller infestation was noticed in rice field in Chamrajnagar, Mandya, Kodagu and Mysuru districts Southern Dry Zone; to manage thrips, spray Roger @ 1.7 ml per litre of water and to manage leaf roller spray Chloropyriphos 20 EC @ 2ml/litre or Roger @ 1.7 ml/litre of water on non rainy day.
- Infestation of brown plant hopper is noticed in rice crop in Ballari, Kalaburgi, Koppal, Raichur and Yadgir districts North East Dry Zone; to control, spray the crop with Chloropyriphos @ 2.0 ml or Monocrotophos @1.5 ml dissolved in one litre of water on non rainy day.
- Infestation of Spodoptera litura was noticed in soybean, black gram in North East Transition Zone; for control, spray Triazophos 40 E.C @ 2 ml or Lambda Cyhalothin 5 E.C. @ 0.5 ml/litre of water on a non rainy day.

▪ **Andhra Pradesh:**

- In Guntur district, undertake dry sowing of irrigated rice (MTU-1006) with gorru and use 30-36 kgs of seed, after seed treatment with Carbandazim @ 2.5 g/kg of seed. Continue sowing of pulses, maize and cotton in all the districts of Coastal Andhra Pradesh.
- In Rayalaseema, as there is no significant rain since last three weeks and also rain is expected only at a few places during next 3 days, give light protective irrigation to groundnut, castor and korra crops by utilizing rain guns or sprinklers. In Chittoor district, as groundnut crop is suffering from water stress conditions, to protect the crop, spray 2% Urea solution @ 20 g/litre of water on the crop. Give light protective irrigation through sprinkler or rain guns wherever irrigation facility is existing.
- In East Godavari district, spray Chlorothalonil@400g/acre, if tikka leaf spot is observed in groundnut after current spells of rain.
- In Coastal Andhra Pradesh, prevailing dry weather conditions are congenial for stem fly and spodoptera infestation in pulses. To control stem fly, spray Monochrotophos @ 1.6 ml or Acephate @ 1 g or Dimethioate @ 1.5 ml/litre of water. To control spodoptera, spray 2.0 ml Quinalphos + 1.0 Dichlorwas/litre of water. If intensity is severe, spray Spinsad or Renoxyphir @ 0.4 g or 0.2 ml Flubendimyde/litre of water. Undertake plant protection methods after current spells of rain.
- In Kadapa district, prevailing dry weather conditions are congenial for incidence of pink boll worm in cotton. To control, keep pheromone traps @ 10/acre and spray Profenophos @ 2.5 ml. or Thiodicarb @ 1.5 g/litre of water on a non rainy day.

▪ **Telangana:**

- In Mahabubnagar, Nalgonda, Medak, Rangareddy, Khammam and Warangal districts (South Telangana Zone), undertake sowing of vegetables and treat vegetable seeds with Imidacloprid @ 5g and Captan @ 3g per kg seed to prevent the incidence of sucking pests and leafspot disease in nursery.
- In Adilabad, Karimnagar, Nizamabad and Khammam districts (North Telangana Zone), prevailing weather conditions (partially cloudy and light rains) are congenial for incidence of turicum leaf blight in maize. To control, spray Acephate @ 1.5 g/litre of water is recommended on a non rainy day.

▪ **Tamil Nadu:**

- In Ariyalur, Nagapattinam, Perambalur, Thanjavur, Thiruvarur and Trichy districts, in direct sown wet seeded rice, apply Pretilachlor + safener @ 500 ml/acre on 3-4 days after sowing to control weeds, continue land preparation and sowing of Samba rice (varieties CR 1009 and ADT 50) after seed treatment with Pseudomonas Fluorescence 10g/kg of seed before sowing.
- In Coimbatore, Tiruppur, Erode districts, undertake sowing of irrigated bajra, continue harvesting of early sown groundnut. Considering the increasing wind speed, propping may be done in early season sugarcane and above 5 months old banana and avoid broadcasting of fertilizer and spraying of pesticides.

- In the Southern Zone (Kanniwadi), continue harvesting of onion and since the wind speed is more than 16 KMPH, propping may be given to five months and old banana.
- In Karaikal and Puducherry, continue land preparation and sowing of long duration varieties of Samba rice like (CR 1009 and KCLR 1).
- In Nammakal, Salem, Dharmapuri and Krishnagiri, to increase yield and induce drought resistance in cotton, apply 2.5 kg/acre of “Cotton Plus” booster with nutrients and growth regulators twice at flowering and at boll initiation stage and continue harvesting of onions.
- In Kanyakumari district, provide sufficient irrigation to vegetables to protect them against high temperature and continue basin preparation for pepper, clove, nutmeg and cinnamon for better rain water harvest. As heavy winds are expected, staking should be given to banana trees.
- In Ariyalur, Nagapattinam, Perambalur, Thanjavur, Thiruvarur and Trichy districts, leaf mite incidence is noticed in Kuruvai rice fields due to prevailing weather condition. To manage this, spray Dicofol @ 500 ml/acre, or Wettable Sulphur @ 400g/acre with 200 litres of water.
- In Chennai district, undertake spraying of Edifenphos @ 750 ml/ha at 30, 45 and 60 DAT for management of blast, sheath rot and brown spot observed in rice.
- In Thoothukudi, Virudhunagar and Tirunelveli districts, stem borer and leaf folder incidence was noticed in rice. To control these pests, release Trichogramma japonicum for stem borer and Trichogramma chilonis for leaf folder thrice @ 1,00,000/ha (or) spray Bacillus thuringiensis 1 kg/ha.
- Suitable varieties for sowing are given in Annexure III.
- ❖ **Animal Husbandry**
- In the Western Zone of Tamil Nadu, heavy wind and cloudiness may cause thirst for water in animals. Hence, provide adequate clean drinking water.
- In the Southern Zone of Tamil Nadu, due to increase in day temperature, farmers are advised to cover the animal shed roof with paddy straw or white washing the roof to reduce the temperature inside the animal house.

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



Banana



Rice



Groundnut



Jute

- **Realised Rainfall:** Rainfall occurred in Changlang, Lohit, Lower Dibang Valley, Tirap and West Kameng districts of Arunachal Pradesh, Barpeta, Bongaigaon, Dhubri, Goalpara, Hailakandi, Karimganj and Kokrajhar districts of Assam, East Khasi Hills and West Garo Hills districts of Meghalaya, Aizwal, Lunglei, Saiha and Serchhip districts of Mizoram and North Tripura and South Tripura districts of Tripura. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most/many places over Arunachal Pradesh on 29th & 30th, over Assam & Meghalaya from 28th to 30th August and over Nagaland, Manipur, Mizoram and Tripura during the period, do not apply irrigation, application of plant protection measures and fertilizers to the standing crops.
 - As heavy rain likely at isolated places over Arunachal Pradesh and Nagaland, Manipur, Mizoram and Tripura on 30th, over Assam & Meghalaya on 29th & 30th August, provide adequate drainage in standing crop fields.
 - **Assam, Meghalaya & Arunachal Pradesh:**
 - In Dibrugarh, Golghat, Jorhat, Sivsagar and Tinsukia districts of Upper Bramhaputra Valley Zone, continue transplanting of Sali rice and sowing of sesame. Undertake land preparation for sowing of green gram and black gram and nursery sowing of cauliflower.
 - In Nagaon and Marigaon districts of Central Bramhaputra Valley Zone of Assam, continue sowing of green gram and black gram. Continue harvesting of early and timely sown olitorius jute.
 - In Lower Bramhaputra Valley Zone and North Blank Plain Zone of Assam, continue transplanting of Sali rice. Continue sowing of *kharif* pulses like green gram and black gram.
 - In Karimganj, Hailakandi and Cachar districts of Barak valley Zone of Assam, complete transplanting of cauliflower in the main field.
 - In Karbi Anglong and NC Hills districts of Hill Zone of Assam, continue sowing of radish and nursery sowing of early cauliflower. Continue land preparation and sowing of *kharif* pulses like green gram and black gram and main land preparation for transplanting of early cauliflower/broccoli, radish.
 - In Dhemaji, Darrang, Lakhimpur and Sonitpur districts of North Blank Plain Zone of Assam, continue nursery sowing of early cauliflower and sowing of *kharif* sesame, green gram and black gram.
 - In East Garo Hills, East Khasi Hills, Jaintia Hills, Ri-Bhoi, South Garo Hills, West Garo Hills and West Khasi Hills

districts of Meghalaya, continue transplanting of Sali/*kharif* rice. Undertake replanting of dead hills or gap filling with seedlings of similar age within 7-10 days of transplanting.

- In Arunachal Pradesh, continue sowing of black gram and green gram. Undertake harvesting of *jhum* rice/upland rice.
- In Arunachal Pradesh, for management of pod borer in pulses at fruiting stage, spray Fipronil @ 2ml/10 litre against pod borer. Also for management of soft rot in ginger, need based drenching of Metalaxyl-8% + Mancozeb 64% WP @ 2.5 g per litre of water.
- In Assam, to control attack of hispa in Sali rice at tillering stage apply Chloropyriphos 20 EC (0.02%) or Quinolphos 25 EC (0.025%) or Carbofuran 3G(0.05%) @ 1.5ml per litre of water on a non rainy day.
- In Barak valley Zone of Assam, to protect coconut from crown rot disease, apply 25 gm Borax in a trench of 15 cm width and 10 cm depth at a distance of 1 to 1.75 m away from the trunk.

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

- In Dimapur, Kephire, Kohima, Longleng, Mokokchung, Mon, Paren, Phek, Tuensang, Wokha and Zunheboto districts of Nagaland, complete harvesting of maize. Bunds/Ridges may be prepared in main *kharif* rice fields to maintain optimum water level of 5-8cm. Apply Bordeaux paste on the citrus tree trunk upto 60cm height from ground level.
- In Bishnupur, Chandel, Churachandpur, Imphal East, Imphal West, Senapati, Tamenglong, Thoubal and Ukhrul districts of Manipur, continue nursery raising of cabbage, cauliflower, broccoli.
- In Tripura, maintain adequate drainage in groundnut fields particularly in lowland where chances of stagnant water due to rain is more.
- In Manipur, there is chance of attack of stem borer/gall midge/plant hoppers or thrips in main *kharif* rice at tillering stage. Spray Coragen 3-5 ml per 15 litre of water after current spells of rain.
- In Tripura, cloudy and humid weather is conducive for the attack of white grub in groundnut. The attack may be controlled by soil application of 10% Phorate @ 10 kg/ha. Also there is chance of leaf blight and stem borer attack on maize. Spray Zineb, 3gm per litre of water against leaf blight and spray Novacron 2ml per litre of water against stem borer in maize. Undertake plant protection methods after current spells of rain
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In Northeastern states, carry out immunizations against FMD, HS and BQ in cattle & buffaloes and swine fever in pigs during monsoon season. Carry out vaccination (RDF1) against Ranikhet disease in one week old chicks and Gamboro disease in two weeks old chicks. Cattle and buffalo should not be fed with water submerged rotten grasses. Need based use of anti-worm drugs may help the cattle to get rid of liver ailments.
- In Nagaland, precaution should be taken against Japanese encephalitis, a mosquito borne disease in piggery. Avoid stagnant water in and around the sty, maintain proper hygienic condition.
- In Arunachal Pradesh, carry out disinfecting the animal/bird sheds with lime powder/ bleaching powder/ 4% NaOH at regular interval.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Maize



Groundnut



Rice



Red gram

- **Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa, in Kolhapur district of Madhya Maharashtra, in all districts of Gujarat Region except Ahmedabad, Anand, Bharuch, Gandhinagar, Narmada, Navsari, Surat, Tapi and Vadodara districts, weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain/thundershowers likely at many places over Konkan & Goa during the period, over Madhya Maharashtra on 30th and over Vidarbha from 27th to 30th, over Gujarat Region from 26th to 28th and over Saurashtra & Kutch on 26th August, do not apply irrigation, application of plant protection measures and fertilizers to the standing crops.

▪ **Maharashtra:**

- In Konkan, maintain water level of 3-5 cm in rice field. Undertake soft wood grafting programme for mango nursery. Undertake intercultural operations like weeding and earthing up in vegetables. Drain out excess water from the field. Apply second one third dose of urea @ 720 to 870 g per Are (100 m²) to vegetable crops after current spell of rain. Undertake application of second dose of fertilizers for Okra @ 720 g urea/Are (100 m²), Brinjal @ 1080 g urea/Are (100 m²) and Chilli @ 810 g of urea/Are (100 m²) after current spell of rain. Complete planting of biennial forage crops like Paragrass, Napier and Gajraj.
- In Madhya Maharashtra, farmers are advised to maintain water level of 3-5 cm in transplanted rice fields in Western Ghat Region. Undertake plucking of matured green gram. In view of subdued rainfall in last week, apply protective

irrigation in standing crops like red gram, groundnut, jowar, cotton and soyabean. Undertake intercultural operations in cotton and pigeon pea to conserve soil moisture. Avoid intercultural operations in groundnut and soybean crop at flowering stage. Undertake organic mulching with crop residues in newly planted orchards to avoid water loss. Maintain optimum plant population in order to maintain water balance.

- In Marathwada, in view of subdued rainfall activity during last few days, apply protective irrigation to *kharif* crops like soybean, late sown sorghum, pearl millet, cotton, sugarcane, turmeric and vegetables by sprinkler irrigation system, which are under moisture stress. Undertake spray of Potassium Nitrate (KNO_3) 2 % (200 gm per 10 litres of water) in soybean and late sown sorghum crop. Undertake spray of 2 % MOP and 2 % urea in sugarcane, mulch with organic mulches and irrigate the crop by drip irrigation. In cotton crop, spray Magnesium Sulphate ($MgSO_4$) @ 20 gm per 10 litres of water at 55 to 60 DAS (square formation to flowering stage). Also spray Potassium Nitrate (13: 00: 45) @ 100 to 150 g per 10 litres of water during water stress condition. Undertake dust mulching in horticultural crops to reduce the loss of water by evaporation from soil. Undertake harvesting of 55-60 DAS pearl millet fodder crop (flowering stage). Undertake plucking of matured green gram.
- In Vidarbha, maintain 3-5 cm water level in transplanted rice fields in Nagpur, Bhandara, Gondia, Chandrapur and Gadchiroli districts. Proper bunding in rice field maybe done and remove all weeds on the bund. Undertake plucking of matured green gram. Complete plantation of fodder crops like maize, bajra and Napier grass by end of August.
- Due to humid weather conditions in Pune region, there may be incidence of downy mildew in cucurbitaceous crops, spray Copper oxy Chloride @ 25 g or Mencozeb 64% + Metalaxil 8% combined fungicide @ 20 g per 10 litres of water on a non rainy day.
- Due to subdued rainfall conditions in Marathwada, there may be attack of tobacco eating caterpillar in Soybean; spray Indoxacarb 15.8 % @ 7 ml per 10 litres of water on a non rainy day.

▪ Gujarat:

- Undertake intercropping of late *kharif* pulses black gram and green gram in between two row of tree plantation in Navasari, Dangs and Valsad districts of South Gujarat Heavy Rainfall Zone. Maintain water level of 3-5 cm in rice fields. Carry out weeding in okra and intercultural operations in transplanted rice, pulses, weeding and hoeing in already planted forest saplings on a non-rainy day.
- Maintain optimum water level in transplanted rice field, carry out hand weeding and other intercultural operations in pearl millet, castor, red gram and rice in Anand, Dahod, Kheda, Panchmahals and Vadodara districts on a non rainy day.
- Complete transplanting of brinjal, chilli and early cauliflower in Amreli, Rajkot, Surendranagar and Jamnagar districts of North Saurashtra Zone. In Saurashtra & Kutch, as mid-season corrections, complete sowing of sorghum (fodder purpose) - CSH-6, GFS-4, GFS-5, GAFS-11, Sunflower - EC-68414, Modern GS-1, 2 & 3, Sesame - Gujarat sesame – 1, 2, 3 & 4, Castor - GAUCH-1, GCH-2, GCH-4, 5, 6 & GCH-7.
- Carry out hand weeding and other intercultural operations in sesame, pearl millet and early sown pulses on a non-rainy day in Bhavnagar and Ahmedabad districts.
- Apply split dose of 25% Nitrogen in cotton 25-30 DAS in South Gujarat Zone (Surat, Narmada, Tapi, Bharuch districts) after current spells of rain.
- Due to prevailing weather condition there is chance of infestation of leaf spot disease in groundnut in North Saurashtra Zone; spray Hexaconazole @ 10 ml or Tebuconazole @ 7 ml in 10 litres of water on non-rainy day.
- Infestation of pink bollworm in cotton is observed in North Saurashtra Zone; pick and bury the infested flowers/bolls in soil for control pink of bollworm infestation in cotton. Also spray Profenofos 50 EC @ 20 ml or Cypermethrin @ 10 ml in 10 litres of water on a non-rainy day. Heavy infestation of semilooper is observed in castor; to control, spray Chlorpyro phos @ 30 ml in 10 litres of water on non-rainy day.
- Suitable varieties for sowing are given in Annexure III.

❖ Animal Husbandry

- In Gujarat region, keep fodder in safe place to avoid spoilage due to rainfall.

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



Red gram



Okra



Maize



Rice

- **Realised Rainfall:** Rainfall occurred in all districts of Sub-Himalayan West Bengal & Sikkim except Cooch Behar and South Sikkim, all districts of Gangetic West Bengal, in Balasore, Bhadrak, Deogarh, Dhenkanal, Jajpur, Keonjhar, Khurda, Mayurbhanj, Nayagarh, Puri, Sambalpur and Sundargarh districts of Odisha, in Arwal, Aurangabad, Banka, Bhabua, Bhagalpur, Buxar, Gaya, Jahanabad, Jamui, Kishanganj, Lakhisarai, Nalanda, Nawada, Purnea and Rohtas

districts of Bihar, in all districts of Jharkhand except Sahebganj. Weather remained mainly dry over rest of the region.

- **Advisories:**

- As rain/thundershowers likely at most/many places over Andaman & Nicobar Islands during the period, over Sub-Himalayan West Bengal & Sikkim on 26th, 29th, 30th and at many places over Odisha on 26th August, do not apply irrigation, application of plant protection measures and fertilizers to the standing crops.

- As heavy rain very likely at isolated places over Odisha on 26th, over Sub-Himalayan West Bengal & Sikkim on 29th & 30th August, provide adequate drainage in standing crop fields.

- **Odisha:**

- In East and South Eastern Coastal Plain Zone, complete transplanting of rice with 15-day old seedling with realized and expected rainfall. Go for top dressing of the direct seeded early rice. Complete sowing on non-paddy crops like pulses and oilseeds like sesame etc. in upland to best utilize the rainfall received during last week. Undertake early sowing of cole crops like cabbage and cauliflower.

- In Koraput and Nawarangpur districts, complete sowing of maize and other non paddy crops in upland condition.

- In Mayurbhanj and Keonjhar districts, complete the transplanting of rice at the earliest. Increase the number of seedlings (4-5/hill) to compensate the yield loss due to delayed transplanting. In the transplanted rice fields, maintain water level up to 5 cm and continue nursery raising of Tomato, Cauliflower, Cabbage.

- In Kalahandi and Nuapara districts of Western Undulating Zone, stem borer attack may occur in maize crop at 3-4 week stage. If damage is noticed, spray Traizophos 400 ml in 200 litre water per acre after current spells of rain.

- In Kalahandi and Nuapara districts of Western Undulating Zone, sucking pests like aphids, jassids may infest the cotton crop at vegetative growth stage. At initial infestation spray neem oil 600ml/acre @ 3ml/litre of water after current spells of rain.

- In Kalahandi and Nuapara districts of Western Undulating Zone and in Angul and Dhenkanal districts of Mid Central Table Land Zone, to minimize infestation of early shoot borer on sugarcane crop, spray Triazophos 40 EC @ 2ml/litre of water after current spells of rain.

- In Kalahandi and Nuapara districts of Western Undulating Zone, there may be attack of top shoot borer in Sugarcane crop. Release egg parasitoid *Trichogramma chilonis* @ 20000/acre at 10 days interval. 3-4 times. In severe case, spray Triazophos/Profenophos @ 2ml/litre of water.

- **West Bengal:**

- In Hooghly and Howrah districts, in view of excess rainfall and flooding, drain out excess water from maize and vegetables crop fields. Maintain 3-5 cm of water level in *Aman* rice fields.

- In Purba Medinipur and South 24 Parganas of Coastal Saline Zone, undertake sowing the seeds of vadu kalai Seeds @ 4-5kg/bigha after seed treatment with thirum @ 3g/kg of seed. Apply first top dressing by 12 kg urea per bigha in the field of *Aman* paddy after weeding. Maintain optimum water level in Aman rice fields.

- In Burdwan, Murshidabad, Nadia, North 24 Parganas of New Alluvial Zone, keep stagnant water (2 to 3 cm) in rice field upto 10 days after transplanting. Under sowing of Maize composite varieties (Suwan, Deoki) @ 20kg seed/ha at 60x30 cm spacing under upland to medium land situation. Start land preparation for gladiolus.

- In South Dinajpur and Malda districts in Sub-Himalayan West Bengal, undertake sowing of early coriander for vegetable purpose.

- In Darjeeling district of Hill Zone, maintain adequate drainage channel in ginger, turmeric and large cardamom fields to prevent water stagnation in the fields.

- In Laterite and Red Soil Zone, in this weather condition, brown spot disease and stem borer attack may be found in rice. To control, spray with Mancozeb 75 WP @ 2g/litre of water at an interval of 10-12 days under clear weather condition. If the stem borer damage (Dead heart) is exceeding more than 5%, spray Chlorpyrifos 20% EC @ 2ml/litre at clear weather condition. Undertake plant protection measures on a non rainy day .

- In New Alluvial Zone, in the prevailing temperature infestations of Gundhi bug is reported in rice. Apply Malathion or Dichlorovos @ 1 ml per litre of water, if the infestation is more, apply Chlorpyrifos @ 1.5 ml per litre of water. Under high humidity and cloudy condition, combined attack of downy mildew and mosaic may be seen in bitter and pointed gourd. Apply Ridomil @ 2 g per litre to control the attack.

- In Old Alluvial Zone, due to high humidity, some rice fields are affected by Bacterial leaf blight (BLB). To control this disease, spray Copper- oxy-Chloride @ 4g/litre of water at 15 days interval. To control downy mildew in cucurbits, spray Metalaxyl +Mencozeb @ 2.5g/litre of water at 10-15 days intervals. Undertake plant protection measures after current spells of rain.

- **Andaman and Nicobar Islands:**

- In North, south and Middle Andaman, raise the rice main field bund at 15 cm height to harvest the rain water as rainfall is expected during this week. Spray micronutrient mixture @ 2 g/litre in beans and brinjal in rain free days.

- In Nicobar, maintain drainage channel in the vegetable fields to avoid stagnation of water as heavy rainfall is expected.

- **Bihar:**

- In Bihar, the districts of Vaishali, Bhojpur, Patna, Saran, Buxar, Samastipur (4 blocks), Begusarai, Lakhisarai, Khagaria, Bhagalpur, Munger and Bhagalpur are affected by floods due to the rising water level of river Ganga. The flood has damaged the standing crops like rice, maize, arhar, banana and vegetables. In case of severe damage, after receding of flood water, in the upland areas, sowing of arhar, black gram and early cauliflower, tomato, radish, brinjal,

pointed gourd and in medium land situation sowing of toria, sunflower by the end of this month is suggested is suggested. Maintain 2-3 cm water level in transplanted rice fields.

- In Araria, Katihar, Kishanganj, Madhepura, Purnea, Saharsa and Supaul districts in North East Alluvial Zone, continue transplanting of chilli, brinjal and cauliflower in raised beds and planting of pointed gourd. Undertake intercultural operation in rice. Top dressing of 1/3 urea (44 kg/ha) after 1st hand weeding at 25-30 days after transplanting and apply remaining 1/3 urea (44 kg/ha) after 2nd hand weeding at 40-45 days after transplanting.
- In Darbhanga, East Champaran, Gopalganj, Samastipur, West Champaran districts of North West Alluvial Plain Zone, continue transplanting of Kharif onion, Chilli, Brinjal, Early tomato and Early cauliflower. Weeding is advised in standing crops. Undertake sowing of September pigeon pea.
- In South Bihar Alluvial Zone, in present weather condition, brown plant hopper (BPH) may be enhanced in paddy. To control spray Imidachlorprid 17.8 % SC @ 1.0 ml/3 litre of water on a non rainy day. There is chance of stem borer in maize, spray of Carbrayl @ 2 g/litre of water if infestation is above ETL.

▪ **Jharkhand:**

- In Western Plateau Zone, undertake inter-culture operation to control weeds in different *kharif* crops like Rice, Urd, Arhar, Maize, Mung etc. in uplands on a non rainy day. After weeding, broadcast urea as per the requirement of the crops.
- In Central and North Eastern parts of Jharkhand, continue sowing of horse gram, sesame, niger, plantation of new trees and undertake nursey raising of Tomato, Cabbage Cauliflower with improved varieties on raised bed and before sowing treat the seed with Carbendazim @ 2 g or Trichoderma @ 5 g per kg of seed. To prevent from rizhome rot, drainage facility should be provided in ginger and turmeric fields.
- In North Eastern parts of Jharkhand, complete planting of sweet potato, sowing of black gram, til and horse gram, plantation of new trees with realized rainfall.
- 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 on a non rainy day.
- In South Eastern Plateau Zone, presently weather is conducive for the occurrence of pests like hairy caterpillar on groundnut crop. So, in early stage of caterpillar, apply Dichlorvos @ 0.5 ml per litre of water on a non rainy day. For control of adult caterpillar, provide bamboo perch in the fields for predatory birds.
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In Terai Zone of West Bengal, vaccinate cattle against BQ and HS (BQ, HS Vaccine/ HS+BQ).
- In North East Alluvial Zone of Bihar, during rainy season, avoid fly on the animal skin because Myiasis may be developed. Fumigation of the animal shed must be done. Animal shed washed with Phenyl.
- In West, South and East Bihar, Farmers should avoid grazing of cattles in the areas from where flood water has just receded to avoid possible diseases.
- In Jharkhand, to prevent from Diarrhoea due to excessive feeding of green grass, animal should give Neblon powder also with antibiotic like Fazol or Nitrofurazolidone etc after keeping suggestion with veterinarian.2)To prevent from liver fluke, (Symptom –Anorexia,Diarrhoea and swelling of brisket region) the cattle should give Oxytoclozanide (10-15 mg /kg body weight) or Rufoxinide (7.5 mg /kg body weight) after suggestion of veterinarian.

❖ **Pisciculture:**

- In Odisha, farmers are advised to apply Mahua Oil cake @ 1ton/ac to kill the predator fishes where the pisciculture activities are to taken in new water bodies. Collect 4000 no of fish fry/ac in the ratio of 4:3:3(Catla:Rohu:Mrigal). For PH correction of water add 250 kg of lime/1hamt of water. Apply Cifax or Cow dung slurry for the better growth of the plankton.

CENTRAL INDIA [M.P., CHHATTISGARH]



Maize



Rice



Soybean



Red gram

- **Realised Rainfall:** Rainfall occurred in all districts of East Madhya Pradesh except Balaghat, Chhindwara and Seoni, all districts of West Madhya Pradesh except Betul and Burhanpur, in Balrampur, Bilaspur, Janjgir, Jashpur, Korba, Koriya, Surajpur and Surguja districts of Chhattisgarh. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers very likely at many places over Madhya Pradesh and Chhattisgarh during the period, it is advised to not to apply irrigation, plant protection measures and fertilizers to the standing crops.
 - As heavy rain very likely at isolated places over Madhya Pradesh on 26th, over East Madhya Pradesh on 27th and over

Chhattisgarh on 26th and 27th August, provide adequate drainage in standing crop fields.

▪ **Madhya Pradesh:**

- Due to heavy rain during past three days, flood was reported in Rewa, Satna, Damoh and Panna districts of East Madhya Pradesh and rainfall is likely to continue during next 5 days, in the flood affected districts, drain out excess water and maintain upto 5 cm water level in transplanted rice fields. In West Madhya Pradesh, as flood was also reported in Vidisha, Agar, Rajgarh and Ujjain districts, drain out excess water from *kharif* soybean, maize, pulses and vegetable fields.
- In Chhindwara and Betul districts, continue nursery preparation for tomato, chili, brinjal, early cauliflower and raising of papaya seedlings.
- In Indore and Ujjain districts, continue nursery preparation for cauliflower and transplanting of onion.
- In Jhabua, Alirajpur and Dhar districts, provide adequate drainage in crop fields. After weed control, apply 1/3 dose of recommended nitrogenous fertilizer 40-50 DAS in cereal crops after current spells of rain.
- In Jhabua Hill Zone due to cloudy weather, there are chances of attack of sucking pests in cotton, spray Thiamethoxam or Acetamiprid @ 0.35-0.45 g/litre of water after current spells of rain.
- In Grid Zone, due to cloudy weather there are chances of attack of fruit borer in brinjal and okra, spray Dimethoate @ 1.5 ml/litre of water after current spells of rain.
- In Malwa Plateau Zone, due to cloudy weather there are chances of attack of stem borer in maize, apply Phorate 10 G @ 10 kg/ha or Carbaryl @ 2.0 g/litre of water after current spells of rain.

▪ **Chhattisgarh:**

- In North Chhattisgarh, undertake sowing of crops like horse gram and niger in upland areas. Continue nursery sowing of brinjal, tomato, chilli and onion in upland areas. Undertake intercultural operations in *kharif* crops on a non rainy day.
- In Central Chhattisgarh, maintain 5 cm water in rice fields. Undertake sowing of horse gram and niger.
- In South Chhattisgarh, undertake intercultural operations in rice and apply 2nd dose of Urea. Undertake sowing of crops like niger, horse gram, black gram and green gram.
- In South Chhattisgarh, due to humid weather, there are chances of attack of blast in rice crop. For control spray Tricyclazole (Beem or Bon) @ 6g/10 litre of water after current spells of rain.
- In Central Chhattisgarh due to cloudy weather there are chances of attack of leaf caterpillar in soybean, spray Triazophos @ 2ml/acre after current spells of rain.
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In Madhya Pradesh, keep animals in shade, provide green fodder and fresh and clean water three times a day.
- In Chhattisgarh, farmers are advised to carry out vaccination of their animals against Black Quarter, HS and Anthrax disease.

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



Groundnut



Maize



Rice



Okra

- **Realised Rainfall:** Rainfall occurred in Reasi district of Jammu & Kashmir, Bilaspur, Hamirpur, Kullu, Mandi, Shimla, Sirmaur, Solan and Una districts of Himachal Pradesh, all districts of Uttarakhand except in Chamoli, Champawat and Udham Singh Nagar, in Barnala, Ludhiana, Moga, Nawashahar, Ropar and Mohali districts of Punjab, Chandigarh, Panchkkula and Yamunanagar districts of Haryana, Allahabad, Azamgarh, Banda, Chandauli, Deoria, Fatehpur, Gazipur, Jaunpur, Kaushambi, Mirzapur, Pratapgarh, Raibareilly, Sahuji Maharajnagar, Sant ravidas nagar, Sonbhadra, Sultanpur, and Varanasi districts of East Uttar Pradesh, Agra, Etah, Etawah, Hamirpur, Jalaun, Jhansi, Lalitpur, Mahoba, Mainpuri, Mathura and Saharanpur districts of West Uttar Pradesh, all districts of East Rajasthan except Jhunjhunu and Sikar, in Barmer, Jalore, and Pali districts of West Rajasthan. Weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain is very likely at most/many places over Uttarakhand during the period, at many places over Himachal Pradesh from 27th to 30th, over Jammu and Kashmir from 26th to 28th, over west Uttar Pradesh on 30th, over Haryana, Chandigarh & Delhi on 30th and over East Rajasthan on 27th & 28th August, 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 Southeast Rajasthan on 27th and 28th August, provide adequate drainage in standing crop fields.

▪ **Rajasthan:**

- In East Rajasthan due to heavy rain during the week water logging was observed in maize, pearl millet, cotton, green gram, black gram and cotton fields in Banswara, Jhalawar, Chittorgarh and Pratapgarh, drain out excess water from the crop fields.
- In East Rajasthan, Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts of Sub Humid Southern Plain and Aravali Hill Zone, farmers are advised broadcasting of 40 kg Nitrogen/hectare through urea in standing maize crop of 20-30 days. Undertake weeding and hoeing operation in maize, moong, urad crops after current spells of rain. Drain out excess water from standing crops.
- In Arid Western Plain Zone, in Jaisalmer and Bikaner districts, continue nursery sowing of vegetables like cauliflower, cabbage, chili and brinjal. Apply top dressing of nitrogen in standing pearl millet crop @ 30 kg/ha (in the form of urea @ 66 kg/ha) along with rain. Undertake thinning operation in kharif standing crops after current spells of rain.
- In Dungarpur and Banswara districts of Southern Humid Plain Zone, apply top dressing of urea in maize, cotton and direct seeded rice (DSR) after current spells of rain. Drain out excess water from standing crops.
- In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhopur districts of Flood Prone Eastern Plain Zone, undertake nursery sowing of cauliflower and sowing of radish. Drain out excess water from standing crops.
- In Dungarpur and Banswara districts of Southern Humid Plain Zone, prevailing weather condition is congenial for attack of semiloopers/spodoptera in soybean and jassids in cotton for control of semiloopers/spodoptera in soybean spray Emamectin benzoate 5 SG @ 200 to 220 gm. or Thiodicarb 75 SP @ 1.0 kg./ha or Indoxacarb 15.8 EC @ 350 ml/ha. In case of sudden outbreak of semiloopers/spodoptera for control spray Chlorantranilipole @ 150 ml per 500 litres of water per hectare, spray Emidachloprid 17.8 SL @ 200 ml per hectare for control of jassids in cotton per hectare after current spells of rain.
- In Arid Western Plain Zone, in Barmer, Churu, Jalore, Jodhpur, Pali districts, prevailing weather condition is congenial for attack of yellow vein mosaic in bhindi, for control spray Malathion 30 EC @ 1 ml per litre of water after current spells of rain.
- In Arid Western Plain Zone, in Barmer, Churu, Jalore, Jodhpur, Pali districts, prevailing weather condition is congenial for attack of yellow mosaic virus in mung and moth, and sucking pest in cotton for control spray Agrimycin @ 200 g per hectare for yellow mosaic virus and spray Cypermethrin @ 450 ml per hectare for sucking pest in cotton after current spells of rain.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of bacterial blight in green gram, moth bean and cowpea crop, for control spray Streptocycline @ 1 g and Copper fungicide @ 20 g per 10 litre of water after current spells of rain.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of leaf spot disease in groundnut crop, for control spray Bavistin @ 0.5 g or Mancozeb @ 2 g per litre of water after current spells of rain.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of fruit borer in bitter melon, tinda, cucumber, brinjal & tomato, for control pluck affected fruits and bury them deep in soil & spray Malathion 50 EC @ 1.0 ml per litre water after current spells of rain.
- In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhopur districts of Flood Prone Eastern Plain Zone, prevailing weather condition is congenial for attack of stem borer in sorghum for control apply Quinalphos 5 % granules @ 8 to 10 kg per hectare after current spells of rain.

▪ **Jammu & Kashmir:**

- Maintain proper drainage in maize, pulses and vegetable crop field and postpone plant protection measures in Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, till weather gets clear after current spell of rain. Postpone irrigation in paddy and summer fodder crop. Apply second dose of Nitrogen as top dressing to paddy just before panicle initiation stage i.e about 55 – 65 days after transplanting and to maize crop before tassel formation i.e. about 30-40 days after sowing when weather will be clear after current spell of rain.
- Postpone nursery sowing of early cauliflower and Knol Khol in Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone. Undertake sowing of carrot and radish on ridges.
- Weather is congenial for attack of blast on paddy crop in Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, to control, spray Tricyclazole (beam) @ 0.06% on a non rainy day. There may be attack of stem borer, maize cut worm and aphid on maize. Take proper plant protection measures and spray insecticides in clear weather.
- Prevent water logging in the field of Chrysanthemum in Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone to protect young seedlings from rotting. Transplant the rooted cuttings at optimum soil moisture. Raise seedlings of Marigold on raised beds under protected structures. Cover the seed beds with polythene to give protection against rainfall.

▪ **Uttarakhand:**

- In Dehradun, Pauri and Haridwar districts of Sub Humid Sub Tropic Zone, apply top dressing of 1/4 Urea to paddy crop after 20 to 25 days and to maize after 15-20 days of sowing after current spell of rain. Undertake transplanting of seedlings of brinjal and chilli in main field.
- In Udham Singh Nagar district of Bhabar and Tarai Zone, complete sowing of mid variety of cabbage and transplanting of chilli till end of this month. Carry out weeding and hoeing in the early variety of Cabbage. Proper

drainage should be arranged in the vegetable fields. Drain out excess water in the field of Sugarcane crop.

- In Nainital district of Bhabar and Tarai Zone, continue sowing of French bean and early varieties of pea and rai in mid hills. In unirrigated mid hills, radish varieties like Meenu early, Japanese white, Pusa Himani and early varieties of Saljam like Parpiltop, white glow should be sown at the earliest.
- In Tehri Garhwal, Chamoli, Champawat, Pithoragarh, Rudraprayag and Uttarkashi districts of Hill Zone continue sowing of carrot in raised beds. Continue sowing of toria, pea and garlic in rainfed condition at mid to higher latitude. Undertake transplanting of seedlings of cabbage and broccoli in the main field. Drain out excess water in the vegetable fields.
- In Bhabar and Tarai Zone, attack of Hispa insect is noticed in paddy in some areas. Farmers are advised to spray Cypermethrin 10 EC @ 1ml per litre of water or Chlorpyrifos 20 EC @ 2.5ml per litre of water after current spell of rain.
- In Tehri Garhwal, Chamoli, Champawat, Pithoragarh, Rudraprayag and Uttarkashi districts of Hill Zone, farmers are advised for constant monitoring of finger millet crops against blast disease, if the population is above ETL then spray Tilt 2.0 ml/litre of water after current spells of rain.

▪ **Himachal Pradesh:**

- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, in mid hill areas, continue nursery sowing of Chinese cabbage and direct sowing of radish, carrot, broccoli, lettuce. Continue nursery sowing of mid season cauliflower and cabbage in poly house in mid hill and lower region and transplanting of ageti cauliflower and cabbage nursery in fields.
- In Mid Hills Sub-Humid Zone of Himachal Pradesh, in Bilaspur, Solan, Shimla and Sirmour districts, continue nursery sowing of cauliflower and transplanting of cabbage nursery.
- In High Hills Temperate Dry Zone of Himachal Pradesh, in Kinnaur and Lahaul & Spiti, continue sowing of oat. Continue nursery sowing of vegetables.
- In Mild Hills Sub-Humid Zone, in Kullu and Mandi districts, present weather is conducive for attack of mealy bug in Pomegranate, for control spray Emidachlopid @ 200 ml per 200 litres of water on a non rainy day.
- In Kullu and Mandi districts of Mild Hills Sub-Humid Zone, weather is conducive for attack of stigma blight in stone fruits, for control spray Captan @ 600 g or Kavach @ 400 g in 200 litres of water after the fruit set on a non rainy day.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, weather is conducive for attack of blast and brown spot in paddy crop, for control spray Carbendazim @ 2.0 g per litre of water on a non rainy day.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of rice hispa and leaf folder in paddy crop, for control rice hispa clear the grasses from bunds or spray Cypermethrin 10 EC @ 1ml per litre of water or Chlorpyrifos 20 EC @ 2.5ml per litre of water and spray Chlorpyrifos 20 EC @ 2.5 ml per litre of water for leaf folder on a non rainy day.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, in lower regions weather is conducive for attack of stem borer in paddy crop, for control broadcast Cartap 4% granules or Carbofuran 3% G @ 10 kg per acre or Chlorpyrifos 20 EC @ 2 ml per litre of water on a non rainy day.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of stalk rot and stem borer in maize crops, for control stalk rot, drench maize fields with bleaching powder @ 16 kg per hectare a week before tasseling and spray Carbaryl @ 2 g per litre of water for stem borer on a non rainy day.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of white flies or sucking pests in soybean, moong, urd crops, for control spray Emidachlopid 17.8 % SC @ 1.0 ml per 3 litres of water per acre on a non rainy day.

▪ **Punjab, Haryana and Delhi:**

- In Punjab, in Fazilka, Ferozepur and Faridkot districts, complete the transplanting of short duration varieties of rice and sowing of cotton. Continue sowing of okra, maize and planting of sugarcane. Continue transplanting of chilli and cucurbits on the ridges. Complete the sowing of moong. Undertake sowing of radish, carrot and turnip.
- In Western Zone of Punjab, continue transplanting of chilli, tomato, bell pepper. Continue sowing of cucurbits, round gourd, sponge gourd, okra, and cluster bean. Complete sowing of cotton, transplanting of paddy and undertake sowing of fodder crops.
- In Central Plain Zone of Punjab, complete the transplanting of basmati varieties and undertake sowing of fodder crops. Undertake planting of fruit crops like citrus, mango, litchi, guava etc.
- In Gurdaspur district of Punjab, complete transplanting of rice and continue sowing of maize. Drain out excess water from field of maize, sugarcane, pulses and vegetables. Undertake planting of ever green fruit crops like citrus, mango, litchi, guava, etc.
- In Ajitgarh, Rupnagar and SBS Nagar, drain out excess water from field of maize and continue sowing of mash, okra, cucurbits, cowpea, sesame and nursery raising of early varieties of cauliflower, brinjal and tomato.
- In Western Zone of Haryana, continue transplanting of rice, sowing of arhar, green gram and black gram. Complete the sowing of guar/bajra and sowing of leafy vegetables, bottle gourd, cucumber, ridge gourd summer radish. Undertake intercultural/hoeing operations in cotton crops for conserving the moisture and removing the weeds on a non rainy day. Undertake planting the fruits crops.

- In Eastern Zone of Haryana, continue transplanting of rice and continue sowing of fodder crops such as guar, maize and bajra.
- In Western Semi-Arid Zone of Delhi, complete the sowing of maize. Continue sowing of sweet corn, baby corn and fodder crops such as sorghum, bajra and cluster bean. Undertake transplanting of early cauliflower, tomato, chilli and brinjal on raised bed and sowing of radish, spinach, carrot and coriander. Undertake transplanting of onion seedling in the prepared fields.
- Due to heavy rainfall followed by bright sunny days, can result in parawilt incidence in cotton in Western Plain Zone of Punjab. To control, spray Cobalt Chloride (10 mg per litre of water) on affected plants within 24 hours of appearance of symptoms in clear weather.
- In Central Plain Zone and Western Zone of Punjab, sheath blight may be noticed in rice. Check by spraying Amistar Top 325 SC @ 200 ml or Nativo 75 WG @ 80 g or Lustre 37.5 SE @ 320 ml or Folicure/Orius 25 EC @ 200 ml or Bavistin 50 WP @ 200 g or Tilt/Bumper 25 EC or Monceren 250 SC 200 ml in 200 litres of water on a non rainy day.
- In Undulating Plain Zone of Punjab, as weather is congenial for the infection sheath blight in rice, keep the water channels & ridges free from weeds to prevent initial infection, spray Tilt @ 0.1% on a non rainy day and repeat after 15 days if required.
- In Western Zone of Haryana, due to variable weather and high moisture level in the environment, monitor the insect/pest and disease in the cotton crop. For control of leaf hopper infestation, spray 600 gram Carbaryl or 600 ml Quinalphos 25 E.C. or 800 ml Linden (Kenoden) 20 E.C. with 150-175 litre water per acre, on a non-rainy day.
- In Western Semi-Arid Zone of Delhi, due to humid weather conditions, there may be increase in population of insect pests of cotton. Monitor the insect, if pest's population is above ETL, spray Imidacloprid 17.8 % SC @ 1.0 ml/3 litre or Triazophos 40 EC @ 1.0 ml/litre of water and Spinosad 1.0 ml/3 litre of water on a non rainy day. Monitor brown plant hopper (BPH) in paddy, spray Imidacloprid 17.8 % SC @ 1.0 ml/3 litre or Fenobucarb 50 EC @ 1 ml/litre or Buprofezin 25 EC @ 2 ml/litre of water on a non rainy day.

▪ **Uttar Pradesh:**

- In Central Plain Zone of East Uttar Pradesh, remove the weeds from rice fields before top dressing and maintain 3 - 5cm water in the fields. To control stem borer in paddy crop, release Trichogramma parasite at an interval of 8-10 days. Undertake sowing of green gram and black gram. Undertake land preparation for sowing of Toria, select the best variety of Toria, like TA-9, Bhawani, PT-30, PT-507.
- In Eastern Plain Zone of Uttar Pradesh, continue sowing of arhar.
- In Western Plain Zone of West Uttar Pradesh, undertake nursery sowing of cauliflower and transplanting of onion. Continue sowing of sweet corn and baby corn. Undertake hoeing and weeding operation in standing *kharif* crops and vegetables.
- In Bundelkhand Zone of West Uttar Pradesh, undertake nursery sowing of mid season brinjal, chilli, tomato, cabbage, cauliflower and continue transplanting of mid season brinjal, chilli, tomato, cabbage, cauliflower, apply Urea @ 30 kg per hectare in late sown sesame crop after current spells of rain.
- In Bundelkhand Zone of West Uttar Pradesh, due to continuous rain and high humidity weather condition, there may be chances of attack of yellow mosaic virus in urad, mung and soybean, for control spray Dimethoate @ 1.5 litres in one hectare after current spells of rain.
- In Bundelkhand Zone, Central and Eastern Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of khaira in paddy, for control, spray Zinc Sulphate @ 20 kg in 800 to 1000 litres of water per hectare after current spells of rain.
- In Central Plain Zone of East Uttar Pradesh due to moisture or humid weather condition, there may be chances of attack of stem borer in kharif maize, for control, spray Dimethoate 30 EC @ 1 litre or Quinalphos 25 EC @ 1.5 litres in 700 to 800 litres of water per hectare on a non rainy day.
- In Central Plain Zone of East Uttar Pradesh due to prevailing weather condition, there may be chances of attack of yellow mosaic virus in Urd and Mung, for control, spray Dimethoate 30 EC @ 1 litre in 1000 litres of water per hectare on a non rainy day.
- In North Eastern Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of fruit borer and top borer in brinjal, for control spray Quinalphos 0.2 % @ 200 ml in 200 litres of water per acre on a non rainy day.
- Suitable varieties for sowing are given in Annexure III.

❖ **Horticulture:**

- In Central and Eastern Plain Zone of East Uttar Pradesh and Bundelkhand Zone of West Uttar Pradesh continue planting of new orchard of mango, guava, ber, lichi, aonla, lemon, ber, papaya.
- In Central and Eastern Plain Zone of East Uttar Pradesh undertake hoeing and weeding operation in banana orchards.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, undertake transplanting of papaya seedlings. Apply 10.0 kg well rotten FYM, 300 g SSP and 50 g Quinalphos 1.5% per pit before transplanting after current spells of rain.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, continue plantation of mango, litchi, guava, citrus, laquat and amla.
- In Una, Hamirpur, Kangra and Chamba districts of Himachal Pradesh, weather is conducive for citrus canker on citrus plants, for control spray Malathion @ 10 ml or Metasystox @ 10 ml per 10 litres of water after current spells of rain.
- In Tarai Zone of Uttarakhand, in the Polyhouse, continue grafting in mango, guava and litchi. Undertake picking of

early varieties of apple in mid hilly regions.

- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, undertake sowing of cole crops on raised seed beds.
- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, continue budding in walnut and gap filling in old orchards. Provide mechanical support to young fruit plants. Keep orchards weed free and remove the stagnant water in the orchard.

❖ **Animal Husbandry**

- In Arid Western Plain Zone, in Jaisalmer and Bikaner districts, possibility for spread of infectious diseases like black quarter, HS etc. in the rainy season, farmers are advised to adopt proper vaccination against them as per the consultation with registered veterinarian.
- In Tarai Zone of Uttarakhand, to save the poultry birds from Ranikhet disease, vaccination (R B 2) should be done when they attained the age of 6-8 weeks. To save the sheep and goats from infectious diseases, give vaccination of Interotoxemia and PPR. To save the animal from Gal-Ghotu disease, tie them in neat and clean places. When symptoms of Gal-Ghotu disease appeared in the animals, then inject Sulphonamides like Sulphamethazine or Sulphadimidne 150Mg/Kg in the veins of animal for three days with the advice of Veterinarian.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, there may be attack of ticks and mites on animals, for control spray Botox @ 2.0 ml per litre of water.

❖ **Apiculture:**

- In Himachal Pradesh, to control mites attack on honeybees, dust Sulphur on sealed brood in the colony and not on larvae. For protection from ants put the legs of apiary into water so that ants could not attack apiary.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, kill wasps with a wooden flap and dusting or spraying with insecticides. Protect bees from rain by reducing the entrance and placing them in proper place. Examine colonies at intervals for wax moth management.
- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, for the protection of honey bee colonies from ants, farmers are advised to put the legs of apiary into water so that ants could not attack apiary. Farmers are advised to not open the honey bee colonies during rainy day/cloudy weather conditions. Check the insect pest attack particularly mite and brood infestation.

❖ **Floriculture**

- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, prevent water logging conditions in field by proper drainage to protect young seedlings of Chrysanthemum from rotting. Transplant the rooted cuttings at optimum soil moisture. Raise seedlings of Marigold on raised beds under protected structures. Cover the seed beds with polythene to give protection against rainfall.
- In Himachal Pradesh, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of blue beetle in balsam, zinnia, cleome and rose, for control spray Cypermethrin @ 20 ml in 10 litres of water. In poly house there may be attack of thrips and beetle, for control spray Rogor @ 20 ml in 10 litres of water for thrips and for beetle spray Dicofol @ 20 ml in 10 litres of water. To control thrips in tagetes spray Rogor @ 20 ml in 10 litres of water on a non rainy day.

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

Annexure I

Week by week Rainfall Distribution

Sub-Divisions	10.08.16		17.08.16		24.08.16	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	40.5	-21	44.0	-60	57.2	-12
Dibang Valley	**	**	**	**	**	**
East Kameng	40.6	-15	17.2	-75	7.2	-86
East Siang	24.1	-84	16.6	-90	8.5	-95
Kurung Kumey	**	**	**	**	**	**
Lohit	50.3	-41	72.4	-38	43.1	-58
Lower Dibang Valley	119.1	457	26.5	-46	38.7	48
Lower Subansari	**	**	**	**	**	**
Papumpare	123.1	2	27.1	-75	0.0	-100
Tawang	106.0	-25	51.0	-65	8.0	-94
Tirap	83.4	-5	114.4	-3	39.6	-69

Upper Siang	21.2	-56	59.5	-56	12.2	-88
Upper Subansari	10.0	-66	30.0	-47	23.4	-37
West Kameng	30.4	-79	22.0	-85	49.4	-63
West Siang	20.4	-60	1.4	-98	4.1	-96
Assam&Meghalaya						
Assam						
Baksa	67.4	-10	8.5	-95	2.6	-98
Barpeta	53.6	-28	11.5	-93	36.9	-68
Bongaigaon	35.8	-53	15.0	-89	43.4	-65
Cachar	115.6	-11	31.7	-71	26.1	-71
Chirang	103.4	36	2.0	-99	13.0	-90
Darrang	**	**	**	**	**	**
Dhemaji	**	**	**	**	**	**
Dhubri	20.1	-77	3.8	-96	58.2	-42
Dibrugarh	67.9	-33	74.5	-19	10.5	-90
Goalpara	57.2	25	43.0	-56	85.3	14
Golaghat	107.4	71	18.5	-70	15.8	-76
Hailakandi	42.7	-55	89.5	-8	65.4	-30
Jorhat	70.1	-19	6.1	-92	11.4	-87
Kamrup(Rural)	46.6	-3	2.4	-97	0.0	-100
Kamrup(Metro)	53.5	11	5.0	-93	0.2	-99
Karbi Anglong	26.3	-51	56.9	19	5.2	-88
Karimganj	189.6	86	56.8	-45	35.4	-68
Kokrajhar	11.1	-91	12.8	-93	42.7	-71
Lakhimpur	65.3	-43	55.6	-53	1.2	-99
Morigaon	22.6	-69	12.4	-83	17.2	-74
N.C.Hills	3.2	-93	35.4	-20	8.2	-82
Nagaon	42.3	-30	26.6	-56	13.3	-81
Nalbari	101.8	36	9.6	-87	1.3	-98
Sonitpur	76.7	14	58.3	-32	0.2	-99
Sibsagar	125.5	52	42.2	-44	0.0	-100
Tinsukia	91.1	6	83.5	-15	5.2	-94
Udalgiri	19.9	-68	22.2	-66	5.1	-91
Meghalaya						
East Garo Hills	0.0	-100	21.6	-73	0.0	-100
East Khasi Hills	107.9	-48	142.2	-41	49.3	-81
Jaintia Hills	6.0	-96	8.0	-97	3.0	-99
Ribhoi	25.0	-70	16.3	-84	20.0	-79
South Garo Hills	24.0	-75	3.0	-96	3.0	-97
West Garo Hills	6.0	-94	10.6	-86	51.4	-48
West Khasi Hills	2.0	-99	6.0	-96	17.0	-89
NMMT						
Mizoram						
Aizwal	66.0	-35	133.3	17	46.4	-60
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**

Saiha	84.0	0	90.0	2	110.0	5
Serchhip	40.3	-49	104.6	-16	56.6	-41
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	**	**	**	**	**	**
Churachandpur	**	**	**	**	**	**
Imphal east	20.8	-68	7.6	-89	24.2	-61
Imphal west	123.9	150	36.9	-54	6.5	-85
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	**	**	**	**	**	**
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	105.4	14	131.0	150	15.2	-73
Kephire	**	**	**	**	**	**
Kohima	36.5	-57	32.3	-68	5.1	-94
Longleng	**	**	**	**	**	**
Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	50.0	-41	35.0	-65	13.0	-83
Tuensang	**	**	**	**	**	**
Wokha	**	**	**	**	**	**
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	30.1	-57	195.0	120	8.0	-87
NorthTripura	14.0	-83	207.2	115	69.9	-14
SouthTripura	21.2	-73	85.0	-10	107.5	12
West Tripura	19.2	-71	65.7	-21	18.7	-74
Himachal Pradesh						
Bilaspur	138.3	54	96.0	36	105.7	98
Chamba	130.1	-8	62.1	-47	21.1	-75
Hamirpur	159.7	78	173.5	76	83.8	0
Kangra	229.6	37	160.0	4	28.8	-77
Kinnaur	16.0	-13	14.5	-32	8.2	-57
Kullu	66.5	63	45.1	11	45.1	33
Lahaul and Spiti	10.8	-67	13.4	-57	9.3	-71
Mandi	131.8	35	93.7	8	67.5	-17
Shimla	69.6	54	62.8	38	49.3	20
Sirmaur	45.6	-60	75.2	-39	31.0	-71
Solan	100.8	19	65.4	-24	40.8	-39
Una	90.3	10	110.5	42	56.0	-13
Punjab						
Amritsar	20.6	-59	60.1	15	0.0	-100
Barnala	47.0	55	9.0	-66	39.0	57
Bhatinda	27.5	-31	0.0	-100	23.0	0
Faridkot	53.2	127	11.0	-56	8.6	-69
Fatehgarh Saheb	45.3	-1	20.8	-50	11.4	-70
Ferozpur	0.7	-98	8.0	-69	0.0	-100

Gurdaspur	167.3	84	53.4	-37	1.6	-97
Hoshiarpur	87.7	20	82.0	38	12.1	-73
Jalandhar	9.4	-82	11.2	-75	18.7	-52
Kapurthala	0.0	-100	59.0	68	24.6	-3
Ludhiana	2.7	-94	11.5	-73	46.6	14
Mansa	17.0	-53	9.0	-69	0.0	-100
Moga	2.8	-92	0.0	-100	63.2	91
Muktesar	0.0	-100	55.6	157	0.0	-100
Nawashahar	39.9	-40	50.0	-5	87.1	68
Patiala	47.5	-14	11.7	-74	8.2	-82
Ropar	47.8	-34	64.0	6	100.4	100
Sangrur	41.6	7	9.6	-75	4.4	-86
Mohali	74.0	24	35.0	-19	49.0	-1
TarnTaran	0.0	-100	28.0	7	0.0	-100
Haryana,Chd,Delhi						
Haryana						
Ambala	66.9	-22	45.1	-44	12.2	-83
Bhiwani	4.7	-85	42.3	30	6.1	-81
Chandigarh	39.3	-54	43.0	-39	46.7	-21
Faridabad	18.3	-68	71.7	38	12.7	-78
Fatehabad	0.0	-100	9.3	-52	0.0	-100
Gurgaon	4.3	-91	70.5	49	0.0	-100
Hissar	3.6	-88	5.2	-81	1.9	-92
Jhajar	6.1	-84	131.0	263	0.0	-100
Jind	4.2	-88	30.3	-3	4.3	-88
Katihah	39.8	13	14.3	-58	12.1	-63
Karnal	30.4	-30	69.3	14	27.5	-54
Kurukshetra	24.5	-39	24.3	-56	3.0	-95
Mahendragarh	12.3	-66	62.5	51	2.2	-92
Mewat	2.8	-95	59.4	20	7.9	-78
Palwal	9.8	-78	88.1	98	25.8	-30
Panchkkula	72.8	-11	23.6	-73	36.1	-49
Panipat	3.4	-92	81.6	62	14.4	-74
Rewari	5.9	-88	108.5	130	0.0	-100
Rohtak	8.4	-82	68.6	44	0.6	-99
Sirsa	9.5	-27	2.8	-87	3.8	-80
Sonepat	1.0	-98	36.1	-35	4.3	-91
Yamunanagar	32.8	-57	74.0	5	32.8	-61
Delhi						
Central Delhi	21.0	-70	114.0	108	0.0	-100
East Delhi	12.0	-83	0.0	-100	0.0	-100
New Delhi	1.8	-97	56.0	2	1.2	-98
North Delhi	3.7	-95	34.6	-37	1.1	-98
North East Delhi	11.0	-84	10.0	-82	1.0	-98
North West Delhi	0.5	-99	8.5	-85	0.0	-100
South Delhi	17.5	-75	13.3	-76	2.4	-95
South West Delhi	25.6	-63	81.8	49	1.4	-97
West Delhi	2.0	-97	1.0	-98	0.0	-100
Jammu & Kashmir						

Anantnag	37.3	55	11.1	-19	15.7	10
Badgam	2.0	-86	0.2	-98	1.2	-91
Bandipore	**	**	**	**	**	**
Baramula	24.6	-8	20.3	22	3.8	-71
Doda	35.8	30	28.6	47	15.4	-33
Ganderbal	13.2	-29	6.0	-55	20.4	63
Jammu	179.0	86	65.9	-19	14.4	-78
Kargil	**	**	**	**	**	**
Kathua	180.5	61	81.4	-20	6.2	-92
Kistwar	**	**	**	**	**	**
Kulgam	18.6	-23	1.4	-90	17.6	24
Kupwara	0.6	-97	2.7	-77	3.7	-70
Ladakh(Leh)	1.8	-36	0.9	-77	0.0	-100
Poonch	**	**	**	**	**	**
Pulwama	28.6	31	6.0	-55	18.4	28
Rajouri	66.6	25	3.2	-96	2.0	-96
Ramban	54.3	97	11.2	-42	5.0	-78
Reasi	320.2	133	100.4	-8	34.3	-60
Samba	62.4	-35	15.9	-80	0.5	-99
Shopian	**	**	**	**	**	**
Srinagar	6.8	-63	17.8	33	1.3	-90
Udhampur	249.5	82	50.6	-54	3.0	-96
East Madhya Pradesh						
Anuppur	94.3	-9	104.8	16	51.1	-39
Balaghat	158.8	47	17.9	-85	23.2	-77
Chhatarpur	86.8	-21	180.8	118	274.9	259
Chindwara	27.8	-58	6.4	-90	13.5	-74
Damoh	125.0	12	36.3	-54	231.9	178
Dindori	226.5	92	33.7	-63	34.6	-63
Jabalpur	200.4	85	81.4	-20	35.6	-49
Katni	137.5	31	142.4	65	217.7	172
Mandla	152.9	33	62.2	-47	58.5	-34
Narsingpur	79.0	-16	37.3	-61	53.6	-28
Panna	77.1	-30	355.1	313	304.1	251
Rewa	37.7	-58	231.5	220	205.8	166
Sagar	127.6	12	28.0	-69	167.5	123
Satna	72.1	-22	296.8	255	280.7	312
Seoni	83.2	1	26.9	-67	26.2	-60
Shahdol	139.0	37	151.0	98	74.3	-8
Sidhi	35.8	-55	251.6	259	120.8	39
Singrauli	71.6	10	203.8	267	95.8	21
Tikamgarh	52.5	-40	6.0	-92	186.5	122
Umari	128.5	31	216.0	124	88.6	-9
West Madhya Pradesh						
Agar	146.2	11	26.1	-73	247.6	255
Alirajpur	127.3	101	32.2	-33	93.7	81
Asoknagar	135.3	64	13.3	-82	113.8	47
Badwani	23.2	-56	9.3	-75	44.0	0

Betul	57.1	-31	27.2	-60	4.1	-93
Bhind	36.9	-47	45.1	-38	65.3	30
Bhopal	144.5	54	43.3	-46	165.7	119
Burhanpur	43.7	-36	19.1	-63	3.9	-93
Datia	62.3	-25	27.0	-63	60.9	1
Dewas	119.7	43	20.2	-71	114.3	60
Dhar	74.7	7	18.5	-62	108.0	118
Guna	178.4	97	98.7	38	147.0	64
Gwalior	54.5	-35	12.2	-82	55.7	-9
Harda	161.9	64	22.4	-76	52.8	-32
Hosangabad	204.1	72	113.1	4	48.8	-48
Indore	95.9	29	13.1	-76	154.6	176
Jhabua	139.4	103	21.3	-51	135.1	163
Khandwa	114.7	40	8.7	-85	38.7	-32
Khargone	56.6	-13	13.9	-69	40.0	-14
Mandsaur	157.1	104	18.4	-67	195.0	222
Morena	17.6	-77	45.7	-34	57.3	-13
Neemuch	261.2	301	25.1	-59	217.8	269
Raisen	158.1	47	64.0	-29	138.4	68
Rajgarh	229.9	143	73.3	8	311.3	334
Ratlam	295.1	303	43.9	-23	253.1	279
Sehore	146.4	50	32.0	-60	107.9	23
Shajapur	101.0	13	37.0	-43	194.5	204
Sheopur Kalani	82.3	18	121.6	64	42.1	-40
Shivpuri	81.0	3	20.1	-66	77.6	31
Ujjain	149.8	99	32.0	-38	225.6	252
Vidisha	228.4	146	75.6	-9	245.0	180
Chhattisgarh						
Bastar	173.3	103	27.6	-68	0.0	-100
Bijapur	120.0	-12	19.5	-83	0.4	-99
Bilaspur	96.6	8	46.0	-52	37.2	-50
Dantewara	101.0	-12	84.2	-3	8.4	-89
Dhamtari	109.6	55	14.1	-83	0.0	-100
Durg	217.6	165	3.6	-96	2.0	-97
Janjgir	206.9	97	104.7	-7	47.1	-47
Jashpurnagar	104.1	2	54.6	-45	60.2	-33
Kanker	225.9	138	82.5	-13	3.2	-96
Korba	130.0	19	85.1	-27	40.0	-63
Koriya	68.4	-34	256.8	162	99.9	7
Kawardha	**	**	**	**	**	**
Mahasumund	91.7	18	30.9	-65	13.3	-81
Narayanpur	248.3	118	42.3	-57	0.0	-100
Raigarh	178.4	100	73.7	-16	27.6	-64
Raipur	122.5	51	10.6	-88	5.5	-92
Rajnandgaon	116.3	37	19.2	-74	4.6	-94
Surguja	100.6	-2	289.3	219	139.4	61
East Uttar Pradesh						
Allahabad	23.0	-69	205.2	251	92.4	39
Ambedkar Nagar	1.0	-99	169.0	174	15.0	-79

Azamgarh	18.0	-75	153.1	123	60.2	-9
Bahraich	7.9	-85	48.6	-29	16.1	-78
Ballia	20.7	-63	69.2	14	27.4	-53
Balrampur	13.2	-80	29.6	-59	27.4	-68
Banda	52.0	-36	197.8	130	151.6	142
Barabanki	9.0	-85	86.6	20	15.5	-76
Basti	8.7	-84	14.3	-78	14.8	-80
Chandauli	112.0	55	129.0	93	88.0	22
Deoria	3.5	-93	14.0	-83	31.5	-53
Faizabad	11.1	-82	55.6	-29	18.7	-76
Farrukhabad	2.1	-97	58.3	-27	3.1	-95
Fatehpur	28.8	-63	77.2	9	35.5	-48
Gazipur	13.8	-83	61.9	-12	54.2	-15
Gonda	4.5	-94	30.4	-56	12.7	-83
Gorakhpur	14.5	-83	40.5	-59	4.2	-95
Hardoi	11.8	-80	58.1	-9	29.5	-55
Jaunpur	14.5	-78	152.3	172	47.5	-23
Kannauj	0.0	-100	82.1	3	25.2	-64
Kanpur City	7.1	-90	43.4	-25	12.9	-82
Kanpur Dehat	0.5	-99	51.5	-15	17.3	-74
Kaushambi	15.4	-78	72.9	11	50.3	-16
Kheri	10.4	-83	88.9	29	9.5	-88
Kushi nagar	5.5	-91	17.1	-83	4.5	-95
Lucknow	12.6	-78	124.9	94	22.4	-62
Maharajganj	10.8	-84	42.1	-61	0.0	-100
Mau	5.6	-91	29.5	-64	16.5	-78
Mirzapur	53.0	-37	213.7	229	171.4	198
Pratapgarh	19.3	-72	170.3	167	58.0	-16
RaiBareilly	16.7	-72	165.0	189	35.7	-45
Sahuji Maharajnagar	9.5	-86	311.0	327	127.0	65
Sant Kabirnagar	38.0	-34	37.0	-53	0.0	-100
Sant Ravidas Nagar	45.0	-38	226.0	239	72.0	0
Shrawasti	17.5	-68	39.6	-42	20.0	-73
Sidharthnagar	15.1	-76	16.4	-79	0.0	-100
Sitapur	25.0	-57	98.2	45	6.1	-91
Sonbhadra	25.1	-69	228.6	230	172.9	166
Sultanpur	15.8	-75	150.2	157	31.0	-55
Unnao	5.2	-93	71.8	1	8.3	-87
Varanasi	121.0	72	102.3	75	76.4	4
West Uttar Pradesh						
Agra	19.8	-73	19.7	-73	44.0	-17
Aligarh	15.2	-75	84.1	35	4.3	-92
Auraiya	4.0	-94	58.8	2	24.0	-62
Badaun	24.6	-65	71.0	5	7.6	-87
Baghpat	5.5	-90	54.4	-3	12.0	-73
Bareilly	44.8	-39	165.5	159	5.0	-92
Bijnor	66.8	-12	43.5	-46	5.5	-91
Bulandsahar	16.1	-69	57.5	-15	12.9	-77

Etah	5.7	-91	132.0	116	36.0	-33
Etawah	10.7	-88	67.3	10	40.7	-35
Firozabad	18.0	-70	49.8	-24	24.0	-56
GBNagar	0.0	-100	6.0	-90	0.0	-100
Ghaziabad	5.6	-91	32.3	-38	5.0	-92
Hamirpur	47.0	-45	188.9	127	90.5	55
Jalaun	43.3	-55	121.9	56	30.5	-42
Jhansi	37.5	-54	33.2	-59	92.6	53
Jotiba Phule Nagar	43.0	-25	136.0	70	0.0	-100
Kanshiramnagar	14.0	-77	157.0	135	17.0	-73
Lalitpur	73.2	-32	14.0	-82	185.0	198
Mahamaya Nagar	7.3	-88	19.0	-72	5.0	-89
Mahoba	34.2	-59	226.7	169	100.4	68
Mainpuri	7.1	-89	73.3	7	42.4	-10
Mathura	0.0	-100	65.0	0	40.5	-18
Meerut	11.9	-84	28.4	-60	12.2	-84
Moradabad	92.5	24	72.1	-8	8.6	-87
Muzzaffarnagar	18.8	-71	49.1	-28	5.4	-92
Pilibhit	14.5	-81	45.2	-39	0.0	-100
Rampur	34.5	-58	59.0	-18	3.8	-95
Saharanpur	82.0	9	52.3	-25	37.7	-49
Shahjahanpur	28.1	-62	64.4	-7	14.7	-80
Uttarakhand						
Almora	84.0	27	83.6	31	37.5	-45
Bageshwar	98.2	49	85.5	34	32.4	-52
Chamoli	146.7	82	133.6	43	18.2	-71
Champawat	103.8	8	75.7	-9	9.5	-90
Dehradun	96.0	-44	118.6	-26	38.3	-74
Garhwal Pauri	72.6	-39	78.0	-24	49.7	-47
Garhwal Tehri	104.5	9	51.6	-38	35.6	-54
Haridwar	62.8	-30	72.9	-21	61.1	-29
Nainital	69.6	-26	225.9	133	56.0	-54
Pithorgarh	127.7	-3	90.7	-26	36.5	-70
Rudraprayag	181.8	26	175.7	4	72.4	-51
Udham Sing Nagar	18.9	-74	59.9	-34	13.1	-85
Uttarkashi	111.4	18	90.0	-17	51.8	-37
Bihar						
Araria	22.6	-70	38.4	-53	23.1	-73
Arwal	36.1	-32	95.6	43	72.9	10
Aurangabad	33.7	-44	100.0	80	136.6	118
Banka	30.3	-39	73.5	21	59.7	7
Begusarai	11.5	-76	34.1	-25	7.5	-86
Bhabua	121.7	50	108.6	80	137.4	62
Bhagalpur	18.7	-64	32.3	-48	38.2	-40
Bhojpur	10.6	-81	29.4	-53	9.1	-87
Buxar	25.8	-53	44.8	-37	30.6	-45
Darbhanga	18.9	-65	24.7	-66	11.0	-84
East Champaran	16.8	-67	18.2	-74	1.7	-98
Gaya	78.9	19	80.5	22	120.7	87

Gopalganj	15.7	-68	19.6	-76	5.6	-93
Jahanabad	34.5	-44	65.0	11	46.8	-26
Jamui	43.6	-29	78.6	38	142.1	173
Kathihar	22.9	-55	33.7	-41	7.9	-89
Khagadia	12.9	-81	56.5	-24	12.8	-78
Kishanganj	6.7	-92	19.4	-84	42.0	-58
Lakhisarai	19.6	-66	34.5	-40	63.5	-1
Madhepura	32.9	-44	23.2	-67	0.0	-100
Madhubani	5.9	-88	24.4	-71	4.0	-94
Monghyar	0.0	-100	47.2	-17	25.6	-60
Muzaffarpur	15.4	-72	45.3	-33	7.6	-89
Nalanda	15.5	-76	66.8	12	46.8	-27
Nawada	46.4	-36	89.1	49	95.0	37
Patna	16.0	-70	49.6	-15	12.6	-83
Purnea	18.3	-71	43.1	-47	33.1	-50
Rohtas	55.5	-18	72.6	14	108.1	69
Saharsha	15.9	-79	35.8	-67	5.5	-91
Samstipur	6.5	-90	43.2	-48	7.3	-88
Saran	39.1	-24	30.6	-60	18.3	-76
Sheikpura	45.8	-12	136.2	141	25.8	-51
Sheohar	7.6	-85	30.0	-62	0.0	-100
Sitamarhi	10.4	-80	20.0	-74	1.7	-98
Siwan	13.7	-75	39.4	-47	27.1	-61
Supaul	16.1	-62	39.3	-37	12.2	-83
Vaishali	27.3	-52	33.5	-52	2.9	-96
West Champaran	10.0	-82	36.1	-57	4.2	-95
Jharkhand						
Bokaro	66.3	-18	76.9	26	171.6	194
Chatra	91.1	11	278.9	263	177.5	165
Deoghar	44.5	-27	126.5	102	111.1	78
Dhanbad	92.3	22	93.9	35	188.0	207
Dumka	56.6	-20	125.8	70	119.0	70
East Singbhum	323.1	288	183.2	175	279.9	337
Garhwa	26.5	-67	118.3	65	162.5	175
Giridih	88.0	28	148.6	168	115.8	83
Godda	24.8	-45	48.5	-20	43.7	-37
Gumla	50.4	-42	50.2	-40	86.7	11
Hazaribagh	54.0	-32	117.6	104	176.5	169
Jamtara	86.3	14	143.2	64	75.6	2
Khunti	76.2	-24	80.3	8	121.5	56
Koderrna	53.3	-24	114.9	102	124.1	105
Latehar	54.1	-38	248.5	343	197.5	226
Lohardagga	69.2	-22	106.2	87	207.5	244
Pakur	21.2	-70	115.1	31	41.0	-48
Palamau	51.9	-33	193.5	179	188.6	196
Ramgarh	98.0	28	94.4	60	139.2	126
Ranchi	55.2	-44	44.7	-46	125.3	92
Sahebganj	34.4	-38	26.6	-69	11.5	-85
Saraikela	102.0	20	94.5	42	132.0	102

Simdega	85.2	-18	94.5	6	95.0	-1
West Singhbhum	45.5	-50	174.2	121	150.0	117
East Rajasthan						
Ajmer	122.7	230	11.9	-72	49.8	33
Alwar	24.4	-56	120.4	113	38.1	-17
Banswara	201.8	164	12.9	-80	203.4	222
Baran	201.4	140	139.4	98	151.3	115
Bharatpur	17.9	-67	49.4	-14	76.7	60
Bhilwara	235.1	370	34.0	-40	104.9	86
Bundi	176.8	216	33.2	-47	69.5	24
Chittorgarh	341.2	453	57.7	-10	221.5	226
Dausa	90.0	38	108.8	82	64.4	34
Dholpur	18.3	-74	34.2	-51	131.5	135
Dungarpur	165.8	220	9.4	-81	139.1	173
Jaipur	48.5	-3	32.3	-32	30.6	-27
Jhalawar	177.8	101	56.2	-29	210.8	184
Jhunjhunu	13.5	-61	67.2	96	8.3	-74
Karauli	47.8	-40	74.7	-7	88.4	71
Kota	238.0	235	45.4	-34	107.1	71
Pratapgarh	188.8	190	20.8	-68	359.6	464
Rajsamand	165.6	290	15.0	-67	124.6	193
Sawai Madhopur	95.3	24	142.0	109	64.6	12
Sikar	15.9	-53	59.8	71	23.6	-15
Sirohi	230.7	190	35.1	-55	122.5	85
Tonk	133.3	150	52.1	-6	49.0	-1
Udaipur	157.1	228	14.1	-71	129.0	190
West Rajasthan						
Barmer	96.7	287	2.4	-88	40.5	111
Bikaner	52.2	209	16.5	-4	5.4	-68
Churu	8.4	-67	27.0	22	19.4	-17
Hanumangarh	4.3	-82	1.3	-94	0.6	-96
Jaisalmer	27.0	112	3.4	-83	2.2	-79
Jalore	195.3	433	11.0	-68	38.0	25
Jodhpur	148.4	551	23.6	-6	21.3	-3
Nagaur	84.7	211	19.1	-31	23.1	-20
Pali	268.5	556	60.0	69	108.3	198
Sri Ganganagar	23.7	46	5.3	-71	3.6	-73
Gujarat Region						
Ahmedabad	88.1	68	8.4	-83	19.1	-49
Anand	123.2	94	4.2	-94	16.5	-68
Banaskantha	63.2	47	4.7	-89	85.0	121
Baroda	77.4	-1	15.6	-77	26.1	-52
Broach	54.4	-8	17.5	-64	4.9	-88
DNH	480.6	167	61.2	-62	42.9	-53
Dahod	101.0	28	14.6	-75	92.9	55
Daman	304.5	69	27.4	-83	26.2	-71
Dangs	421.0	161	85.3	-31	88.1	-22
Gandhinagar	155.6	141	20.8	-56	23.7	-39
Kheda	103.4	52	1.6	-97	33.4	-33

Mehsana	89.3	70	1.5	-97	56.5	38
Narmada	83.1	-12	44.3	-46	10.1	-82
Navsari	223.4	70	21.6	-82	21.5	-73
Panchmahal	122.0	35	9.3	-88	66.0	2
Patan	86.0	140	2.6	-94	58.4	59
Sabarkantha	128.4	107	8.5	-86	85.8	85
Surat	124.4	37	43.6	-45	16.0	-71
Tapi	160.0	21	35.8	-63	27.6	-60
Valsad	426.1	209	48.6	-65	31.4	-69
S K & Diu region						
Amreli	85.0	184	0.0	-99	1.5	-95
Bhavnagar	59.0	85	0.9	-97	7.7	-71
Diu	160.5	342	2.5	-93	1.4	-92
Jamnagar	314.3	686	0.0	-100	4.2	-78
Junagarh	139.2	181	0.8	-98	0.4	-98
Kutch	126.6	359	0.1	-99	5.5	-65
Porbandar	165.2	274	1.0	-97	0.1	-99
Rajkot	128.4	182	0.5	-98	0.9	-96
Surendranagar	35.6	-13	6.7	-79	4.9	-81
Maharashtra						
Konkan & Goa						
Mumbai City	105.2	-2	40.6	-66	40.8	-56
Mumbai Suburban	202.2	59	13.6	-89	36.7	-69
North Goa	174.1	-15	54.3	-70	121.7	-10
Raigad	276.1	39	91.7	-59	101.9	-40
Ratnagiri	305.1	42	74.3	-65	91.6	-45
Sindhudurg	172.4	-6	68.0	-59	125.2	-8
South Goa	107.7	-40	47.9	-71	96.6	-10
Thane	190.6	14	36.3	-79	65.1	-49
Madhya Maharashtra						
Ahmednagar	15.5	-17	1.5	-91	0.7	-97
Dhule	46.2	25	8.6	-66	14.2	-40
Jalgaon	41.9	-24	7.3	-83	5.9	-85
Kolhapur	283.1	114	47.3	-61	47.8	-45
Nandurbar	100.5	52	34.6	-34	27.3	-40
Nasik	151.7	126	27.2	-54	20.3	-58
Pune	183.1	210	25.1	-56	19.2	-52
Sangli	63.3	131	12.4	-50	5.2	-72
Satara	162.8	265	23.6	-47	18.0	-40
Solapur	3.3	-84	2.3	-89	2.3	-91
Marathwada						
Aurangabad	20.5	-43	1.4	-95	1.1	-97
Beed	6.0	-76	4.3	-86	3.4	-89
Hingoli	9.8	-82	1.8	-97	13.8	-77
Jalna	11.5	-67	0.3	-99	1.7	-95
Latur	11.0	-74	4.6	-91	5.0	-91
Nanded	14.8	-69	8.1	-86	6.0	-90
Osmanabad	14.3	-51	10.8	-66	3.4	-91

Parbhani	8.0	-79	3.8	-92	4.7	-92
Vidarbha						
Akola	38.8	-37	14.5	-63	7.3	-81
Amraoti	48.9	-30	11.6	-78	3.4	-93
Bhandara	78.1	-32	11.7	-86	1.3	-98
Buldhana	24.0	-57	17.2	-56	3.7	-90
Chandrapur	50.0	-48	10.8	-87	10.5	-87
Gadchiroli	92.2	-14	30.1	-72	4.5	-95
Gondia	148.8	37	14.2	-85	14.2	-85
Nagpur	40.5	-46	6.3	-89	0.2	-99
Wardha	37.9	-48	16.4	-74	5.7	-90
Washim	31.4	-56	2.4	-96	15.0	-72
Yeotmal	39.0	-42	1.5	-98	7.5	-87
Odisha						
Angul	153.7	77	87.7	7	20.6	-72
Balasore	93.3	13	85.6	8	54.1	-14
Bargarh	140.7	60	53.5	-40	4.4	-95
Bhadrak	82.4	-5	122.3	43	89.2	41
Bolangir	158.4	98	25.3	-71	17.5	-77
Boudh	171.2	93	94.5	3	12.2	-85
Cuttack	133.1	58	72.9	-2	23.6	-73
Deogarh	57.0	-64	91.6	-25	44.7	-55
Dhenkanal	124.3	42	87.0	1	76.2	5
Gajapati	57.9	6	20.5	-69	15.0	-75
Ganjam	58.2	20	25.2	-54	22.0	-62
Jagatsingpur	124.1	39	132.0	69	17.9	-80
Jajpur	111.8	36	122.1	56	43.9	-41
Jharsuguda	176.2	49	90.1	-15	28.2	-67
Kalahandi	162.1	116	41.6	-59	6.8	-92
Kandhamal	141.1	59	65.4	-29	14.5	-82
Kendrapara	166.0	78	146.0	58	24.4	-62
Keonjhar	66.8	-22	83.4	4	73.0	27
Khurda	105.1	37	39.8	-48	33.5	-57
Koraput	104.4	2	55.6	-44	5.8	-93
Malkangiri	125.4	23	54.0	-55	2.0	-98
Mayurbhanj	98.5	2	60.8	-30	104.8	44
Nawapara	95.6	57	19.0	-75	2.0	-97
Nawarangpur	108.6	14	31.3	-74	0.1	-99
Nayagarh	78.7	14	29.4	-65	42.0	-42
Puri	167.0	127	51.6	-24	41.9	-46
Rayagada	110.2	100	24.4	-63	26.4	-62
Sambalpur	249.2	103	77.5	-36	30.4	-70
Sonepur	204.6	99	71.5	-38	24.9	-69
Sundargarh	84.1	-5	70.5	-27	69.8	-7
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	74.5	18	7.9	-85	28.5	-57
North & Middle Andaman	58.8	-43	16.1	-84	7.0	-94

South Andaman	16.2	-83	14.6	-87	11.3	-86
GWB						
Bankura	112.2	80	69.0	-3	188.7	202
Birbhum	47.4	-37	127.2	72	97.4	69
Burdwan	64.4	-5	130.6	87	209.2	244
East Midnapore	199.0	165	50.5	-31	93.8	54
Hooghly	44.3	-28	88.5	48	173.7	190
Howrah	95.3	-4	60.2	-7	103.4	90
Kolkata	158.6	92	113.3	67	158.5	134
Murshidabad	18.1	-65	85.3	28	35.1	-36
Nadia	40.6	-21	186.1	201	191.6	269
24 Pargana (N)	92.5	32	156.2	107	132.4	114
Purulia	133.1	73	84.0	21	234.7	288
24 Pargana (S)	188.8	111	59.2	-35	117.1	29
West Midnapore	75.1	-1	141.8	95	79.4	12
SHWB & Sikkim						
Cooch Behar	34.5	-80	8.3	-96	5.4	-96
Darjeeling	32.3	-78	67.4	-56	73.5	-50
East Sikkim	57.0	-53	57.4	-32	37.1	-64
Jalpaiguri	22.8	-84	33.4	-79	65.6	-56
Malda	9.5	-83	49.9	-22	36.3	-51
North Dinajpur	0.6	-99	3.3	-96	60.2	-26
North Sikkim	82.1	3	35.6	-63	37.0	-68
South Dinajpur	8.5	-83	1.0	-98	39.4	-42
South Sikkim	35.5	-71	22.2	-74	20.4	-80
West Sikkim	**	**	**	**	**	**
Karnataka						
Coastal Karnataka						
Dakshina Kannada	129.4	-33	143.9	-33	131.5	-27
Udupi	213.2	-4	126.4	-46	115.9	-41
Uttara Kannada	166.6	-6	53.4	-70	89.2	-29
NI Karnataka						
Bagalkote	9.7	-41	5.8	-64	5.8	-63
Belagavi	73.4	97	16.0	-49	19.5	-8
Bidar	18.7	-54	10.5	-77	2.6	-95
Dharwad	32.7	20	21.4	-19	13.5	-22
Gadag	8.8	-50	7.6	-52	3.0	-81
Haveri	24.3	-21	6.7	-76	15.5	-29
Kalaburgi	9.2	-70	10.9	-74	3.1	-92
Koppal	0.0	-99	3.8	-79	9.2	-50
Raichur	2.2	-92	1.8	-94	5.0	-81
Vijayapura	8.5	-49	7.1	-65	11.3	-46
Yadgir	1.3	-96	7.8	-81	3.1	-93
SI Karnataka						
Ballari	1.3	-93	5.9	-69	10.7	-46
Bangalore Rural	13.2	-39	9.1	-67	4.9	-84
Bangalore Urban	2.0	-93	9.8	-69	7.0	-78
Chamarajanagar	1.0	-94	1.5	-89	1.4	-92
Chikaballapur	8.7	-60	2.5	-89	0.0	-100

Chikkamagaluru	111.1	-6	46.0	-59	35.7	-57
Chitradurga	2.4	-84	0.4	-97	1.9	-87
Davangere	8.3	-61	4.0	-81	6.5	-65
Hassan	23.1	-31	5.5	-82	3.0	-90
Kodagu	115.8	-21	103.4	-25	68.8	-40
Kolar	0.0	-100	11.0	-47	8.3	-64
Mandya	1.4	-87	0.9	-92	0.2	-99
Mysuru	2.0	-87	11.7	-20	4.4	-72
Ramanagara	0.0	-100	7.2	-69	8.8	-71
Shivamogga	174.0	62	104.8	-1	84.3	6
Tumakuru	0.4	-98	3.7	-79	2.9	-85
Kerala						
Alappuzha	57.0	-30	26.1	-63	22.1	-74
Kannur	127.8	-6	103.2	-20	116.8	3
Ernakulam	62.3	-42	34.7	-63	37.9	-55
Idukki	72.6	-44	74.8	-43	63.6	-45
Kasaragod	86.5	-44	76.0	-50	192.6	42
Kollam	25.5	-54	34.1	-34	32.7	-47
Kottayam	63.0	-30	26.8	-69	34.5	-60
Kozhikode	122.3	-7	52.5	-54	36.0	-68
Malappuram	78.5	-19	39.3	-58	23.0	-74
Palakkad	50.8	-38	40.3	-53	28.4	-63
Pathanamthitta	48.9	-43	35.2	-54	47.9	-37
Thiruvananthapuram	13.8	-56	9.8	-67	3.7	-89
Thrissur	68.1	-37	18.9	-82	24.0	-76
Wyand	83.0	-49	52.5	-60	49.4	-61
Tamil Nadu						
Ariyalur	0.0	-100	7.0	-73	21.8	-32
Chennai	14.0	-54	0.9	-97	2.4	-94
Coimbatore	11.5	34	7.6	-16	5.3	-50
Cuddalore	1.6	-94	18.3	-35	26.6	-21
Dharmapuri	0.8	-95	0.9	-96	0.0	-100
Dindigul	1.0	-92	4.1	-71	6.0	-70
Erode	0.0	-100	0.2	-98	15.3	-3
Kanchipuram	3.1	-90	13.5	-64	33.9	-25
Kanyakumari	3.6	-80	0.5	-97	2.8	-85
Karikal	0.0	-100	7.8	-45	3.6	-84
Karur	0.0	-100	0.0	-100	3.7	-72
Krishnagiri	0.0	-100	4.8	-78	0.3	-99
Madurai	0.0	-100	1.5	-91	19.3	-23
Nagapattinam	7.2	-58	25.0	22	16.0	-32
Namakkal	1.5	-92	7.4	-67	5.5	-78
Nilgiris	8.8	-80	15.6	-65	14.6	-62
Perambalur	0.0	-100	0.5	-97	16.3	-34
Puducherry	0.7	-98	77.2	148	32.8	-2
Pudukottai	5.0	-75	11.0	-51	7.9	-73
Ramanathapuram	1.3	-78	0.0	-100	9.2	-14
Salem	1.0	-96	12.6	-52	33.0	6
Sivaganga	7.7	-63	16.8	6	20.9	0

Thanjavur	1.0	-93	3.7	-84	10.3	-64
Theni	2.2	-66	2.6	-68	3.8	-49
Tirunelveli	0.2	-97	0.6	-88	0.1	-99
Tirupur	0.2	-97	6.2	2	0.0	-100
Tiruvallur	3.9	-85	3.8	-88	0.7	-98
Tiruvannamalai	0.0	-100	6.0	-81	24.1	-35
Tiruvarur	0.0	-100	1.4	-93	10.3	-58
Toothukudi	0.0	-100	0.3	-93	0.0	-100
Trichy	0.1	-99	5.3	-62	2.2	-89
Vellore	0.3	-99	4.8	-84	2.7	-92
Villupuram	2.1	-90	16.2	-41	6.4	-82
Virudhunagar	0.0	-100	0.0	-100	14.2	19
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	26.3	-42	3.3	-93	21.7	-48
Guntur	2.8	-90	1.1	-97	0.3	-99
Krishna	4.3	-89	6.4	-87	5.5	-88
Nellore	0.0	-100	2.0	-91	2.8	-88
Prakasam	1.4	-91	1.2	-94	0.0	-100
Sirkakulam	21.6	-51	14.1	-70	6.7	-85
Visakhapatnam	25.1	-32	15.0	-67	4.2	-89
Vizianagram	21.1	-40	15.4	-66	4.9	-90
West Godavari	14.6	-74	7.6	-87	10.8	-78
Rayalaseema						
Anantapur	0.7	-95	0.6	-96	0.0	-100
Chittoor	0.5	-98	1.4	-94	0.8	-97
Cuddapah	0.4	-98	0.0	-100	0.0	-100
Kurnool	3.8	-85	5.5	-81	0.5	-98
Telangana						
Adilabad	37.7	-44	4.4	-94	7.1	-89
Hyderabad	12.7	-69	0.7	-98	0.7	-98
Karimnagar	39.8	-28	10.6	-81	2.6	-95
Khammam	37.0	-37	2.2	-97	9.4	-82
Mehabubnagar	5.6	-82	5.8	-86	0.5	-99
Medak	12.5	-73	5.4	-90	0.4	-99
Nalgonda	3.8	-86	0.5	-99	0.3	-99
Nizamabad	24.1	-63	12.0	-83	3.4	-95
Rangareddy	13.5	-60	4.6	-90	0.4	-99
Warangal	32.1	-39	5.5	-91	6.4	-86

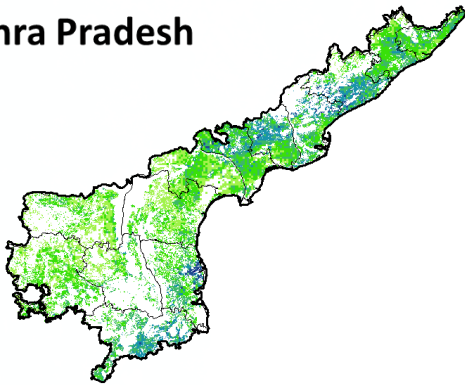
Legends

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

Annexure II

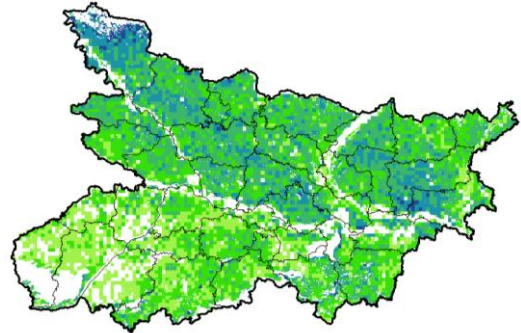
NOAA/AVHRR NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON
25th August 2016 FOR DIFFERENT STATES

Andhra Pradesh



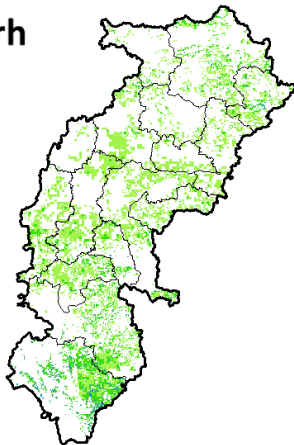
Agriculture vigour is moderate over central part whereas northern and southern coastal parts show good NDVI in the state of Andhra Pradesh.

Bihar



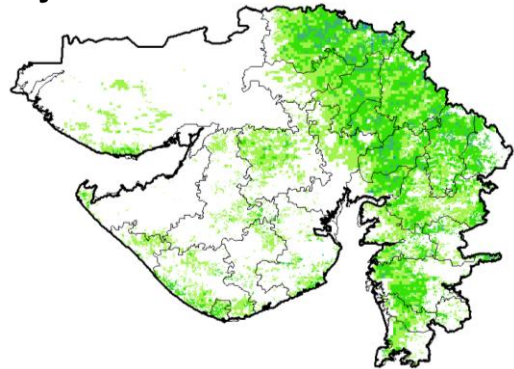
Agriculture vigour is moderate over southern parts of Bihar whereas northern part shows good NDVI values.

Chhattisgarh



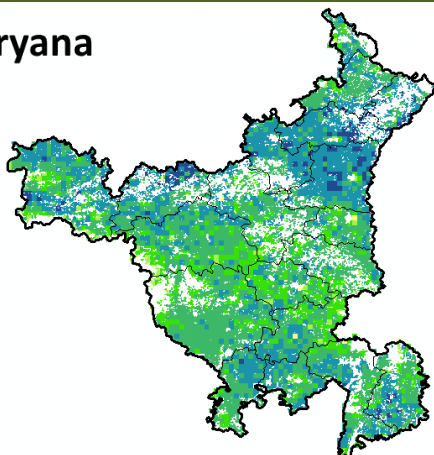
Agriculture vigour is moderate in the state of Chhattisgarh.

Gujarat



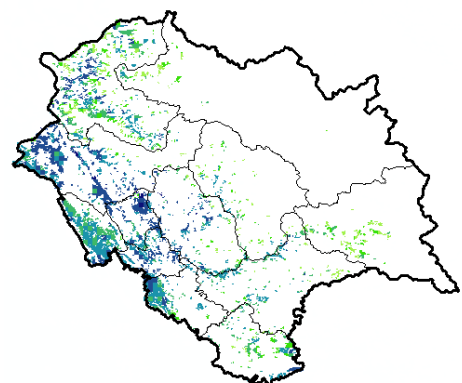
Moderate NDVI values are observed in patches in Saurashtra and Gujrat region.

Haryana



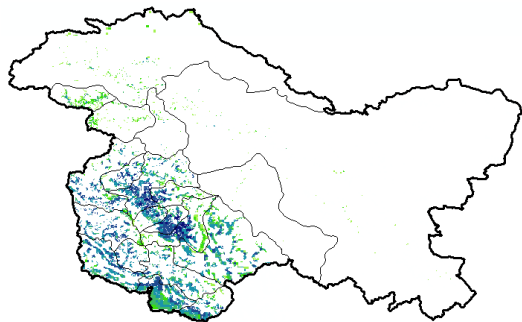
Agriculture vigour is moderate in patches over central region whereas, good agriculture vigour is observed in northern, western and southern regions of the state.

Himachal Pradesh



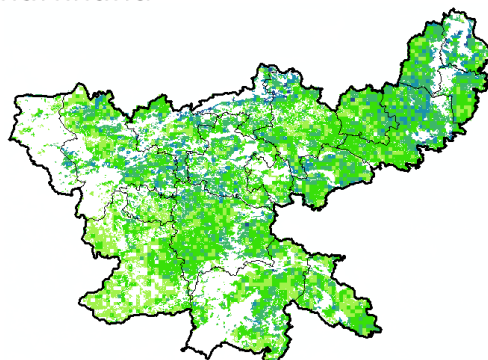
Agriculture vigour is good over entire state of Himachal Pradesh.

Jammu & Kashmir



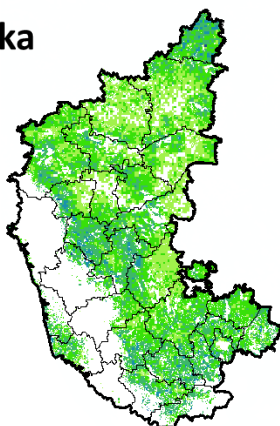
Agriculture vigour is good over central part of Jammu & Kashmir, whereas the remaining region shows moderate NDVI.

Jharkhand



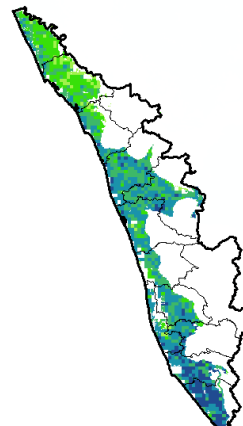
Agriculture vigour is moderate over entire state of Jharkhand.

Karnataka



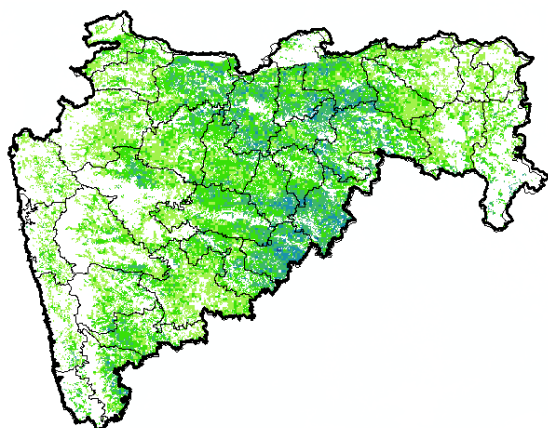
Agriculture vigour is moderate over northern region of the state whereas good vigour is observed in the central and southern regions.

Kerala



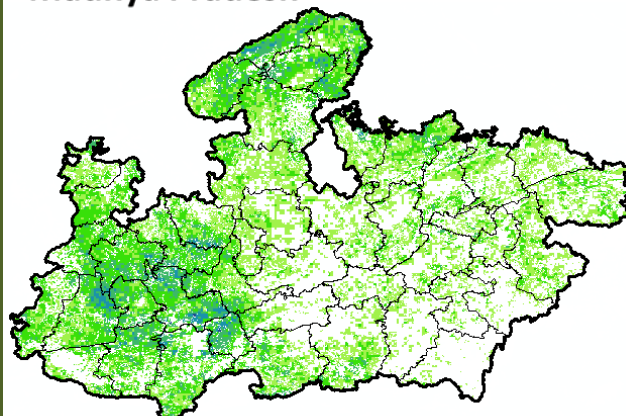
Agriculture vigour is good over entire state of Kerala except northern part which shows moderate NDVI values.

Maharashtra



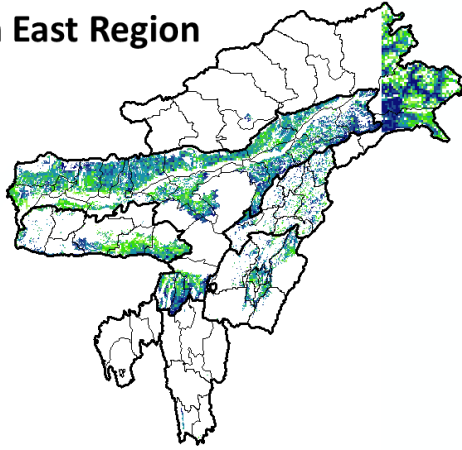
Agricultural vigour is moderate over western and eastern region of the state of Maharashtra whereas, good vigour is observed in the central region.

Madhya Pradesh



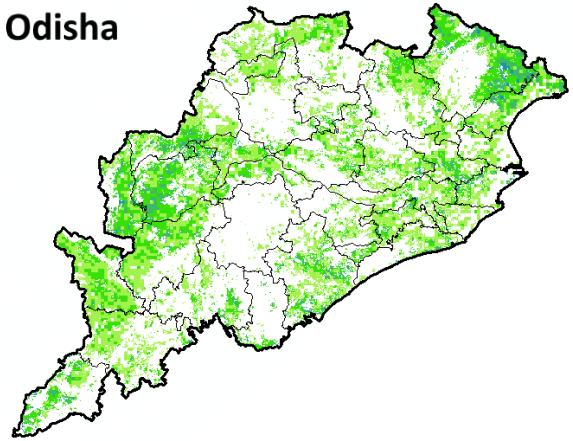
Agriculture vigour shows moderate values of NDVI over central and eastern region of the state of Madhya Pradesh whereas, good vigour is observed over western region.

North East Region



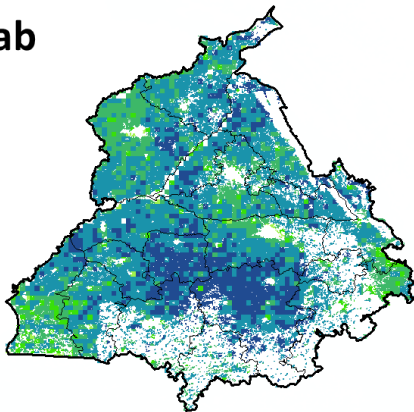
Agriculture vigour is good over north-east states of country.

Odisha



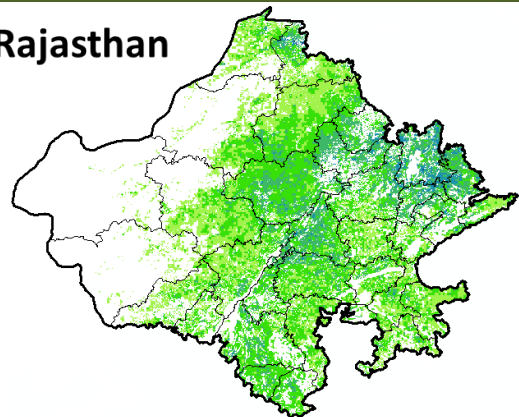
Agricultural vigour is moderate over entire state of Odisha.

Punjab



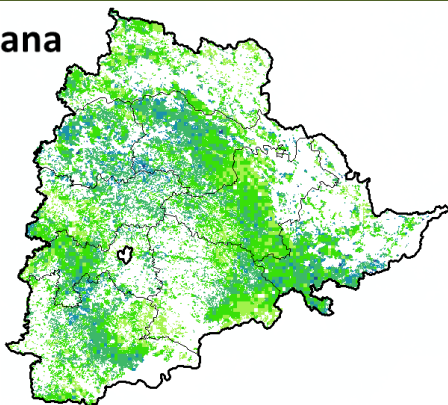
Agricultural vigour is good over the entire state of Punjab whereas central region shows patches of very good vigour NDVI.

Rajasthan



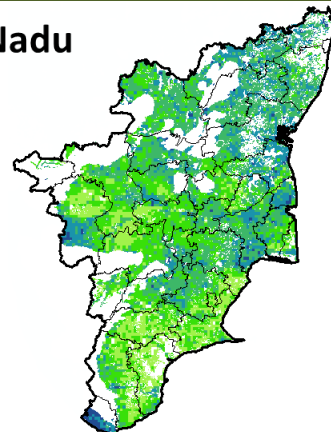
Agriculture vigour is moderate over most parts of Rajasthan whereas, good vigour is observed over north eastern region.

Telangana



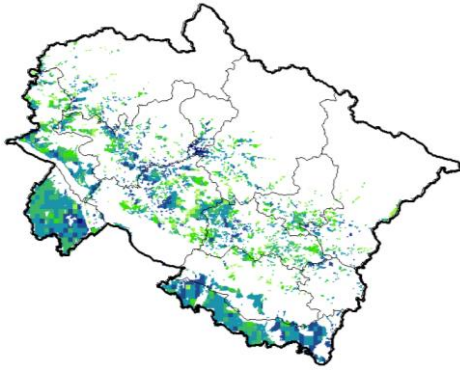
Agriculture vigour is moderate over entire state of Telangana whereas, good vigour is observed in patches in the north western region.

Tamil Nadu



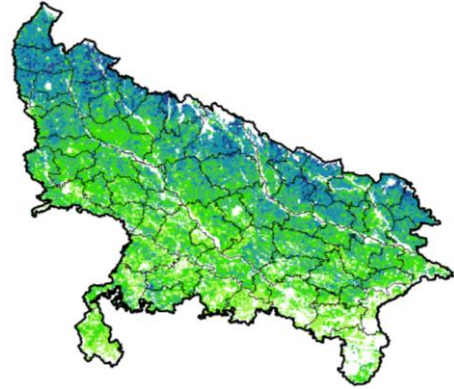
Agricultural vigour is good in patches of northern, southern and central part of Tamil Nadu, whereas rest of the part shows moderate NDVI.

Uttarakhand



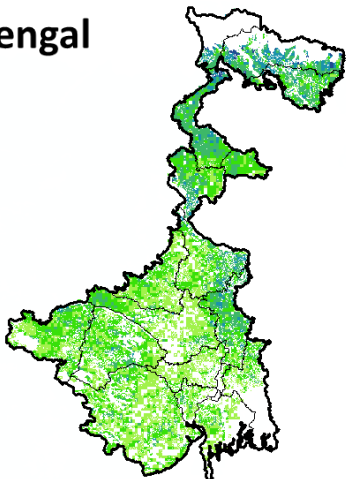
Agricultural vigour is good in state of Uttarakhand.

Uttar Pradesh

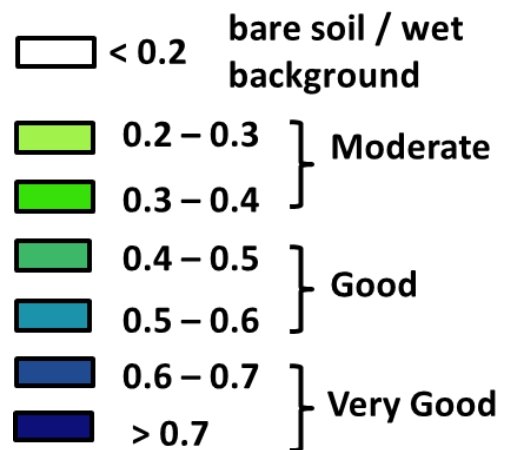


Agricultural vigour is good and very good over northern and north eastern part of the state whereas, moderate over the remaining region of Uttar Pradesh.

West Bengal



Agricultural vigour is moderate in West Bengal, whereas few patches in eastern and northern region of the state shows good NDVI.



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

Annexure III

Assam

Sali rice: Ranjit, Bahadur, Satyaranjan, Basundhara, Kushal, Mahsuri, Bhogali, Rangilee, Ketekijoha. Satyaranjan and Basundhara (in double cropping areas having crop duration of 130-135 days). Jalashree, Jalkunwari, Plawan (for flood affected areas).
Ranjit, Gitesh, Bahadur, Kushal, Piolee (long duration).
Satyaranjan, Bosundhora, T.T.B.-404, Mulagabharu, Kanaklata, Joymoti, IR-36, IR-64 etc and Disang, Luit, Kapilee, 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.

West Bengal

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

Odisha

Maize: Navjot, Shakti, Decan-107, Decan-109,
Hybrid: Megan-G, Megan, MM-1107, Highshell, Prabal, Proagro 4643, Bio9681, Pinnacle, DMH-7705,
Rice: *Early:* Jogesh, Siddant, Hazaridhan, Mandakini, Jyotirmayee, Virendra
Medium: Pratikshya, Manaswini, Tapaswini MAS, Konark, Surendra, Kharavela, Naveen, Abhisek
Late: Barsadhan, Ranidhan, Pooja, Mrinalini, RGL-2837, Moti, Ketakijoha, Padmini, Kanchana, Mahanadi, Jagabandhu
Hybrid varieties: CR Dhan 701, NK 5251, JKRH 401, Ajay, Rajalaxmi, Arize 6444G
Cotton: Suraj, Supriya, B.S.-30, B.S.-279, Surabhi, Sujata
Hybrid: Bunny, Diana, Bhaskra, Namaskara, Tulasi, Sigma, Chiruta, Takat
Mango: Grow Baiganpalli, Totapuri, Bombay green, Suvarnarekha, Neelam, Himsagar,, Langra, Dusheri, Amrapalli, Mallika, Ratna, Ramkella, Rummani, Sindhu, Alphanso and Keshar, etc.
Ragi: Divyasingh, AKP-2, AKP-3, AKP-7, Godavari, Neelachal, Bhairavi, Shubhra, and Chilika.
Banana: Hampa, Patakpara, Bantal, Robusta and Kabuli etc.
Greengram: K-851, PDM-11, PDM-54, OUM-11-5
Blackgram : T-9, Pant U-11, Pant U-19, Pant, U-30, and cowpea –Cowpea-, SEB-2, Pusa Barsati
Soybean: Ankur, Gourav, P. K. 73-163 and T-49.
Sesame: Prachi, Kalika, Kanak, Vinayak etc.

Bihar

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

Jharkhand

Rice: Birsa Dhan 108, Birsa Vikash Dhan 109, 110, 111, Sahbhagi and Vandana, IR 36, 64, Lalat, Naveen,

Sahbhagi, BR 10, Kanak, Rajendra Dhan 202, Sughanda, Birsa Vikash Sugandh Dhan 2, Birsa Vikash Dhan 203.

Maize: Suwan Composite 1 (100 days) and hybrid variety- HQPM 1 (100 days), Composite variety- Birsa Makka 1 (80-85 days) and hybrid variety- Kanchan (80-85 days), Birsa vikash Makka 2 (70-80 Days).

Red gram: Birsa Arhar (210 days), Bahar (240 Days) and ICPH 2671 (210 days).

Groundnut: AK 12-24, Birsa moongfali 1, 2, 3 and bold type – Birsa bold (BAU 13).

Urad: T 9, Pant U 19, 30, 35 and Birsa urd 1.

Moong: Pusa Vishal, S M L 668, K 885, P S 16, Pant Moong 2 and P D M 11.

Sweet potato: Birsa sakarkand-1 and Sri Bhadra.

Jammu & Kashmir

Paddy (Sub Tropical Zone): Basmati 370, Ranbir Basmati, China-1039, K-39, K-343, Giza-1.

Maize: Vivek-25, Vivek QOM-9 HM-5 and HQPM-1.

Uttarakhand

Sugarcane: Pant 84211, Co-238, Co-241, Co Pant 3220, COS-8436, COS-88230 etc. and medium to late sown varieties like Co Pant 90223, Co Pant-96219, COS-97222, COS-767, COS-1148, COS-96268 etc.

Okra (Bhabar and Tarai Zone): Uphar, Punjab Padmini, Punjab-1, Punjab-7, Arka, Anamika, Abhay, Parbhani Kranti

Paddy: Sharbati, Pusa 1121, Pusa 1, Pusa 44, NDR 359.

Groundnut: TA-64, Chandras, Kaushal, Prakash, Ambar.

Dwarfs variety of paddy: Narendra-118, Narendra-97, Pant Sankar Dhan-1 and Pant Sankar Dhan-10.

Pigeon pea: Pant Arhar-3, Pant Arhar-291, UPAS-120, Pusa-992.

Maize: Tarun, Navin, Kiran, Navjot, Pratap maize-1, Pusa sankul-3 & 4 Kg seed of chilly crop.

Soyabean: P.S.-1042, P.S.-1241, P.S.-1347, P.S.-1225, P.S.-19.

Groundnut: TA-64, Chandras, Kaushal, Prakash, Ambar.

Okra: Uphar, Punjab Padmini, Punjab-1, Punjab-7, Arka, Anamika, Abhay, Parbhani Kranti.

Radish: Pusha Chetki.

Himachal Pradesh

Cauliflower: snowball and Giant snowball.

Radish: Japanese white, Chinese pink and mino early white

Turnip: PTWG-1

Carrot: Pusakesar

Fenugreek: I.C. 74, kasoori.

Peas: Mater ageta-6 (early variety).

Cabbage: Pride of India, golden achor and hybrid

East Uttar Pradesh

Kharif Maize: ganga-11, sartaj, H.Q.P.M.-5, H.Q.P.M.-8, Pro-316, Bio-9681, Wai-1402 K, Prabhat, hybrid varieties G-1, 5 and selective varieties of Tarun, Navin, Kanchan, Sweta and Jaunpuri for early sowing.

Rice: Narendra-359, Malvia dhan-36, Narendra dhan-2026, Narendra dhan-2064, Narendra dhan-2065, Narendra dhan-3112, Sarju-52, Pant dhan-4, seeta, Jalamagna, jalanidhi, jalparia, chakia 59.

Hybrid varieties : Pro. Agro-6444(2001) Eraese, P.H.B.-71, Narendra sankar dhan-2,3, K.R.H.-2, P.R.H.-10, U.S.-312, R.H.-312, V.S.R.-202, R.H.-1531,

Scented varieties: Type-3, Pusa basmati-1, Malvia sugandh-105, Malvia sugandh-4-3, Narendra sugandh or Narendra usar dhan-1, Narendra usar dhan-2, C.L.R.-10, or Narendra usar dhan-2008

Turmeric: Kasturi, Paspu, Amlapuram, Madhukar, Sugna, Rajendra

Ginger -suprabha, suruchi, surbhi and Hingiri

Urad Bean: Pant U-19, Azad URD-1, KU 91-2, Shekhar-1, KU-301

Arahar: Bahar, Amar, Narendra Arahar-1,2, pusa-2001, pusa-991, pusa-992, paras manak, UPAS 120.

Moong: Type-27, 56

West Uttar Pradesh

Ladies finger: VRO-6, VRO-5.

Sugarcane: ko.sha 88230, ko.sha 8436, ko 0238, ko.sha 07250 or U.P. 0512.

Barseem: V.L.1, V.L.10, maskavi, jai, K-8027, K-9565, Mandakini.

Onion: pusa red, pusa white.

Sugarcane: The mid and late maturing varieties of sugarcane: CO Pant 211, Co Sa 687 and Co Sa 8436.

The varieties recommended in areas with poor water drainage: B.O.54 and B.O.91.

Baby corn: M.H.-4.

Punjab

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

Rice: Pusa-44, T.R-112 and T.R-113.

Onion: Punjab Naroya, Punjab White and PRO 6.

Radish: Punjab Pasand and Japanese white.

Turnip: L-1.

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

Tomato: TH-1, Punjab Ratta, Punjab NR 7, Punjab 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.

Maize: PMH1, Parbhat, PMH2

Paddy : PR-124, PR-123, PR-121, PR-122, PR-114, PR 113, PR-126, PR-115.

Okra: Punjab-8 and Punjab-7

Delhi

Oat : J.H.O-822, O.L.-9, Pusa oat-5.

Barseem: Vardan, Buland Barseem-1, Masakavi, J.B-3;

Radish: Japanese White, Hill queen, French Radish;

Spinach: Pusa Bharti.

Amaranth: Pusalal Chaulai, Pusa Kiran.

Ladyfinger: Pusa A-4.

Radish: Japanese White, Hill queen, French Radish.

Spinach: All Green, Pusa Bharti;

Fenugreek: Pusa Kasuri;

Coriander: Pant Haritama, Hybrids.

Turnip: Pusa Swati, Local Red variety.

Bottle Gourd- Pusa Naveen, Pusa Samridhi

Bitter Gourd- Pusa Visesh, Pusa-2 mosumi

Pumpkin- Pusa Visvash, Pusa Vikash

Ridge Gourd- Pusa Chikni

Cucumber- Pusa Uday, Pusa Barkha

East Rajasthan:

pearl millet: HHB 67, HHB 60, Raj 171, ICMH 356 and ICTP 8201 (improved varieties)

Raj-171, ICTP-8203, RHB-173, RHB-177, RHB-121, HHB-67 (improved varieties)

Sorghum: CSH-6, CSH-9, CSV-10, CSV-15.

TG37-A, DH-86, Pratap Mungfali-1.

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

kharif onion: N-53 & Agrifound dark red

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

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

HQPM-1, Pratap Hybrid Maize-3, Pratap Makka-9

Ageti-76, Bassi Selected, Mahi Kanchan

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

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

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

West Rajasthan

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

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

Bhindi: Ark Anamika, varshauphar, Parbhanikranti, pusamakhmali.

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

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

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

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

Gujarat

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

Sunflower: EC-68414, Modern GS-1, 2 & 3.

Sesame: Gujarat sesame -1, 2, 3 & 4.

Castor: GAUCH-1, GCH-2, GCH-4, 5, 6 & GCH-7.

Sorghum (fodder): CSH-6, GFS-4, GFS-5, GAFS-11.

Madhya Pradesh

Cauliflower: Golden Anker and Pusa Mukta.

Cabbage: Pusa Synthetic, Pusa Subhadra and Pusa Him Jyoti.

Radish: Pusa Kesar and Pusa Meghali.

Chhattisgarh

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

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

Karnataka

Ragi: Indaf-5, Indaf-9, and GPU-28.MR-01,MR-06 & ML-365.

Maize: Hybrids –DMH-2, Arjun and Private hybrids, GH-0727, Renuka (G-25).

Andhra Pradesh

Sorghum:CSH-9,CSH-13,CSH-14,PSV-15,PSV-19

Bajra:ICTP 8203,PBH 3

Korra:Prasad, Krishnadevaraya, Narashimharaya, Srilakshmi, Surya nandi

Cowpea: C 152 GC3 C0-4 CO-5

Sunflower:NDSH1 KBSH1 KBSH 44 DRSH 1

Green gram:LGG 407 LGG 450 LGG 460 MGG 295 ML 267

Field bean:TFB-1 TFB-5

Tamil Nadu

Samba rice:CR 1009 and ADT 50.

Telangana

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