



National Agromet Advisory Service Bulletin



Friday 2nd September 2016

(For the period 2nd to 5th September 2016)



Issued by

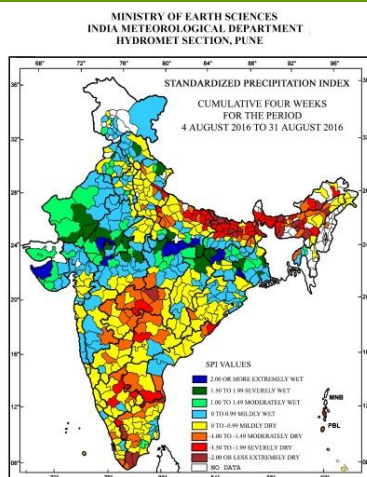
*National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division,
India Meteorological Department, Shivajinagar, Pune.*

Weblink For

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

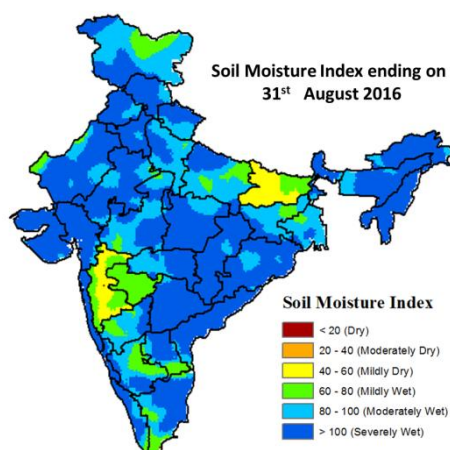
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Standardised Precipitation Index Four Weekly for the Period 4th to 31st August 2016



- Extremely/severely wet conditions experienced in few districts of Jharkhand; Rajasthan; Purulia, Nadia, Kolkata districts of West Bengal; Banda, Mirzapur, Sonbhadra districts of Uttar Pradesh; Chamoli, district of Uttarakhand; Kapurthala district of Punjab; Kullu, district of Himachal Pradesh; Neemuch, Rajgarh, Ratlam, Vidisha, Chhatarpur, Panna, Rewa, Satna, districts of Madhya Pradesh; Jamnagar, districts of Saurashtra, Kutch & Diu; Surguja, districts of Chhattisgarh.
- Extremely/Severely dry conditions experienced in most districts of Meghalaya; many districts of Bihar; Delhi; few districts of Arunachal Pradesh; Assam; West Bengal; Basti, Deoria, Farrukhabad, Gonda, Gorakhpur, Kushi Nagar, Mau, Maharajganj, Siddharth Nagar, Pilibhit districts of Uttar Pradesh; Udham Singh Nagar district of Uttarakhand; Nagpur, Yeotmal, districts of Maharashtra; Srikakulam, Chittoor, districts of Andhra Pradesh; Medak district of Telangana; Coimbatore, Nilgiri, Tirunelveli, Tiruvallur, Toothukudi districts of Tamil Nadu & Puducherry; Chitradurga, Hassan, Chickballapur districts of Karnataka.
- Moderately dry conditions experienced in few districts of Assam; Maharashtra; Telangana; West Kameng, district of Arunachal Pradesh; East Khasi Hills district of Meghalaya; West Tripura district of Tripura; Nawarangpur district of Odisha; Godda, Sahibganj districts of Jharkhand; Bhagalpur, Kishanganj, Madhepura, Monghyr, districts of Bihar; Bhaich, Balrampur, Faizabad, Kannauj, Kanpur City, Kanpur Dehat, Sant Kabir Nagar, Unnao, Auraiya, Mahamaya Nagar, Rampur, districts of Uttar Pradesh; Dehradun district of Uttarakhand; Betul, Chhindwara districts of Madhya Pradesh; Nellore, Vizianagaram, Anantapur, districts of Andhra Pradesh; Adilabad, Nizamabad Warangal districts of Telangana; Chennai, Dharmapuri, Dindigul, Kanyakumari, Madurai, Vellore districts of Tamil Nadu; Bagalkote, Gulbarga, Bangalore Rural, Bellary, Chamaraajanagar districts of Karnataka; Thrissur, Trivandrum districts of Kerala.
- Rest of the country experienced moderately wet mildly dry/mildly wet conditions.

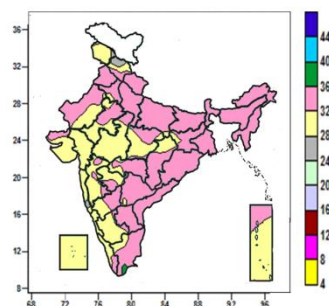
Soil Moisture Index for the week ending on 31st August 2016



- Soil Moisture Index indicates moderately wet condition in many parts of Jammu & Kashmir, Uttar Pradesh, Vidarbha, Karnataka, West Bengal, Jharkhand and west Madhya Pradesh. Mildly wet condition in Marathwada, some parts of Madhya Pradesh, Bihar, Jharkhand, Rajasthan, West Bengal, Karnataka, Andhra Pradesh, Tamil Nadu, Uttar Pradesh, Madhya Maharashtra. Mildly dry condition in many parts of Madhya Maharashtra and Bihar. Rest of the country shows severely wet condition.

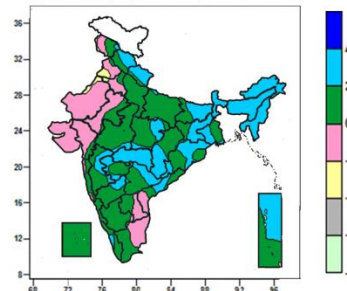
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 31.08.2016

Actual Mean Maximum Temperature (°C) in India for the week ending 31.08.2016



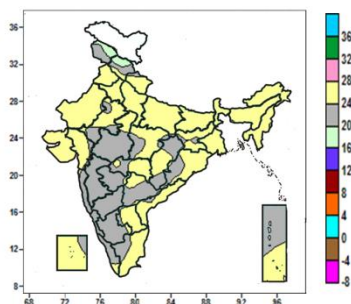
- Mean maximum temperature was between 36 to 40°C over isolated pocket of Tamil Nadu.
- Mean maximum temperature was between 28 to 36°C over rest of the country except some parts of Himachal Pradesh and isolated pockets of Jammu & Kashmir and Konkan, where it was between 24 to 28°C.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 31.08.2016



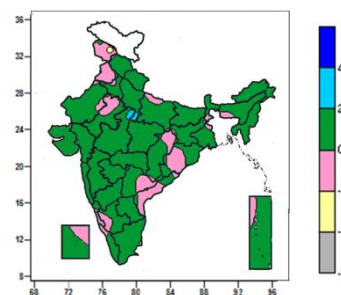
- Mean maximum temperature was above normal by 2 to 4°C over Sub-Himalayan West Bengal & Sikkim, North East India, many parts of Himachal Pradesh, Uttarakhand, Bihar, Jharkhand, Vidarbha, Odisha, some parts of Gangetic West Bengal, East Madhya Pradesh, Chhattisgarh, Madhya Maharashtra, Marathwada, North Interior Karnataka, Telangana, Coastal Andhra Pradesh, Andaman & Nicobar Islands and isolated pockets of Jammu & Kashmir, East Uttar Pradesh, West Madhya Pradesh and Kerala.
- It was normal to near normal over rest of the country except some parts of Punjab and isolated pockets of Haryana and West Rajasthan where it was below normal by 2 to 4°C.

Actual Mean Minimum Temperature (°C) in India for the week ending 31.08.2016



- Mean minimum temperature was between 16 to 20°C over some parts of Jammu & Kashmir and Himachal Pradesh.
- Mean minimum temperature was between 20 to 28°C over rest of the country.

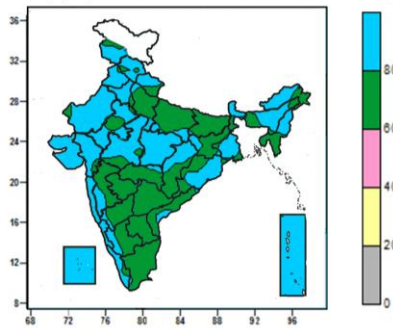
Mean Minimum Temperature (°C) Anomaly in India for the week ending 31.08.2016



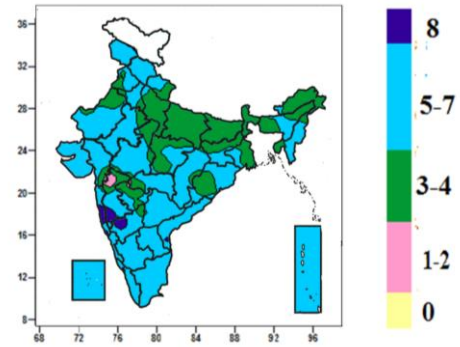
- Mean minimum temperature was above normal by 2 to 4°C over isolated pockets of West Uttar Pradesh and West Madhya Pradesh.
- Mean minimum temperature was normal to near normal over rest of the country except isolated pocket of Jammu & Kashmir, where it was below normal by 2 to 4°C.

Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 31.08.2016

Relative Humidity (%) over India for the week ending 31.08.2016



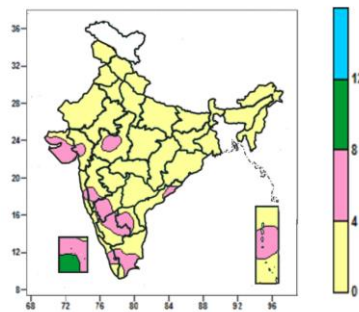
Cloud amount (okta) over India for the week ending 31.08.2016



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

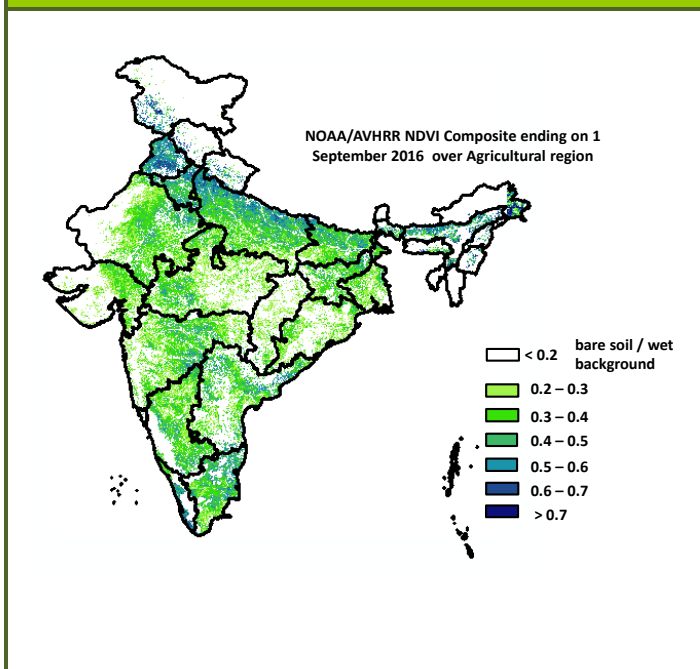
- Sky remained overcast (8 okta) over some parts of Konkan, Madhya Maharashtra and North Interior Karnataka and isolated pockets of Coastal Andhra Pradesh.
- Sky remained generally cloudy (5-7okta) over rest of the country except East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal, Tripura, many parts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

Wind speed (knots) over India for the week ending 31.08.2016



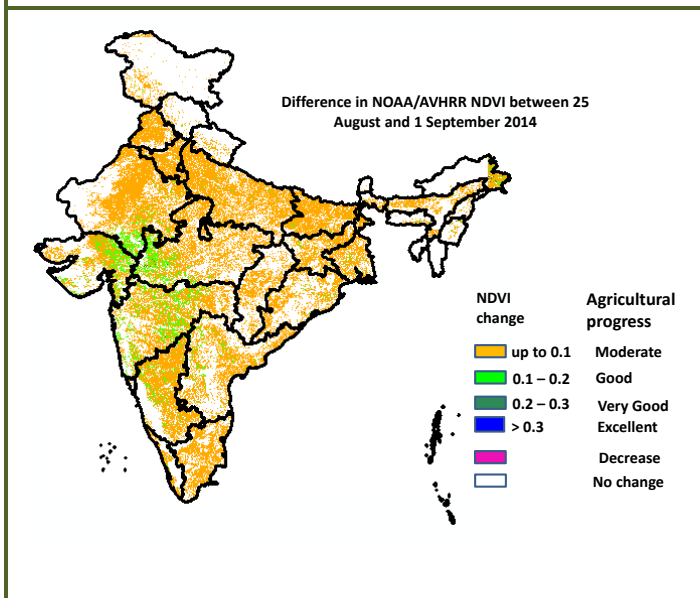
- Mean wind speed was between 8 to 12 knots over some parts of Lakshadweep.
- Mean wind speed was between 0 to 4 knots over rest of the country except many parts of Saurashtra & Kutch, Lakshadweep, Rayalaseema, some parts of West Madhya Pradesh, Gujarat Region, Konkan, Madhya Maharashtra, Interior Karnataka,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

NOAA/AVHRR NDVI COMPOSITE ENDING ON 1st September 2016 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour is good in Kerala, north Tamil Nadu, north Andhra Pradesh, northern and north eastern parts of Uttar Pradesh, Punjab, Haryana, parts of east Bihar, few patches in east Rajasthan and North east region where NDVI varies from 0.5 to 0.7. NDVI is moderated in few parts of Bihar, central Haryana, Gujarat, west 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 25th AUGUST and 1st SEPTEMBER 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, rest Madhya Pradesh and patches in West Bengal, Odisha, Andhra Pradesh, Tamil Nadu, Maharashtra and Gujarat.

- NOAA/AVHRR NDVI composite maps for the week ending on 1st September 2016 for different States are given in Annexure II.

Monsoon Watch

- Southwest monsoon was vigorous over Arunachal Pradesh and active over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim, West Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Marathwada, Telangana and Coastal Andhra Pradesh.

Weather Forecast for next 5 days valid upto 0830 hours of 7th September 2016

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

5 Day Rainfall Forecast (MID DAY) 2nd September 2016

Met Sub-divisions	02 Sept	03 Sept	04 Sept	05 Sept	06 Sept
1. Andaman & Nicobar Islands	WS	WS	FWS	FWS	FWS
2. Arunachal Pradesh	WS	WS	WS	FWS	FWS
3. Assam & Meghalaya	WS	WS	WS	FWS	FWS
4. N.M.M. & T.	WS	WS	FWS	FWS	FWS
5. S.H. West Bengal & Sikkim	WS	WS	WS	FWS	FWS
6. Gangetic West Bengal	FWS	WS	WS	WS	FWS
7. Odisha	FWS	WS	WS	SCT	SCT
8. Jharkhand	SCT	FWS	WS	WS	FWS
9. Bihar	FWS	WS	WS	WS	WS
10. East Uttar Pradesh	SCT	ISOL	ISOL	SCT	SCT
11. West Uttar Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
12. Uttarakhand	SCT	ISOL	ISOL	SCT	SCT
13. Haryana, Chd & Delhi	ISOL	ISOL	DRY	DRY	ISOL
14. Punjab	SCT	ISOL	ISOL	ISOL	ISOL
15. Himachal Pradesh	SCT	ISOL	ISOL	ISOL	ISOL
16. Jammu & Kashmir	SCT	ISOL	ISOL	ISOL	ISOL
17. West Rajasthan	ISOL	DRY	DRY	DRY	DRY
18. East Rajasthan	ISOL	ISOL	DRY	DRY	DRY
19. West Madhya Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
20. East Madhya Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
21. Gujarat Region	SCT	ISOL	ISOL	ISOL	ISOL
22. Saurashtra & Kutch	ISOL	DRY	DRY	DRY	ISOL
23. Konkan & Goa	FWS	SCT	SCT	FWS	FWS
24. Madhya Maharashtra	ISOL	ISOL	ISOL	ISOL	ISOL
25. Marathwada	ISOL	ISOL	DRY	ISOL	ISOL
26. Vidarbha	SCT	ISOL	ISOL	ISOL	ISOL
27. Chhattisgarh	SCT	FWS	FWS	SCT	SCT
28. Coastal Andhra Pradesh	SCT	SCT	SCT	SCT	SCT
29. Telangana	SCT	SCT	ISOL	ISOL	ISOL
30. Rayalaseema	ISOL	ISOL	ISOL	ISOL	ISOL
31. Tamil Nadu & Puducherry	SCT	SCT	SCT	SCT	SCT
32. Coastal Karnataka	WS	WS	WS	WS	WS
33. North Interior Karnataka	SCT	SCT	ISOL	ISOL	ISOL
34. South Interior Karnataka	SCT	SCT	SCT	SCT	ISOL
35. Kerala	WS	WS	WS	FWS	WS
36. Lakshadweep	SCT	SCT	WS	WS	WS

% 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

- 02 September (Day 1):** Heavy to very heavy rain with extremely heavy fall very likely at isolated places over Assam & Meghalaya and Arunachal Pradesh; heavy to very heavy at isolated places over Sub-Himalayan West Bengal & Sikkim and heavy at isolated places over Nagaland, Manipur & Mizoram & Tripura.
- 03 September (Day 2):** Heavy to very heavy rain at isolated places very likely over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Arunachal Pradesh; heavy at isolated places over Bihar, Gangetic West Bengal, Odisha and Nagaland, Manipur, Mizoram & Tripura.
- 04 September (Day 3):** Heavy to very heavy rain at isolated places very likely over Bihar and Sub-

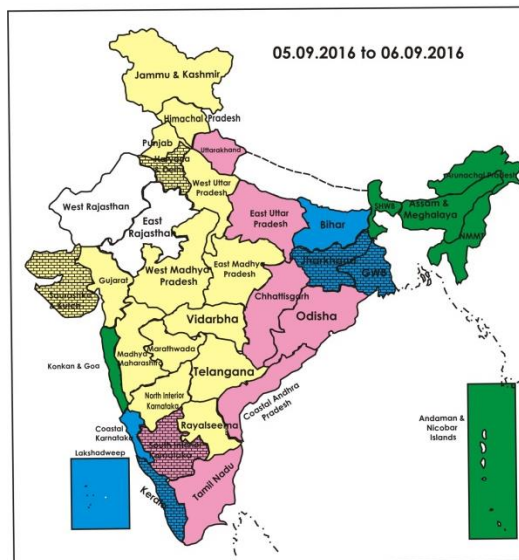
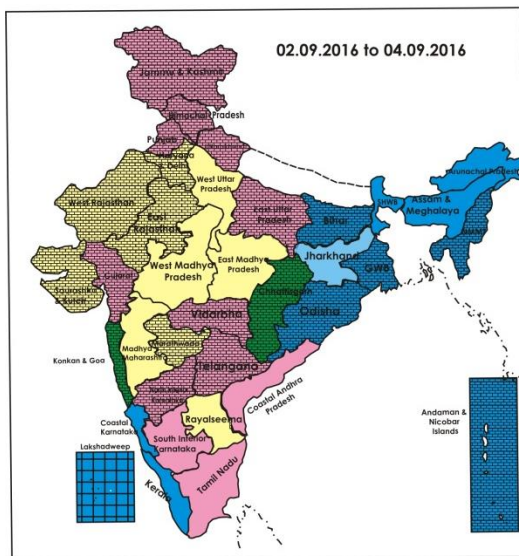
Himalayan West Bengal & Sikkim; heavy at isolated places over north Chhattisgarh, Jharkhand, Gangetic West Bengal, Odisha, Arunachal Pradesh and Assam & Meghalaya.

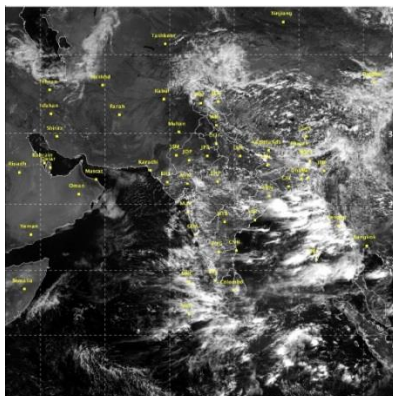
- **05 September (Day 4):** Heavy to very heavy rain at isolated places very likely over Bihar; heavy at isolated places over Jharkhand and West Bengal & Sikkim.
- **06 September (Day 5):** Heavy to very heavy rain at isolated places very likely over Bihar.

Weather Outlook for subsequent 2 days from 7th to 9th September 2016

- Rain at most places very likely over northeast and adjoining east India.
- Rain at many places very likely over Andaman & Nicobar Islands and along west coast; at a few places over central, peninsula and rest east India.

Weather Forecast Map (valid upto 0830 hours 7th September, 2016)





Salient Advisories

- In **Bihar**, in flood affected districts, if severe damage is observed in standing crops like rice, maize, arhar, banana and vegetables, after receding of flood water, undertake sowing of toria, September pigeon pea, early tomato and early cauliflower in the upland areas and in medium land situation, sowing of toria and sunflower is suggested.
- In **Madhya Maharashtra**, apply protective irrigation in standing crops like red gram, groundnut, jowar, cotton and soybean. Maintain water level of 5-7 cm in transplanted rice fields in Western Ghat Region. Continue plucking of matured green gram. Apply mulch of dry grass and field trash in standing crops and orchards to conserve soil moisture.
- In **Tamil Nadu**, continue land preparation for transplanting of *Samba* rice in Cauvery Delta Zone and in Western Zone, undertake nursery sowing of *Samba* rice.
- In Upper Brahmaputra Valley Zone of **Assam**, farmers who could not raise *Sali* rice seedlings in nursery due to floods are advised to undertake direct sowing of the sprouted seeds of extra early duration varieties like Luit, Kopilee, Culture-1 and Disang of *Sali* rice in puddled soil with seed rate 10 kg per bigha up to mid September. Continue sowing of green gram and black gram and nursery sowing of cauliflower.
- As rain/thundershowers likely at most/many places over **Arunachal Pradesh, Assam & Meghalaya 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/heavy to very heavy rain likely at isolated places over Arunachal Pradesh and Assam & Meghalaya on 2nd to 4th and over Nagaland, Manipur, Mizoram and Tripura on 2nd & 3rd Sept., provide adequate drainage in standing crop fields.
- As rain/thundershowers likely at most/many places over **West Bengal & Sikkim, Andaman & Nicobar Islands, Bihar, Coastal Karnataka and Kerala** during the period, , over **Jharkhand** from 3rd to 6th and over **Odisha** from 2nd to 4th Sept., at many places over **Chhattisgarh** on 3rd & 4th, over **Konkan & Goa** on 2nd, 5th & 6th September, do not apply irrigation, application of plant protection measures and fertilizers to the standing crops.
- As heavy/heavy to very heavy rain very likely at isolated places over **Sub-Himalayan West Bengal & Sikkim** from 2nd to 5th, over **Bihar** from 3rd to 6th, heavy rain very likely at isolated places over **Odisha** on 3rd & 4th, over **Gangetic West Bengal and Jharkhand** on 4th & 5th, over **north Chhattisgarh** on 4th Sept., provide adequate drainage in standing crop fields.
- In Sub-Montane and Low Hills Sub-Tropical Zone of **Himachal Pradesh**, prevailing weather is conducive for attack of white flies and sucking pests in soybean, moong and urd crops. For control, spray Imidachloprid 17.8 % SC @ 1 ml in 3 litres of water or Thiamethoxam 25 WG @ 40 g per acre.
- 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 the districts of Kerala except Palakkad and Thiruvananthapuram, in all districts of Coastal Karnataka, Bidar, Raichur and Yadgir districts of North Interior Karnataka, Kodagu, Mandya, Ramanagara and Shivamogga districts of South Interior Karnataka, Ariyalur, Chennai, Cuddalore, Dharmapuri, Kancheepuram, Karaikal, Krishnagiri, Nagapattinam, Namakkal, Perambalur, Puducherry, Pudukkottai, Salem, Sivaganga, Thanjavur, Thiruvannamalai, Tiruvarur, Trichy, Vellore and Villupuram districts of Tamil Nadu, all districts of Telangana, all districts of Coastal Andhra Pradesh except Nellore, in Cuddapah and Kurnool district of Rayalaseema. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most places over Coastal Karnataka and most/many places over Kerala during the period, do not apply irrigation, fertilizers and plant protection measures to the standing crops.
 - **Kerala:**
 - In Kottayam district of Problem Area Zone, continue land preparation for sowing of *puncha* rice.
 - In Kannur, Kasaragod, Malappuram and Kozhikode districts of Northern Zone, 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 clear weather in Thiruvananthapuram district. Undertake crown cleaning in coconut to prevent Eriophid mite attack.
 - In Idukki and Wynad districts of High Altitude Zone, there is chance of Pseudostem weevil infestation and sigatoka leaf spot in four month old banana. To control, adopt strict phytosanitary measures. Sigatoka leaf spot disease may become severe due to increase in relative humidity. If found severe, spray 1% Bordeaux mixture or Bavistin @ 1g/litre of water after cutting the severely affected leaves and burning them.
 - In Kottayam district of Problem Area Zone, apply Pseudomonas @ 20g/litre of water as a prophylactic measure against fungal diseases in rice and continue 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 after current spells of rain.
 - In Palakkad, Ernakulam and Thrissur districts of Central Zone of Kerala, to prevent leaf fall in nutmeg, remove the infected leaves from field and apply Kocide @ 2g/litre of water after current spells of rain.
 - In Kannur, Kasaragod, Malappuram and Kozhikode districts of Northern Zone, to control cashewnut borer in cashewnut, chisel out the grubs and swab the tree trunk with Acephate @ 4g/litre of water if noticed.
 - **Karnataka:**
 - Undertake sowing of sunflower/maize in Ballari, Kalaburgi, Koppal, Raichur and Yadgir districts of North East Dry Zone. Complete harvesting of green gram and black gram.
 - In medium black to deep black soils, carry out sowing of sunflower in wider rows of 135 cm, to overcome moisture stress and get higher yields in Vijayapura, Bagalkote and Gadag districts of North Dry Zone under sufficient moisture condition.
 - Carry out hand weeding in rice, intercultivation in red gram in Southern Transition Zone.
 - To reduce the flower drop in cotton in Uttar Kannada district of Hill Zone, spray Planofix @ 0.25 ml/litre of water on non rainy day.
 - Continue harvesting of green gram, black gram in Bidar district of North East Transition Zone in clear weather. Carry out weeding/intercultural operations to conserve soil moisture and earthing-up of rows in pigeon pea.
 - Complete harvesting of green gram in clear weather in Dharwad, Belagavi and Haveri districts of North Transition Zone. Spray 2% urea at 50% flowering stage of soybean crop, spray 2% DAP when the black gram crop is at flowering/pod filling stage and 12.5 kg of Nitrogen/ha in groundnut at the time of flowering stage.
 - Complete sowing of ragi in Bengaluru Rural and Bengaluru Urban districts of Eastern Dry Zone under sufficient moisture condition. Carry out intercultultural operations in earlier sown maize and groundnut crops to control the weeds and to increase the moisture availability to crops. Undertake residue mulch to standing crops like red gram, maize etc. to conserve soil moisture.
 - Due to cloudy weather condition, there is chance of thrips and mites in chilli crop and mites in coconut in

Chamrajnagar, Mandya, Kodagu and Mysuru districts of Southern Dry Zone; to control thrips and mites in chilli, spray Roger @ 1.7 ml + Dicotol @ 2.5 ml per litre of water and to control mites in coconut, spray water soluble Sulphur @ 5 g/litre of water or spray a mixture of neem oil (20 ml) + garlic solution (20 g) + soap powder solution (5 g) per litre of water to the coconut flower and fruit bunch.

- 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 Chlorpyrifos @ 2.0 ml or Monocrotophos @ 1.5 ml dissolved in one litre of water on non rainy day.
- Infestation of pod borer was noticed in soybean in North East Transition Zone; spray Emamectin @ 0.4 ml per litre of water.
- In Uttar Kannada district, there is chance of stem borer attack in ginger, turmeric and cardamom in Uttar Kannada district; for control, spray Monocrotophos @ 1.2 ml or Chlorpyrifos @ 2 ml per litre of water. Spray 1% Bordeaux mixture to arecanut plantation against Kole Roga in Uttar Kannada, Dakshina Kannada and Udupi districts.
- **Andhra Pradesh:**
 - In Guntur district of Krishna Godavari Zone, continue 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, continue sowings of redgram, castor, greengram, cowpea, sorghum, bajra and horsegram with realized rainfall in Chittoor and Kadapa districts of Southern Zone .
 - In Rayalaseema, in Anantapur district, pink boll worm infestation was observed in cotton (in flowers and bolls). To control, install Pheromone traps @ 4-6 /acre, destroy rosette flowers and remove the dropped squares, dried flowers and infested bolls periodically to suppress the initial pest population and spray insecticides like Profinophos @ 2 ml/litre or Thiodicarb 75 WP @ 1.5 g/litre or Quinalphos 25 EC @ 2.5 ml/litre plus Dichlorovas @ 1 ml/litre of water at 15 days interval.
 - In Coastal Andhra Pradesh, prevailing 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.
 - In Cuddapah and Chittoor districts of Southern Zone, prevailing weather conditions are congenial for incidence of sucking pests (jassids and white fly) in cotton. To control, undertake stem application of Monocrotophos and water in 1:4 ratio.
- **Telangana:**
 - In South Telangana Zone, taking advantages of recent rains, in cotton, farmers can go for application of 30-35 kg urea and 10 kg Muriate of Potash per acre at 40, 60 and 80 days after sowing as top dressing. To protect rice crop from gall midge and stem borer incidence, apply Carbofuran 3G @ 10 kg or Phorate @ 4 kg per acre at 15-20 days after transplanting.
 - In Adilabad, Karimnagar, Nizamabad and Khammam districts (North Telangana Zone), whitefly incidence was noticed in black and green gram. To control, spray Triazophos @ 1.5 ml/litre or Acetamiprid @ 0.2g/litre or Neem oil @ 5 ml/litre of water.
 - In Mahabubnagar, Nalgonda, Medak, Rangareddy, Khammam and Warangal districts (South Telangana Zone), incidence of sucking pests is noticed in cotton. To control, apply Monocrotophos and water in 1:4 ratio with soft brush on tender part of the stem at 40 and 60 days after sowing. Prevailing weather conditions are congenial for the incidence of Phytophthora Blight in red gram. If noticed, to control spray Mancozeb @ 2g per litre of water for 2 times in 10 days interval.
- **Tamil Nadu:**
 - In Ariyalur, Nagapattinam, Perambalur, Thanjavur, Thiruvarur and Trichy districts of Cauvery Delta Zone, continue land preparation for transplanting of Samba rice.
 - In Coimbatore, Tiruppur, Erode districts of Western Zone, undertake nursery preparation for Samba rice utilizing the realized rainfall. Since rainfall is anticipated, provide drainage to Kar rice which is at milky to maturity stage. Provide propping for early season and mid season planted sugarcanes against lodging due to anticipated high wind speed. Also protect banana crop against lodging by giving support.
 - In the Southern Zone (Kanniwadi), undertake land preparation for sowing of cotton and maize.
 - In Karaikal and Puducherry, continue land preparation and sowing of long duration varieties of Samba rice like (CR 1009 and KCLR 1).
 - In Salem, Dharmapuri, Nammakal and Krishnagiri districts of North Western Zone, undertake cultivation of sorghum, maize and minor millets crops utilizing the realized rainfall after seed treatment with Trichoderma viride @ 4g/kg seed.
 - In Nilgiris district of High Altitude Hilly Zone, in pepper plantation, spray DAP @ 1% on leaves to prevent spike drop and to enhance yield on a non rainy day.
 - In Nilgiris district of High Altitude Hilly Zone, widespread incidence of ash weevil is observed in horticultural crops. To control ash weevil, spray Phosalone 35 EC @ 1.5 ml/litre of water on a non rainy day.
 - In Thoothukudi, Virudhunagar and Tirunelveli districts of South Zone, expected moderate cloud cover and humidity during the coming days is conducive for incidence of earhead bug in rice. If incidence is noticed, spray

Malathion @ 500 ml/ha during morning or evening hours on a non rainy day.

➤ Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In the Western Zone of Tamil Nadu, present weather is conducive for foot and mouth disease and mastitis disease in milching animals. Clean the udder before and after milking with 1% Potassium permanganate and keep the shed clean to control mastitis and vaccinate animals to prevent foot and mouth disease.
- In the Southern Zone of Tamil Nadu, provide adequate good drinking water to cattles.
- In the North Western Zone, increase in wind speed and fall in temperature will result in discomfort for poultry. The feed intake may also reduce. Addition of double dose of liver tonics and toxin binders in feed for poultry should help in overcoming reduced feed intake.

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



Banana



Rice



Groundnut



Jute

- **Realised Rainfall:** Rainfall occurred in East Siang, Lohit, Lower Dibang Valley, Upper Siang and Upper Subansari districts of Arunachal Pradesh, Cachar, Dhubri, Dibrugarh, Hailakandi, Kamrup(Rural), Kamrup(Metro), Karbi Anglong, Karimganj, Lakhimpur, Morigaon, Nagaon, Nalbari, Sibsagar, Tinsukia and Udalgiri districts of Assam, Ri-Bhoi and West Khasi Hills districts of Meghalaya, Aizwal, Lunglei and Serchhip districts of Mizoram, Imphal East and Imphal West districts of Manipur, Dimapur and Kohima districts of Nagaland and all districts of Tripura. Weather remained mainly dry over rest of the region.

● **Advisories:**

- As rain/thundershowers likely at most/many places over Arunachal Pradesh, Assam & Meghalaya 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/heavy to very heavy rain likely at isolated places over Arunachal Pradesh and Assam & Meghalaya from 2nd to 4th and over Nagaland, Manipur, Mizoram and Tripura on 2nd & 3rd Sept., provide adequate drainage in standing crop fields.

■ **Assam, Meghalaya & Arunachal Pradesh:**

- In Dibrugarh, Golghat, Jorhat, Sivsagar and Tinsukia districts of Upper Bramhaputra Valley Zone, complete sowing of sesame at the earliest. Continue sowing of green gram and black gram and nursery sowing of cauliflower. Farmers who could not raise *Sali* rice seedlings in nursery due to floods are advised to undertake direct sowing of the sprouted seeds of extra early duration varieties like Luit, Kopilee, Culture-1 and Disang of *Sali* rice in puddled soil with seed rate 10 kg per bigha up to mid September.
- 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, complete 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, farmers are advised to top dress of Urea @ 6 kg per bigha 25-30 days after transplanting of *Sali* rice. Before top dressing of urea, weeds must be removed from the field.
- In Karbi Anglong and NC Hills districts of Hill Zone of Assam, continue sowing of radish. Continue sowing of *kharif* pulses like green gram and black gram. Undertake nursery raising for winter vegetables. To avoid damping off of seedlings, the seed beds should be drenched with 0.01% Captan or 4% Formalin solution and covered with polythene sheet or gunny bag for 2 days.
- In Dhemaji, Darrang, Lakhimpur and Sonitpur districts of North Blank Plain Zone of Assam, continue nursery sowing of early cauliflower, radish and sowing of *kharif* sesame, green gram and black gram.
- In Meghalaya, repair bunds in *jhum* rice and *Sali* rice field to retain standing water.
- In Arunachal Pradesh, continue sowing of black gram and green gram and harvesting of *jhum* rice/upland rice.
- In Arunachal Pradesh, there is chance of attack of leaf folder and gundhi bug on wetland rice at tillering stage. Spray Triazophos 40EC@4ml/litre of water against leaf folder and hang dead frog in the field against gundhi bug.
- 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 after current spells of rain.
- In Lower Bramhaputra Valley Zone, attack of Whorl maggot is generally observed in *Sali* rice up to 30 days after transplanting. To control this pest farmers are advised to spray Chloropyriphos 20EC or Carbofuran 3G @ 0.2g

per litre of water (30Kg/ha) after current spells of rain.

- In Barak valley Zone of Assam, to protect coconut from crown rot disease, apply 25 gm Bordeaux 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 Nagaland, to control gundhi bug in *jhum* rice, undertake weed control and eradication of alternate hosts from *jhum* rice fields and surrounding areas which can help prevent the multiplication of the bug. Mechanical control measures such as smoking the field, hand-picking of adults and nymphs have also been advocated.
- In Manipur, continue sowing of onion in the upland areas. Bunds/Ridges may be prepared to maintain optimum water level of 5-8cm in rice fields. Undertake nursery raising for cabbage/cauliflower/broccoli.
- In Mizoram, undertake harvesting of matured pods of cow pea.
- In Tripura, maintain adequate drainage in groundnut fields particularly in lowland where chances of stagnant water due to rain is more.
- In Manipur, spray Tricyclazole @ 15 gm/15 litre water against rice blast and Imidachlopid @ 8ml/15 litre of water against sucking pest on *kharif* rice at panicle initiation stage. Undertake plant protection methods after current spells of rain
- In Tripura, cloudy and humid weather is conducive for the attack of Rice Leaf Folder in *Aman* rice. Apply Cypermethrin+ Chloropyrophos 1ml per litre of water. 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 2 ml 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, prevent the livestock from feeding rotten grasses after flood. Instead, feed the animals with concentrate and green grasses along with vitamins and mineral supplements. Farmers are advised to keep clean around the pig shed and don't allow water stagnation. Spraying of insecticides for killing of mosquito is highly recommended.
- 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



Green gram

- **Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa, in Jalgaon district of Madhya Maharashtra, all districts of Marathwada except Aurangabad and Osmanabad, all districts of Vidarbha except Akola, Amraoti, Buldhana, Washim and Yeotmal, all districts of Gujarat Region except Narmada, Tapi and Vadodara, in all districts of Saurashtra & Kutch. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Maharashtra:**
 - As rain/thundershowers likely at many places over Konkan & Goa on 2nd, 5th & 6th Sept., do not apply irrigation, application of plant protection measures and fertilizers to the standing crops.
 - In Konkan, maintain water level of 7-8 cm in rice field by bunding the fields. Undertake application of third dose of nitrogenous fertilizers for rice crop @ 435 g Urea per Are (100 m²) area. Continue intercultural operations and plant protection measures in rice, finger millets, vegetable fields and mango, cashew and sapota orchards after current spell of rain.
 - In Madhya Maharashtra, apply protective irrigation in standing crops like red gram, groundnut, jowar, cotton and soybean. Maintain water level of 5-7 cm in transplanted rice fields in Western Ghat Region. Continue plucking of matured green gram. Apply mulch of dry grass and field trash to standing crops and orchards to conserve soil moisture. Continue intercultural operations in cotton, red gram and vegetable crops.
 - In Marathwada, continue plucking of matured green gram. Continue intercultural operations and application of fertilizers in cotton, red gram, vegetables, orchards and sugarcane.
 - In Vidarbha, maintain 5-7 cm water level in transplanted rice fields in Nagpur, Bhandara, Gondia, Chandrapur and Gadchiroli districts. Continue plucking of matured green gram and keep the produce in safer place. Continue intercultural operation and application of fertilizers in rice, cotton, red gram and pulses.
 - Due to cloudy weather in Western Maharashtra Scarcity Zone, there may be attack of jassids and thrips in cotton; spray Thiamethoxam 25 WG @ 2g in 10 litres of water.

- Due to cloudy weather in Marathwada region, there may be incidence of rust disease in fig; spray Carbendazim @ 1 g + @ 2 g Chlorothalonil per 1 litre of water.
- Due to cloudy and humid weather conditions in Pune region, there may be incidence of anthracnose disease on pomegranate; spray Hexaconazole @ 1 ml per litre of water.
- **Gujarat**
- Maintain water level of 3-5 cm in rice fields in Middle Gujarat and South Gujarat Heavy Rainfall Zone.
- Carry out gap filling in castor in Kutch district, in fennel in North Gujarat Zone and gap filling, thinning in late sown pulses in Bhavnagar and Ahmedabad districts.
- Carry out intercultural operations in pulses (vegetative stage) in Navasari, Dangs and Valsad districts of South Gujarat Heavy Rainfall Zone, in red gram in Surat, Narmada, Tapi, Bharuch districts of South Gujarat Zone, in pearl millet, sesame, cotton, pulses, vegetable crops, sorghum etc in Saurashtra & Kutch region, in sesame, pearl millet, sorghum and early sown pulses in Bhavnagar and Ahmedabad districts, in rice in Anand, Dahod, Kheda, Panchmahals and Vadodara districts on a non rainy day, to conserve soil moisture.
- Infestation of pink bollworm and jassids & thrips in cotton is observed in Kachchh district and North Saurashtra Zone; pick and bury the infested flowers/bolls in soil; also spray Profenofos 50 EC @ 20 ml or Cypermethrin @ 10 ml in 10 litres of water on a non-rainy day for control of pink bollworm. Spray Imidacloprid 17.8 % @ 5.0 ml /10 litres of water on non-rainy day for control of jassids and thrips.
- Due to cloudy weather condition there is chance of incidence of blast disease in pearl millet; to avoid it, apply Carbendazim 10 g or Tricyclazole 6 g in 10 litres of water.
- Present weather condition is favorable for infestation of *heliathis* in green gram and cowpea in Kachchh district and North Saurashtra Zone; if observed, spray Quinalphos 25 EC @ 20 ml in 10 litres of water or Renaxypyr @ 3 ml in 10 litres of water under clear sky.
- ❖ **Animal Husbandry**
- In Gujarat region, keep fodder in safe place to avoid spoilage due to rain.

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



Red gram



Okra



Maize



Rice

- **Realised Rainfall:** Rainfall occurred in all districts of Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim except South Dinajpur, in Kolkata district of Gangetic West Bengal, all districts of Odisha except Boudhgarh, Bhadrak, Deogarh, Jajpur, Sambalpur and Sonepur, in Arwal, Araria, Jamui, Katihar, Madhepura, Madhubani, Monghyr and Supaul districts of Bihar, Garhwa, Gumla, Latehar, Lohardaga, Sahibganj and Simdega districts of Jharkhand. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most/many places over West Bengal & Sikkim, Andaman & Nicobar Islands, and Bihar during the period, over Odisha from 2nd to 4th and over Jharkhand from 3rd to 6th Sept., do not apply irrigation, application of plant protection measures and fertilizers to the standing crops.
 - As heavy/heavy to very heavy rain very likely at isolated places over Sub-Himalayan West Bengal & Sikkim from 2nd to 5th, over Bihar from 3rd to 6th, over Odisha on 3rd & 4th, heavy rain very likely at isolated places over Gangetic West Bengal and Jharkhand on 4th & 5th Sept., provide adequate drainage in standing crop fields.
 - **Odisha:**
 - In East and South Eastern Coastal Plain Zone, undertake dressing of N in early sown direct seeded rice at three weeks after weeding and gap filling, apply 6-8 kg N/acre under saturated condition. Complete sowing on non-paddy crops like pulses and sesame etc. in uplands. Continue sowing of early cole crops like cabbage and cauliflower. Undertake transplanting of brinjal and planting of marigold.
 - In Koraput and Nawarangpur districts, complete sowing of maize and other non paddy crops in upland condition.
 - In Mayurbhanj and Keonjhar districts, in the transplanted rice fields, maintain water level up to 5 cm and continue nursery raising of Tomato, Cauliflower, Cabbage. Undertake inter-cultivation in pulses and groundnut.
 - 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 Keonjhar and Mayurbanj districts of North Central Plateau Zone, due to high humidity there is chance of stem borer attack on paddy crop, install pheromone traps @ 8-10/acre.
- In Keonjhar and Mayurbanj districts of North Central Plateau Zone, prevailing weather is congenial for attack of white flies in pulses and Tikka disease in groundnut. To control the white flies, spray Imidacloprid @ 1 ml in 4 liters of water. Spray Mancozeb @ 4g/litre of water to control Tikka disease in groundnut. Undertake plant protection measures after current spells of rain.
- In Agul and Dhenkanal districts of Mid Central Table Land Zone, in case of attack of Yellow vein mosaic in green gram, black gram and okra, spray Thiamethoxam @ 1g/3 litre of water after current spells of rain.
- **West Bengal:**
 - In Burdwan, Murshidabad, Nadia, North 24 Parganas of New Alluvial Zone, keep 2 to 3 cm stagnant water in rice field upto 10 days after transplanting. At the time of panicle initiation, keep 5 to 7 cm water in the fields. Continue 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, maintain 3-5 cm of water in rice field. 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. Undertake weeding in rice at 35 days after transplanting and maintain 2-3 cm of standing water.
 - In Purba Medinipur and South 24 Parganas of Coastal Saline Zone, undertake intercultural operation and thinning in rice at tillering stage. Maintain optimum water level in Aman rice fields.
 - In Laterite and Red Soil Zone, in this weather condition, brown spot disease and stem borer attack may be found in rice. If stem borer damage (Dead heart) is exceeding more than 5%, spray Chlorpyrifos 20% EC @ 2ml/litre. To control sheath blight, spray Carbendazim 50 WP @ 1g/litre of water. Undertake plant protection measures after current spells of rain.
 - In New Alluvial Zone, in some areas, infestations of Gundhi-bug are reported in rice at maturity stage. Apply Malathion or Dichlorovos @ 1ml/litre of water if the infestation is more.
 - In Old Alluvial Zone, under the present weather condition, there is a possibility of outbreak of Downy mildew in cucurbits. To control downy mildew, spray Metalaxyl +Mencozeb @ 2.5g/litre of water at 10-15 days intervals. Undertake plant protection measures after current spells of rain. To reduce boll worm infestation in bhindi, use pheromone trap @ 2-4/ bigha, install the trap just above the crop height.
- **Andaman and Nicobar Islands:**
 - In North, South and Middle Andaman, undertake weeding in main field of paddy with the help of cono weeder or manually. It is also suggested to do weeding and earthing in vegetables during rain free days. Set up light trap in the rice and vegetable field to attract borer/caterpillar moth.
 - In Nicobar, remove the unwanted fallen coconuts/leaves from coconut gardens to avoid breeding of rhinoceros beetle.
- **Bihar:**
 - In Bihar, in flood affected districts, if severe damage is observed in standing crops like rice, maize, arhar, banana and vegetables, after receding of flood water, undertake sowing of toria, September pigeon pea, early tomato and early cauliflower in the upland areas and in medium land situation, sowing of toria and sunflower is suggested. Drain out excess water and 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 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, undertake sowing of September pigeon pea, nursery sowing of cabbage and cauliflower. Undertake transplanting of early varieties of cauliflower. Undertake weeding in vegetables such as chilli, tomato, brinjal, *kharif* onion, bhindi, pumpkin, sponge guard and cucumber.
 - In South Bihar Alluvial Zone, in present weather condition, attack of brown plant hopper (BPH) may be enhanced in paddy. If population is observed above ETL in rice then, broadcast Cartap 4% granules @ 10 kg/acre in moist soil for effective control. There is chance of stem borer in maize, spray of Carbrayl @ 2 g/litre of water if infestation is above ETL. Undertake plant protection measures after current spells of rain.
- **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 nursery 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.
- In Western Plateau Zone, timely sown rice crop are at flowering stage and this stage is susceptible to the attack of Gundhi bug. To control the insects, dusting of Chlorpyrifos/Quinolphos/Methyl Parathion dust @ 10 kg per acre on a non rainy day is recommended.
- 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 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 liver fluke in cattle (Symptom –Anorexia,Diarrhoea and swelling of brisket region), the cattle should give Oxcyclozanide (10-15 mg /kg body weight) or Rufoxinide (7.5 mg /kg body weight) after consulting veterinarian.

CENTRAL INDIA [M.P., CHHATTISGARH]



Maize



Rice



Soybean



Green gram

- **Realised Rainfall:** Rainfall occurred in all districts of East Madhya Pradesh except Panna, Rewa, Satna, Sidhi and Singrauli, in Agar, Bhopal, Harda, Hoshangabad, Jhabua, Neemuch, Raisen, Sehore, Sheopur and Shivpuri districts of West Madhya Pradesh, in all districts of Chhattisgarh except Janjgir, Jashpur and Surajpur. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - In Jabalpur, Rewa, Satna districts, continue nursery preparation for cauliflower. Undertake weed control in rice and strengthen the bunds for retaining of rain water.
 - In Chhindwara and Betul districts, continue nursery preparation for tomato, chilli, brinjal, early cauliflower and raising of papaya seedlings.
 - In Indore and Ujjain districts, continue nursery preparation for cauliflower and transplanting of onion. Apply split dose of nitrogen in maize.
 - 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.
 - 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.
 - In Nimar Valley Zone, due to humid weather there are chances of powdery mildew disease in black gram and green gram, Spray Corbendazim @ 1g/litre per acre.
 - In Bundelkhand Zone, due to humid weather there are chances of attack of yellow mosaic virus in black gram, spray Imidacloprid @ 0.5ml per litre of water.
 - **Chhattisgarh:**
 - As rain/thundershowers likely at many places over Chhattisgarh on 3rd & 4th September along with heavy rain at isolated places over north Chhattisgarh on 4th Sept., do not apply irrigation and plant protection measures to the standing crops.
 - In North Chhattisgarh, continue sowing of horse gram and niger in upland areas. Undertake first top dressing with urea (25 kg/acre) in rice at tillering stage. Undertake intercultural operations in *kharif* crops after current spells of rain.
 - In Central Chhattisgarh, maintain 5 cm water in rice fields. Continue sowing of horse gram and niger.
 - In South Chhattisgarh, undertake intercultural operations in rice on a non rainy day and apply 2nd dose of Urea. Continue 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 Ananatanag, Baramula, Doda, Ganderbal, Jammu, Kathua, Rajouri, Reasi, Samba, Srinagar and Udhampur districts of Jammu & Kashmir; all districts of Himachal Pradesh except Hamirpur, Kangra, Lahaul & spiti, Sirmaur and Solan, in Chamoli, Pithorgarh, Rudraprayag and Uttarkashi districts of Uttarakhand, all districts of Punjab except Fatehgarh Saheb, Ludhiana, Mansa, Nawashahar, Patiala, Ropar, Sangrur and Mohali, in all districts of Haryana except Chandigarh, Palwal, Panchkkula, Panipat and Sonapat, in New Delhi, North Delhi, and South West Delhi districts of Delhi, Bahraich, Balrampur, Chandauli, Gonda, Hardoi, Kheri, Sitapur and Sonbhadra districts of East Uttar Pradesh, Baghpat, Bulandsahar, Firozabad, GB Nagar, Ghaziabad, Hamirpur, Jhansi, Jotiba Phule Nagar, Kanshiramnagar, Mathura, Meerut and Muzzaffarnagar districts of West Uttar Pradesh, Alwar, Bhilwara, Bundi, Chittorgarh, Jaipur, Jhalawar, Jhunjhunu, Kota, Rajsamand, Sawai Madhopur, Sikar, Sirohi, Tonk and Udaipur districts of East Rajasthan, all districts of West Rajasthan. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Rajasthan:**
 - 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 before tasseling in maize. Undertake weeding and hoeing operation in maize, moong, urad and cotton crops.
 - In Arid Western Plain Zone, in Jaisalmer and Bikaner districts, apply top dressing of nitrogen in standing pearl millet crop @ 30 kg/ha (in the form of urea @ 66 kg/ha) along with rain.
 - In Dungarpur and Banswara districts of Southern Humid Plain Zone, apply top dressing of urea in maize, cotton and rice on a non rainy day.
 - In Alwar, Bharatpur, Dhaulpur, Karauli, Sawaimadhapur districts of Flood Prone Eastern Plain Zone, undertake nursery sowing of cauliflower and sowing of radish.
 - In Irrigated North Western Plain Zone, in Hanumangarh, apply top dressing of nitrogen @ 10 kg per bhiga (22 kg urea) in paddy crop, after 6-7 weeks of transplanting and maintain 4 - 5 cm water in the field.
 - In Sub Humid Southern Plain and Aravali Hill Zone, prevailing weather condition is congenial for attack of stem borer in maize and bollworm and jassids in cotton crop, for control apply Phorate 10 G 3% granules @ 5 to 7.5 kg per hectare at 15-30 days after sowing of maize, for stem borer and apply Carbaryl 50% dust @ 2.5 kg per hectare for control of bollworm and jassids in cotton crop.
 - 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.
 - In Arid Western Plain Zone, in Jaisalmer and Bikaner districts, prevailing humid weather condition is congenial for attack of sucking pests (jassids, white fly, thrips etc) in guar and pulses and pod borers in pulses, for control spray Acitamiprid or Thiamethoxam @ 3 gm per 10 litre of water for sucking pests in guar and pulses, spray Quinalphos @ 2 ml per litre of water or Monocrotophos @ 1.5 ml per litre of water for pod borers in pulses.
 - In Arid Western Plain Zone, in Jaisalmer and Bikaner districts, prevailing humid weather condition is congenial for attack of bacterial leaf blight in guar, for spray Streptomycin @ 2.5 g along with Copper Oxychloride @ 30 g per 10 litres of water.

- In Arid Western Plain Zone, in Barmer, Churu, Jalore, Jodhpur, Pali districts, prevailing weather condition is congenial for attack of fruit borer in tomato and white fly and aphid in guar crop, for control spray Malathion 50 EC @ 1 ml. per litre of water per hectare for fruit borer in tomato and spray Monocrotophos 36 SL @ 1 litre per hectare for white fly and aphid in guar crop.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of fruit borer in okra, for control, uproot & burn the affected plants and spray Malathion 50 EC @ 1.0 ml per litre of water. Harvesting of fruits can be done 3 days after spray.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, prevailing weather condition is congenial for attack of sap sucking pest as whitefly, jassids in guar, for control spray Triazophos @ 2.5 ml or Acitamidiprid @ 0.4 g per litre of water.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar prevailing weather condition is congenial for attack of tikka disease in groundnut, for control, spray Carbendazim (50% WP) 0.1% @ 1 g per litre of water or Hexaconazole 5 EC @ 1 ml per litre of water.
- **Jammu & Kashmir:**
 - In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, farmers are advised to spray paddy crop with a mixture of 3 gm of Zinc Sulphate, 15 kg Urea and 1 Kg of Zineb per hectare in 500 litres of water, if yellowing of leaves from tips is noticed.
 - In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, application of top dressing of Nitrogen on paddy crop is advised at panicle initiation stage. Undertake nursery raising of cole crops like cauliflower, cabbage and Know-Khol. Undertake sowing of radish and carrot on ridges.
 - In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, weather is favourable for attack of green leaf hopper and stem borer on paddy and attack of stem borer & blister beetle on maize crop. Monitor the crop and take proper plant protection measures.
 - Present weather is congenial for attack of blast on paddy crop in Intermediate Zone, to control, spray Tricyclazole (Beam) @ 0.06%. Also there may be attack of stem borer, cut worm and aphids on maize. Monitor the crop and take proper plant protection measures if observed.
- **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. Undertake transplanting of seedlings of brinjal and chilli in main field.
 - In Udhm Singh Nagar district of Bhabar and Tarai Zone, paddy is in the stage of panicle emergence/ formation of earhead stage. Therefore it is advised to maintain optimum water level in the fields. Continue transplanting of Brinjal and sowing of early variety of spinach (Palak) in the field.
 - In Nainital district of Bhabar and Tarai Zone, if the seedlings of hilly rai or snowball, cabbage and cauliflower are ready then undertake transplanting of these vegetables in the main field. Continue sowing of early variety of radish, turnip and early variety of pea. In unirrigated mid hills, complete sowing of radish varieties like Meenu early, Japanese white, PusaHimani and early varieties of Saljam like Parpiltop at the earliest.
 - In TehriGarhwal, 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. Continue transplanting of seedlings of cabbage and broccoli in the main field.
 - 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 on a non rainy day.
 - In Dehradun, Pauri and Haridwar districts of Sub Humid Sub Tropic Zone, to prevent infestation of stem borer to paddy, apply 25 EC Quinolphos 20ml in 10ml of water on a non rainy day.
- **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. Undertake plantation of new tea plants or for infilling of gaps with new plants.
 - In Mid Hills Sub-Humid Zone of Himachal Pradesh, in Bilaspur, Solan, Shimla and Sirmaur 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, remove the weeds, if any from the oat fields. Continue nursery sowing of vegetables.
 - In High Hills Temperate Dry Zone of Himachal Pradesh, in Kinnaur and Lahaul&Spiti, present weather is conducive for attack of blight in potato, for control spray Rhedomil 0.25% @ 25 gm per 10 litre of water.
 - In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of hairy caterpillar in mash and sesame crops, for control spray Cypermethrin 25 EC @ 0.5 ml per litre of water.
 - In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, weather is conducive for attack of white flies and sucking pests in soybean, moong, urd crops, for control spray Emidachloprid 17.8 % SC @ 1 ml in 3 litres of water or Thiamethoxam 25 WG @ 40 g per acre.

- In Mid Hills Sub-Humid Zone of Himachal Pradesh, in Bilaspur, Solan, Shimla and Sirmour districts, prevailing weather is conducive for attack of blight in tomato, for control spray Diethane M-45 / Redomil gold @ 250 g in 100 litres of water.
- **Punjab, Haryana and Delhi:**
- In Punjab, in Fazilka, Ferozepur and Faridkot districts, 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 and planting *kharif* onion.
- 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.. Undertake planting of ever green fruit crops like citrus, mango, litchi, guava, etc.
- In Ajitgarh, Rupnagar and SBS Nagar districts, 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 Western & 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% and repeat after 15 days if required.
- 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 trizophos 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. Monitor the infection of blast disease in rice at 2-3 days interval. If symptoms appear than, spray of Bavistin 2 gram/litre of water 2-3 times with an interval of 10 day.
- **Uttar Pradesh:**
- In Central Plain Zone of East Uttar Pradesh, undertake weeding in rice fields before top dressing and maintain 3 - 5cm water level in the fields. Undertake transplanting of mid season brinjal, tomato, cauliflower and capsicum. To control stem borer in paddy crop, release Trichograma parasite at an interval of 8-10 days. 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, undertake weeding operation in late sowing paddy crop and thinning operation in pulses. Apply top dressing of nitrogen in maize and paddy crop. Undertake weeding in green gram and black gram. Undertake light hoeing, mulch with crop residue to conserve the soil moisture.
- In Western Plain Zone of West Uttar Pradesh, undertake hoeing and weeding operation in standing *kharif* crops, sugarcane 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.
- In Bundelkhand Zone of West Uttar Pradesh, due to continues 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.
- 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 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 leaf rolling, hispa in paddy, for control, spray Chlorpyrifos 20 EC or Quinalphos 25 EC @ 1.5 litres in 500 to 600 litres of water per hectare on a non rainy day.

- 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 *khari* 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 leaf roller in pigeonpea, for control spray Monocrotophos @ 2 ml in 1 litre of water and mixed in 200 liters 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 Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing high humidity weather condition is congenial for fruit rot in guava crop, in this disease white spots are seen on fruits & later fruits become rotten, for control spray Mancozeb @ 2 g per litre of water.
- In East Rajasthan, Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts of Sub Humid Southern Plain and Aravali Hill Zone, undertake transplanting of papaya plants, it should be 20 cm height or two month age.
- 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.
- In Tarai Zone of Uttarakhand, continue picking of early varieties of apple in mid hilly regions. Collect the seeds of seed bearing fruits like Aadu, Plum, Khubani etc and keep them for root setting. Proper drainage of water should be maintained in standing crop of potato.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, continue 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 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.
- 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, 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, spray of bavistin & Diathane M-45 is recommended for protection against septoria leaf spot in young fruit plants.
- 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.

❖ **Poultry:**

- In Himachal Pradesh, weather is congenial for attack of Diathermia and Cocksedia in poultry, for control spray Formalin 40% @ 1 litre in 9 litres of water around the farm.

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

Annexure I
Week by week Rainfall Distribution

Sub-Divisions	17.08.16		24.08.16		31.08.16	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	44.0	-60	57.2	-12	22.6	-52
Dibang Valley	**	**	**	**	**	**
East Kameng	17.2	-75	7.2	-86	23.9	-64
East Siang	16.6	-90	8.5	-95	113.0	-19
Kurung Kumey	**	**	**	**	**	**
Lohit	72.4	-38	43.1	-58	65.7	-24
Lower Dibang Valley	26.5	-46	38.7	48	61.3	27
Lower Subansari	**	**	**	**	**	**
Papumpare	27.1	-75	0.0	-100	28.2	-73
Tawang	51.0	-65	8.0	-94	1.0	-99
Tirap	114.4	-3	39.6	-69	25.4	-77
Upper Siang	59.5	-56	12.2	-88	118.0	35
Upper Subansari	30.0	-47	23.4	-37	46.5	12
West Kameng	22.0	-85	49.4	-63	4.2	-96
West Siang	1.4	-98	4.1	-96	7.6	-87
Assam&Meghalaya						
Assam						
Baksa	8.5	-95	2.6	-98	28.1	-78
Barpeta	11.5	-93	36.9	-68	16.4	-87
Bongaigaon	15.0	-89	43.4	-65	19.6	-82
Cachar	31.7	-71	26.1	-71	173.2	76
Chirang	2.0	-99	13.0	-90	14.8	-87
Darrang	**	**	**	**	**	**
Dhemaji	**	**	**	**	**	**
Dhubri	3.8	-96	58.2	-42	37.6	-63
Dibrugarh	74.5	-19	10.5	-90	59.2	-22
Goalpara	43.0	-56	85.3	14	2.1	-97
Golaghat	18.5	-70	15.8	-76	14.5	-77
Hailakandi	89.5	-8	65.4	-30	64.1	-19
Jorhat	6.1	-92	11.4	-87	26.8	-62
Kamrup(Rural)	2.4	-97	0.0	-100	44.7	-9
Kamrup(Metro)	5.0	-93	0.2	-99	43.5	-11
Karbi Anglong	56.9	19	5.2	-88	73.6	47
Karimganj	56.8	-45	35.4	-68	84.0	6
Kokrajhar	12.8	-93	42.7	-71	23.8	-86
Lakhimpur	55.6	-53	1.2	-99	99.4	8
Morigaon	12.4	-83	17.2	-74	50.6	-24
N.C.Hills	35.4	-20	8.2	-82	19.0	-63
Nagaon	26.6	-56	13.3	-81	69.4	0

Nalbari	9.6	-87	1.3	-98	34.6	-53
Sonitpur	58.3	-32	0.2	-99	21.0	-70
Sibsagar	42.2	-44	0.0	-100	61.1	-9
Tinsukia	83.5	-15	5.2	-94	88.9	10
Udalgiri	22.2	-66	5.1	-91	50.2	-14
Meghalaya						
East Garo Hills	21.6	-73	0.0	-100	20.4	-66
East Khasi Hills	142.2	-41	49.3	-81	24.8	-87
Jaintia Hills	8.0	-97	3.0	-99	0.0	-100
Ribhoi	16.3	-84	20.0	-79	40.8	-50
South Garo Hills	3.0	-96	3.0	-97	0.0	-100
West Garo Hills	10.6	-86	51.4	-48	9.4	-88
West Khasi Hills	6.0	-96	17.0	-89	39.0	-69
NMMT						
Mizoram						
Aizwal	133.3	17	46.4	-60	141.9	43
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	98.0	-6	139.0	40
Mamit	**	**	**	**	**	**
Saiha	90.0	2	110.0	5	0.0	-100
Serchhip	104.6	-16	56.6	-41	116.9	31
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	**	**	**	**	**	**
Churachandpur	**	**	**	**	**	**
Imphal east	7.6	-89	24.2	-61	32.5	-48
Imphal west	36.9	-54	6.5	-85	205.1	380
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	**	**	**	**	**	**
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	131.0	150	15.2	-73	146.0	144
Kephire	**	**	**	**	**	**
Kohima	32.3	-68	5.1	-94	129.5	65
Longleng	**	**	**	**	**	**
Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	35.0	-65	13.0	-83	3.0	-96
Tuensang	**	**	**	**	**	**
Wokha	**	**	**	**	**	**
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	195.0	120	8.0	-87	66.0	-3
NorthTripura	207.2	115	69.9	-14	150.8	93
SouthTripura	85.0	-10	107.5	12	104.5	29

West Tripura	65.7	-21	18.7	-74	50.9	-28
Himachal Pradesh						
Bilaspur	96.0	36	105.7	98	36.4	-34
Chamba	62.1	-47	21.1	-75	45.9	-44
Hamirpur	173.5	76	83.8	0	27.5	-63
Kangra	160.0	4	28.8	-77	68.9	-23
Kinnaur	14.5	-32	8.2	-57	6.3	-59
Kullu	45.1	11	45.1	33	81.2	174
Lahaul and Spiti	13.4	-57	9.3	-71	14.6	-46
Mandi	93.7	8	67.5	-17	72.2	30
Shimla	62.8	38	49.3	20	54.2	75
Sirmaur	75.2	-39	31.0	-71	27.3	-68
Solan	65.4	-24	40.8	-39	29.3	-47
Una	110.5	42	56.0	-13	56.3	4
Punjab						
Amritsar	60.1	15	0.0	-100	45.5	60
Barnala	9.0	-66	39.0	57	35.0	111
Bhatinda	0.0	-100	23.0	0	123.5	795
Faridkot	11.0	-56	8.6	-69	135.5	868
Fatehgarh Saheb	20.8	-50	11.4	-70	11.7	-58
Ferozpur	8.0	-69	0.0	-100	45.2	132
Gurdaspur	53.4	-37	1.6	-97	70.6	55
Hoshiarpur	82.0	38	12.1	-73	38.5	15
Jalandhar	11.2	-75	18.7	-52	96.7	254
Kapurthala	59.0	68	24.6	-3	213.5	1006
Ludhiana	11.5	-73	46.6	14	17.5	-35
Mansa	9.0	-69	0.0	-100	27.2	89
Moga	0.0	-100	63.2	91	165.6	800
Muktesar	55.6	157	0.0	-100	44.5	195
Nawashahar	50.0	-5	87.1	68	15.2	-67
Patiala	11.7	-74	8.2	-82	24.0	-33
Ropar	64.0	6	100.4	100	21.1	-43
Sangrur	9.6	-75	4.4	-86	17.9	-12
Mohali	35.0	-19	49.0	-1	3.0	-90
TarnTaran	28.0	7	0.0	-100	54.0	186
Haryana,Chd,Delhi						
Haryana						
Ambala	45.1	-44	12.2	-83	48.0	-16
Bhiwani	42.3	30	6.1	-81	84.3	241
Chandigarh	43.0	-39	46.7	-21	16.9	-57
Faridabad	71.7	38	12.7	-78	38.3	-10
Fatehabad	9.3	-52	0.0	-100	57.0	288
Gurgaon	70.5	49	0.0	-100	52.5	68
Hissar	5.2	-81	1.9	-92	36.8	87
Jhajar	131.0	263	0.0	-100	71.1	171
Jind	30.3	-3	4.3	-88	59.0	125
Katihah	14.3	-58	12.1	-63	77.7	217
Karnal	69.3	14	27.5	-54	44.4	10
Kurukshetra	24.3	-56	3.0	-95	44.6	35

Mahendragarh	62.5	51	2.2	-92	41.6	53
Mewat	59.4	20	7.9	-78	44.3	16
Palwal	88.1	98	25.8	-30	26.8	-9
Panchkkula	23.6	-73	36.1	-49	2.5	-96
Panipat	81.6	62	14.4	-74	24.0	-21
Rewari	108.5	130	0.0	-100	76.3	175
Rohtak	68.6	44	0.6	-99	43.8	4
Sirsa	2.8	-87	3.8	-80	78.3	350
Sonepat	36.1	-35	4.3	-91	21.5	-39
Yamunanagar	74.0	5	32.8	-61	58.2	5
Delhi						
Central Delhi	114.0	108	0.0	-100	23.0	-40
East Delhi	0.0	-100	0.0	-100	0.0	-100
New Delhi	56.0	2	1.2	-98	59.6	54
North Delhi	34.6	-37	1.1	-98	54.4	41
North East Delhi	10.0	-82	1.0	-98	5.0	-87
North West Delhi	8.5	-85	0.0	-100	0.0	-100
South Delhi	13.3	-76	2.4	-95	10.4	-73
South West Delhi	81.8	49	1.4	-97	47.9	24
West Delhi	1.0	-98	0.0	-100	7.0	-82
Jammu & Kashmir						
Anantnag	11.1	-19	15.7	10	36.9	151
Badgam	0.2	-98	1.2	-91	20.8	106
Bandipore	**	**	**	**	**	**
Baramula	20.3	22	3.8	-71	36.4	151
Doda	28.6	47	15.4	-33	52.0	210
Ganderbal	6.0	-55	20.4	63	48.2	397
Jammu	65.9	-19	14.4	-78	56.9	6
Kargil	**	**	**	**	**	**
Kathua	81.4	-20	6.2	-92	39.7	-28
Kistwar	**	**	**	**	**	**
Kulgam	1.4	-90	17.6	24	15.6	6
Kupwara	2.7	-77	3.7	-70	18.9	145
Ladakh(Leh)	0.9	-77	0.0	-100	6.5	183
Poonch	**	**	**	**	**	**
Pulwama	6.0	-55	18.4	28	28.6	109
Rajouri	3.2	-96	2.0	-96	66.6	59
Ramban	11.2	-42	5.0	-78	29.0	73
Reasi	100.4	-8	34.3	-60	63.8	-22
Samba	15.9	-80	0.5	-99	49.4	-8
Shopian	**	**	**	**	**	**
Srinagar	17.8	33	1.3	-90	42.8	341
Udhampur	50.6	-54	3.0	-96	55.6	-32
East Madhya Pradesh						
Anuppur	104.8	16	51.1	-39	68.4	-2
Balaghat	17.9	-85	23.2	-77	85.1	6
Chhatarpur	180.8	118	274.9	259	47.8	-25
Chindwara	6.4	-90	13.5	-74	64.0	10

Damoh	36.3	-54	231.9	178	54.0	-20
Dindori	33.7	-63	34.6	-63	90.0	49
Jabalpur	81.4	-20	35.6	-49	146.9	73
Katni	142.4	65	217.7	172	42.6	-39
Mandla	62.2	-47	58.5	-34	79.7	0
Narsingpur	37.3	-61	53.6	-28	103.2	37
Panna	355.1	313	304.1	251	7.2	-89
Rewa	231.5	220	205.8	166	14.4	-74
Sagar	28.0	-69	167.5	123	75.7	-4
Satna	296.8	255	280.7	312	16.4	-68
Seoni	26.9	-67	26.2	-60	148.1	148
Shahdol	151.0	98	74.3	-8	33.6	-49
Sidhi	251.6	259	120.8	39	25.2	-62
Singrauli	203.8	267	95.8	21	8.3	-83
Tikamgarh	6.0	-92	186.5	122	49.5	-7
Umaria	216.0	124	88.6	-9	66.2	-14
West Madhya Pradesh						
Agar	26.1	-73	247.6	255	93.3	-6
Alirajpur	32.2	-33	93.7	81	17.4	-73
Asoknagar	13.3	-82	113.8	47	13.0	-76
Badwani	9.3	-75	44.0	0	14.9	-66
Betul	27.2	-60	4.1	-93	27.0	-46
Bhind	45.1	-38	65.3	30	5.6	-89
Bhopal	43.3	-46	165.7	119	82.9	13
Burhanpur	19.1	-63	3.9	-93	13.5	-75
Datia	27.0	-63	60.9	1	8.8	-82
Dewas	20.2	-71	114.3	60	19.8	-72
Dhar	18.5	-62	108.0	118	9.1	-86
Guna	98.7	38	147.0	64	19.5	-71
Gwalior	12.2	-82	55.7	-9	3.0	-94
Harda	22.4	-76	52.8	-32	44.4	-36
Hoshangabad	113.1	4	48.8	-48	55.6	-40
Indore	13.1	-76	154.6	176	11.5	-81
Jhabua	21.3	-51	135.1	163	34.9	-42
Khandwa	8.7	-85	38.7	-32	18.3	-68
Khargone	13.9	-69	40.0	-14	7.9	-86
Mandsaur	18.4	-67	195.0	222	17.4	-68
Morena	45.7	-34	57.3	-13	7.4	-83
Neemuch	25.1	-59	217.8	269	50.0	0
Raisen	64.0	-29	138.4	68	60.4	-27
Rajgarh	73.3	8	311.3	334	24.6	-66
Ratlam	43.9	-23	253.1	279	18.2	-72
Sehore	32.0	-60	107.9	23	43.3	-48
Shajapur	37.0	-43	194.5	204	7.0	-88
Sheopur Kalani	121.6	64	42.1	-40	63.5	53
Shivpuri	20.1	-66	77.6	31	34.6	-30
Ujjain	32.0	-38	225.6	252	22.0	-69
Vidisha	75.6	-9	245.0	180	16.6	-78

Chhattisgarh						
Balod	19.4	-76	0.0	-100	50.6	-12
Baloda Bazar	7.1	-92	16.7	-73	22.6	-59
Balrampur	288.0	253	227.0	204	67.0	-1
Bastar	27.6	-68	0.0	-100	87.5	12
Bemetara	14.0	-84	6.0	-90	36.2	-42
Bijapur	19.5	-83	0.4	-99	181.7	100
Bilaspur	46.0	-52	37.2	-50	49.5	-16
Dantewara	84.2	-3	8.4	-89	100.4	5
Dhamtari	14.1	-83	0.0	-100	38.4	-30
Durg	3.6	-96	2.0	-97	25.8	-55
Gariaband	20.6	-75	10.1	-88	50.5	-25
Janjgir	104.7	-7	47.1	-47	13.0	-82
Jashpurnagar	54.6	-45	60.2	-33	28.7	-67
Kabirdham	17.2	-77	0.0	-100	101.0	66
Kanker	82.5	-13	3.2	-96	83.0	9
Kondagaon	31.2	-66	0.0	-100	159.6	95
Korba	85.1	-27	40.0	-63	51.0	-35
Koriya	256.8	162	99.9	7	55.9	9
Mahasumund	30.9	-65	13.3	-81	50.7	-20
Mungeli	5.6	-94	28.6	-61	101.2	73
Narayanpur	42.3	-57	0.0	-100	166.1	108
Raigarh	73.7	-16	27.6	-64	54.0	-14
Raipur	10.6	-88	5.5	-92	58.8	6
Rajnandgaon	19.2	-74	4.6	-94	62.8	-3
Sukma	18.4	-79	6.4	-90	131.8	88
Surajpur	127.9	53	53.4	-34	25.5	-59
Surguja	289.3	219	139.4	61	63.3	-6
East Uttar Pradesh						
Allahabad	205.2	251	92.4	39	26.8	-50
Ambedkar Nagar	169.0	174	15.0	-79	5.0	-89
Azamgarh	153.1	123	60.2	-9	11.4	-79
Bahraich	48.6	-29	16.1	-78	64.7	6
Ballia	69.2	14	27.4	-53	5.3	-90
Balrampur	29.6	-59	27.4	-68	60.0	-19
Banda	197.8	130	151.6	142	20.3	-63
Barabanki	86.6	20	15.5	-76	22.7	-58
Basti	14.3	-78	14.8	-80	2.7	-95
Chandauli	129.0	93	88.0	22	35.0	-30
Deoria	14.0	-83	31.5	-53	3.0	-95
Faizabad	55.6	-29	18.7	-76	3.7	-92
Farrukhabad	58.3	-27	3.1	-95	13.6	-75
Fatehpur	77.2	9	35.5	-48	1.9	-96
Gazipur	61.9	-12	54.2	-15	19.9	-61
Gonda	30.4	-56	12.7	-83	33.3	-40
Gorakhpur	40.5	-59	4.2	-95	17.3	-74
Hardoi	58.1	-9	29.5	-55	54.1	-4
Jaunpur	152.3	172	47.5	-23	7.6	-85
Kannauj	82.1	3	25.2	-64	0.0	-100

Kanpur City	43.4	-25	12.9	-82	5.1	-88
Kanpur Dehat	51.5	-15	17.3	-74	6.1	-89
Kaushambi	72.9	11	50.3	-16	1.4	-97
Kheri	88.9	29	9.5	-88	48.8	-17
Kushi nagar	17.1	-83	4.5	-95	0.0	-100
Lucknow	124.9	94	22.4	-62	23.3	-56
Maharajganj	42.1	-61	0.0	-100	7.0	-89
Mau	29.5	-64	16.5	-78	0.0	-100
Mirzapur	213.7	229	171.4	198	21.3	-61
Pratapgarh	170.3	167	58.0	-16	14.0	-76
RaiBareilly	165.0	189	35.7	-45	1.6	-97
Sahuji Maharajnagar	311.0	327	127.0	65	16.0	-76
Sant Kabirnagar	37.0	-53	0.0	-100	0.0	-100
Sant Ravidas Nagar	226.0	239	72.0	0	0.0	-100
Shrawasti	39.6	-42	20.0	-73	29.3	-52
Sidharthnagar	16.4	-79	0.0	-100	6.1	-90
Sitapur	98.2	45	6.1	-91	49.7	-19
Sonbhadra	228.6	230	172.9	166	41.0	-19
Sultanpur	150.2	157	31.0	-55	10.3	-82
Unnao	71.8	1	8.3	-87	0.0	-100
Varanasi	102.3	75	76.4	4	27.4	-52
West Uttar Pradesh						
Agra	19.7	-73	44.0	-17	10.3	-82
Aligarh	84.1	35	4.3	-92	29.5	-39
Auraiya	58.8	2	24.0	-62	2.0	-96
Badaun	71.0	5	7.6	-87	18.4	-72
Baghpat	54.4	-3	12.0	-73	45.8	17
Bareilly	165.5	159	5.0	-92	12.7	-81
Bijnor	43.5	-46	5.5	-91	9.0	-85
Bulandsahar	57.5	-15	12.9	-77	61.0	22
Etah	132.0	116	36.0	-33	20.0	-53
Etawah	67.3	10	40.7	-35	17.3	-67
Firozabad	49.8	-24	24.0	-56	39.1	-23
GBNagar	6.0	-90	0.0	-100	77.0	167
Ghaziabad	32.3	-38	5.0	-92	34.3	-32
Hamirpur	188.9	127	90.5	55	33.5	-40
Jalaun	121.9	56	30.5	-42	13.0	-78
Jhansi	33.2	-59	92.6	53	38.5	-32
Jotiba Phule Nagar	136.0	70	0.0	-100	44.0	-29
Kanshiramnagar	157.0	135	17.0	-73	93.0	70
Lalitpur	14.0	-82	185.0	198	19.0	-76
Mahamaya Nagar	19.0	-72	5.0	-89	14.5	-67
Mahoba	226.7	169	100.4	68	7.8	-86
Mainpuri	73.3	7	42.4	-10	18.7	-54
Mathura	65.0	0	40.5	-18	45.8	-3
Meerut	28.4	-60	12.2	-84	31.6	-33
Moradabad	72.1	-8	8.6	-87	5.2	-92
Muzzaffarnagar	49.1	-28	5.4	-92	39.3	-1

Pilibhit	45.2	-39	0.0	-100	1.1	-98
Rampur	59.0	-18	3.8	-95	18.7	-72
Saharanpur	52.3	-25	37.7	-49	26.7	-45
Shahjahanpur	64.4	-7	14.7	-80	14.0	-79
Uttarakhand						
Almora	83.6	31	37.5	-45	14.2	-69
Bageshwar	85.5	34	32.4	-52	23.5	-48
Chamoli	133.6	43	18.2	-71	47.3	-7
Champawat	75.7	-9	9.5	-90	1.5	-98
Dehradun	118.6	-26	38.3	-74	17.9	-84
Garhwal Pauri	78.0	-24	49.7	-47	23.2	-70
Garhwal Tehri	51.6	-38	35.6	-54	16.4	-74
Haridwar	72.9	-21	61.1	-29	7.2	-88
Nainital	225.9	133	56.0	-54	13.5	-85
Pithorgarh	90.7	-26	36.5	-70	32.1	-68
Rudraprayag	175.7	4	72.4	-51	60.6	-40
Udham Sing Nagar	59.9	-34	13.1	-85	6.4	-91
Uttarkashi	90.0	-17	51.8	-37	48.9	-34
Bihar						
Araria	38.4	-53	23.1	-73	30.2	-59
Arwal	95.6	43	72.9	10	40.3	-4
Aurangabad	100.0	80	136.6	118	9.6	-82
Banka	73.5	21	59.7	7	5.4	-88
Begusarai	34.1	-25	7.5	-86	7.4	-89
Bhabua	108.6	80	137.4	62	17.1	-65
Bhagalpur	32.3	-48	38.2	-40	24.4	-48
Bhojpur	29.4	-53	9.1	-87	22.6	-61
Buxar	44.8	-37	30.6	-45	18.2	-67
Darbhanga	24.7	-66	11.0	-84	6.6	-88
East Champaran	18.2	-74	1.7	-98	1.5	-98
Gaya	80.5	22	120.7	87	13.5	-72
Gopalganj	19.6	-76	5.6	-93	1.1	-98
Jahanabad	65.0	11	46.8	-26	0.8	-98
Jamui	78.6	38	142.1	173	35.7	-38
Katihar	33.7	-41	7.9	-89	30.1	-45
Khagadia	56.5	-24	12.8	-78	11.5	-81
Kishanganj	19.4	-84	42.0	-58	75.1	-32
Lakhisarai	34.5	-40	63.5	-1	16.1	-71
Madhepura	23.2	-67	0.0	-100	50.0	-27
Madhubani	24.4	-71	4.0	-94	36.3	-54
Monghyar	47.2	-17	25.6	-60	48.6	-14
Muzaffarpur	45.3	-33	7.6	-89	4.1	-94
Nalanda	66.8	12	46.8	-27	1.3	-98
Nawada	89.1	49	95.0	37	5.9	-87
Patna	49.6	-15	12.6	-83	11.2	-79
Purnea	43.1	-47	33.1	-50	14.2	-83
Rohtas	72.6	14	108.1	69	0.7	-99
Saharsha	35.8	-67	5.5	-91	13.5	-81
Samstipur	43.2	-48	7.3	-88	6.2	-88

Saran	30.6	-60	18.3	-76	10.3	-81
Sheikpura	136.2	141	25.8	-51	4.1	-92
Sheohar	30.0	-62	0.0	-100	0.0	-100
Sitamarhi	20.0	-74	1.7	-98	17.8	-74
Siwan	39.4	-47	27.1	-61	8.4	-85
Supaul	39.3	-37	12.2	-83	51.4	-20
Vaishali	33.5	-52	2.9	-96	18.1	-68
West Champaran	36.1	-57	4.2	-95	29.6	-67
Jharkhand						
Bokaro	76.9	26	171.6	194	7.8	-88
Chatra	278.9	263	177.5	165	12.7	-75
Deoghar	126.5	102	111.1	78	0.8	-99
Dhanbad	93.9	35	188.0	207	5.2	-92
Dumka	125.8	70	119.0	70	9.7	-82
East Singbhum	183.2	175	279.9	337	3.3	-94
Garhwa	118.3	65	162.5	175	37.0	-19
Giridih	148.6	168	115.8	83	2.8	-95
Godda	48.5	-20	43.7	-37	19.4	-60
Gumla	50.2	-40	86.7	11	48.5	-19
Hazaribagh	117.6	104	176.5	169	12.3	-79
Jamtara	143.2	64	75.6	2	1.2	-98
Khunti	80.3	8	121.5	56	20.7	-71
Koderrna	114.9	102	124.1	105	0.0	-100
Latehar	248.5	343	197.5	226	43.0	-22
Lohardagga	106.2	87	207.5	244	36.6	-24
Pakur	115.1	31	41.0	-48	15.9	-77
Palamau	193.5	179	188.6	196	9.0	-84
Ramgarh	94.4	60	139.2	126	13.6	-76
Ranchi	44.7	-46	125.3	92	12.1	-81
Sahebganj	26.6	-69	11.5	-85	40.4	-35
Saraikelela	94.5	42	132.0	102	10.6	-83
Simdega	94.5	6	95.0	-1	73.4	-6
West Singbhum	174.2	121	150.0	117	4.7	-93
East Rajasthan						
Ajmer	11.9	-72	49.8	33	27.3	4
Alwar	120.4	113	38.1	-17	51.7	42
Banswara	12.9	-80	203.4	222	20.2	-71
Baran	139.4	98	151.3	115	25.4	-51
Bharatpur	49.4	-14	76.7	60	26.0	-40
Bhilwara	34.0	-40	104.9	86	45.5	22
Bundi	33.2	-47	69.5	24	71.5	82
Chittorgarh	57.7	-10	221.5	226	46.9	-15
Dausa	108.8	82	64.4	34	26.6	-25
Dholpur	34.2	-51	131.5	135	9.8	-78
Dungarpur	9.4	-81	139.1	173	27.1	-42
Jaipur	32.3	-32	30.6	-27	48.2	36
Jhalawar	56.2	-29	210.8	184	38.7	-39
Jhunjhunu	67.2	96	8.3	-74	65.1	144
Karauli	74.7	-7	88.4	71	29.2	-20

Kota	45.4	-34	107.1	71	46.7	-10
Pratapgarh	20.8	-68	359.6	464	13.6	-79
Rajsamand	15.0	-67	124.6	193	53.9	54
Sawai Madhopur	142.0	109	64.6	12	75.3	88
Sikar	59.8	71	23.6	-15	60.6	136
Sirohi	35.1	-55	122.5	85	86.6	45
Tonk	52.1	-6	49.0	-1	42.8	26
Udaipur	14.1	-71	129.0	190	32.0	-20
West Rajasthan						
Barmer	2.4	-88	40.5	111	47.5	203
Bikaner	16.5	-4	5.4	-68	62.1	293
Churu	27.0	22	19.4	-17	67.3	240
Hanumangarh	1.3	-94	0.6	-96	66.1	341
Jaisalmer	3.4	-83	2.2	-79	58.6	566
Jalore	11.0	-68	38.0	25	87.4	328
Jodhpur	23.6	-6	21.3	-3	47.2	171
Nagaur	19.1	-31	23.1	-20	32.1	30
Pali	60.0	69	108.3	198	75.9	167
Sri Ganganagar	5.3	-71	3.6	-73	32.9	194
Gujarat Region						
Ahmedabad	8.4	-83	19.1	-49	61.8	50
Anand	4.2	-94	16.5	-68	48.3	-11
Aravalli	16.0	-71	143.2	176	36.8	-42
Banaskantha	4.7	-89	85.0	121	72.1	103
Broach	17.5	-64	4.9	-88	32.3	-35
Chhota Udepur	34.9	-58	44.7	-41	60.0	-15
DNH	61.2	-62	42.9	-53	87.7	-32
Dahod	14.6	-75	92.9	55	52.8	-18
Daman	27.4	-83	26.2	-71	25.9	-80
Dangs	85.3	-31	88.1	-22	42.2	-66
Gandhinagar	20.8	-56	23.7	-39	55.4	27
Kheda	1.6	-97	33.4	-33	68.1	23
Mahisagar	13.0	-77	88.3	56	32.1	-49
Mehsana	1.5	-97	56.5	38	62.9	43
Narmada	44.3	-46	10.1	-82	26.5	-65
Navsari	21.6	-82	21.5	-73	36.6	-64
Panchmahal	9.3	-88	66.0	2	40.4	-41
Patan	2.6	-94	58.4	59	102.4	220
Sabarkantha	8.5	-86	85.8	85	45.6	-10
Surat	43.6	-45	16.0	-71	56.1	-19
Tapi	35.8	-63	27.6	-60	23.6	-76
Vadodara	15.6	-77	26.1	-52	20.7	-69
Valsad	48.6	-65	31.4	-69	53.3	-60
S K & Diu region						
Amreli	0.0	-99	1.5	-95	46.7	59
Bhavnagar	0.9	-97	7.7	-71	53.8	55
Botad	1.3	-96	9.3	-59	149.8	327
Devbhoomi Dwarka	0.1	-99	2.1	-83	36.5	72
Diu	2.5	-93	1.4	-92	30.7	37

Gir Somnath	4.4	-88	0.2	-99	73.3	94
Jamnagar	0.0	-100	4.2	-78	97.3	176
Junagarh	0.8	-98	0.4	-98	82.0	147
Kutch	0.1	-99	5.5	-65	55.7	119
Morbi	3.0	-90	5.0	-76	62.6	78
Porbandar	1.0	-97	0.1	-99	49.4	65
Rajkot	0.5	-98	0.9	-96	89.2	183
Surendranagar	6.7	-79	4.9	-81	121.0	249
Maharashtra						
Konkan & Goa						
Mumbai City	40.6	-66	40.8	-56	217.6	133
Mumbai Suburban	13.6	-89	36.7	-69	159.7	57
North Goa	54.3	-70	121.7	-10	167.7	-16
Raigad	91.7	-59	101.9	-40	167.7	10
Ratnagiri	74.3	-65	91.6	-45	139.1	-3
Sindhudurg	68.0	-59	125.2	-8	104.4	-18
South Goa	47.9	-71	96.6	-10	87.4	-8
Thane	36.3	-79	65.1	-49	89.3	-25
Madhya Maharashtra						
Ahmednagar	1.5	-91	0.7	-97	12.8	-51
Dhule	8.6	-66	14.2	-40	15.0	-47
Jalgaon	7.3	-83	5.9	-85	32.8	-17
Kolhapur	47.3	-61	47.8	-45	24.5	-66
Nandurbar	34.6	-34	27.3	-40	13.5	-74
Nasik	27.2	-54	20.3	-58	18.8	-64
Pune	25.1	-56	19.2	-52	12.1	-67
Sangli	12.4	-50	5.2	-72	2.9	-86
Satara	23.6	-47	18.0	-40	12.8	-58
Solapur	2.3	-89	2.3	-91	13.3	-47
Marathwada						
Aurangabad	1.4	-95	1.1	-97	22.0	-45
Beed	4.3	-86	3.4	-89	44.8	23
Hingoli	1.8	-97	13.8	-77	34.5	-29
Jalna	0.3	-99	1.7	-95	62.3	59
Latur	4.6	-91	5.0	-91	57.0	17
Nanded	8.1	-86	6.0	-90	43.5	-14
Osmanabad	10.8	-66	3.4	-91	24.4	-37
Parbhani	3.8	-92	4.7	-92	46.7	-9
Vidarbha						
Akola	14.5	-63	7.3	-81	7.9	-82
Amraoti	11.6	-78	3.4	-93	25.5	-42
Bhandara	11.7	-86	1.3	-98	51.5	-26
Buldhana	17.2	-56	3.7	-90	22.3	-45
Chandrapur	10.8	-87	10.5	-87	50.9	-28
Gadchiroli	30.1	-72	4.5	-95	126.6	56
Gondia	14.2	-85	14.2	-85	98.1	20
Nagpur	6.3	-89	0.2	-99	35.2	-40
Wardha	16.4	-74	5.7	-90	34.6	-32

Washim	2.4	-96	15.0	-72	21.1	-41
Yeotmal	1.5	-98	7.5	-87	18.0	-64
Odisha						
Angul	87.7	7	20.6	-72	37.5	-53
Balasore	85.6	8	54.1	-14	50.4	-28
Bargarh	53.5	-40	4.4	-95	43.6	-31
Bhadrak	122.3	43	89.2	41	29.4	-61
Bolangir	25.3	-71	17.5	-77	34.6	-59
Boudh	94.5	3	12.2	-85	13.5	-84
Cuttack	72.9	-2	23.6	-73	47.3	-33
Deogarh	91.6	-25	44.7	-55	17.7	-76
Dhenkanal	87.0	1	76.2	5	36.3	-56
Gajapati	20.5	-69	15.0	-75	69.7	13
Ganjam	25.2	-54	22.0	-62	38.1	-38
Jagatsingpur	132.0	69	17.9	-80	47.8	-27
Jajpur	122.1	56	43.9	-41	25.5	-69
Jharsuguda	90.1	-15	28.2	-67	35.1	-52
Kalahandi	41.6	-59	6.8	-92	64.1	-4
Kandhamal	65.4	-29	14.5	-82	32.3	-61
Kendrapara	146.0	58	24.4	-62	64.7	-14
Keonjhar	83.4	4	73.0	27	51.2	-20
Khurda	39.8	-48	33.5	-57	50.3	-28
Koraput	55.6	-44	5.8	-93	87.6	9
Malkangiri	54.0	-55	2.0	-98	53.0	-32
Mayurbhanj	60.8	-30	104.8	44	33.5	-58
Nawapara	19.0	-75	2.0	-97	39.9	-34
Nawarangpur	31.3	-74	0.1	-99	103.5	19
Nayagarh	29.4	-65	42.0	-42	35.1	-48
Puri	51.6	-24	41.9	-46	47.8	-33
Rayagada	24.4	-63	26.4	-62	62.9	15
Sambalpur	77.5	-36	30.4	-70	26.8	-63
Sonepur	71.5	-38	24.9	-69	15.0	-84
Sundargarh	70.5	-27	69.8	-7	33.0	-55
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	7.9	-85	28.5	-57	88.9	32
North & Middle Andaman	16.1	-84	7.0	-94	61.0	-45
South Andaman	14.6	-87	11.3	-86	183.9	74
GWB						
Bankura	69.0	-3	188.7	202	16.1	-74
Birbhum	127.2	72	97.4	69	5.1	-91
Burdwan	130.6	87	209.2	244	7.1	-86
East Midnapore	50.5	-31	93.8	54	15.5	-83
Hooghly	88.5	48	173.7	190	10.8	-81
Howrah	60.2	-7	103.4	90	6.9	-90
Kolkata	113.3	67	158.5	134	109.1	44
Murshidabad	85.3	28	35.1	-36	13.2	-75
Nadia	186.1	201	191.6	269	11.2	-74

24 Pargana (N)	156.2	107	132.4	114	15.2	-74
Purulia	84.0	21	234.7	288	12.8	-81
24 Pargana (S)	59.2	-35	117.1	29	25.1	-73
West Midnapore	141.8	95	79.4	12	18.7	-70
SHWB & Sikkim						
Cooch Behar	8.3	-96	5.4	-96	118.2	-21
Darjeeling	67.4	-56	73.5	-50	98.5	-28
East Sikkim	57.4	-32	37.1	-64	37.4	-57
Jalpaiguri	33.4	-79	65.6	-56	81.4	-47
Malda	49.9	-22	36.3	-51	40.3	-33
North Dinajpur	3.3	-96	60.2	-26	19.5	-72
North Sikkim	35.6	-63	37.0	-68	84.0	-11
South Dinajpur	1.0	-98	39.4	-42	4.5	-91
South Sikkim	22.2	-74	20.4	-80	78.1	-11
West Sikkim	**	**	**	**	**	**
Karnataka						
Coastal Karnataka						
Dakshina Kannada	143.9	-33	131.5	-27	80.9	-36
Udupi	126.4	-46	115.9	-41	102.1	-25
Uttara Kannada	53.4	-70	89.2	-29	60.0	-37
N I Karnataka						
Bagalkote	5.8	-64	5.8	-63	0.9	-94
Belagavi	16.0	-49	19.5	-8	9.4	-54
Bidar	10.5	-77	2.6	-95	55.0	28
Dharwad	21.4	-19	13.5	-22	20.9	20
Gadag	7.6	-52	3.0	-81	23.1	32
Haveri	6.7	-76	15.5	-29	15.1	-4
Kalaburgi	10.9	-74	3.1	-92	14.9	-59
Koppal	3.8	-79	9.2	-50	22.5	-5
Raichur	1.8	-94	5.0	-81	36.5	28
Vijayapura	7.1	-65	11.3	-46	21.9	-11
Yadgir	7.8	-81	3.1	-93	58.2	79
S I Karnataka						
Ballari	5.9	-69	10.7	-46	6.3	-73
Bangalore Rural	9.1	-67	4.9	-84	8.3	-71
Bangalore Urban	9.8	-69	7.0	-78	21.9	-19
Chamarajanagar	1.5	-89	1.4	-92	6.4	-55
Chikaballapur	2.5	-89	0.0	-100	4.5	-81
Chikkamagaluru	46.0	-59	35.7	-57	23.5	-55
Chitradurga	0.4	-97	1.9	-87	1.6	-87
Davangere	4.0	-81	6.5	-65	10.4	-31
Hassan	5.5	-82	3.0	-90	19.0	2
Kodagu	103.4	-25	68.8	-40	38.2	-48
Kolar	11.0	-47	8.3	-64	16.6	-17
Mandya	0.9	-92	0.2	-99	43.0	214
Mysuru	11.7	-20	4.4	-72	8.5	-31
Ramanagara	7.2	-69	8.8	-71	54.8	115
Shivamogga	104.8	-1	84.3	6	47.2	-11
Tumakuru	3.7	-79	2.9	-85	24.6	43

Kerala						
Alappuzha	26.1	-63	22.1	-74	55.1	-14
Kannur	103.2	-20	116.8	3	83.5	-1
Ernakulam	34.7	-63	37.9	-55	76.4	20
Idukki	74.8	-43	63.6	-45	82.3	-3
Kasaragod	76.0	-50	192.6	42	67.6	-31
Kollam	34.1	-34	32.7	-47	39.5	-32
Kottayam	26.8	-69	34.5	-60	67.0	-8
Kozhikode	52.5	-54	36.0	-68	49.9	-25
Malappuram	39.3	-58	23.0	-74	30.1	-50
Palakkad	40.3	-53	28.4	-63	22.8	-54
Pathanamthitta	35.2	-54	47.9	-37	62.5	-16
Thiruvananthapuram	9.8	-67	3.7	-89	14.5	-47
Thrissur	18.9	-82	24.0	-76	30.6	-55
Wyand	52.5	-60	49.4	-61	46.3	-46
Tamil Nadu						
Ariyalur	7.0	-73	21.8	-32	113.1	171
Chennai	0.9	-97	2.4	-94	35.1	8
Coimbatore	7.6	-16	5.3	-50	14.1	44
Cuddalore	18.3	-35	26.6	-21	73.7	110
Dharmapuri	0.9	-96	0.0	-100	32.7	26
Dindigul	4.1	-71	6.0	-70	19.9	5
Erode	0.2	-98	15.3	-3	26.1	43
Kanchipuram	13.5	-64	33.9	-25	73.1	92
Kanyakumari	0.5	-97	2.8	-85	3.6	-73
Karikal	7.8	-45	3.6	-84	89.2	291
Karur	0.0	-100	3.7	-72	12.4	-32
Krishnagiri	4.8	-78	0.3	-99	41.9	79
Madurai	1.5	-91	19.3	-23	21.5	-14
Nagapattinam	25.0	22	16.0	-32	77.5	189
Namakkal	7.4	-67	5.5	-78	35.0	42
Nilgiris	15.6	-65	14.6	-62	28.1	-16
Perambalur	0.5	-97	16.3	-34	30.5	-3
Puducherry	77.2	148	32.8	-2	77.5	173
Pudukottai	11.0	-51	7.9	-73	56.8	69
Ramanathapuram	0.0	-100	9.2	-14	9.6	-37
Salem	12.6	-52	33.0	6	53.0	61
Sivaganga	16.8	6	20.9	0	89.0	265
Thanjavur	3.7	-84	10.3	-64	87.1	206
Theni	2.6	-68	3.8	-49	5.8	-29
Tirunelveli	0.6	-88	0.1	-99	0.3	-94
Tirupur	6.2	2	0.0	-100	9.2	2
Tiruvallur	3.8	-88	0.7	-98	12.1	-65
Tiruvannamalai	6.0	-81	24.1	-35	65.8	79
Tiruvarur	1.4	-93	10.3	-58	67.2	160
Toothukudi	0.3	-93	0.0	-100	0.6	-88
Trichy	5.3	-62	2.2	-89	30.1	24
Vellore	4.8	-84	2.7	-92	48.4	64

Villupuram	16.2	-41	6.4	-82	52.0	36
Virudhunagar	0.0	-100	14.2	19	10.3	-35
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	3.3	-93	21.7	-48	65.8	57
Guntur	1.1	-97	0.3	-99	178.7	400
Krishna	6.4	-87	5.5	-88	145.0	258
Nellore	2.0	-91	2.8	-88	17.2	-13
Prakasam	1.2	-94	0.0	-100	83.1	211
Sirkakulam	14.1	-70	6.7	-85	35.3	-26
Visakhapatnam	15.0	-67	4.2	-89	70.4	70
Vizianagram	15.4	-66	4.9	-90	70.9	52
West Godavari	7.6	-87	10.8	-78	112.1	129
Royalaseema						
Anantapur	0.6	-96	0.0	-100	9.8	-48
Chittoor	1.4	-94	0.8	-97	18.8	-22
Cuddapah	0.0	-100	0.0	-100	60.0	154
Kurnool	5.5	-81	0.5	-98	51.7	92
Telangana						
Adilabad	4.4	-94	7.1	-89	42.8	-23
Hyderabad	0.7	-98	0.7	-98	84.8	132
Karimnagar	10.6	-81	2.6	-95	54.1	26
Khammam	2.2	-97	9.4	-82	80.8	51
Mehabubnagar	5.8	-86	0.5	-99	63.4	90
Medak	5.4	-90	0.4	-99	39.2	4
Nalgonda	0.5	-99	0.3	-99	140.0	301
Nizamabad	12.0	-83	3.4	-95	41.8	-21
Rangareddy	4.6	-90	0.4	-99	99.0	208
Warangal	5.5	-91	6.4	-86	55.6	23

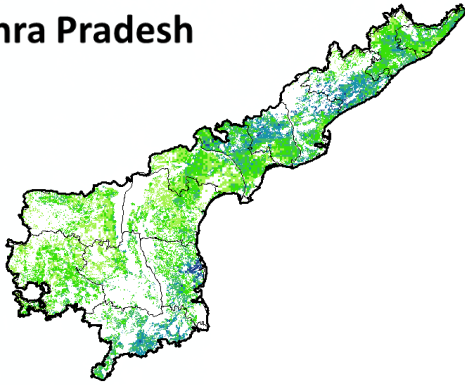
Legends

	(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

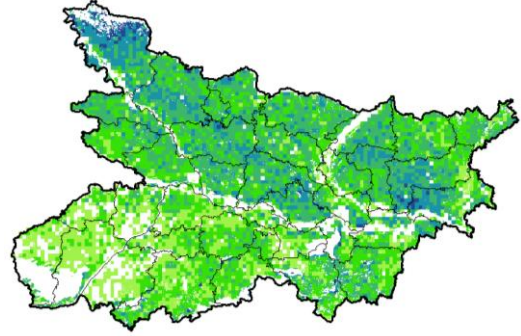
NOAA/AVHRR NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON
1st September 2016 FOR DIFFERENT STATES

Andhra Pradesh



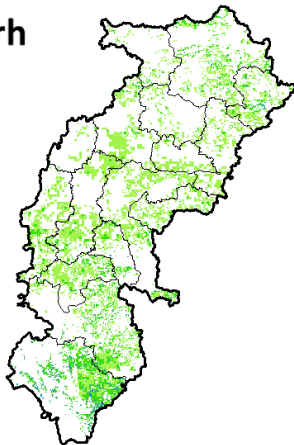
Agriculture vigour is moderate over central part whereas northern and southern coastal parts show good NDVI in the state of Andhra Pradesh.

Bihar



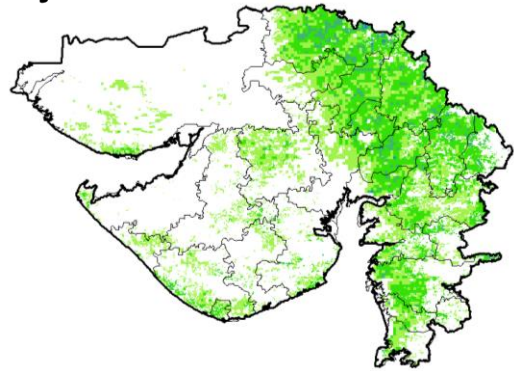
Agriculture vigour is moderate over southern parts of Bihar whereas northern part shows good NDVI values.

Chhattisgarh



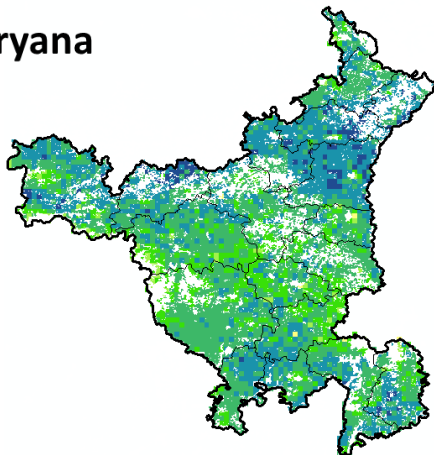
Agriculture vigour is moderate in the state of Chhattisgarh.

Gujarat



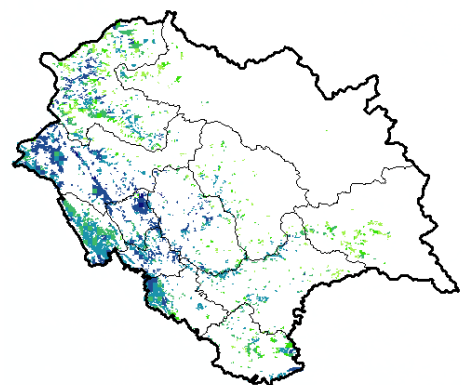
Moderate NDVI values are observed in patches in Saurashtra and Gujrat region.

Haryana



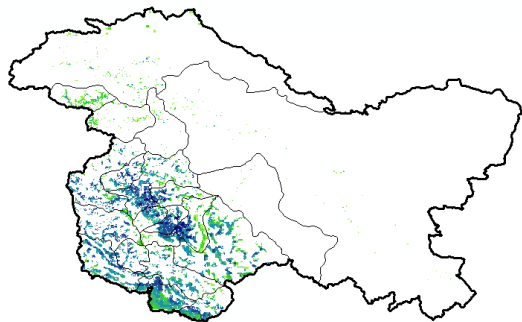
Agriculture vigour is moderate in patches over central region whereas, good agriculture vigour is observed in northern, western and southern regions of the state.

Himachal Pradesh



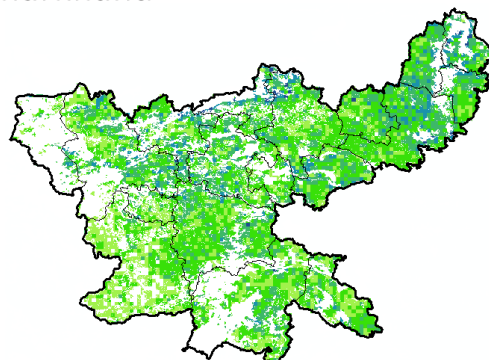
Agriculture vigour is good over entire state of Himachal Pradesh.

Jammu & Kashmir



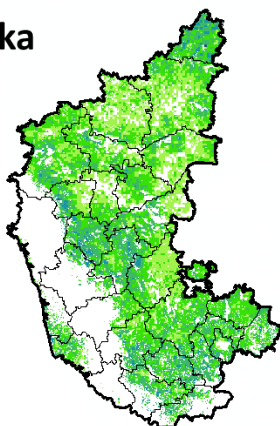
Agriculture vigour is good over central part of Jammu & Kashmir, whereas the remaining region shows moderate NDVI.

Jharkhand



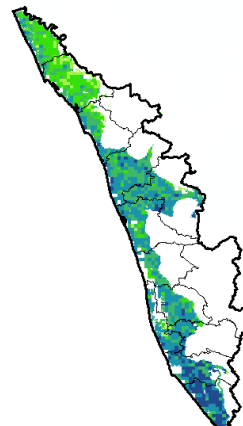
Agriculture vigour is moderate over entire state of Jharkhand.

Karnataka



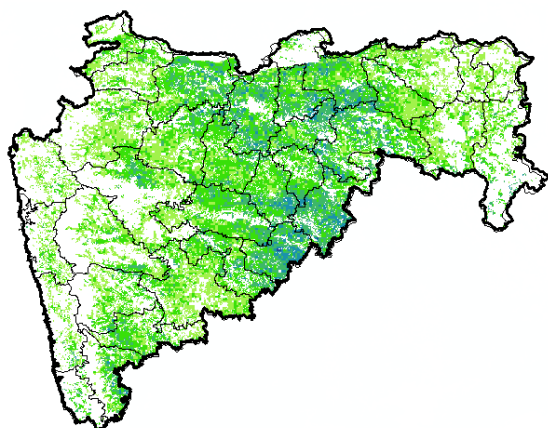
Agriculture vigour is moderate over northern region of the state whereas good vigour is observed in the central and southern regions.

Kerala



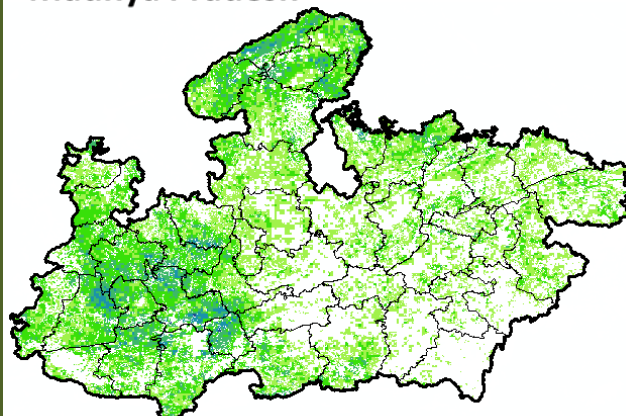
Agriculture vigour is good over entire state of Kerala except northern part which shows moderate NDVI values.

Maharashtra



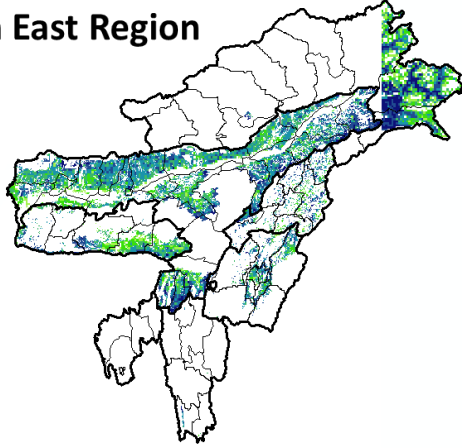
Agricultural vigour is moderate over western and eastern region of the state of Maharashtra whereas, good vigour is observed in the central region.

Madhya Pradesh



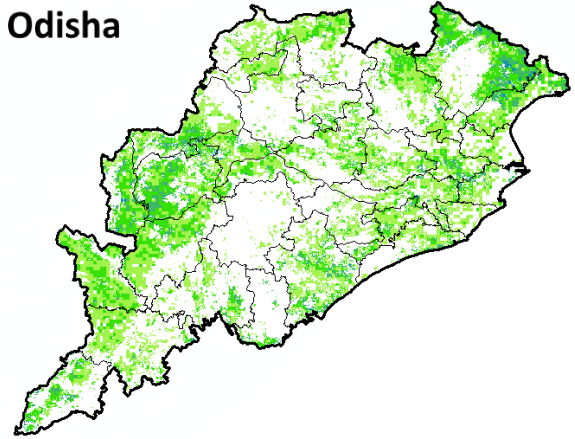
Agriculture vigour shows moderate values of NDVI over central and eastern region of the state of Madhya Pradesh whereas, good vigour is observed over western region.

North East Region



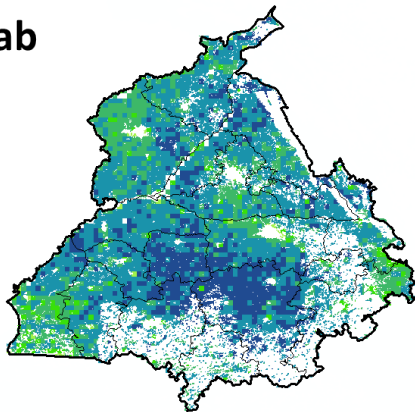
Agriculture vigour is good over north-east states of country.

Odisha



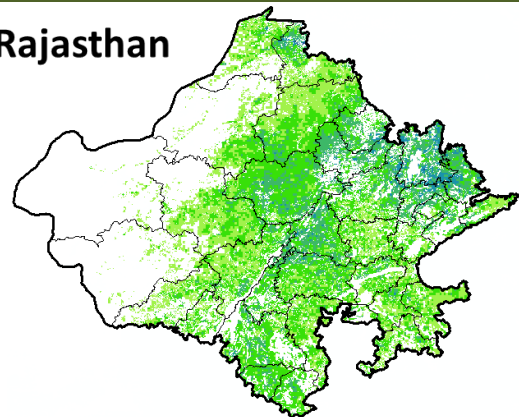
Agricultural vigour is moderate over entire state of Odisha.

Punjab



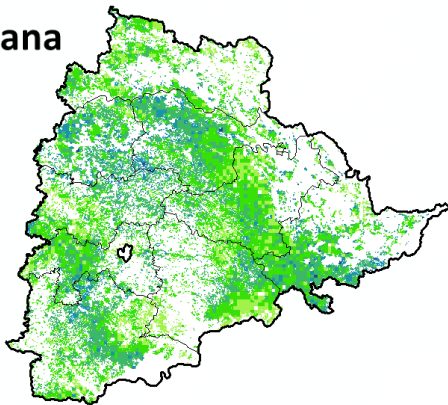
Agricultural vigour is good over the entire state of Punjab whereas central region shows patches of very good vigour NDVI.

Rajasthan



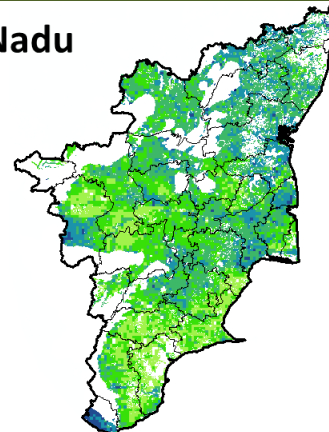
Agriculture vigour is moderate over most parts of Rajasthan whereas, good vigour is observed over north eastern region.

Telangana

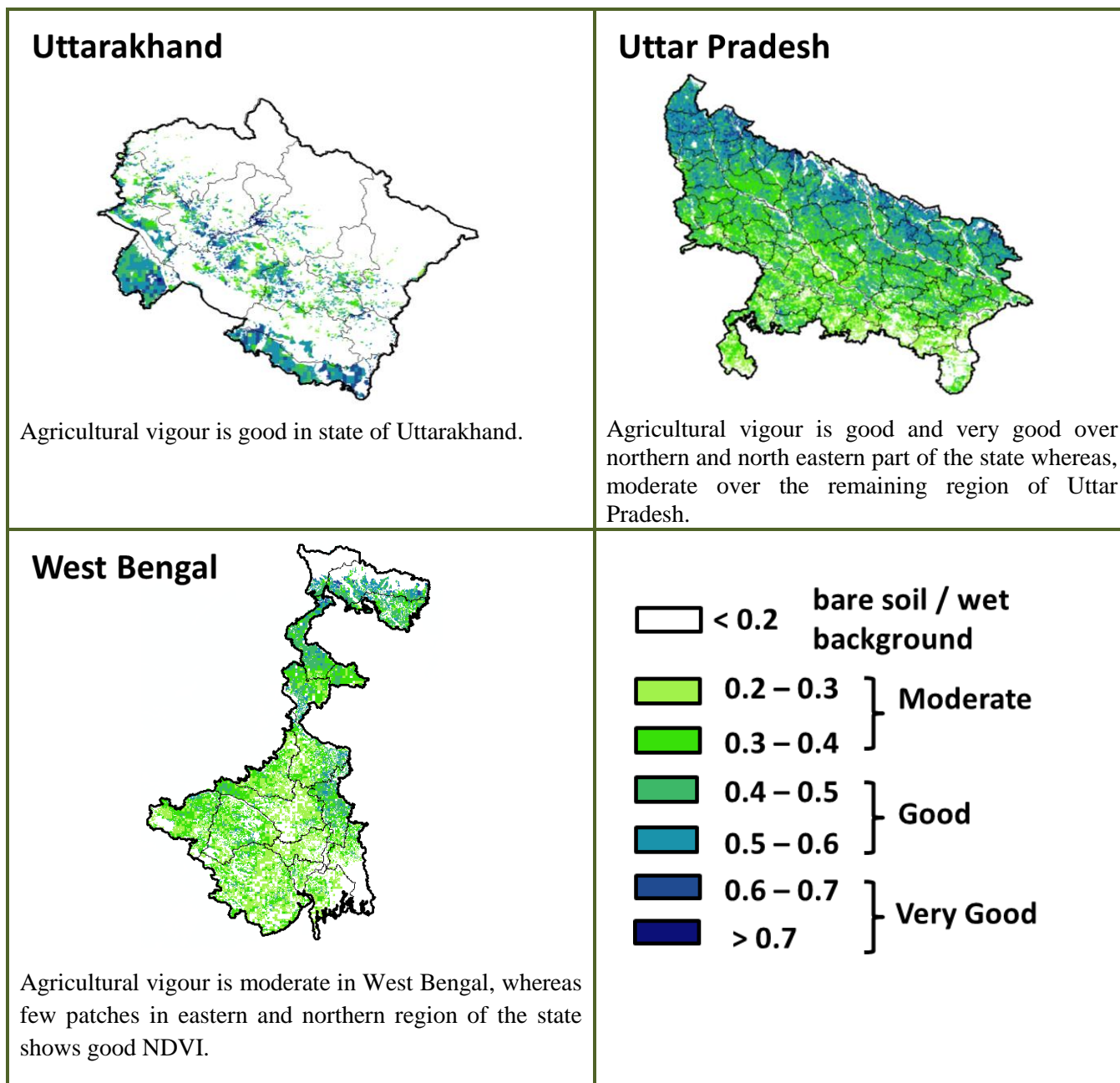


Agriculture vigour is moderate over entire state of Telangana whereas, good vigour is observed in patches in the north western region.

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.



* 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, Dikhow (medium duration).
- Capsularis jute:** JRC 321 and UPC 94.
- Olitorious jute:** Navin (JRO 524), Basudev(JRO 7835), Baisakhtissa(JRO 632), Bahagi (sel-2) and Tarun.
- Okra:** Pusa Sawani, Arka Anamika, Parbhdani Kranti.
- Ridge gourd:** Pusa Nashdar or other local varieties like AAU-1, AAU-2, AAU-3 etc.
- Sponge gourd:** Pusa Chikni or other local varieties.
- Banana:** Dwarf Cavendish, Jahaji (Dwarf Cultivar), Cheni Champa, Malbhog, Chenichampa, Malbhog, Barjahaji (Medium Tall cultivars).
- Papaya:** Washington, Haflong, Rasi, KorgHoney Dew, Co-1, Co-2, Pusa Delicious, Pusa Majesty.
- Guava:** Alahabad Safeda, Lucknow-49, Chittidar, Seedless.
- Fodder crops :** Hybrid Napier, Setaria and Guinea.

Meghalaya

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

Groundnut: ICGS 76, JL 24.

Soybean:JS 335, Bragg, Ankur, Pusa Soubean-1, Local JS 2.

Nagaland

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

Tripura

Groundnut: TAG 24, TG 37A, ICGS 76.

Maize :DMH- 849, 117, HQPM 1, BQPM 9.

West Bengal

Coconut: Eastcoastal, Hazari

Banana :Mortoman, Chapa, Kathali, Singapuri,

Mustard:Varuna, Sita and Bhagirathi.

Jute : Chaitali, Basudev, Naveen, Sonali, Sobujsona, Shyamali etc.

Aman rice: Medium duration MTU-7029, MTU1001, Pratiksha, and for long duration CR1017, CR1018, Cr1019, Sabita.

Paddy : IET-4094, 2233, Ratna, Bikash, Kitish, Sasya-shree, IR-42, Swarna, Mashuri, IET-8002.

Odisha

Maize: Navjot, Shakti, Decan-107, Decan-109,

Hybrid: Megan-G,Megan,MM-1107,Highshell, Prabal, Proagro 4643, Bio9681, Pinnacle, DMH-7705,

Rice: *Early:* Jogesh, Siddant, Hazaridhan, Mandakini, Jyotirmayee, Virendra

Medium: Pratikshya, Manaswini, Tapaswini MAS, Konark, Surendra, Kharavela, Naveen, Abhisek

Late: Barsadhan, Ranidhan, Pooja, Mrinalini, RGL-2837, Moti, Ketakijoha, Padmini,Kanchana, Mahanadi, Jagabandhu

Hybrid varieties: CR Dhan 701, NK 5251, JKRH 401, Ajay, Rajalaxmi, Arize 6444G

Cotton: Suraj, Supriya, B.S.-30, B.S.-279, Surabhi, Sujata

Hybrid: Bunny, Diana, Bhaskra, Namaskara, Tulasi, Sigma, Chiruta, Takat

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, Patakpura, 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

Soyabean: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) andhybrid 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): Basmati370, Ranbir Basmati, China-1039,K-39,K-343,Giza-1.

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

Uttarakhand

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

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

Paddy: Sharbati, Pusa 1121, Pusa 1, Pusa 44, NDR 359.
Groundnut: TA-64, Chandras, Kaushal, Prakash, Ambar.
Dwarfs variety of paddy: Narendra-118, Narendra-97, Pant Sankar Dhan-1 and Pant Sankar Dhan-10.
Pigeon pea: Pant Arhar-3, Pant Arhar-291, UPAS-120, Pusa-992.
Maize: Tarun, Navin, Kiran, Navjot, Pratap maize-1, Pusa sankul-3 & 4 Kg seed of chilly crop.
Soyabean: P.S.-1042, P.S.-1241, P.S.-1347, P.S.-1225, P.S.-19.
Groundnut: TA-64, Chandras, Kaushal, Prakash, Ambar.
Okra: Upar, 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 Himgiri
Urad Bean: Pant U-19, Azad URD-1, KU 91-2, Shekhar-1, KU-301
Arahar: Bahar, Amar, Narendra Arahar-1,2, pusa-2001, pusa-991, pusa-992, paras manak, UPAS 120.
Moong: Type-27, 56

West Uttar Pradesh

Ladies finger: VRO-6, VRO-5.
Sugarcane: ko.sha 88230, ko.sha 8436, ko 0238, ko.sha 07250 or U.P. 0512.
Barseem: V.L.1, V.L.10, maskavi, jai, K-8027, K-9565, Mandakini.
Onion: pusa red, pusa white.
Sugarcane: The mid and late maturing varieties of sugarcane: CO Pant 211, Co Sa 687 and Co Sa 8436.
The varieties recommended in areas with poor water drainage: B.O.54 and B.O.91.
Baby corn: M.H.-4.

Punjab

Sugarcane: CoJ-85, CoJ-83, CoJ-64 (early maturing), COH-119, CoJ-88, CoS-8436 for and CoJ-89, CO118, COJ85, COJ64.
Rice: Pusa-44, T.R-112 and T.R-113.
Onion: Punjab Naroya, Punjab White and PRO 6.
Radish: Punjab Pasand and Japanese white.
Turnip: L-1.
Carrot: Punjab Black Beauty, Punjab Carrot Red and PC-34.
Tomato: TH-1, Punjab Ratta, Punjab NR 7, Punjab Chhuhara, Punjab Upma, Castle Rock.
Rice: Hybrid varieties: K. R. H 2, PHB 71, Pant hybrid Dhan1, Narendra hybrid dhan 1, P R H 10
High yielding varieties: Pusa 44, Pant Dhan-4, Pant Dhan-10, Pusa-834, Pusa basmati-1, Pusa basmati-1509, Pusa improved basmati, Pusa sugandha-5, Pusa 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:PantHaritama, Hybrids.
Turnip:Pusa Swati, Local Red variety.
Bottle Gourd- Pusa Naveen, PusaSamridhi
Bitter Gourd- PusaVisesh, Pusa-2 mosumi
Pumpkin- PusaVisvash, PusaVikash
Ridge Gourd- PusaChikni
Cucumber- PusaUday, PusaBarkha

East Rajasthan:

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

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

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

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

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

kharif onion: N-53 & Agrifound dark red

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

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

Ageti-76, Bassi Selected, Mahi Kanchan

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

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

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

West Rajasthan

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

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

Bhindi: Ark Anamika, varshauphar, Parbhanikranti, pusamakhmali.

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

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

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

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

Madhya 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.

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.