



National Agromet Advisory Service Bulletin



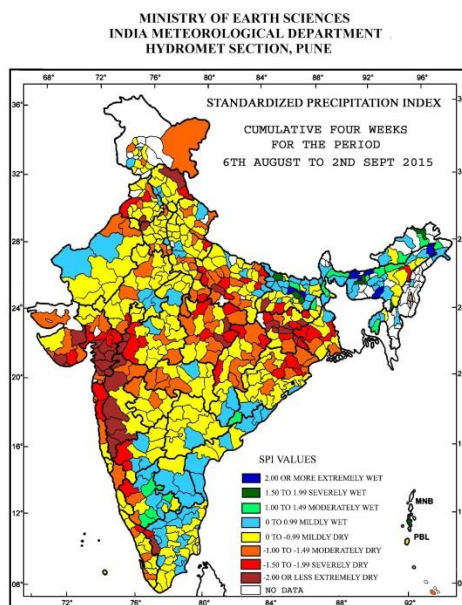
Friday 4th September 2015
(For the period 4th to 8th September 2015)

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

Monsoon Watch

- The Southwest Monsoon has withdrawn from western parts of Rajasthan. The withdrawal line passes through Anupgarh, Nagaur, Jodhpur and Barmer.
- Conditions are favourable for further withdrawal of Southwest Monsoon from some more parts of northwest India during next 3-4 days.

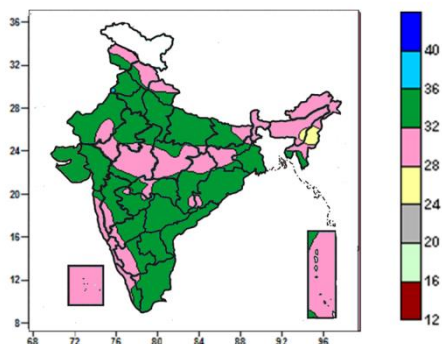
Standardised Precipitation Index Four Weekly for the Period 6th August to 2nd September 2015



- Extremely/severely wet conditions experienced in few districts of Assam; Upper Siang district of Arunachal Pradesh; East Khasi Hills district of Meghalaya; Begusarai, East Champaran, Khagaria, Monghyr, Samastipur districts of Bihar.
- Extremely/Severely dry conditions experienced in many districts of Jharkhand and Gujarat; few districts of West Bengal; Madhya Pradesh and Konkan & Goa; Golaghat district of Assam; Angul, Jajpur, Keonjhar districts of Odisha; Gaya, Rohtas districts of Bihar; Fatehpur, Kannauj, Kanpur Dehat, Kaushambi, Kushi Nagar, Mau, Rae Bareilly, Pilibhit, Mahoba districts of Uttar Pradesh; Ferozepur, Jalandhar, Mansa districts of Punjab; Kinnaur, Lahaul & Spiti districts of Himachal Pradesh; Pratapgarh district of Rajasthan; Kolhapur, Nashik, Pune, Sangli, Satara, Nandurbar districts of Maharashtra; Jashpur, Koriya, Rajnandgaon districts of Chhattisgarh; Coimbatore, Nilgiri districts of TamilNadu; Belgam, Dharwad, Shivamogga districts of Karnataka; Wayanad district of Kerala.
- Moderately dry conditions experienced in many districts of Saurashtra, Kutch & Diu; few districts of Uttar Pradesh; Uttarakhand; Gujarat Region; Konkan & Goa; Maharashtra and Chhattisgarh; Howrah, West Midnapore districts of West Bengal; Balasore, Bhadrak, Dhenkanal, Mayurbhanj, Kandhamal, Sambalpur districts of Odisha; West Singhbhum district of Jharkhand; Hoshiarpur, Moga districts of Punjab; Baramula, Ladakh (Leh), Ramban districts of Jammu & Kashmir; Sri Ganganagar, Hanumangarh, Banswara, Bhilwara, Jaipur districts of Rajasthan; Barwani, Betul, Sehore, Balaghat, Katni, Mandla, Narsinghpur, Panna, Sagar, Singrauli districts of Madhya Pradesh; Chennai district of TamilNadu; Uttar Kannada, Chikmagalur, Kodagu districts of Karnataka; Alappuzha, Ernakulam, Kozhikode, Kollam districts of Kerala.
- Rest of the country experienced moderately wet/mildly dry/wet conditions.

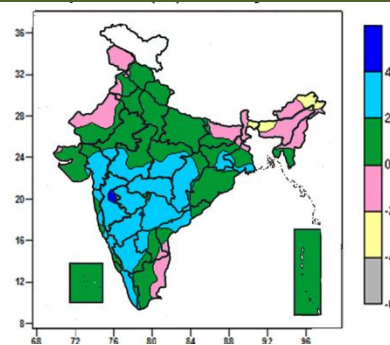
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 02.09.2015

Actual Mean Maximum Temperature (°C) in India for the week ending 02.09.2015



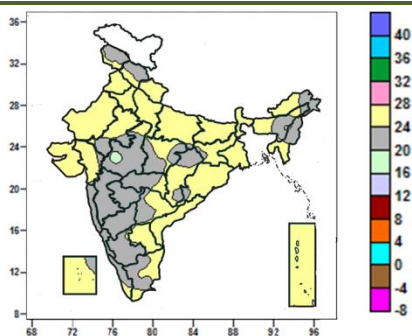
- Mean maximum temperature was between 32 to 36°C over Punjab, Haryana & Delhi, West Uttar Pradesh, Gujarat, Telangana, Coastal Andhra Pradesh and Rayalaseema, many parts of Rajasthan, East Uttar Pradesh, Bihar, Odisha, Mizoram, Chhattisgarh, Madhya Maharashtra, Marathwada, Vidarbha, Interior Karnataka and Tamil Nadu, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Madhya Pradesh, Jharkhand, Tripura and Kerala and isolated pockets of Konkan and Andaman & Nicobar Islands.
- It was below 32°C over remaining parts of the country.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 02.09.2015



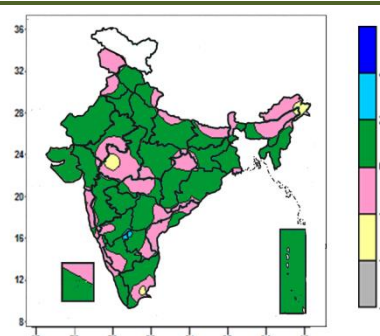
- Mean maximum temperature was above normal by 4°C over isolated pockets of Madhya Maharashtra, Telangana and North Interior Karnataka.
- Mean maximum temperature was above normal by 2 to 4°C over Marathwada and Vidarbha, many parts of Gujarat Region, Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Chhattisgarh, Telangana, Karnataka, Coastal Andhra Pradesh and Kerala, some parts of Jharkhand, Gangetic West Bengal and Rayalaseema, isolated pockets of East Rajasthan, Saurashtra, Odisha and Tamil Nadu.
- Mean maximum temperature was below normal by 2 to 4°C over some parts of Arunachal Pradesh, Sub-Himalayan West Bengal and isolated pockets of Assam & Meghalaya.
- It was normal to near normal in remaining parts of the country.

Actual Mean Minimum Temperature (°C) in India for the week ending 02.09.2015



- Mean minimum temperature was between 16 to 20°C over isolated pockets of West Madhya Pradesh and Assam.
- It was in the range of 20 to 28°C over rest of the country.

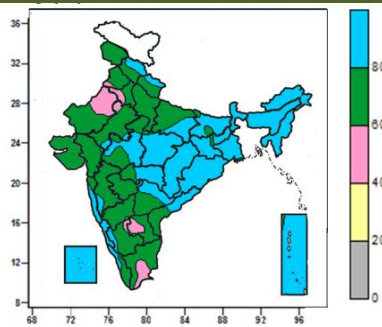
Mean Minimum Temperature (°C) Anomaly in India for the week ending 02.09.2015



- Mean maximum temperature was above normal by 2 to 4°C over isolated pockets of Interior Karnataka and Rayalaseema.
- Mean minimum temperature was below normal by 2 to 4°C over isolated pockets of Arunachal Pradesh, Assam, West Madhya Pradesh and Tamil Nadu.
- It was normal to near normal in remaining parts of the country.

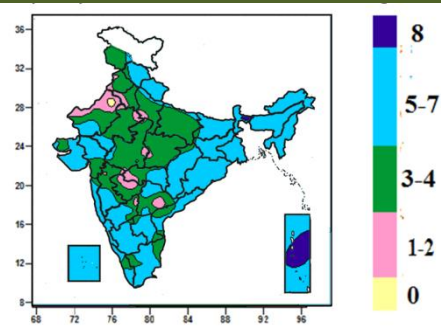
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 02.09.2015

Relative Humidity (%) over India for the week ending 02.09.2015



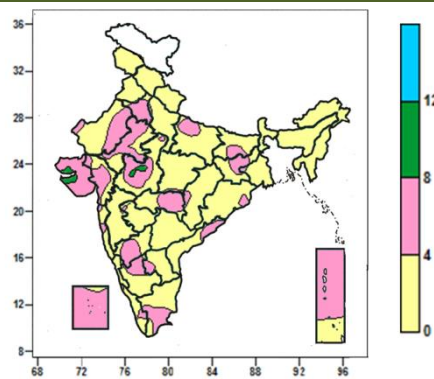
- Mean Relative humidity was above 80% over North East India, West Bengal & Sikkim, Chhattisgarh, Odisha, Coastal Karnataka, Lakshadweep and Andaman & Nicobar Islands, many parts of Bihar, Jharkhand, Madhya Pradesh, Vidarbha, Konkan & Goa, Coastal Andhra Pradesh, some parts of Himachal Pradesh, Uttarakhand,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

Cloud amount (okta) over India for the week ending 02.09.2015



- Sky remained cloudy (8 okta) over some parts of Sub-Himalayan West Bengal and Andaman & Nicobar Islands.
- Sky remained generally cloudy (5-7 okta) over North East India, Gangetic West Bengal & Sikkim, Uttarakhand, Odisha, Coastal Karnataka and Lakshadweep, many parts of Himachal Pradesh, Sub-Himalayan West Bengal, Bihar, Gujarat State, Chhattisgarh, Konkan & Goa, Coastal Andhra Pradesh, Rayalaseema, Interior Karnataka, Tamil Nadu, Kerala and Andaman & Nicobar Islands, some parts of Rajasthan, Vidarbha, Madhya Maharashtra and Telangana, isolated pockets of Jammu & Kashmir, Uttar Pradesh and West Madhya Pradesh.
- Sky remained partly cloudy/mainly clear/clear sky (3 to 4/1 to 2/0 okta) over rest of the country.

Wind speed (knots) over India for the week ending 02.09.2015



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

Weather Forecast for next 5 days valid upto 0830 hours of 9th September 2015

- No significant change in maximum temperatures over plains of northwest and adjoining central India during next 2-3 days.

5 Day Rainfall Forecast (MORNING) 4th September 2015

Met Sub-divisions	04 Sep	05 Sep	06 Sep	07 Sep	08 Sep
1. Andaman & Nicobar Islands	SCT	FWS	FWS	SCT	SCT
2. Arunachal Pradesh	FWS	FWS	FWS	FWS	FWS
3. Assam & Meghalaya	FWS	FWS	FWS	FWS	FWS
4. N. M. M. & T.	FWS	FWS	FWS	FWS	FWS
5. S.H. West Bengal & Sikkim	FWS	FWS	FWS	FWS	FWS
6. Gangetic West Bengal	SCT	SCT	ISOL	ISOL	ISOL
7. Orissa	SCT	SCT	SCT	SCT	SCT
8. Jharkhand	ISOL	ISOL	ISOL	ISOL	ISOL
9. Bihar	ISOL	ISOL	ISOL	ISOL	ISOL
10. East Uttar Pradesh	ISOL	ISOL	ISOL	DRY	DRY
11. West Uttar Pradesh	ISOL	ISOL	DRY	DRY	DRY
12. Uttarakhand	ISOL	ISOL	ISOL	ISOL	ISOL
13. Haryana, Chd & Delhi	ISOL	DRY	DRY	DRY	DRY
14. Punjab	ISOL	DRY	DRY	DRY	DRY
15. Himachal Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
16. Jammu & Kashmir	SCT	ISOL	SCT	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. Gujrat Region	ISOL	ISOL	ISOL	ISOL	ISOL
22. Saurashtra & Kutch	ISOL	ISOL	ISOL	ISOL	ISOL
23. Konkan & Goa	SCT	SCT	SCT	SCT	SCT
24. Madhya Maharashtra	SCT	SCT	SCT	SCT	SCT
25. Marathawada	ISOL	SCT	FWS	FWS	SCT
26. Vidharbha	ISOL	ISOL	SCT	SCT	ISOL
27. Chhattisgarh	ISOL	ISOL	ISOL	SCT	SCT
28. Coastal Andhra Pradesh	SCT	SCT	SCT	FWS	FWS
29. Telangana	ISOL	SCT	SCT	FWS	FWS
30. Rayalaseema	ISOL	SCT	SCT	FWS	FWS
31. Tamilnadu & Puducherry	FWS	FWS	SCT	SCT	ISOL
32. Coastal Karnataka	FWS	FWS	FWS	FWS	FWS
33. North Interior Karnataka	ISOL	SCT	FWS	FWS	FWS
34. South Interior Karnataka	FWS	FWS	FWS	WS	FWS
35. Kerala	FWS	FWS	FWS	FWS	FWS
36. Lakshadweep	FWS	FWS	FWS	FWS	FWS

% Station Reporting Rainfall

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

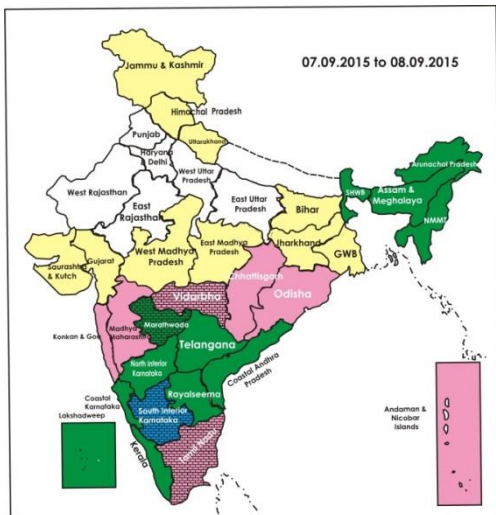
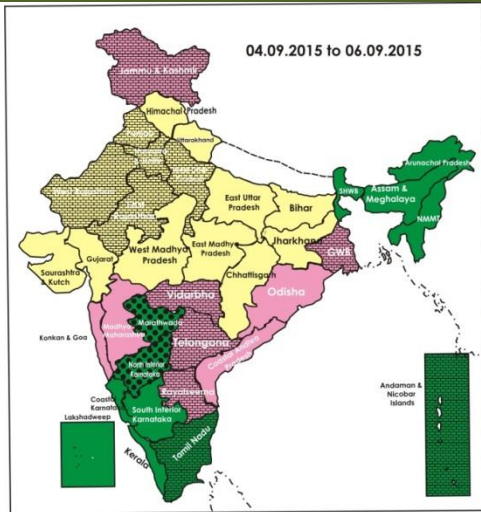
Weather Warning during next 5 days

- 04 September (Day 1):** Heavy rainfall would occur at isolated places over South Interior Karnataka, Tamil Nadu & Puducherry and Kerala.
- 05 September (Day 2):** Heavy rainfall would occur at isolated places over Coastal Karnataka, South Interior Karnataka, interior Tamil Nadu & Puducherry and Kerala.
- 06 September (Day 3):** Heavy rainfall would occur at isolated places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Karnataka., South Interior Karnataka and Kerala.
- 07 September (Day 4):** Heavy rainfall would occur at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Karnataka, South Interior Karnataka and Kerala.
- 08 September (Day 5):** Heavy rainfall would occur at isolated places over Arunachal Pradesh, Assam & Meghalaya and Coastal Karnataka.

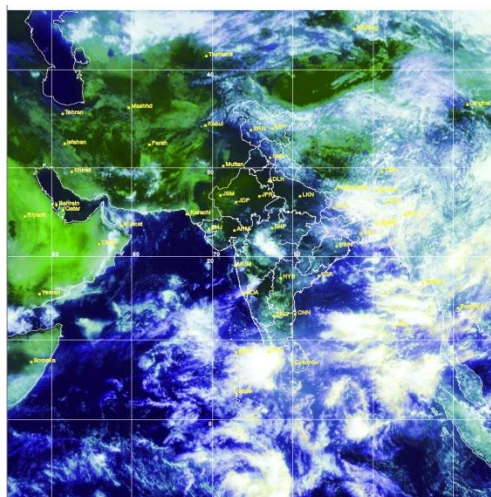
Weather Outlook for subsequent 2 days from 9th to 11th September 2015

- Rain/thundershowers would occur at many places over northeastern states.
- Rain/thundershowers would occur at a few places over peninsular India; at isolated places over central and east India.

Weather Forecast Map (Valid upto 0830 hours of 9th September, 2015)



Satellite image dated, 04.09.2015 0545 UTC



Salient Advisories

- In **Assam**, due to heavy rain, flooding is reported in Dhemaji, Lakhimpur, Dibrugarh, Morigaon, Barpeta, Sonitpur, Tinsukia and Goalpara districts. Drain out excess water from standing crop fields in these flood affected districts. In North Bank Plain Zone, Upper Brahmaputra Valley Zone and Lower Brahmaputra Valley Zone, farmers in flood affected areas are advised late and staggered planting of rice after receding of flood with 60 to 80 days old seedlings of the varieties like Prafulla (80 days) and Gitesh (60 days) is also suggested up to mid of September. The old seedlings of other improved long duration variety like Monohar Sali, Salpona, Prasadbhog, Gobin bhog etc. can be transplanted up to mid of September.
- In **Nagaland**, maintain proper drainage in ginger crop fields to avoid rhizome rot in view of likely occurrence of heavy rainfall.
- In **Tripura**, maintain proper drainage particularly in groundnut and banana crop fields in medium and lowlands.
- In **South Interior Karnataka**, continue transplanting of rice in Chamarajanagar, Kodagu, Mandya and Mysore districts and undertake sowing of short duration crops like pulses and minor millets in the Eastern Dry Zone utilizing the realized and expected rainfall.
- In **North Interior Karnataka**, undertake sowing of fodder crops like jowar, maize, bajra in North East Dry Zone and North East Transition Zone with realized and expected rainfall.
- In **Rayalaseema**, undertake sowing of contingent crops like sorghum, cowpea, horsegram, korra, bajra in Anantpur district and korra in Kurnool district utilising the expected rainfall. Undertake sowing of redgram, castor, greengram, cowpea, sorghum, bajra and horsegram in the Southern Zone.
- In **Madhya Maharashtra**, apply protective irrigation for the crops/orchards under moisture stress and also spray 2% potassium nitrate in the standing crops and 8% Kaolin in orchards. Maintain 5 cm water level in rice fields in Western ghat region of Nasik, Pune and Kolhapur districts. Undertake compartmental bunding in the fields to conserve soil moisture wherever sowing is not carried out.
- In **Marathwada**, for taking rabi crops, undertake compartmental bunding to conserve moisture wherever sowing is not carried out.
- In **Vidarbha**, maintain 5 cm water level in transplanted rice field. Continue weeding and hoeing in cotton to conserve soil moisture.
- In Arid West Zone of **Rajasthan**, as mainly dry weather is prevailing during last few weeks, apply protective irrigation in bajra under moisture stress conditions.
- In Western Undulating Zone of **Odisha**, Bacterial Leaf blight infestation is noticed in rice in some areas in the main fields. Spray Steptocycline @ 0.1g or Plantomycin @ 1g per litre of water on a non rainy day.

Detailed Zonewise Agromet Advisories

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



Maize



Groundnut



Green gram



Rice transplanting

- **Realised Rainfall:** Rainfall occurred in all districts of Coastal Karnataka and Shivamogga district of South Interior Karnataka; Kannur, Kasargod and Kozhikode districts of Kerala; all districts of Coastal Andhra Pradesh except Guntur, Nellore and Prakasam; Khammam, Medak, Nizamabad and Warangal districts of Telangana; Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Andhra Pradesh:**
 - In North Coastal Zone, if nursery sowing of rice is delayed, use short duration varieties or undertake direct sowing of rice.
 - In Scarce Rainfall Zone, undertake sowing of contingent crops like sorghum, cowpea, horsegram, korra, bajra in Anantpur district and korra in Kurnool district utilising the expected rainfall.
 - Undertake sowing of redgram, castor, greengram, cowpea, sorghum, bajra and horsegram utilising the expected rainfall in the Southern Zone.

- Prevailing weather conditions are congenial for occurrence of thrips and mite in chilli in the Southern Zone. To control, spray Diphenthiuran @ 1.25 g/litre of water on a non rainy day.
- Prevailing weather conditions are congenial for incidence of tikka leaf disease in groundnut in the North Coastal Zone. To control, apply Chlorothalonil @ 2.0 g/litre of water on a non rainy day.
- **Telangana:**
 - In the Southern Telangana Zone, undertake application of 30-35 kg urea and 10 kg Muriate of Potash per acre in Bt cotton at 60-65 days and 80-85 days after sowing as top dressing and apply 45-50 kg urea and 30-35 kg Muriate of Potash at flowering stage as top dressing to the rainfed maize utilising the expected rainfall.
 - In the North Telangana Zone, maintain shallow depth of water (1-2 cm) at the time of transplanting of rice and increase the water level up to 5 cm depth after transplanting.
 - In the Northern Telangana Zone, Verticillium wilt is noticed on cotton. To control drench the soil at the base of infected plants with Copper oxy Chloride @ 3.0 g/litre of water or Carbendazim @1 g or Benomyl @1 g per litre of water on a non rainy day.
 - In the Southern Telangana Zone, in the prevailing dry weather conditions, incidence of Rhizoctonia root rot disease is observed in cotton growing on red chalka soils. To control, drench the soil with Carbendazim @ 1g or Copper-Oxy-Chloride @ 3g or Carbendazim 12% + Mancozeb 63% (SAAF) per litre of water on a non rainy day around the root zone 2-3 times at 7-10 days interval to avoid further spread of the root rot.
- **Karnataka:**
 - In South Interior Karnataka, continue transplanting of rice in Chamarajanagar, Kodagu, Mandya and Mysore districts the realised and expected rainfall.
 - In the Eastern Dry Zone, in areas where sowing is yet to be done, undertake sowing of short duration crops like pulses and minor millets.
 - In the North East Dry Zone and North East Transition Zone, undertake sowing of fodder crops like jowar, maize, bajra with realized and expected rainfall.
 - Undertake harvesting of matured greengram and blackgram in the North East Transition Zone.
 - In North Dry Zone, follow moisture conservation techniques for dry land such as compartmental bunding, ridges furrow and scooping in fields spared for rabi sowing.
 - In Hill Zone, undertake spraying of Planofix @ 0.25 ml/litre to reduce the square/flower bud/flower drop in cotton after current spells of rain.
 - In North East Transition Zone, present weather conditions are favourable for attack of fruit borer in vegetable crops. Undertake spraying of Malathion 50 EC @ 2 ml/litre of water for control after current spells of rain.
- **Kerala:**
 - Continue planting of tapioca and transplanting of Brinjal in the Problem Area Zone.
 - Prevailing weather conditions are congenial for incidence of bacterial leaf blight in rice in the Problem Area Zone. Spray Streptocyclin @ 6g/25 litres of water after current spells of rain.
 - Prevailing high relative humidity is congenial for increase in Quick wilt disease in pepper and sucking pests in cowpea in the Central Zone. To control, apply Trichoderma or Pseudomonas culture in soil or spray 1% Bordeaux mixture on the leaves for wilt and apply 2% neem oil-garlic-soap emulsion to control sucking pests in cowpea after current spells of rain.
 - Prevailing weather conditions are congenial for fungal diseases in young budded rubber plants in the Southern Zone. To control fungal diseases, spray Copper Oxy Chloride or Bordeaux mixture. Pink disease can be controlled by chiseling out the affected bark and apply Bordeaux paste after current spells of rain.
- **Tamil Nadu:**
 - In the Cauvery Delta Zone, continue nursery sowing of *Samba* rice varieties (CR 1009 and ADT 50).
 - Continue nursery sowing of long duration varieties of rice like CR 1009 and KKL 1 for ensuing samba season in Karaikal and Puducherry.
 - Undertake sowing of black gram (Co-6, Vamban 6), green gram(Co- 8) and red gram(Co-7) in the North Western Zone.
 - Undertake thinning of winter combodia cotton and maize in the Western Zone.
 - Black bug incidence was noticed in *Kuruwai* rice in the Cauvery Delta Zone. To control, undertake spraying of Profenophos 50 EC @ 400 ml/acre with 200 litre of water on a non rainy day.
 - Suitable varieties for sowing are given in Annexure II.
- **Animal Husbandry**
 - Prevailing weather conditions are congenial for Enterotoxaemia in livestock in Northern Telangana and sheep pox in sheep in Southern Telangana. To prevent the diseases, vaccinate the animals.



Green gram

Banana

Okra

Rice

- **Realised Rainfall:** Rainfall occurred in all districts of Arunachal Pradesh except Anjaw, Dibang Valley, Kurung Kumey and Lower Subansari; all districts of Assam except Darrang and N. C. Hills; all districts of Meghalaya except South Garo Hills; Aizwal and Serchhip districts of Mizoram; Imphal East, Imphal West and Thoubal districts of Manipur; Dimapur, Kohima and Mokokchung districts of Nagaland and all districts of Tripura. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Assam, due to heavy rain, flooding is reported in Dhemaji, Lakhimpur, Dibrugarh, Morigaon, Barpeta, Sonitpur, Tinsukia and Goalpara districts. Drain out excess water from standing crop fields in these flood affected districts.
 - In North Bank Plain Zone, Upper Bramhaputra Valley Zone and Lower Bramhaputra Valley Zone, farmers in flood affected areas are advised late and staggered planting of rice after receding of flood with 60 to 80 days old seedlings of the varieties like Prafulla (80 days) and Gitesh (60 days) is also suggested up to mid of September. The old seedlings of other improved long duration variety like Monohar Sali, Salpona, Prasadbhog, Gobin bhog etc. can be transplanted up to mid of September. Complete the transplanting at the earliest for non flood affected areas. Continue sowing of *kharif* sesame, green gram, black gram, early cauliflower and radish after current spells of heavy rain.
 - In Hill Zone, continue sowing of green gram and black gram, transplanting of early cauliflower and undertake nursery sowing of mid cauliflower after current spells of heavy rain.
 - In Barak Valley Zone and Upper Bramhaputra Valley Zone of Assam, continue nursery sowing of *kharif* pulses, mid cauliflower and radish after current spells of heavy rain.
 - In Barak Valley Zone, avoid water stagnation in the field of banana to protect the banana plant from wilting or panama disease.
 - In Central Bramhaputra Valley Zone of Assam, continue sowing of *kharif* pulses like black gram/green gram, nursery raising of cole crops and early radish after current spells of heavy rain.
 - In Lower Bramhaputra Valley Zone of Assam, continue transplanting of finger millet after current spells of heavy rain.
 - In Meghalaya, continue sowing of pea, red gram, black gram, green gram and nursery raising of cauliflower after current spells of heavy rain. Remove excess water and maintain proper drainage facilities in the fields of groundnut, soybean, ginger and turmeric crop fields.
 - In North Bank Plain Zone, Central Bramhaputra Valley Zone and Hill Zone of Assam, due to cloudy and humid weather there is chance of attack of rice hispa and stem bore in *Sali* rice. Spray Chloropyriphos 20 EC (0.02%) or Quinalphos @ 2 teaspoon/5 litre of water or or Monocrotophos 40 EC @ 1.5 ml per litre of water against rice hispa and Carbofuran 3G @ 30 kg/ha or Phorate 10G @ 10kg/ha against stem borer after current spells of rain.
 - In Lower Bramhaputra Valley Zone of Assam, due to cloudy and humid weather, there is chance of incidence of blast in rice. Spray Carbendazime @ 1g/litre of water at tillering stage and subsequently give two sprays of Edifenphos @ 1ml/litre of water at panicle initiation stage.
 - In Meghalaya, spray/drench with 1% Bordeaux mixture or Dithane M-45 (2.5g/litre of water in turmeric/ginger to prevent rhizome rot. Also, due to cloudy and humid weather, there is chance of attack of yellow stem borer in *Sali* rice and leaf spot in groundnut. To manage the attack, spray Imidachloprid @ 2.0 ml or per litre of water and spray Carbendazim (0.05%) + Mancozeb (0.2%) against leaf spot in groundnut. Apply the pesticides after current spells of rain.
 - In Arunachal Pradesh, due to humid and cloudy weather, there is chance of attack of blast/bacterial leaf blight in normal rice. Spray copper fungicide (Blitox 0.3%) alternately with Streptocycline (250 ppm) against blast/bacterial leaf blight after current spells of rain.
 - **Manipur, Mizoram, Nagaland and Tripura:**
 - In Manipur, maintain 5cm water in the rice fields.
 - In Mizoram, continue sowing of cowpea after current spells of heavy rain.
 - In Nagaland, maintain proper drainage in ginger crop fields to avoid rhizome rot in view of likely occurrence of heavy rainfall.
 - In Tripura, maintain proper drainage particularly in groundnut and banana crop fields in medium upland and

- lowlands.
- In Nagaland, if infestation of caseworm occurs in rice field, drain out water from the rice field and keep it dry for 3 or 4 days.
- In Tripura, due to cloudy and humid weather, there is chance of incidence of stem and cob rot in maize. Spray TrichodermaViride @ 5ml + Psuedomonas Flourensense @ 5ml per litre of water Also in the present weather condition, combined attack of downy mildew and mosaic may be seen in bitter gourd & pointed gourd. Apply Redomil–MZ @ 2 g per litre to manage the attack. Undertake plant protection measures after current spells of rain.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- In Northeastern states, carry out vaccination (RDF1) against Ranikhet disease in one week old chicks and against Gamboro disease in two weeks old chicks. The cows and goats should not be allowed to feed on submerged rotten grasses. Vaccinate domestic live stocks against BQ, HS, Foot and mouth as well as anthrax diseases. Keep pig shed/ sty dry and avoid dampness during rainy days.
- In Barak Valley Zone of Assam, there is chance of gastrointestinal parasites infestation in poultry. Keep the poultry shed clean and maintain in good sanitary conditions.
- In Meghalaya, due to high humidity, there is chance for growth of molds (especially Aspergillus sps.) producing aflatoxin in animal feed. It is advised to keep the animal feeds in dry and clean place and avoid direct contact with ground/soil.
- **Fishery**
- In Assam, encircle fish ponds with *happa* net barrier in the low lying areas to prevent out flow of fishes from the ponds and also to check inflow of predatory fishes during flooding.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Cotton



Sugarcane



Rice



Groundnut

- **Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa; Bhandara, Chandrapur, Gadchiroli, Gondia, Nagpur and Wardha districts of Vidarbha. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, apply third dose of nitrogenous fertilizers to rice crop at flowering stage i.e. 435 gm Urea per 0.25 hectare. Maintain water level of 5-10 cm in rice field. Apply second dose of nitrogenous fertilizers i.e. 800 g of urea per 0.25 hectare on nagli crop on a non rainy day. Complete earthing up operation in 35 to 40 days old groundnut crop and continue weeding in pulses and vegetables on a non rainy day.
 - In Madhya Maharashtra, apply protective irrigation for the crops/orchards under moisture stress and spray 8% Kaolin in orchards. Maintain 5 cm water level in rice fields in Western ghat region of Nasik, Pune and Kolhapur districts Undertake light hoeing, weeding and organic mulching in newly planted orchards. Undertake compartmental bunding in the fields to conserve soil moisture wherever sowing is not carried out.
 - In Marathwada, for taking rabi crops, undertake compartmental bunding to conserve moisture wherever sowing is not carried out. Undertake sowing of *rabi* jowar after receipt of sufficient rainfall.
 - In Vidarbha, maintain 5 cm water level in transplanted rice field. Continue weeding and hoeing in cotton to conserve soil moisture in Central Vidarbha.
 - Due to humid and warm weather in East Vidarbha region, there may be attack of stem borer in rice; spray Fipronil @ 30 ml per 10 litres of water on a non rainy day.
 - Due to subdued rainfall in Marathwada region, there may be reddening of leaf in cotton; spray Magnesium Sulphate @ 1 Kg + Diammonium Phosphate @ 4 Kg per acre in 200 litres of water on a non rainy day.
 - Due to humid and warm weather in Konkan region, there may be incidence of anthracnose on new flush of mango; spray Propineb @ 20 g or Carbendazim @ 10 g per 10 litres of water on a non rainy day.
 - **Gujarat:**
 - In Gujarat, carry out intercultural operations like hoeing and weeding and apply mulch in in standing crops to conserve soil moisture.
 - Undertake sowing of castor and sorghum, transplanting of brinjal, tomato, chilli and other vegetable crops in Bhal and Coastal Zone.
 - As there was no significant rain during last few weeks and mainly dry weather is likely to continue, apply

protective irrigation in standing crops like pearl millet in North Gujarat Zone, vegetable, cotton, castor and groundnut crops under moisture stress condition in North Saurashtra Zone.

- Undertake planting of sapling of different fruit crops viz. sapota, papaya, citrus, pomegranate, custard apple in North West Zone.
- Partly cloudy and humid weather conditions are favourable for incidence of sucking pests (whitefly, aphids and jassid etc.) in vegetables in North West Zone; spray Imidachoprid or Thiomethoxam @ 4 ml/10 litres of water for control.
- Infestation of semilooper is observed in castor in North Gujarat Zone and North West Zone; spray Chlorpyrophos @ 30 ml in 10 litres of water for control.
- Thrips infestation in cotton is observed above ETL in North Saurashtra Zone; spray Fipronil or Profenophosin @ 20 ml in 10 litres of water for control.
- **Animal Husbandry**
- For the control of tick and other parasites, spray Deltamethrin or Aemitz 2 ml in 1 litre of water in South Saurashtra Zone.

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



Groundnut



Cotton



Green gram



Rice transplanting

- **Realised Rainfall:** Rainfall occurred in all districts of Andaman & Nicobar Islands, Gangetic West Bengal & Sikkim; all districts of Sub-Himalayan West Bengal except South Dinajpur; all districts of Bihar except Arwal, Bhabua, Bhojpur, Buxar, Jahanabad, Jamui, Lakhisarai, Madhubani, Nawada, Rohtas, Saharsha, Saran and Sheikpura; all districts of Jharkhand except Deoghar, Koderma, Latehar, Lohardaga, Palamau, Ranchi, Sahibganj and Seraikela-Kharsawan; all districts of Odisha.

- **Advisories:**

- **West Bengal:**

- In Coastal Saline Zone, complete the transplanting of *Aman* rice. Undertake hand weeding to keep the fields weed free at tillering stage. In upland areas where rice could not be cultivated, undertake sowing of red amaranthus, spinach, coriander etc. Also undertake land preparation and sowing of *vadu kalai* like Kalindi and Swarna.
- In Hill Zone, maintain proper drainage system in soybean, vegetable and ginger fields in view of likely occurrence of heavy to heavy rainfall.
- In Old Alluvial Zone, undertake land preparation and sowing of black gram after current spells of heavy rain. Treat seeds with Carbendazim 50% WP @ 2g/kg seed 7 days before sowing.
- In Old Alluvial zone, protect seedbed of early cauliflower and cabbage from heavy rain by using white polythene sheets. Provide adequate drainage to prevent water stagnation in the seedbed.
- In New Alluvial Zone, due to cloudy weather conditions, combined attack of downy mildew and mosaic may be seen in bitter gourd and pointed gourd and attack of leaf folder may be found in rice at tillering stage. Apply Redomil - MZ (@ 2 g per litre of water to control downy mildew and apply Triazophos @ 0.5 ml/litre or Chlorpyrophos 50% + Cypermethrin 5% @ 1.5 ml/litre of water to control attack of leaf folder. Undertake plant protection measures on a non rainy day.
- In Terai Zone, due to high humidity seedlings of cabbage and cauliflower may get affected by blight disease. Apply 12% Carbendazim + 64% Mancozeb @ 2 g/litre of water after current spells of rain.

- **Andaman and Nicobar Islands:**

- In North and Middle and South Andaman, undertake weed control in transplanted rice at vegetative stage on a non rainy day.

- **Odisha:**

- In East and South Eastern Coastal Plain Zone, undertake weed control and gap filling in direct seeded rice. Under moisture stress condition, go for 2% urea spray instead of soil application of Nitrogenous fertilizer. In uplands, continue sowing of green gram, black gram, horse gram and sesame.
- In North Eastern Ghat Zone, continue sowing of groundnut, sesame and ragi.
- In North Central Plateau Zone, continue sowing of green gram, black gram and cowpea.
- In Western Undulating Zone, continue sowing of improved varieties of black gram vari. Sarala, Ujala, PU-30, T-9, Prasad, green gram varieties like Tarm-1, Dhauli, Durga, Kamdev Jyoti, PDM-54, PDM-11, Samrat, PM-1, PM-2 @ 6-8kg/acre and cow pea vari. Utkala manika, Pusa Barsati and SEB- 2 @ 8kg/acre in fallow uplands.

- In Western Undulating Zone, sucking pests like aphids and jassids may infest the cotton crop during this period. Spray neem oil 3ml/litre of water. If the infestation increases, spray Imidacloprid @ 1ml in 4 litres of water or Acephate @ 2g/litre of water on a non rainy day.
- In Western Undulating Zone, Bacterial Leaf blight infestation is noticed in rice in some areas in main fields. Spray Streptocycline @ 0.1g or Plantomycin @ 1g per litre of water on a non rainy day.
- In North Central Plateau Zone, white ant attack has been found in groundnut in low rain fall areas. Undertake soil drenching with Chloropyriphos @ 2 ml/litre of water. Also if bud necrosis has been found, spray Imidacloprid @ 4ml /10 litre water to control the vector. Undertake plant protection measures on a non rainy day.
- In East and South Eastern Coastal Plain Zone, high humidity and cloudy weather favours infestation of blast in rice. For control, spray Beam 1 g and 1.5 g Hinosan in 2 litres of water twice at 15 days interval on a non rainy day.
- In East and South Eastern Coastal Plain Zone, hairy caterpillar and leaf minor has been found in groundnut. Spray DDVP @ 200 ml per acre for control of hairy caterpillar and spray Chloropyriphos @ 2 ml/litre of water to control leaf minor on a non rainy day.
- **Bihar:**
 - In North East Alluvial Plain Zone, undertake land preparation preferably in uplands for sowing of September arhar and maintain optimum water level in *kharif* rice fields.
 - In North West Alluvial Plain Zone, continue transplanting of *kharif* onion, tomato, chilli and cauliflower on raised beds. Complete sowing of cluster bean, bitter gourd and radish.
 - In South Bihar Alluvial Zone, complete transplanting of *kharif* onion and continue planting of mango, litchi, guava and papaya plants in already made pits and undertake sowing of pigeon pea, black gram and sesame. Continue sowing of tobacco & sweet potato.
 - In North West Alluvial Plain Zone, present weather is conducive for the occurrence of red pumpkin beetle in cucurbitaceous vegetable crops, to control, spray Dichlorvos 76 EC @ 1 ml/litre of water.
 - In North East Alluvial Plain Zone, present weather is conducive for the occurrence of attack of yellow vein mosaic disease in okra, to control, spray Imidacloprid 17.8%SL @ 0.5 ml/litre of water or Malathion 50 EC @ 2.5ml/litre of water.
 - In North West Alluvial Plain Zone, present weather is conducive for the occurrence of attack of leaf folder and stem borer in paddy crops, for control, broadcasting of Cartap Hydrochloride (Caldan) 4% granules @ 10 kg/acre is advised.
 - In South Bihar Alluvial Zone, present weather is conducive for attack of shoot borer in maize. For control, apply Carbofuran @ 3-4 pellets per plant in the shoot of the plants.
- **Jharkhand:**
 - In South Eastern Plateau Zone, complete transplanting of finger millet, undertake land preparation for cultivation of short duration early potato, continue cultivation of vegetables like tomato, early cabbage & cauliflower and complete sowing of maize, arhar, green gram, black gram, urd, groundnut, soybean and sesame. Undertake cultivation of upland spices, yam & forage crops like jowar & maize.
 - In North Eastern Plateau Zone, continue cultivation of improved varieties of green pea, tomato, cabbage and cauliflower.
 - In Western Plateau Zone, undertake sowing of crop like kulthi or niger in fallow lands, continue preparation of fields for cultivation of early potato and green peas and continue sowing of improved varieties of urad, maize.
 - In South Eastern Plateau Zone, present weather is conducive for the occurrence of leaf folder and hairy caterpillar in groundnut, to control, spray Chlorpyriphos @ 1 ml per litre of water mixing Teepol @ 0.5 ml per litre of water.
 - In Western Plateau Zone, prevailing weather is conducive for the attack of leaf spot/tikka disease in groundnut and stem borer in rice. To control, spray Endofil M-45 @ 5 gm + Bavistin @ 1 gm in 4 litre of water for leaf spot/tikka disease and spray Monocrotophos 36 E.C. @ 1-2 ml per litre of water for stem borer.
 - In Western Plateau Zone, prevailing weather is conducive for attack of stem rot disease in transplanted rice, to control, spray fungicide Saaf @ 2 g per litre of water.
 - Suitable varieties for sowing are given in Annexure II.

CENTRAL INDIA [M.P., CHHATTISGARH]



Rice



Green gram



Okra



Soybean

- **Realised Rainfall:** Rainfall occurred in all districts of East Madhya Pradesh except Rewa, Shahdol, Sidhi and

Tikamgarh; Agar, Bhopal, Burhanpur, Dewas, Guna, Hoshangabad, Raisen, Rajgarh, Shivpuri and Vidisha districts of West Madhya Pradesh; all districts of Chhattisgarh. Weather remained mainly dry over rest of the region.

• **Advisories:**

▪ **Madhya Pradesh:**

- Complete sowing of niger, continue weeding and hoeing and top dressing of urea in kodo millet and little millet crops in Satpura Plateau Zone and continue nursery sowing of early winter vegetables in Malwa Plateau Zone.
- Undertake sowing of toria in available fields in Kymore Plateau and Satpura Hill Zone.
- Undertake transplanting of vegetables like brinjal, tomato, chilli, cauliflower and cabbage on raised bed in Bundelkhand Zone.
- Due to humid weather, there are chances of attack of girdle beetle, semi looper and tobacco caterpillar in soybean in Jhabua Hill Zone, spray Trizophos @ 2.0 ml/litre of water.
- Due to humid weather there are chances of occurrence of blast in rice in Bundelkhand Zone, spray Ediphenphos or Propiconazole @ 1.5 ml or Mancozeb @ 2.5 g per litre of water.

▪ **Chhattisgarh:**

- In North Hill Zone, complete sowing of kulthi, niger, sunflower, urad, arhar, horse gram and vegetable crops in the upland areas.
- In Plain Zone of Chhattisgarh, maintain 3-5 cm water level in the transplanted rice fields for better tillering and undertake sowing of niger and horse gram.
- Complete sowing of niger, horse gram, black gram and green gram in Bastar Plateau Zone.
- Due to humid weather there are chances of attack of stem borer in rice in North Hill Zone, spray Monocrotophos 36 E.C. @ 1-2 ml per litre of water on a non rainy day.
- Due to humid weather, there may chances of attack of tobacco caterpillar in soybean in Plain Zone, spray Prophenophos @ 2 ml/litre of water on a non rainy day.

• **Animal Husbandry**

- Keep animal sheds clean, dry and create smoke to prevent from mosquitoes in Madhya Pradesh and Chhattisgarh.

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



Cotton

Green gram

Maize

Cabbage

- **Realised Rainfall:** Rainfall occurred in Bageshwar, Chamoli, Nainital, Rudraprayag and Udham Singh Nagar districts of Uttarakhand; Kathua and Reasi districts of Jammu & Kashmir; Baran and Jhalwar districts of East Rajasthan; Allahabad, Azamgarh, Bahraich, Balarampur, Basti, Faizabad, Gorakhpur, Maharajganj, Shahuji Maharaj Nagar, Siddarth Nagar, Sultanpur and Varanasi districts of East Uttar Pradesh. Weather remained mainly dry over rest of the region.

• **Advisories:**

▪ **Jammu & Kashmir:**

- In Valley temperate Zone of Jammu & Kashmir, complete sowing of root vegetables preferably on ridges and transplanting of cole crops. Also continue harvesting of baby corn and *kharif* pulses. Avoid water stress in rice at milky stage.
- In Intermediate Zone of Jammu & Kashmir, continue nursery sowing of cole crops like cabbage and cauliflower and sowing of gobisarson and toria in Sub-tropical Zone.
- In Intermediate Zone of Jammu & Kashmir, in the prevailing weather conditions, there are chances of stem borer in maize and blast attack in rice. To control stem borer, apply Carbufuron 3G @ 750 g/kanal and to control blast, spray Tricyclazole (beam) @ 6 ml/10 litres of water. Also there is chance of attack of hairy caterpillars in *kharif* pulses. To control, collect and destroy young gregarious caterpillars or apply Chlorpyrifos 20 EC @ 2 ml per litre of water.

▪ **Uttarakhand:**

- In Bhabar and Tarai Zone, undertake sowing of early vegetable pea at high hills.
- In Hill Zone, weather conditions are favourable for sowing of vegetable pea and toria in mid high zone.
- In Hill Zone, there is chance of attack of stem bore in rice. Spray Chlorpyrifos or Quinalphos @ 40ml/16-20 litre of water. Also there is chance of attack of sucking pest in pulses. To manage the attack, spray Imidachloprid @ 1ml per litre of water.

▪ **Himachal Pradesh:**

- In Sub-Montane and Low Hills Sub-Tropical Zone, 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 in fields. Continue transplanting of, tomato, brinjal, capsicum, chilli and direct sowing of okra and sowing of radish and turnip in lower rainfed areas. In mid hill region undertake nursery sowing of Chinese cabbage and direct sowing of raddish, carrot, broccoli and lettuce.
- In Mid Hills sub-Humid Zone, continue nursery sowing of cauliflower, cabbage (Pride of India, golden achor and hybrid), sowing of carrot and radish at a distance of 30x10cm. Undertake, sowing of carrot and cruciferous vegetables and early variety of pea at a distance of 30x10cm, transplanting of onion at a distance 15x10cm and early variety of cauliflower at a distance of 45x30cm.
- Under humid weather condition, there are chances of incidence of leaf folder in rice in Sub-Montane and Low Hills Sub-Tropical Zone, for control, spray Chlorpyrifos 20 EC @ 2.5ml per litre of water.
- Under humid weather condition there are chances of attack of red beetle and fruit fly in cucurbits in Sub-Montane and Low Hills Sub-Tropical Zone. For control, spray Malathion 50EC @ 1ml per litre of water. Also install pheromone trap @ 25 per hectare.
- Under humid weather condition there are chances of incidence of fruit rot and leaf spot disease in tomato and capsicum in Mid Hills Sub-Humid Zone. Spray Ridomil gold @ 25g or Streptocyclin @ 1g or Blitox @ 30g per 10 litres of water.
- Under cloudy and humid weather condition, there are chances of incidence of sooty blotch and fly speck diseases and attack of wooly aphids in apple in Mild Hills Sub-Humid Zone. For control of sooty blotch and fly speck diseases, spray Ziram @ 600 ml per 200 litres of water. For the control of wooly aphids, spray Actara @ 200 g or Dursban @ 200 ml or Marshal @ 200 ml per 200 litres of water.

▪ **Rajasthan:**

- In Arid Western Plain Zone, undertake field preparation for sowing of early varieties of radish. Also undertake nursery for sowing of early varieties of cabbage and cauliflower and continue hoeing and weeding operation in *kharif* pulses and cluster bean to conserve moisture and apply irrigation to pearl millet.
- In Sub Humid Southern Plain and Aravali Hill Zone, continue weeding and hoeing in cotton, groundnut, maize, moong, sorghum, soybean and urad crops.
- In Southern Humid Plain Zone, due to prevailing weather, there are chances of attack of jassids in Cotton. Spray Imidachloprid 17.8 SL @ 200 ml/ha for control.
- Due to partly cloudy and humid weather, there are chances of attack of leaf borer in sesame in Flood Prone Eastern Plain Zone and attack of stem borer in paddy in Southern Humid Plain Zone, spray Monocrotophos 36 WSC @ 1 litre/ha to control both the pests.
- In Semi Arid Eastern Plain Zone of Rajasthan, due to partly cloudy weather, there are chances of incidence of leaf spot disease on groundnut and yellow mosaic disease in okra in Semi Arid Eastern Plain Zone and Flood Prone Eastern Plain Zone also, spray Bavistin @ 0.5 g or Mancozeb @ 2 g per litre water for leaf spot and spray Malathion 50 EC @ 1.0 ml per litre water for yellow mosaic.
- In Southern Humid Plain Zone, there are chances of sudden outbreak of semiloopers in soybean, due to partly cloudy and humid weather, spray Indoxocarb 15.8 EC @ 350 ml/ha for control.
- Due to prevailing weather, there are chances of attack of bacterial blight in cluster bean and green gram, moth bean and cowpea in Transitional Plain Zone of Inland Drainage and in Semi Arid Eastern Plain Zone, spray Copper Oxy Chloride @ 30 g/10 litre water for control.
- In Arid Western Plain Zone of Rajasthan, due to rise in temperature, there may be increased attack of pod borer in moong and moth crops at flowering/pod formation stage. Spray Quinalphos 25 EC @ 1 litre/ha. Also there are chances of attack of leaf minor in groundnut, spray Imidachloprid @ 1ml per litre of water for control.
- In Irrigated Northwestern Plain Zone, due to moderately humid conditions, there are chances of attack of white fly/jassids/thrips in Bt cotton and guar, spray Trizophos 40 EC @ 2.5 ml per litre of water or Acitamidprid 20 S P @ 0.4 g/litre of water.

➤ **Punjab, Haryana and Delhi:**

- In Central Plain Zone of Punjab, undertake sowing of potato and desi varieties of radish (Punjab Pasand), turnip (L-1) and carrot (Punjab Black Beauty, Punjab Carrot Red and PC 34).
- In Central Plain, Western Plain and Undulating Plain Zone of Punjab, continue planting of fruit plants *viz* citrus, mango, litchi, guava, loquat, ber, amla and papaya.
- In Western Zone of Haryana, continue transplanting of tomato, onion chilli and early cauliflower on ridge. Complete the planting of fruits crops like acid lime, mango, jack fruit and jamun.
- In Western Semi-Arid Zone of Delhi, continue transplanting of *kharif* onion, chilli, brinjal, tomato and early cauliflower on ridges. Continue sowing of radish, coriander, spinach. Undertake sowing of sweet corn and baby corn in this week and short varieties of urad and moong.
- Due to humid weather conditions in there may be increase in population of sucking pests in cotton in Western Semi-Arid Zone of Delhi. Install pest specific pheromone traps in the fields. If sucking pest's population is above ETL, spray Imidacloprid 17.8 % SC @ 1.0 ml/3 litre of water.
- Incidence of sheath blight is noticed in rice crop in Western Zone of Punjab, spray Folicur 25 EC (Tebuconazole)

@200 ml or Tilt 25 EC (Propiconazole) @ 200ml in 200 litres of water/acre. Also due to partly cloudy weather, white fly and jassid may occur in cotton, if reaches ETL level then spray Oberon @ 200ml/acre for white fly and 80g/acre Ulala for the management of Jassid.

- In Central Plain Zone of Punjab, weather conditions are favourable for development of sheath blight on normal and basmati rice. Spray Nativo @ 80 g or Lustre @ 320 ml or of Tilt @ 200 ml in 200 litres of water per acre.
- In Western Zone of Haryana, weather conditions are favourable for infestation of leafhopper in rice. Monitor the crop. If infestation is noticed dusting of Carbarel 5% dust @ 10 kg or Methyil Parathion 2% per acre is advised.

▪ **Uttar Pradesh:**

- In Central Plain Zone, complete sowing of bajra, green gram, black gram and sesame and nursery sowing of cabbage and tomato. Continue nursery sowing/transplanting of capsicum, chilli and cauliflower and sowing of toria, potato, pointed gourd and *parwal* gourd.
- In Bundelkhand Zone, complete nursery sowing of early cauliflower, tomato, chilli and brinjal on raised beds and undertake transplanting in main fields if nurseries are ready. Apply light irrigation in groundnut, soybean, sesame, vegetables and fodder crops.
- In Eastern Plain Zone, continue sowing of radish and spinach. Continue planting of *kharif* onion at a distance of 15x10cm, nursery sowing of cauliflower, cabbage, tomato and chilli and sowing of okra, lobia, toria T-9 (black), Type -36 (yellow), PT-303, 30, Narendra Toria-1, B-9 (yellow). Complete sowing of fodder crops like jowar, bajra, maize, chari and lobia and long duration varieties of pigeon pea (Bahar, PDA-11).
- Due to humid weather condition, there are chances of attack of shoot fly/stem borer in maize and *Pyrilla* in sugarcane in Central Plain Zone. Spray Dimethoate 30 EC @ 1 litre or Quinolphos 25 EC @ 1.5 litre in 500-600 litres of water per ha for control of shoot fly/stem borer and spray Phosphamidon @ 300-400 ml per 800-1000 litres of water for *Pyrilla*.
- Due to partly cloudy and humid weather condition, there are chances in increase in the incidence of yellow mosaic disease in black gram, green gram and soybean in Bundelkhand Zone. Remove the diseased plants and spray Diamathoate 30 EC @ 1litre per 700 litres of water.
- Due to rise in temperature, there is chance of attack of top borer in sugarcane in North eastern Plain Zone. Spray Corazine @ 150 gm per 200 litres of water per acer. For control of top borer in maize, spray Quinalphos @ 1.5 g or Imidachloprid @ 1g per litre of water.
- In Western Plain Zone, weather is conducive for the incidence of blast in rice. Spray Beam @ 120 g per 200 litres of water.

• **Horticulture**

- In Uttar Pradesh, undertake planting of mango, litchi, papaya, guava, ber and *aonla*. Undertake gap filling in banana.
- Continue planting of kinnow saplings in Irrigated Northwestern Plain Zone of Rajasthan.
- Suitable varieties for sowing are given in Annexure II.

• **Floriculture**

- Continue weeding in gladiolus and sowing of late varieties of gladiolus and marigold in Mid Hills Sub Humid Zone of Himachal Pradesh.
- Blue beetle attack is seen in Balsam, Zenia, Cleome and rose in Sub Montane and Low Hills Sub Humid Zone of Himachal Pradesh. For control spray Cypermethrin @ 20 ml per 10 litres of water. In poly houses attack of thrips and mites is expected. For control, spray Rogur @ 20 ml for thrips and for mites spray Diclofol @ 20 ml in 10 litres of water.

• **Poultry**

- In view of increasing humidity in Sub-Montane and Low Hills Sub-Tropical Zone of Himachal Pradesh, replace the poultry houses with fresh litter to avoid wetting and keep the houses clean and ensure clean drinking water to the birds. Weather is congenial for incidence of Ranikhet disease. Undertake vaccination for IBD and Ranikhet disease.

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

Annexure I

Week by week Rainfall Distribution

Sub-Divisions	19.08.15		26.08.15		02.09.15	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	82.9	-20	80.3	43	236.5	511
Dibang Valley	**	**	**	**	**	**
East Kameng	43.3	-18	64.3	-3	34.4	-41
East Siang	440.6	150	107.1	-33	649.7	386
Kurung Kumey	**	**	**	**	**	**
Lohit	138.9	25	60.7	-38	389.4	389
Lower Dibang Valley	430.6	818	221.6	444	755.0	2070
Lower Subansari	**	**	**	**	**	**
Papumpara	61.1	-32	146.5	15	321.0	141
Tawang	65.0	-50	105.0	-25	113.0	17
Tirap	4.0	-97	55.4	-56	175.6	65
Upper Siang	174.2	38	195.6	93	286.0	293
Upper Subansari	21.5	-60	105.2	176	108.5	175
West Kameng	135.2	5	210.8	51	86.5	-10
West Siang	159.0	113	150.0	28	216.0	338
Assam&Meghalaya						
Assam						
Baksa	136.1	7	241.7	61	284.1	201
Barpeta	303.7	138	305.9	104	224.9	138
Bongaigaon	342.4	219	466.2	191	146.2	87
Cachar	46.3	-58	126.0	38	99.4	4
Chirang	340.6	217	447.2	179	269.2	244
Darrang	**	**	**	**	**	**
Dhemaji	67.0	-37	127.0	17	393.0	326
Dhubri	89.7	-4	256.2	127	64.9	-22
Dibrugarh	91.9	-4	85.9	-8	245.0	240
Goalpara	154.9	94	376.7	331	84.9	21
Golghat	39.8	-31	13.1	-81	43.3	-21
Hailakandi	108.4	3	230.7	189	125.1	71
Jorhat	69.0	-5	**	**	92.5	40
Kamrup(Rural)	82.4	18	187.1	223	105.7	152
Kamrup(Metro)	56.1	-20	93.9	62	138.1	230
Karbi Anglong	34.0	-20	38.8	-16	53.6	17
Karimganj	60.5	-33	375.5	221	87.1	11
Kokrajhar	313.1	147	505.8	194	382.8	178
Lakhimpur	93.7	-12	88.9	-18	296.0	221
Morigaon	152.0	139	82.5	19	77.4	21
N.C.Hills	39.9	-8	37.8	-33	25.4	-35
Nowgong	50.5	-15	47.3	-37	69.7	10
Nalbari	108.6	57	139.9	79	216.9	275
Sonitpur	115.5	35	131.8	57	159.7	159
Sibsagar	49.2	-28	62.6	-20	55.6	-13
Tinsukia	131.7	30	85.4	10	344.2	341

Udalgiri	67.1	17	144.7	126	169.7	231
Meghalaya						
East Garo Hills	390.0	336	357.7	323	219.2	363
East Khasi Hills	1214.7	397	491.2	86	720.9	347
Jaintia Hills	334.0	68	173.0	-35	334.0	112
Ribhoi	98.9	0	103.9	20	84.6	-3
South Garo Hills	124.0	50	41.0	-57	15.0	-79
West Garo Hills	78.2	-5	309.0	223	117.4	67
West Khasi Hills	572.0	522	230.0	28	524.0	275
NMMT						
Mizoram						
Aizwal	54.3	-54	190.2	60	105.5	15
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	23.0	-75	3.0	-97	**	**
Serchhip	117.2	-3	92.6	-9	115.2	54
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	**	**	**	**	**	**
Churachandpur	**	**	**	**	**	**
Imphal east	16.2	-74	42.3	-32	33.3	-48
Imphal west	74.6	30	53.6	16	101.8	135
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	6.0	-91	25.0	-39	64.0	39
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	15.2	-64	46.2	-32	66.9	20
Kephire	**	**	**	**	**	**
Kohima	25.2	-74	241.0	192	56.4	-27
Longleng	**	**	**	**	**	**
Mokokchung	9.0	-83	54.0	-41	40.0	-57
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	**	**	**	**	**	**
Tuensang	**	**	**	**	**	**
Wokha	**	**	**	**	**	**
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	104.2	15	68.5	21	119.2	76
North Tripura	42.4	-54	65.8	-14	127.5	70
South Tripura	128.0	29	147.9	57	164.5	133
West Tripura	104.8	24	77.6	7	99.4	50
Himachal Pradesh						
Bilaspur	35.5	-49	56.2	12	16.9	-68
Chamba	32.0	-70	13.7	-84	10.1	-87
Hamirpur	19.5	-79	58.2	-30	15.4	-78
Kangra	80.4	-44	95.8	-18	21.1	-74

Kinnaur	13.1	-33	0.1	-99	0.3	-98
Kullu	11.2	-70	9.1	-73	6.4	-76
Lahaul and Spiti	1.0	-97	0.0	-100	0.0	-100
Mandi	22.5	-75	34.4	-51	11.5	-79
Shimla	42.4	0	18.5	-52	8.4	-74
Sirmaur	89.7	-23	43.3	-59	5.7	-93
Solan	32.0	-59	43.9	-31	15.2	-71
Una	24.4	-69	77.5	23	10.4	-79
Punjab						
Amritsar	52.2	-1	22.0	-33	0.0	-100
Barnala	4.5	-85	13.0	-38	0.0	-100
Bhatinda	6.3	-79	6.7	-64	0.0	-100
Faridkot	35.0	28	25.0	10	0.0	-100
Fatehgarh Sahib	3.3	-91	49.4	37	1.0	-96
Ferozpur	2.1	-93	4.9	-76	0.0	-100
Gurdaspur	52.8	-32	32.2	-44	21.1	-49
Hoshiarpur	21.5	-64	7.3	-83	0.0	-100
Jalandhar	2.3	-95	14.8	-59	2.9	-91
Kapurthala	46.9	34	22.3	-16	0.0	-100
Ludhiana	7.9	-82	44.4	25	1.8	-93
Mansa	0.0	-100	0.0	-100	0.0	-100
Moga	0.0	-100	2.2	-92	0.0	-100
Muktesar	0.0	-100	4.5	-83	0.0	-100
Nawashahar	35.6	-32	20.1	-60	0.0	-100
Patiala	12.5	-71	24.3	-45	1.9	-95
Ropar	26.3	-57	73.0	66	0.0	-100
Sangrur	20.5	-47	28.1	-3	0.0	-100
Mohali	0.0	-100	58.7	40	3.3	-90
TarnTaran	1.3	-95	8.0	-62	0.0	-100
Haryana,Chd,Delhi						
Haryana						
Ambala	18.2	-78	30.9	-53	7.2	-87
Bhiwani	54.8	81	0.0	-100	0.0	-100
Chandigarh	0.0	-99	50.5	4	0.0	-100
Faridabad	92.0	102	7.7	-88	0.0	-100
Fatehabad	0.0	-100	1.0	-94	0.0	-100
Gurgaon	62.8	43	4.0	-89	0.0	-100
Hissar	39.0	39	1.0	-96	3.2	-82
Jhajar	49.7	30	7.4	-76	0.0	-100
Jind	47.2	24	7.6	-75	0.0	-100
Katihah	12.4	-65	5.7	-81	0.5	-98
Karnal	30.6	-46	4.3	-93	0.0	-100
Kurukshetra	9.5	-83	12.3	-74	2.3	-93
Mahendragarh	7.0	-79	0.0	-100	0.0	-100
Mewat	9.8	-78	4.3	-88	0.0	-100
Palwal	17.3	-61	0.0	-100	0.0	-100
Panchkkula	18.7	-77	35.2	-49	0.7	-99
Panipat	22.1	-57	29.4	-41	0.0	-100
Rewari	26.4	-39	0.2	-99	0.0	-100
Rohtak	35.6	-9	5.0	-87	0.0	-100
Sirsa	22.0	12	0.0	-100	0.0	-100

Sonepat	18.7	-64	26.0	-42	0.0	-100
Yamunanagar	50.4	-33	32.4	-57	15.3	-74
Delhi						
Central Delhi	9.0	-83	38.0	-27	0.0	-100
East Delhi	44.0	-18	4.0	-92	0.0	-100
New Delhi	23.2	-57	57.7	10	0.0	-100
North Delhi	25.0	-54	17.4	-67	0.0	-100
North East Delhi	34.0	-37	17.0	-68	0.0	-100
North West Delhi	14.5	-73	6.0	-89	0.0	-100
South Delhi	32.4	-40	107.2	104	0.0	-100
South West Delhi	65.9	23	37.3	-29	0.0	-100
West Delhi	43.0	-20	17.0	-68	0.0	-100
Jammu & Kashmir						
Anantnag	4.6	-66	18.9	40	2.3	-87
Badgam	3.4	-68	11.9	2	2.8	-76
Bandipore	**	**	**	**	**	**
Baramula	1.8	-90	13.8	10	5.7	-64
Doda	34.2	45	17.2	12	2.8	-84
Ganderbal	1.0	-92	4.3	-61	2.2	-76
Jammu	13.9	-81	36.2	-41	0.0	-100
Kargil	**	**	**	**	**	**
Kathua	47.3	-48	31.4	-48	52.0	-16
Kistwar	**	**	**	**	**	**
Kulgam	0.4	-97	1.2	-91	2.4	-86
Kupwara	13.0	29	2.1	-80	3.5	-51
Ladakh(Leh)	0.0	-100	0.1	-97	0.0	-100
Poonch	**	**	**	**	**	**
Pulwama	14.9	22	12.5	-5	1.1	-92
Rajouri	2.8	-96	33.0	-25	20.8	-55
Ramban	4.4	-81	4.3	-72	4.9	-71
Reasi	15.1	-84	60.3	-30	52.9	-30
Samba	6.8	-91	55.9	-8	0.6	-99
Shopian	**	**	**	**	**	**
Srinagar	12.9	-2	44.7	303	3.5	-62
Udhampur	1.2	-99	20.7	-76	26.2	-65
East Madhya Pradesh						
Anuppur	75.4	-21	3.0	-96	53.4	-24
Balaghat	70.2	-41	27.0	-72	77.4	-5
Chhatarpur	74.4	-10	0.2	-99	38.6	-48
Chindwara	56.1	-15	7.5	-85	47.1	-21
Damoh	121.1	41	0.0	-100	38.8	-42
Dindori	91.6	-10	4.9	-94	30.6	-53
Jabalpur	42.0	-58	10.4	-87	64.4	-16
Katni	83.8	-8	0.0	-100	60.1	-7
Mandla	90.6	-25	2.7	-97	106.0	29
Narsingpur	62.2	-39	2.7	-96	66.8	-12
Panna	96.8	7	18.4	-76	37.3	-48
Rewa	77.6	8	8.3	-89	18.8	-71
Sagar	74.0	-23	0.0	-100	46.0	-36
Satna	103.6	28	8.1	-88	37.9	-30
Seoni	73.2	-11	3.5	-94	34.7	-45

Shahdol	42.0	-50	0.0	-100	0.0	-100
Sidhi	132.0	66	1.6	-98	0.0	-100
Singrauli	78.0	15	3.0	-95	61.1	15
Tikamgarh	146.5	80	0.0	-100	3.0	-95
Umaria	126.6	20	32.3	-63	81.6	8
West Madhya Pradesh						
Agar	86.6	-3	0.2	-99	45.9	-53
Alirajpur	16.3	-69	7.5	-88	1.8	-97
Asoknagar	125.8	62	0.0	-100	26.5	-49
Badwani	19.8	-48	0.0	-100	7.3	-84
Betul	34.1	-52	2.5	-95	26.9	-52
Bhind	52.2	-21	0.8	-98	7.8	-85
Bhopal	105.3	34	0.0	-100	34.2	-50
Burhanpur	42.2	-16	2.2	-96	33.1	-43
Datia	128.5	73	0.0	-100	28.8	-46
Dewas	75.0	-1	0.8	-99	31.2	-58
Dhar	20.2	-60	3.1	-94	21.9	-66
Guna	164.3	118	0.0	-100	61.4	2
Gwalior	120.3	73	0.0	-100	8.6	-84
Harda	77.8	-25	0.0	-100	3.4	-95
Hosangabad	167.6	45	1.7	-98	61.4	-35
Indore	22.7	-59	0.0	-100	17.5	-72
Jhabua	12.2	-73	0.0	-100	4.3	-93
Khandwa	20.7	-68	1.0	-98	20.4	-67
Khargone	12.9	-71	0.3	-99	22.8	-62
Mandsaur	71.9	23	3.3	-94	0.0	-100
Morena	107.7	49	1.1	-98	7.4	-83
Neemuch	84.4	31	0.0	-100	0.0	-100
Raisen	146.5	47	3.2	-96	68.8	-12
Rajgarh	114.6	58	0.0	-100	91.7	30
Ratlam	25.2	-59	2.0	-97	9.1	-86
Sehore	65.9	-27	0.6	-99	27.7	-68
Shajapur	59.0	-20	0.0	-100	27.5	-56
Sheopur Kalani	47.1	-32	0.0	-100	5.5	-87
Shivpuri	124.2	102	0.0	-100	31.0	-37
Ujjain	54.8	-11	0.2	-99	27.0	-60
Vidisha	112.7	20	2.6	-97	69.8	-5
Chhattisgarh						
Bastar	108.2	21	69.3	-2	250.7	221
Bijapur	123.3	20	26.0	-71	90.4	-3
Bilaspur	101.4	19	10.5	-84	98.7	62
Dantewara	87.4	13	38.2	-47	152.2	97
Dhamtari	30.4	-65	20.0	-70	84.6	38
Durg	74.4	-3	8.1	-88	95.4	69
Janjgir	86.9	-15	17.8	-80	91.4	39
Jashpurnagar	80.5	-15	11.9	-86	85.7	2
Kanker	32.8	-69	28.0	-64	112.2	36
Korba	175.3	70	16.1	-82	55.9	-6
Koriya	78.2	-21	14.1	-83	49.4	-16
Kawardha	57.5	-15	0.0	-100	65.2	7
Mahasumund	115.7	26	21.6	-64	92.1	37

Narayanpur	130.7	32	24.1	-69	115.0	47
Raigarh	40.8	-54	41.0	-39	64.1	-8
Raipur	66.1	-20	21.2	-67	51.2	-18
Rajandgaon	31.6	-59	2.7	-96	61.8	-17
Surguja	70.4	-19	36.2	-54	32.9	-50
East Uttar Pradesh						
Allahabad	71.5	24	8.8	-87	39.6	-15
Ambedkar Nagar	20.0	-68	10.0	-84	15.0	-69
Azamgarh	70.4	10	6.5	-90	48.7	-9
Bahraich	68.1	1	72.4	-4	94.1	62
Ballia	108.7	109	25.2	-59	5.5	-88
Balrampur	91.0	18	30.2	-59	32.1	-57
Banda	31.8	-61	20.8	-66	15.7	-73
Barabanki	60.7	-17	20.9	-66	10.0	-82
Basti	60.8	-11	48.7	-25	81.5	57
Chandauli	129.2	91	0.0	-100	11.4	-78
Deoria	86.0	14	21.5	-69	2.5	-95
Faizabad	43.2	-45	48.4	-31	78.9	62
Farrukhabad	53.9	-28	41.4	-26	0.7	-99
Fatehpur	25.1	-62	2.7	-96	1.0	-98
Gazipur	87.6	37	31.0	-51	11.0	-77
Gonda	53.9	-10	75.0	-9	4.4	-91
Gorakhpur	62.4	-30	30.5	-64	34.6	-42
Hardoi	86.1	40	43.9	-33	20.0	-63
Jaunpur	71.2	34	13.0	-80	21.9	-53
Kannauj	28.9	-62	4.8	-93	5.7	-90
Kanpur City	15.8	-77	12.9	-78	8.6	-80
Kanpur Dehat	16.6	-76	6.3	-89	4.1	-93
Kaushambi	40.0	-37	3.4	-95	2.9	-94
Kheri	103.0	46	36.8	-50	13.0	-78
Kushi nagar	6.5	-94	39.8	-55	4.0	-92
Lucknow	55.7	-13	20.5	-62	3.9	-93
Maharajganj	9.3	-92	44.0	-46	58.8	-3
Mau	19.0	-75	29.0	-65	6.0	-89
Mirzapur	85.7	52	3.2	-94	28.3	-50
Pratapgarh	54.3	-14	5.3	-93	25.0	-47
RaiBareilly	37.7	-37	10.4	-83	3.2	-93
Sahuji Maharajnagar	67.0	-11	9.0	-89	40.0	-41
Sant Kabirnnagar	74.0	8	17.0	-73	18.0	-67
Sant Ravidas Nagar	136.0	101	0.0	-100	12.0	-77
Shrawasti	70.9	6	74.2	-2	28.5	-51
Sidharthnagar	25.8	-65	89.6	25	51.8	-12
Sitapur	47.7	-25	30.4	-53	7.8	-88
Sonbhadra	122.2	84	19.2	-69	29.7	-43
Sultanpur	31.3	-49	14.5	-79	37.9	-25
Unnao	29.1	-58	11.0	-83	25.6	-45
Varanasi	86.1	44	14.7	-79	44.6	-20
West Uttar Pradesh						
Agra	50.8	-25	7.1	-86	6.7	-87
Aligarh	83.9	29	47.1	-18	2.3	-94
Auraiya	41.9	-35	2.9	-95	8.1	-84

Badaun	38.0	-43	70.4	5	5.8	-90
Baghpat	47.5	-10	17.5	-64	0.0	-100
Bareilly	41.4	-29	52.2	-27	18.5	-70
Bijnor	41.0	-45	80.5	17	5.1	-90
Bulandsahar	48.9	-25	84.4	35	1.9	-95
Etah	31.0	-46	21.1	-62	7.8	-79
Etawah	79.1	7	17.0	-63	2.0	-96
Firozabad	98.1	43	32.5	-34	20.1	-55
GBNagar	82.0	62	40.0	-33	0.0	-100
Ghaziabad	19.3	-64	18.8	-70	0.0	-100
Hamirpur	20.5	-72	0.0	-100	25.9	-55
Jalaun	70.5	-4	3.0	-93	3.9	-94
Jhansi	45.3	-39	2.1	-96	9.5	-83
Jotiba Phule Nagar	28.0	-63	62.0	-9	2.5	-95
Kanshiramnagar	66.0	-3	76.0	16	3.0	-94
Lalitpur	58.5	-24	0.0	-100	6.5	-91
Mahamaya Nagar	20.8	-67	41.5	-14	1.5	-96
Mahoba	0.0	-100	0.0	-100	4.2	-92
Mainpuri	42.0	-37	12.0	-72	1.5	-96
Mathura	29.8	-55	4.3	-91	0.0	-100
Meerut	20.5	-72	40.9	-45	0.1	-99
Moradabad	22.7	-70	25.2	-63	24.9	-53
Muzzaffarnagar	26.0	-62	11.0	-82	8.8	-74
Pilibhit	34.3	-53	6.7	-92	0.0	-100
Rampur	2.2	-97	22.8	-67	10.1	-82
Saharanpur	6.7	-92	12.3	-79	6.3	-87
Shahjahanpur	99.1	50	49.0	-37	1.7	-97
Uttarakhand						
Almora	38.9	-45	15.0	-74	18.1	-58
Bageshwar	17.5	-75	28.6	-51	47.0	10
Chamoli	89.0	9	7.6	-87	50.5	4
Champawat	71.5	-15	52.0	-44	18.0	-79
Dehradun	95.7	-37	128.3	-13	28.4	-70
Garhwal Pauri	89.7	-13	25.9	-71	27.0	-64
Garhwal Tehri	15.8	-81	18.4	-74	2.0	-97
Haridwar	97.3	10	45.1	-45	25.5	-55
Nainital	40.3	-61	37.2	-70	30.1	-63
Pithorgarh	75.2	-39	37.4	-68	13.4	-87
Rudraprayag	107.0	-35	21.5	-85	41.4	-55
Udham Sing Nagar	27.9	-67	31.0	-67	34.0	-48
Uttarkashi	97.4	-5	15.3	-80	12.4	-83
Bihar						
Araria	72.9	-2	120.8	31	81.6	29
Arwal	112.7	92	77.0	22	22.9	-45
Aurangabad	69.9	22	32.5	-46	51.3	-12
Banka	60.3	0	112.9	108	48.0	10
Begusarai	54.0	33	325.2	383	42.8	-29
Bhabua	115.2	94	5.5	-93	16.5	-68
Bhagalpur	75.1	21	160.1	144	54.0	17
Bhojpur	22.3	-67	17.1	-76	9.7	-81
Buxar	164.4	175	14.6	-76	3.2	-94

Darbhanga	54.7	-15	237.6	219	44.8	-6
East Champaran	132.8	92	201.8	147	80.4	48
Gaya	44.5	-31	12.5	-80	35.9	-27
Gopalganj	71.9	-2	64.5	-24	52.2	13
Jahanabad	146.6	149	12.2	-78	29.4	-33
Jamui	58.2	7	80.0	44	20.9	-62
Kathihar	81.4	43	58.1	-22	71.8	56
Khagadia	109.0	60	331.1	386	47.5	-6
Kishanganj	161.4	59	174.4	57	207.3	110
Lakhisarai	81.7	52	92.6	34	24.0	-56
Madhepura	63.0	3	93.5	12	55.1	-11
Madhubani	26.3	-65	150.9	93	27.3	-53
Monghyar	67.2	25	296.2	329	30.0	-45
Muzaffarpur	36.6	-42	112.6	37	50.7	1
Nalanda	115.5	96	18.9	-69	59.9	24
Nawada	55.9	-10	25.6	-61	12.5	-70
Patna	73.7	35	41.6	-48	48.6	19
Purnea	35.0	-49	61.6	-24	102.7	53
Rohtas	54.7	-8	16.3	-75	4.5	-92
Saharsha	66.2	-25	132.3	63	15.7	-67
Samstipur	134.0	69	300.7	358	51.9	3
Saran	117.6	70	25.9	-69	26.9	-39
Sheikpura	104.9	112	97.8	64	13.1	-74
Sheohar	19.8	-73	310.4	261	54.0	5
Sitamarhi	17.5	-76	169.2	97	39.3	-23
Siwan	108.2	63	69.1	-7	33.5	-26
Supaul	65.2	19	103.7	25	52.9	12
Vaishali	43.2	-27	53.2	-33	97.0	146
West Champaran	63.4	-19	189.0	77	51.6	-19
Jharkhand						
Bokaro	27.2	-55	19.5	-68	45.8	-31
Chatra	49.6	-36	15.1	-75	35.6	-34
Deoghar	60.1	0	25.0	-59	17.8	-64
Dhanbad	33.7	-51	22.1	-64	62.6	-4
Dumka	30.2	-61	51.9	-22	36.5	-37
East Singbhum	69.6	5	3.1	-95	32.9	-51
Garhwa	0.0	-100	0.0	-100	**	**
Giridih	90.5	45	38.8	-30	60.1	2
Godda	61.7	8	100.3	39	68.5	63
Gumla	53.4	-41	15.3	-78	70.0	10
Hazaribagh	66.1	14	28.0	-56	34.2	-37
Jamtara	65.6	-22	55.1	-27	42.3	-37
Khunti	10.0	-86	10.5	-86	53.3	-26
Koderrna	55.2	-8	16.3	-73	12.4	-76
Latehar	25.1	-55	26.5	-58	26.0	-56
Lohardagga	43.6	-15	4.2	-93	11.9	-74
Pakur	38.7	-57	82.3	8	87.7	23
Palamau	73.5	7	15.6	-75	16.8	-72
Ramgarh	7.5	-89	5.8	-90	55.4	-9
Ranchi	43.5	-48	7.4	-88	28.9	-56
Sahebganj	**	**	0.0	-100	12.8	-79

Saraikela	21.7	-68	12.7	-80	27.0	-63
Simdega	105.1	16	30.9	-64	62.0	-22
West Singbhum	43.4	-43	45.2	-33	38.3	-46
East Rajasthan						
Ajmer	37.9	-11	0.0	-100	0.0	-100
Alwar	36.2	-27	5.2	-88	1.9	-95
Banswara	49.9	-18	1.9	-97	0.5	-99
Baran	176.7	144	0.0	-100	34.0	-34
Bharatpur	92.1	76	12.7	-75	0.0	-100
Bhilwara	43.5	-23	0.0	-100	1.4	-96
Bundi	71.1	17	0.0	-100	0.0	-100
Chittorgarh	69.3	7	0.0	-100	7.6	-87
Dausa	18.2	-67	6.5	-86	1.0	-97
Dholpur	96.9	43	0.2	-99	3.2	-92
Dungarpur	45.2	-2	0.0	-100	1.4	-97
Jaipur	24.3	-47	0.0	-100	0.0	-100
Jhalawar	98.0	17	0.1	-99	41.5	-33
Jhunjhunu	55.5	71	0.0	-100	0.0	-100
Karauli	54.3	-18	0.0	-100	2.5	-93
Kota	89.8	34	0.0	-100	7.6	-86
Pratapgarh	39.7	-42	1.4	-98	4.6	-93
Rajsamand	45.1	-1	0.0	-100	0.4	-99
Sawai Madhopur	44.8	-26	0.0	-100	0.3	-99
Sikar	62.8	86	0.0	-100	0.0	-100
Sirohi	70.3	-9	0.0	-100	0.0	-100
Tonk	39.5	-27	0.0	-100	0.8	-98
Udaipur	52.9	24	0.0	-100	0.0	-99
West Rajasthan						
Barmer	22.9	6	0.0	-100	0.0	-100
Bikaner	42.5	120	0.0	-100	0.0	-100
Churu	51.9	139	0.0	-100	1.1	-94
Hanumangarh	7.1	-64	10.3	-31	0.0	-100
Jaisalmer	36.2	80	0.0	-100	0.0	-100
Jalore	55.8	58	0.8	-97	0.0	-100
Jodhpur	37.7	57	0.0	-100	0.0	-100
Nagaur	33.4	23	0.0	-100	0.0	-100
Pali	42.0	15	0.1	-99	0.0	-100
Sri Ganganagar	7.1	-61	0.5	-95	0.0	-100
Gujarat Region						
Ahmedabad	16.5	-62	5.2	-83	2.8	-93
Anand	8.0	-87	0.8	-98	4.4	-92
Banaskantha	32.0	-22	0.0	-100	0.0	-100
Baroda	13.6	-80	2.0	-96	8.0	-89
Broach	8.8	-82	1.2	-97	4.9	-91
DNH	55.9	-62	196.9	82	25.5	-86
Dahod	27.2	-52	0.0	-100	10.3	-86
Daman	30.2	-79	179.0	66	16.3	-91
Dangs	21.0	-83	20.5	-82	17.5	-88
Gandhinagar	23.3	-48	1.4	-96	0.0	-100
Kheda	23.7	-58	0.1	-99	8.6	-86
Mehsana	42.6	4	0.1	-99	0.0	-100

Narmada	14.2	-80	2.6	-96	2.8	-96
Navsari	29.0	-74	16.7	-79	7.1	-93
Panchmahal	36.9	-43	0.2	-99	3.7	-95
Patan	36.6	5	0.0	-100	0.0	-100
Sabarkantha	45.1	-16	0.2	-99	0.0	-100
Surat	23.7	-67	4.9	-91	12.8	-83
Tapi	5.0	-94	4.6	-94	6.6	-93
Valsad	33.6	-72	121.5	40	22.3	-81
S K & Diu region						
Amreli	9.1	-69	2.2	-90	2.4	-92
Bhavnagar	23.1	-25	13.4	-45	0.3	-99
Diu	3.1	-91	1.5	-89	0.8	-96
Jamnagar	13.6	-38	3.4	-73	0.0	-100
Junagarh	7.3	-82	2.9	-86	0.2	-99
Kutch	6.5	-72	0.2	-98	0.0	-99
Porbandar	2.5	-92	4.6	-69	0.0	-100
Rajkot	22.0	-25	0.6	-97	0.1	-99
Surendranagar	4.4	-86	0.0	-100	0.0	-100
Maharashtra & Goa						
Konkan & Goa						
Mumbai City	36.2	-67	21.3	-81	85.5	-18
Mumbai Suburban	41.4	-63	17.3	-84	43.7	-58
North Goa	85.8	-46	53.6	-59	83.6	-12
Raigad	66.1	-68	93.7	-43	81.4	-47
Ratnagiri	50.2	-75	76.1	-52	84.2	-42
Sindhudurg	63.9	-58	76.0	-44	105.9	-11
South Goa	68.4	-50	68.4	-35	75.3	-16
Thane	51.6	-65	107.9	-14	44.6	-65
Madhya Maharashtra						
Ahmednagar	1.7	-89	2.2	-92	13.9	-51
Dhule	10.1	-62	0.7	-97	2.6	-91
Jalgaon	17.1	-60	0.9	-98	15.0	-65
Kolhapur	18.9	-83	25.4	-70	25.1	-63
Nandurbar	8.8	-82	1.8	-96	0.8	-98
Nasik	17.4	-70	19.5	-60	7.3	-86
Pune	8.6	-84	12.5	-68	8.1	-79
Sangli	1.5	-93	5.1	-76	3.7	-82
Satara	6.8	-83	11.2	-62	6.3	-80
Solapur	0.8	-96	10.2	-63	11.5	-60
Marathwada						
Aurangabad	5.4	-82	0.3	-99	15.0	-66
Beed	18.2	-35	9.5	-72	16.9	-58
Hingoli	19.5	-68	7.8	-87	4.4	-93
Jalna	17.1	-43	4.0	-90	10.1	-78
Latur	20.6	-60	35.6	-35	6.4	-88
Nanded	40.9	-22	18.5	-70	21.3	-59
Usmanabad	9.4	-70	23.0	-46	17.9	-56
Parbhani	19.3	-60	7.7	-87	7.6	-86
Vidarbha						
Akola	23.0	-42	0.0	-100	9.0	-80
Amraoti	40.9	-25	1.3	-97	9.8	-79

Bhandara	147.0	73	20.8	-74	118.1	66
Buldhana	21.8	-44	2.5	-94	10.6	-75
Chandrapur	133.8	57	20.5	-74	65.5	-14
Gadchiroli	95.6	-6	14.3	-84	120.8	42
Gondia	107.7	13	10.6	-88	166.8	101
Nagpur	167.4	174	12.1	-77	57.5	-16
Wardha	48.2	-17	6.5	-88	35.5	-39
Washim	12.1	-78	0.4	-99	0.0	-100
Yeotmal	30.6	-47	8.4	-85	18.2	-68
Odisha						
Angul	45.2	-51	19.3	-66	82.8	-2
Balasore	37.6	-54	36.6	-39	68.8	3
Bargarh	56.2	-41	36.0	-50	118.0	88
Bhadrak	26.0	-69	73.5	25	40.9	-47
Bolangir	54.3	-37	36.4	-48	134.3	58
Boudh	44.9	-48	68.1	-11	84.8	10
Cuttack	59.7	-29	66.3	-13	105.2	52
Deogarh	81.7	-33	43.8	-47	97.4	16
Dhenkanal	77.7	-13	26.0	-62	83.1	0
Gajapati	64.9	3	30.0	-46	49.4	-25
Ganjam	57.1	1	26.3	-52	49.6	-21
Jagatsingpur	77.0	-15	67.6	-4	77.9	9
Jajpur	44.7	-45	42.9	-42	53.7	-35
Jharsuguda	46.0	-54	96.6	22	131.0	70
Kalahandi	57.8	-42	50.7	-36	116.7	84
Kandhamal	39.2	-55	28.9	-62	87.5	13
Kendrapara	36.3	-62	125.5	119	72.7	-10
Keonjhar	49.2	-42	23.3	-53	59.6	-17
Khurda	84.4	5	49.3	-30	65.8	2
Koraput	113.0	11	32.6	-60	136.6	81
Malkangiri	202.0	59	70.6	-18	244.0	195
Mayurbhanj	46.2	-48	48.4	-18	70.6	-18
Nawapara	67.7	-8	36.1	-54	73.9	31
Nawarangpur	131.1	-4	36.8	-46	112.7	32
Nayagarh	75.4	-11	35.0	-46	107.9	62
Puri	96.5	32	63.2	-12	78.6	15
Rayagada	109.8	70	29.7	-55	57.1	4
Sambalpur	45.4	-63	53.9	-35	122.5	45
Sonepur	65.3	-39	45.0	-38	100.2	21
Sundargarh	44.2	-56	61.0	-10	100.9	33
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	17.3	-71	16.8	-72	54.2	-16
North & Middle Andaman	21.4	-79	274.2	161	125.7	15
South Andaman	18.9	-80	126.9	48	87.6	-16
GWB						
Bankura	32.4	-54	32.7	-39	45.5	-36
Birbhum	47.7	-30	77.3	27	75.8	31
Burdwan	32.5	-51	57.5	-1	53.0	1
East Midnapore	55.6	-28	70.8	14	55.3	-40

Hooghly	15.7	-73	51.1	-15	31.0	-49
Howrah	11.6	-84	65.4	42	36.9	-53
Kolkata	42.9	-40	95.9	38	46.7	-41
Murshidabad	50.0	-27	83.9	50	100.6	90
Nadia	9.4	-86	30.3	-33	44.0	-11
24 Pargana (N)	63.1	-19	50.1	-23	73.6	34
Purulia	34.7	-49	26.1	-55	48.1	-36
24 Pargana (S)	93.3	11	37.9	-58	56.0	-39
West Midnapore	22.3	-69	46.1	-25	49.1	-36
SHWB & Sikkim						
Cooch Behar	216.2	23	269.9	71	302.5	163
Darjeeling	127.5	-7	158.2	-4	266.4	126
East Sikkim	49.1	-42	89.6	-15	91.2	-3
Jalpaiguri	325.9	125	202.7	18	413.7	226
Malda	145.2	130	80.3	-1	105.9	99
North Dinajpur	101.7	47	85.5	15	232.6	182
North Sikkim	105.4	2	115.3	8	418.2	297
South Dinajpur	90.5	38	86.5	26	27.2	-47
South Sikkim	90.3	7	101.5	-4	140.5	49
West Sikkim	73.0	-29	63.0	-41	129.0	22
Karnataka						
Coastal Karnataka						
Dakshina Kannada	124.2	-40	61.4	-64	50.2	-53
Udupi	105.2	-52	70.9	-62	61.3	-48
Uttara Kannada	64.1	-61	51.1	-57	42.8	-48
N I Karnataka						
Bagalkote	9.0	-36	1.9	-89	8.6	-44
Belagavi	6.0	-78	9.5	-57	14.0	-27
Bidar	22.3	-53	23.3	-51	13.3	-70
Dharwad	3.7	-84	7.8	-59	11.2	-31
Gadag	26.9	99	20.0	11	29.3	70
Haveri	12.4	-53	12.7	-39	10.5	-30
Kalaburgi	7.2	-83	30.2	-23	22.4	-45
Koppal	20.8	24	21.6	8	23.5	-8
Raichur	9.6	-62	22.4	-22	10.5	-64
Vijayapura	2.9	-85	32.8	49	14.6	-43
Yadgir	16.9	-55	23.2	-41	10.4	-70
S I Karnataka						
Ballari	52.2	196	26.8	35	14.5	-39
Bangalore Rural	35.6	17	16.4	-41	9.8	-68
Bangalore Urban	35.6	10	24.9	-12	4.5	-84
Chamarajanagar	31.7	113	27.7	64	0.0	-100
Chikaballapur	23.3	-2	79.7	211	25.7	5
Chikkamagaluru	53.3	-51	28.5	-62	24.3	-48
Chitradurga	20.1	74	29.4	121	14.6	3
Davangere	24.8	24	18.0	-2	14.5	-4
Hassan	47.0	43	29.4	17	10.4	-45
Kodagu	82.4	-39	37.9	-63	17.8	-74
Kolar	6.9	-68	25.4	15	2.9	-86

Mandya	58.7	328	32.4	99	5.7	-62
Mysuru	37.5	133	45.2	233	0.7	-95
Ramanagara	70.5	176	22.5	-16	13.6	-53
Shivamogga	64.7	-37	38.5	-48	37.6	-15
Tumakuru	47.0	143	21.6	21	16.8	-11
Kerala						
Alappuzha	64.9	-8	32.1	-63	0.5	-99
Kannur	59.1	-52	48.5	-55	33.4	-54
Ernakulam	71.4	-20	41.6	-49	7.0	-88
Idukki	77.9	-40	29.5	-73	7.3	-91
Kasaragod	73.2	-48	49.0	-62	86.0	-1
Kollam	65.3	21	25.5	-61	0.7	-99
Kottayam	119.5	35	40.4	-52	6.7	-90
Kozhikode	52.3	-55	38.0	-62	31.5	-48
Malappuram	68.2	-28	29.9	-62	11.5	-80
Palakkad	65.8	-27	31.5	-53	6.7	-85
Pathanamthitta	118.8	54	35.0	-56	0.7	-99
Thiruvananthapuram	41.9	33	20.4	-38	1.4	-94
Thrissur	67.6	-35	47.9	-47	7.9	-88
Wynad	94.7	-31	32.7	-72	5.3	-93
Tamil Nadu						
Ariyalur	10.4	-62	27.6	-22	13.0	-65
Chennai	6.4	-81	18.5	-50	14.2	-56
Coimbatore	28.4	209	14.5	32	0.0	-100
Cuddalore	6.8	-75	40.9	17	22.1	-33
Dharmapuri	63.6	188	44.2	48	13.1	-50
Dindigul	18.3	18	12.4	-36	5.0	-76
Erode	41.5	258	10.7	-35	0.9	-95
Kanchipuram	17.2	-56	39.5	-6	25.3	-34
Kanyakumari	20.6	10	8.2	-52	0.0	-100
Karikal	0.0	-100	37.7	37	0.0	-100
Karur	11.7	1	19.1	19	0.0	-100
Krishnagiri	57.4	144	46.4	81	6.7	-74
Madurai	53.4	177	4.8	-80	14.6	-44
Nagapattinam	3.0	-86	28.1	13	22.5	-3
Namakkal	22.4	3	28.4	14	1.7	-93
Nilgiris	38.7	-18	25.4	-29	1.1	-97
Perambalur	28.3	59	52.0	119	15.9	-48
Puducherry	38.6	35	62.5	87	7.9	-71
Pudukottai	18.4	-26	25.2	-13	12.5	-62
Ramanathapuram	44.3	334	2.9	-73	0.9	-94
Salem	36.3	31	36.3	11	6.1	-79
Sivaganga	76.0	366	6.0	-72	0.0	-100
Thanjavur	51.2	140	21.0	-35	3.9	-85
Theni	27.0	218	3.4	-54	0.0	-100
Tirunelveli	8.8	35	0.0	-100	0.0	-100
Tirupur	20.6	232	7.8	-14	1.7	-82
Tiruvallur	0.6	-98	68.8	114	28.8	-21
Tiruvannamalai	61.4	95	61.5	67	15.1	-60

Tiruvarur	16.6	-23	30.8	17	0.0	-100
Toothukudi	10.5	238	0.0	-100	0.0	-100
Trichy	35.6	133	11.7	-49	23.1	-6
Vellore	49.6	63	63.8	80	13.3	-56
Villupuram	33.7	21	42.8	17	3.8	-89
Virudhunagar	25.2	125	0.7	-94	0.9	-94
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	52.0	26	4.0	-91	39.0	-2
Guntur	27.8	-28	56.7	48	20.3	-41
Krishna	35.8	-22	45.7	1	31.7	-24
Nellore	13.6	-39	65.7	171	12.8	-38
Prakasam	29.0	49	40.5	48	15.5	-42
Sirkakulam	40.9	-15	35.3	-22	90.2	89
Visakhapatnam	70.1	68	34.4	-15	32.3	-24
Vizianagram	87.1	86	36.7	-28	57.4	33
West Godavari	66.4	33	32.1	-33	58.6	22
Rayalaseema						
Anantapur	22.9	55	51.2	161	7.2	-66
Chittoor	27.7	11	57.9	115	11.9	-54
Cuddapah	23.3	-2	95.9	239	0.7	-97
Kurnool	12.8	-56	32.1	6	9.6	-68
Telangana						
Adilabad	43.0	-37	29.8	-52	28.9	-52
Hyderabad	31.9	-34	17.9	-53	11.6	-67
Karimnagar	29.8	-44	20.5	-55	10.9	-77
Khammam	50.1	-10	12.9	-75	56.9	8
Mehabubnagar	12.9	-67	27.3	-23	18.2	-49
Medak	17.2	-70	10.9	-74	32.3	-20
Nalgonda	46.3	34	44.0	40	22.4	-40
Nizamabad	39.4	-45	27.8	-59	33.7	-36
Rangareddy	22.8	-53	33.0	-17	13.8	-61
Warangal	53.5	-3	18.2	-56	40.1	-18

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

List of varieties

North Inerior Karnataka

Groundnut: Bunch type of varieties, JL-24 and TMV-2, S-230, Mardur local.

Paddy: short duration varieties Amrut, MGD-101, MTU-1001 in low lands, BR-2655, Tunga.

Sesame: E8, DS1, DSH9.

Maize: Arjun, 900 M.

Pearl millet: ICTP 8203 and ICMV 221.

Pigeon pea: Maruti, TS 3 R.

Red gram: BRG-1, BRG2, TTB-7.

Horse gram : KBH-1, PHG-9.

Tamil Nadu

Banana: poovan, rasthali, monthan, karpooravalli and neypoovan.

Kuruvai rice: ADT 36, ADT 43, ADT 45 and CO 51.

Andhra Pradesh

Rice: MTU-1010, Nellore masuri, Dharani, Shwetha. Sannalu, Swarna, Vasundhara, Suraksha, Vijetha.

Varieties for Early Kharif Rice Plantings - Pushkala, Rasi, IR64.

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

Castor: PCH-111, PCH-222, Kranti, GCH-4, Haritha.

Telangana

Red gram: PRG-158, Asha, LRG-41.

Sunflower: KBSH-1, NDSH-1, DRSH-1, APSH-66 hybrids.

Assam

Sali/ kharif rice :

Long duration high yielding varieties : Ranjit, Bahadur, Peoli, Moniram, Pankaj, Kushal , Swarna sub-1, Gitesh, Pankaj, Mashuri (for growing in typical lowland paddy area).

Medium duration paddy varieties : Satya and Basundhara (in medium lowland area).

Early cauliflower: Pusa Katki, Pusa Deepali and Early Kunwari.

Califlower : Japanese, Pusa synthetic, Pusa snowball and Main Crop Patna.

Broccoli : Early Danish Giant, De Cicco Green Bud, Sparton Early, Coastal and Atlantic.

Finger Millet : INR1008, TANU-9, Banars and Local varieties.

Black gram : KU 301, USJD 113, PU 19, T-9, T-27, Pant U-19, T-122, Saonia mah.

Green gram : Pratap, SG 21-5, T-44, Kopergaon, K-851, ML-56, ML-131, SG-1 (Pratap).

Kharif sesame : Gauri, Madhabi, ST-1683, Punjab Til No.1.

Radish : Pusa Desi, Pusa Chetki, Pusa Himani.

Meghalaya

Cauliflower: Meghalaya Local.

Pigeon Pea (Red Gram/Arhar) : UPAS-120, ICPL 87 (short duration), WB 20, Pusa 9 & Sarita (long duration).

Black gram : Pant U 19, T- 9 Azad urd 1.

Green gram : K 851, PDM 11, Pusa Vishal.

Pea: Arkel (for vegetables), TRC P8, TRC P9, Prakash, Rachna.

Kharif sesame : Gauri, Madhabi, ST-1683, Punjab Til No.1.

Red gram : UPAS-120, ICPL 87 (short duration), WB 20, Pusa 9 & Sarita (long duration).

French bean : Naga Local.

Manipur

Cauliflower: White shot, adopt White flash.

West Bengal

Dry Seeded rice: Sabita Foundation, Swarna sub-1 certified, IR-64, Hira T.L.

Mango: Himsagar, Mallicka, Langra.

Guava: Safeda, L-49.

Coconut: Eastcoastal, Hazari.

Banana: Mortoman, Chapa, Kathali, Singapuri.

Odisha

Sunflower: Morden, Sunrise, Surya and Hybrid varieties like KBSH-1, KBSH-3 and MSFH.

Onion: Nasik Red, Patna Red, Pune Red, Bellary Red, Pusa Ratnar, Pusa Madhavi, Arka Niketan ,Arka Pragati.

Ragi: HYVs. like Subhra, Vairabi, Dibyasingh, Nilachala, Subhra, Godavari and Chilka.

Sesame: Uma, Kalika, Kanak, Nirmala, Prachi, Usha.T.

Turmeric: Roma, Surama, Rang, Rashmi.

Jute: JRO-524(Naveen).

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

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.

Bihar

Moong: Pusa Vishal, Samrat, SML-668, Sona varieties are recommended for moong.

Urad: Pant U-19 and Pant U-31, Uttra and Type-9 for Urad.

Maize: Suwan, Deevki, Ganga-11, Shaktiman-1 and Shaktiman-2.

Turmeric: Improved Varieties- Rajendran, Sonia, Rajender Sonali.

Ginger: Improved varieties - Maran, Nadia.

Rice: Low land: Rajshree, Satyam, Rajendra, Mehsooril MTU 7029(Swarna), Swarna sub-1.

Medium land: Sita, Kanak, IR 36, Rajendra, Shweta, Santosh, Shahbhagi.

Medium duration (Hybrid): P.H.B.71, Pusa R.H.10, K.R.H 2, P.A.644, Pant Sankardhan.

Til: Krishna., Kaakee safed, Kalika, Kalika, Pragati.

Jharkhand

Green gram: mung S.M.L. 668.

Sugarcane: BO 147.

Rice: Upland Rice: Birsa Dhan 108, Birsa Vikash Dhan 109.110, 111 & Vandana.

Medium land: Anjali, Sahbhagi, Naveen, Birsamati, Sugandha, BR-10, IR-36.

Low land: Swarna (MTU-7029), Rajshree, Sambha Mahsuri (BPT-5204), Birsa Dhan-202, Birsamati.

Finger Millet: Birsa marua 2, A-404, GPU 45, 47.

Urd Bean: T9, Pant U19, 30, 35 & Birsa Urd 1.

Arhar: Brisa Arhar-1, Narendra Arhar-1, Bahar, ICPH-2671.

Groundnut: A.K-12-24, Birsa Bold.

Sweet Potato: Birsa Sakarkandi & Shreebhadra.

Jammu & Kashmir

Cabbage: Golden Acre, Pride of India and Pusa Mukta.

Cauliflower: Giant Snow Ball, Pant Gobh 2 & 3 and Pusa Synthetic.

Himachal Pradesh

Cauliflower: snowball and Giant snowball.

Radish, pea: Arkal, VL-7.

Cabbage: India Golden, Hybrid Kismond.

Capsicum: solan hyb-1, californiawonder, yolo wonder, vlschimla mirch-2.

Brinjal: plr-1, azad (hybrid), ArkaNidhi, ArkaKeshav, HisarShaymal, PPC, F1 Chhaya, F1 Sandhya.

Tomato: solangola, Palam Pink, Palam Pride, F1 Avtar, F1 Rakshita.

Chilli: Surajmukhi.

Moong: PusaBaishakhi.

Mash: UG-218.

Carrot: Nantes and Chantenay.

Palak: Pusa Harit, Pusa Bharti.

Garden pea: PalamPriya, Azad P-1, PB-89, PalamSamool and Lincoln.

Carrot: Nantes and Chantenay.

Palak: PusaHarit, Pusa Bharti.

East Uttar Pradesh

Kharif onion: N-53, Agrifound red

Sorghum: Pusa chari-23, SSG-98-8MFSH-3, Pant-5 and MP chari

Lobia: Russian Joint, UPC-5286, UPC-5287, NP-3, Bundhel lobia-2, UPC-9202 and UPC-4200

Moong: Narendra moong-1, Pant moong-1, 3, 4, PDM-11, Samrat, Malveey - Jyoti, Janchetana, Jagruti, Janpriya, Jankalyani, Asha, Shweta, Neha, TM-9937, MH-215.

Urad: Narendra urd-1, Pant U-35, 31, Azad urd-2, 3, Shekhar-1, 2, 3.

Sugarcane: coj-64, cos-96268, cos-98231, cos-767, cos-84, cos-32, copant-84212, Ko.Sha.-88230, 95255, Ko.Sha.-95436, 01235.

Tomato: pusa early, pusa ruby, HS 101.

Cauliflower: pusa Dipali.

Pearl Millet: Raj WCC-75, ICMB-155, Pusa-322, 23, ICMH-451.

Sesame: T-4, 78, Shekhar, Pragati, Tarun.

Pigeon Pea: Bahar, Narendra Arhar-1, Azad, Pusa-9.

Jute: Jute Reshma, NDC (2007), NDC-2028, NDC-9102.

Okra: PusaSawani, VarsaUphar, Azad kranti.
Brinjal: Pant Samrat, Pant Rituraj, Pusa hybrid-6.
Guava:Sardar(Lucknow-49).

West Uttar Pradesh

Ladies finger:VRO-6, VRO-5.
Pigeon pea:T-21, UPAS 120.
Cotton: H777, Dhanalakshami, HD107.
For fodder Jowar: JS 120, Lobia 88.

Punjab

Sugarcane: CoJ-85, CoJ-83, CoJ-64 (early maturing), COH-119, CoJ-88, CoS-8436 for and CoJ-89.
Rice: Pusa-44, T.R-112 and T.R-113.

Delhi

Cotton: H-777, H-974, H-1098.
Pigeon pea: Pusa 2001, Pusa991, Pusa992, Paras manak, UPAS 120.
Bajra: Hybrid Bajra Pusa-605, Hybrid Bajra Pusa-415, Composite Bajra Pusa-383, HSV-67.
Maize:AH-421, AH-58 or Composites: Pusa composite-3, Pusa composite-4.
Guar: PusaNavbahar, DurgaBahar.
Radish:PusaChetki.
Cluster bean:PusaKomal.
Beans: PusaSem 2, PusaSem 3.
Spinach: PusaBharti.
Amaranths: PusalalChaulai, PusaKiran.
Ladyfinger: Pusa A-4.

East Rajasthan

Moong: Short dur K 851, Ganga 8, RMG 268 and SML 668,Pusa Vishal.
Urad: Short dur Pant U-19, Krishna, T-19, Pratap Urd-1, T-9, PU-19, RBU-38.
Guar: RGC-936,986,1002,1017,HG -365,563,Hg2-20. RGC-1003, RGC-1066.
Green gram Short dur RMG-492, RMG-268, SML-668 and RMG-344.
Cowpea: Short dur C-152, RS-9, FS-68, RC-19 and RC-101, C-152, RS-9.
Moth bean Short dur RMO-40, RMO-225, RMO-435, IPCMO-912.
Sorghum: CSH-6 (90-100 days), CSV-10 (100-110 days), CSV-15 (105-140 days).
Sesame : RT-125, RT- 127, RT- 346, RT -351.
Pearl millet : RHB-121, HHB-67.
Radish: Pusa Chetki.
Maize: Him-129, GM-6, Mahi Kanchan, Pratap Hybrid Maize-1, Pratap Makka-3, and Pratap Makka-5 and for fodder Pratap Makka Chari-6 and African tall.
Sorghum: CSV-17, Pratap Jowar-1430 and for fodder Pratap Chari-1080 and SSG-59-3.
Clusterbean: RGC-1031, RGC-1017, RGC-1055, RGC-1038.

West Rajasthan

Moong: Short dur RMG 344,268,K851,RMG 62, RMG 268, SML 668 and GM-4.
Moth bean: RMO-40, 257, 225, 435, 423 and CZM-2.
Guar: RGC-936, 197, 986, 1002, 1003, 1017 and 1066.
Til :- RT-125, RT- 127, RT- 346, RT -351.
Cowpea:RC-19, RC-101, RCP-27.
Bajra :- RHB-121, HHB-67.