



National Agromet Advisory Service Bulletin



Friday 9th September 2016

(For the period 9th to 13th September 2016)



Issued by

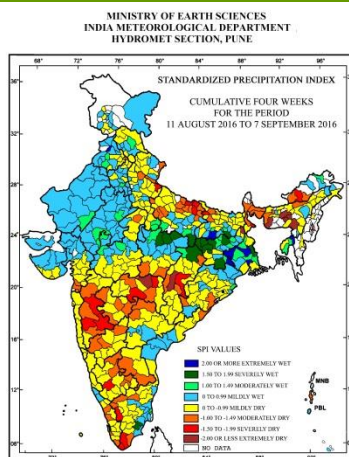
*National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division,
India Meteorological Department, Shivajinagar, Pune.*

Weblink For

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

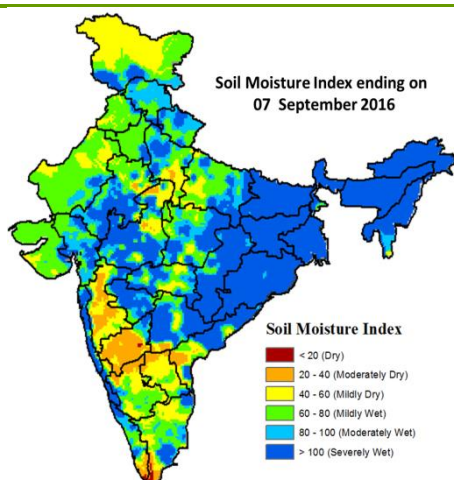
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Standardised Precipitation Index Four Weekly for the Period 11th August to 7th September 2016



- Extremely/severely wet conditions experienced in few districts of West Bengal; Jharkhand; North Tripura district of Tripura; Gaya, Jamui, districts of Bihar; Sonbhadra district of Uttar Pradesh; Kapurthala district of Punjab; Panna, Rewa, Satna districts of Madhya Pradesh; Surguja district of Chhattisgarh; Sivaganga district of Tamil Nadu & Puducherry.
- Extremely/Severely dry conditions experienced in most districts of Meghalaya; East Kameng district of Arunachal Pradesh; Kamrup Rural, Kamrup Metro districts of Assam; South Dinajpur district of West Bengal; Sahibganj district of Jharkhand; Gopalganj district of Bihar; Gorakhpur, Maharajganj, Siddharth Nagar, Pilibhit districts of Uttar Pradesh; Ahmednagar, Satara, Sholapur, Bhandara, Nagpur, Yeotmal districts of Maharashtra; Durg, Raipur districts of Chhattisgarh; Coimbatore, Kanyakumari, Tirunelveli districts of Tamil Nadu & Puducherry; Hassan district of Karnataka.
- Moderately dry conditions experienced in few districts few districts of Arunachal Pradesh; Sub Himalayan West Bengal; Uttarakhand; Maharashtra; Karnataka; Dhubri, Shonitpur, Bongaigaon districts of Assam; Ganjam, Nawarangpur district of Odisha; East Champaran, Saran, Sheohar districts of Bihar; Balrampur, Basti, Deoria, Faizabad, Farrukhabad, Gonda, Kanpur City, Kanpur Dehat, Kushi Nagar, Mau, Sant Kabir Nagar, Unnao, Bijnor districts of Uttar Pradesh; Panchkula district of Haryana; Gwalior, Balaghat, Chindwara districts of Madhya Pradesh; Valsad, Navsari, Dadara & Nagar Haveli districts of Gujarat Region; Dhamtari, Jashpur, Rajnandgaon districts of Chhattisgarh; Srikakulam, Anantapur, Chittoor districts of Andhra Pradesh; Adilabad, Nizamabad districts of Telangana; Dharmapuri, Nilgiri, Toothukudi districts of Tamil Nadu & Puducherry; Alappuzha, Malappuram, Thrissur, Trivandrum districts of Kerala.
- Rest of the country experienced moderately wet mildly dry/mildly wet conditions.

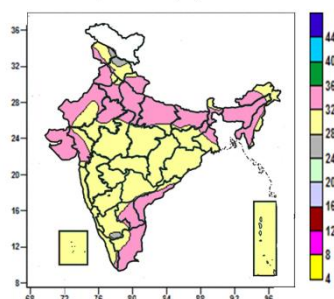
Soil Moisture Index for the week ending on 7th September 2016



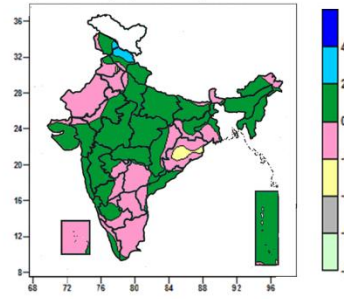
- Soil Moisture Index indicates moderately dry condition in many parts of North Interior Karnataka, some parts of Madhya Maharashtra, Kerala, Andhra Pradesh and Madhya Pradesh. Mildly dry condition in many parts of Jammu & Kashmir, Madhya Maharashtra, Rayalaseema, some parts of Punjab, Uttar Pradesh, Rajasthan, Madhya Pradesh, Maharashtra, Tamil Nadu, Coastal Andhra Pradesh, Telangana. Mildly Wet condition in many parts of West Rajasthan, Gujarat, Uttar Pradesh, Haryana & Delhi, Punjab and some parts of Jammu & Kashmir, Uttarakhand, Himachal Pradesh, Madhya Pradesh, Maharashtra, South Interior Karnataka, Kerala and Tamil Nadu. Rest of the country shows moderately/severely wet condition.

Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 07.09.2016

Actual Mean Maximum Temperature (°C) in India for the week ending 07.09.2016



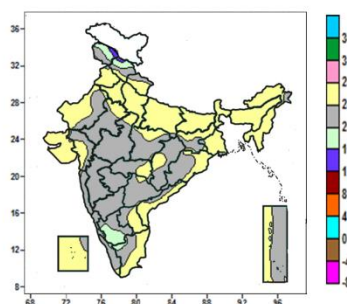
Mean Maximum Temperature (°C) Anomaly in India for the week ending 07.09.2016



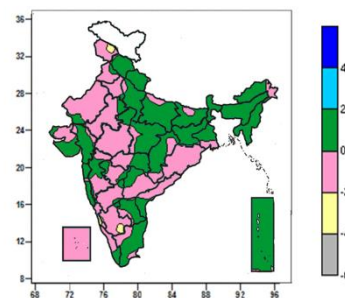
- Mean maximum temperature was between 32 to 36°C over West Uttar Pradesh, Meghalaya, Tripura, Saurashtra & Kutch, many parts of Uttarakhand, Punjab, Haryana & Delhi, East Uttar Pradesh, Bihar, Assam, Nagaland, Manipur, Mizoram, Arunachal Pradesh, Sub-Himalayan West Bengal, West Rajasthan, Gujarat Region, Coastal Andhra Pradesh, Rayalaseema, Tamil Nadu, some parts of East Rajasthan, West Madhya Pradesh, Jharkhand, Gangetic West Bengal and isolated pockets of East Madhya Pradesh, South Interior Karnataka and Kerala.
- Mean maximum temperature was between 28 to 32°C over rest of the country except over some parts Himachal Pradesh and isolated pockets of Jammu & Kashmir, Tamil Nadu and South Interior Karnataka, where it was between 24 to 28°C.

- Mean maximum temperature was above normal by 2 to 4°C over some parts of Himachal Pradesh and isolated pocket of Jammu & Kashmir.
- It was normal to near normal over rest of the country except some parts of Odisha, where it was below normal by 2 to 4°C.

Actual Mean Minimum Temperature (°C) in India for the week ending 07.09.2016



Mean Minimum Temperature (°C) Anomaly in India for the week ending 07.09.2016

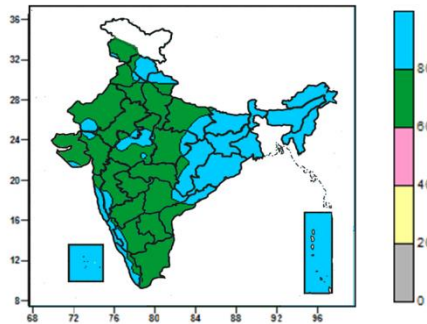


- Mean minimum temperature was between 12 to 16°C over isolated pockets of Jammu & Kashmir and Himachal Pradesh.
- Mean minimum temperature was between 16 to 20°C over some parts of Jammu & Kashmir, Himachal Pradesh, South Interior Karnataka and isolated pockets of Kerala and Tamil Nadu.
- Mean minimum temperature was between 20 to 28°C over rest of the country.

- Mean minimum temperature was normal to near normal over the country except isolated pocket of Jammu & Kashmir, Coastal Karnataka and South Interior Karnataka, where it was below normal by 2 to 4°C.

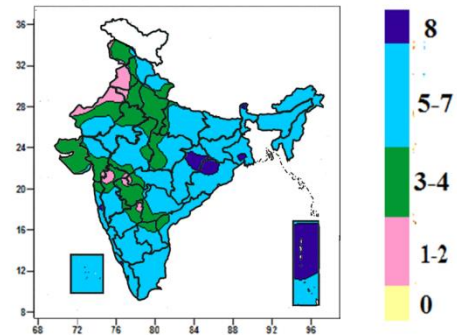
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 07.09.2016

Relative Humidity (%) over India for the week ending 07.09.2016



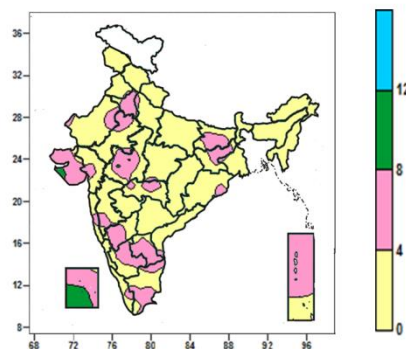
- Mean Relative Humidity was above 80% over North East India, Sub-Himalayan West Bengal & Sikkim, Jharkhand, Gangetic West Bengal, Odisha, Lakshadweep, Andaman & Nicobar Islands, many parts of Himachal Pradesh, Uttarakhand, Chhattisgarh, Konkan & Goa, Coastal Karnataka, Kerala, some parts of East Uttar Pradesh, Madhya Pradesh, Coastal Andhra Pradesh and isolated pockets of Jammu & Kashmir, Punjab, Haryana, Rajasthan, Gujarat, Madhya Maharashtra, Telangana and South Interior Karnataka.
- Mean Relative Humidity was between 60 to 80% over rest of the country.

Cloud amount (okta) over India for the week ending 07.09.2016



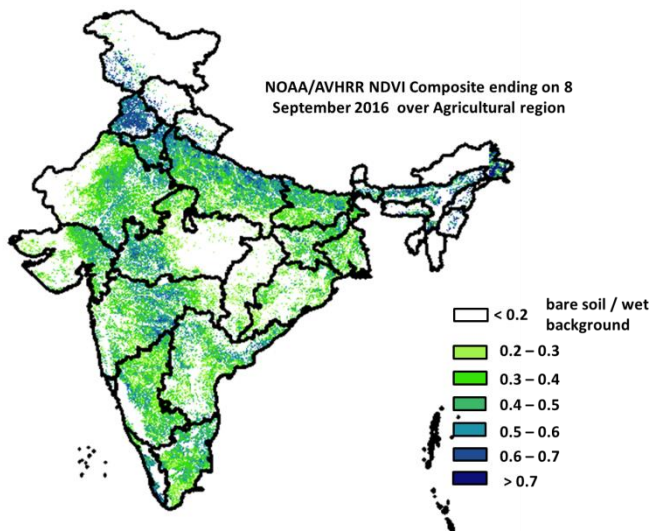
- Sky remained overcast (8 okta) over many parts of Andaman & Nicobar Islands, some parts of Sikkim, Chhattisgarh, Odisha and isolated pockets of Jharkhand, Gangetic West Bengal, Konkan and Kerala.
- Sky remained generally cloudy (5-7okta) over rest of the country except over Punjab, Haryana & Delhi,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

Wind speed (knots) over India for the week ending 07.09.2016



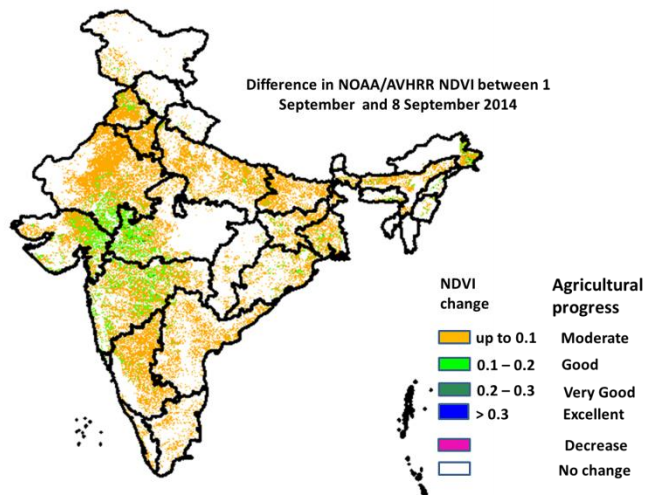
- Mean wind speed was between 8 to 12 knots over some parts of Lakshadweep and isolated pocket of Saurashtra.
- Mean wind speed was between 0 to 4 knots over rest of the country except many parts of Haryana & Delhi, Saurashtra & Kutch, Rayalaseema, Lakshadweep, Andaman & Nicobar Islands, some parts of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

NOAA/AVHRR NDVI COMPOSITE ENDING ON 8th September 2016 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour is very good in Punjab, northern parts of Haryana, patches in Uttar Pradesh, where NDVI values are > 0.7, Agriculture vigour is good in Kerala, North Tamil Nadu, North Andhra Pradesh, north eastern parts of Uttar Pradesh, Haryana, parts of East Bihar, patches in East Rajasthan, Marathwada, Vidarbha, South Interior Karnataka and North east region, where NDVI varies from 0.5 to 0.7. NDVI is moderate in parts of Bihar, Gujarat, west Rajasthan, 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 east Madhya Pradesh.

DIFFERENCE IN NOAA/AVHRR NDVI BETWEEN 1st and 8th SEPTEMBER 2016



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

- NOAA/AVHRR NDVI composite maps for the week ending on 8th September 2016 for different States are given in Annexure II.

Monsoon Watch

- Yesterday Southwest monsoon was active over Bihar, Jharkhand and Arunachal Pradesh.

Weather Forecast for next 5 days valid upto 0830 hours of 14th September 2016

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

5 Day Rainfall Forecast (MID DAY) 9th September 2016

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

- **09 September (Day 1):** Heavy rain at isolated places very likely over Sub-Himalayan West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **10 September (Day 2):** Heavy rain at isolated places very likely over Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Coastal Andhra Pradesh.
- **11 September (Day 3):** Heavy to very heavy rain at isolated places very likely over Odisha and Coastal Andhra Pradesh; heavy rain over Chhattisgarh, Arunachal Pradesh and Assam & Meghalaya and Rayalaseema.
- **12 September (Day 4):** Heavy to very heavy rain at isolated places very likely over Telangana; heavy rain over Uttarakhand, East Uttar Pradesh, Vidarbha, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim,

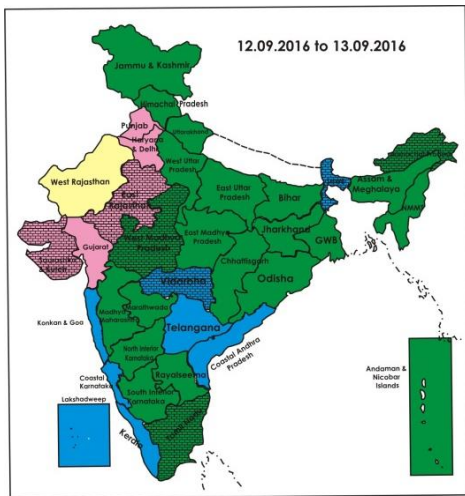
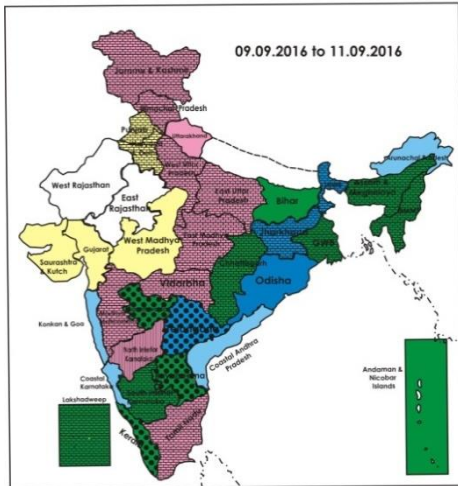
Coastal Andhra Pradesh, Rayalaseema and Karnataka.

- **13 September (Day 5):** Heavy rain at isolated places very likely over East Madhya Pradesh, Vidarbha and Marathwada.

Weather Outlook for subsequent 2 days from 14th to 16th September 2016

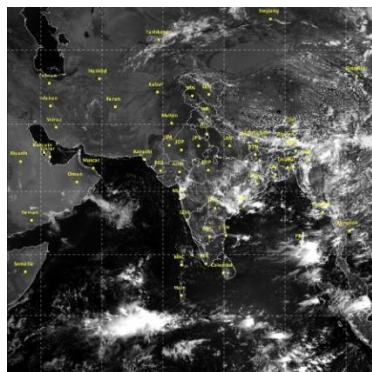
- Rain at most places very likely over northeast India; at many places over east and peninsular India.
- Rainfall at a few places likely over central India and at isolated places over rest parts of the country.

Weather Forecast Map (valid upto 0830 hours 14th September, 2016)



- Most places
- Most/Few places/Dry
- Most/ Few places
- Most / Many places
- Most/Many / Isolated places
- Most / Isolated places
- Most / Many/ Few places
- Most / Few / Isolated places
- Most/Many places/ Dry
- Most / Isolated places/ Dry
- Many places
- Many / Few places
- Many / Isolated places
- Many / Few / Isolated places
- Many / Few places/ Dry
- Many / Isolated places/Dry
- Many places/ Dry
- Few places
- Few / Isolated places
- Few / Isolated places/Dry
- Few places/Dry
- Isolated places
- Isolated places/ Dry
- Dry

Satellite image dated, 09.09.2016 0600 UTC



Salient Advisories

- In view of the prevailing mainly dry weather conditions, farmers are advised to;
 - In **Jammu & Kashmir**, maintain 5-7 cm water level in rice. Apply protective irrigation to maize and light irrigation with sprinkler to nursery beds of cole crops like cauliflower, cabbage and Khol.
 - In Jaisalmer and Bikaner districts of **West Rajasthan**, apply irrigation to *kharif* crops like groundnut, guar and pulses showing wilting symptoms. Undertake hoeing and weeding operation in rainfed crops to create dust mulch for checking evaporation losses and also for control of weeds.
 - In **West Uttar Pradesh**, apply protective light irrigation as per requirement in soybean, urad, maize and groundnut. Undertake hoeing & weeding operation in all *kharif* crops at vegetative stage and in vegetables.
 - In Udham Singh Nagar and Nainital districts of **Uttarakhand**, farmers are advised to maintain optimum water level in paddy fields at panicle emergence/formation of earhead stage as this stage is very susceptible to water stress which influence the size, number of grains and weight of seeds of earhead.
 - In **West Madhya Pradesh**, as there was no significant rainfall during last two weeks and also rainfall is expected only at isolated places during next 4 days, apply light protective irrigation in late sown soybean and vegetables.
 - In **Madhya Maharashtra**, in view of expected rain from 12th September, apply light protective irrigation to *kharif* soybean, groundnut, cotton, red gram, vegetables and sugarcane which are in moisture stress condition. Maintain water level of 3-5 cm in transplanted rice fields (tillering stage) in Western Ghat Region, apply light protective irrigation to *kharif* soybean, groundnut, cotton, red gram, vegetables and sugarcane if required. In **Marathwada**, apply light protective irrigation to *kharif* soybean, groundnut, cotton, red gram, vegetables and sugarcane if required as rain expected from 11th September.
 - In Anantapur and Chittoor districts of **Rayalaseema**, provide light protective irrigation through rain guns or sprinklers to groundnut crop (June, July sown) which is suffering from stress conditions wherever irrigation is available or spray 2% Urea solution @ 20 g/litre of water to protect crops.
- 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 Dhemaji, Lakhimpur, Sonitpur, Golaghat, Jorhat, Dibrugarh and Sibsagar districts of 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 **Coastal Karnataka** and **Coastal Andhra Pradesh** from 10th to 13th, over **Telangana** from 11th to 13th, at many places over **Rayalaseema** and **Kerala** from 11th to 13th, over **South Interior Karnataka** from 11th to 13th, over **North Interior Karnataka** on 12th and 13th and over **Tamil Nadu** on 12th Sept., do not apply irrigation, fertilizers and plant protection measures to the standing crops.
- As rain/thundershowers likely at most/many places over **Sub-Himalayan West Bengal & Sikkim, Jharkhand** and **Odisha** during the period, at many places over **Andaman & Nicobar Islands** and **Bihar** during the period, over **Gangetic West Bengal** from 11th to 13th, over **Arunachal Pradesh** on 9th, 10th & 13th, over **Assam & Meghalaya** on 9th, 10th, 12th & 13th and over **Nagaland, Manipur, Mizoram** and **Tripura** on 12th & 13th Sept., do not apply irrigation, application of plant protection measures and fertilizers to the standing crops.
- As rain/thundershowers likely at many places over **Uttarakhand, Uttar Pradesh** and **East Madhya Pradesh** on 12th and 13th, over **West Madhya Pradesh** on 13th, over **Chhattisgarh** from 11th to 13th, over **Konkan & Goa**

from 10th to 13th, over **Marathwada** from 11th to 13th and over **Vidarbha** on 12th & 13th 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 **Odisha** from 9th to 11th, heavy rain at isolated places over **Sub-Himalayan West Bengal & Sikkim** on 9th & 12th, over **Arunachal Pradesh** and **Assam & Meghalaya** from 9th to 11th, over **Nagaland, Manipur, Mizoram** and **Tripura** on 9th & 10th Sept., provide adequate drainage in standing crop fields.
- As heavy to very heavy rain very likely at isolated places over **Coastal Andhra Pradesh** from 10th to 12th, over **Telangana** on 12th, heavy rain very likely at isolated places over **Rayalaseema** on 11th & 12th, over **Karnataka** on 12th, over **Uttarakhand** and **East Uttar Pradesh** on 12th, over **Chhattisgarh** on 12th, over East Madhya Pradesh, Vidarbha and Marathwada on 13th Sept., provide adequate drainage in standing crop fields.

Detailed Zonewise Agromet Advisories

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



Banana



Rice



Sugarcane



Red gram

- **Realised Rainfall:** Rainfall occurred in Ernakulam and Kasaragod districts of Kerala, all districts of Coastal Karnataka, Bidar district of North Interior Karnataka, Chikkamagaluru and Shivamogga districts of South Interior Karnataka, Chennai, Karaikal, Madurai, Perambalur, Pudukkotai, Ramanathapuram, Sivaganga and Thiruvallur districts of Tamil Nadu, all districts of Telangana except Adilabad, Karimnagar, Mahabubnagar and Nalgonda, in East and West Godavari, Srikakulam, Vizianagaram and Vishakapatnam districts of Coastal Andhra Pradesh. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most/many places over Coastal Karnataka and Coastal Andhra Pradesh from 10th to 13th, over Telangana from 11th to 13th, at many places over Rayalaseema and Kerala from 11th to 13th, over South Interior Karnataka from 11th to 13th, over North Interior Karnataka on 12th and 13th and over Tamil Nadu on 12th Sept., do not apply irrigation, fertilizers and plant protection measures to the standing crops.
 - As heavy to very heavy rain very likely at isolated places over Coastal Andhra Pradesh from 10th to 12th, over Telangana on 12th, heavy rain very likely at isolated places over Rayalaseema on 11th & 12th, over Karnataka on 12th Sept., provide adequate drainage in standing crop fields.
 - **Kerala:**
 - In Kottayam district of Problem Area Zone, continue land preparation for sowing of *puncha* rice.
 - Continue harvesting of rice, vegetables, Nendran bananas and tapping of rubber in clear weather in Thiruvananthapuram district. Undertake harvesting of sugarcane in Pathanamthitta district and Viruppu rice in Kollam district.
 - In Idukki and Wynad districts of High Altitude Zone, undertake planting of cardamom and coffee seedlings.
 - In Kottayam district of Problem Area Zone, prevailing light rainfall and high day temperature conditions are congenial for incidences of downy mildew, sucking pests/leaf feeding insects, and mosaic disease in cucurbits. If noticed, spray Mancozeb @ 0.2% to control downy mildew, apply Beauveria/Verticillium (*lecanicillium lecanii*) @ 10 g/litre of water to control sucking pests/leaf feeding insects and cut and remove the affected plant parts to control mosaic disease 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 Idukki and Wynad districts of High Altitude Zone, prevailing cloudy and moderate rainfall conditions are congenial for shoot borer incidence in ginger. To control shoot borer, spray Malathion @ 0.1% or Monocrotophos @ 0.075%.
 - In Thiruvananthapuram district, spray Copper oxy Chloride 4g/litre of water in newly planted gardens to control fungal diseases.
 - **Karnataka:**
 - Provide protective irrigation in soybean and sugarcane as per requirement. Complete harvesting of green gram

and black gram in Bidar district of North East Transition Zone. Carry out weeding/intercultural operations to conserve soil moisture and earthing-up of rows in pigeon pea.

- In Eastern Dry Zone, undertake intercultural operation in maize to control the weeds and to increase the moisture availability to crops. Undertake mulching by using the residues of weeds, gliricidia and other green manure crops grown on the bunds, borders and along the drainage lines.
- Complete harvesting of green gram and black gram in Ballari, Kalaburgi, Koppal, Raichur and Yadgir districts of North East Dry Zone. In harvested fields, continue sowing of sunflower/maize.
- 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 a non rainy day.
- 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.
- In Southern Transition Zone, present weather is congenial for attack of sucking pests in groundnut, for control, spray Chlorpyrifos @ 2.5 ml in one liter of water.
- In Eastern Dry Zone, to control stem borer in Maize Spray Quinolphos-25 EC @ 2ml/litre of water or Chlorophyriphos -20 EC @ 2ml/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 Chloropyriphos @ 2 ml per litre of water. Spray 1% Bordeaux mixture to arecanut plantation against Kole Roga in Uttar Kannada, Dakshina Kannada and Udupi districts. Undertake plant protection measures on a non rainy day.

▪ **Andhra Pradesh:**

- In Srikakulam, Vishakapatnam and Vizianagaram districts of North Coastal Zone, as there is forecast of rainfall, drain out excess water from maize and mesta fields immediately. Spray Chlorpyrifos @ 2.5 ml/litre of water to control cob borer in maize (silking to grain filling stage).
- In Anantapur and Chittoor districts of Rayalaseema, provide irrigations through rain guns or sprinklers to groundnut crop (June, July sown) which is suffering from stress conditions. wherever irrigation is available or spray 2% Urea solution @ 20 g/litre of water to protect crops from dry spell.
- In Southern Zone, present weather conditions are favourable for leaf folder and stem borer attack in rice at tillering stage. To control, spray Chlorpyrifos @ 2.5 ml. or Cartaphydrochloride @ 2g or Rhynoxypyr @ 0.3 ml/litre of water.
- In Coastal Andhra Pradesh, excess moisture condition is congenial for root rot and fusarium wilt in cotton. To control, spray Copper Oxochloride @ 3 g or Carbandism 1g by mixing with 1 litre of water around the stem base near the soil.
- In Kadapa district of Southern Zone, prevailing weather conditions are congenial for attack of leaf folder and sucking pests in groundnut (flowering stage). To control leaf folder, spray Monocrotophos @ 1.6 ml or Quinolphos @ 2 ml/litre of water and to control sucking pests, spray Imidachlorprid @ 0.3 ml/litre of water.

▪ **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.
- In Adilabad, Karimnagar, Nizamabad and Khammam districts (North Telangana Zone), incidence of whorl maggot was noticed in rice and late wilt in maize. To control whorl maggot, spray Monocrotophos @ 1.6 ml/litre of water and to control late wilt, spray Copper oxochloride @ 3 g/litre of water.
- In Mahabubnagar, Nalgonda, Medak, Rangareddy, Khammam and Warangal districts (South Telangana Zone), prevailing weather conditions (light to moderate rains) are congenial for the incidence of black arm bacterial disease in cotton. If noticed, spray Copper-Oxy-Chloride @ 30g + Plantomycin or Poshamycin 2 g in 10 litres of water for 2-3 times in 15 days interval time.

▪ **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, nursery sowing Samba rice may be taken up with medium duration rice variety.
- In the Southern Zone (Kanniwadi), continue land preparation for sowing of cotton and maize.
- In Thoothukudi, Virudhunagar and Tirunelveli districts of South Zone, continue main field and nursery bed preparation under dryland conditions for raising rainfed crops during the ensuing north east monsoon season.
- In Salem, Dharmapuri, Nammakal and Krishnagiri districts of North Western Zone, undertake cultivation of pulses. Short term (60-65 days) varieties of black gram (Co-6), Vamban-6,8, green gram variety Co-8 (60 days), red gram varieties Co-7 (125 days), VBN -3 (105 days).
- In Chennai district of North Eastern Zone, brown spot incidence was observed in rice. To control, spray

- Mancozeb @ 2.0g/litre of water 2 to 3 times at 10 - 15 day intervals, based on the intensity of the disease.
- In Nilgiris district of High Altitude Hilly Zone, spray Bionoculant Pseudomonas @ 10 ml/litre of water on arecanut to prevent disease incidence 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.
- In Kanyakumari district, uproot and destroy severely affected plant and apply lime 1-2 kg in the pits after removal of the affected plants to control wilt disease in banana.
- Suitable varieties for sowing are given in Annexure III.
- ❖ **Animal Husbandry**
- In the Southern Zone of Tamil Nadu, feed animals with dried concentrates.
- In the Western Zone, present weather is conducive for the initiation of foot and mouth disease in dairy animals and cattle. Vaccinate the animals.
- In the North Western Zone of Tamil Nadu, subdued Southwest Monsoon likely to bring intermittent cloudiness and mild rainfall. Day temperature is expected to be around 34°C which will not stay for longer due to light breeze wind. Hence, feed intake and egg production will be normal in poultry. Continue testing of feed ingredients for moisture and mycotoxin before use.

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



Banana



Rice



Groundnut



Jute

- **Realised Rainfall:** Rainfall occurred in all districts of Arunachal Pradesh except Tawang, all districts of Assam except Kamrup Metro, all districts of Meghalaya except Janita Hills, South Garo Hills and West Khasi Hills, in 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 on 9th, 10th & 13th, over Assam & Meghalaya on 9th, 10th, 12th & 13th and over Nagaland, Manipur, Mizoram and Tripura on 12th & 13th Sept., do not apply irrigation, application of plant protection measures and fertilizers to the standing crops.
 - As heavy rain at isolated places over Arunachal Pradesh and Assam & Meghalaya on 9th to 11th, over Nagaland, Manipur, Mizoram and Tripura on 9th & 10th Sept., provide adequate drainage in standing crop fields.
 - **Assam, Meghalaya & Arunachal Pradesh:**
 - In Dhemaji, Lakhimpur, Sonitpur, Dibrugarh, Golghat, Jorhat and Sibsagar districts of Upper Brahmaputra Valley Zone and North Blank Plain, 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 early cauliflower, radish, brinjal.
 - 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, undertake weeding in the fields.
 - In Karbi Anglong and NC Hills districts of Hill Zone of Assam, undertake land preparation for sowing of black gram and green gram and early varieties radish. Planting of coconut can be done in this month in low lying areas.
 - In Marigaon and Nagaon districts of central Brahmaputra Valley Zone, undertake land preparation for sowing of Black gram and Green gram, nursery sowing brinjal, Cole crops and early radish.
 - In Barpeta, Bongaigaon, Dhubri and Goalpara districts, undertake land preparation for sowing of brinjal, pumpkin and radish. Top dressing of urea may be done at 25-30 days of transplanting *Sali* paddy.
 - In Meghalaya, repair bunds in *jhum* rice and *Sali* rice field to retain standing water.
 - In Arunachal Pradesh, undertake nursery sowing of winter vegetables and harvesting of *jhum* rice after 1-2 bright sunny days.
 - In Hill Zone, infestation of rice hispa may occur in tillering stage. Spraying with Quinalphos @ 10ml/5 litre of water should be done if infestation is noticed. Also Carbendazim @ 1g/litre of water may be sprayed to control blast disease.
 - In Arunachal Pradesh, there is chance of attack of leaf folder and gundhi bug on wetland rice at tillering stage. Spray Triazophos 40 EC @ 4ml/litre of water against leaf folder and hang dead frog in the field against gundhi

bug.

- In Meghalaya, High relative humidity with intermittent rain is favourable for development of blast in rice, If blast spot are seen farmers are advised to apply Mancozeb @ 2g/litre or Carbendazime @ 1g/litre of water. Spraying should be done in sunny days. Spray Malathion 5% dust @ 6.25kg/ha for Rice Gandhi bug.
- In Lower Brahmaputra Valley Zone, attack of Whorl maggot is generally observed in Sali rice up to 30days after transplanting. To control this pest farmers are advised to spray Chloropyrifos 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. Land preparation for sowing of french bean, broad bean and pea may be done. Weeding may be done and apply 33 kg Urea/ha at panicle initiation stage after drainage of water in rice fields. Undertake nursery raising for rabi vegetables.
- In Mizoram, undertake harvesting of *kharif* maize, *kharif* pulses, brinjal and matured pods of cow pea and okra. Undertake nursery sowing of tomato.
- In Tripura, maintain adequate drainage in groundnut fields particularly in lowland where chances of stagnant water due to rain is more. Undertake cultivate early winter vegetables such as cabbage, radish, brinjal etc.
- In Manipur, spray Tricyclazole @ 15g/15 litre water against rice blast and Spray Propiconazole @ 15ml/15 litre water against sheath blight in rice at panicle initiation stage. Undertake plant protection methods after current spells of rain.
- In Tripura, Due to cloudy and humid weather there may be attack of Stem and Cob rot disease in maize. The combination of Trichoderma Viride (5ml per litre) and Seodomonous Flurensense (5ml per litre) may be applied to manage the attack. In the present weather condition, attack of Downy mildew may be seen in the field. Mancozeb or Chlorothalonil 2 g/litre twice at 10 days interval may be sprayed to manage the attack. Undertake plant protection methods after current spells of rain.
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In Northeastern states, 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, Vaccination is advocated against FMD. Deworming with antihelminthic drugs like oxcyclozanide or pyrantel.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Maize



Groundnut



Rice



Green gram

- **Realised Rainfall:** Rainfall occurred all districts of Kaknkan & Goa except Mumbai City and Mumbai Suburban, in Jalna district of Marathwada, Buldhana, Gadchiroli and Gondia districts of Vidarbha, Chota Udepur district of Gujarat Region, Batod district of Saurashtra & Kutch. Weather remained mainly dry over rest of the region.

● **Advisories:**

▪ **Maharashtra:**

- As rain/thundershowers likely at many places over Konkan & Goa from 10th to 13th, over Marathwada from 11th to 13th and over Vidarbha on 12th & 13th Sept., do not apply irrigation, application of plant protection measures and fertilizers to the standing crops.
- As heavy rain very likely at isolated places over Vidarbha and Marathwada on 13th Sept., provide adequate drainage in standing crop fields.
- In Konkan, maintain water level of 5-7 cm in rice field (panicle initiation/flowering stage) by bunding the fields. Continue intercultural operations and plant protection measures in rice, finger millet, vegetable fields and mango, cashew and sapota orchards after current spell of rain.
- In Madhya Maharashtra, in view of expected rain from 12th September, apply light protective irrigation to *kharif* soybean, groundnut, cotton, red gram, vegetables and sugarcane which are in moisture stress condition. Maintain water level of 3-5 cm in transplanted rice fields (tillering stage) in Western Ghat Region. Undertake field

preparation for sowing of *rabi* jowar. Continue intercultural operations and plant protection measures in cotton, red gram and vegetable fields after current spell of rain.

- In Marathwada, in view of expected rain from 11th September, apply light protective irrigation to *kharif* soybean, groundnut, cotton, red gram, vegetables and sugarcane if required. Continue intercultural operations, application of fertilizers and plant protection measures in cotton, red gram, vegetables, orchards and sugarcane after current spell of rains. To increase boll setting in cotton, spray 2 % urea (200 gm per 10 litres of water).
- In Vidarbha, in view of expected rain from 12th September, apply light protective irrigation to *kharif* soybean, groundnut, cotton, red gram and vegetables if required. Maintain 3-5 cm water level in transplanted rice fields (tillering stage) in Nagpur, Bhandara, Gondia, Chandrapur and Gadchiroli districts. Continue intercultural operation, application of fertilizers and plant protection measures in rice, cotton, red gram and pulses after current spell of rain.
- Due to partly cloudy weather condition and temperature around 30^oC in Madhya Maharashtra, Marathwada and Vidarbha region, there may be incidence of Spodoptera disease on soybean; spray Propiconozol @ 1 ml + Lambda-cyhalothrin @ 1 ml per litre of water after current spell of rain.
- Due to dry and cloudy weather condition in east Vidarbha, there may be incidence of armyworm in rice crop; spray 10 EC Cypermethrin (6 ml/10 litres of water) after current spell of rain.

▪ **Gujarat:**

- Carry out hand weeding and inter-culturing practices and apply fertilizer for groundnut fields in Middle Gujarat and maintain water level of 3-5 cm in rice fields 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.
- In South Saurashtra Zone, for the control of white grub in groundnut, undertake soil application of Phorate 25 kg/ha or Choloropayriphos 4 liter/ha with irrigation or drenching of Choloropayriphos @ 25 ml in 10 liter of water near the base of the plant.
- In South Gujarat Zone, prevailing weather is congenial attack of mealybug in cotton, for effective control, spray Chlorpyriphos 20 EC 25ml / 10 liter of water
- Present weather condition is favorable for infestation of mites in sesame in Kutch district, spray Propargite @ 10 ml or Dicofol 20 ml in 10 liters of water for control.

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, Gangetic West Bengal, Sub-Himalayan West Bengal & Sikkim, all districts of Odisha, all districts of Bihar except Buxar and Rohtas, all districts of Jharkhand except Sahibganj and Simdega. Weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain/thundershowers likely at most/many places over Sub-Himalayan West Bengal & Sikkim, Jharkhand and Odisha during the period, at many places over Andaman & Nicobar Islands and Bihar during the period, over Gangetic West Bengal from 11th to 13th 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 over Odisha from 9th to 11th, heavy rain at isolated places over Sub-Himalayan West Bengal & Sikkim on 9th & 12th Sept., provide adequate drainage in standing crop fields.

▪ **Odisha:**

- In East and South Eastern Coastal Plain Zone, undertake dressing of Nitrogen 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.
- In Bargarh, Bolangir and Sambalpur districts, in transplanted rice, apply 35kg Urea per acre at 21st days after transplanting keeping the field at saturated condition. Both grassy and broad leaved weed can be controlled with the application of Bispyribac sodium @ 20g a.i. per ha. Monitor the adult population of Stem borer in the field. Use Pheromone traps to reduce initial population. Apply Coragen @ 0.3 ml/litre to control stem borer. Foliar spray of 1 g Streptocycline and 15 g Copper oxychloride in 10 lt of water should be done to control bacterial leaf blight.
- 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 (eight to ten week) square formation stage. Spray Buprofezin 2ml/lit water for controlling sucking pests. Go for hoeing, weeding followed by 2nd top dressing in application of 26kg urea in hybrids and 20 kg in improved varieties. At 7-8 week stage of crop. spray planofix @ 3.5ml /15lit water and at 9-10 week stage spray planofix @ 7ml/15litre of water.
- In Keonjhar and Mayurbhanj 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 Mayurbhanj 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, undertake seedbed preparation for early winter vegetables. Farmers can cultivate radish, broccoli, onion, cabbage, cauliflower etc. in the nursery bed. Farmers are advised to keep 5-7cm water in the field of Aman rice at tillering stage.
 - In South Dinajpur and Malda districts in Sub-Himalayan, undertake nursery sowing of early cabbage and cauliflower after current spells of heavy rain.
 - In Darjeeling district of Hill Zone, maintain adequate drainage channel in ginger and turmeric and undertake harvesting of large cardamom and round chilli. Apply 20 kg Nitrogen as 2nd top dressing at 40-45 days after transplanting and maintain 2-3 cm of standing water.
 - In Purba Medinipur and South 24 Parganas of Coastal Saline Zone, for precaution measure against wilting in vegetables, drain out the rain water through the furrow within the two row in vegetables field. If water stagnation found over the ridge immediate drain out the water.
 - In Laterite and Red Soil Zone, in this weather condition, sheath rot attack may be found in rice. If the Sheath rot damage (Discolouration and Rottening of flag leaf sheath) is exceeding more than 10%, spray Hexaconazole 75% WG @ 0.1g/litre of water after current spells of rain. Give first spray at the time of disease appearance and second spray at 15 days later.
 - In New Alluvial Zone, present temperature and humidity conditions are congenial for the rapid spread of thrips and mites leading to the leaf curling in chilli. As a control spray Di-fenthiuron @ 0.75g per litre of water at 7-10 days interval. Due to high temperature & humidity attack of Blast disease may be found in rice. If leaves are affected more than 5% apply Carbendazim + Mancozeb after current spells of rain.
 - In Old Alluvial Zone, under the present weather condition, there is a possibility of outbreak of Downy mildew of cucurbits, so farmers are advised to spray Metalaxyl + Mancozeb @ 2.5 g/litre of water at 10-15 days intervals after current spells of rain. To reduce boll worm infestation in bhindi, spray Biorine/Dispel 1kg formulation dilute in two liter of water firstly and then dilute in 300 liter of water to be sprayed one acre area.
- **Andaman and Nicobar Islands:**
 - In North, South and Middle Andaman, keep open the rice main field bunds at 10 cm height to drain the excess water. Undertake weeding and cleaning of vegetable plots with providing drainage facility.
 - In Nicobar, avoid intercultural operation in coconut gardens as rainfall is expected during the period.
- **Bihar:**
 - 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 transplanting of kharif onion and early varieties of cauliflower and planting of pointed gourd in upland area. Drain out excess water from vegetables crop.
 - 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, in fallow uplands undertake sowing of kulthi and niger. Farmers, having assured irrigation facility may cultivate early potato and green peas at optimum soil moisture condition. The recommended variety of potato for this area is Kufri Ashoka and Kufri Kanchan.
- In Central and North Eastern parts of Jharkhand, undertake sowing of improved varieties –Birsa Niger-1 , Birsa Niger-2 and Birsa Niger-3 in uplands, planting of early variety of potato and pea. To control Gall midge in rice crop, apply Phorate 10 g @ 8 kg per hectare and for Case worm and Stem borer, spraying of Chlorpyrifos or Quinolphos @ 1.5 ml per lt. of water. If sheath blight is noticed, drain the water from the paddy field and top dressing of extra dose of Potash @ 30 kg ha, followed by spraying of Hexaconazole (Kantof) 0.2% or Validamycin 0.25% solution.
- In South Eastern Plateau Zone, in cucurbitaceous crops, if attack of red pumpkin beetle is found, spraying of Diclorvos 76 EC (DDVP) @ 1 ml/litre of water is advised after current spells of rain.
- 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 after current spells of rain. 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 is recommended after current spells of rain.
- 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 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 Anuppur, Dindori and Shahdol districts of East Madhya Pradesh, in Agar, Betul, Bhopal, Burhanpur, Dewas, Hoshangabad, Indore, Jhabua, Khargone, Neemuch, Rajgarh, Ratlam, Shajapur and Ujjain districts of West Madhya Pradesh, in all districts of Chhattisgarh except Baloda Bazar, Durg, Kabirdham, Mungeli, Raipur, Rajnandgaon and Surajpur. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at many places over East Madhya Pradesh on 12th and 13th, over West Madhya Pradesh on 13th, over Chhattisgarh from 11th to 13th Sept., do not apply irrigation, application of plant protection measures and fertilizers to the standing crops.
 - As heavy rain very likely at isolated places over Chhattisgarh on 12th and over East Madhya Pradesh on 13th Sept., provide adequate drainage in standing crop fields.
- **Madhya Pradesh:**
 - In West Madhya Pradesh, as there was no significant rainfall during last two weeks and also rainfall is expected only at a few places during the period, apply irrigation in late sown soybean and vegetables. Undertake harvesting of matured green gram and black gram.
 - In Chhindwara and Betul districts, continue nursery preparation for tomato, chilli, brinjal, early cauliflower and raising of papaya seedlings.
 - In Morena, Gwalior districts undertake land preparation and sowing of toria. Undertake intercultural operations in vegetables.
 - In Indore and Ujjain districts, continue nursery preparation for cauliflower and transplanting of onion. Apply split dose of nitrogen in maize.
 - 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 Hoshangabad and Narsinghpur districts, undertake hand weeding in rice and apply third dose of Nitrogen.

- 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 on a non rainy day.
- 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 on a non rainy day.
- In Central Narmada Valley Zone, due to humid weather, there are chances of infestation of girdle beetle in soybean, spray Triazophos 40 EC @ 800 ml per ha on a non rainy day.

▪ **Chhattisgarh:**

- In North Chhattisgarh, continue sowing of horse gram and niger in upland areas.
- In Central Chhattisgarh, continue sowing of horse gram and niger. Keep inputs ready for sowing of *rabi* crops like chickpea, wheat, linseed, toria etc.
- In South Chhattisgarh, undertake intercultural operations in rice and apply 2nd dose of Urea. Undertake earthing in tuber crops and apply split dose of Nitrogen after current spells of rain.
- In North Chhattisgarh, due to humid weather attack of blast is observed in rice crop, spray Tricyclazole @ 120 g/acre after current spells of rain and repeat after 10-12 days as per requirement.
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In Madhya Pradesh, provide green fodder and fresh and clean water three times a day.
- In Chhattisgarh, create smoke in cattle house to prevent cattle from mosquitoes.

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



Groundnut

Maize

Rice

Okra

- **Realised Rainfall:** Rainfall occurred in Kathua, Reasi, Samba and Udhampur districts of Jammu & Kashmir, Bilaspur and Solan districts of Himachal Pradesh, Chamoli, Dehradun, Garhwal Tehri and Rudraprayag districts of Uttarakhand, Gurudaspur, Kapurthala and Ropar districts of Punjab, Faridabad, Gurgaon, Mewat and Palwal districts of Haryana, Ballia, Basti, Deoria, Jaunpur, Kushinagar, Sant Ravidasnagar and Sonbhadra districts of East Uttar Pradesh, Baghpat, GB Nagar, Jotiba Phule Nagar, Kanshiramnagar, Mahamayanagar, Mathura, Meerut, Moradabad and Shahjahanpur districts of West Uttar Pradesh, Banswara, Bhilwara, Bundi, Chittorgarh, Dausa, Jhalawar, Kota, Pratapgarh and Sirohi districts of East Rajasthan. Weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain/thundershowers likely at many places over Uttarakhand and Uttar Pradesh on 12th and 13th Sept., do not apply irrigation, application of plant protection measures and fertilizers to the standing crops.
- As heavy rain very likely at isolated places over Uttarakhand and East Uttar Pradesh on 12th Sept., provide adequate drainage in standing crop fields

▪ **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 Dungarpur and Banswara districts of Southern Humid Plain Zone, apply irrigation in rice as per requirement and apply top dressing of urea.
- In Irrigated North Western Plain Zone, in Hanumangarh and Sriganganagar, maintain 4 - 5 cm water in paddy crop.
- In Arid Western Plain Zone, in Jaisalmer and Bikaner districts, apply protective irrigation to kharif crops like groundnut, guar and pulses showing wilting symptoms. Undertake hoeing and weeding operation in rainfed crops to create dust mulch for checking evaporation losses and also for control of weeds.
- 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 sucking pests and alternaria leaf spots in cotton and bacterial leaf blight in paddy, for control spray Emidachloprid 17.8 SL @ 200 ml per hectare or Dimethoate 30 EC @ 1 litre per hectare for control of sucking

pests and spray solution of Propineb @ 2 g or Mancozeb @ 3 g per litre of water for alternaria leaf spots in cotton and for control of bacterial leaf blight in paddy spray Streptocycline @ 1g & Copper Oxychloride @ 30 g per 10 litres of water.

- In Arid Western Plain Zone, in Jaisalmer and Bikaner districts, prevailing 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 Acitamidrid or Thiamethoxam @ 3 g 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 weather condition is congenial for flower drop in cucurbits (bottle gourd, ridge gourd etc..) for control, spray Planofix @ 0.25 ml per litre of water.
- In Arid Western Plain Zone, in Barmer, Churu, Jalore, Jodhpur, Pali districts, prevailing weather condition is congenial for attack of bollworm in cotton crop, for control. spray Monocrotophos 36 SL @ 1 litre per hectare.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of leaf spot disease in groundnut crop, for control spray Bavistin @ 0.5 g or Mancozeb @ 2 g per litre of water.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of leaf curl & mosaic disease in chilli crop, for control uproot & burn affected plants & spray Dimethoate 30 EC @ 1.0 ml per litre water.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, prevailing weather condition is congenial for attack of bacterial blight in guar for control spray Streptocycline @ 5 g or Plantomycine @ 50 g or Agrimycin @ 30 g per 100 litres of water.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, prevailing weather condition is congenial for attack of pink bollworm in Desi cotton, for control spray Fenveret 20 EC @ 1 ml per litre of water.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganganagar, prevailing weather condition is congenial for attack of leaf miner in kinnow fruits, for control spray Acitamidrid 20 SP @ 0.4 ml per litre of water.

▪ **Jammu & Kashmir:**

- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, farmers are advised to maintain 5-7 cm water level in paddy crop. Give top dressing of Nitrogen at panicle initiation stage of paddy crop. Give protective irrigation to maize and light irrigation with sprinkler to nursery beds of cole crops like cauliflower, cabbage and Kno Khol. Undertake sowing of radish and carrot on ridges.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, undertake sowing of toria after treatment the seed with Captan/Thiram @ 3g/kg seed to protect from incidence of alternaria blight/seedling rot. Apply irrigation in rice and maintain 5-7 cm water level and protective irrigation to maize at silking /tasselling stage.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, due to increase in temperature with high humidity there may be incidence of hairy caterpillars on pulses(mash), destroy young larvae in gregarious phase. If population is high, spray Quinalphos @ 0.03% or Dichlorvos @ 0.05%.
- Weather is congenial for attack of blast on paddy crop in Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, to control, spray Trycylazole(bean) @ 0.06% on a non rainy day.

▪ **Uttarakhand:**

- In Dehradun, Pauri and Haridwar districts of Sub Humid Sub Tropic Zone, undertake intercultural operations in late transplanted paddy and top dressing of Nitrogen fertilizer in paddy and maize. Earthing and binding in sugarcane are advised as to protect them from lodging caused by rain and strong winds.
- In Udhm Singh Nagar district of Bhabar and Tarai Zone, farmers are advised to maintain optimum water level in paddy in the stage of panicle emergence/formation of earhead and this stage is very susceptible to water stress leads to influence the size, number of grains and weight of seeds of earhead.
- In Nainital district of Bhabar and Tarai Zone, continue transplanting of rai or snowball, cabbage and cauliflower 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 at the earliest.
- In Tehri Garhwal, Chamoli, Champawat, Pithoragarh, Rudraprayag and Uttarkashi districts of Hill Zone, undertake sowing of radish, rai and French bean. Continue sowing of toria, pea and garlic. Undertake harvesting of garlic, potato, cauliflower in clear weather. Complete transplanting of cabbage and broccoli in the main field.
- In Tehri Garhwal, Chamoli, Champawat, Pithoragarh, Rudraprayag and Uttarkashi districts of Hill Zone, there may be incidence of blast disease on finger millet and paddy crop, reduce or delay top dressing of Nitrogen fertilizer and if the disease population is above ETL, spray Propiconazole 25EC (Tilt) @ 1ml/litre in water during clear weather.
- In Bhabar and Tarai Zone, attack of Hispa insect and bacterial leaf blight is found in the paddy crop. Farmers are advised to take proper plant protection measures in clear weather. In Udhm Singh Nagar district of Bhabar and Tarai Zone, there may be incidence of occurrence of Thrips which is harmful for flowering and fruiting in the Urd and Moong, spray Monocrotophos or dimethoate @ 1.0-1.5 ml/liter of water at the time of flowering after current spells of rain .
- In Dehradun, Pauri and Haridwar districts of Sub Humid Sub Tropic Zone, under prevailing weather condition there is possibility of Khaira disease in paddy, spray 5 kg ZnSO₄ in 2% urea solution per hectare.

▪ **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. Undertake transplanting of brinjal, tomato, chilli cauliflower and cabbage on raised bed if seedlings are ready. Continue nursery sowing of mid season cauliflower and cabbage in poly house in mid hill and lower region and sowing and transplanting of tomato and capsicum. Transplanting of ageti cauliflower and cabbage nursery in fields. Continue plantation of new tea plants or for infilling of gaps with new plants. Apply mulch in ginger, turmeric, colocasia crops.
- 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 downy mildew in cauliflower, tomato and cabbage, for control spray Rhedomil M-Z @ 25 gm per litre of water, repeat at 15 days interval on a non rainy day.
- 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% @ 25g per 10 liters of water on a non rainy day.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of hairy caterpillar in mash and sesame crops, for control spray Cypermethrin 25 EC @ 0.5 ml per litre of water on a non rainy day.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of fruit fly in cucurbitaceous crops, for control spray Rogor @ 2 ml + 10 gm sugar or jaggery per litre of water at 50 litres per hectare on a non rainy day.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, in sub tropical climate, present weather is conducive for attack of mite and jassids in okra, chilli and cucurbitaceous crops, for control of mite, spray Phosmite @ 1.5 to 2 ml per litre of water and for control of jassid spray Dimethoate 30 EC @ 2 ml per litre of water on a non rainy day.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, present weather is conducive for attack of fruit rot disease in tomato crop, for control spray Mancozeb @ 250 g or Rhedomil gold @ 250 g in 100 litres of water at 8-10 days interval on a non rainy day.

▪ **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. Undertake sowing of radish, carrot and turnip and planting *kharif* onion. Undertake propping up of sugarcane crop using trash twist to prevent the sugarcane from lodging.
- 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. Undertake sowing of radish, turnip and carrot.
- In Central Plain Zone of Punjab, undertake sowing of fodder crops and planting of fruit crops like citrus, mango, litchi, guava etc.
- In Gurdaspur district of Punjab, 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/hoing 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.
- In Central Plain Zone and Western Zone of Punjab, sheath blight may be noticed in rice. Check by spraying Amistar Top 325 SC @ 200 ml or Nativo 75 WG @ 80 g or Lustre 37.5 SE @ 320 ml or Folicure/Orius 25 EC @ 200 ml or Bavistin 50 WP @ 200 g or Tilt/Bumper 25 EC or Monceren 250 SC 200 ml in 200 litres of water on a non rainy day.
- In Undulating Plain Zone of Punjab, as weather is congenial for the infection sheath blight in rice, keep the water channels & ridges free from weeds to prevent initial infection, spray Tilt @ 0.1% and repeat after 15 days if required.
- In Western, Central and Western Plain Zone of Punjab, due to high humidity and cloudy weather conditions, false

smut may be noticed in paddy crop, spray Kocide 46 DF (Chopper hydroxide) @ 500 g in 200 litres of water per acre and after 10 days of its application spray Tilt 200 ml in 200 litres of water at boot stage of the crop.

- 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 Emidachloprid 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 rainyday. Monitor brown plant hopper (BPH) in paddy, spray Emidachloprid 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 Uttar Pradesh, Maintain 3 - 5cm water level in the rice field, apply top dressing dose of nitrogen @ 30 kg/ha (65 kg urea/ha) for high yield varieties of paddy crop at panicle initiation stage (after 50-55 days of transplantation) and nitrogen @ 15 kg/ha (33 kg urea/ha) in scented varieties of paddy crop. Maintain optimum water level in rice fields as crop is in active tillering /panicle initiation stage and apply light irrigation in maize crop as crop is in tasseling/silking stage which are sensitive to moisture. Continue transplanting of mid season brinjal, tomato, cauliflower and capsicum. Undertake sowing of toria and cabbage, select the best variety of Toria. Undertake nursery sowing of tomato and knol khol, gobhi and sowing of radish.
- In Eastern Plain Zone of Uttar Pradesh, undertake sowing of bajra, late sowing of urad, arhr at optimum moisture condition.
- In Western Plain Zone of West Uttar Pradesh, apply irrigation as per requirement in soybean, urad, maize and groundnut. undertake transplanting of brinjal, tomato, chilli, cauliflower and cabbage on raised bed if seedlings are ready. Undertake hoeing & weeding operation in all *kharif* crops and vegetables.
- In Bundelkhand Zone of West Uttar Pradesh, undertake land preparation for sowing of vegetable peas, gram, lentil, linseed, toria, mustard. Undertake nursery sowing of mid season brinjal, chilli, tomato, cabbage, cauliflower and continue transplanting of mid season brinjal, chilli, tomato, cabbage, cauliflower. Undertake land preparation for sowing of radish, cabbage, carrot, coriander.
- In North Eastern Plain Zone, due to prevailing weather condition, there may be chances of attack of leaf roller in arhar, for control spray Monocrotophos @ 2.0 ml per liter of water mix in 200 liters of water on one acre after current spells of rain.
- In Central Plain Zone of East Uttar Pradesh due to prevailing weather condition, there may be chances of attack of stem borer and brown stripe/downy mildew, leaf blight in *kharif* maize, for control stem borer, spray Carbofuran 3G or Phorate 10 G @ 20kg per hectare or Chlorpyriphos 25 EC @ 1.5 litre in 600 litres of water per hectare and for control of brown stripe/downy mildew, leaf blight spray Mancozeb 75WP @ 1.5 kg + Zinc Sulphate @ 0.25 kg in 500 litres of water per hectare after current spells of rain.
- In Central Plain Zone of East Uttar Pradesh due to prevailing weather condition, there may be chances of attack of ergot in *jwar* crop at flowering stage, for control, uproot and burn affected plants and spray Thiram @ 0.15% + Carbaryl @ 0.1%, 2 to 3 times, at 7-10 days interval after current spells of rain.
- In Central Plain Zone of East Uttar Pradesh due to prevailing weather condition, there may be chances of attack of stem borer, brown plant hopper, gall midge, leaf folder and jassids in paddy, for control spray Chlorpyriphos 20 EC or Quinalphos 25 EC @ 1litre per hectare after current spells of rain.
- In Bundelkhand Zone of West Uttar Pradesh, due to humid weather condition, there may be chances of attack of yellow mosaic virus in urad, mung and soybean, for control spray Dimethoate @ 1.5 litres /hectare.
- In Western Plain Zone of West Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of fruit borer, diamond back moth in vegetables like brinjal, cauliflower, cabbage, tomato etc, for control use pheromone trap @ 3 to 4 per acre. If insect population is above ETL, spray Spinosad @ 1.0 ml per 4 litres of water on 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, litchi, aonla, lemon, papaya.
- In Central Plain Zone of East Uttar Pradesh due to prevailing weather condition, there may be chances of fruit rotting in Anola, for control spray Blitox @ 3gm per litre of water.
- In Central Plain Zone of East Uttar Pradesh, undertake hoeing and weeding operation in banana orchards and provide mechanical support to plants.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of leaf curl & mosaic in Papaya, for control uproot & burn the affected plants and spray Dimethoate 30 EC or Methyl Demeton 25 EC @ 1 ml 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, loquat and amla.

- In Una, Hamirpur, Kangra and Chamba districts of Himachal Pradesh, weather is conducive for citrus canker on citrus plants, for control spray Malathion @ 10 ml or Metasystox @ 10 ml per 10 litres of water after current spells of rain.
- In Tarai Zone of Uttarakhand, collect seeds of fruits like Aadu, Plum, Khubanietc 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.
- ❖ **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-Ghotudisease, 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 Himachal Pradesh, in Una, Hamirpur, Kangra and Chamba districts, there may be attack of ticks and mites on animals, for control spray Botox @ 2 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 Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, in case of insufficient nectar or honey in the apiary, artificial feeding may be given to honey bee colonies.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, feed the colonies with sugar water solution in the ratio of 2:1. Keep colonies in stand to give protection against ants.
- ❖ **Floriculture**
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, undertake sowing of marigold seed.
- 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 after current spells of rain.
- ❖ **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	24.08.16		31.08.16		07.09.16	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	57.2	-12	22.6	-52	127.1	138
Dibang Valley	**	**	**	**	**	**
East Kameng	7.2	-86	23.9	-64	46.2	-26
East Siang	8.5	-95	113.0	-19	568.0	350
Kurung Kumey	**	**	**	**	**	**
Lohit	43.1	-58	65.7	-24	135.8	73
Lower Dibang Valley	38.7	48	61.3	27	463.0	1320
Lower Subansari	**	**	**	**	**	**
Papumpare	0.0	-100	28.2	-73	190.3	22
Tawang	8.0	-94	1.0	-99	22.0	-80
Tirap	39.6	-69	25.4	-77	116.2	2
Upper Siang	12.2	-88	118.0	35	273.4	98

Upper Subansari	23.4	-37	46.5	12	88.6	201
West Kameng	49.4	-63	4.2	-96	53.4	-51
West Siang	4.1	-96	7.6	-87	214.0	261
Assam&Meghalaya						
Assam						
Baksa	2.6	-98	28.1	-78	109.1	16
Barpeta	36.9	-68	16.4	-87	202.4	115
Bongaigaon	43.4	-65	19.6	-82	101.3	10
Cachar	26.1	-71	173.2	76	154.4	54
Chirang	13.0	-90	14.8	-87	86.6	-6
Darrang	**	**	**	**	**	**
Dhemaji	**	**	**	**	**	**
Dhubri	58.2	-42	37.6	-63	39.4	-42
Dibrugarh	10.5	-90	59.2	-22	110.0	40
Goalpara	85.3	14	2.1	-97	58.5	-10
Golaghat	15.8	-76	14.5	-77	120.8	117
Hailakandi	65.4	-30	64.1	-19	135.5	88
Jorhat	11.4	-87	26.8	-62	170.8	145
Kamrup(Rural)	0.0	-100	44.7	-9	33.4	-30
Kamrup(Metro)	0.2	-99	43.5	-11	15.2	-68
Karbi Anglong	5.2	-88	73.6	47	63.5	52
Karimganj	35.4	-68	84.0	6	144.0	34
Kokrajhar	42.7	-71	23.8	-86	154.8	60
Lakhimpur	1.2	-99	99.4	8	175.1	69
Morigaon	17.2	-74	50.6	-24	111.8	124
N.C.Hills	8.2	-82	19.0	-63	100.7	85
Nagaon	13.3	-81	69.4	0	57.4	4
Nalbari	1.3	-98	34.6	-53	119.0	120
Sonitpur	0.2	-99	21.0	-70	59.5	9
Sibsagar	0.0	-100	61.1	-9	121.7	119
Tinsukia	5.2	-94	88.9	10	153.6	80
Udalgiri	5.1	-91	50.2	-14	93.1	89
Meghalaya						
East Garo Hills	0.0	-100	20.4	-66	144.4	110
East Khasi Hills	49.3	-81	24.8	-87	449.7	210
Jaintia Hills	3.0	-99	0.0	-100	1.0	-99
Ribhoi	20.0	-79	40.8	-50	64.6	-15
South Garo Hills	3.0	-97	0.0	-100	3.0	-96
West Garo Hills	51.4	-48	9.4	-88	34.7	-49
West Khasi Hills	17.0	-89	39.0	-69	5.0	-96
NMMT						
Mizoram						
Aizwal	46.4	-60	141.9	43	31.1	-71
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	98.0	-6	139.0	40	54.0	-45
Mamit	**	**	**	**	**	**
Saiha	110.0	5	0.0	-100	1.0	-99

Serchhip	56.6	-41	116.9	31	73.6	-19
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	**	**	**	**	**	**
Churachandpur	**	**	**	**	**	**
Imphal east	24.2	-61	32.5	-48	37.6	-23
Imphal west	6.5	-85	205.1	380	254.2	405
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	**	**	**	**	1.0	-97.0
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	15.2	-73	146.0	144	50.2	1
Kephire	**	**	**	**	**	**
Kohima	5.1	-94	129.5	65	61.0	-20
Longleng	**	**	**	**	**	**
Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	13.0	-83	3.0	-96	8.0	-90
Tuensang	**	**	**	**	**	**
Wokha	**	**	**	**	**	**
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	8.0	-87	66.0	-3	67.3	18
NorthTripura	69.9	-14	150.8	93	61.6	-5
SouthTripura	107.5	12	104.5	29	110.5	91
West Tripura	18.7	-74	50.9	-28	50.4	-24
Himachal Pradesh						
Bilaspur	105.7	98	36.4	-34	35.2	-18
Chamba	21.1	-75	45.9	-44	14.9	-83
Hamirpur	83.8	0	27.5	-63	25.3	-55
Kangra	28.8	-77	68.9	-23	24.7	-72
Kinnaur	8.2	-57	6.3	-59	16.6	-9
Kullu	45.1	33	81.2	174	22.3	-6
Lahaul and Spiti	9.3	-71	14.6	-46	3.8	-86
Mandi	67.5	-17	72.2	30	23.4	-54
Shimla	49.3	20	54.2	75	9.3	-73
Sirmaur	31.0	-71	27.3	-68	24.7	-58
Solan	40.8	-39	29.3	-47	34.5	-31
Una	56.0	-13	56.3	4	8.0	-83
Punjab						
Amritsar	0.0	-100	45.5	60	6.6	-76
Barnala	39.0	57	35.0	111	0.0	-100
Bhatinda	23.0	0	123.5	795	0.0	-100
Faridkot	8.6	-69	135.5	868	0.0	-100
Fatehgarh Saheb	11.4	-70	11.7	-58	3.8	-85
Ferozpur	0.0	-100	45.2	132	9.8	-60
Gurdaspur	1.6	-97	70.6	55	39.4	-4

Hoshiarpur	12.1	-73	38.5	15	0.0	-100
Jalandhar	18.7	-52	96.7	254	9.3	-74
Kapurthala	24.6	-3	213.5	1006	35.5	36
Ludhiana	46.6	14	17.5	-35	2.0	-93
Mansa	0.0	-100	27.2	89	0.0	-100
Moga	63.2	91	165.6	800	0.0	-100
Muktesar	0.0	-100	44.5	195	0.0	-100
Nawashahar	87.1	68	15.2	-67	16.7	-57
Patiala	8.2	-82	24.0	-33	4.3	-87
Ropar	100.4	100	21.1	-43	36.7	7
Sangrur	4.4	-86	17.9	-12	0.9	-97
Mohali	49.0	-1	3.0	-90	0.0	-100
TarnTaran	0.0	-100	54.0	186	0.0	-100
Haryana,Chd,Delhi						
Haryana						
Ambala	12.2	-83	48.0	-16	16.7	-62
Bhiwani	6.1	-81	84.3	241	1.3	-93
Chandigarh	46.7	-21	16.9	-57	0.1	-99
Faridabad	12.7	-78	38.3	-10	70.0	28
Fatehabad	0.0	-100	57.0	288	0.0	-100
Gurgaon	0.0	-100	52.5	68	30.3	-9
Hissar	1.9	-92	36.8	87	0.3	-99
Jhajar	0.0	-100	71.1	171	13.3	-56
Jind	4.3	-88	59.0	125	0.0	-100
Katihah	12.1	-63	77.7	217	0.0	-100
Karnal	27.5	-54	44.4	10	7.6	-69
Kurukshetra	3.0	-95	44.6	35	6.7	-75
Mahendragarh	2.2	-92	41.6	53	0.7	-96
Mewat	7.9	-78	44.3	16	37.8	-7
Palwal	25.8	-30	26.8	-9	43.5	81
Panchkkula	36.1	-49	2.5	-96	8.0	-86
Panipat	14.4	-74	24.0	-21	4.6	-85
Rewari	0.0	-100	76.3	175	5.0	-83
Rohtak	0.6	-99	43.8	4	0.8	-97
Sirsa	3.8	-80	78.3	350	0.0	-100
Sonepat	4.3	-91	21.5	-39	6.0	-81
Yamunanagar	32.8	-61	58.2	5	9.0	-81
Delhi						
Central Delhi	0.0	-100	23.0	-40	0.0	-100
East Delhi	0.0	-100	0.0	-100	0.0	-100
New Delhi	1.2	-98	59.6	54	6.1	-86
North Delhi	1.1	-98	54.4	41	2.0	-96
North East Delhi	1.0	-98	5.0	-87	1.0	-98
North West Delhi	0.0	-100	0.0	-100	0.0	-100
South Delhi	2.4	-95	10.4	-73	10.2	-77
South West Delhi	1.4	-97	47.9	24	18.9	-58
West Delhi	0.0	-100	7.0	-82	0.0	-100
Jammu & Kashmir						
Anantnag	15.7	10	36.9	151	6.2	-53

Badgam	1.2	-91	20.8	106	0.0	-100
Bandipore	**	**	**	**	**	**
Baramula	3.8	-71	36.4	151	16.6	23
Doda	15.4	-33	52.0	210	12.8	-12
Ganderbal	20.4	63	48.2	397	15.8	95
Jammu	14.4	-78	56.9	6	24.1	-42
Kargil	**	**	**	**	**	**
Kathua	6.2	-92	39.7	-28	53.6	-10
Kistwar	**	**	**	**	**	**
Kulgam	17.6	24	15.6	6	1.2	-91
Kupwara	3.7	-70	18.9	145	0.0	-100
Ladakh(Leh)	0.0	-100	6.5	183	0.0	-100
Poonch	**	**	**	**	**	**
Pulwama	18.4	28	28.6	109	0.0	-100
Rajouri	2.0	-96	66.6	59	0.0	-100
Ramban	5.0	-78	29.0	73	24.0	66
Reasi	34.3	-60	63.8	-22	45.4	-14
Samba	0.5	-99	49.4	-8	43.5	4
Shopian	**	**	**	**		**
Srinagar	1.3	-90	42.8	341	4.5	-44
Udhampur	3.0	-96	55.6	-32	63.6	20
East Madhya Pradesh						
Anuppur	51.1	-39	68.4	-2	58.2	-15
Balaghat	23.2	-77	85.1	6	29.8	-64
Chhatarpur	274.9	259	47.8	-25	14.1	-83
Chindwara	13.5	-74	64.0	10	21.5	-60
Damoh	231.9	178	54.0	-20	22.5	-65
Dindori	34.6	-63	90.0	49	73.1	15
Jabalpur	35.6	-49	146.9	73	16.5	-77
Katni	217.7	172	42.6	-39	19.4	-71
Mandla	58.5	-34	79.7	0	18.9	-74
Narsingpur	53.6	-28	103.2	37	23.5	-66
Panna	304.1	251	7.2	-89	11.4	-84
Rewa	205.8	166	14.4	-74	11.9	-85
Sagar	167.5	123	75.7	-4	13.2	-78
Satna	280.7	312	16.4	-68	7.1	-89
Seoni	26.2	-60	148.1	148	15.9	-73
Shahdol	74.3	-8	33.6	-49	32.5	-52
Sidhi	120.8	39	25.2	-62	30.0	-62
Singrauli	95.8	21	8.3	-83	6.8	-90
Tikamgarh	186.5	122	49.5	-7	1.5	-98
Umaria	88.6	-9	66.2	-14	25.1	-62
West Madhya Pradesh						
Agar	247.6	255	93.3	-6	46.2	-52
Alirajpur	93.7	81	17.4	-73	20.3	-62
Asoknagar	113.8	47	13.0	-76	24.0	-55
Badwani	44.0	0	14.9	-66	5.0	-89
Betul	4.1	-93	27.0	-46	34.9	-42

Bhind	65.3	30	5.6	-89	20.4	-60
Bhopal	165.7	119	82.9	13	54.3	-23
Burhanpur	3.9	-93	13.5	-75	78.3	31
Datia	60.9	1	8.8	-82	0.3	-99
Dewas	114.3	60	19.8	-72	47.7	-30
Dhar	108.0	118	9.1	-86	19.9	-62
Guna	147.0	64	19.5	-71	14.4	-78
Gwalior	55.7	-9	3.0	-94	2.6	-96
Harda	52.8	-32	44.4	-36	29.2	-65
Hoshangabad	48.8	-48	55.6	-40	34.2	-64
Indore	154.6	176	11.5	-81	40.2	-29
Jhabua	135.1	163	34.9	-42	33.6	-36
Khandwa	38.7	-32	18.3	-68	12.7	-81
Khargone	40.0	-14	7.9	-86	41.8	-34
Mandsaur	195.0	222	17.4	-68	20.7	-67
Morena	57.3	-13	7.4	-83	1.7	-97
Neemuch	217.8	269	50.0	0	60.7	1
Raisen	138.4	68	60.4	-27	15.1	-79
Rajgarh	311.3	334	24.6	-66	30.3	-53
Ratlam	253.1	279	18.2	-72	52.7	-13
Sehore	107.9	23	43.3	-48	24.6	-68
Shajapur	194.5	204	7.0	-88	60.5	-4
Sheopur Kalani	42.1	-40	63.5	53	25.5	-39
Shivpuri	77.6	31	34.6	-30	29.8	-51
Ujjain	225.6	252	22.0	-69	48.0	-11
Vidisha	245.0	180	16.6	-78	3.7	-94
Chhattisgarh						
Balod	0.0	-100	50.6	-12	49.0	-4
Baloda Bazar	16.7	-73	22.6	-59	27.4	-45
Balrampur	227.0	204	67.0	-1	46.5	-39
Bastar	0.0	-100	87.5	12	67.8	-6
Bemetara	6.0	-90	36.2	-42	42.2	-22
Bijapur	0.4	-99	181.7	100	60.1	-25
Bilaspur	37.2	-50	49.5	-16	36.8	-39
Dantewara	8.4	-89	100.4	5	74.9	14
Dhamtari	0.0	-100	38.4	-30	55.0	-6
Durg	2.0	-97	25.8	-55	1.2	-98
Gariaband	10.1	-88	50.5	-25	39.6	-40
Janjgir	47.1	-47	13.0	-82	61.4	-16
Jashpurnagar	60.2	-33	28.7	-67	34.8	-55
Kabirdham	0.0	-100	101.0	66	10.6	-79
Kanker	3.2	-96	83.0	9	41.1	-29
Kondagaon	0.0	-100	159.6	95	51.6	-28
Korba	40.0	-63	51.0	-35	71.3	-9
Koriya	99.9	7	55.9	9	34.1	-49
Mahasumund	13.3	-81	50.7	-20	91.8	45
Mungeli	28.6	-61	101.2	73	4.6	-92
Narayanpur	0.0	-100	166.1	108	34.0	-48
Raigarh	27.6	-64	54.0	-14	102.8	49

Raipur	5.5	-92	58.8	6	9.9	-81
Rajnandgaon	4.6	-94	62.8	-3	19.3	-70
Sukma	6.4	-90	131.8	88	108.0	52
Surajpur	53.4	-34	25.5	-59	20.0	-76
Surguja	139.4	61	63.3	-6	105.6	33
East Uttar Pradesh						
Allahabad	92.4	39	26.8	-50	21.3	-54
Ambedkar Nagar	15.0	-79	5.0	-89	0.0	-100
Azamgarh	60.2	-9	11.4	-79	29.0	-51
Bahraich	16.1	-78	64.7	6	0.4	-99
Ballia	27.4	-53	5.3	-90	95.7	159
Balrampur	27.4	-68	60.0	-19	4.2	-93
Banda	151.6	142	20.3	-63	5.9	-91
Barabanki	15.5	-76	22.7	-58	9.8	-84
Basti	14.8	-80	2.7	-95	49.0	-11
Chandauli	88.0	22	35.0	-30	12.0	-75
Deoria	31.5	-53	3.0	-95	50.0	3
Faizabad	18.7	-76	3.7	-92	6.5	-90
Farrukhabad	3.1	-95	13.6	-75	13.0	-71
Fatehpur	35.5	-48	1.9	-96	14.1	-72
Gazipur	54.2	-15	19.9	-61	24.7	-49
Gonda	12.7	-83	33.3	-40	3.7	-94
Gorakhpur	4.2	-95	17.3	-74	20.5	-68
Hardoi	29.5	-55	54.1	-4	21.8	-55
Jaunpur	47.5	-23	7.6	-85	37.9	-29
Kannauj	25.2	-64	0.0	-100	10.3	-79
Kanpur City	12.9	-82	5.1	-88	1.3	-97
Kanpur Dehat	17.3	-74	6.1	-89	0.3	-99
Kaushambi	50.3	-16	1.4	-97	0.8	-98
Kheri	9.5	-88	48.8	-17	19.8	-61
Kushi nagar	4.5	-95	0.0	-100	40.0	-19
Lucknow	22.4	-62	23.3	-56	2.5	-95
Maharajganj	0.0	-100	7.0	-89	11.7	-80
Mau	16.5	-78	0.0	-100	11.0	-76
Mirzapur	171.4	198	21.3	-61	28.7	-51
Pratapgarh	58.0	-16	14.0	-76	24.0	-55
RaiBareilly	35.7	-45	1.6	-97	7.4	-84
Sahuji Maharajnagar	127.0	65	16.0	-76	29.5	-52
Sant Kabirnagar	0.0	-100	0.0	-100	19.0	-62
Sant Ravidas Nagar	72.0	0	0.0	-100	37.0	-21
Shrawasti	20.0	-73	29.3	-52	3.2	-94
Sidharthnagar	0.0	-100	6.1	-90	13.2	-76
Sitapur	6.1	-91	49.7	-19	17.2	-70
Sonbhadra	172.9	166	41.0	-19	31.2	-45
Sultanpur	31.0	-55	10.3	-82	0.5	-99
Unnao	8.3	-87	0.0	-100	9.0	-80
Varanasi	76.4	4	27.4	-52	26.8	-55
West Uttar Pradesh						

Agra	44.0	-17	10.3	-82	26.4	-30
Aligarh	4.3	-92	29.5	-39	6.8	-83
Auraiya	24.0	-62	2.0	-96	4.7	-89
Badaun	7.6	-87	18.4	-72	12.0	-75
Baghpat	12.0	-73	45.8	17	31.8	33
Bareilly	5.0	-92	12.7	-81	10.4	-80
Bijnor	5.5	-91	9.0	-85	12.3	-75
Bulandsahar	12.9	-77	61.0	22	28.9	-27
Etah	36.0	-33	20.0	-53	6.0	-84
Etawah	40.7	-35	17.3	-67	0.0	-100
Firozabad	24.0	-56	39.1	-23	4.7	-87
GBNagar	0.0	-100	77.0	167	150.0	491
Ghaziabad	5.0	-92	34.3	-32	26.6	-31
Hamirpur	90.5	55	33.5	-40	10.8	-79
Jalaun	30.5	-42	13.0	-78	7.2	-84
Jhansi	92.6	53	38.5	-32	6.7	-89
Jotiba Phule Nagar	0.0	-100	44.0	-29	45.0	10
Kanshiramnagar	17.0	-73	93.0	70	42.0	-18
Lalitpur	185.0	198	19.0	-76	8.5	-86
Mahamaya Nagar	5.0	-89	14.5	-67	80.0	145
Mahoba	100.4	68	7.8	-86	2.8	-94
Mainpuri	42.4	-10	18.7	-54	0.0	-100
Mathura	40.5	-18	45.8	-3	63.8	111
Meerut	12.2	-84	31.6	-33	31.6	-33
Moradabad	8.6	-87	5.2	-92	80.0	67
Muzaffarnagar	5.4	-92	39.3	-1	7.5	-82
Pilibhit	0.0	-100	1.1	-98	2.0	-97
Rampur	3.8	-95	18.7	-72	8.2	-83
Saharanpur	37.7	-49	26.7	-45	0.0	-100
Shahjahanpur	14.7	-80	14.0	-79	46.4	-1
Uttarakhand						
Almora	37.5	-45	14.2	-69	5.2	-87
Bageshwar	32.4	-52	23.5	-48	13.5	-66
Chamoli	18.2	-71	47.3	-7	34.9	-22
Champawat	9.5	-90	1.5	-98	0.0	-100
Dehradun	38.3	-74	17.9	-84	103.7	30
Garhwal Pauri	49.7	-47	23.2	-70	30.6	-53
Garhwal Tehri	35.6	-54	16.4	-74	8.9	-86
Haridwar	61.1	-29	7.2	-88	19.3	-68
Nainital	56.0	-54	13.5	-85	17.9	-77
Pithorgarh	36.5	-70	32.1	-68	21.8	-78
Rudraprayag	72.4	-51	60.6	-40	32.8	-60
Udham Sing Nagar	13.1	-85	6.4	-91	15.6	-70
Uttarkashi	51.8	-37	48.9	-34	22.8	-65
Bihar						
Araria	23.1	-73	30.2	-59	101.6	43
Arwal	72.9	10	40.3	-4	187.4	420
Aurangabad	136.6	118	9.6	-82	53.2	-7
Banka	59.7	7	5.4	-88	94.0	118

Begusarai	7.5	-86	7.4	-89	184.7	230
Bhabua	137.4	62	17.1	-65	58.8	-15
Bhagalpur	38.2	-40	24.4	-48	92.8	76
Bhojpur	9.1	-87	22.6	-61	140.3	182
Buxar	30.6	-45	18.2	-67	25.6	-55
Darbhanga	11.0	-84	6.6	-88	136.0	194
East Champaran	1.7	-98	1.5	-98	83.0	63
Gaya	120.7	87	13.5	-72	206.8	308
Gopalganj	5.6	-93	1.1	-98	53.3	13
Jahanabad	46.8	-26	0.8	-98	158.0	272
Jamui	142.1	173	35.7	-38	162.9	205
Kathihar	7.9	-89	30.1	-45	126.6	174
Khagadia	12.8	-78	11.5	-81	83.0	52
Kishanganj	42.0	-58	75.1	-32	185.4	102
Lakhisarai	63.5	-1	16.1	-71	185.8	245
Madhepura	0.0	-100	50.0	-27	136.3	93
Madhubani	4.0	-94	36.3	-54	105.8	104
Monghyar	25.6	-60	48.6	-14	138.2	157
Muzaffarpur	7.6	-89	4.1	-94	111.4	161
Nalanda	46.8	-27	1.3	-98	70.7	47
Nawada	95.0	37	5.9	-87	68.3	42
Patna	12.6	-83	11.2	-79	128.3	160
Purnea	33.1	-50	14.2	-83	90.3	38
Rohtas	108.1	69	0.7	-99	26.1	-52
Saharsha	5.5	-91	13.5	-81	174.1	147
Samstipur	7.3	-88	6.2	-88	127.3	133
Saran	18.3	-76	10.3	-81	53.2	6
Sheikpura	25.8	-51	4.1	-92	53.1	23
Sheohar	0.0	-100	0.0	-100	41.6	-14
Sitamarhi	1.7	-98	17.8	-74	91.4	90
Siwan	27.1	-61	8.4	-85	63.8	28
Supaul	12.2	-83	51.4	-20	135.1	196
Vaishali	2.9	-96	18.1	-68	88.7	71
West Champaran	4.2	-95	29.6	-67	104.8	91
Jharkhand						
Bokaro	171.6	194	7.8	-88	88.4	3
Chatra	177.5	165	12.7	-75	57.0	-15
Deoghar	111.1	78	0.8	-99	131.9	168
Dhanbad	188.0	207	5.2	-92	150.0	121
Dumka	119.0	70	9.7	-82	99.9	51
East Singbhum	279.9	337	3.3	-94	266.3	292
Garhwa	162.5	175	37.0	-19	30.0	-63
Giridih	115.8	83	2.8	-95	142.5	131
Godda	43.7	-37	19.4	-60	73.0	61
Gumla	86.7	11	48.5	-19	41.9	-39
Hazaribagh	176.5	169	12.3	-79	113.8	79
Jamtara	75.6	2	1.2	-98	113.8	66
Khunti	121.5	56	20.7	-71	87.0	4
Koderrna	124.1	105	0.0	-100	138.0	122

Latehar	197.5	226	43.0	-22	73.1	3
Lohardagga	207.5	244	36.6	-24	57.4	-15
Pakur	41.0	-48	15.9	-77	95.8	31
Palamau	188.6	196	9.0	-84	38.3	-45
Ramgarh	139.2	126	13.6	-76	68.0	-5
Ranchi	125.3	92	12.1	-81	49.7	-30
Sahebganj	11.5	-85	40.4	-35	4.4	-93
Saraikela	132.0	102	10.6	-83	172.6	127
Simdega	95.0	-1	73.4	-6	27.7	-67
West Singhum	150.0	117	4.7	-93	121.5	76
East Rajasthan						
Ajmer	49.8	33	27.3	4	21.1	-24
Alwar	38.1	-17	51.7	42	9.6	-78
Banswara	203.4	222	20.2	-71	34.6	-44
Baran	151.3	115	25.4	-51	17.0	-69
Bharatpur	76.7	60	26.0	-40	21.5	-54
Bhilwara	104.9	86	45.5	22	40.4	-5
Bundi	69.5	24	71.5	82	60.0	22
Chittorgarh	221.5	226	46.9	-15	46.2	-21
Dausa	64.4	34	26.6	-25	31.8	-20
Dholpur	131.5	135	9.8	-78	24.3	-43
Dungarpur	139.1	173	27.1	-42	11.7	-76
Jaipur	30.6	-27	48.2	36	20.5	-37
Jhalawar	210.8	184	38.7	-39	35.4	-51
Jhunjhunu	8.3	-74	65.1	144	5.1	-78
Karauli	88.4	71	29.2	-20	14.2	-64
Kota	107.1	71	46.7	-10	81.1	33
Pratapgarh	359.6	464	13.6	-79	58.0	-16
Rajsamand	124.6	193	53.9	54	28.7	-25
Sawai Madhopur	64.6	12	75.3	88	24.4	-32
Sikar	23.6	-15	60.6	136	9.3	-55
Sirohi	122.5	85	86.6	45	38.6	-45
Tonk	49.0	-1	42.8	26	22.3	-39
Udaipur	129.0	190	32.0	-20	19.4	-58
West Rajasthan						
Barmer	40.5	111	47.5	203	3.6	-79
Bikaner	5.4	-68	62.1	293	7.3	-51
Churu	19.4	-17	67.3	240	1.6	-91
Hanumangarh	0.6	-96	66.1	341	4.7	-61
Jaisalmer	2.2	-79	58.6	566	1.1	-90
Jalore	38.0	25	87.4	328	13.9	-54
Jodhpur	21.3	-3	47.2	171	12.8	-21
Nagaur	23.1	-20	32.1	30	22.1	11
Pali	108.3	198	75.9	167	22.4	-38
Sri Ganganagar	3.6	-73	32.9	194	11.2	-24
Gujarat Region						
Ahmedabad	19.1	-49	61.8	50	22.0	-45
Anand	16.5	-68	48.3	-11	24.3	-58
Aravalli	143.2	176	36.8	-42	9.3	-84

Banaskantha	85.0	121	72.1	103	20.2	-43
Broach	4.9	-88	32.3	-35	9.0	-82
Chhota Udepur	44.7	-41	60.0	-15	45.8	-41
DNH	42.9	-53	87.7	-32	13.8	-89
Dahod	92.9	55	52.8	-18	29.8	-56
Daman	26.2	-71	25.9	-80	14.2	-89
Dangs	88.1	-22	42.2	-66	25.8	-82
Gandhinagar	23.7	-39	55.4	27	18.0	-70
Kheda	33.4	-33	68.1	23	17.0	-75
Mahisagar	88.3	56	32.1	-49	23.8	-64
Mehsana	56.5	38	62.9	43	12.9	-72
Narmada	10.1	-82	26.5	-65	24.4	-63
Navsari	21.5	-73	36.6	-64	24.2	-78
Panchmahal	66.0	2	40.4	-41	23.6	-64
Patan	58.4	59	102.4	220	8.4	-74
Sabarkantha	85.8	85	45.6	-10	19.9	-65
Surat	16.0	-71	56.1	-19	24.4	-69
Tapi	27.6	-60	23.6	-76	18.8	-80
Vadodara	26.1	-52	20.7	-69	19.3	-66
Valsad	31.4	-69	53.3	-60	17.9	-87
S K & Diu region						
Amreli	1.5	-95	46.7	59	2.7	-91
Bhavnagar	7.7	-71	53.8	55	28.2	-16
Botad	9.3	-59	149.8	327	39.0	51
Devbhoomi Dwarka	2.1	-83	36.5	72	0.8	-95
Diu	1.4	-92	30.7	37	6.0	-70
Gir Somnath	0.2	-99	73.3	94	1.5	-96
Jamnagar	4.2	-78	97.3	176	2.3	-89
Junagarh	0.4	-98	82.0	147	4.2	-86
Kutch	5.5	-65	55.7	119	0.1	-99
Morbi	5.0	-76	62.6	78	0.0	-100
Porbandar	0.1	-99	49.4	65	0.2	-99
Rajkot	0.9	-96	89.2	183	4.3	-82
Surendranagar	4.9	-81	121.0	249	16.2	-55
Maharashtra						
Konkan & Goa						
Mumbai City	40.8	-56	217.6	133	17.2	-81
Mumbai Suburban	36.7	-69	159.7	57	27.7	-77
North Goa	121.7	-10	167.7	-16	47.5	-46
Raigad	101.9	-40	167.7	10	45.8	-68
Ratnagiri	91.6	-45	139.1	-3	48.3	-62
Sindhudurg	125.2	-8	104.4	-18	37.0	-59
South Goa	96.6	-10	87.4	-8	33.5	-61
Thane	65.1	-49	89.3	-25	40.5	-67
Madhya Maharashtra						
Ahmednagar	0.7	-97	12.8	-51	0.7	-97
Dhule	14.2	-40	15.0	-47	0.2	-99
Jalgaon	5.9	-85	32.8	-17	28.8	-29

Kolhapur	47.8	-45	24.5	-66	9.0	-84
Nandurbar	27.3	-40	13.5	-74	12.0	-74
Nasik	20.3	-58	18.8	-64	13.3	-75
Pune	19.2	-52	12.1	-67	6.0	-85
Sangli	5.2	-72	2.9	-86	3.1	-82
Satara	18.0	-40	12.8	-58	5.3	-81
Solapur	2.3	-91	13.3	-47	4.5	-83
Marathwada						
Aurangabad	1.1	-97	22.0	-45	24.9	-36
Beed	3.4	-89	44.8	23	19.6	-51
Hingoli	13.8	-77	34.5	-29	28.3	-53
Jalna	1.7	-95	62.3	59	59.3	39
Latur	5.0	-91	57.0	17	28.0	-45
Nanded	6.0	-90	43.5	-14	21.6	-57
Osmanabad	3.4	-91	24.4	-37	5.7	-85
Parbhani	4.7	-92	46.7	-9	22.6	-59
Vidarbha						
Akola	7.3	-81	7.9	-82	14.7	-61
Amraoti	3.4	-93	25.5	-42	27.0	-46
Bhandara	1.3	-98	51.5	-26	8.1	-89
Buldhana	3.7	-90	22.3	-45	31.7	-16
Chandrapur	10.5	-87	50.9	-28	13.6	-82
Gadchiroli	4.5	-95	126.6	56	35.2	-55
Gondia	14.2	-85	98.1	20	36.5	-51
Nagpur	0.2	-99	35.2	-40	9.7	-86
Wardha	5.7	-90	34.6	-32	28.5	-57
Washim	15.0	-72	21.1	-41	27.5	-49
Yeotmal	7.5	-87	18.0	-64	13.5	-76
Odisha						
Angul	20.6	-72	37.5	-53	56.7	-19
Balasore	54.1	-14	50.4	-28	118.2	90
Bargarh	4.4	-95	43.6	-31	158.3	128
Bhadrak	89.2	41	29.4	-61	69.0	23
Bolangir	17.5	-77	34.6	-59	146.8	112
Boudh	12.2	-85	13.5	-84	202.0	271
Cuttack	23.6	-73	47.3	-33	108.6	66
Deogarh	44.7	-55	17.7	-76	46.7	-50
Dhenkanal	76.2	5	36.3	-56	57.4	-14
Gajapati	15.0	-75	69.7	13	55.6	14
Ganjam	22.0	-62	38.1	-38	37.1	-17
Jagatsingpur	17.9	-80	47.8	-27	136.3	134
Jajpur	43.9	-41	25.5	-69	63.0	-6
Jharsuguda	28.2	-67	35.1	-52	98.2	22
Kalahandi	6.8	-92	64.1	-4	112.5	84
Kandhamal	14.5	-82	32.3	-61	99.4	83
Kendrapara	24.4	-62	64.7	-14	118.3	82
Keonjhar	73.0	27	51.2	-20	77.9	25
Khurda	33.5	-57	50.3	-28	74.0	28
Koraput	5.8	-93	87.6	9	150.4	105






Malkangiri	2.0	-98	53.0	-32	116.6	47
Mayurbhanj	104.8	44	33.5	-58	146.7	94
Nawapara	2.0	-97	39.9	-34	64.6	23
Nawarangpur	0.1	-99	103.5	19	62.0	-22
Nayagarh	42.0	-42	35.1	-48	61.6	2
Puri	41.9	-46	47.8	-33	102.0	66
Rayagada	26.4	-62	62.9	15	72.1	27
Sambalpur	30.4	-70	26.8	-63	159.6	71
Sonepur	24.9	-69	15.0	-84	219.4	187
Sundargarh	69.8	-7	33.0	-55	116.3	64
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	28.5	-57	88.9	32	140.0	98
North & Middle Andaman	7.0	-94	61.0	-45	174.1	56
South Andaman	11.3	-86	183.9	74	192.4	99
GWB						
Bankura	188.7	202	16.1	-74	154.0	154
Birbhum	97.4	69	5.1	-91	124.8	104
Burdwan	209.2	244	7.1	-86	144.5	164
East Midnapore	93.8	54	15.5	-83	101.5	33
Hooghly	173.7	190	10.8	-81	135.2	87
Howrah	103.4	90	6.9	-90	83.2	26
Kolkata	158.5	134	109.1	44	185.9	142
Murshidabad	35.1	-36	13.2	-75	75.3	25
Nadia	191.6	269	11.2	-74	67.6	19
24 Pargana (N)	132.4	114	15.2	-74	68.6	18
Purulia	234.7	288	12.8	-81	189.5	156
24 Pargana (S)	117.1	29	25.1	-73	89.6	-7
West Midnapore	79.4	12	18.7	-70	114.0	46
SHWB & Sikkim						
Cooch Behar	5.4	-96	118.2	-21	105.4	-10
Darjeeling	73.5	-50	98.5	-28	148.4	19
East Sikkim	37.1	-64	37.4	-57	84.8	-23
Jalpaiguri	65.6	-56	81.4	-47	191.3	60
Malda	36.3	-51	40.3	-33	107.7	101
North Dinajpur	60.2	-26	19.5	-72	87.5	17
North Sikkim	37.0	-68	84.0	-11	126.1	9
South Dinajpur	39.4	-42	4.5	-91	35.7	-40
South Sikkim	20.4	-80	78.1	-11	124.7	14
West Sikkim	**	**	**	**	**	**
Karnataka						
Coastal Karnataka						
Dakshina Kannada	131.5	-27	80.9	-36	49.4	-46
Udupi	115.9	-41	102.1	-25	86.1	-24
Uttara Kannada	89.2	-29	60.0	-37	58.0	-23
N I Karnataka						
Bagalkote	5.8	-63	0.9	-94	2.4	-86
Belagavi	19.5	-8	9.4	-54	1.7	-89

Bidar	2.6	-95	55.0	28	38.1	0
Dharwad	13.5	-22	20.9	20	3.9	-71
Gadag	3.0	-81	23.1	32	4.1	-75
Haveri	15.5	-29	15.1	-4	2.6	-79
Kalaburgi	3.1	-92	14.9	-59	13.4	-66
Koppal	9.2	-50	22.5	-5	2.4	-88
Raichur	5.0	-81	36.5	28	8.4	-65
Vijayapura	11.3	-46	21.9	-11	3.5	-85
Yadgir	3.1	-93	58.2	79	3.9	-88
S I Karnataka						
Ballari	10.7	-46	6.3	-73	3.8	-79
Bangalore Rural	4.9	-84	8.3	-71	11.6	-60
Bangalore Urban	7.0	-78	21.9	-19	14.4	-55
Chamarajanagar	1.4	-92	6.4	-55	0.6	-96
Chikaballapur	0.0	-100	4.5	-81	17.2	-35
Chikkamagaluru	35.7	-57	23.5	-55	30.0	-27
Chitradurga	1.9	-87	1.6	-87	7.4	-33
Davangere	6.5	-65	10.4	-31	10.9	-15
Hassan	3.0	-90	19.0	2	7.0	-60
Kodagu	68.8	-40	38.2	-48	25.3	-59
Kolar	8.3	-64	16.6	-17	1.0	-96
Mandya	0.2	-99	43.0	214	2.0	-87
Mysuru	4.4	-72	8.5	-31	1.9	-85
Ramanagara	8.8	-71	54.8	115	6.6	-76
Shivamogga	84.3	6	47.2	-11	44.1	17
Tumakuru	2.9	-85	24.6	43	12.0	-40
Kerala						
Alappuzha	22.1	-74	55.1	-14	9.1	-83
Kannur	116.8	3	83.5	-1	19.1	-67
Ernakulam	37.9	-55	76.4	20	30.4	-48
Idukki	63.6	-45	82.3	-3	24.0	-63
Kasaragod	192.6	42	67.6	-31	35.7	-54
Kollam	32.7	-47	39.5	-32	7.0	-81
Kottayam	34.5	-60	67.0	-8	15.6	-71
Kozhikode	36.0	-68	49.9	-25	11.1	-80
Malappuram	23.0	-74	30.1	-50	12.6	-72
Palakkad	28.4	-63	22.8	-54	9.9	-76
Pathanamthitta	47.9	-37	62.5	-16	20.8	-56
Thiruvananthapuram	3.7	-89	14.5	-47	4.7	-79
Thrissur	24.0	-76	30.6	-55	14.2	-74
Wyand	49.4	-61	46.3	-46	19.4	-73
Tamil Nadu						
Ariyalur	21.8	-32	113.1	171	16.4	-25
Chennai	2.4	-94	35.1	8	51.7	123
Coimbatore	5.3	-50	14.1	44	9.1	7
Cuddalore	26.6	-21	73.7	110	27.1	29
Dharmapuri	0.0	-100	32.7	26	2.5	-89
Dindigul	6.0	-70	19.9	5	11.5	-47
Erode	15.3	-3	26.1	43	7.6	-47

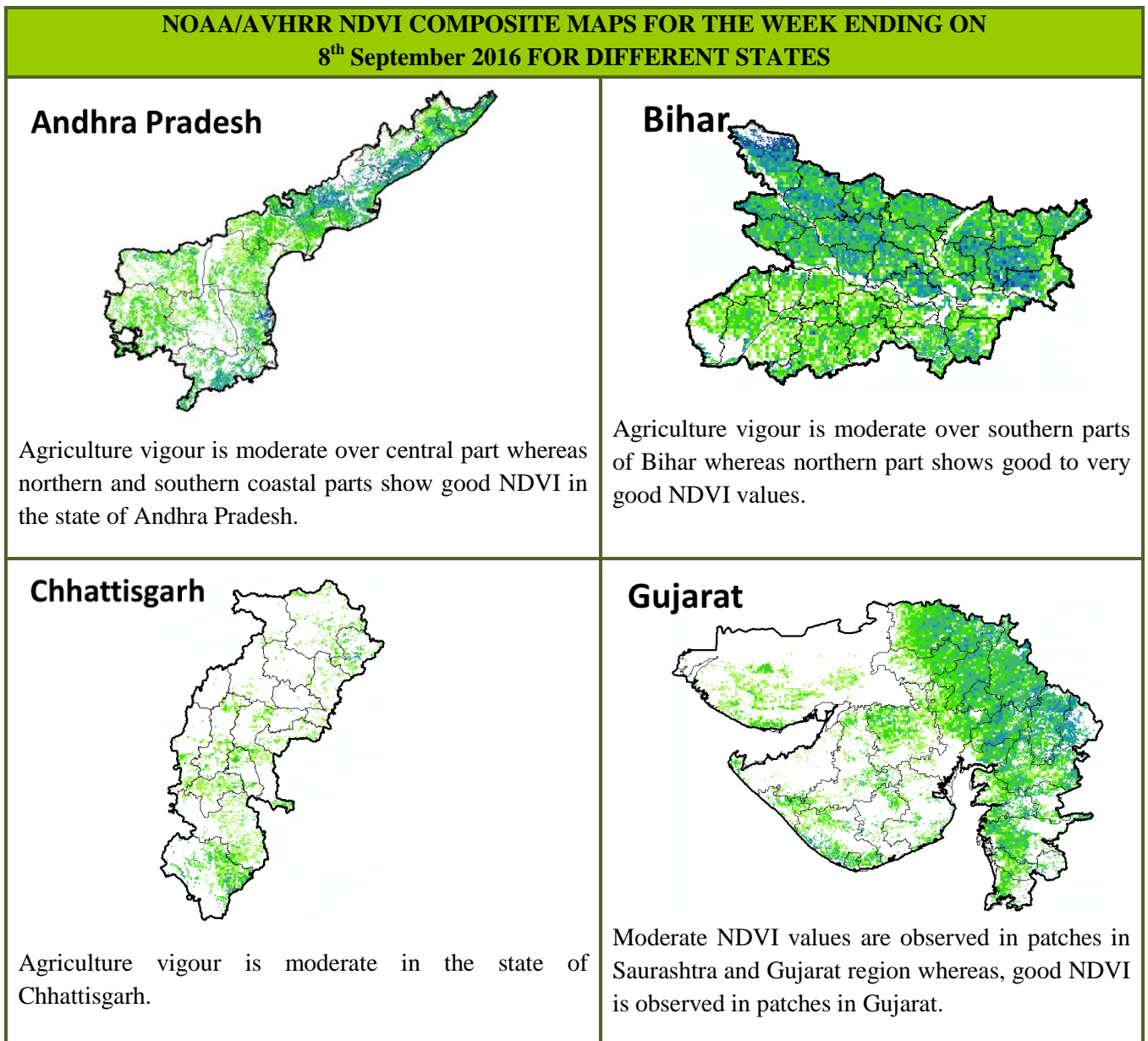
Kanchipuram	33.9	-25	73.1	92	28.3	0
Kanyakumari	2.8	-85	3.6	-73	0.3	-98
Karikal	3.6	-84	89.2	291	65.2	329
Karur	3.7	-72	12.4	-32	12.6	-22
Krishnagiri	0.3	-99	41.9	79	0.3	-99
Madurai	19.3	-23	21.5	-14	33.8	35
Nagapattinam	16.0	-32	77.5	189	26.4	72
Namakkal	5.5	-78	35.0	42	12.6	-28
Nilgiris	14.6	-62	28.1	-16	26.0	-19
Perambalur	16.3	-34	30.5	-3	47.3	172
Puducherry	32.8	-2	77.5	173	0.5	-98
Pudukottai	7.9	-73	56.8	69	53.1	159
Ramanathapuram	9.2	-14	9.6	-37	32.7	355
Salem	33.0	6	53.0	61	12.6	-48
Sivaganga	20.9	0	89.0	265	73.3	347
Thanjavur	10.3	-64	87.1	206	19.9	13
Theni	3.8	-49	5.8	-29	3.4	-61
Tirunelveli	0.1	-99	0.3	-94	0.4	-91
Tirupur	0.0	-100	9.2	2	5.7	-36
Tiruvallur	0.7	-98	12.1	-65	53.7	87
Tiruvannamalai	24.1	-35	65.8	79	5.4	-82
Tiruvarur	10.3	-58	67.2	160	19.1	13
Toothukudi	0.0	-100	0.6	-88	1.8	-70
Trichy	2.2	-89	30.1	24	16.1	-30
Vellore	2.7	-92	48.4	64	9.0	-70
Villupuram	6.4	-82	52.0	36	5.3	-75
Virudhunagar	14.2	19	10.3	-35	8.9	-28
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	21.7	-48	65.8	57	66.2	72
Guntur	0.3	-99	178.7	400	10.4	-66
Krishna	5.5	-88	145.0	258	16.8	-55
Nellore	2.8	-88	17.2	-13	22.1	10
Prakasam	0.0	-100	83.1	211	7.0	-67
Sirkakulam	6.7	-85	35.3	-26	53.2	16
Visakhapatnam	4.2	-89	70.4	70	30.7	-23
Vizianagram	4.9	-90	70.9	52	45.6	1
West Godavari	10.8	-78	112.1	129	76.7	81
Rayalaseema						
Anantapur	0.0	-100	9.8	-48	4.4	-75
Chittoor	0.8	-97	18.8	-22	14.4	-47
Cuddapah	0.0	-100	60.0	154	13.8	-37
Kurnool	0.5	-98	51.7	92	2.8	-89
Telangana						
Adilabad	7.1	-89	42.8	-23	18.0	-68
Hyderabad	0.7	-98	84.8	132	97.2	191
Karimnagar	2.6	-95	54.1	26	22.3	-52
Khammam	9.4	-82	80.8	51	68.0	48

Mehabubnagar	0.5	-99	63.4	90	7.6	-72
Medak	0.4	-99	39.2	4	37.1	3
Nalgonda	0.3	-99	140.0	301	24.4	-22
Nizamabad	3.4	-95	41.8	-21	41.1	-19
Rangareddy	0.4	-99	99.0	208	53.0	50
Warangal	6.4	-86	55.6	23	36.6	-20

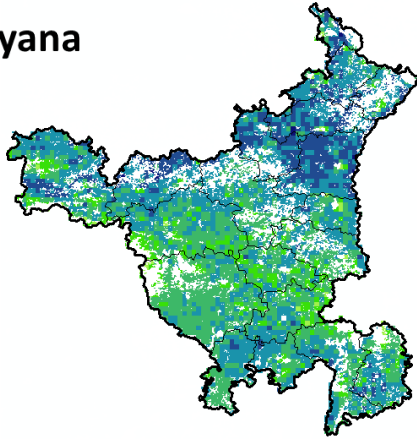
Legends

	(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

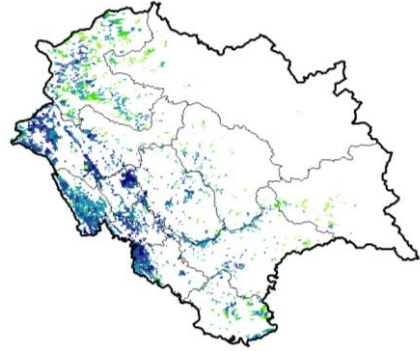


Haryana



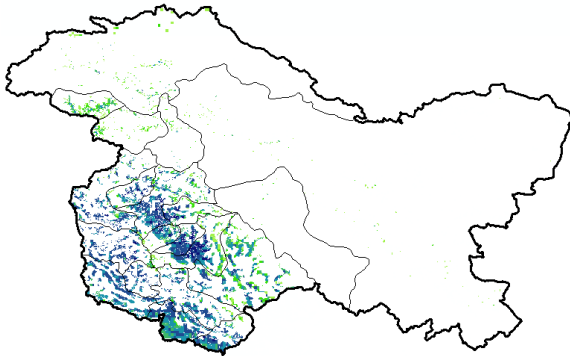
Agriculture vigour is moderate in patches over central region whereas, good & very good agriculture vigour is observed in northern, western and southern regions of the state.

Himachal Pradesh



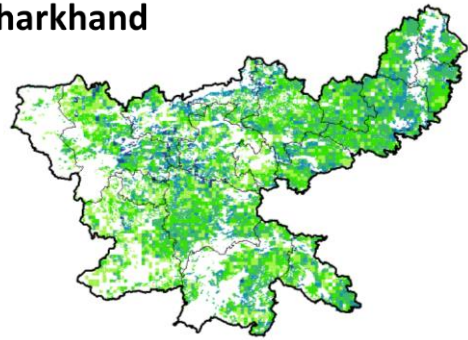
Agriculture vigour is good to very good over southern parts of Himachal Pradesh.

Jammu & Kashmir



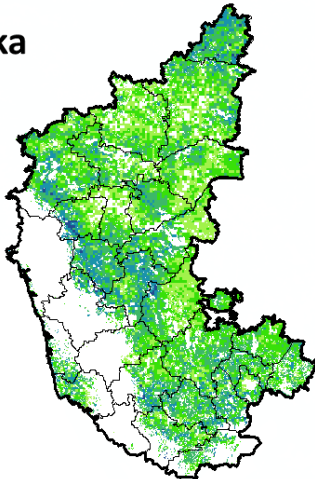
Agriculture vigour is good to very good over south western part of Jammu & Kashmir, whereas the remaining region shows moderate NDVI.

Jharkhand



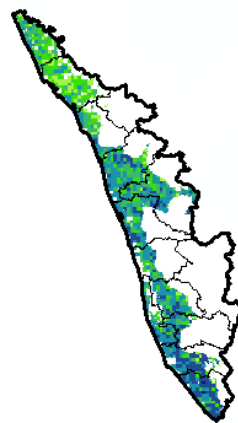
Agriculture vigour is moderate over entire state of Jharkhand whereas, few patches in north and east show good NDVI values.

Karnataka



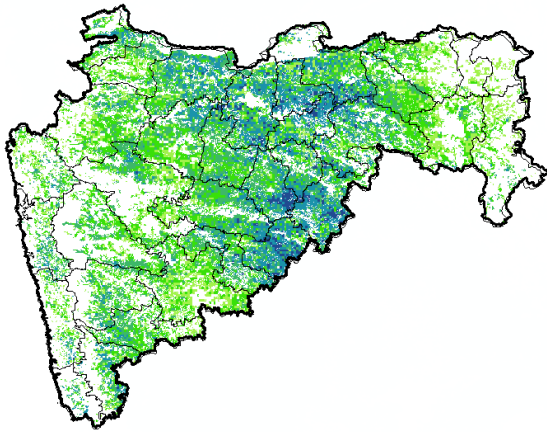
Agriculture vigour is moderate over northern region of the state whereas good vigour is observed in the central and southern regions.

Kerala



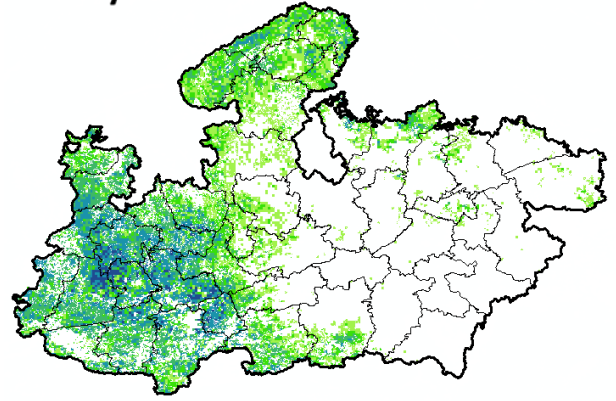
Agriculture vigour is good over entire state of Kerala except northern part which shows moderate NDVI values.

Maharashtra



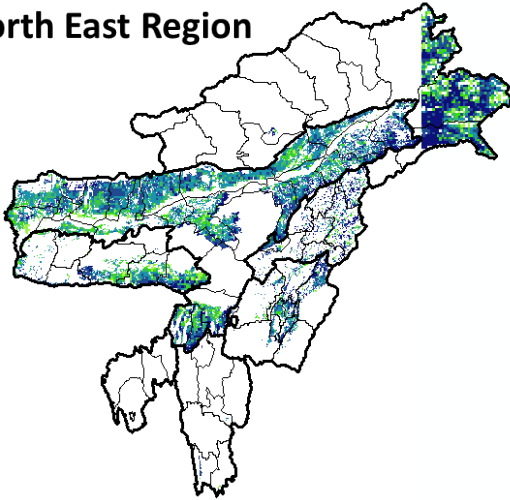
Agricultural vigour is moderate over western and eastern region of the state of Maharashtra whereas, good vigour is observed in the central region.

Madhya Pradesh



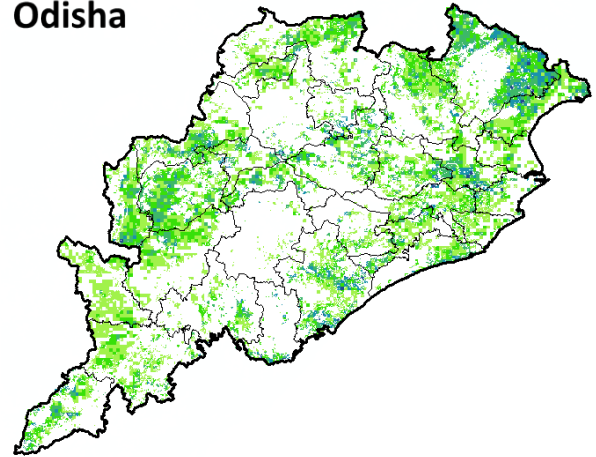
Agriculture vigour is moderate over central and northern region of the state of Madhya Pradesh whereas, good & very good vigour is observed over western region.

North East Region



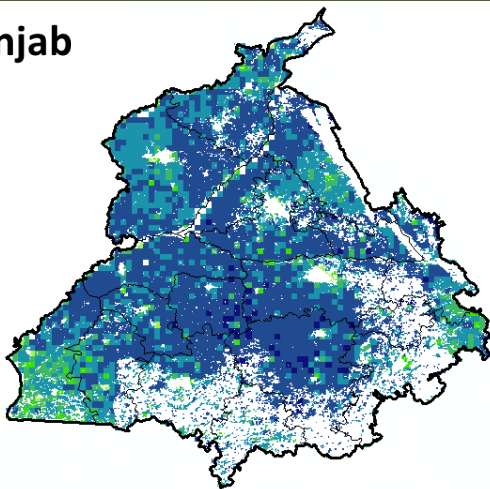
Agriculture vigour is good & very good over north-east states of country.

Odisha



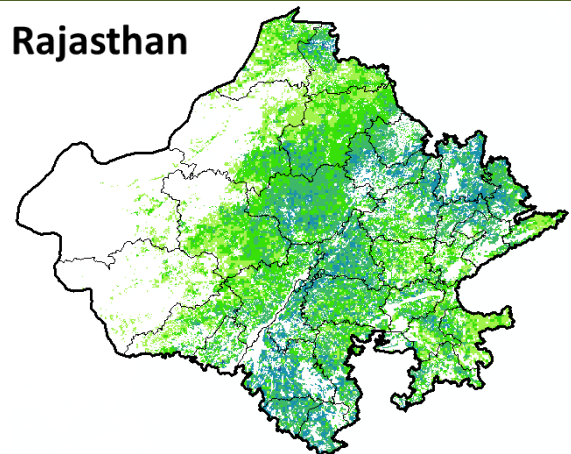
Agricultural vigour is moderate over entire state of Odisha.

Punjab

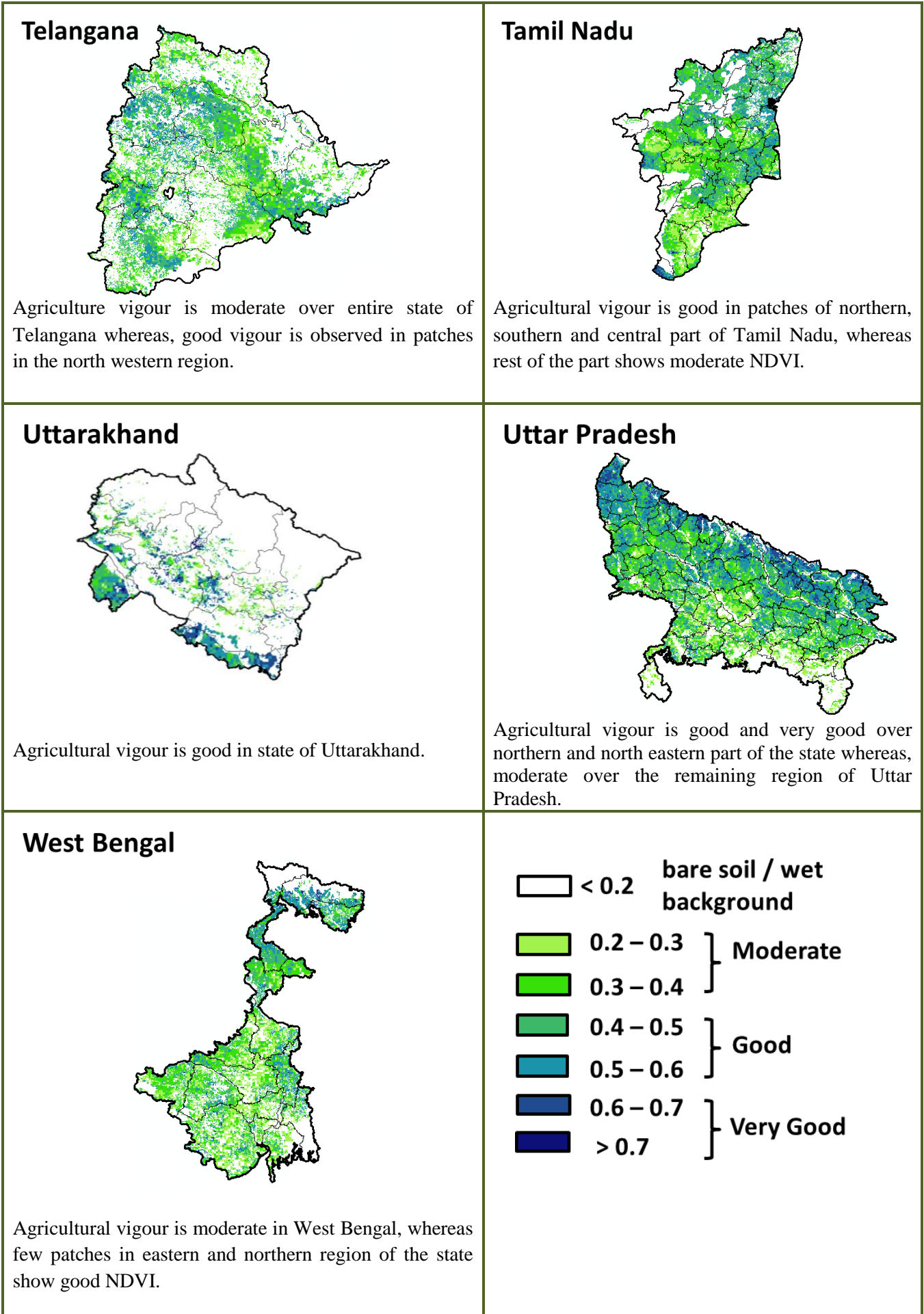


Agricultural vigour is very good over the entire state of Punjab except for few patches in south western region which shows moderate conditions.

Rajasthan



Agriculture vigour is moderate over western Rajasthan whereas, good vigour is observed over eastern region.



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

Annexure III

Assam

Sali rice: Ranjit, Bahadur, Satyaranjan, Basundhara, Kushal, Mahsuri, Bhogali, Rangilee, Ketekijoha. Satyaranjan and Basundhara (in double cropping areas having crop duration of 130-135 days).
Jalashree, Jalkunwari, Plawan (for flood affected areas).
Ranjit, Gitesh, Bahadur, Kushal, Piolee (long duration).
Satyaranjan, Bosundhora, T.T.B.-404, Mulagabharu, Kanaklata, Joymoti, IR-36, IR-64 etc and Disang, Luit, Kapilee, Dikhov (medium duration).
Capsularis jute: JRC 321 and UPC 94.
Olitorious jute: Navin (JRO 524), Basudev(JRO 7835), Baisakhtissa(JRO 632), Bahagi (sel-2) and Tarun.
Okra: Pusa Sawani, Arka Anamika, Parbhdani Kranti.
Ridge gourd: Pusa Nashdar or other local varieties like AAU-1, AAU-2, AAU-3 etc.
Sponge gourd: Pusa Chikni or other local varieties.
Banana: Dwarf Cavendish, Jahaji (Dwarf Cultivar), Cheni Champa, Malbhog, Chenichampa, Malbhog , Barjahaji (Medium Tall cultivars).
Papaya: Washington, Haflong, Rasi, Korg Honey Dew, Co-1, Co-2, Pusa Delicious, Pusa Majesty.
Guava: Alahabad Safeda, Lucknow-49, Chittidar, Seedless.
Fodder crops : Hybrid Napier, Setaria and Guinea.

Meghalaya

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

Nagaland

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

Tripura

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

West Bengal

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

Odisha

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

Bihar

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

Jharkhand

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

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

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

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

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

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

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

Sweet potato: Birsa sakarkand-1 and Sri Bhadra.

Jammu & Kashmir

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

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

Uttarakhand

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

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

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

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

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

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

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

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

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

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

Radish: Pusha Chetki.

Himachal Pradesh

Cauliflower: snowball and Giant snowball.

Radish: Japanese white, Chinese pink and mino early white

Turnip: PTWG-1

Carrot: Pusakesar

Fenugreek: I.C. 74, kasoori.

Peas: Mater ageta-6 (early variety).

Cabbage: Pride of India, golden achor and hybrid

East Uttar Pradesh

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

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

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

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

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

Ginger -suprabha, suruchi, surbhi and Hingiri

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

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

Moong: Type-27, 56

West Uttar Pradesh

Ladies finger: VRO-6, VRO-5.

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

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

Onion: pusa red, pusa white.

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

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

Baby corn: M.H.-4.

Punjab

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

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

Onion: Punjab Naroya, Punjab White and PRO 6.

Radish: Punjab Pasand and Japanese white.

Turnip: L-1.

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

Tomato: TH-1, Punjab Ratta, Punjab NR 7, Punjab Chuhara, Punjab Upma, Castle Rock.

Rice: Hybrid varieties: K. R. H 2, PHB 71, Pant hybrid Dhan1, Narendra hybrid dhan 1, P R H 10

High yielding varieties: Pusa 44, Pant Dhan-4, Pant Dhan-10, Pusa-834, Pusa basmati-1, Pusa basmati-1509, Pusa improved basmati, Pusa sugandha-5, Pusa sughanda-4 (Pusa 1121), Ranvir basmati and Taravadi basmati.

Pigeon pea: Pusa 2001, Pusa 992, Paras, Manak.

Maize: PMH1, Parbhat, PMH2

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

Okra: Punjab-8 and Punjab-7

Delhi

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

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

Radish: Japani White, Hill queen, French Radish;

Spinach: Pusa Bharti.

Amaranth: Pusalal Chaulai, Pusa Kiran.

Ladyfinger: Pusa A-4.

Radish: Japani White, Hill queen, French Radish.

Spinach: All Green, Pusa Bharti;

Fenugreek: Pusa Kasuri;

Coriander: Pant Haritama, Hybrids.

Turnip: Pusa Swati, Local Red variety.

Bottle Gourd- Pusa Naveen, Pusa Samridhi

Bitter Gourd- Pusa Visesh, Pusa-2 mosumi

Pumpkin- Pusa Visvash, Pusa Vikash

Ridge Gourd- Pusa Chikni

Cucumber- Pusa Uday, Pusa Barkha

East Rajasthan:

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

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

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

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

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

kharif onion: N-53 & Agrifound dark red

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

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

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

Ageti-76, Bassi Selected, Mahi Kanchan

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

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

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

West Rajasthan

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

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

Bhindi: Ark Anamika, varshauphar, Parbhanikranti, pusamakhmali.

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

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

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

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

Madhya Pradesh

Cauliflower: Golden Anker and Pusa Mukta.

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

Radish: Pusa Kesar and Pusa Meghali.

Toria: Jawahar -1, PT-303.

Chhattisgarh

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

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

Karnataka

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.