



National Agromet Advisory Service Bulletin



Friday 21st October 2016

(For the period 21st to 25th October 2016)



Issued by

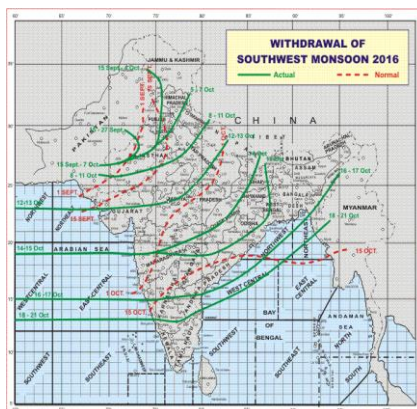
*National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division,
India Meteorological Department, Shivajinagar, Pune.*

Weblink For

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

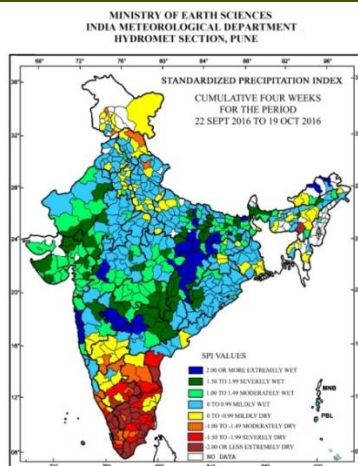
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Monsoon Watch



- The withdrawal line of southwest monsoon continues to pass through Lat.22.0°N/Long.94.0°E, Lat.19.0°N/Long.90.0°E, Lat.16.0°N/Long.85.0°E, Tirupathi, Bengaluru, Mangaluru, Lat.13.0°N/Long.70.0°E and Lat.13.0°N/Long.60.0°E. (Fig. 3).
- Conditions are favourable for further withdrawal of the southwest monsoon from some more parts of the country during next 3- 4 days.

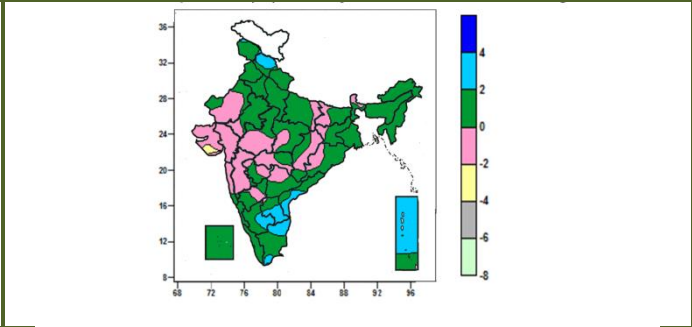
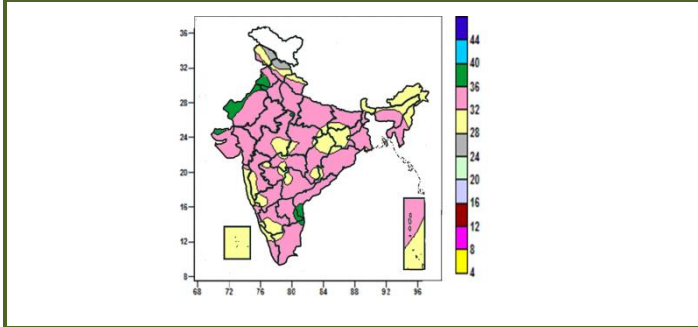
Standardised Precipitation Index Four Weekly for the Period 22nd September 2016 to 19th October 2016



- Extremely/severely wet conditions experienced in many districts of Konkan & Goa, Chhattisgarh, Telangana; few districts of Arunachal Pradesh, Bihar, Gujarat Region, Saurashtra & Kutch, Maharashtra; Lakhimpur, Morigaon districts of Assam; Darjeeling, Jalpaiguri districts of West Bengal; Bolangir, Kalahandi, Nawapara districts of Odisha; Lohardaga, Palamu, Latehar districts of Jharkhand; Allahabad, Ambedkar Nagar, Azamgarh, Ballia, Basti, Ghazipur, Mirzapur, Sant Kabir Nagar, Sonbhadra, Varanasi districts of Uttar Pradesh; Churu, Jalore, Pali, Ajmer, Banswara, Sirohi, Udaipur districts of Rajasthan; Bhopal, Dhar, Hoshangabad, Alirajpur, Dindori, Katni, Rewa, Shahdol, Sidhi, Singrauli districts of Madhya Pradesh; Bidar district of Karnataka.
- Extremely/Severely dry conditions experienced in most districts of Tamil Nadu & Puducherry; few districts of Kerala; Jaintia Hills district of Meghalaya; Nellore, Prakasam districts of Andhra Pradesh; Chittoor district of Rayalaseema; Bangalore Urban, Chamarajanagar, Hassan, Kolar, Mysore, Tumkur, Ramanagara, Chickballapur districts of Karnataka.
- Moderately dry conditions experienced in Garhwal Tehri district of Uttarakhand; Lahaul & Spiti district of Himachal Pradesh; Udhampur, Kupwara districts of Jammu & Kashmir; Anantapur, Cuddapah districts of Andhra Pradesh; Madurai, Theni, Tirupur, Puducherry districts of Tamil Nadu & Puducherry; Dakshin Kannada, Gadag, Haveri, Bangalore Rural, Bellary districts of Karnataka; Cannur, Idukki, Kasargod, Pathanamthitta districts of Kerala; Lakshadweep district of Lakshadweep.
- Rest of the country experienced moderately wet mildly dry/mildly wet conditions.

Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 19.10.2016

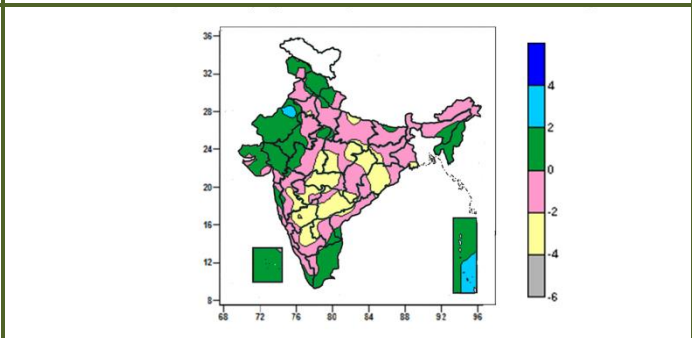
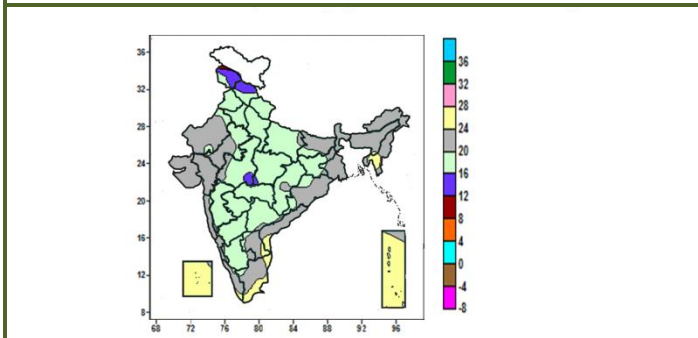
Actual Mean Maximum Temperature (°C) in India for the week ending 19.10.2016	Mean Maximum Temperature (°C) Anomaly in India for the week ending 19.10.2016
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- Mean maximum temperature was between 36 to 40°C over some parts of Punjab, West Rajasthan and isolated pockets of Haryana, Kutch, Coastal Andhra Pradesh, Rayalaseema, and Tamil Nadu.
- Mean maximum temperature was between 28 to 36°C over rest of the Country except some parts of Jammu & Kashmir and Himachal Pradesh, where it was between 24 to 28°C.

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

Actual Mean Minimum Temperature (°C) in India for the week ending 19.10.2016	Mean Minimum Temperature (°C) Anomaly in India for the week ending 19.10.2016
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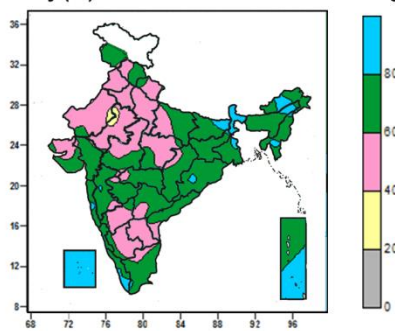


- Mean minimum temperature was between 8 to 12°C over isolated pocket of Jammu & Kashmir.
- Mean minimum temperature was between 12 to 16°C over many parts of Jammu & Kashmir, some parts of Himachal Pradesh and isolated pockets of Madhya Pradesh and Vidarbha.
- Mean minimum temperature was between 16 to 24°C over rest of the country except many parts of Mizoram, Lakshadweep, Andaman & Nicobar Islands, some parts of Tripura, Coastal Andhra Pradesh, Tamil Nadu and isolated pockets of Meghalaya, Rayalaseema and Kerala, where it was between 24 to 28°C.

- Mean minimum temperature was above normal by 2 to 4°C over some parts of Andaman & Nicobar Islands and isolated pocket of West Rajasthan.
- Mean minimum temperature was normal to near normal over rest of the country except many parts of Vidarbha, Telangana, North Interior Karnataka, some parts of Madhya Pradesh, Chhattisgarh, Odisha, Madhya Maharashtra, Marathwada, South Interior Karnataka, Rayalaseema and isolated pockets of Haryana, East Uttar Pradesh, Jharkhand, Gangetic West Bengal and Coastal Andhra Pradesh, where it was below normal by 2 to 4°C.

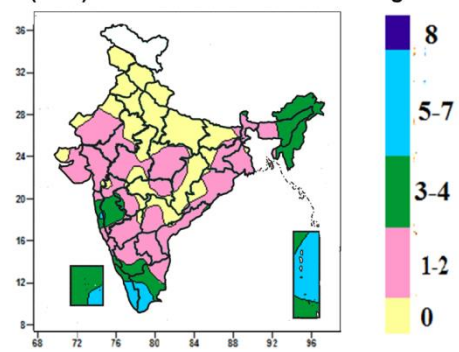
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 19.10.2016

Relative Humidity (%) over India for the week ending 19.10.2016



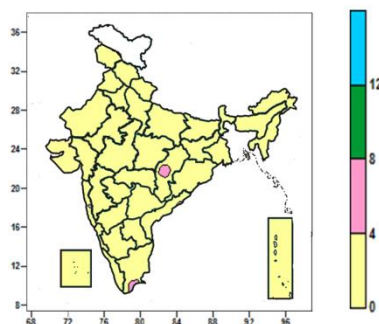
- Mean Relative Humidity was above 80% over Sub Himalayan West Bengal & Sikkim, Lakshadweep, some parts of Bihar, Arunachal Pradesh, Assam, Mizoram, Kerala and isolated pockets of Nagaland, Jharkhand, Gangetic West Bengal, Odisha, Madhya Maharashtra, Konkan and Tamil Nadu.
- Mean Relative Humidity was between 60 to 80% over rest of the country except Punjab, Haryana & Delhi, West Uttar Pradesh, many parts of Uttarakhand, Rajasthan, Madhya Pradesh, Interior Karnataka, Rayalaseema, some parts of Himachal Pradesh, East Uttar Pradesh, Saurashtra & Kutch, Telangana, Coastal Andhra Pradesh and isolated pockets of Jammu & Kashmir, Gujarat region, Madhya Maharashtra, Marathwada, Vidarbha and Tamil Nadu, where it was between 40 to 60% and isolated pockets of Rajasthan, where it was between 20 to 40%.

Cloud amount (okta) over India for the week ending 19.10.2016



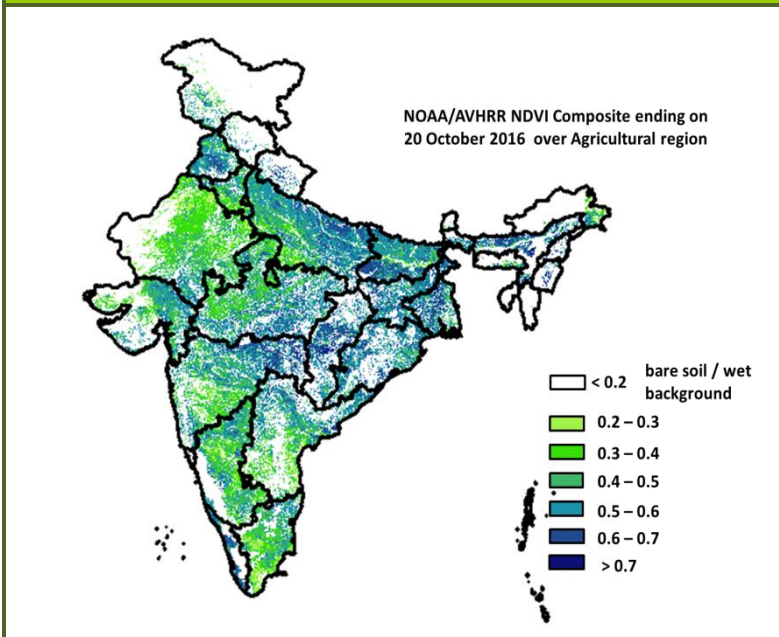
- Sky remained generally cloudy (5-7okta) over many parts of Kerala, Andaman & Nicobar Islands, some parts of Lakshadweep, Tamil Nadu and isolated pocket of Konkan and Madhya Maharashtra.
- Sky remained partly cloudy (3-4okta) over Arunachal Pradesh, Meghalaya, Nagaland, Manipur, Mizoram, many parts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

Wind speed (knots) over India for the week ending 19.10.2016



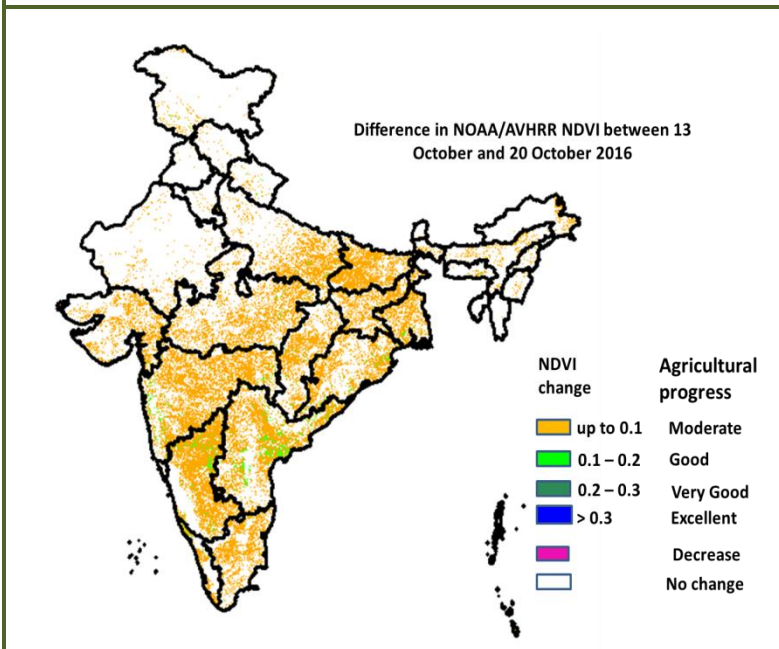
- Mean wind speed was between 0 to 4 knots over the entire country except isolated pockets of Chhattisgarh and Tamil Nadu, where it was between 4 to 8 knots.

NOAA/AVHRR NDVI composite ending on 20th October 2016 over Agricultural region of India



- Agricultural vigour is very good in Punjab, Haryana, Uttar Pradesh, East M.P, Bihar, Odisha, West Bengal, Vidarbha region, patches in Karnataka, Kerala and North-east where NDVI value are > 0.7, Agriculture vigour is good in north Andhra Pradesh, Telangana, Uttar Pradesh, Rajasthan, Gujarat, NDVI varies from 0.5 to 0.7. NDVI is moderate in west Rajasthan, West M.P, Madhya Maharashtra, Andhra Pradesh, Karnataka and Tamil Nadu (NDVI 0.3 to 0.5).

Difference in NOAA/AVHRR NDVI between 13th October and 20th October 2016



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

- NOAA/AVHRR NDVI composite maps for the week ending on 20th October 2016 for different States are given in Annexure II.

Weather Forecast for next 5 days valid upto 0830 hours of 26th October 2016

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- No significant change likely in maximum and minimum temperatures over northwest India and minimum temperatures are likely to fall by 1-2°C over central India during next 3-4 days.

5 Day Rainfall Forecast (MID DAY) 21st October 2016

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

% 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		

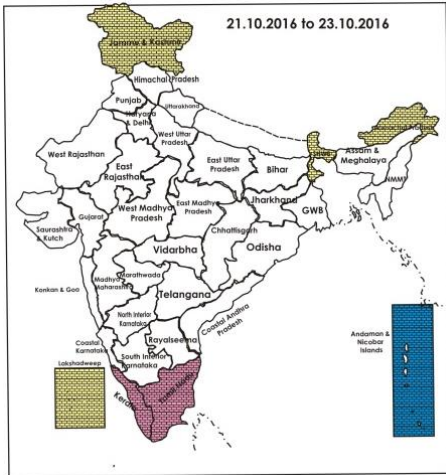
Weather Warning during next 5 days

- **21 October (Day 1):** Squally wind speed reaching 45-55 kmph gusting to 65 kmph would prevail over and around Andaman Islands. Fishermen are advised not to venture over Andaman Islands and adjoining sea area.
- **22 October (Day 2):** Heavy rain at isolated places very likely over Andaman & Nicobar Islands. Squally wind speed reaching 45-55 kmph gusting to 65 kmph would prevail over and around Andaman Islands. Fishermen are advised not to venture over Andaman Islands and adjoining sea area.
- **No weather warning from 23rd to 25th October.**

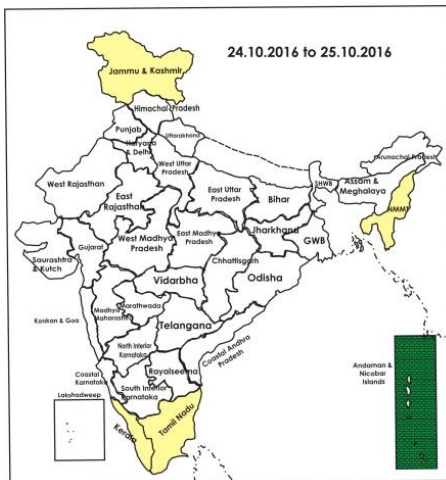
Weather Outlook for subsequent 2 days from 26th to 28th October 2016

- Rain at a few places very likely over northeast, adjoining east India Andaman & Nicobar Islands, extreme south Peninsular India and at isolated places over northeast India.

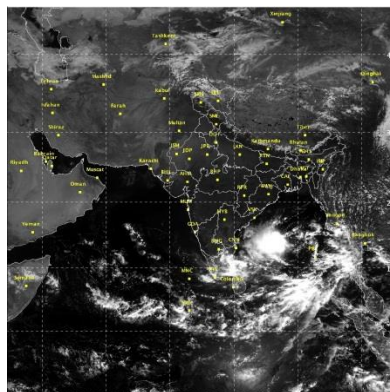
Weather Forecast Map (valid upto 0830 hours of 26th October 2016)



- 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, 21.10.2016, 0600 UTC



Salient Advisories

- As rain/thundershowers likely at most/ many places over **Andaman and Nicobar Islands** from 21st to 24th along with heavy rain very likely at isolated places on 22nd Oct., do not apply irrigation, application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation. In North, South and Middle Andaman, keep the rice field bunds open to drain out excess rain water to avoid lodging. As squally wind speed reaching 45-55 kmph gusting to 65 kmph would prevail over and around Andaman islands on 21st & 22nd Oct., provide support to banana and staking of vegetables to prevent the crops from lodging due to strong winds.
- Continue sowing of mustard, rapeseed, pea, gram and maize in **Bihar** and mustard, rapeseed, pea **Chhattisgarh**, sowing of mustard, pea and sesame in **Odisha**. Continue sowing of mustard and Bengal gram in **North Saurashtra** and **North Gujarat**. Undertake sowing of gram and mustard in **East Rajasthan** and sowing of gram, pea and mustard in **East Uttar Pradesh**. Complete sowing of *rabi* jowar, safflower and gram in **Madhya Maharashtra** and **Marathwada**. Continue sowing of toria, rapeseed and mustard in **Assam**. Continue nursery sowing of *Mundakan* rice in **Kerala**. Undertake sowing of chickpea, safflower, rabi maize, groundnut and sorghum in Telangana.
- As dry weather would prevail during the period, continue harvesting of groundnut in **South Interior Karnataka**, soybean and pulses in **Madhya Pradesh**, rice, maize and groundnut in **Chhattisgarh**, groundnut, sesame, bajra, green gram, cowpea, maize and picking of matured cotton in North West and North **Gujarat**, pulses in **South Gujarat**, maize, sorghum and pulses in **East Rajasthan** and harvesting of pearl millet, moong, moth bean in **west Rajasthan**, rice and pulses in **Himachal Pradesh**, rice and maize in **Jammu & Kashmir** and **Uttarakhand**. In **Royalaseema**, continue harvesting of groundnut, bajra and korra.

Detailed Zonewise Agromet Advisories

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



Banana



Rice



Sugarcane



Red gram

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala except Kasargod and Khozikode, Coimbatore, Dindigul, Madurai, Nilgiris, Theni, Tiruppur, Villupuram and Virudhunagar districts of Tamil Nadu, Udupi district of Coastal Karnataka, Bengaluru Rural, Kodagu, Mandya, Ramnagara and Shivamogga districts of South Interior Karnataka. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Kerala:**
 - In Southern and North Zone Zone, undertake nursery sowing of *Mundakan* rice, soak seed for 30 minutes in a solution of Pseudomonas culture @10g/litre of water per kg of seed. The above seed treatment can also be used to control sheath blight, sheath root, leaf spot disease etc.
 - In Central Zone, undertake land preparation for transplanting of *Mundakan* rice. Transplant the seedlings at 4-5 leaf stage. Continue nursey sowing of winter vegetables.
 - In Idukki and Wynad districts of High Altitude Zone, continue land preparation for sowing of Bhindi, Amaranthus and planting of banana; continue harvesting of cardamom.
 - In Northern Zone, to control bud rot disease in coconut, cut and remove the affected tissues from the crown in early stages of the disease and apply Bordeaux paste and protect it from rain falls. Adopt complete field sanitation in banana gardens. Remove all dried leaves. If infestation is noticed, spray the pseudo stem and fill the leaf axils with neem based insecticide @15 ml per litre of water at monthly intervals (starting from 5th month onwards).
 - **Andhra Pradesh:**
 - In Southern Zone, continue nursery sowing of medium duration and long duration rice, continue land preparation

for sowing of *rabi* red gram and other pulses in Chittoor district.

- In Rayalaseema, continue sowing of Bengal gram in Black soils in Ananthapuram District. Continue harvesting of groundnut, bajra and korra.
- In Scarce Rainfall Zone of Rayalaseema, pink boll worm incidence was noticed in cotton growing in black soils. To control, undertake spraying of Chloropyriphos @ 2 ml per litre + Nuvan @ 1ml per litre or profenophos @ 2ml per liter or Larvin @ 1.5g per liter of water.
- In Kadapa district of Southern Zone, present weather conditions are favorable for leaf spot disease in turmeric, to control, undertake spraying of Carbendazim @ 1 g or Mancozeb @ 2.5 g/litre of water.

▪ **Telangana:**

- In North Telangana Zone, undertake harvesting of soybean, when majority of leaves become golden yellow and ready to fall and the lowest pods are yellowish and dry and undertake sowing of Bengal gram after proper seed treatment.
- In South Telangana Zone, undertake sowing of chickpea and safflower under residual soil moisture conditions in Black soils and undertake sowing of rabi maize, sorghum, groundnut and sunflower under irrigated condition after proper seed treatment with fungicides.
- In Mahabubnagar, Nalgonda, Medak, Rangareddy, Khammam and Warangal districts (South Telangana Zone), prevailing weather conditions are congenial for the incidence of leaf spot on cotton. To control, spray Copper-Oxy-Chloride @ 30 g and Plantomycin @ 2g in 10 liters of water also prevailing weather conditions are congenial for gray mold incidence on castor, to control, spray Carbendazim @ 1g or Propiconazole @ 1 ml per litre of water.

▪ **Tamil Nadu:**

- In Ariyalur, Perambalur, Thanjavur, Thiruvarur and Trichy districts of Cauvery Delta Zone, continue nursery sowing of Late samba/Thaladi season rice (varieties ADT 38, ADT 46, ADT 49, improved white Ponni, TRY 3 and TKM 13). Continue transplanting of *Samba* rice.
- In Coimbatore, Tiruppur and Erode districts of Western Zone, continue sowing of millets, pulses and oil seeds.
- In Southern Zone (Kanniwadi), continue transplanting of *Samba* Rice and complete harvesting of *Kuruvai* rice.
- In Thoothukudi, Virudhunagar and Tirunelveli districts of South Zone, for sowing during the ensuing northeast monsoon season under rainfed conditions, select drought tolerant and pest and disease resistant varieties of cotton(KC 3 and PA 255), maize (CoH(M) 6), sorghum(K 8 and K12), green gram(CO 6), sunflower(CO 4), pearl millet (CO [Cu] 9), gingelly (TMV 5), coriander(CO 4) and senna(KKM 1) and continue main field and nursery bed preparation under dryland conditions for raising rainfed crops during the ensuing northeast monsoon season.
- In North Western Zone, undertake sowing of short duration (60-65 days) varieties of black gram (Co-6), Vamban-6,8, green gram variety Co-8, red gram varieties Co-7 (125 days), VBN -3 (105 days).
- In Nilgiri district of High Altitude Hilly Zone, in coffee, coco, rubber and coconut plantations, undertake cultivation of vegetable cowpea (Co-2) as intercrop.
- In High Rainfall Zone, undertake planting of pineapple, banana, cinnamon and ginger.
- In Cauvery Delta Zone, due to prevailing weather condition Leaf mite incidence is been noticed in the Samba paddy fields. To manage this, undertake spraying of Dicofol @ 600 ml per acre or wettable Sulphur @ 400 g per acre with 200 litre of water.

▪ **Karnataka:**

- In Bidar district of North East Transition Zone, undertake sowing of wheat, planting of sugarcane and continue sowing of Bengal gram, sorghum, safflower, niger under optimum soil moisture condition.
- In Chamrajnagar, Mandya, Kodagu and Mysuru districts of Southern Dry Zone, continue sowing of minor millets (finger millet (short duration varieties), kodo millet, foxtail millet, little millet etc) and short duration crops like pulses (cowpea, horse gram, green gram and black gram) under sufficient soil moisture condition. Take up repeated intercultural operations in already sown crops to conserve soil moisture and to control weeds.
- Complete sowing of *rabi* sorghum, continue sowing of safflower, chickpea and wheat in Dharwad, Belagavi and Haveri districts of North Transition Zone under sufficient soil moisture condition. Complete harvesting of soybean during morning hours.
- Continue sowing of sorghum, chickpea, wheat, sunflower and safflower wherever there is sufficient soil moisture condition in Vijayapura, Bagalkote and Gadag districts of North Dry Zone. Intercropping of *rabi* sorghum + chickpea (2: 1 row proportion) is recommended. Give preference to sowing of fodder crops. Taking advantage of dry weather, continue harvesting, threshing and drying of soybean, groundnut, onion and maize.
- Continue sowing of Bengal gram; undertake sowing of sorghum in Raichur, Kalaburgi, Ballari, Yadgir, Koppal districts of North East Dry Zone under sufficient moisture condition.
- In Bengaluru, Rural, Bengaluru Urban, Ramnagara, Chikaballapura and Kolar districts of Eastern Dry Zone, undertake sowing of short duration varieties of ragi and short duration crops like cowpea, field bean, sunflower, niger and Bengal gram under sufficient moisture condition.
- Continue sowing of cotton under irrigated condition in Central Dry Zone.
- Continue harvesting of matured groundnut in Southern Transition Zone; undertake picking of cotton in Hill Zone.
- Pod borer attack is noticed in short duration pigeon pea crop in North East Transition Zone and North East Dry Zone, spray Profenophos @ 2 ml or Thiodicarb @ 0.6 g or Methomyl @ 0.6 g per litre of water for control.

- Brown plant hopper is noticed in rice crop in North East Dry Zone; to control this pest, spray the crop with Chloropyriphos @ 2.0 ml or Monocrotophos @ 1.5 ml in one litre of water.
- There is chance of attack of stem borer in ginger, turmeric and cardamom in Hill Zone; for control, spray Chloropyriphos @ 2 ml /litre of water. For the control of tuber rot in ginger and turmeric, treat the tubers with Copper Oxychloride @ 3 g per litre of water and remove excess water from the field. As a precautionary measure, for the control of Katta Roga in black pepper spray 1% Bordeaux mixture solution and pour 5 litres of 0.2 % Copper Oxychloride solution to the root of the vine in the soil.
- Suitable varieties for sowing are given in Annexure III.

❖ Animal Husbandry

- In the Southern Zone and North Eastern Zones of Tamil Nadu, vaccinate dairy animals and cattle against hemorrhagic septicemia & black quarter. In western Zone, prevailing climate is conducive for mastitis disease in milch animals. Hence, clean the udder with 1% KMnO₄ before and after milking.
- In Scarce Rainfall Zone of Rayalaseema of Andhra Pradesh, vaccinate sheep in time against sheep pox and keep them in dry sheds.
- In Telangana, prevailing weather conditions are congenial for the occurrence of Ranikhet disease in poultry, ET, sheep pox, Hemorrhagic Septicemia in Cattle, Buffaloes and Black Quarter in Cattle. To prevent the diseases, vaccinate the poultry and animals.
- Vaccinate (ET vaccine) sheep and goats against Enterotoxemia in North Dry Zone.

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



Banana



Rice



Cauliflower



Land preparation/Sowing

- **Realised Rainfall:** Rainfall occurred in Dibang Valley, Lower Dibang Valley, Papumpara, Upper Siang, Upper Subansari and West Siang districts of Arunachal Pradesh; Baksa, Barpeta, Bongaigaon, Chirang, Dhubri, Goalpara, Karbi Anglong, Kokrajhar, Lakhimpur, Morigaon, Nalbari and Sonitpur districts of Assam; East Khasi Hills and Ri-Bhoi districts of Meghalaya; Lunglei Saiha and Serchhip districts of Mizoram. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Assam, Meghalaya & Arunachal Pradesh:**
 - In Dhemaji, Lakhimpur, Sonitpur, Dibrugarh, Golghat, Jorhat and Sibsagar districts of Upper Brahmaputra Valley Zone of Assam, continue land preparation and sowing of toria and planting of potato and nursery sowing of early cauliflower, radish and brinjal.
 - In Karimganj, Hailakandi and Cachar districts of Barak Valley Zone of Assam, continue nursery raising for winter vegetables and planting of potato. Complete sowing of rapeseed/mustard at the earliest.
 - In Karbi Anglong and NC Hills districts of Hill Zone of Assam, continue nursery raising of winter vegetables and transplanting of early cauliflower and sowing of onion.
 - In Marigaon and Nagaon districts of Central Brahmaputra Valley Zone of Assam, continue sowing of rabi pulses, rapeseed/mustard and oil seeds, nursery sowing of brinjal, cole crops and early radish. Undertake land preparation for sowing of wheat.
 - In Barpeta, Bongaigaoin, Dhubri and Goalpara districts of Lower Brahmaputra Valley Zone of Assam, continue sowing of pumpkin, radish, onion, planting of early potato and nursery preparation of cabbage, cauliflower.
 - In North Bank Plain Zone of Assam, continue land preparation and sowing of rapeseed/mustard. Farmers are advised to adopt relay cropping with pea in the rice fields 20- 25 days before harvesting the Sali paddy, suitable varieties of pea such as T-136, bonneville etc. should be sown maintaining a spacing of 30cm x 10cm.
 - In Meghalaya, continue nursery sowing/transplanting of cauliflower/cabbage/broccoli and harvesting of matured soybean and groundnut.
 - In Arunachal Pradesh, continue nursery sowing of winter vegetables and sowing of pea. Complete sowing of black gram and green gram in rice fallow of *jhum* fields. Undertake harvesting of soybean at the earliest.
 - In Hill Zone of Assam, spray Copper Oxychloride @ 0.3% at an interval of 7-10 days or alternatively Carbendazim @ 0.05% can be sprayed at an interval of 12-15 days against infestation of Cercospora leaf spot in black gram and green gram at vegetative stage.
 - In Upper Brahmaputra Valley Zone of Assam, due to favourable weather conditions symptoms of blast disease is observed in *sali* rice. To control the disease, spray Kitazin @ 1 ml/litre of water.

- In North Bank Plain Zone of Assam, to control rice bug infestation at milky and dough stage of Sali rice above ETL. Apply Malathion 5% dust @ 20 kg/ha to control rice bug infestation in *Sali* rice.
- In Central Brahmaputra Valley Zone of Assam, attack of leaf folder and aphids are seen in many fields of black gram and green gram in Nagaon and Marigaon district. Farmers are advised to spray Quinalphos @ 2.5 ml/litre of water or Dimethoate @ 2ml/litre of water.
- In Meghalaya, to control gundhi bug/stem borer in upland rice at milky to dough stage, spray Imidacloprid 17.8 SC @ 2ml/litre of water and Chloropyriphos @ 0.02% or Monocrotophos @ 0.04%.
- In Arunachal Pradesh, apply Bordeaux paste on the tree trunk of citrus fruits at fruiting stage. In case of incidence of citrus mite spray Dicofol @ 1.5ml/litre of water. Incorporate Clothianidin 50 WDG @ 4g/plant in base region of the plant against shoot grab.
- **Nagaland, Manipur, Mizoram and Tripura:**
- In Nagaland, continue land preparation and sowing of toria and *rabi* maize. Also continue nursery preparation for cabbage, cauliflower, knol-khol, broccoli, radish and tomato. Undertake timely harvesting of *kharif* crops. Undertake seed treatment in all *rabi* crops before sowing with fungicides (@ 2 to 3 g/kg seed) prevents seed borne diseases, promotes better germination and crop stand leading to higher productivity.
- In Manipur, continue sowing of garden pea and nursery raising and transplanting of cole crops/onion and for planting of potato. Continue land preparation for sowing rapeseed/mustard. Undertake harvesting of *Kharif* rice, soybean and groundnut.
- In Mizoram, continue harvesting of *khasi* mandarin/acid lime, passion fruit, banana, *kharif* maize and sowing of green gram, black gram and French bean.
- In Tripura, continue land preparation for planting of potato, land preparation and sowing of sesame and transplanting of early winter vegetables such as cabbage, radish, brinjal etc. Drain out water from the fields of *Aman* rice 10 days before harvesting.
- In Nagaland, spray Streptocycline 2g/5litre of water against bacterial blight in TRC/WRC rice.
- In Manipur, to control neck blast/sheath blight/sheath rot/smut disease in main *kharif* rice, spray Tricyclazole @ 15gm/ or Propiconazole @ 15ml/15 litres of water.
- In Mizoram, apply insecticide like Imidacloprid 0.5 ml or Phosolone 1.5 ml or Acephate 1.0 g or Dimethoate 2 ml/litre of water against banana rhizome weevil disease in banana.
- Suitable varieties for sowing are given in Annexure III.
- ❖ **Animal Husbandry**
- In Assam, undertake vaccination of cattle and goat against BQ, HS, Foot and mouth disease as well as anthrax disease. Vaccination (RDF1) against Ranikhet disease in one week old chicks and against Gamboro disease in two weeks old chicks may be carried out.
- In Tripura, the present weather condition is favorable for infestation of round worm, flukes and tapeworms in cattle. De-worming may be done under recommendation and supervision of authorized practitioner.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Maize



Mustard



Rice



Land preparation/Sowing

- **Realised Rainfall:** Weather remained mainly dry/dry over the region.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, continue harvesting of matured rice during morning hours. Maintain water level of 8-10 cm in fields of late varieties of rice at grain filling stage. Undertake harvesting of matured groundnut. Soft wood grafting may be started in cashew nursery. Undertake preparatory tillage for sowing of seasonal fodder crops viz. maize, multicut sorghum, sorghum, bajra in Sindhudurg region.
 - In Madhya Maharashtra, complete sowing of *rabi* jowar, Bengal gram and safflower. Undertake harvesting of early maturing rice in morning hours in Western Ghat Region. Maintain water level of 8-10 cm in late maturing rice by bunding in Western Ghat Region. Complete harvesting of matured groundnut and jowar. Undertake nursery sowing for onion between October to November. At the time of transplanting of onion, dip roots of onion seedlings in Carbendazim @ 1 g per litre of solution. Undertake sowing of wheat between October to November. Undertake nursery sowing of tomato, chilli, brinjal & cole crops.
 - In Marathwada, complete sowing of *rabi* jowar, Bengal gram and safflower. Complete preparatory tillage and undertake planting of pre seasonal sugarcane between October to November. Undertake thinning in *rabi* jowar for

maintaining desired plant population. Undertake picking of cotton early in the morning. Undertake harvesting of matured groundnut and jowar.

- In Vidarbha, undertake harvesting of early maturing rice in East Vidarbha region. Maintain 8-10 cm water level in rice fields of late sown/long duration varieties in Nagpur, Bhandara, Gondia, Chandrapur and Gadchiroli districts. Complete sowing of Bengal gram and safflower. Undertake harvesting of matured groundnut and jowar. Continue nursery sowing of vegetables.
- Due to partly cloudy weather conditions and cold nights in Madhya Maharashtra, there may be incidence of powdery mildew in vine yards ; spray 80% WS @ 2 g per litre of water. If higher incidence are observed spray Dipheconazole @ ½ ml + Potassium bicarbonate @ 5 g per litre of water.
- Due to partly cloudy weather conditions in south Konkan, there may be incidence of mango hoppers on new flush of mango; spray 25 % Cypermethrin @ 3 ml or 2.8 % Deltamethrin @ 9 ml or 20 % Fenvelarate 5 ml per 10 litres of water.
- **Gujarat:**
 - In Rajkot, Amreli, Jamnagar and Surendranagar districts of North Saurashtra Zone, continue sowing of chickpea, purva til, ajwain and mustard; continue sowing of garlic where irrigation facility is available.
 - Continue land preparation/sowing of mustard, gram, carrot and *rabi* fennel in Kutch district of North West Zone and mustard, gram and *rabi* fennel in North Gujarat Zone under optimum moisture condition; Continue harvesting of groundnut, sesame, bajra, green gram, cowpea, maize and picking of matured cotton in North West Zone and North Gujarat Zone.
 - In South Gujarat Zone, undertake planting of sugarcane; continue nursery preparation of *rabi* vegetable crops like chilli, tomato and brinjal, land preparation for sowing of sorghum, picking of matured capsules of castor during early morning hours to avoid shattering. To prevent dropping of squares and small bolls in cotton, spray Planofix @ 1 ml/4-5 litres of water.
 - In South Gujarat Heavy Rainfall Zone, continue land preparation for sowing of *rabi* pulses and other *rabi* crops, continue planting of sugarcane and continue nursery preparation for cole crops. Continue harvesting of matured pulses.
 - Present temperature and low humidity favours infestation of thrips, jassid and mealy bug in cotton, jassid and white fly in castor in North West Zone and North Gujarat Zone; to control, spray Imidacloprid 17.8 % @ 5 ml or Thiomethoxam @ 6 g in 10 litres of water.
 - Due to prevailing weather conditions there is chance of infestation of pink boll worm in cotton in North Saurashtra Zone; install 5 pheromone traps/acre for monitoring of pest; for control, spray Acephate 75 % SP @ 15 g and Abamectin 10 ml/10 litres of water.
 - Suitable varieties for sowing are given in Annexure III.
- ❖ **Animal Husbandry**
 - In Maharashtra, farmers are advised to provide good quality drinking water and green fodder to animals. Also protect the animals from October heat and take care there should not be water stagnation in animal shed.
 - Keep animal shed hygienic and clean to avoid flies and mosquitoes in Gujarat State.

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



Red gram



Okra



Maize



Rice

- **Realised Rainfall:** Rainfall occurred all districts of Andaman & Nicobar Islands; Cooch Behar, Darjeeling, Jalpaiguri, districts of Sub Himalayan West Bengal, East Sikkim, North Sikkim and South Sikkim districts of Sikkim. Kishanganj district of Bihar, Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Odisha:**
 - In East and South Eastern Coastal Plain Zone, continue land preparation and sowing of mustard (varieties like Parbhati, Anuradha, TS-29 & M-27), groundnut and sesame. Continue nursery raising of cole crops such as cabbage and cauliflower for early planting. Continue harvesting of early sown kharif groundnut. Make bundles in such a way that the pods will remain up side and the plants down under sun for drying of pods and thresh them.
 - In Mayurbhanj and Keonjhar districts, continue sowing of green pea in fallow uplands. Grow High Yielding varieties such as Rachana, Arkel and T -163. Use 30 kg seeds/acre and continue nursery raising of tomato, cauliflower and cabbage.

- In Malkangiri district of South Eastern Ghat Zone, due to the high humidity and cloudy weather, there is chance of bacterial leaf blight in Kharif rice, spray Streptocycline 1 g along with 20 g Copper oxy chloride in 10 litres of water.
- In North Eastern Coastal Plain Zone, prevailing cloudy weather with high humidity will increase the incidence of blast and sheath blight of Kharif Rice. To control it spray Tebuconazole+Trifloxystrobin 75WG@200g/ha in 500 litres of water or or spray Tricyclazole @ 0.5g/litre of water.
- In Kalahandi and Nuapara districts of Western Undulating Zone, sucking pests like aphids, jassids infestation may occur on cotton crop at square formation to flowering stage. Spray Buprofezin 2ml/litre water for controlling sucking pests.
- In North Central Plateau Zone, if Helicoverpa infestation has been found in maize, spray 100 L.E. NPV during morning and evening hours. If stem borer attack is noticed, apply 1 g Furadan in the leaf whorl or spray 2 ml Chloropyriphos or 1.5 ml Phosphamidon in 1 litre of water and repeat the spraying after 15 days of first spraying.
- In East and South Eastern Coastal Plain Zone and North Central Plateau Zone, stem borer infestation and Bacterial Leaf Blight is noticed in rice. Spray Tryzophos or Chloropyriphos @ 2 ml per litre water to control Stem borer. For control of Bacterial Leaf Blight, spray 200 g Plantomycin in 200 litres of water per acre. Also high humidity, low temperature and cloudy weather favours the infestation of blast in rice. Spray 1 g Beam and 1.5 g Hinosan in 2 litres of water twice at 15 days interval.
- In Mid Central Table Land Zone, high humidity with low night temperature condition is favourable for spread of blast disease. To control, spray Tricyclazole @ 0.5g/litre of water. To control leaf folder and stem borer, spray Deltamethrin +Triazophos @ 2ml/litre of water or Prophenophos 50 EC @ 2 ml/litre of water and use 200 litre /acre.
- **West Bengal:**
 - In Burdwan, Murshidabad, Nadia, North 24 Parganas districts of New Alluvial Zone, continue nursery sowing of onion, cabbage, cauliflower. Keep 5-7cm water in the rice fields at grain formation stage.
 - In Purba Midnapore and South 24-parganas districts of Coastal Saline Zone, undertake land preparation for sowing of early mustard. Before seed sowing, apply Azophos @ 2kg/bigha with compost as field preparation. Prepare upland for seedling preparation of winter vegetables like cabbage, cauliflower, knolkhol, chilli, tomato etc.
 - In Laterite and Red Soil Zone, drain out water from the matured rice fields 10 days before harvesting. Harvest the matured crop and keep the rice bundles in the field for few days for sun drying.
 - In Hill Zone, due to high humidity, yellow stem borer and blast disease may be found in rice. Spray Azadirachtin 0.03% (300PPM) neem oil based WSP @ 2000 g/ha in 1000 litre of water to control stem borer and spray Tricyclazole 75% WP @ 0.5 g/litre of water on a non rainy day to control blast disease.
 - In New Alluvial Zone, in the present weather condition, there is chance of attack of stem borer and rice hispa and Brown spot & Blast may be found in Aman rice at flowering stage. Apply Chlorapyriphos 2.5ml or Triazophos @ 2ml per litre of water against rice hispa and apply Carbendazim + Mancozeb 2.5g/litre of water at 10-12 days interval against brown spot & Blast.
 - In Old Alluvial Zone, prevailing weather condition is favourable for attack of green leaf hopper and rice bug in Aman rice. To control green leaf hopper, spray Acetamiprid @ 1 g/5litre of water and to control rice bug, spray Carbaryl 50WP 2g/litre of water or spray Dichlorovs @ 1 g/litre of water.
 - In Terai Zone, for control of blast/brown spot, sheath blight in rice, apply Tricyclazole @ 0.75g/litre of water against blast/brown spot and Validamycin @ 2ml/litre of water against sheath blight. For Gundhi bug apply Fipronil SSC @ 1ml/litre of water. Also to control aphids, white fly, jassid and mosaic in legume vegetables, apply Thiamethoxam @ 1g/3 litre or Acetamiprid @ 1ml/litre of water.
- **Andaman and Nicobar Islands:**
 - As rain/thundershowers likely at most/ many places over Andaman and Nicobar Islands from 21st to 24th along with heavy rain very likely at isolated places on 22nd Oct., do not apply irrigation, application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.
 - In North, South and Middle Andaman, keep the rice field bunds open to drain out excess rain water to avoid lodging. As squally wind speed reaching 45-55 kmph gusting to 65 kmph would prevail over and around Andaman islands on 21st & 22nd Oct., provide support to banana and staking of vegetables to prevent the crops from lodging due to strong winds.
 - In North, South and Middle Andaman, clear the drainage channels in vegetable fields to avoid stagnation of rain water.
- **Bihar:**
 - In Araria, Katihar, Kishanganj, Madhepura, Purnea, Saharsa and Supaul districts in North East Alluvial Zone, continue sowing of mustard, rapeseed, pulses, pea, sunflower and maize. Before sowing seeds must be treated with Carbendizin @ 2g/kg of seed. Maintain 5 cm standing water in the rice fields.
 - In Darbhanga, East Champaran, Gopalganj, Samastipur, West Champaran districts of North West Alluvial Plain Zone, undertake sowing of garlic, mustard, rapeseed, sunflower, lentil, coriander and land preparation for sowing of gram, pea, rajma, methi and potato and planting of sugarcane.
 - In South Bihar Alluvial Zone, undertake land preparation for sowing of potato and transplanting of mature

seedlings of cauliflower, cabbage and tomato and sowing of carrot may be done in raised bed.

- In North East Alluvial Zone, humidity & temperature conditions are favourable for Brown plant hopper attack in rice. To manage it, spray with Imidacloprid 17.8% SL @ 0.5ml/litre of water during evening hours.
- In South Bihar Alluvial Zone, in present weather condition, there is chance of attack brown plant hooper in rice, If insect population is above ETL, spray Imidacloprid 17.8 % SC @ 1ml/3 litres of water or Fenobucarb 50 EC @ 1 ml/litre of water.

▪ **Jharkhand:**

- In South Eastern Plateau Zone, in fallow uplands, undertake sowing of mustard. Before sowing, treat the seed with Bavistin @ 2 g per kg of seed. Undertake planting of potato.
- In Western Plateau Zone, undertake harvesting of matured rice. In harvested fields, undertake land preparation and sowing of toria, mustard and Bengal gram.
- In Central and North Eastern parts of Jharkhand, undertake sowing of toria and mustard Also undertake sowing of gram and planting of potato.
- In South Eastern Plateau Zone, present weather is conducive for occurrence of pests like hairy caterpillar on groundnut crop. So, in early stage of caterpillar, apply Dichlorvos @ 0.5 ml per litre of water. For control of adult caterpillar, provide bamboo perch in the fields for predatory birds.
- In South Eastern Plateau Zone, low land rice crop are at milky 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.
- In South Eastern Plateau Zone, there may be attack of leaf eating and sucking pests in pigeon pea, for control, spray Monochrotophos @ 1 ml per liter of water by mixing Teepol @ 0.5 ml per liter of water.
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In Andaman and Nicobar Islands, keep cattles in doors during heavy rainfall and high wind period.
- In Jharkhand, weather is favourable for Foot and Mouth Disease (FMD), vaccinate FMD vaccine to the cattle with the consultation of veterinary doctor. Also due to decrease in temperature, PPR Disease may increase in Goat & Sheep. farmer are advised to vaccinate their animal with PPR vaccine @ 1ml S/C.
- In Terai Zone of West Bengal, vaccinate cattle against BQ and HS (BQ, HS Vaccine/ HS+BQ).

CENTRAL INDIA [M.P., CHHATTISGARH]



Maize



Rice



Soybean



Land preparation/Sowing

- **Realised Rainfall:** Weather remained dry over the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - In Gwalior, Bhind, Morena, Guna, Ashoknagar and Shivpuri districts, continue sowing mustard and planting of potato.
 - In Chhindwara and Betul districts, continue nursery preparation for tomato, chilli, brinjal and nursery sowing of cabbage, cauliflower and sowing of garlic, coriander etc. Continue harvesting of matured maize, green gram, black gram and soybean. Undertake sowing of wheat, mustard, toria, linseed and safflower with available soil moisture.
 - In Vindhyan Plateu Zone, continue harvesting of matured soybean, green gram and black gram. Undertake nursery preparation for winter vegetables like brinjal, chilli, cabbage, cauliflower, tomato and onion and sowing of green pea and garlic.
 - In Tikamgarh, Chhatarpur and Datia districts, continue sowing of radish, fenugreek, spinach, coriander and turnip. Continue seed bed preparation for sowing of onion and field preparation for sowing of potato and garlic. Continue sowing of linseed and mustard. Undertake sowing of lentil, pea and chickpea.
 - In Indore and Ujjain districts, continue harvesting of soybean and maize. Continue nursery preparation for early winter vegetables, onion and field preparation for sowing of potato, pea and garlic. Continue transplanting cauliflower and cabbage. Continue sowing of gram.
 - In Jhabua, Alirajpur and Dhar districts, continue harvesting of matured maize and soybean. Continue nursery preparation for winter vegetables and field preparation for pea. Continue sowing of mustard and early variety of gram.
 - In Jabalpur, Rewa, Satna districts, continue sowing of mustard and pea and harvesting of matured soybean, urad

and moong. Continue sowing of gram and lentil. Undertake nursery preparation for cauliflower and cabbage.

- In Jhabua Hill Zone, due to humid weather there are chances of attack of shoot borer in ginger and turmeric, spray Triazophos @ 2 ml/litre of water.

▪ **Chhattisgarh:**

- In North Chhattisgarh, continue transplanting of winter vegetables like cauliflower, cabbage, chilli, tomato, brinjal etc., continue sowing of *rabi* crops like toria, mustard, linseed, green pea and potato. Complete harvesting of maize, rice, groundnut, finger millet. Continue sowing of radish, turnip, spinach and carrot.
- In Central Chhattisgarh, continue sowing of *rabi* crops like horse gram, green gram, black gram, chickpea, linseed, toria etc. Continue nursery sowing of cauliflower, cabbage, KnolKhol, tomato, brinjal, chillies and capsicum.
- In South Chhattisgarh, continue sowing of toria and harvesting of matured short duration variety of rice.
- In Chhattisgarh, due to humid weather incidence of blast is observed in rice crop, spray Tricyclazole @ 120 g/acre and repeat after 10-12 days as per requirement.
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In Chhattisgarh, provide concentrate feed to milch animals mixed with dry and green fodder and insure for enrich diet having protein, carbohydrate, fat, vitamins etc.
- In Madhya Pradesh, keep cattle in dry and shaded place and provide green fodder, fresh and clean water. Vaccinate the goats for control of PPR disease.

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



Mustard



Maize



Rice



Land preparation/Sowing

- **Realised Rainfall:** Weather remained dry over the region.

• **Advisories:**

▪ **Rajasthan:**

- In East Rajasthan, in Bhilwara, Chittorgarh, Rajsamand, Sirohi and Udaipur districts, undertake harvesting of matured maize, pulses. Undertake sowing of gram and mustard.
- In Arid Western Plain Zone, in Barmer, Churu, Jalore, Jodhpur, Pali districts, continue land preparation for sowing of taramira, gram, mustard crops, garlic and onion. In Jaisalmer and Bikaner districts, undertake sowing of mustard and gram in irrigated areas and undertake land preparation for sowing of fodder crops like Lucerne, Berseem, oat. Undertake sowing of leafy vegetables like spinach, coriander.
- In Alwar, Bharatpur, Dhauipur, Karauli, Sawaimadhapur districts of Flood Prone Eastern Plain Zone, undertake sowing of barley, apply Quinalphos 1.5% dust @ 25 kg per hectare at last ploughing to manage soil borne pests and treat seed with 3g thiram/kg seeds before sowing. Undertake sowing of lentil and mustard after seed treatment. Undertake land preparation for planting of potato.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganaganagar, continue sowing of mustard and gram. Apply irrigation to paddy, narma and desi cotton crops as per requirement.
- In Jaipur, Ajmer, Tonk and Dausa districts of Semi-Arid Eastern Plain Zone, undertake sowing of early pea, gram, taramira and mustard. Undertake sowing of desi carrot and radish.
- In Irrigated North Western Plain Zone, Hanumangarh and Sriganaganagar, prevailing weather condition is congenial for attack of pyrilla in sugarcane, for control, spray Dimethoate 30 EC @ 1 litre per hectare.

▪ **Jammu & Kashmir:**

- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, continue harvesting of matured rice, maize and mash pods. Undertake sowing of oats, mustard and gram. Continue sowing of berseem as fodder for animals. Continue nursery sowing of late cauliflower (Snow Ball Group) and onion crop and sowing of leafy vegetable like spinach, methi and coriander. Continue land preparations for sowing of wheat crop.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, harvest the early maturing varieties of rice. Continue thinning and hoeing in 15-20 days old toria crop. Continue harvesting of matured maize, bajra, moong and mash. The fields that have been vacant after harvesting are required to be ploughed and planked for conservation of moisture to keep them ready for sowing of *rabi* crops.
- In Valley Temperate Zone of Jammu and Kashmir, continue harvesting of rice, maize and kharif pulses. Continue field preparation for sowing of brown sarson, oat, pea, lentil, spinach, methi, garlic and berseem.

- In Cold Arid Zone, farmers are advised to continue harvesting of matured vegetable crops. Undertake transplanting of cabbage, cauliflower, KnolKhol, Kale, broccoli and lettuce before first fortnight of October in greenhouses. Transplant roots of spinach beet for early harvest. Direct seed sowing of spinach, turnip & radish should be done in greenhouses.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, continue sowing of winter potato and nursery raising /sowing of onion, radish, carrot, turnip, garlic and methi. Continue transplanting of onion, knolkhol, cabbage, cauliflower and broccoli.
- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone of Jammu and Kashmir, farmers are advised to sprinkle the nursery beds of vegetable (Cole) crops with 0.2% Bavistine solution (2g/litre of water) to control damping off.
- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, due to the prevailing weather conditions, rice crop (Basmati) may be infected with brown spot, to control, spray the Mancozeb @ 0.25%. Give 2-3 sprays at 15 days interval.
- **Uttarakhand:**
- In Udhm Singh Nagar district of Bhabar and Tarai Zone, continue harvesting of early and mid season variety of paddy and harvesting of maize. Continue sowing of mustard crop and apply half dose of Nitrogen as top dressing after 4-5 days of irrigation at 20 days after sowing. Continue transplanting of late variety of cauliflower and weeding and hoeing in the brinjal crop
- In TehriGarhwal, Chamoli, Champawat, Pithoragarh, Rudraprayag and Uttarkashi districts of Hill Zone, undertake sowing of wheat. Continue nursery raising of onion crop. Undertake sowing of carrot, spinach, methi, dhania and radish. Give light irrigation to all vegetable crops.
- In Dehradun, Pauri and Haridwar districts of Sub Humid Sub Tropic Zone, give third dose of nitrogen @ 20kg/hectare to late sown paddy crop. Continue sowing of toria and potato under optimum soil moisture condition. Continue nursery raising of medium maturing cabbage and cauliflower.
- In Bhabar and Tarai Zone, due to prevailing weather condition there may be chances of attack of leaf blight disease in Maize crop, for control spray Mancozeb @ 1.5 kg per 750 to 800 litres of water per hectare.
- In Bhabar and Tarai Zone, continue sowing of potato of varieties KufriAshoka or KufriJyoti. Undertake picking up of capsicum, tomato from the polyhouse.
- In Dehradun, Pauri and Haridwar districts of Sub Humid Sub Tropic Zone, under prevailing weather conditions there is possibility of incidence of hopper, shoot borer, blight and blast attack on paddy crop and downy mildew on cucurbitaceous crops. Take proper plat protection measures to minimize the damage due to above pest/disease.
- **Himachal Pradesh:**
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, Continue land preparation and sowing of mustard, gobhi sarson, early pea, gram, lentil and early wheat in lower region. Continue sowing of turnip and radish in lower rainfed areas. Continue nursery sowing of Chinese cabbage and direct sowing of radish, carrot, broccoli, lettuce. Continue planting of onion. Continue sowing of potato in lower and mid hill regions. Continue sowing of berseem, lucerne and oats for fodder. Continue sowing of mushroom and maintain room temperature 18-22°C for successful cultivation of dhingri mushroom. Undertake nursery sowing of cauliflower (late group), cabbage, knolkhol, broccoli and chinese cabbage and direct sowing of radish, carrot, turnip, palak and methi in mid hill areas. Undertake transplanting of mid season cauliflower in low hill areas.
- In High Hills Temperate Dry Zone of Himachal Pradesh, in Kinnaur and Lahaul&Spiti, Continue harvesting of matured potato, oat crops.
- 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 Redomil M-Z @ 25 gm per litre of water, repeat at 15 days interval.
- 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.
- In Mild Hills Sub-Humid Zone, in Kullu and Mandi districts apply Blitox @ 600 g per 200 litres of water after harvesting of Apple and Pomegranate orchards.
- In Mild Hills Sub-Humid Zone, in Kullu and Mandi districts, present weather is conducive for attack of woolly aphids in Apple, for control spray Marshal @ 200ml per 200 litres of water.
- In Sub-Montane and Low Hills Sub-Tropical Zone, in Una, Hamirpur, Kangra and Chamba districts, weather is conducive for attack of fruit borer, diamond back moth in vegetables (brinjal, cauliflower, cabbage, tomato etc), for control spray Spinosad @ 1.0 ml per 4 litres of water.
- **Punjab, Haryana and Delhi:**
- In Punjab, in Fazilka, Ferozepur and Faridkot districts, farmers are advised to harvest matured rice. To avoid the shedding of flowers and bolls, maintain optimum moisture in cotton crop during flowering and fruiting stages. Also apply irrigation in maize at flowering/tasselling stage. Complete the planting of sugarcane in the first fortnight of October. Undertake sowing of gram varieties PDG-4, PDG-3 under rainfed conditions and mid season pea varieties Punjab 89 and Mithi Phali and raya varieties PBR 357, RLC-1, PBR-210, RLM-619, PBR-91 under irrigated conditions and PBR-97 under rainfed conditions and RLC-1, PBR 210 and PBR 91 varieties are recommended for South-Western districts.

- In Western Zone of Punjab, continue transplanting of seedlings (4-6 weeks old) of cauliflower. Undertake sowing of late season varieties of cauliflower i.e. can be started. Complete sowing of early varieties of potato and undertake sowing of “desi” varieties of radish (Punjab Pasand), turnip (L-1) and carrot (Punjab Black Beauty, Punjab Carrot Red and PC 34), using 4-5 kg seed rate of radish and carrot and 2-3 kg seed rate of turnip per acre. Keep ridges 45 cm and plants 7.5 cm apart. Apply irrigation in rice and cotton as per requirement. Undertake sowing wheat varieties (PBW 725, PBW 677, HD-3086, WH 1105, PBW 621, HD 2967) and durum wheat (WHD 943 and PDW 29) under irrigated conditions and PBW 660 and PBW-644 under rainfed conditions last week of October.
- In Undulating Plain Zone, apply irrigation in vegetable nursery as per the requirement and undertake planting of sugarcane, cauliflower, cabbage and sowing of other seasonal vegetables. Undertake harvesting of matured rice and pulses. Undertake sowing of raya varieties RLC3, PBR357, PBR210 under irrigated conditions.
- In Central Plain Zone of Punjab, continue sowing of pea and planting of 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 sowing of arhar, green gram and black gram. Undertake harvesting and threshing of matured bajra crop and picking of cotton crops after sunrise. Undertake field preparation for sowing of mustard, raya and gram.
- In Eastern Zone of Haryana, continue sowing of fodder crops such as guar, maize and bajra. Undertake harvesting of matured rice crop.
- In Western Semi-Arid Zone of Delhi, field preparation may be started for sowing of early mustard- Pusa Sarson-25, Pusa Sarson-26, Pusa Agrni, Pusa Taraka, Pusa Mahak and early pea (Cultivars- Pusa pragati, Pant matar-3, Arkilet). Farmers are advised to do arrangement for quality seeds. Weather is suitable for sowing of carrot in the raised bed. Recommended cultivars: Pusa Rudhira. Seed rate-4.0 kg/acre. Application of FYM, potash and phosphorus fertilizer is recommended. Seed treatment with Captan @ 2 g per kilogram is advised. Undertake transplanting of green onion seedling in the prepared fields, mature seedlings of cauliflower, cabbage, broccoli and tomato may also be done in raised bed and planting of early potato. Farmers are advised to apply irrigation in rice at grain formation stage for higher yield and stop irrigation two weeks before harvesting. After harvesting, crop should be dried in the field for 2-3 days and thereafter threshing should be done.
- In Central Plain Zone and Western Zone of Punjab, sheath blight may be noticed in rice. Control the same by spraying 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.
- **Uttar Pradesh:**
 - In Central Plain Zone of Uttar Pradesh, continue sowing of gram, pea, mustard, maize and garlic, planting of sugarcane and potato. Continue transplanting of mid season brinjal, tomato, cauliflower, tomato and capsicum. Continue sowing of winter vegetable like spinach, fenugreek, coriander, carrot, radish, tomato etc. Undertake nursery sowing of cabbage.
 - In Eastern Plain Zone of Uttar Pradesh, continue harvesting of matured paddy. Undertake sowing of garlic, coriander, fenugreek. Continue sowing of toria, potato, vegetable pea. Continue transplanting of cauliflower, cabbage, brinjal, chilli and tomato.
 - In North eastern plain Zone of Uttar Pradesh, continue harvesting of matured kharif maize, paddy, sesame, groundnut, jowar and cowpea.
 - In Western Plain Zone of Uttar Pradesh, continue sowing of mustard, before sowing the seeds, apply Captan or Thiram @ 2.5 g per kg of seeds. Continue nursery sowing of broccoli, late cauliflower, cabbage and tomato and sowing of early potato.
 - In Bundelkhand Zone of Uttar Pradesh, continue sowing of linseed, mustard, vegetable peas, gram, pea, lentil, and toria. Continue transplanting of late sowing brinjal, chilli, tomato, cabbage, cauliflower. Continue sowing of radish, cabbage, carrot, coriander and sowing of barseem for fodder crop.
 - In Central Plain Zone of East Uttar Pradesh due to prevailing weather condition, there may be chances of attack of bacterial disease and bacterial blight in paddy, for control, spray Agromycin-100 @ 75 g or Streptocycline @ 15 gm or Copper oxychloride @ 500 g in 500-600 litres of water, 2 to 3 times at an interval of 10 days.
 - In Central Plain Zone of East Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of pod borer in early pigeon pea, for control, spray Monocrotophos 36 EC @ 800 ml or Carbaryl 50% soluble granule @ 2 kg in 800 litres of water.
 - In Eastern Plain Zone and Central Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of gundhi bug in paddy, for control, broadcast Malathion 5% or Linden 13% dust @ 20 to 25 kg per hectare after flowering stage.
 - Suitable varieties for sowing are given in Annexure III.
- ❖ **Horticulture:**
 - In Central Plain Zone of East Uttar Pradesh due to prevailing weather condition, there may be chances of attack of mosaic in papaya, for control, spray Mencozeb @ 2 ml per litres of water.
 - In Irrigated North Western Plain Zone of Rajasthan, there may be fruit drops in kinnow fruits, for control spray mixture of Carbendazim 50 WP @ 1 g per litre of water or Propineb 70 WP @ 2 g and Gibbrellic acid @ 20 mg

per litre of water.

- In Arid Western Plain Zone, in Jaisalmer and Bikaner districts, ber plants are in flowering stage, avoid heavy irrigation to prevent flower drop.
- In Una, Hamirpur, Kangra and Chamba districts of Himachal Pradesh, weather is conducive for leaf minor in new growth of citrus on citrus plants, for control spray Malathion @ 10 ml or Metasystox @ 10 ml per 10 litres of water.
- In Himachal Pradesh, undertake land preparations for planting of strawberry and picking in tea at 8 days interval to maintain the quality and productivity. Undertake lopping of shade trees in tea orchards.
- In Nainital district of Bhabar and Tarai Zone of Uttarakhand, give irrigation to newly transplanted orchard of Mango and Litchi.

❖ **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, to avoid robbing and insect pest infestation farmers are advised to close/seal all cracks, crevices and hole of honey bee colonies with wet soil.
- In Valley Temperate Zone of Jammu and Kashmir, protect colonies from varroa mite by applying formic acid 85% @ 34ml /napkin pads per colony in porous polythene bags placed on the top brass or install drone combs (frames).

❖ **Floriculture**

- In Jammu, Kathua, Samba and Reasi districts of Sub Tropical Zone, undertake transplanting of seedlings of marigold and winter season annuals due to presence of sufficient moisture in soil.
- In Valley Temperate Zone of Jammu and Kashmir, complete sowing of nursery for spring flowering annuals at earliest.
- 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.
- In Himachal Pradesh, in Una, Hamirpur, Kangra and Chamba districts, undertake transplanting of chrysanthemum and marigold in raised bed and sowing of gladiolus.
- In Himachal Pradesh, in Una, Hamirpur, Kangra and Chamba districts, undertake earthing up operation in gladiolus and disbudding in carnation.

❖ **Animal Husbandry**

- In High Hills Temperate Dry Zone of Himachal Pradesh, in Kinnaur and Lahaul & Spiti, there may be attack of ringworm (fungal infection) in animals, for control, after clipping hair and scrubbing with soap and water, apply Salicylic or Benzoic acid ointment (2 to 5%) or Iodine once daily until lesions heal.
- In Himachal Pradesh, weather is conducive for the attack of pink eye disease in newly born calves, for control, prepare the solution of 1% boric acid in boiled water and wash eyes at regular interval of three hours. To control ecto as well as endo parasites in animals, especially calves consult local veterinarian.
- In Nainital district of Bhabar and Tarai Zone, to save the animals from Gal-Ghotu disease, keep them in neat and clean places. When symptoms of Gal-Ghotu disease appears in the animals, then contact immediately to the nearest Veterinarian for advice.
- In Rajouri, Ramban, Poonch and Udhampur districts of Intermediate Zone, Nomads are advised to vaccinate and deworm their flocks in order to avoid the economic losses caused by viral and parasitic diseases.

❖ **Poultry:**

- In Himachal Pradesh, ensure plenty of drinking water to the poultry birds, proper space for egg lying of birds and provide 14 to 16 hours light including day light. Normal feeding schedule should be continued and add mineral in the diet if stress is observed.
- In Nainital district of Bhabar and Tarai Zone, there is a chance of Aflatoxicosis disease in poultry due to occurrence of fungus in the food which causes death of poultry birds. So, medicine should be administered to the poultry birds on the advice of veterinarian.

❖ **Fisheries:**

- In Himachal Pradesh, in fish ponds, maintain water depth at least 5 feet. On cloudy weather reduce the feed quantity to fish. It is better to agitate water with stick from side early in morning before sun rise and after sun set.

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

Annexure I

Week by week Rainfall Distribution

Sub-Divisions	05.10.16		12.10.16		19.10.16	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	2.5	-98	45.2	-32	18.6	-75
Dibang Valley	**	**	190.0	344	31.0	-22
East Kameng	9.7	-68	28.2	-34	0.0	-100
East Siang	3.8	-96	199.3	253	15.5	-45
Kurung Kumey	**	**	**	**	**	**
Lohit	3.1	-95	79.5	61	4.1	-87
Lower Dibang Valley	0.0	-100	343.5	703	41.0	3
Lower Subansari	**	**	**	**	**	**
Papumpare	5.9	-92	132.8	125	47.9	-28
Tawang	4.0	-96	34.0	-52	4.0	-93
Tirap	6.8	-93	10.4	-80	16.0	-66
Upper Siang	8.2	-90	0.4	-99	78.0	1
Upper Subansari	4.0	-76	15.2	-41	63.2	221
West Kameng	4.2	-96	66.8	-6	10.4	-81
West Siang	2.5	-91	107.4	211	49.4	52
Assam&Meghalaya						
Assam						
Baksa	0.6	-99	51.2	-9	34.3	23
Barpeta	10.1	-77	79.3	42	33.9	21
Bongaigaon	12.6	-78	57.4	-10	36.2	20
Cachar	130.1	89	77.4	29	17.5	-49
Chirang	10.0	-82	71.0	12	27.2	-10
Darrang	**	**	**	**	**	**
Dhemaji	0.0	-100	144.0	208	10.0	-66
Dhubri	14.1	-81	128.6	151	39.5	80
Dibrugarh	12.2	-76	93.4	134	6.8	-77
Goalpara	0.0	-100	63.6	25	74.4	95
Golaghat	9.8	-58	31.3	-6	2.8	-88
Hailakandi	39.5	-30	47.5	-17	17.6	-51
Jorhat	8.6	-81	89.5	144	1.7	-94
Kamrup(Rural)	0.4	-99	30.1	-13	4.4	-83
Kamrup(Metro)	0.8	-98	69.1	99	1.7	-93
Karbi Anglong	5.5	-79	20.8	-39	24.6	-13
Karimganj	51.5	-30	193.9	91	5.2	-87
Kokrajhar	10.9	-78	112.6	112	54.0	11
Lakhimpur	5.8	-89	156.9	235	23.6	-19
Morigaon	42.4	101	134.5	165	21.0	-23
N.C.Hills	9.4	-76	15.7	-57	0.0	-100
Nagaon	9.9	-71	33.6	-17	18.9	-27
Nalbari	0.0	-100	22.2	-31	30.3	34

Sonitpur	7.4	-78	53.0	58	21.4	6
Sibsagar	10.1	-65	69.7	170	5.7	-72
Tinsukia	18.1	-55	142.5	377	3.3	-89
Udalgiri	10.5	-67	60.3	86	12.4	-25
Meghalaya						
East Garo Hills	15.6	-76	194.6	268	5.3	-47
East Khasi Hills	26.9	-74	111.2	14	114.8	191
Jaintia Hills	1.0	-99	0.0	-100	0.0	-100
Ribhoi	8.9	-73	48.2	70	20.9	-54
South Garo Hills	7.0	-89	221.0	245	4.0	-78
West Garo Hills	0.0	-100	61.4	-4	3.2	-83
West Khasi Hills	32.0	-31	140.0	120	16.0	-76
NMMT						
Mizoram						
Aizwal	75.3	-16	69.9	-13	12.7	-69
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	56.5	-35	24.7	-65	34.6	-29
Mamit	**	**	**	**	**	**
Saiha	71.0	-24	71.0	11	73.0	140
Serchhip	19.2	-67	43.4	-16	24.4	-41
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	**	**	**	**	13.0	-23
Churachandpur	**	**	**	**	**	**
Imphal east	0.0	-100	54.1	5	12.6	-29
Imphal west	100.8	80	125.8	167	2.5	-76
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	0.0	-100	41.0	74	10.0	15
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	8.6	-77	0.2	-99	2.6	-71
Kephire	37.0	-46	6.0	-86	11.0	-15
Kohima	29.4	-27	56.5	51	18.6	-30
Longleng	**	**	**	**	**	**
Mokokchung	4.0	-93	16.0	-49	9.0	-74
Mon	**	**	**	**	**	**
Paran	**	**	**	**	**	**
Phek	19.0	-53	20.0	-47	11.0	-58
Tuensang	**	**	**	**	**	**
Wokha	53.0	43	44.0	-2	0.0	-100
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	74.0	33	**	**	0.0	-100
NorthTripura	21.3	-61	38.1	-41	18.8	-38
SouthTripura	35.1	-37	105.2	73	11.3	-64
West Tripura	17.7	-68	51.9	-16	13.9	-52

Himachal Pradesh						
Bilaspur	1.5	-86	7.7	13	0.0	-100
Chamba	6.1	-74	2.3	-79	0.0	-100
Hamirpur	0.2	-99	0.0	-100	0.0	-100
Kangra	3.3	-86	0.8	-95	0.1	-98
Kinnaur	0.0	-100	1.7	-86	0.0	-100
Kullu	5.2	-31	1.0	-88	0.0	-100
Lahaul and Spiti	0.0	-100	0.0	-100	0.0	-100
Mandi	4.6	-67	7.1	-25	0.0	-100
Shimla	3.6	-62	2.9	-73	0.0	-100
Sirmaur	9.3	-43	0.3	-98	0.0	-100
Solan	4.3	-69	12.6	-30	0.0	-100
Una	6.9	-66	0.5	-94	0.0	-100
Punjab						
Amritsar	0.0	-100	3.5	-58	0.0	-100
Barnala	0.0	-100	0.0	-100	0.0	-100
Bhatinda	0.0	-100	0.0	-100	0.0	-100
Faridkot	0.0	-100	0.0	-100	0.0	-100
Fatehgarh Sahib	0.0	-100	0.0	-100	0.0	-100
Ferozpur	0.0	-100	1.8	-33	0.0	-100
Gurdaspur	1.9	-90	0.5	-96	0.0	-100
Hoshiarpur	1.2	-94	1.0	-88	0.0	-100
Jalandhar	0.0	-100	2.4	-62	0.0	-100
Kapurthala	0.0	-100	0.3	-97	0.0	-100
Ludhiana	0.3	-98	3.8	-25	0.0	-100
Mansa	0.0	-100	0.0	-100	0.0	-100
Moga	2.0	-88	0.0	-100	0.0	-100
Muktesar	0.0	-100	0.0	-100	0.0	-100
Nawashahar	0.0	-100	14.5	108	0.0	-100
Patiala	0.0	-100	0.0	-100	0.0	-100
Ropar	0.0	-100	10.3	35	0.0	-100
Sangrur	0.5	-95	0.0	-100	0.0	-100
Mohali	4.0	-47	0.0	-100	0.0	-100
TarnTaran	0.0	-100	0.0	-100	0.0	-100
Haryana,Chd,Delhi						
Haryana						
Ambala	0.0	-100	2.2	-81	0.0	-100
Bhiwani	3.6	-45	1.3	-51	0.0	-100
Chandigarh	0.1	-99	0.0	-100	0.0	-100
Faridabad	20.0	113	0.0	-100	0.0	-100
Fatehabad	0.0	-100	0.0	-100	0.0	-100
Gurgaon	15.4	133	0.0	-100	0.0	-100
Hissar	3.9	-42	0.0	-100	0.0	-100
Jhajar	0.0	-100	0.0	-100	0.0	-100
Jind	0.3	-96	0.0	-100	0.0	-100
Katihah	0.0	-100	0.0	-100	0.0	-100
Karnal	0.3	-97	0.0	-100	0.0	-100
Kurukshetra	0.0	-100	0.0	-100	0.0	-100
Mahendragarh	0.0	-100	0.0	-100	0.0	-100

Mewat	3.4	-75	0.0	-100	0.0	-100
Palwal	0.0	-100	0.0	-100	0.0	-100
Panchkkula	1.0	-91	1.3	-70	0.0	-100
Panipat	1.2	-87	0.0	-100	0.0	-100
Rewari	29.3	193	4.2	67	0.0	-100
Rohtak	0.0	-100	0.0	-100	0.0	-100
Sirsa	12.3	44	0.0	-100	0.0	-100
Sonepat	0.5	-94	0.0	-100	0.0	-100
Yamunanagar	3.6	-74	2.4	-84	0.0	-100
Delhi						
Central Delhi	23.0	107	0.0	-100	0.0	-100
East Delhi	2.0	-82	0.0	-100	0.0	-100
New Delhi	1.5	-86	0.0	-100	0.0	-100
North Delhi	17.7	59	0.0	-100	0.0	-100
North East Delhi	8.0	-28	0.0	-100	0.0	-100
North West Delhi	0.0	-100	0.0	-100	0.0	-100
South Delhi	4.8	-57	0.0	-100	0.0	-100
South West Delhi	7.1	-36	0.0	-100	0.0	-100
West Delhi	0.0	-100	**	**	**	**
Jammu & Kashmir						
Anantnag	1.9	-75	2.9	-68	0.0	-100
Badgam	0.0	-100	0.0	-100	1.4	-72
Bandipore	**	**	**	**	**	**
Baramula	0.0	-100	3.4	-53	0.0	-100
Doda	0.0	-100	1.0	-89	0.0	-100
Ganderbal	0.0	-100	0.0	-100	0.0	-100
Jammu	0.0	-100	2.5	-81	0.0	-100
Kargil	**	**	**	**	**	**
Kathua	44.4	107	5.2	-32	0.0	-100
Kistwar	**	**	**	**	**	**
Kulgam	0.0	-100	0.0	-100	0.0	-100
Kupwara	0.0	-100	0.0	-100	0.0	-100
Ladakh(Leh)	0.0	-100	0.0	-100	0.0	-100
Poonch	**	**	**	**	**	**
Pulwama	0.0	-100	0.0	-100	0.0	-100
Rajouri	0.0	-100	8.9	-30	0.0	-100
Ramban	0.0	-100	1.5	-83	0.0	-100
Reasi	0.8	-97	8.6	-26	0.0	-100
Samba	0.0	-100	0.0	-100	0.0	-100
Shopian	**	**	**	**	**	**
Srinagar	2.9	-56	0.0	-100	0.6	-93
Udhampur	0.0	-100	1.2	-91	0.0	-100
East Madhya Pradesh						
Anuppur	12.3	-28	17.3	8	0.0	-100
Balaghat	21.8	-8	12.7	-27	0.0	-100
Chhatarpur	1.3	-91	0.8	-95	0.0	-100
Chindwara	19.3	-9	17.1	27	0.0	-100
Damoh	21.0	38	24.0	145	0.0	-100

Dindori	59.3	264	2.2	-79	0.0	-100
Jabalpur	19.7	34	10.7	3	0.0	-100
Katni	25.5	69	10.1	-4	0.0	-100
Mandla	37.4	130	26.8	113	0.0	-100
Narsingpur	31.8	73	26.5	188	0.0	-100
Panna	7.8	-48	40.3	291	0.0	-100
Rewa	55.0	213	19.6	88	0.0	-100
Sagar	10.2	-33	26.4	124	0.0	-100
Satna	16.4	-12	8.2	-28	0.0	-100
Seoni	26.0	42	7.7	-49	0.0	-100
Shahdol	19.2	31	4.0	-67	0.0	-100
Sidhi	21.4	0	0.0	-100	0.0	-100
Singrauli	90.0	809	83.0	476	0.0	-100
Tikamgarh	10.0	-26	34.0	196	0.0	-100
Umaria	25.0	59	1.8	-89	0.0	-100
West Madhya Pradesh						
Agar	5.8	-79	25.2	241	0.0	-100
Alirajpur	73.4	303	6.5	-44	0.0	-100
Asoknagar	3.2	-70	56.0	483	0.0	-100
Badwani	58.1	240	14.7	6	0.0	-100
Betul	12.7	-32	29.2	61	0.0	-100
Bhind	0.5	-96	9.8	-43	0.0	-100
Bhopal	32.9	130	52.7	402	0.0	-100
Burhanpur	58.8	205	0.0	-100	0.0	-100
Datia	4.4	-73	30.9	58	0.0	-100
Dewas	10.0	-40	15.8	31	0.0	-100
Dhar	80.0	238	27.8	114	0.0	-100
Guna	17.9	60	8.5	-38	0.0	-100
Gwalior	20.7	52	6.8	-67	0.0	-100
Harda	47.1	134	0.2	-99	0.0	-100
Hoshangabad	32.5	89	23.7	88	0.0	-100
Indore	15.5	-33	6.2	-51	0.0	-100
Jhabua	81.8	290	1.7	-86	0.0	-100
Khandwa	58.7	221	4.0	-64	0.0	-100
Khargone	55.9	205	26.7	99	0.0	-100
Mandsaur	7.0	-51	12.4	-22	0.0	-100
Morena	0.0	-100	16.5	46	0.0	-100
Neemuch	1.7	-88	34.4	125	0.0	-100
Raisen	29.4	85	9.1	-23	0.0	-100
Rajgarh	13.5	48	17.7	46	0.0	-100
Ratlam	28.3	43	4.9	-68	0.0	-100
Sehore	10.4	-27	7.2	-48	0.0	-100
Shajapur	7.5	-44	4.0	-71	0.0	-100
Sheopur Kalani	5.5	-36	10.0	-34	0.0	-100
Shivpuri	12.2	8	13.0	-14	0.0	-100
Ujjain	24.2	31	4.7	-66	0.0	-100
Vidisha	25.1	95	27.0	275	0.0	-100
Chhattisgarh						

Balod	48.4	98	148.2	792	0.0	-100
Baloda Bazar	48.6	163	16.0	34	0.0	-100
Balrampur	20.0	-21	68.0	382	0.0	-100
Bastar	23.8	-33	124.2	317	0.0	-100
Bemetara	69.2	259	155.9	926	0.0	-100
Bijapur	36.0	-3	67.3	129	0.0	-100
Bilaspur	31.9	69	58.4	284	0.3	-95
Dantewara	11.5	-72	26.0	-14	0.0	-100
Dhamtari	44.8	84	43.2	211	0.0	-100
Durg	25.2	3	29.0	75	0.0	-100
Gariaband	32.2	13	31.8	67	0.0	-100
Janjgir	19.4	-1	31.9	180	0.0	-100
Jashpurnagar	3.5	-90	28.6	66	0.0	-100
Kabirdham	45.1	96	25.8	31	0.0	-100
Kanker	62.1	157	82.1	277	0.0	-100
Kondagaon	72.2	138	159.6	514	0.0	-100
Korba	23.5	-3	26.7	83	0.0	-100
Koriya	51.3	186	31.6	300	0.0	-100
Mahasumund	78.6	344	58.7	274	0.0	-100
Mungeli	17.6	-7	26.4	74	0.0	-100
Narayanpur	77.7	177	100.3	231	0.0	-100
Raigarh	23.3	3	41.8	185	0.0	-100
Raipur	116.7	570	42.4	247	0.0	-100
Rajnandgaon	65.7	240	71.2	224	0.0	-100
Sukma	51.7	73	69.9	130	0.0	-100
Surajpur	7.5	-67	41.7	286	0.0	-100
Surguja	99.8	237	37.4	127	0.0	-100
East Uttar Pradesh						
Allahabad	43.5	177	26.9	98	0.0	-100
Ambedkar Nagar	8.0	-61	5.0	-69	0.0	-100
Azamgarh	24.1	-8	8.3	-42	0.0	-100
Bahraich	7.3	-76	81.7	278	0.0	-100
Ballia	48.7	110	29.0	282	0.0	-100
Balrampur	7.7	-80	35.3	15	0.0	-100
Banda	3.4	-78	11.0	-33	0.0	-100
Barabanki	5.7	-78	22.4	14	0.0	-100
Basti	4.1	-86	35.0	123	0.0	-100
Chandauli	9.0	-57	1.5	-85	0.0	-100
Deoria	29.5	-23	7.5	-16	0.0	-100
Faizabad	0.0	-100	33.4	96	0.0	-100
Farrukhabad	0.0	-100	10.3	-41	0.0	-100
Fatehpur	0.7	-96	24.2	60	0.0	-100
Gazipur	40.1	30	20.3	82	0.0	-100
Gonda	4.7	-86	25.6	7	0.0	-100
Gorakhpur	16.2	-57	35.2	39	0.0	-100
Hardoi	0.0	-100	8.3	-62	0.0	-100
Jaunpur	15.8	-13	7.7	-30	0.0	-100
Kannauj	0.0	-100	17.5	-28	0.0	-100
Kanpur City	0.0	-100	31.5	56	0.0	-100

Kanpur Dehat	0.0	-100	24.5	30	0.0	-100
Kaushambi	18.7	21	0.0	-100	0.0	-100
Kheri	0.0	-100	39.6	42	0.0	-100
Kushi nagar	13.5	-75	2.0	-88	0.0	-100
Lucknow	0.2	-99	28.0	61	0.0	-100
Maharajganj	19.3	-50	41.5	81	0.0	-100
Mau	25.0	-20	0.0	-100	0.0	-100
Mirzapur	30.5	62	8.3	-33	0.0	-100
Pratapgarh	10.3	-37	30.3	114	0.0	-100
RaiBareilly	0.2	-99	18.7	-20	0.0	-100
Sahuji Maharajnagar	29.0	50	3.5	-77	0.0	-100
Sant Kabirnagar	12.0	-62	83.0	461	0.0	-100
Sant Ravidas Nagar	28.0	33	6.0	-38	0.0	-100
Shrawasti	31.0	2	17.8	-18	0.0	-100
Sidharthnagar	17.1	-50	22.7	-12	0.0	-100
Sitapur	0.0	-100	2.5	-91	0.0	-100
Sonbhadra	24.0	48	26.6	74	0.0	-100
Sultanpur	0.0	-100	30.2	59	0.0	-100
Unnao	0.0	-100	23.8	11	0.0	-100
Varanasi	15.6	-31	8.9	-6	0.0	-100
West Uttar Pradesh						
Agra	0.0	-100	6.8	-34	0.0	-100
Aligarh	4.3	-80	0.0	-100	0.0	-100
Auraiya	0.0	-100	27.2	43	0.0	-100
Badaun	4.0	-82	16.0	-34	0.0	-100
Baghpat	0.0	-100	0.0	-100	0.0	-100
Bareilly	5.9	-75	6.2	-73	0.0	-100
Bijnor	8.5	-61	0.0	-100	0.0	-100
Bulandsahar	4.7	-79	3.2	-75	0.0	-100
Etah	0.0	-100	4.4	-69	0.0	-100
Etawah	0.0	-100	7.5	-67	0.0	-100
Firozabad	2.7	-80	13.2	-33	0.0	-100
GBNagar	13.0	-41	0.0	-100	0.0	-100
Ghaziabad	3.2	-85	0.0	-100	0.0	-100
Hamirpur	0.0	-100	20.8	60	0.0	-100
Jalaun	1.3	-93	31.8	60	0.0	-100
Jhansi	1.7	-89	20.6	20	0.0	-100
Jotiba Phule Nagar	0.0	-100	0.0	-100	0.0	-100
Kanshiramnagar	2.0	-91	0.0	-100	0.0	-100
Lalitpur	0.0	-100	13.0	-14	0.0	-100
Mahamaya Nagar	24.5	38	0.0	-100	0.0	-100
Mahoba	5.8	-56	0.0	-100	0.0	-100
Mainpuri	0.0	-100	7.1	-61	0.0	-100
Mathura	0.0	-100	0.0	-100	0.0	-100
Meerut	0.0	-100	0.0	-100	0.0	-100
Moradabad	0.5	-98	0.2	-98	0.0	-100
Muzzaffarnagar	0.0	-100	0.0	-100	0.0	-100
Pilibhit	1.4	-96	1.6	-95	0.0	-100

Rampur	0.0	-100	0.0	-100	0.0	-100
Saharanpur	0.0	-100	4.0	-74	0.0	-100
Shahjahanpur	0.0	-100	7.6	-71	0.0	-100
Uttarakhand						
Almora	0.5	-98	0.0	-100	0.0	-100
Bageshwar	0.8	-97	2.5	-87	0.0	-100
Chamoli	6.6	-57	3.4	-78	0.0	-100
Champawat	11.5	-64	7.6	-68	0.0	-100
Dehradun	3.2	-88	12.7	-52	0.0	-100
Garhwal Pauri	0.0	-100	0.0	-100	0.0	-100
Garhwal Tehri	0.0	-99	0.1	-99	0.0	-100
Haridwar	5.7	-60	2.5	-82	0.0	-100
Nainital	1.1	-97	13.0	-55	0.0	-100
Pithorgarh	26.3	6	12.6	-38	1.4	-92
Rudraprayag	13.0	-44	0.8	-97	0.0	-100
Udham Sing Nagar	0.7	-98	0.0	-100	0.0	-100
Uttarkashi	19.0	-14	0.5	-98	0.0	-100
Bihar						
Araria	5.4	-86	116.8	556	0.0	-100
Arwal	0.0	-100	96.5	885	0.0	-100
Aurangabad	0.0	-100	152.6	1120	0.0	-100
Banka	11.1	-70	66.2	185	0.0	-100
Begusarai	7.3	-74	23.3	117	0.0	-100
Bhabua	0.0	-100	29.9	177	0.0	-100
Bhagalpur	4.7	-86	21.3	-2	0.0	-100
Bhojpur	0.0	-100	7.0	-42	0.0	-100
Buxar	0.0	-100	132.0	495	0.0	-100
Darbhanga	5.5	-86	38.6	219	0.0	-100
East Champaran	0.9	-97	20.9	15	0.0	-100
Gaya	2.2	-89	113.1	719	0.0	-100
Gopalganj	0.0	-100	19.0	47	0.0	-100
Jahanabad	0.0	-100	38.5	274	0.0	-100
Jamui	0.0	-100	28.2	21	0.0	-100
Kathihar	0.0	-100	62.7	160	0.0	-100
Khagadia	0.0	-100	26.1	47	0.0	-100
Kishanganj	13.0	-60	110.1	405	26.9	30
Lakhisarai	0.0	-100	29.9	72	0.0	-100
Madhepura	0.0	-100	72.9	303	0.0	-100
Madhubani	0.0	-100	18.4	-20	0.0	-100
Monghyar	0.0	-100	31.0	78	0.0	-100
Muzaffarpur	1.1	-97	28.1	71	0.0	-100
Nalanda	0.0	-100	50.3	216	0.0	-100
Nawada	0.0	-100	48.8	226	0.0	-100
Patna	0.0	-100	52.3	206	0.0	-100
Purnea	0.0	-100	71.5	254	0.0	-100
Rohtas	0.0	-100	57.2	297	0.0	-100
Saharsha	0.0	-100	40.6	49	0.0	-100
Samstipur	6.9	-82	87.9	685	0.0	-100
Saran	0.0	-100	47.7	326	0.0	-100

Sheikpura	0.0	-100	105.8	570	0.0	-100
Sheohar	0.0	-100	0.0	-100	0.0	-100
Sitamarhi	1.9	-93	0.0	-100	0.0	-100
Siwan	4.6	-76	41.6	255	0.0	-100
Supaul	3.4	-90	117.5	535	0.0	-100
Vaishali	4.6	-88	53.6	182	0.0	-100
West Champaran	10.5	-65	30.8	65	0.0	-100
Jharkhand						
Bokaro	0.0	-100	47.1	100	0.0	-100
Chatra	30.2	22	11.6	-43	0.0	-100
Deoghar	5.1	-87	1.1	-94	0.0	-100
Dhanbad	0.9	-98	29.1	29	0.0	-100
Dumka	43.3	-37	59.6	79	0.0	-100
East Singbhum	13.6	-58	25.4	62	0.0	-100
Garhwa	27.5	42	48.1	97	0.0	-100
Giridih	6.4	-85	43.9	112	0.0	-100
Godda	11.4	-70	25.6	16	0.0	-100
Gumla	13.8	-54	47.8	140	0.0	-100
Hazaribagh	21.7	-42	86.5	363	0.0	-100
Jamtara	9.7	-86	29.2	7	0.0	-100
Khunti	3.0	-90	25.0	-1	0.0	-100
Koderrna	0.7	-98	18.3	-16	0.0	-100
Latehar	2.6	-91	80.9	328	0.0	-100
Lohardagga	5.1	-84	52.7	249	0.0	-100
Pakur	21.3	-67	18.0	-60	0.0	-100
Palamau	16.4	-11	93.7	404	0.0	-100
Ramgarh	9.0	-75	94.0	359	0.0	-100
Ranchi	0.2	-99	29.6	55	0.0	-100
Sahebganj	21.0	-68	8.6	-64	0.0	-100
Saraikela	7.4	-76	8.1	-57	0.0	-100
Simdega	7.5	-74	28.6	60	0.0	-100
West Singbhum	0.0	-100	5.9	-70	0.0	-100
East Rajasthan						
Ajmer	18.1	255	44.7	1108	0.0	-100
Alwar	10.3	4	1.4	-84	0.0	-100
Banswara	54.0	507	21.4	42	0.0	-100
Baran	12.5	95	21.1	64	0.0	-100
Bharatpur	9.7	9	17.3	88	0.0	-100
Bhilwara	6.9	28	7.7	53	0.0	-100
Bundi	1.5	-80	16.5	81	0.0	-100
Chittorgarh	9.9	44	29.1	227	0.0	-100
Dausa	4.6	-53	12.4	85	0.0	-100
Dholpur	0.5	-95	14.2	29	0.0	-100
Dungarpur	26.3	318	11.5	28	0.0	-100
Jaipur	5.5	-6	14.7	199	0.0	-100
Jhalawar	4.7	-41	13.3	-10	0.0	-100
Jhunjhunu	12.3	86	0.1	-96	0.0	-100
Karauli	0.0	-100	31.8	232	0.0	-100
Kota	11.0	124	13.1	-10	0.0	-100

Pratapgarh	35.8	182	18.0	-1	0.0	-100
Rajsamand	22.9	269	32.7	922	0.0	-100
Sawai Madhopur	1.0	-89	21.3	93	0.0	-100
Sikar	18.8	248	1.4	-49	0.0	-100
Sirohi	47.7	784	17.3	380	0.0	-100
Tonk	8.9	58	10.5	55	0.0	-100
Udaipur	25.8	285	34.2	427	0.0	-100
West Rajasthan						
Barmer	22.9	782	0.0	-100	0.0	-100
Bikaner	6.5	140	2.3	287	0.0	-100
Churu	28.8	372	0.6	-56	0.0	-100
Hanumangarh	1.9	-29	0.6	14	0.0	-100
Jaisalmer	6.2	520	0.0	-100	0.0	-100
Jalore	47.4	1380	0.0	-100	0.0	-100
Jodhpur	19.0	805	3.6	408	0.0	-100
Nagaur	18.2	469	9.4	453	0.0	-100
Pali	30.9	531	0.0	-100	0.0	-100
Sri Ganganagar	0.0	-100	0.1	-92	0.0	-100
Gujarat Region						
Ahmedabad	27.1	331	25.3	164	0.0	-100
Anand	48.7	524	6.0	-36	0.0	-100
Aravalli	39.8	477	33.0	240	0.0	-100
Banaskantha	59.3	905	19.0	458	0.0	-100
Broach	47.7	227	18.7	87	0.0	-100
Chhota Udepur	30.0	75	5.0	-60	0.0	-100
DNH	78.1	176	7.6	-54	0.0	-100
Dahod	36.4	209	12.5	-7	0.0	-100
Daman	43.6	54	29.8	82	0.0	-100
Dangs	61.0	31	13.8	-6	0.0	-100
Gandhinagar	22.2	319	41.4	365	0.0	-100
Kheda	41.6	571	36.2	269	0.0	-100
Mahisagar	33.9	298	20.7	80	0.0	-100
Mehsana	36.1	423	30.4	348	0.0	-100
Narmada	61.8	186	23.7	116	0.0	-100
Navsari	23.8	-26	26.1	78	0.0	-100
Panchmahal	61.4	463	18.7	85	0.0	-100
Patan	47.4	1149	15.9	270	0.0	-100
Sabarkantha	23.6	214	16.8	36	0.0	-100
Surat	89.1	245	25.2	142	0.0	-100
Tapi	87.0	213	10.6	43	0.0	-100
Vadodara	32.9	208	17.3	27	0.0	-100
Valsad	44.5	11	22.0	45	0.0	-100
S K & Diu region						
Amreli	51.5	400	52.4	789	0.0	-100
Bhavnagar	48.9	456	17.4	126	0.0	-100
Botad	73.5	600	51.3	541	0.0	-100
Devbhoomi Dwarka	33.3	494	16.4	682	0.0	-100
Diu	6.0	22	13.7	59	0.0	-100
Gir Somnath	23.3	133	44.3	560	0.0	-100

Jamnagar	85.3	848	14.3	250	0.0	-100
Junagarh	67.8	377	74.9	1108	0.0	-100
Kutch	32.5	655	5.4	238	0.0	-100
Morbi	56.8	802	18.6	481	0.0	-100
Porbandar	62.9	511	29.7	560	0.0	-100
Rajkot	66.3	471	14.8	72	0.0	-100
Surendranagar	27.4	215	15.8	105	0.0	-100
Maharashtra						
Konkan & Goa						
Mumbai City	59.8	27	7.6	-69	0.0	-100
Mumbai Suburban	58.1	26	20.4	-34	0.0	-100
North Goa	25.6	-66	96.3	124	0.1	-99
Raigad	101.7	64	15.5	-63	1.3	-91
Ratnagiri	109.8	50	34.7	-23	0.1	-99
Sindhudurg	27.7	-59	88.6	116	0.2	-99
South Goa	10.5	-83	48.7	38	0.1	-99
Thane	46.5	1	12.6	-63	0.0	-100
Madhya Maharashtra						
Ahmednagar	105.0	251	4.5	-79	0.0	-100
Dhule	68.7	214	4.4	-73	0.0	-100
Jalgaon	51.8	136	19.0	23	0.0	-100
Kolhapur	7.4	-86	31.7	-10	0.2	-99
Nandurbar	42.0	103	18.5	25	0.0	-100
Nasik	56.9	71	8.8	-57	0.0	-100
Pune	49.9	23	7.8	-69	0.0	-100
Sangli	12.6	-72	5.3	-83	0.4	-98
Satara	48.2	17	9.0	-66	0.5	-97
Solapur	65.9	74	2.5	-90	0.0	-100
Marathwada						
Aurangabad	56.8	120	7.6	-60	0.0	-100
Beed	98.8	292	5.6	-74	0.0	-100
Hingoli	68.5	176	46.8	134	0.0	-100
Jalna	77.3	267	7.8	-68	0.0	-100
Latur	126.8	301	19.8	-23	0.0	-100
Nanded	79.5	188	37.5	50	0.0	-100
Osmanabad	109.7	245	8.0	-63	0.0	-100
Parbhani	75.9	172	24.0	13	0.0	-100
Vidarbha						
Akola	58.3	175	15.7	0	0.0	-100
Amraoti	53.4	142	32.0	82	0.0	-100
Bhandara	43.2	82	55.7	201	0.0	-100
Buldhana	56.5	177	4.9	-75	0.0	-100
Chandrapur	61.2	165	62.7	241	0.0	-100
Gadchiroli	75.8	161	65.6	230	0.0	-100
Gondia	31.3	32	53.8	199	0.0	-100
Nagpur	29.7	48	50.6	166	0.0	-100
Wardha	42.3	117	37.0	108	0.0	-100
Washim	49.3	132	20.7	-16	0.0	-100

Yeotmal	46.9	96	33.3	86	0.0	-100
Odisha						
Angul	30.8	7	65.9	171	0.0	-100
Balasore	39.3	-43	89.2	69	0.0	-100
Bargarh	17.5	-8	41.0	171	0.0	-100
Bhadrak	34.5	-15	44.0	-2	0.0	-100
Bolangir	27.9	2	108.2	488	0.0	-100
Boudh	19.2	-54	52.1	40	0.0	-100
Cuttack	49.4	20	60.5	64	0.0	-100
Deogarh	20.6	-9	29.4	92	0.0	-100
Dhenkanal	23.7	-42	37.7	23	0.0	-100
Gajapati	84.8	99	83.0	97	0.0	-100
Ganjam	58.4	11	96.2	89	0.0	-100
Jagatsingpur	94.6	161	77.7	101	0.0	-100
Jajpur	41.9	-8	30.3	-25	0.0	-100
Jharsuguda	10.7	-53	29.0	31	0.0	-100
Kalahandi	80.7	112	105.6	548	0.0	-100
Kandhamal	38.1	-8	49.3	32	0.0	-100
Kendrapara	48.6	-11	103.2	79	0.0	-100
Keonjhar	19.4	-41	30.2	-7	0.0	-100
Khurda	56.1	25	55.2	2	0.0	-100
Koraput	47.7	-6	52.5	33	0.0	-100
Malkangiri	14.1	-63	73.4	105	0.0	-100
Mayurbhanj	50.8	4	28.7	5	0.0	-100
Nawapara	28.5	7	29.3	73	0.0	-100
Nawarangpur	79.2	68	68.6	241	0.0	-100
Nayagarh	60.7	40	57.4	11	0.0	-100
Puri	50.8	6	56.3	5	0.0	-100
Rayagada	53.9	63	52.5	33	0.0	-100
Sambalpur	7.2	-68	49.7	225	0.0	-100
Sonepur	8.2	-70	46.1	241	0.0	-100
Sundargarh	19.1	4	37.7	143	0.0	-100
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	83.4	-10	7.3	-91	109.7	39
North & Middle Andaman	113.0	13	49.0	-32	44.1	-6
South Andaman	231.6	122	6.9	-90	46.4	-29
GWB						
Bankura	4.1	-93	32.3	57	0.0	-100
Birbhum	16.8	-65	29.9	32	0.0	-100
Burdwan	1.6	-96	36.8	66	0.0	-100
East Midnapore	58.0	-33	90.7	116	0.0	-100
Hooghly	0.2	-99	64.0	134	0.0	-99
Howrah	8.1	-85	12.8	-66	0.0	-100
Kolkata	6.9	-90	82.9	109	0.0	-100
Murshidabad	12.4	-79	84.2	184	0.0	-100
Nadia	7.1	-81	44.0	89	0.0	-100
24 Pargana (N)	6.4	-89	34.6	18	0.0	-100

Purulia	1.6	-97	20.8	-4	0.0	-100
24 Pargana (S)	25.4	-63	24.3	-60	0.2	-99
West Midnapore	18.9	-68	33.6	57	0.0	-100
SHWB & Sikkim						
Cooch Behar	41.6	-39	68.6	75	32.9	-4
Darjeeling	15.1	-80	160.6	504	124.2	330
East Sikkim	16.1	-70	42.4	-31	42.3	36
Jalpaiguri	36.3	-50	165.0	231	56.5	54
Malda	11.5	-81	71.0	154	0.0	-100
North Dinajpur	10.8	-68	**	**	**	**
North Sikkim	41.1	-61	84.4	14	35.2	-31
South Dinajpur	6.4	-90	0.0	-100	0.0	-100
South Sikkim	31.0	-42	71.8	18	40.8	31
West Sikkim	**	**	**	**	**	**
Karnataka						
Coastal Karnataka						
Dakshina Kannada	5.5	-93	36.1	-43	10.5	-77
Udupi	10.1	-88	51.9	-13	20.9	-44
Uttara Kannada	5.2	-92	105.0	155	2.7	-90
NI Karnataka						
Bagalkote	2.8	-94	14.3	-55	0.0	-100
Belagavi	13.8	-68	11.1	-65	0.3	-99
Bidar	91.9	184	40.6	50	0.0	-100
Dharwad	18.8	-56	39.1	27	4.3	-85
Gadag	9.9	-78	0.3	-99	0.0	-100
Haveri	8.9	-76	7.4	-77	2.2	-91
Kalaburgi	28.8	-31	14.8	-48	0.0	-100
Koppal	29.2	-29	9.7	-67	0.0	-100
Raichur	5.0	-89	11.4	-66	0.0	-100
Vijayapura	11.8	-75	7.4	-71	0.0	-100
Yadgir	9.1	-81	8.4	-75	0.0	-100
SI Karnataka						
Ballari	1.3	-97	3.6	-88	9.6	-53
Bangalore Rural	9.8	-83	13.3	-72	36.4	17
Bangalore Urban	5.4	-90	12.1	-72	14.9	-49
Chamarajanagar	1.6	-96	0.0	-100	11.6	-65
Chikaballapur	5.2	-90	3.0	-93	0.5	-98
Chikkamagaluru	2.1	-96	18.3	-56	11.5	-65
Chitradurga	0.0	-100	31.7	-3	2.2	-89
Davangere	20.8	-51	3.3	-90	11.1	-57
Hassan	16.4	-60	1.1	-97	11.0	-66
Kodagu	4.9	-92	5.6	-88	39.3	-11
Kolar	9.5	-79	5.0	-89	0.3	-99
Mandya	19.1	-54	6.8	-82	34.1	3
Mysuru	2.6	-93	0.0	-100	4.7	-87
Ramanagara	6.1	-89	28.1	-38	28.9	-17
Shivamogga	11.9	-75	27.9	-20	22.4	-17
Tumakuru	3.6	-93	11.6	-69	3.8	-85
Kerala						

Alappuzha	42.1	-40	0.3	-99	24.9	-65
Kannur	0.9	-99	10.5	-82	32.0	-25
Ernakulam	4.6	-94	0.6	-99	81.4	26
Idukki	29.5	-66	4.4	-95	74.6	-8
Kasaragod	1.0	-98	18.6	-75	4.8	-86
Kollam	5.3	-92	4.0	-95	108.4	32
Kottayam	19.3	-74	0.5	-99	67.3	1
Kozhikode	2.3	-97	21.3	-68	4.8	-90
Malappuram	2.3	-96	1.8	-98	50.4	-28
Palakkad	1.9	-97	0.2	-99	43.1	-30
Pathanamthitta	24.5	-67	0.0	-100	143.0	70
Thiruvananthapuram	1.2	-97	0.6	-99	18.9	-72
Thrissur	1.2	-99	0.1	-99	38.1	-45
Wyand	3.0	-95	2.8	-94	45.6	6
Tamil Nadu						
Ariyalur	37.5	7	0.3	-99	6.0	-85
Chennai	96.7	149	5.0	-88	0.0	-100
Coimbatore	2.7	-88	0.6	-98	37.3	-1
Cuddalore	25.2	-24	22.9	-45	5.8	-88
Dharmapuri	8.0	-82	28.8	-39	19.4	-49
Dindigul	8.1	-78	0.0	-99	56.1	12
Erode	5.3	-84	1.6	-95	4.3	-89
Kanchipuram	87.0	124	21.4	-45	5.5	-89
Kanyakumari	0.3	-99	0.3	-99	9.0	-83
Karikal	22.7	-24	16.1	-52	0.0	-100
Karur	6.6	-77	0.1	-99	4.4	-88
Krishnagiri	3.0	-94	16.3	-62	17.1	-54
Madurai	15.6	-59	18.3	-55	44.6	-20
Nagapattinam	9.4	-69	37.2	13	0.0	-100
Namakkal	12.3	-62	2.2	-95	9.8	-75
Nilgiris	7.6	-81	0.8	-98	34.9	-32
Perambalur	34.0	13	0.0	-100	8.0	-82
Puducherry	40.4	5	10.3	-74	11.4	-76
Pudukottai	4.7	-85	2.9	-90	12.4	-71
Ramanathapuram	4.6	-77	0.0	-100	1.5	-97
Salem	4.8	-89	7.9	-83	18.9	-58
Sivaganga	4.2	-85	2.9	-92	8.8	-83
Thanjavur	51.9	64	0.3	-99	13.6	-69
Theni	1.8	-92	0.0	-100	58.6	27
Tirunelveli	0.0	-100	0.0	-100	16.7	-56
Tirupur	0.0	-100	0.0	-100	61.1	60
Tiruvallur	38.3	-2	1.9	-95	0.0	-99
Tiruvannamalai	56.0	48	29.2	-40	18.6	-56
Tiruvarur	50.1	64	3.3	-90	0.0	-100
Toothukudi	0.0	-100	0.0	-100	4.0	-90
Trichy	33.2	-10	2.8	-93	15.0	-65
Vellore	30.3	-24	19.8	-55	3.6	-89
Villupuram	49.5	40	27.9	-35	44.8	20

Virudhunagar	4.7	-84	0.1	-99	58.9	18
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	34.6	-36	33.2	-45	0.0	-100
Guntur	46.5	14	33.0	-6	0.0	-100
Krishna	51.5	18	23.4	-46	0.0	-100
Nellore	6.4	-83	6.8	-82	0.7	-99
Prakasam	6.8	-84	6.5	-83	0.0	-100
Sirkakulam	78.5	49	46.0	-17	0.0	-100
Visakhapatnam	44.7	-26	48.1	-14	0.0	-100
Vizianagram	49.8	3	51.9	0	0.0	-100
West Godavari	28.6	-44	21.6	-64	0.0	-100
Rayalaseema						
Anantapur	6.2	-85	2.4	-93	1.1	-94
Chittoor	28.2	-32	11.5	-72	1.1	-96
Cuddapah	12.3	-66	5.4	-84	0.0	-100
Kurnool	13.1	-67	6.7	-76	0.0	-100
Telangana						
Adilabad	37.0	44	64.0	178	0.0	-100
Hyderabad	23.9	-8	39.5	34	0.0	-100
Karimnagar	13.3	-51	76.2	197	0.0	-100
Khammam	37.4	-1	70.3	108	0.1	-99
Mehabubnagar	12.0	-65	6.9	-74	0.0	-100
Medak	65.2	134	28.4	11	0.0	-100
Nalgonda	23.7	-32	27.8	-16	0.0	-100
Nizamabad	56.5	95	39.6	53	0.0	-100
Rangareddy	10.3	-67	20.6	-31	0.0	-100
Warangal	5.8	-79	54.8	107	0.0	-100

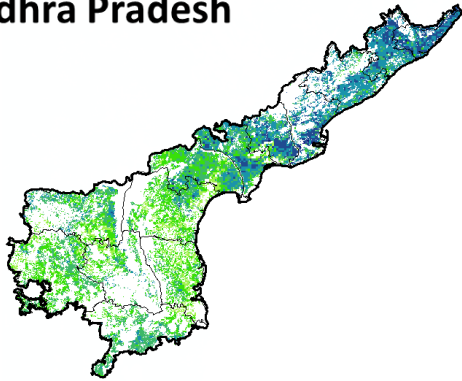
Legends

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

Annexure II

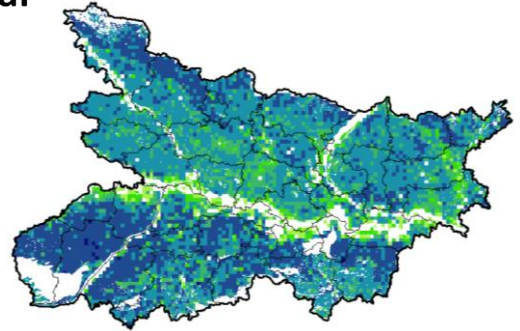
NOAA/AVHRR NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON
20th October 2016 FOR DIFFERENT STATES

Andhra Pradesh



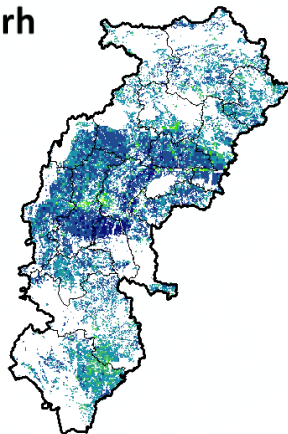
Agriculture vigour is moderate over central and southern part whereas, northern coastal parts show good NDVI in the state of Andhra Pradesh.

Bihar



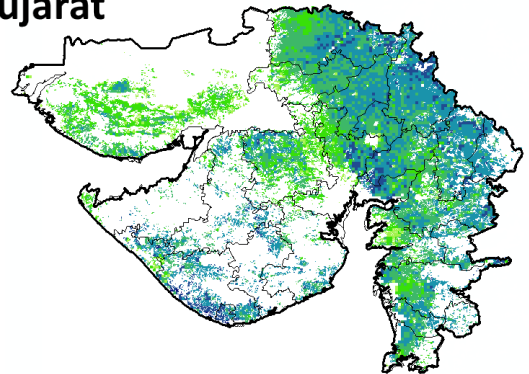
Agriculture vigour is good over central parts of Bihar whereas southern and northern part shows good to very good NDVI values

Chhattisgarh



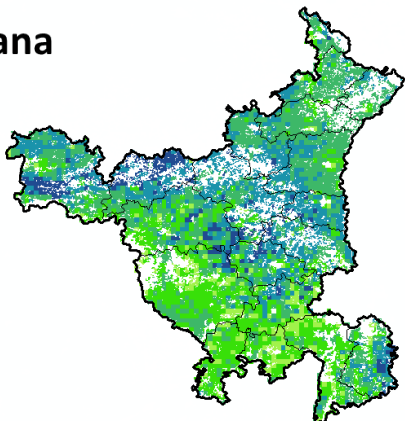
Agriculture vigour is good in southern region whereas, very good vigour is seen in central and northern region of Chhattisgarh.

Gujarat



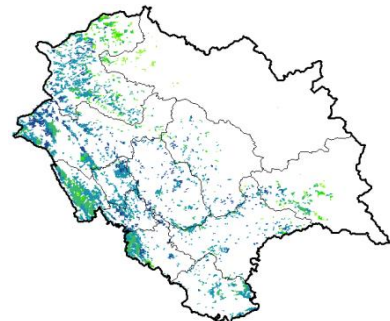
Moderate NDVI values are observed in patches in Saurashtra region whereas, good to very good NDVI is observed in Gujarat.

Haryana



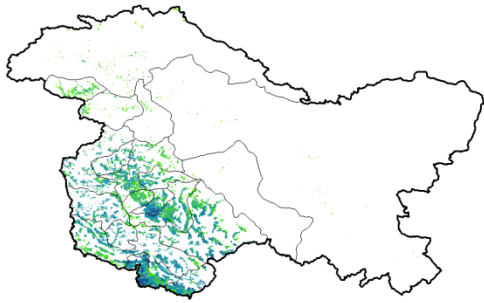
Agriculture vigour is moderate over southern region whereas, good & very good agriculture vigour is observed in rest of the state.

Himachal Pradesh



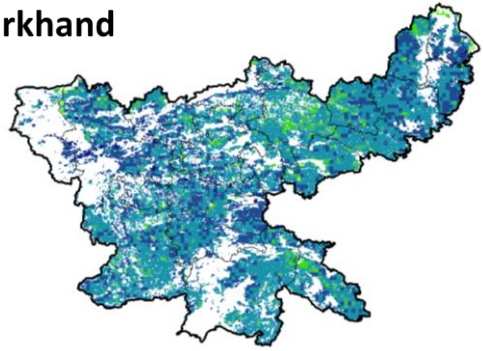
Agriculture vigour is moderate to good over southern parts of Himachal Pradesh.

Jammu & Kashmir



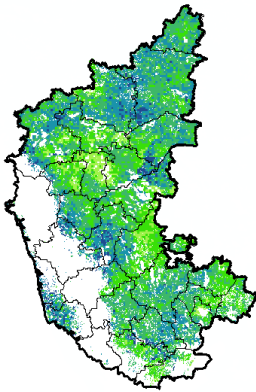
Agriculture vigour is good over south western part of Jammu & Kashmir, whereas the remaining region shows moderate NDVI.

Jharkhand



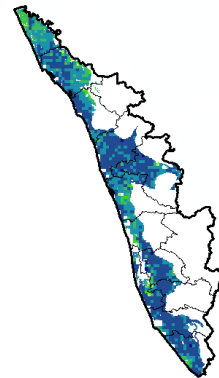
Agriculture vigour is very good over few patches in central region of Jharkhand whereas, remaining states shows good NDVI values.

Karnataka



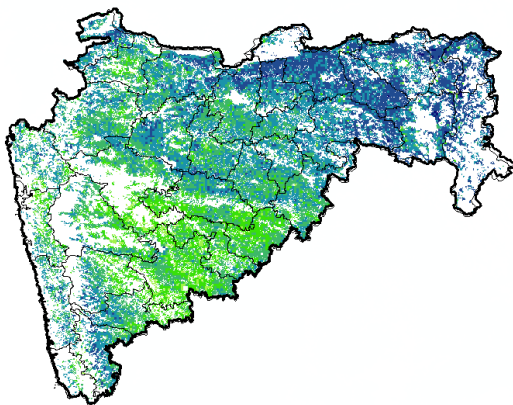
Agriculture vigour is moderate over patches in northern region of the state whereas good vigour is observed in the central and patches in northern regions.

Kerala



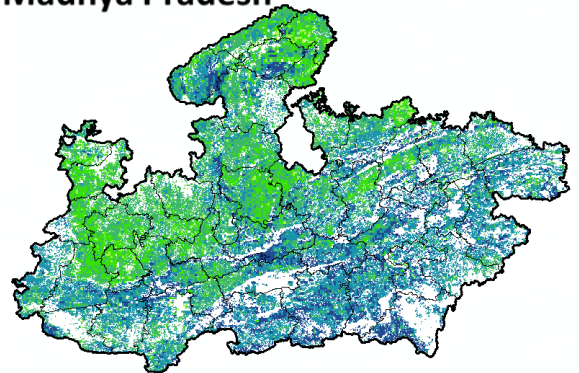
Agriculture vigour is good over entire state of Kerala except northern part which shows moderate NDVI values.

Maharashtra



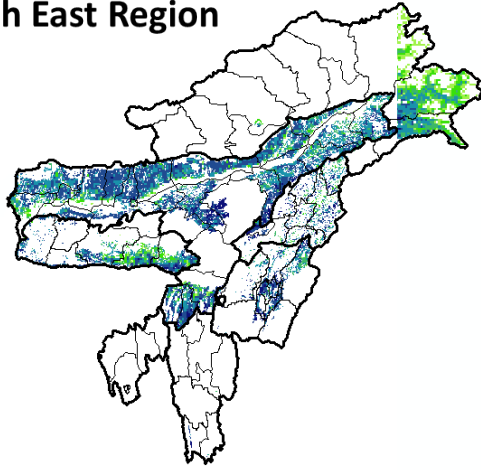
Agricultural vigour is moderate over central Maharashtra whereas, good to very good vigour is observed in the north and eastern regions.

Madhya Pradesh



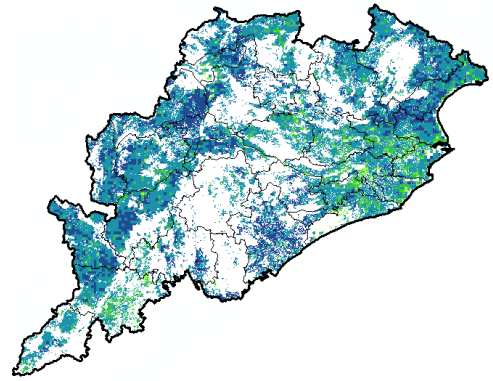
Agriculture vigour is moderate over patches in eastern and northern region of the state of Madhya Pradesh whereas, good & very good vigour is observed over central, western and southern region.

North East Region



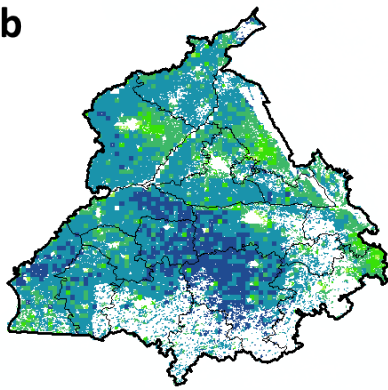
Agriculture vigour is good & very good over north-east states of country.

Odisha



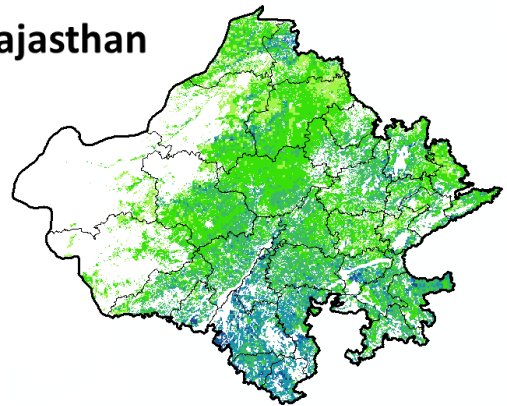
Agricultural vigour is moderate over coastal region of Odisha whereas, good to very good vigour is observed in entire state.

Punjab



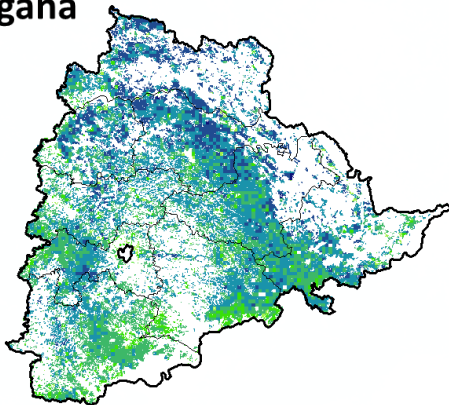
Agricultural vigour is very good over patches in central region whereas good vigour is observed in the entire state of Punjab.

Rajasthan



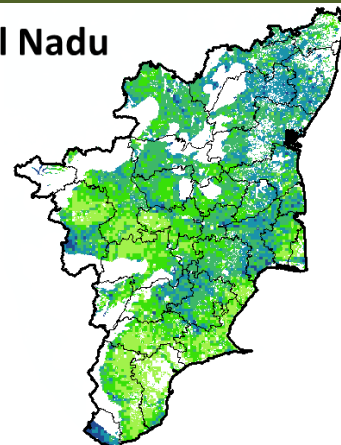
Agriculture vigour is moderate over western and northern Rajasthan whereas, good vigour is observed over southern region.

Telangana

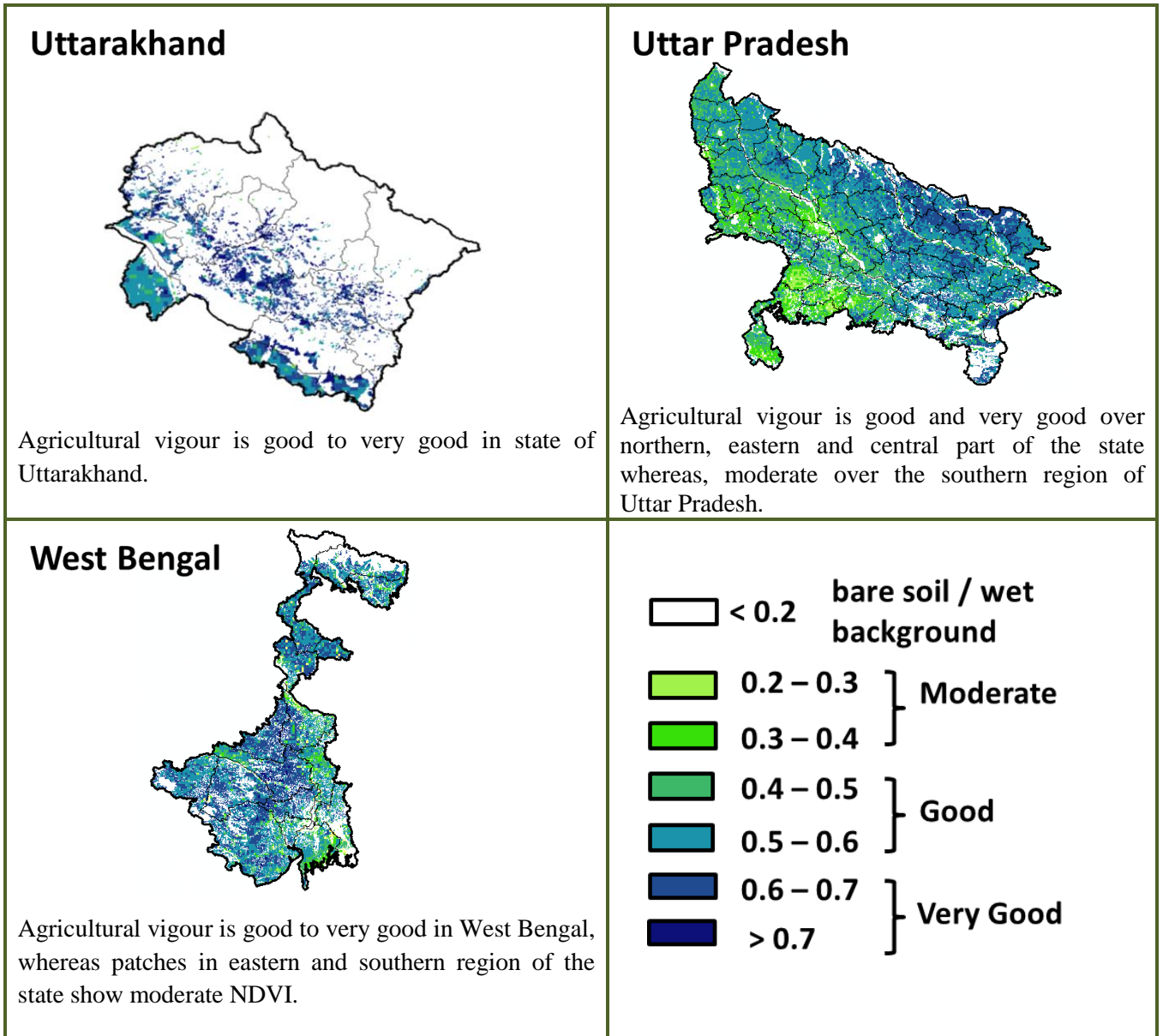


Agriculture vigour is good to moderate over entire state of Telangana whereas, good vigour is observed in patches in the north western region.

Tamil Nadu



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



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

Annexure III

- Assam**
- Okra:** Pusa Sawani, Arka Anamika, Parbhdani Kranti.
- Cauliflower :** Early Kunwari, Pusa Ketki, Pusa Dipali.
- Winter brinjal:** Pusa Kranti, Pusa Purple Long, Pusa Purple Round, Pusa Vairab, Pant Samra.
- Pumpkin:** Arke Suryamukhi, Arka Chandan.
- Radish :** Pusa Desi, Pusa Chetki.
- Tomato :** Punjab Chuhara, S-12, Punjab Kesri, Pusa Early Dwarf, Sioux, Pusa Ruby, VC- 48-1, Arka Abha (BWR-1), Arka Alok (BWR-5), BT-1, Bilahi-1, Bilahi-2).
- Brinjal :** Cluster, Barbengena, JC-1, Kuchia, Pusa Kranti, Pusa Purple Long (for long varieties).
Pusa Purple Round, Pusa Vairab, JC-2, BWR-12 (round varieties).
- Potato :** Kufri Chandramukhi, Kufri Jyoti, Kufri Megha, Kufri Badshah, Kufri Sindhuri.
- Onion :** Pusa Red, Pusa Ratnar, Pusa white (Round), Pusa white (Flat), N-53, Agrifound Light Red, Punjab Red Round, Pusa Madhuri, Arka Niketan.
- Cauliflower :** Early Kunwari, Pusa Katki and Pusa Deepali (for early maturity).
Improved Japanese, Pusa Synthetic, Pusa Snowhall (for mid maturity).
Snowball-16, Pusa Snowball, K-1 and Hissar 1 (for late maturity)etc.
- Cabbage :** Golden Acre, Pride of India, Pusa Mukta (Sel – 8) (for early maturity).
Drum Head and Eclipse Drum Head (for late maturity).
- Knol-Khol :** White Vienna (for early maturity).
Purple Viena (for late maturity).

Manipur

Pea :Arkel.

Tripura

Tomato: Trishul, Allrounder, T- 1408, T- 1458, Anup.

Cauliflower: CFL- 4048, Pusa early synthetic, Kamaya, Suhasihi.

Cabbage: BC- 76, Pusa Drum Head, Pusa Synthetic.

Broccoli: Everest, Ayeshwaria.

Bihar

Pigeon pea: Bahar, Pusa-9, Narendra Arher-1, Rajendra Arher-1 and Maalvia-13.

Sesame : Kanak, kalika, Uma, Usha, Tilottama, Neelima and Prachi

Green gram : K -851, PDM -54, PDM -11, OUM 11-5

Black gram : T-9, Pant-U-19. Pant –U-30, Pant –U-11

Niger : Deomali

Horsegram : Urmi, DS 1-2-2, DS 1-2

Jharkhand

Mustard: Shivani, Varuna, Pusa bold, Kranti, Pusa jaikisan , Vardan etc.

Potato: Kufri Ashoka and Kufri Kanchan.

Toria: BR-23, T.-9, P.T. 303, Panchali and Bhavani.

Gram: KAK-2, ICC-2, HK94-134(Kabuli) and Pusa 256, Pusa 372, Pant G-114, KWR 108, ICC 37.

West Bengal:

Mango: Himsagar, Mallicka, Langra

Guava: Safeda, L-49

Coconut: Eastcoastal, Hazari

Banana: Mortoman, Chapa, Kathali, Singapuri,

Mustard:Varuna, Sita and Bhagirathi.

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

Cabbage : Pride of India, Pusa early, Kranti.

Cauliflower : Jawhar moti, Bharat Jyoti, Early banaras.

Uttarakhand

Pea: Vivek 10, Vivek 11, Pant 3,

Radish:Meenu early, Japanese white, PusaHimani.

Carrot:PusaVrishi,

Jammu and Kashmir

Toria: RSPT-1 and RSPT-2

Himachal Pradesh

Cauliflower: snowball and Giant snowball.

Radish:Japanese white, Chinese pink and mino early white

Turnip: PTWG-1

Carrot:Pusakesar

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, Narendrasankar 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, Narendrasugandh or Nendrausar dhan-1, Nendrausar dhan-2, C.L.R.-10, or Nendrausar dhan-2008

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

Ginger -suprabha, suruchi, surbhi and Himgiri

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

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

Moong: Type-27, 56

Toria:TA-9, Bhawani, PT-30, PT-507, TA-36, PT-303.

Potato:Kufarichandramukhi, Kufarisadabhar, or KufriAshoka.

Mustard: Narendra ageti, rai-4, Varuna (T59), Basti (Pili), rohini, Maya, Narendra swarna-rai-8(pili), Narendra rai (NDR-8501), vaibhav.

Kabuli gram: chamatkar, Puse-1003, Subhra as good varieties.

Pea: Rachna, Pantmatar-5, Aparna Malviya Matar-2, Malviya Matar-15, Shikha and Sapna are good varieties.

Radish: kalyanpur No.1, Pusa Rashmi, Hisar selection-1, Japani Safed, pusa Chetaki, Pusa Himani, Pusa deshi, Arka Nishant and Jaunpuri.

West Uttar Pradesh

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

Baby corn: M.H.-4.

Toria: bhavani

Mustard: Urvashi, Rohini, Maya, Giriraj, Vardan, Vaibhav

Linseed: Parvati, sharda, Padmini

Vegetable pea: Azad-3, Aakril

Gram: Zaki-9218, KGD-1168, KWR-108, Uday

Pea: KPRM-522, KPRM-400, Vikas, Prakash

Lentil: DPL-62, Malika

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 sugandha-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

Cauliflower: Pusa Snow Ball-1, Pusa Snow Ball K-1

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.

Amaranths: 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)

Pea (early): Arkil, Hara bona, VL-3, Jawahar Matar-4, Matar Ageti-6 improved varieties.

Cauliflower: Pusa snow ball K-1, Hisar-1, Dania and Selection-7 are improved varieties.

Carrot: Pusa Keshar is improved variety.

Mustard: Pusa jai kisan, RH-30, Pusa bold, Laxmi, kranti.

Radish: Japanese white & hill queen.

West Rajasthan

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

Bhindi: Ark Anamika, varshauphar, Parbhanikranti, pusamakhmali.

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

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

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

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

Gram: c-235, RSG-44, GNG-663(vardan), RSG-888

GNG-469(samrat), GNG_1581(gangour), for kabulichana-GNG-1499(gouri) and GNG-1292

Mustard: RGN-13, RGN-73, Laxmi, Pusa bold, RGN-298, RGN-229, RGN-48, barni (timely sowing) RGN-145, RGN-236 (for late sowing)

Radish: Japanese white & hill queen.

Madhya Pradesh

Wheat: (Irrigated- JW 1203, 1215, HI 1544).

(Non irrigated- JW 3288, 3173).

Gram: JG 130, JG 218, JG 11, JG 16,JG 6, JG 315, RVJ 202.

Garlic:G 282, 223.

Lentil:RVL 31, JL 2.

Chhattisgarh

Mustard:Shiwani, Varuna, Pusa Bold, BR-40. Mustard.

Toria:Indira toria-1, Pant toria-30 & T-9.

Maharashtra

Jowar :Maldandi (M-35 – 1), SPV-655, SPV-839, Phule Yashoda, Parbhani Moti, Swati.

Wheat: NIAW-301 (Trimbak), NIAW-917 (Tapowan), NIDW-295 (Godavari), Late sowing- NIDW-15 (Panchavati).

For irrigated- NIAW-34.

Gujarat

Chick pea: Gujarat chana-2 (Unirrigated), Gujarat chana-3 (irrigated).

Garlic: Gujarat Garlic-4 or Local.

Mustard: Gujarat Mustard 1, 2, 3, 4, Varuna.

Carrot: Patan Local, Pusa Kesar and Pusa Chamdagni.

Karnataka

Sorghum: DSH-4, M-35-1, Muguthi, DSV-4, DSV-5,Maldandi , CSV-29R, SPV-2217, BJV-44.

Safflower : A-1, A-2, S-144.

Sunflower:Morden, KBSH-1,41,44 & 52.

Cowpea: KBC-1, 2.

Ragi: GPU 26,45, 48, Indaf 7,9, 15.

Field bean: Hebbal Avare-3, 4.

Rabi sorghum: Maldandi Muguti, DSV-4, DSV-5, BJV-44 varietyor Hybrid-DSH- 4, M 35-1 Muguthi, CSV-29R, SPV-2217.

Chickpea: A-1, GBS-964, JG-11, BGD-103, GB-1105, Annigeri-1, ICCV-10, BG-1105, JG-1, KAK-2, Vishal.

Wheat: DWR-162, DWR-225, DWR-415, 185, 195, DWR-2006, DWR-1006, DDK-1001, DWR-137, HD-2189, UAS-304, 428.

Niger :KBN-1, No.71, RCR-18.

Sugarcane: CO-86032, 740, 671.

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.