



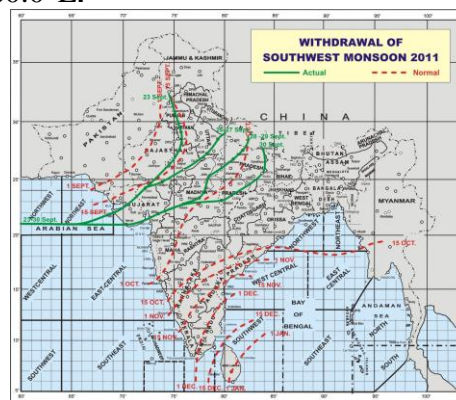
# National Agromet Advisory Bulletin

## Thursday, 6<sup>th</sup> October, 2011

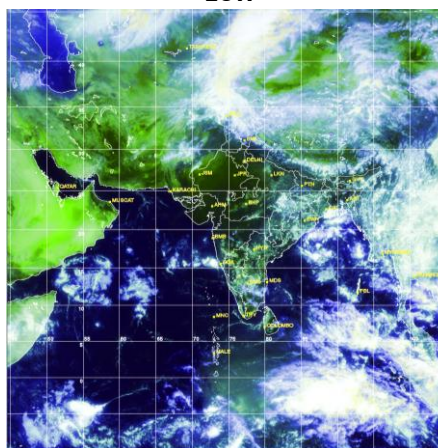
(For the period 6<sup>th</sup> October to 11<sup>th</sup> October, 2011)

### Monsoon Watch

- The withdrawal line of monsoon continues to pass through Lat. 27.0°N / Long. 84.0°E, Balia, Umaria, Jabalpur, Indore, Baroda, Veraval, Lat. 21.0°N / Long. 65.0°E and Lat. 21.0°N / Long. 60.0°E.



Satellite image 0600 UTC dated 7<sup>th</sup> October, 2011



### Issued by

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

The bulletin is also displayed in the website (<http://www.imdagrimet.gov.in>) of the Division

## Executive Summary

The southwest monsoon has withdrawn from most parts of North West India, Gujarat and Madhya Pradesh and mainly dry weather is likely to prevail in the above regions except Jammu & Kashmir, Himachal Pradesh and Uttarakhand during next three days. Farmers in these regions are advised to undertake harvesting of *kharif* rice, maize, bajra, jowar etc. and undertake field preparation and sowing of *rabi* crops like potato, mustard, vegetable pea, toria, lentil, barseem and vegetables etc. with residual soil moisture. Due to possibility of rainfall in Jammu & Kashmir, Himachal Pradesh and Uttarakhand, farmers are advised to undertake harvesting of already matured crops immediately. Farmers in Jammu and Kashmir are also advised to postpone irrigation and intercultural operation to the standing *kharif* crops.

Good rainfall, received during last week of September in Bihar, Jharkhand and West Bengal, may favour grain filling of *kharif* rice in these regions. This rain will also be helpful for sowing of *rabi* crops. Farmers are advised to undertake field preparation and sowing of toria, rapeseed and tobacco in Bihar and green pea, mustard, toria and potato in Jharkhand.

The weather in Orissa remained mainly dry since 22<sup>nd</sup> September. Sunny conditions with westerly dry wind increased the water requirement of crops due to increase in daily evaporation rate. Crops in the Southern districts are approaching moisture stress condition. Farmers are advised to keep the soil at least in moist condition with supplementary irrigation as the crops are now at critical stages.

Due to poor rainfall conditions prevailing in Rayalaseema, many of the late sown crops, which are at pod formation / pod development stage, suffer from moisture stress. Farmers are advised to arrange for supplementary irrigation as the crops are now at critical stage. Due to dry spell, sugarcane is suffering from moisture stress in the North Coastal Zone of Andhra Pradesh. Farmers are advised to undertake spraying of urea 250 g + MOP 250g / 10 litres of water and detrashing and mulching is advised to conserve moisture.

Mainly dry weather prevailed in most of the States except rainfall in few districts of Tamil Nadu, Arunachal Pradesh, Assam and Madhya Maharashtra. Last week's rainfall in Tamil Nadu could be useful for standing *kuruvai* rice crops at vegetative stage, nursery preparation of *samba* rice and preparatory tillage for sowing of rainfed *rabi* crops viz., sorghum, maize, pearl millet, cotton, sunflower, green gram, black gram and cowpea.

As scattered rain/thundershowers would occur over Nagaland, Manipur, Mizoram & Tripura, Himachal Pradesh, Uttarakhand, farmers are advised to undertake intercultural operation and application of fertilizer and plant protection measures to the crops on a non-rainy day and continue the above operations in the remaining regions as no significant rainfall is likely during next three days.

Due to prevailing weather, incidences of bacterial leaf blight, leaf folder, white backed plant hopper and brown plant hopper in rice in Kerala, stem borer, leaf miner in groundnut in Andhra Pradesh, leaf folder, case worm and hispa in rice, Bihar hairy caterpillar in bhindi and thrips in cowpea in Karnataka, gundhi bug in rice in Bihar, leaf folder in rice in Jharkhand and spotted boll worm in cotton in Orissa are reported. Farmers are advised to undertake appropriate plant protection measures to control the pests and diseases.

Well distributed rainfall in the country during *kharif* season may favour good *kharif* production in most parts of the country except some drought and flood affected areas. Recent showers are also favourable for sowing of *rabi* crops. Farmers are advised to undertake land preparation and sowing of *rabi* crops after harvesting of *kharif* crops.

## Distribution of rainfall of the country during last week

State / Districts	Actual	05.10.11
<b>Arunachal Pradesh</b>		
Changlang	11.6	-89
East Kameng	0.6	-98
East Siang	0.0	-100
Lohit	26.5	-59
Lower Subansiri	4.0	-85
Papumpara	10.9	-86
Tawang	0.0	-100
Tirap	46.0	-55
Upper Siang	99.9	16
Upper Subansiri	16.8	1
West Kameng	6.4	-94
West Siang	**	**
<b>Assam</b>		
Barpeta	5.9	-87
Bongaigaon	52.2	-9
Cachar	39.2	-43
Darrang	**	**
Dhubri	4.7	-94
Dibrugarh	38.9	-24
East Garo Hills	8.0	-88
East Khasi Hills	19.7	-81
Goalpara	17.6	-69
Golghat	2.8	-88
Hailakandi	34.6	-39
Jaintia Hills	25.0	-87
Jorhat	0.0	-100
Kamrup	0.0	-100
Karbi Analog	19.2	-26
Karimganj	82.0	11
Kokrajhar	4.7	-90
Lakhimpur	1.3	-98
Morigaon	0.0	-100
N.C.Hills	21.1	-45
Nowgong	14.0	-58
Nalbari	6.7	-85
Sonitpur	5.1	-85
Sibsagar	13.1	-55
Tinsukia	12.0	-70
<b>Himachal Pradesh</b>		
Bilaspur	3.0	-70
Chamba	0.8	-97
Hamirpur	5.5	-68
Kangra	26.2	22
Kinnaur	0.0	-100
Kullu	0.4	-98
Lahaul and Spiti	0.0	-100
Mandi	1.2	-93
Shimla	3.1	-71
Sirmaur	8.2	-62
Solan	0.2	-99
Una	15.8	-18
<b>Punjab</b>		
Amritsar	0.0	-100
Barnala	0.0	-100
Bhatinda	0.0	-100

Faridkot	0.0	-100
Fatehgarh Saheb	0.0	-100
Ferozpur	0.0	-100
Gurdaspur	1.4	-93
Hoshiarpur	0.0	-100
Jalandhar	0.0	-100
Kapurthala	0.0	-100
Ludhiana	0.0	-100
Mansa	0.0	-100
Moga	0.0	-100
Muktesar	0.0	-100
Nawashahar	0.0	-100
Patiala	0.0	-100
Ropar	9.9	-17
Sangrur	0.0	-100
Mohali	0.0	-100
TarnTaran	0.0	-100
<b>Haryana</b>		
Ambala	0.0	-100
Bhiwani	0.0	-100
Chandigarh	0.0	-100
Faridabad	0.0	-100
Fatehabad	0.0	-100
Gurgaon	0.0	-100
Hissar	0.0	-100
Jhajar	0.0	-100
Jind	0.0	-100
Katihah	0.0	-100
Karnal	0.0	-100
Kurukshetra	0.0	-100
Mahendragarh	0.0	-100
Palwal	0.0	-100
Panchkkula	0.0	-100
Panipat	0.0	-100
Rewari	0.0	-100
Rohtak	0.0	-100
Sirsa	0.0	-100
Sonepat	0.0	-100
Yamunanagar	0.0	-100
New Delhi	0.0	-100
<b>Jammu &amp; Kashmir</b>		
Anantnag	0.0	-100
Badgam	0.0	-100
Bandipore	**	**
Baramula	0.0	-100
Doda	0.0	-100
Ganderwal	0.0	-100
Jammu	6.4	-26
Kargil	0.0	-100
Kathua	0.0	-100
Kistwar	**	**
Kulgam	0.0	-100
Kupwara	0.5	-94
Ladakh(Leh)	0.0	-100
Poonch	0.0	-100
Pulwama	0.0	-100
Rajouri	0.0	-100

Ramban	0.0	-100
Reasi	19.5	43
Samba	1.2	-86
Shopian	0.0	-100
Srinagar	0.0	-100
Udhampur	0.0	-100
<b>East Madhya Pradesh</b>		
Anuppur	0.0	-100
Balaghat	0.0	-100
Chhatarpur	0.1	-99
Chindwara	0.0	-100
Damoh	0.0	-100
Dindori	0.0	-100
Jabalpur	0.0	-100
Katni	0.0	-100
Mandla	0.0	-100
Narsingpur	0.0	-100
Panna	0.0	-100
Rewa	0.0	-100
Sagar	0.0	-100
Satna	0.0	-100
Seoni	0.0	-100
Shahdol	0.0	-100
Sidhi	0.0	-100
Singrauli	0.0	-100
Tikamgarh	0.0	-100
Umaria	0.0	-100
<b>West Madhya Pradesh</b>		
Alirajpur	0.0	-100
Asoknagar	0.0	-100
Badwani	0.0	-100
Betul	0.0	-100
Bhind	0.0	-100
Bhopal	0.0	-100
Burhanpur	0.0	-100
Datia	0.0	-100
Dewas	0.0	-100
Dhar	0.0	-100
Guna	0.0	-100
Gwalior	0.0	-100
Harda	0.0	-100
Hosangabad	6.0	-65
Indore	0.0	-100
Jhabua	0.0	-100
Khandwa	0.0	-100
Khargone	0.0	-100
Mandsaur	0.0	-100
Morena	0.0	-100
Neemuch	0.0	-100
Raisen	0.0	-100
Rajgarh	0.0	-100
Ratlam	0.0	-100
Sehore	0.0	-100
Shajapur	0.0	-100
Sheopur	0.0	-100
Kalani	0.0	-100
Shivpuri	0.0	-100
Ujjain	0.0	-100

Vidisha	0.0	-100
<b>Chattisgarh</b>		
Bastar	0.0	-100
Bijapur	0.0	-100
Bilaspur	0.0	-100
Dantewara	0.0	-100
Dhamtari	3.2	-87
Durg	0.0	-100
Janjgir	0.0	-100
Jashpurnagar	0.0	-100
Kanker	0.0	-100
Korba	0.0	-100
Koriya	0.0	-100
Kawardha	0.0	-100
Mahasumund	0.0	-100
Narayanpur	0.0	-100
Raigarh	0.0	-100
Raipur	0.0	-100
Rajandgaon	2.8	-85
Surguja	0.0	-100
<b>Bihar</b>		
Araria	3.0	-94
Arwal	12.4	-58
Aurangabad	0.0	-100
Banka	0.0	-100
Begusarai	8.1	-71
Bhabua	0.0	-100
Bhagalpur	0.0	-100
Bhojpur	0.0	-100
Buxar	0.0	-100
Darbhanga	1.4	-97
East Champaran	1.7	-97
Gaya	0.0	-100
Gopalganj	0.7	-98
Jahanabad	0.0	-100
Jamui	13.0	-67
Kathihar	1.7	-96
Khagadia	4.9	-88
Kishanganj	0.0	-100
Lakhisarai	0.0	-100
Madhepura	4.8	-91
Madhubani	9.8	-76
Monghyar	9.0	-79
Muzaffarpur	3.3	-92
Nalanda	0.0	-100
Nawada	4.8	-90
Patna	0.5	-99
Purnea	1.6	-97
Rohtas	0.0	-100
Saharsha	2.6	-93
Samstipur	2.6	-95
Saran	1.0	-98
Sheikpura	1.1	-98
Sheohar	0.0	-100
Sitamarhi	0.0	-100
Siwan	0.0	-100
Supaul	8.7	-78
Vaishali	0.0	-100
West Champaran	0.5	-99

<b>Jharkhand</b>		
Bokaro	0.0	-100
Chatra	0.0	-100
Deoghar	0.0	-100
Dhanbad	2.7	-95
Dumka	**	**
East Singbhum	0.0	-100
Garhwa	**	**
Giridih	6.8	-81
Godda	**	**
Gumla	**	**
Hazaribagh	2.4	-95
Jamtara	8.8	-86
Khunti	**	**
Koderna	0.0	-100
Latehar	0.0	-100
Lohardagga	0.0	-100
Pakur	0.0	-100
Palamau	11.4	-55
Ramgarh	0.2	-99
Ranchi	0.3	-99
Sahebganj	**	**
Seraikela	**	**
Simdega	**	**
West Singbhum	11.4	-72
<b>East Rajasthan</b>		
Ajmer	0.0	-100
Alwar	0.0	-100
Banswara	0.0	-100
Baran	0.0	-100
Bharatpur	0.0	-100
Bhilwara	0.0	-100
Bundi	0.0	-100
Chittorgarh	1.5	-78
Dausa	0.0	-100
Dholpur	0.0	-100
Dungarpur	0.0	-100
Jaipur	0.0	-100
Jhalawar	0.0	-100
Jhunjhunu	0.0	-100
Karauli	0.0	-100
Kota	0.0	-100
Pratapgarh	0.0	-100
Rajsamand	0.0	-100
Sawai	0.0	-100
Sikar	0.0	-100
Sirohi	0.0	-100
Tonk	0.0	-100
Udaipur	0.0	-100
<b>West Rajasthan</b>		
Barmer	0.0	-100
Bikaner	0.0	-100
Churu	0.0	-100
Hanumangarh	0.0	-100
Jaisalmer	0.0	-100
Jalore	0.0	-100
Jodhpur	0.0	-100
Nagaur	0.0	-100
Pali	0.0	-100

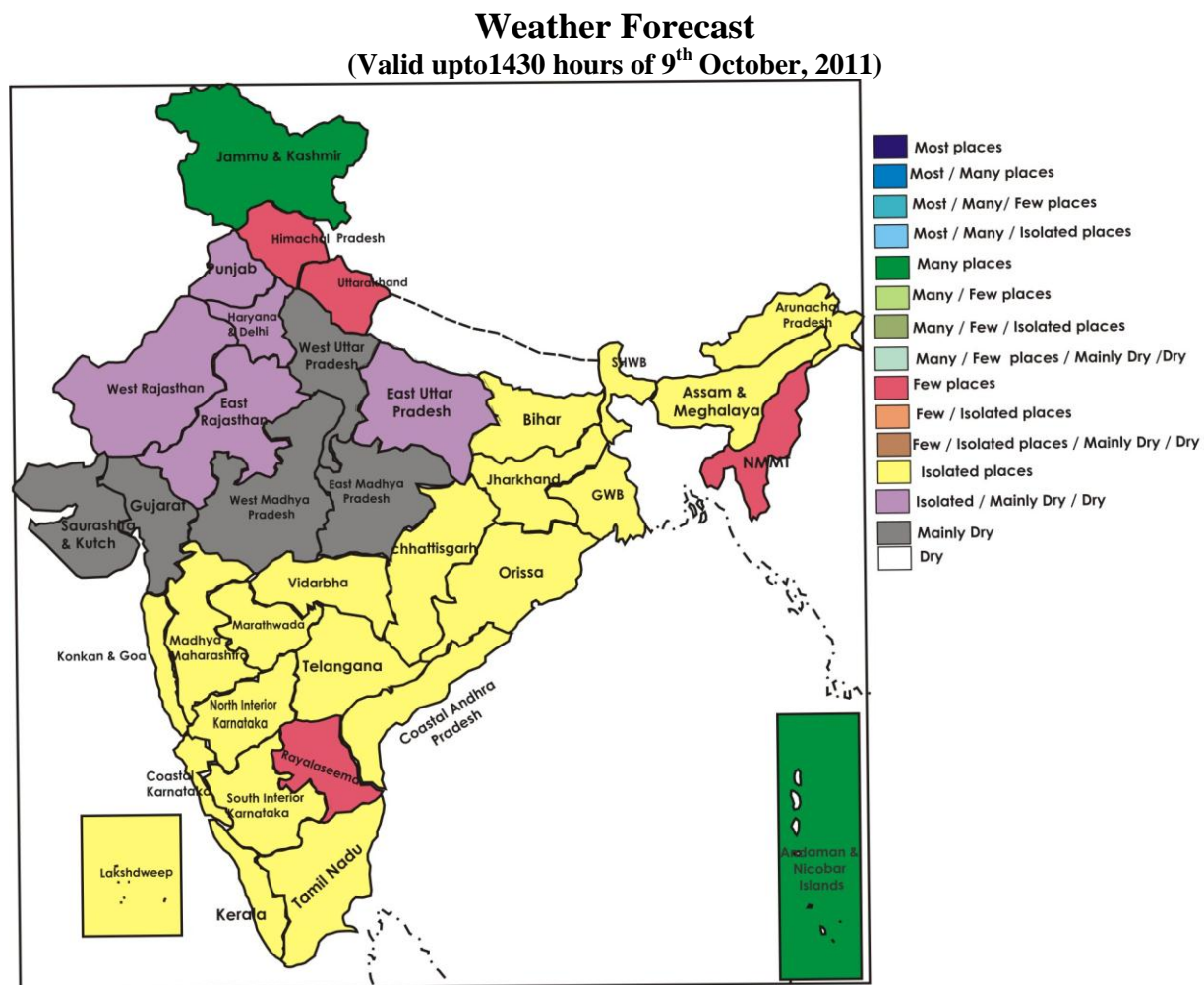
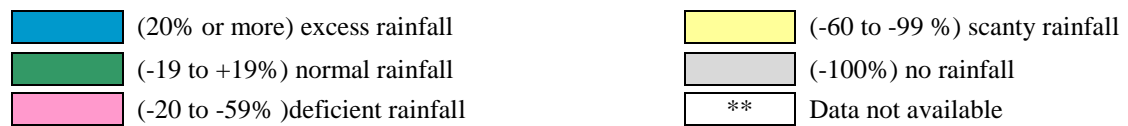
Sri Ganganagar	0.0	-100
<b>Maharashtra</b>		
<b>Konkan &amp; Goa</b>		
Goa	0.0	-100
Mumbai	2.1	-96
Raigad	19.0	-69
Ratnagiri	0.1	-99
Sindhudurg	0.0	-100
Thane	16.1	-64
<b>Madhya Maharashtra</b>		
Ahmednagar	19.4	-35
Dhule	1.8	-92
Jalgaon	0.6	-97
Kolhapur	24.3	-54
Nandurbar	0.0	-100
Nasik	29.6	-11
Pune	28.4	-30
Sangli	14.1	-69
Satara	13.6	-67
Solapur	11.3	-70
<b>Marathwada</b>		
Aurangabad	9.1	-65
Beed	12.6	-50
Hingoli	0.0	-100
Jalna	2.6	-88
Latur	13.8	-56
Nanded	3.3	-88
Usmanabad	18.5	-42
Parbhani	2.6	-91
<b>Vidarbha</b>		
Akola	0.0	-100
Amraoti	0.0	-100
Bhandara	0.0	-100
Buldhana	0.0	-100
Chandrapur	4.6	-80
Gadchiroli	0.8	-97
Gondia	0.0	-100
Nagpur	0.1	-99
Wardha	0.0	-100
Washim	0.0	-100
Yeotmal	0.2	-99
<b>Orissa</b>		
Angul	1.8	-94
Balasore	0.5	-99
Bargarh	0.0	-100
Bhadrak	0.1	-99
Bolangir	0.2	-99
Boudh	0.0	-100
Cuttack	0.0	-100
Deogarh	0.0	-100
Dhenkanal	6.3	-85
Gajapati	0.1	-99
Ganjam	0.0	-100
Jagatsingpur	7.8	-78
Jajpur	0.0	-100
Jharsuguda	0.0	-100
Kalahandi	3.3	-91
Kandhamal	0.0	-100
Kendrapara	0.0	-100
Keonjhar	2.9	-91



Khurda	0.0	-100
Koraput	0.0	-100
Malkangiri	0.0	-100
Mayurbhanj	0.3	-99
Nawapara	0.0	-100
Nawarangpur	0.0	-100
Nayagarh	0.0	-100
Puri	0.7	-98
Rayagada	0.0	-100
Sambalpur	0.0	-100
Sonepur	0.0	-100
Sundargarh	1.3	-93
<b>West Bengal</b>		
<b>GWB</b>		
Bankura	2.3	-96
Birbhum	5.9	-88
Burdwan	0.0	-100
Hooghly	1.5	-96
Howrah	0.0	-100
East Midnapore	0.0	-100
Murshidabad	0.0	-100
Nadia	0.0	-100
24 Pargana (N)	0.0	-100
Purulia	1.7	-96
24 Pargana (S)	1.7	-98
West Midnapore	0.0	-100
<b>SHWB</b>		
Cooch Behar	1.7	-98
Darjeeling	1.9	-97
East Sikkim	12.9	-76
Jalpaiguri	0.7	-99
Malda	0.0	-100
North Dinajpur	0.0	-100
North Sikkim	12.7	-88
South Dinajpur	0.0	-100
South Sikkim	0.0	-100
West Sikkim	34.0	-68
<b>Karnataka</b>		
<b>Coastal Karnataka</b>		
Dakshin Kannada	2.1	-97
Udupi	0.4	-99
Uttar Kannada	6.0	-90
<b>North Interior Karnataka</b>		
Bagalkote	38.1	-11
Belgaum	33.2	-23
Bidar	28.4	-12
Bijapur	24.2	-50
Dharwad	37.2	-13
Gadag	20.2	-56
Gulbarga	37.3	-10
Haveri	20.4	-44
Koppal	17.7	-57
Raichur	14.0	-70
Yadgir	17.6	-62
<b>South Interior Karnataka</b>		
Bangalore Rural	18.1	-69

Bangalore Urban	33.9	-35
Bellary	16.6	-63
Chamarajnaragar	5.6	-86
Chichballapur	30.5	-40
Chickmagalur	18.9	-63
Chitradurga	14.2	-63
Davangere	9.5	-77
Hassan	20.6	-50
Kodagu	19.8	-66
Kolar	44.5	0
Mandya	51.4	25
Mysore	18.5	-53
Ramnagara	34.9	-37
Shimoga	11.0	-77
Tumkur	24.8	-51
<b>Kerala</b>		
Alappuzha	0.0	-100
Kannur	0.0	-100
Ernakulam	0.0	-100
Idukki	0.0	-100
Kasaragod	0.0	-100
Kollam	0.0	-100
Kottayam	0.0	-100
Kozhikode	0.0	-100
Malappuram	0.0	-100
Palakkad	0.0	-100
Pathanamthitta	0.0	-100
Thiruvananthapuram	0.0	-100
Thrissur	0.0	-100
Wyanad	0.0	-100
<b>Tamil Nadu</b>		
Chennai	66.2	71
Coimbatore	1.5	-94
Cuddalore	11.3	-66
Dharmapuri	19.0	-57
Dindigul	37.2	2
Erode	33.8	4
Kanchipuram	20.1	-48
Kanyakumari	0.0	-100
Karur	71.9	154
Krishnagiri	44.3	-18
Madurai	40.8	7
Nagapattinam	16.5	-46
Namakkal	27.0	-16
Nilgiris	15.4	-62
Perambalur	24.2	-20
Puducherry	33.7	-12
Pudukottai	43.7	43
Ramanathapuram	12.6	-36
Salem	11.2	-74
Sivaganga	49.2	71
Thanjavur	44.3	40
Theni	4.9	-77
Tirunelveli	3.7	-79
Tiruvallur	19.7	-49
Tiruvannamalai	4.4	-88
Tiruvarur	56.9	87
Toothukudi	9.5	-33

Trichy	70.1	90
Vellore	6.8	-83
Villupuram	18.4	-48
Virudhunagar	25.2	-12
<b>Andhra Pradesh</b>		
<b>Coastal Andhra Pradesh</b>		
East Godavari	0.0	-100
Guntur	2.5	-94
Krishna	0.8	-98
Nellore	9.5	-75
Prakasam	5.8	-86
Sirkakulam	0.6	-99
Visakhapatnam	0.1	-99
Vizianagram	0.0	-100
West Godavari	4.5	-91
<b>Telangana</b>		
Adilabad	1.1	-96
Hyderabad	55.3	114
Karimnagar	1.8	-93
Khammam	1.4	-96
Mehabubnagar	6.7	-80
Medak	3.5	-87
Nalgonda	12.8	-64
Nizamabad	13.3	-54
Rangareddy	8.6	-72
Warangal	0.0	-100
<b>Rayalaseema</b>		
Anantapur	13.4	-66
Chittoor	21.6	-48
Cuddapah	21.5	-42
Kurnool	40.6	2



#### Major Feature of Weather Forecast upto 1430 hours IST of 9<sup>th</sup> October, 2011

- Fairly widespread rain/thundershowers would occur over Jammu & Kashmir and Andaman & Nicobar Islands.
- Scattered rain/thundershowers would occur over Himachal Pradesh, Uttarakhand, Nagaland, Manipur, Mizoram and Tripura.
- Isolated rain/thundershowers would occur over east and peninsular India and remaining parts of northeast India.
- Mainly dry weather would prevail over rest parts of the country. However, isolated rain/thundershowers would occur over Punjab, Haryana and north Rajasthan from tomorrow onwards.
- No significant change in maximum and minimum temperatures over plains of northwest and adjoining central India during next 2 -3 days.

#### Weather Outlook up to 1430 hours IST of 11<sup>th</sup> October, 2011

- Isolated to scattered rain/thundershowers would occur over western Himalayan region and south peninsular India.
- Isolated rain/thundershowers would occur over east and northeast India.
- Mainly dry weather would prevail over most parts of plains of northwest and central India.

### Zonewise Agromet Advisories

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

- **Realised Rainfall:** Many of the districts of Arunachal Pradesh and Assam received rain during last week.
- **Rainfall Forecast:** Scattered rain / thundershowers would occur over Nagaland, Manipur, Mizoram and Tripura during the period. Isolated rain is likely to occur over Assam and Arunachal Pradesh.
- **Advisory**
  - In Assam, farmers are advised to complete sowing of pulses like green gram and black gram, pigeon pea, sowing of onion, garlic, brinjal (early varieties), cauliflower (early varieties), cabbage, knoll khol, tomato, radish, country bean, Dolichos bean etc.
  - Farmers in Sub Tropical Hill Zone of Arunachal Pradesh are advised to harvest matured maize cobs and WRC crops (rice-IR-8 cultivar) and dry properly before storing.
  - Farmers in Arunachal Pradesh are advised to conserve rain water in the field where maize is in CRI stage or in tasseling stage. Farmers are also advised to start land preparation and sowing for *rabi* crops, prepare nursery bed for vegetables and planting of citrus fruits.
  - Farmers in Mid Tropical Hill Zone in Nagaland are advised to start land preparation and sowing for *rabi* crops like rapeseed, mustard, pea etc. Start harvesting of upland paddy according to maturity.
  - Farmers in Mid-tropical plain zone of Tripura are advised to prepare nursery for sowing of early cauliflower, other cole crops, turmeric, radish and brinjal (early).
  - Farmers of Sub tropical Plain Zone of Manipur are advised to continue sowing for french bean, broad bean and pea and continue to prepare bed for raising nursery for tomato, onion, cabbage, cauliflower etc. Start harvesting of matured soybean and groundnut crops.
  - In Kolasib region of Mizoram, continue to prepare nursery bed for pea, bean, cole crops and tomato.
  - Farmers in Ri-Bhoi, East Khasi and West Khasi districts in Meghalaya are advised to complete sowing of winter vegetables and lentil, mustard, rape in Ri-Bhoi, East khasi and East Garo hill districts.

- Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
- In Central Brahmaputra Valley Zone in Assam, there is attack of gundhi bug in panicle initiation stage of *sali* rice; to control the attack, apply Malathion 5% dust @ 20 kg / ha.
- In Hill Zone of Assam, there is chance of infestation of blast where the crops are at panicle initiation stage; farmers are advised to monitor *sali* paddy and spray Hinosan @ 1ml /lit of water to control the attack.
- In upper Brahmaputra Valley Zone in Assam, there is attack of stem borer and caseworm at maximum tillering, panicle initiation stages of rice; farmers are advised to monitor the crops and spray Chloropyriphos (20%) @ 2 ml / litre of water to control the attack.
- In lower Brahmaputra Valley Zone in Assam, leaf folder attack in rice can be managed by spraying of Nuvacron 5ml per lit of water.
- In Sub Tropical Plain Zone of Manipur, there is chance of occurrence of diseases like neck blast, stem borer and brown plant hopper on rice; farmers are advised to monitor and spray Tricyclazole @ 6 g / 10 litres of water against neck blast, spray Fipronil 80% WG @ 2g/ 15 lit of water against stem borer and brown plant hopper.
- In Kolasib region of Mizoram, due to prevailing weather conditions, there is chance of infestation bacterial wilt, sucking insect and diseases like blast in rice; farmers are advised to monitor the crops and spray Streptocycline 1-2g in 5 liters of water and 2.5 g cereson @ 0.5% in one liter of water against bacterial wilt, to control most of the sucking insect pests do dusting in paddy with Folidol @ 20-25 kg/ha in the morning hours when leaf wet, leaf hopper and plant hopper, Benlate or Mancozeb @ 0.25% against blast disease. Due to prevailing weather as well as fruit maturity period of khasi mandarin, there are chances of peak activity of fruit fly, apply baits of jaggery + fruit juice + malathion (20:20:1).
- In Mild Tropical Plain Zone of Tripura, due to the prevailing humid weather, there is chance of attack of gundhi bug, leaf roller and disease like blast in *aman* rice; farmers are advised to spray Malathion 35 EC @ 1.5 g per liter of water or Cartap Hydrochloride (Dollar) @ 1.5 g per liter of water against gundhi bug, Cypermethrin + Prophenofos @ 1.5 ml per litre of water against leaf roller and Hexaconazole 1 g per liter of water or Azoxyxtrobin 1 g per liter of water against blast. There is attack of leaf spot and leaf blotch in ginger and Turmeric; to control the attack spray Blytox 1 g per liter of water to control the attack.
- Apply plant protection measures on a non-rainy day in Nagaland, Manipur, Mizoram and Tripura.
- Stages of major crops are mentioned in Annexure I.

#### **Animal Husbandry:**

- In Mizoram, due to prevailing weather conditions, there is chance of infestation of round worm, flukes and tapeworms in cattle, farmers are advised to deworm cattles by using appropriate dewormer like Albendazol, Rafoxanide and Praziquanel respectively. Vaccinate pig against swine fever.
- In Nagaland, due to ingestion of contaminated feed and water, there is chance of affect of Foot and Mouth Diseases in livestock. To control the disease, apply bonoglycerine on mouth lesions, mouthwash with 1% KMnO<sub>4</sub>, foot wash with 2% copper sulphate or 2-4% sodium carbonate solution.

#### **EAST INDIA [JHARKHAND, BIHAR, ORISSA, WEST BENGAL &SIKKIM]**

- **Realised Rainfall:** No significant rainfall was received in the region during last week.
- **Rainfall Forecast:** Isolated rain is likely to occur over the States during the period.
- **Advisories:**
  - The weather in Orissa remained mainly dry since 22<sup>nd</sup> September. Sunny conditions with westerly dry wind increased the water requirement of crops due to increase in daily evaporation rate. Crops in the Southern districts are approaching moisture stress condition. Farmers are advised to keep the soil at least in moist condition with supplementary irrigation as the crops are now at critical stages.
  - Farmers in South Bihar Alluvial Zone are advised to undertake propping in standing sugarcane crop for better stand in the field.
  - As dry weather is prevailing over North West Alluvial Zone of Bihar, apply irrigation in the turmeric crop where moisture is limited.
  - In North West Alluvial Zone of Bihar, farmers are advised to prepare the land in upland areas for sowing of rapeseed.
  - In Western Plateau Zone of Jharkhand after harvesting of different kharif crops, farmers can sow mustard and toria and it is the time for sowing of winter vegetables like cauliflower, cabbage, chilli, tomato etc. Farmers are advised to raise the seedlings of these vegetables.
  - Farmers in South Eastern Plateau Zone of Jharkhand are advised to undertake cultivation of green pea in fallow medium land for the utilization of reserved moisture. Rotting of tubers of Turmeric, Ginger and Elephant foot yam are noticed. To save the crops, arrange to drain out excess water.
  - Weather is conducive for the attack of stem borers in turmeric and ginger, spray Roger @ 1 ml per liter of water and also remove affected parts. Collar rot disease seen in elephant foot yam, spray Carbendazim @1g + Thirum @2 g per liter of water in South Eastern Plateau Zone of Jharkhand.
  - Due to probability of cool and high humidity weather condition in rice favours the spreading of false smut disease, spray Tilt @ 1 ml per liter of water. Clear and dry weather also favours in the increment of climbing cutworm insects, spray Quinolphos 25 EC or Chlorpyriphos 20 EC @ 0.6 liter per acre or Carbaryl 50 percent WP @ 1g or Carbaryl 5 percent dust @ 10 kg per acre during dusk or evening time and also advised for Roger @ 1 ml per liter of water for insects attack control in South Eastern Plateau Zone of Jharkhand.
  - In South Eastern Plateau Zone of Jharkhand due to cool and high humid weather condition population of different leaf eating/grain eating or sucking insects are seen more infested . So, plant protection measures have to be ensured hence, farmers are advised for monitoring diseases and pests infestations, spray Diamethoate @ 2 ml per liter of water and take care of blast occurrence.
  - Timely sown crop is at maturity stage hence to prevent grains of cob from parrot attack, fenced with shining wire around the field which act as a repeller. Harvesting should be finished till end of hathia constellation i.e. by the end of 9th October in South Eastern Plateau Zone of Jharkhand.
  - Farmers in Central, Western and North Eastern Plateau Zone of Jharkhand are advised to start sowing of toria, niger, bell peper, green pea, tomato, cabbage, cauliflower, potato etc.
  - Farmers in Central Plateau Zone of Jharkhand are advised to grow African marigold or French marigold.
  - Farmers in Coastal saline Zone of West Bengal are advised to start seed bed preparation of short duration varieties of tomato and cauliflower as soon as possible.
  - Farmers in Terai Zone of West Bengal are advised to undertake seedbed preparation for gladiolus, with ania and marigold.
  - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
  - Prevailing weather condition are congenial for the incidence of aphids and thrips on vegetables, spray Dimethoate or Methyl-O –Demeton @ 2ml/Liter of water and for thrips, spray Imidachlopid @ 0.4 ml/liter of water in North Eastern Plateau Zone of Orissa. Spraying should be done whenever there is rain free period for at least 6 hours.
  - Infestation of spotted boll worm in cotton in East and South Eastern Coastal Plane Zone of Orissa, spray 200 LE HNPV along with gur if it crosses the ETL level of 5 –10 %of affected twigs and install pheromone trap in the middle of the field at 1 ft above the crop height.
  - In North Eastern Plateau Zone of Orissa, the current humid weather is favourable for red and black hairy caterpillar. Apply 10kg 1.5% Chloropyriphos in the morning to control it.
  - In some pockets crops are attacked by leaf Roller/folder insects in Western Plateau Zone of Jharkhand. If the pest population is very less, then the affected leaves should be burnt after plucking them. Otherwise spray Monocrotophos @ 1 ml per litre of water.

- Under prevailing weather condition, there is chance of attack of Brown Plant Hopper (BPH) in *kharif* rice in New Alluvial Zone of West Bengal. If the number of insect reaches more than 15 per plant, apply 0.75 ml Nuvan or Vapona per litre of water or dust Quinolphos 1.5% or Carbaril 4% at lower portion of the stem.
- Due to high humidity and cloudy weather, high yielding varieties of rice may be attacked by blast and bacterial leaf blight in Coastal Saline Zone of West Bengal. For blast disease spray Tricyclazole @ 0.5 g per litre of water or Kasugamicyne @ 1.5 g per litre of water. To prevent bacterial blight spray mixture of 1 g Streptomycine along with 20 g Copper Oxychloride into 10 litres of water.
- In some places of South Bihar Alluvial Zone of Bihar it is reported that gundhi bug are attacking and sucking the grain milk of paddy for its control apply Methyl parathion/folidol/Ekalex (2% Dust) early in morning hours at the rate of 20-25 kg/ha in rice field.
- Late sown crops of maize are attacked by fruit borer; to control, spray Neem based insecticides @ 2-3 ml per litre of water, preferably on upper parts of the plant in Western Plateau Zone of Jharkhand.
- Stages of major crops are mentioned in Annexure I.

#### Animal Husbandry

- In North Eastern Plateau Zone of Orissa, to control ticks and mites in animals, spray Butox @ 2 ml per litre on animals' body and 1-3 ml per litre in the shed. RD vaccine should be given immediately to the chicks which are 7 days old. To prevent coxidirosis disease spray antibiotic solution named Kohrsolin-TH in the poultry house. Periodic vaccination viz. FMD, HS & BQ may be carried out to protect the dairy animals. Clean and hygienic water should be fed to dairy animals. Keep the animal shed clean. Produce and use Azolla as animal feed. Feed the milch animals @ 1 kg feed in two litres of water mixed in 50 g mineral salt.

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

- **Realised Rainfall:** Most of the districts in all States of the region remained mainly dry during last week.
- **Rainfall Forecast:** Fairly widespread rain/thundershowers would occur over Jammu & Kashmir. Scattered rain/thundershowers would occur over Himachal Pradesh and Utrakhand. Mainly dry weather would prevail over rest parts of the region. However, isolated rain/thundershowers would occur over Punjab, Haryana and north Rajasthan from 7<sup>th</sup> onwards.
- **Advisory:**
  - As fairly widespread rain/thundershowers would occur over Jammu & Kashmir, postpone irrigation to the standing crops.
  - As weather is favourable, farmers in Delhi are advised to undertake planting of early potato. Thereafter, sowing of other *rabi* crops such as late wheat can be taken up. Also undertake sowing of pea and carrot in raised bed. Due to favorable temperature, sowing of early mustard should be done in this week. Transplant chrysanthemum and marigold and complete sowing of gladiolus during this week. Transplant mature seedlings of cauliflower, cabbage, broccoli and tomato in raised beds.
  - Farmers in Uttar Pradesh are advised to prepare land for nursery sowing of barseem, potato and toria.
  - As weather is expected to be dry during the period, farmers in Punjab and Haryana are advised to pick the fully matured opened bolls in the cotton crop. Undertake harvesting of matured paddy crop. Undertake sowing of raya and autumn potato till 15th October and complete sowing of Barseem (fodder). Taking advantage of present weather transplant main season varieties of cauliflower and cabbage. Undertake sowing of radish, turnip and carrot. Give need based irrigation to sugarcane crop.
  - Farmers of Himachal Pradesh are advised to prepare nuresery and undertake sowing of seeds of cabbage, cauliflower and broccoli etc. Direct sowing of carrot, raddish and Palak can also be done during this period. Light earthling up followed by light irrigation is also advised in ginger and turmeric. Farmers of the sub-montane and low hill area are advised to complete sowing of toria and berseem and take up sowing of potato. In the high hills, sowing of barley can be taken up.
  - Farmers in Jammu & Kashmir are advised to undertake harvesting of matured rice, matured pods of pulses, early sown maize, bajra, oilseeds and *kharif* vegetables. Undertake nursery sowing of cabbage, chinese cabbage and kale in cold arid zone (Leh). In fallow lands, conservation of soil moisture *insitu* condition for the sowing of *rabi* crops is advised. Make arrangements for proper drainage of water from the orchards.
  - Farmers in Bhabar and Tarai Zone of Uttarakhand are advised to continue sowing of vegetable pea at high hills, planting of potato and also continue sowing of early vegetable pea, mustard, berseem, toria and garlic under optimum soil moisture conditions.
  - Farmers in Uttarakhand and Uttar Pradesh advised to undertake propping for long and healthy crop plants.
  - Farmers in Bhabar and Tarai Zone of Uttarakhand are advised to continue sowing of Rajmash crop.
  - Farmers in Uttar Pradesh are advised continue sowing of brinjal, chilli, lady's finger and lobia.
  - Farmers in Rajasthan are advised to undertake field preparation for sowing of Ajwain, taramira, rainfed taramira, toria, pea, mustard. They are also advised to undertake seed bed preparation for raising nursery of vegetables viz. chilli, brinjal, palak, pea, cabbage, coriander, onion and tomato for *rabi* season. Farmers are advised to start field preparation for sowing of wheat, oats and barley and procure improved varieties of mustard, lentil, gram and potato tubers. In command areas of southern humid plain zone, farmers are advised to go for sowing of maize for fodder or for green cobs before sowing of wheat.
  - In Semi Arid Eastern Plain Zone of Jaipur in Rajasthan, Blight disease may attack tomato, brinjal & chilli crops. Farmers are advised to spray mencozeb @ 2 gm or copper oxychloride @ 3 gm or Redomil MZ-2 gm per litre water.
  - In the sub montane zone of Himachal Pradesh attack of Fruit borer is observed in bhindi and brinjal. Farmers are advised to spray carbaryl 50wp @2g per litre of water or endosulphon @1.5ml per litre of water. Observe 7 days waiting period for picking of fruits.
  - Termites may damage crops and vegetables in the present weather in Delhi. Farmers are advised to spray Chlorpyriphos 20 EC @ 4ml per litre of water.
  - Attack of blast in paddy may occur during this weather condition in Delhi. Spraying of Tricyclozole (Beam, Ban or Sevic) 6 g per 10 litres of water or Saaf @ 1 ml per litre of water is advised.
  - Weather is favourable for attack of brown plant hopper and Gundhi Bug in paddy, fruit fly on cucurbitaceous crops and mite and jassids on ladyfinger, brinjal and chilli crop in Delhi. Farmers are advised to monitor the crops and take proper plant protection measures.
  - Farmers are advised to monitor sugarcane for the attack of pyrilla in Punjab and Haryana. Take proper plant protection measures.
  - Due to high humidity there is possibility of attack of Jassid and Sundi in cotton crop in Haryana. Take proper plant protection measures.
  - Stages of major crops are mentioned in Annexure I.
- **Animal Husbandary**
  - In Punjab, during hot and humid climate may lead to conditions of ring worm & other problems in animals so farmers are advised to keep the animals clean and dry also protect wounds from flies to avoid maggots' infestation.
  - To check tick infection spray Asuntol 0.05%, Butox 0.02% and Taktic 0.02% on the animals as well as in the sheds and repeat the spray after 10-15 days.
  - Due to changing environment milch and baby animals are likely to be affected with infection of respiratory tracts in In Semi Arid Eastern Plain Zone of Jaipur in Rajasthan. If symptoms like droppings from nose, fever etc. are seen in animals, a three days course of Cproflaxin, Anorflaxin or Sulpha may be given under the guidance of veterinary doctor.



**SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS]**

- **Realised Rainfall:** No significant rainfall occurred in Kerala, Andhra Pradesh and Karnataka. Chennai, Karur, Krishnagiri, Madurai, Pudukkottai, Sivagangai, Thanjavur, Thiruvarur and Trichy districts in Tamil Nadu received sufficient rainfall.
- **Rainfall Forecast:** Scattered rain/thundershowers would occur over Rayalaseema, South Interior Karnataka, Tamil Nadu and Kerala. Isolated rain/thundershowers would occur over remaining parts of the region.
- **Advisories:**
  - Due to poor rainfall conditions prevailing in Rayalaseema, many of the late sown crops at pod formation / development stage suffer from moisture stress. Farmers are advised to arrange for supplementary irrigation as the crops are now at critical stage for irrigation.
  - Due to dry spell, sugarcane is suffering from moisture stress in the North Coastal Zone of Andhra Pradesh. Farmers are advised to spraying with urea 250 g + MOP 250 g / 10 litres of water and detrashing and mulching is advised to conserve moisture.
  - As there was no significant rainfall in Kerala, Andhra Pradesh and coastal Karnataka, apply irrigation to the crops. Postpone irrigation to the crops in Chennai, Karur, Krishnagiri, Madurai, Pudukkottai, Sivagangai, Thanjavur, Thiruvarur and Trichy districts in Tamil Nadu since sufficient rainfall has been received during last week.
  - Farmers in the Eastern Dry Zone of Karnataka are advised to give protective irrigation to rainfed crops, since they are at grain filling / milky stage, which is a critical stage and also there was no rainfall during last week. Farmers in the Coastal Zone of Karnataka are advised to provide irrigation to paddy in its present critical stage condition, since there has been no rainfall in the last ten days.
  - Farmers in the North Dry Zone of Karnataka are advised to continue sowing of sun flower, rabi sorghum, chickpea, wheat and safflower and harvesting of pearl millet (bajra) and maize may be taken up.
  - Farmers in the Hill Zone of Karnataka are advised to take up sowing under irrigated condition. Since increase in wind speed is forecasted, there is a possibility of falling of plants. Therefore farmers are advised to go in for staking for plants.
  - Farmers in the North East Dry Zone of Karnataka are advised to harvest green gram and black gram wherever it is possible, prepare land for sowings of *rabi* crops like safflower, rabi jowar & sorghum, bengal gram. As most of the area is under moisture deficit status, apply protective irrigation to crops like pigeon pea, cotton, sunflower and groundnut which are under stress.
  - Farmers in the Cauvery Delta Zone of Tamil Nadu are advised to undertake harvesting of *kuruvai* rice; also sowing of *samba / thaladi* rice in the nursery and also transplanting paddy with proper seedlings.
  - Farmers in the Problem Areas Zone of Kerala are advised to undertake new planting of banana.
  - Farmers in Central Zone of Kerala are advised to continue manuring in coconut, ginger, turmeric and vegetables. Undertake transplanting of mundakan rice. Farmers of High Altitude Zone of Kerala are advised to apply fertilizers in coconut, arecanut, pepper and cardmom plantations.
  - Incidence of bacterial leaf blight, leaf folder, white backed plant hopper and brown plant hopper in paddy in some areas of Problem Areas Zone of Kerala. To control bacterial leaf blight, spray fresh cowdung water made by mixing cowdung in water @ 20 g/litre, fold the leaves of the plant, roll and web together with white patches on them to control leaf folder and drain off the field completely to control white backed plant hopper and brown plant hopper.
  - Incidences of blue beetle, leaf cutter and block spine beetle in paddy, bihari hairy caterpillar in bhendi crop, mealy bugs in papaya and trips in cowpea crop was noticed in the Southern Dry Zone of Karnataka. Spray nuvacron @ 1.5ml/ ltr. of water to control field blue beetle, leaf cutter and block spine beetle, akalux @ 2.00ml per ltr. of water to control hairy caterpillar, rogar @ 1.5ml per ltr. of water to control trips and chlorophyriphos @ 2.00ml per ltr. of water to control mealy bugs
  - Incidence of paddy leaf folder, paddy hispa and case worm was noticed in paddy and sterility mosaic was noticed in pigeon pea in North East Transition Zone of Karnataka. Farmers are advised to take up spraying of Quinolphos or Chloropyriphos 2ml/litre of water to control leaf folder, paddy hispa and case worm and rough out the affected plants followed by spraying of Docofol @ 2.5 ml/litre of water to control sterility mosaic.
  - Due to higher humidity, low temperature and frequent rains in the Coastal Zone of Karnataka, gundhi bug, thrips, leaf folder was noticed in paddy, phytophthora foot rot and anthracnose disease on pepper leaves, vines etc. and koleroga/rotting disease in arecanut. Farmers are advised to undertake plant protection measures.
  - Incidence of maruka (leaf webbing) pest is observed in red gram in the North East Dry Zone of Karnataka. Farmers are advised to add 0.5ml of DDVP insecticide / l for efficient control for maruka pest management.

**WEST INDIA [GOA, MAHARASHTRA, GUJARAT]**

- **Realised rainfall:** Mainly dry weather prevailed in most of the districts in the region except light rainfall in Raigad district in Konkan, Osmamabad in Marathwada and Ahmednagar, Kolhapur, Nasik and Pune districts of Madhya Maharashtra.
- **Rainfall forecast:** Isolated rainfall is likely in Maharashtra and mainly dry weather is likely in Gujarat.
- **Advisories:**
  - Farmers in Madhya Maharashtra, Marathwada and Vidarbha region of Maharashtra are advised to continue harvesting of matured black gram and soyabean crop. Farmers in South Konkan region are advised to continue harvesting of matured early rice varieties. Farmers in Madhya Maharashtra are advised to start harvesting of matured groundnut.
  - Taking advantage of prevailing weather, farmers in Madhya Maharashtra are advised to undertake pruning in grapes for proper fruit setting.
  - Farmers in Konkan, Kolhapur, Pune and Nasik division of Maharashtra are advised to maintain water level of 5-10 cm and of 5-8 cm in Vidarbha in rice field. Apply third dose of nitrogenous fertilizers to late maturing varieties of rice at flowering stage.
  - Farmers in Madhya Maharashtra are advised to spray 2% Diammonium Phosphate (DAP) i.e., 4 kg DAP in 200 liters of water to prevent reddening of leaf in cotton at boll formation stage.
  - Farmers in Madhya Maharashtra and Marathwada are advised to undertake sowing of *rabi* jowar with the help of optimum moisture in the field. Farmers are also advised to complete preparatory tillage and undertake the sowing of safflower after harvesting of *kharif* crops.
  - Farmers in Madhya Maharashtra are advised to undertake sowing of rainfed gram.
  - Farmers in Vidarbha are advised to spray NAA 10 PPM to avoid flower dropping in orange.
  - As there was no significant rain during last few weeks and mainly dry weather would prevail in South Gujarat Zone, South Gujarat Heavy Rainfall Zone, Bhal and Coastal Zone and North Gujarat Zone, farmers are advised to apply irrigation to sugarcane, cotton and vegetables crops as per requirement.
  - As mainly dry weather will prevail during the period, farmers in Middle Gujarat Zone, South Gujarat Heavy Rainfall Zone and North West Zone are advised to continue harvesting of maize, green gram, cowpea and pear millet.
  - Farmers in North Gujarat Zone and North West Zone are advised to irrigate groundnut crop as per requirement.
  - Farmers in Middle Gujarat Zone are advised to undertake sowing of mustard, cluster bean before 15<sup>th</sup> October. Prepare tobacco nurseries using 5-6 kg seed for 1 hectare area covering with mulch to protect seedling from sun light.

- Farmers in South Gujarat Zone and North Gujarat Zone are advised to prepare field for sowing of *rabi* crops.
- Farmers in South Saurashtra Zone of Gujarat are advised to complete harvesting of groundnut.
- Farmers in North West Zone of Gujarat are advised to undertake sowing of maize, jowar and lucern.
- Suitable varieties of the crops for sowing are mentioned in Annexure II.
- Due to increase in maximum temperature and high humidity there may be incidence of bacterial leaf blight on *kharif* rice in Pune division, spray Streptocyclin @ 75g and Copper Oxychloride @ 125g per hectare in 500 litres of water.
- Due to prevailing weather there may be attack of stem borer and midge fly in rice in East Vidarbha region of Maharashtra, spray Quinolphos 25% WS @ 32 ml or Fenitrothion 50% WS @ 30 ml per 10 litres of water. Also there may be attack of nodal blast in rice in South Konkan, spray Carbendazim @ 10g or Copper oxychloride 25g per 10 litres of water.
- As there was rain and humid weather during last week in Western Maharashtra Scarcity Zone, there may be attack of thrips, jassids and white fly in cotton. To control spray Aciphate 20g + Monosil @ 20 ml in 10 litres of water.
- Weather condition is favourable for infestation of downy mildew in grapes in Madhya Maharashtra, spray Metalaczil-Mancozeb (0.2%) or Siamocyanil-Mancozeb (0.2%) five times at an interval of 12 days.
- Prevailing weather may cause fruit dropping in Sapota in North Konkan region of Maharashtra, spray Redomil (Metalaxyl 8% + Mancozeb 64%) at @ 20g per 10 litres of water.
- Farmers in Bhal and Coastal Zone of Gujarat are advised to spray Dimethoate 30 E.C. or Methyl-o-demate 25 E.C. @ 10 ml per 10 liters of water to control the insect pest like whitefly in vegetables.
- Farmers in Middle Gujarat Zone are advised to apply carbofuran 3% or cartap hydrochloride 4% @ 7.5 kg per hectare to control paddy stem borer and leaf roller.
- Stages of major crops are mentioned in Annexure I.

#### Animal Husbandry

- For control of external parasites like ticks, spraying of cattle shed by using 1 to 1.5 ml neon per litre of water is advised. For control of fly and Mosquito in cattle shed, spray Malathion dust and clean the shed frequently in Gujarat.
- Farmers in North-West Zone of Gujarat are advised to give antibiotic R to B @ 0.5 ml to the poultry birds and antibiotic dose to the animals.

#### CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** No significant rainfall occurred over the region.
- **Rainfall Forecast:** Mainly dry weather is likely to prevail over the region.
- **Advisory:**
- As there is possibility of dry weather and clear sky condition in Bundelkhand Zone of Madhya Pradesh, farmers are advised to harvest the mature crops. Also prepare field for sowing of sarson saag, toria, onion, potato, radish, spinach and garlic and sow chickpea, lentil and mustard. Farmers in Kymore Plateau and Satpura Hill Zones in Madhya Pradesh are advised to prepare field for sowing of *rabi* crops and transplant cauliflower in main fields.
- Farmers in Central Narmada Valley Zone of Madhya Pradesh are advised for transplanting of tomato, brinjal, and chilly. Farmers in Malwa Plateau Zone of Madhya Pradesh are advised for sowing of potato and prepare nursery for onion, brinjal, chilly tomato, etc. Also transplanting of tomato, brinjal, chilly etc. can be done with proper seedlings. Farmers in Vindhya Plateau Zone of Madhya Pradesh are advised for sowing of wheat and gram.
- Farmers in Gird Valley Zone of Madhya Pradesh are advised to transplant the winter sown varieties of cauliflower in the field. Also the farmers may start mustard sowing from 10th October according to moisture availability.
- Farmers in Chattisgarh Plain Zone are advised for sowing of nursery of early varieties of cauliflower, tomato, brinjal, chilli, niger and horsegram. Also in North Hill Zone of Chattisgarh, farmers are advised for sowing / planting of potato, ramtil and toria and prepare nursery for tomato, cabbage, pea, chilly and cauliflower.
- Farmers in Bastar Plateau Zone are advised for sowing of niger, kulthi (horsegram), toria, cauliflower and cabbage. Also prepare nursery for *rabi* vegetables.
- Weather is congenial for fruit and stem borer in brinjal in Bundelkhand Zone of Madhya Pradesh, farmers are advised to spray Melathyon 50 E.C. 2.0 ml per litre of water.
- In Bastar Plateau Zone of Chattisgarh where niger sowing has taken place, white insect attack is being observed, spray Confidor @ 0.5 g per litre of water.
- In rice, gall midge, leaf folder and stem borer attack is being observed; spray Cartap Hydrochloride @ 3mls per litre of water in Bastar Plateau Zone of Chattisgarh.
- In Bastar Plateau Zone of Chattisgarh, stem borer attack in late sown maize is being observed. For its control, Carobofuran 3 G should be used @ 2-3 grains/ plant or this can be also applied at the time of earthing up @ 10 Kg./ acre.
- **Animal Husbandry & Poultry**
- In Bundelkhand Zone of Madhya Pradesh, animals should be protected from high day and low night temperature. So keep them in animals' shed.

### Annexure I Major Crops

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

- Sugarcane (vegetative), *sali* rice (tillering/ panicle initiation), *olitorius* and capsularis jute (retting / fiber extraction), sesame (vegetative / flowering / pod formation), groundnut (pegging / pod formation), arhar, radish, knoll khol and brinjal (early variety), sesamum, Dolichos bean, country bean (sowing / early vegetative / vegetative), jute (for seed production) (early vegetative / vegetative), early cauliflower and cabbage (nursery sowing / seedling / transplanting / vegetative), winter vegetables (nursery bed preparation / sowing / transplanting), ginger / turmeric (vegetative), black gram / green gram (vegetative), onion, garlic (sowing/planting) and khasi mandarin (flowering) in Assam.
- Rice (harvesting), tuber crops (vegetative), soyabean and groundnut (pod formation / seed filling), cabbage, cauliflower, knolkhol etc. (nursery preparation / transplanting), ginger and turmeric (maturity) and maize (harvesting) in Arunachal Pradesh.
- Soyabean, groundnut (maturity/ harvesting), *kharif* rice (milk / dough / maturity), ginger and turmeric (rhizome formation), tomato (nursery raising), early cauliflower and cabbage (nursery sowing / vegetative), onion (nursery raising), brinjal (flowering / fruiting), French bean, broad bean, pea (sowing / vegetative) in Manipur.
- *Kharif* rice (maturity), arhar (pod formation), *sali* rice (milk / dough / maturity), *rabi* maize (growing), pea, garlic and lettuce (sowing), ginger and turmeric (early sown) (maturity / harvesting), ginger and turmeric (late sown) (vegetative), *toria* (vegetative), groundnut (pod formation), onion (nursery preparation), potato (vegetative), *Khasi* mandarin (flowering / fruiting) and banana (vegetative), lentil, mustard, rapeseed (sowing), winter vegetable (sowing) in Meghalaya.

- Rice (flowering / milk/ harvesting), groundnut (pegging / pod formation), soyabean (flowering / pod formation), okra (harvesting), ginger and turmeric (rhizome formation / maturity / harvesting), *khasi* mandarin (vegetative / fruiting/ harvesting), French Bean, rice bean, urd and moong bean (maturity / harvesting), banana (vegetative / fruiting / maturity/ harvesting), cucurbits (flowering / fruiting/ harvesting), cole crops and tomato (nursery preparation) in Mizoram.
- Soyabean (flowering / pod formation), groundnut (flowering / pegging / pod formation), green gram and black gram (sowing / vegetative), finger millet (flowering), okra (flowering / fruiting), lowland rice (panicle initiation), upland rice (maturity / harvesting), banana (fruiting), colocasia (flowering), cabbage (nursery sowing / transplanting), cowpea (vegetative), mandarin (planting) and papaya (transplanting) in Nagaland.
- *Aman* rice (panicle initiation / flowering / milk), groundnut (pegging / pod formation), upland / jhum rice (dough / maturity), cucurbits and other vegetables (flowering / fruiting), maize (cob formation / maturity), ginger and turmeric (vegetative / rhizome formation), cole crops (nursery preparation / sowing), radish, brinjal (early) (sowing) and sesame (vegetative / flowering / pod formation) in Tripura.

#### **EAST INDIA [JHARKHAND, BIHAR, ORISSA, WEST BENGAL &SIKKIM]**

- Sugarcane (vegetative), rice (booting / panicle initiation), *kharif* maize (tasselling), *kharif* arhar, sesame, sorghum, jowar, (flowering / grain formation), lobia for green fodder, mishrikand (vegetative), onion, radish (sowing), cauliflower (sowing), fruit trees (transplanting) and sweet potato (planting) in Bihar.
- Rice (booting / flowering / milk), finger millet (grain formation), maize (silking / grain formation / grain filling / harvesting), pigeon pea (vegetative / flowering / grain formation), pulses (urd bean, moong bean) (grain formation / maturity), groundnut (pegging / grain formation/ harvesting), turmeric and ginger (vegetative / rhizome formation), elephant foot yam (tuber elongation), potato (land preparation / sowing), sweet potato (stem elongation), mustard, toria, green pea (sowing), cauliflower, cabbage, chilli, tomato (transplanting), niger (sowing), papaya (transplanting), African or French marigold (sowing) in Jharkhand.
- Arhar (early vegetative / vegetative / flowering / grain formation), maize (tasseling / silking / cob formation), papaya, marigold, tuberose (planting), cowpea (sowing / early vegetative), *kharif* vegetables (flowering / fruiting), sugarcane (vegetative), *kharif* rice (panicle initiation / flowering / grain formation), groundnut (pegging / pod formation / maturity), turmeric and ginger (planting / early vegetative), yam (sowing), sesame, green gram, black gram, niger, other pulses (flowering / grain formation), mango, banana, lemon, cashew nut and marigold (planting) in Orissa.
- *Aman* rice (Booting / heading stage), tomato, cauliflower (nursery preparation), *aus* rice (grain maturity / harvesting), *kharif* maize (tasseling / silking / cob formation), mango, coconut, guava, banana (planting) and *kharif* vegetables (flowering / fruiting / harvesting), winter vegetables (nursery preparation) in West Bengal.
- Large cardamom (capsule formation / transplanting of suckers from nursery / grain maturity), *kharif* vegetables (harvesting), orange (fruiting.), ginger (late harvesting), rice (flag leaf initiation / flowering), maize (harvesting), seed potato (maturity / harvesting), orange (fruiting) in Sikkim.

#### **NORTHWEST INDIA [JAMMU & KASHMIR, HIMACHAL PRADESH, UTTARAKHAND, PUNJAB, HARYANA, DELHI, UTTAR PRADESH & RAJASTHAN]**

- Rice(vegetative), brinjal, tomato, chilli, cauliflower, cabbage, radish, spinach, coriander, onion (vegetative), cucurbits crops (flowering/fruiting), lentil (pod formation), maize, hybrid cluster bean, baby corn, Pigeon pea (sowing/ vegetative), green gram and black gram(flowering / fruiting), cotton (sowing), Sugarcane(sowing), guar, bajra(flowering/grain filling), Soyabean(flower initiation) in Delhi.
- Vegetables (flowering / fruiting / harvesting), garlic, ginger (planting), bhindi, (transplanting), cucurbits (transplanting), Khira, summer squash, bitter gourd, tur, brinjal, Shimla mirch, and tomato (transplanting), Apple (fruit development/maturity), pomegranate (fruit development), ginger, arbi, amaranthus, turmeric, rice, maize (sowing/transplanting) in Himachal Pradesh.
- Berseem (sowing / emergence), cucurbits (vegetative / flowering/maturity), onion (seed bed preparation), capsicum, chilli, brinjal, raddish, carrot, turnip, cauliflower, cabbage, broccoli (vegetative / fruiting / maturity / picking), winter vegetable crops viz. potato, radish, carrot, turnip, garlic, spinach, methi (sowing / fruiting), cole crops viz. early cauliflower, cabbage, knoll khol, broccoli (field preparation/ nursery sowing), early sown maize (initiation of tassell emergence / grain development), early sown maize, bajra (grain formation / maturity / harvesting), maize (grain filling and development), *kharif* pulses, mash (flowering / pod development / maturity), moong (pod formation/ maturity / harvesting), rice (flowering / milking / grain filling / maturity / harvesting), *Kharif* oilseed (groundnut, sunflower, summer brassica etc.) (flowering / seed development / maturity, groundnut – pegging initiation stage), *Rabi* oilseeds i.e. toria, gobi sarson (sowing / emergence), citrus, guava, apple (fruiting) in Jammu & Kashmir.
- Chilli, capsicum, cauliflower, broccolli (transplanting), tomato (vegetative/maturity/harvesting) and lahi (flowering / fruiting), sugarcane (planting), Early planted rice (maturity / harvesting), late planted rice (panicle initiation / milking ), litchi, loquat, peach, citrus (flowering / fruiting), mango (early varieties) (flowering), maize (cob formation/cob maturity), soyabean (flowering / pod formation), foxtail millet, okra, bottle gourd, bitter gourd, ginger, turmeric, (sowing / planting), toria, pea (field preparation / sowing), papaya (planting), sorghum, pigeon pea, early vegetable pea, urd, potato and pearl millets(sowing) in Uttarakhand.
- Rice (tillering), winter sugarcane (vegetative growth / formative), summer sugarcane (initial growth / formative stage), cucurbits like gourd, bitter gourd, cucumber, etc. and another vegetables like lady's finger, tomato, brinjal, chilli etc. (sowing / flowering/fruiting), black gram, baby corn/ maize / fodder maize, vegetables (flowering/fruiting/maturity/harvesting), groundnut, jowar, bajra, til, moong, urd, moong, lobia (early vegetative), arhar, toria (sowing /early vegetative), tomato, brinjal, cabbage, garlic, (sowing/transplanting), barseem, potato, toria (sowing) in Uttar Pradesh.
- Rice (Irrigated area, Basmati) (grain formation), rice ( maturity/ harvesting), spring sugarcane (sprouting), barseem (vegetative), sugarcane(grand growth), cotton (boll maturity/picking), fodder lucerne, oats, senji (sowing), gram, potato, peas(sowing), radish, carrot, turnip, cauliflower(sowing/transplanting) in Punjab.
- Sugarcane (spring season) (planting/emergence/early vegetative), barseem (vegetative), pulses, moong, mash, pigeon pea (vegetative), rice (tillering / vegetative growth) in Haryana.
- Rice (tillering/vegetative), narma cotton, desi cotton (flowering / boll formation in Sriganaganagar), sweet potato (sowing), pearl millet, sorghum (vegetative / maturity / harvesting), moong, cowpea, urd (maturity / pod picking), early sown maize (harvesting), maize, soybean, chilli and cluster bean (vegetative) in Rajasthan.

#### **SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS]**

- *Kuruvai* rice (maturity / harvesting), *Samba / thaladi* rice (transplantation), cotton (vegetative/ harvesting), vegetables (nursery / transplanting), sugarcane (vegetative/ grand growth/maturity), groundnut (maturity), maize (sowing to harvesting), sorghum (vegetative), black gram (harvest), red gram (vegetative), pulses (vegetative/flowering) in Tamil Nadu.
- Sugarcane (grand growth), cotton (boll formation), hybrid jowar, maize (maturity / harvesting), ragi, sunflower (grain / seed development / maturity), bengal gram (sowing), red gram (bud initiation / flowering stage), rabi jowar (sowing), late planting paddy (flowering stage) and horticultural crops (vegetative growth/ flowering/ fruit development) in Karnataka.
- Maize (maturity / harvesting), jowar, cotton (maturity), pulse crops like green gram & red gram (pod formation/ maturity), rice (nursery / transplanting), groundnut (pod maturity/harvesting), bajra (harvesting) in Andhra Pradesh.
- *Virippu* rice (harvesting), black pepper (berry maturing/harvesting), ginger (vegetative), turmeric and vegetable crops (harvesting), *Mundakan* rice (transplanting) in Kerala.

**WEST INDIA [GOA, MAHARASHTRA, GUJARAT]**

- Sugarcane (new *adsali* - early vegetative growth / old *adsali* - grand growth / elongation), sugarcane (pre-seasonal) (vegetative), sugarcane (*suru*) (vegetative), *Kharif* rice (grain maturity/ harvesting in early maturing varieties in South Konkan, grain formation in medium and late varieties and panicle initiation/flowering in late maturing varieties in Konkan, Kolhapur, Pune, Nashik division and tillering /panicle initiation in East Vidarbha), jowar (grain formation/ grain maturity in early sown crop), soyabean (pod maturity/harvesting), groundnut (pod maturity/harvesting), cotton (flowering/ boll formation), red gram (branching) in Maharashtra.
- *Kharif* bajra (harvesting), vegetables (flowering / fruiting / harvesting), sugarcane (vegetative), groundnut (maturity/ harvesting), *kharif* pulses (flowering / grain formation / maturity / harvesting), maize (harvesting), cotton (boll formation/development) in Gujarat.

**CENTRAL INDIA[M.P., CHHATTISGARH]**

- Sugarcane (vegetative), vegetables (flowering and fruiting), moong, urad, maize, soybean, sesame, groundnut, jowar groundnut, pigeon pea (maturity/harvesting), onion, brinjal, tomato and chilli etc. (vegetative), rice (flowering / grain formation), proper time of sowing/transplanting of wheat, gram, toria, onion, garlic, tomato, brinjal, chilly in Madhya Pradesh.
- Rice (tillering), sugarcane (planting), groundnut, arhar, green gram and sesame (vegetative), ginger, turmeric, papaya, mango and guava (vegetative) cauliflower, potato (sowing), proper time for sowing/transplanting of tomato, brinjal, chilli, niger, horsegram, ramtil, toria, cauliflower, cabbage, niger, kulthi in Chhattisgarh.

## Annexure II List of Varieties

**Assam****Early cauliflower:**

**Mid season varieties:** Improved Japanese, Pusa Synthetic, Pusa Snowball.

**Early maturing cabbage varieties:** Golden Acre, Pride of India, Pusa Mukta.

**Others:** Early Kunwari, Pusa Katki and Pusa Deepali.

**Cabbage:** Golden Acre, Pride of India, Pusa Mukta (Sel-8).

**Tomato:** Punjab Suhara, Avinash, Pusa Ruby.

**Green gram:** T-44, Kopergaon, K-851, ML-56, ML-131.

**Black gram:** SB 121 (Saonia Mah), T-9, T-27, Pant U-19, T-122, KU 301, USJD 113, T 9, T27.

**Radish:** Pusa Desi, Pusa Himani, Pusa Chetki, Japanese white, Bombay Red.

**Brinjal:**

**Long varieties:** Cluster, JC-1, Kuchia, Pusa Kranti, Pusa Purple Long, Longai.

**Round varieties:** Pusa Purple Round, Pusa Vairab, JC-2, BWR-12.

**Knol khol:** White Vienna.

**Onion:** Pusa Red, Pusa Ratnar, Pusa White, N-53

**Garlic :** Eknalio and T-56-4 and other local varieties.

**Sesamum:** SP-1181 (Madhabi), Gauri, Binayak, ST 1683, Punjab Tall No. 1.

**Dolichos Bean:** Pusa Early Profile and SD-18.

**Rapeseed and mustard:** M-27, TS-36, TS-38 and TS-46.

**Manipur**

**French bean:** Pant Anupam, Tangkhul Hawaii (local).

**Pea:** Arkel, Azad.

**Cabbage:** Rare Ball.

**Cauliflower:** White Flash.

**Onion:**Nasik Red.

**Tripura**

**Brinjal:** Pusa Kranti, Pusa Purple Long.

**Cauliflower:** CFL-4048, Pusa Early Synthetic, Kamaya, Suhasihi.

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

**Broccoli:** Everest, Ayeshwaria.

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

**Mizoram**

**Tomato:** Avinash -2, Pusa Divya, Arvind, Rita.

**Cabbage:** Golden Acre, Ryozeeki, Harnil.

**Broccoli:** Pushpa, Pusa Broccoli, Aishwarya and Fiesta.

**Cauliflower:** Pusa Early Synthetic, Pusa Shubhra, Pant Gobhi - 2 and Patna Ageti.

**Orissa****Rice:**

**Medium land close to sea where water is drained out by October:** Lalat, Surendra, MTU-1001, MTU-1010, Konark, Gajapati.

**Different crops in upland areas affected by excess rainfall:**

**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

**Horse gram:** Urmi, DS 1-2-2, DS 1-2.

**Brinjal:** Utkal Madhuri, Green Round, Green Long, Sufala, Suchitra, Supriya.

**West Bengal**

**Banana:**Mortoman, Chapa, Kathali, Singapuri.



**Cauliflower:** Pusa Deipali, Pusa Chetaki.

**Tomato:** Baisali, Indam 1116, Akash.

### Jharkhand

**Green Pea:** Swarn Rekha, Arkel, Azad Pea, Kashi Nandini, PE-6, Birsa Matar.

**Sweet Potato:** Birsa Sakarkand-1 and Sri Bhadra.

**Potato:** Kufri Ashoka, Kufri Pukhraj, Kufri Surya and Kufri Puskar

**Short duration:** Kufri Ashoka and Kufri Pukhraj.

**Long duration:** Kufri Surya and Kufri Puskar.

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

**Niger:** Birsa Niger-1, Birsa Niger-2.

**Bell pepper:** California Wander, Bharat, Arka Basant, Arka Mohini, Arka Gaurav, Allowander, Bombi, Indra, Nan-3020.

**Tomato:** Pusa Ruby, Swarna Sampda, Swarn Lalima.

**Cabbage:** Golden Acre, Pride of India, Early Drum Head.

**Cauliflower:** Pusa Deepali, Patna Early, Hazipur Extra Early, Pusa Ketki.

**Papaya:** Pusa Giant, Pusa Dwarf, Honey Dew, Pusa Majesty.

**Mustard:** Shivani, Pusa Jaikisan, Pusa Bold, Vardan.

**African Marigold:** Pusa Narangi, Pusa Basanti.

**French Marigold:** Petite Orange, Petite Yellow, Rusty Red, Lemmon Drop.

### Bihar

**Onion:** N-53, Agrifound Dark Red and Baswant 780.

**Radish:** Pusa Chetki, Pusa Deshi, Pusa Himani, Pusa Reshmi, Japani Safed, Arka Nishant.

**Sweet Potato:** Rajendra Shakarkand-5, Krash-4, Rajendra Shakarkand-35, Rajendra Shakarkand-43, Rajendra Shakarkand-47, Shri Bhadra, Kalmegh, Rajendra Shakarkand-92.

**Cauliflower:** Aghani, Pusa Dipali, Pusi, Patna Main, Pusa Shuvra.

**Rapeseed:** RAUTS-17, PT-303, Panchali and Bhawani.

### Delhi

**Pea:** Pusa Pragati, Arkel.

**Carrot:** Pusa Rudhira and Pusa Kesar.

**Early mustard:** Pusa Sarson-25, Pusa Sarson-26, Pusa Agni, Pusa Taraka, Pusa Mahak

**Early potato :** Kufri Badshah

### Himachal Pradesh

**Lettuce:** Iceberg

**Brinjal :** Arka Nidhi, PPC

**Ageti bhindi :** P-8, Prabhini kranti, Arka anamika

**Frenchbean :** Contender

**Pepper :** Surjmukhi

**Broccoli:** Palam Samridhi

**Rajmash :** Triloki, Jwala, baspa Kailash

### Jammu & Kashmir

**Brinjal :** PPL, PPC & PPR

**Carrot:** . Nantes and Pusa Yamdagini

**Turnip :** Purple Top White Globe

**Chillies :** NP-46A, Pusa jawala

**Bajra:** WCC-75, ICMS-7703 and Hybrid M.H.B-110,

**Cauliflower :** Giant snow ball, punam, pusa hybrid -2, NS-60

**Cabbage:** Golden Acre, pusa mukta & pride of India

**Knol -khol :** White Viena, king of market & Purple Viena

**Fodder berseem :** mascavi, pusa giant, BL-1

**Toria:** RSPT-1, RSPT-2, RSPR-3

**Gobi Sarson :** GSS-1

**Winter Vegetables :** **Potato :** K. Badshah, K. Sinduri, K. Chipsona & K. Sona, **radish :** pusa chetki, **Japanese white &** pusa Reshmi, **carrot:** Pusa Kesar, P. Yamdagani, **Turnip :** PTWG, **garlic :** local, yamuna safed agrifound parvati, large segmented, **Methi:** P.E.B.K. methi, pusa early bunching and kasuri methi and **spinach :** prickly seeded, all green during these days.

### Punjab

**Desi varieties of radish:** Punjab Pasand and Punjab Safed,

**Turnip:** L-1 and 4-white

**Carrot :** PC 34)

**Late season Cauliflower:** Snow-Ball-16, Pusa Snow ball 1 & Pusa Snow ball K-1

**Gram:** PBG 5 and PBG-1

**Peas:** Punjab 87, Punjab 88, Punjab 89 and Mithi Phali

### Haryana

**Baisakhi Mung:** K851 and Type 44 and Muskan

**Pigeon pea:** UPAS 120, T-21.

### Uttarkhand:

**Pea:** VL Ageti Mater-7, Vivel Mater-10, Pant Subjee Mater-3, Azad Mater-3 and Arkel at high hills, Pant Subjee Matar-3.

**Garlic :** VL-Garlic or DARL-52 , Yamuna Safed-1, 2, pant Lohit, Agreefound Parvati etc

**Toria :** Pant Toria 2002-25, Pant Toria-30, Pant Toria-303, Type -9.

**Tomato :** Pant T-3, Pusa Gaurav, Pusa Bahar, Pusa Hybrid-2 etc

**Potato:** Kufri Jyoti, Kufri Ashok, Kufri Anand.

Mustard: Pant Rai-8988, Rohini, Urvasi, Kranti.  
 Serson: Binoy-9, Narendra Dev Yellow Serson-2.  
 Berseem: Vardan, Miskavi.

#### **Uttar Pradesh:**

Toria: Pitambri kanti type-9(black). Type-36(yellow), PT-303, PT30, Bawani, T9, PT303

#### **Rajasthan**

**Groundnut** : RSB 87, RS 138, JL 24, RG 14,

**Sweet potato**: Pusa Safed, Pusa Lal, Pusa Sunhari & L-20

**Taramira** : T-27, I.T.S.A.

**Toria**: T-9, Sangam

**Gram**: RSG 44, Dahod yellow, GNG 16, ICCV 10, RSG 888 and Pratap chana 1.

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

**Mustard**: Improved varieties

1. Early sown (Irrigated) - EJ17, Pusa Mahak and kanti.
2. Normal sown (irrigated) - Maya, Rohini, Pusa Jai kisan, Varuna, RGN13, RGN73, NRCDR 2, NRCHB 506(hybrid).
3. Normal sown (rainfed) -Arawali,RGN48, Geeta and PBR97
4. Saline sodic soils - CS52, CS54, CS56, Narendra Rai 1
5. Taramira - Karan Tara, Narendra Tara
6. Yellow Sarson - NRCYS-05-02, YSH401

**Potato** : 1. Early sown- Kufri-Ashok and Chandramukhi for early sowing.

2. Mid sowing- Kufri-Anand, Chipsona-1, 2, Jyoti and Pukhraj.

**Onion** : Red Arka Niketan, Local Red and Pusa white for rabi season.

**Radish** : Pusa Rasmi.

**Ajwain** : Pratap ajwain - 1

#### **Karnataka**

Sunflower: Modern, KBSH-41, 42 &44

Cowpea: C-152, PKB-4, KM-5

Horse gram: KBH-1, PHG-9, GPM-6

Safflower: Annigeri-1, S-144

Rabi Sorghum: Hybrid- DSH-4, Improved Varieties-M-35-1(rainfed and irrigated), Moguti(5-4-1), DSV-4(rainfed and irrigated), DSV-5(rainfed and 1 or 2 protective irrigation).

Maize: GANGA-11, Deccan-103

Ragi : INDAF-7,9 and 15

Bengalgram: Annigeri -1, ICCV-10, ICCV-2

#### **Tamil Nadu**

Late samba: ADT 38, ADT 46, ADT 49, improved white ponni, IR 20, ASD 19, Paiyur1, Trichy 1, Trichy 3 and Co 50

Late Thaladi: ADT 39 ADT 42, and ASD 16

#### **Andhra Pradesh**

Green gram: LBG-752, LBG-623, LBG-20, T-9, LGG-460, LGG-407

Red gram: LRG-41, ICPL-85063

Paddy: (BPT-5204, BPT-5204, MTU-7029, MTU-2067, MTU-2077, MTU-1001, MTU-7029)

#### **Gujarat:**

**Cluster bean**: GC-1, 2.

**Mustard**: Guj - Mustard-1, 2, 3, Pusa Jaykisan (Bio-902), varuna GM-1 or GM-2.

**Tobacco**: GC-1or GCT-3

#### **Maharashtra**

**Rabi Jowar**: Maldandi 35-1, Selection-3, Phule Vasudha, Phule Revati, Phule Yashodha and Mauli, for medium soil - Mauli, for black soil - Phule Revati, Phule Vasudha.

**Safflower**: Bhima, Phule Kusuma.

**Gram**: Vijay Gram.

#### **Madhya Pradesh**

- **Onion**: Udaipur 102, Pusa white, Nasik Red and Nasik Roja
- **Wheat**-Sujatha, HW 2004 or HI 1500 and gram JG 130, JG 11, JG 315, JG 16, Jaki 9218 and for Bengal gram JG 1
- **Sugarcane**- Jawahar-86141, Ko-Jawahar-86141, Ko-Jawahar-86572, Ko-Jawahar8632, Ko-6304, Ko-C-671
- **Garlic**-G-283, G-1, G-41 or g-323

#### **Chattisgarh**

- **Niger crop**: JNC-1, JNC-6, JNC-9, GA-10, Ootakmund, KGN-2,
- **Horsegram (Kuthi) crop** : AK-231, AK-42, Bastar Kuthi, Birsa Kuthi, VLG-9
- **Potato**: Kufri Lalima, Kufri Pukaraj

**Annexure III**  
**Contour maps for the week ending 05.10.2011**

