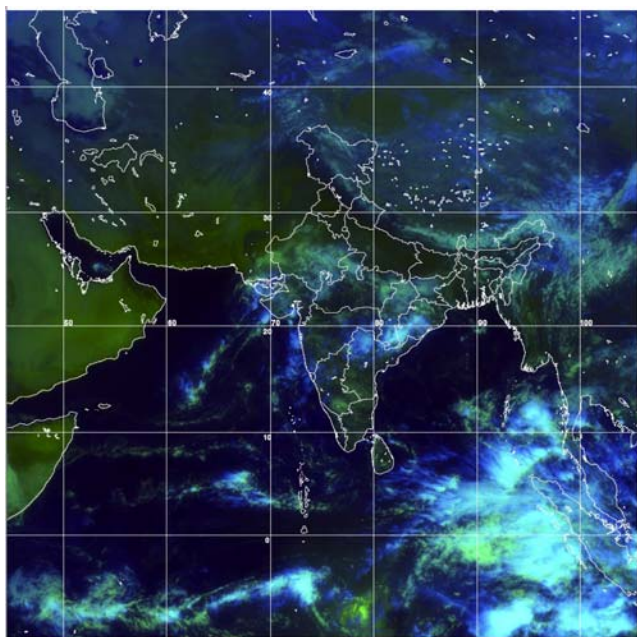




National Agromet Advisory Bulletin

THURSDAY, 11th November, 2010
(For the period 11th to 15th November, 2010)



Satellite image 0600 UTC Dated
12th November, 2010



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

Heavy rains occurred during first week of November 2010 due to the cyclone 'Jal' in coastal region of Andhra Pradesh, Karnataka and north Tamil Nadu. Due to heavy rains over Andhra Pradesh, particularly in East and West Godavari, Visahakapattinam, Nellore and Prakasam districts during first week of November, standing *rabi* crops in considerable areas are damaged. In addition, water logging is also reported in some areas of crop fields in the region. Lodging of rice, sugarcane and banana crops is reported in certain pockets. Sizeable area of pulses and vegetables has also been damaged. In Kerala, Coastal Karnataka, South Interior Karnataka and Tamil Nadu, harvesting of matured crops and also sowing / transplanting and intercultural operations in plantation crops and vegetable crops have been hampered during the week. In Karnataka coffee, ragi and maize grown in the districts of Chikmagalur, Kodagu and Hassan have been damaged due to rainfall associated with the cyclone "JAL".

During last week there was sufficient rainfall in most of the districts in Konkan & Goa, Orissa, Karnataka, Kerala and Tamil Nadu in addition to Andhra Pradesh. These rains were useful in supporting sowing of *rabi* crops and also for already sown *rabi* crops in Konkan & Goa and Orissa.

Utilizing the residual soil moisture, farmers are advised to undertake sowing of *rabi* crops like wheat, gram, mustard, lentil, oat, berseem, pea and planting of garlic and potato and transplanting of broccoli, cauliflower, cabbage, onion and tomato in Delhi, sowing of wheat, lentil and gram in Punjab and Haryana, sowing of wheat, gram and pea in Uttarakhand, sowing / transplanting of *boro* rice, sowing of rapeseed and mustard, niger, lentil, rajmah, pea, lathyrus, winter vegetables, like cauliflower, cabbage, brinjal and carrot and planting of potato in Assam, sowing of gram, pea, linseed and mustard and planting of potato in Chhattisgarh, sowing of mustard, wheat and cumin and planting of sugarcane in Gujarat, sowing of mustard, pulses like gram, lentil, vegetables like cabbage, cauliflower, chilli, tomato and planting of potato in West Bengal, sowing of green gram, black gram, horse gram, groundnut, mustard and sesamum in Orissa, wheat, barley, cumin and fenugreek in Rajasthan and sarson, jowar, gram, sunflower, linseed, safflower and rainfed wheat in Maharashtra. Farmers in Chhattisgarh are advised to complete sowing of mustard within second week of November to overcome aphids infestation.

In remaining parts of the country, mainly dry weather prevailed during last week. Farmers are advised to undertake harvesting of crops like rice in Mizoram, maize and groundnut in Rajasthan, ragi and soyabean in Uttarakhand, medium and late maturing varieties of rice, nagli and groundnut in South Konkan, maize and groundnut in Karnataka and rice in Kerala.

Infestation of jassids is reported above ETL in cotton in North Sourashtra Zone of Gujarat. Farmers are advised to spray Imidachloprid @ 4 ml or Acetamaprid @ 2 gm /10 lit of water to control jassids. No other major pest incidence is reported during this week in the country.

Due to sufficient rainfall received and adequate residual soil moisture, good prospect of *rabi* crops is expected.

Distribution of rainfall (% departure from normal) for the districts of Karnataka, Kerala, Tamil Nadu and Andhra Pradesh during last five Weeks

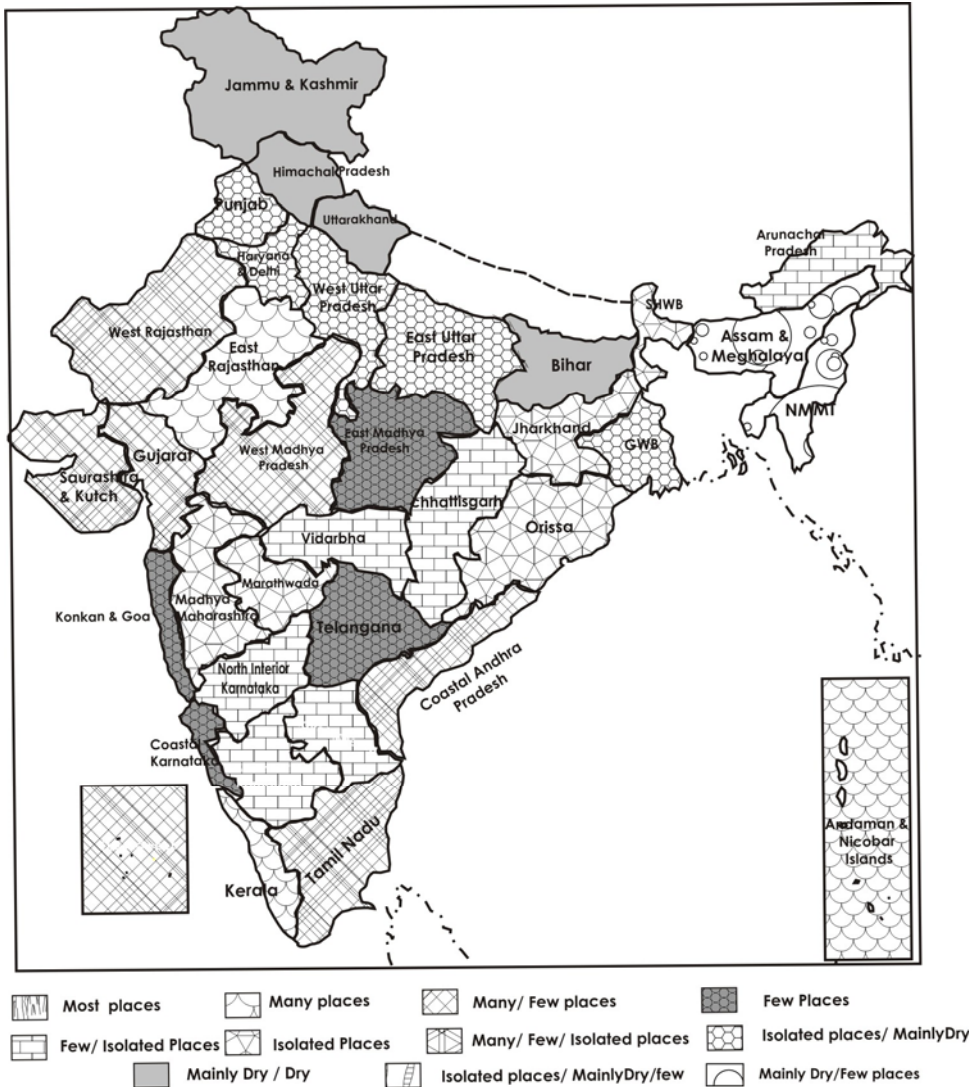
Karnataka					
Coastal Karnataka					
Districts	13.10.10	20.10.10	27.10.10	03.11.10	10.11.10
Dakshin Kannada	-34	22	403	75	108
Udupi	-50	159	441	48	158
Uttar Kannada	-21	187	125	36	536
North Interior Karnataka					
Bagalkote	-99	87	4	-42	316
Belgaum	-96	54	19	-34	377
Bidar	-99	100	133	-90	60
Bijapur	-100	164	-46	-38	127
Dharwad	-35	-23	-9	-11	439
Gadag	-91	44	-44	17	639
Gulbarga	-93	287	11	-15	147
Haveri	-51	-61	-51	46	569
Koppal	-92	-32	-7	4	431
Raichur	-100	6	-48	17	180
South Interior Karnataka					
Bangalore Rural	-56	23	-87	85	275
Bangalore Urban	-16	9	-84	135	329
Bellary	-92	58	34	90	465
Chamarajnanagar	-41	-78	-91	267	340
Chickmagalur	-69	-23	62	6	384
Chitradurga	-73	21	-14	393	636
Davangere	-66	-20	39	108	509
Hassan	-45	-53	59	138	306
Kodagu	-40	-42	63	270	271
Kolar	-96	-43	-42	232	379
Mandya	-61	-53	-93	228	479
Mysore	-50	-75	-55	443	630
Shimoga	-1	-23	70	43	428
Tumkur	-62	-12	-90	332	327
Kerala					
Alappuzha	127	44	-28	-56	20
Kannur	34	112	122	66	69
Ernakulam	148	68	-13	0	88
-2Idukki	40	-25	-53	24	50
Kasaragod	-79	8	296	-85	15
Kollam	102	-26	-68	-49	30
Kottayam	120	32	-43	-35	40
Kozhikode	8	6	207	8	-36
Malappuram	-3	-30	42	89	7
Palakkad	28	5	-12	68	53
Pathanamthitta	36	-10	-74	-22	65
Thiruvananthapuram	147	-77	-93	-65	-22
Thrissur	239	78	10	140	98
Wyanad	-28	-76	-54	93	166
Tamil Nadu					
Chennai	-96	-44	-98	41	-13
Coimbatore	-93	-99	-69	202	78
Cuddalore	-85	-79	-71	167	-16
Dharmapuri	-59	-13	-33	264	198
Dindigul	-6	-83	-9	143	147
Erode	-81	-93	-53	164	171
Kanchipuram	-26	-91	-27	51	4
Kanyakumari	250	-92	-96	-46	-7

Districts	13.10.10	20.10.10	27.10.10	03.11.10	10.11.10
Karur	-84	-90	-41	128	206
Krishnagiri	-52	-24	-50	322	265
Madurai	-22	-74	-18	110	186
Nagapattinam	-79	-74	-99	58	-38
Namakkal	-65	-72	-64	298	131
Nilgiris	38	-71	-30	139	47
Perambalur	-58	-17	-71	209	41
Pondicherry	-81	-48	-26	54	107
Pudukottai	-42	-37	-67	-27	-34
Ramanathapuram	-29	-92	-67	76	-57
Salem	-71	-54	-41	325	129
Sivaganga	30	-73	-85	88	-41
Thanjavur	30	-35	-70	102	-12
Theni	-63	-93	-74	70	43
Tirunelveli	-18	-99	-92	-13	-45
Tiruvallur	-85	-85	-72	124	-11
Tiruvannamalai	-56	-67	-10	280	151
Tiruvarur	-98	-67	-85	122	-21
Tuticorin	-92	-94	-81	18	-60
Trichy	-21	-56	-59	70	23
Vellore	-53	-26	-53	184	163
Villupuram	-71	-57	-41	203	121
Virudhunagar	-77	-91	-80	205	60
Andhra Pradesh					
Coastal Andhra Pradesh					
East Godavari	-67	-68	-28	1113	227
Guntur	-44	-36	10	172	62
Krishna	-62	-34	98	460	13
Nellore	-92	-91	-53	264	51
Prakasam	-59	-61	-33	179	138
Sirkakulam	35	77	0	203	397
Visakhapatnam	-23	-67	-28	751	185
Vizianagram	-34	-21	39	396	145
West Godavari	-86	-52	-9	661	88
Telangana					
Adilabad	-98	375	286	-52	297
Hyderabad	-100	72	-20	-19	167
Karimnagar	-99	263	349	21	235
Khammam	-94	54	214	301	118
Mehabubnagar	-75	63	-56	0	110
Medak	-100	321	70	45	42
Nalgonda	-87	-5	110	112	212
Nizamabad	-58	556	277	-100	340
Rangareddy	-98	80	148	50	99
Warangal	-92	95	193	2	102
Rayalaseema					
Anantapur	-76	23	54	494	529
Chittoor	-96	-25	-48	235	185
Cuddapah	-87	-72	-21	161	144
Kurnool	-83	-80	208	-12	112

LEGEND

- EXCESS 20% OR MORE
- NORMAL +19% TO - 19%
- DEFICIENT - 20% TO - 59%
- SCANTY - 60% TO - 99%
- NO RAIN - 100%
- DATA NOT AVAILABLE

Weather Forecast (Valid upto 0830 hours of 14th November, 2010)



Weather Warnings

- Isolated heavy rainfall would occur over Gujarat, Tamilnadu, Kerala and Lakshadweep during next 24 hours.
- Isolated heavy rainfall would occur over Andman & Nicobar Islands during next 48 hours.

Weather Outlook (upto 0830 hours IST of 16th November, 2010)

- Fairly widespread rainfall activity would occur over south Peninsular India with isolated heavy falls over coastal areas of Andhra Pradesh and Tamilnadu.
- Under the influence of the upper air cyclonic circulation over south Andaman Sea which is moving west-northwestwards, a low pressure area is likely to form over central parts of south Bay of Bengal and neighbourhood.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Gajapati, Ganjam, Jagatsingpur, Kandhamal, Kendrapara, Khurda, Nayagarh and Puri districts of Orissa received good rain during last week. No significant rain occurred in most of the remaining districts of the States of this region.
- **Rainfall Forecast:** Isolated rain will occur in Orissa, Bihar and Sub Himalayan West Bengal and Sikkim and mainly dry weather will prevail over Gangetic West Bengal and Bihar during the period.
- **Major Crops:**
 - *Kharif* rice (grain maturity / harvesting), black gram (maturity / harvesting), kulthi (pod formation), gram, lentil and peas (sowing / early vegetative), mustard, sarson and sunflower (sowing / early vegetative), maize and wheat (sowing), potato (planting), vegetables like cauliflower, cabbage, chillies, tomato, Palak, carrot, radish, khnolkhol, turnip, beet etc. (sowing / early vegetative / vegetative) in Bihar.
 - *kharif* rice grain formation / early maturity / harvesting), sesamum (maturity / harvesting), groundnut (maturity / harvesting), urd, green gram, and niger (maturity / harvesting), pignon pea (flowering / pod formation), kulthi (pod formation) and potato (planting), Onion, toria, mustard, pea, gram, lentil, wheat, barley, linseed etc. (sowing / early vegetative), tomato, cabbage and cauliflower (nursery sowing / transplanting / early vegetative), chilli and brinjal (nursery sowing / transplanting) in Jharkhand.
 - Rice (grain formation / early maturity / maturity / harvesting), *kharif* groundnut (maturity / harvesting), *kharif* pulses, soybean, sesamum and ragi (maturity / harvesting), cotton (flowering / boll formation / picking), *rabi* vegetable crops (sowing / germination / early vegetative / vegetative) in Orissa.
 - Sugarcane (cane development), *rabi* vegetable crops (sowing / germination / early vegetative / vegetative), *aman* rice (grain formation / early maturity / maturity), pulses (maturity / harvesting), arhar (flowering / pod formation), sesame (maturity / harvesting) and groundnut (maturity / harvesting) in West Bengal.
 - Large cardamom (capsule / grain maturity / harvesting), orange (fruit maturity / harvesting), wheat (sowing / germination / seedling / crown root initiation), *rabi* potato (sowing / germination), ginger (maturity / harvesting), rice (flowering / milk and grain formation / maturity), *rabi* vegetable (transplanting / vegetative) and mustard (sowing / germination) in Sikkim.
- **Advisories:**
 - As Gajapati, Ganjam, Jagatsingpur, Kandhamal, Kendrapara, Khurda, Nayagarh and Puri districts of Orissa received good rain during last week, postpone irrigation to the standing crops in these districts. As most of the remaining districts of the States of this region received no significant rain during last week, apply irrigation to the crops.
 - Taking the advantage of dry weather, farmers in West Bengal are advised to undertake harvesting of *aman* rice, sesame and groundnut.
 - In West Bengal, farmers are advised to undertake planting of potato and sowing of mustard, wheat, pulses like gram, lentil etc., transplanting of vegetables like cabbage, cauliflower, chilli, tomato etc.
 - Farmers are advised to undertake sowing of maize, wheat, pulses like gram, lentil and peas, oilseed crops like mustard, sarson and sunflower, vegetables like cauliflower, cabbage, chillies, tomato, Palak, carrot, radish, khnolkhol, turnip, beet etc. and planting of potato (planting) in Bihar.
 - Farmers in Bihar are advised to harvest the matured *kharif* crops like rice, black gram etc.
 - Farmers in Sikkim are advised to undertake sowing of wheat and mustard, planting of *rabi* potato and transplanting of *rabi* vegetable.
 - Farmers in Jharkhand are advised to harvest the matured *kharif* crops like rice, sesamum, groundnut, urd, green gram and niger.
 - Farmers in Jharkhand are advised to undertake land preparation and sowing of onion, wheat, barley, peas, mustard, gram, lentil and linseed and planting of potato and sowing for raising seedlings and

transplanting of vegetables like tomato, cauliflower, cabbage and also transplanting of chilli and brinjal during this period.

- Farmers in Orissa are advised to undertake sowing of *rabi* groundnut, mustard, sunflower, green pea, nursery sowing of onion and vegetables like garden pea, carrot, radish etc. and nursery sowing and transplanting of vegetables like tomato, brinjal, cabbage, cauliflower etc.
- Recommended varieties of crops to be sown in different States of the region are mentioned in Annexure I.
- Due to prevailing cloudy weather, root-rot of cabbage and cauliflower became prevalent in New Alluvial Zone of West Bengal. Apply Karjet @ 2 g per litre of water or Blitox or Fitolan @ 3 to 5 g per litre of water at the collar region.

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

- **Realised Rainfall:** No significant rain occurred in all the districts of the States of this region during last week.
- **Rainfall Forecast:** Rain is likely to occur at isolated places over Arunachal Pradesh during next 24 hours and at a few places thereafter. Mainly dry weather is likely to prevail over Assam and Meghalaya during next 24 hours and over Nagaland, Manipur, Mizoram and Tripura during next 48 hours and at a few places thereafter.
- **Major Crops:**
 - *Rabi* vegetables (nursery sowing / transplanting / germination / early vegetative), sugarcane (cane development), *sali* rice (maturity / harvesting), arhar (flowering / pod formation), sesamum (maturity / harvesting) and black gram and green gram (pod formation / maturity), rapeseed and mustard (sowing / seedling / early vegetative), potato (planting / seedling) and *boro* rice (nursery bed preparation and sowing) in Assam.
 - Rice (harvesting), *rabi* vegetables like cauliflower, cabbage, tomato etc. (nursery sowing / transplanting / early vegetative), pea and carrot (sowing), orange (fruiting), ginger and turmeric (vegetative), mustard (sowing) and potato (planting / seedling) in Arunachal Pradesh.
 - *Aman* rice (grain formation / maturity / harvesting), toria, lentil, red gram (sowing) and *rabi* vegetables (sowing / germination / transplanting / early vegetative / vegetative) in Tripura.
 - *Sali* rice (grain formation / maturity / harvesting), *boro* rice (nursery sowing), wheat (sowing), *rabi* vegetables (nursery sowing / transplanting / early vegetative / vegetative) in Meghalaya.
- **Advisory:**
 - As most of the districts of the States of this region received no significant rain during last couple of weeks, apply irrigation to the standing crops.
 - Taking the advantage of relatively dry weather, farmers are advised to harvest the matured *kharif* crops like rice, *kharif* pulses etc. in the States of this region.
 - Farmers in Assam are advised to undertake sowing of rapeseed and mustard, planting of potato and nursery sowing of winter vegetables in Hills Zone, planting of potato and sowing of rapeseed and mustard, niger, lentil and pea in Lower Brahmaputra Valley Zone, sowing of rapeseed and mustard and planting of potato in Upper Brahmaputra Valley Zone, sowing of rapeseed and mustard and nursery sowing of winter vegetables in Barak Valley Zone, sowing of *rabi* pulses like lentil, rajmah, pea, lathyrus etc. and oilseeds like rapeseed, mustard, linseed and niger etc., vegetables like cauliflower, cabbage, brinjal and carrot and planting of potato in Central Brahmaputra Valley Zone and sowing of *boro* rice and rapeseed and mustard and vegetables like knolkhol, radish, brinjal, carrot and tomato in North Bank Plain Zone.
 - Farmers in Arunachal Pradesh are advised to undertake sowing of mustard, nursery sowing and transplanting of hybrid tomato, cauliflower and cabbage and also to undertake sowing of carrot and pea. Farmers are also advised to prepare field for potato and undertake planting.

- Farmers in Tripura are advised to undertake nursery sowing of *boro* rice and sowing of other crops like toria, pulses like, lentil, red gram etc.
- Farmers in Meghalaya are advised to undertake nursery sowing of *boro* rice, sowing of wheat and also nursery sowing and transplanting of *rabi* vegetables like cauliflower, cabbage, radish, carrot and ladies finger.
- Prepare land and undertake sowing of mustard and transplanting tomato in Nagaland.
- Farmers in Mizoram are advised to undertake sowing of crops like carrot, raddish, peas, *rabi* onion, lentil etc. and transplanting of other vegetables crops like cauliflower, cabbage, capsicum and tomato.
- Farmers in Manipur are advised to harvest matured crops of rice, soybean and groundnut taking the advantage of relatively dry weather. Farmers are also advised to undertake nursery sowing of onion, tomato and capsicum, nursery sowing and transplanting of cauliflower and cabbage and sowing of crops like field pea, rapeseed and mustard, pea, leafy vegetables, carrot, radish, turnip and transplanting of potato.
- Recommended varieties of major crops to be sown in different States of the region are mentioned in Annexure I.
- Taking the advantage of relatively dry weather, undertake intercultural operation in the standing crops.
- Leaf spot are found on turmeric leaves in Mizoram. The infected and dried leaves should be collected and burnt in order to reduce the inoculum source in the field. Spraying of Blitox or Blue copper at 3 g / litre of water was found effective against leaf spot.
- There may be attack of gundhi bug in *aman* rice in Tripua. Endosulfan 2 ml per litter of water or Malathion 1 ml per litter may be sprayed to manage the attack.
- There may be attack of ear cutting caterpillar in rice in Tripura. Neem green @ 2 ml per litter of water may be sprayed to manage the attack.

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

- **Realised Rainfall:** Dry weather prevailed over the states in the region.
- **Rainfall Forecast:** Either mainly dry or dry weather is likely over the region during next 3 days except in East Rajasthan and West Rajasthan where rain is likely at many places during next 48 hours and at many/few places thereafter.
- **Major Crops:**
 - Wheat, gram, oats, lentil, pea, garlic, potato, mustard and sarson (sowing) in Delhi
 - Wheat(sowing) and vegetables(sowing/transplanting) in Himachal Pradesh.
 - Rice (harvesting), wheat, barley, gram, brown sarson, potato, radish, carrot, garlic, spinach and peas(sowing/germination), toria (flower bud initiation) in Jammu & Kashmir.
 - Rice, soybean, ragi (harvesting), toria, mustard (sowing / early vegetative), wheat(sowing) in Uttarakhand.
 - Sugarcane (harvesting), cotton (boll maturity / picking), wheat, lentil, gram, radish, ghobi sarson, raya, African sarson(sowing) in Punjab.
 - Sugarcane (vegetative), rice (maturity), wheat, gram and barseem(sowing) in Haryana.
 - Rice (grain maturity / harvesting), maize, urd, moong, til, soybean, groundnut, jowar and bajra (grain maturity / harvesting), sugarcane (grand growth), vegetable crops (vegetative / flowering) in Uttar Pradesh.
 - Sugarcane (grand growth), vegetable crops (flowering / fruiting / harvesting), wheat, barley, gram, mustard, ajwain, fenugreek, cumin and isabgol(sowing) in Rajasthan.
- **Advisory:**
 - Farmers are advised to undertake land preparation and sowing of *rabi* crops like wheat, lentil, potato, mustard, sarson, vegetable pea, berseem and gram may be undertaken utilizing the residual soil moisture

in various states of the region. Farmers are advised to complete harvesting of kharif crops and undertake post-harvesting operations. Arrange for proper storage facilities for the harvested produce.

- Farmers in Delhi region are advised to undertake sowing of wheat, gram, mustard, lentil, oat, berseem, pea, garlic, potato, sarson saag, radish, spinach, turnip and coriander (varieties in Annexure I).
- Farmers in Mid Hills Sub-Humid (Solan, Shimla, Sirmaur) of Himachal Pradesh are advised to undertake sowing of wheat, barley and oat. Undertake sowing of peas in mid-hills and transplanting of cabbage, cauliflower and broccoli may be started in Sub Montane & Low Hills Sub-Tropical Zone (Hamirpur, Kangra and Una Chamba districts).
- Farmers in sub tropical zone (Jammu, Kathua and Reasi district) are advised to undertake sowing of wheat, barley, gram, potato, radish, carrot, garlic, spinach and peas. Undertake sowing of wheat and mustard in intermediate zone (Rajouri, Doda and Udhampur districts). Harvest the matured crops of rice under the present weather conditions.
- Farmers in Uttarakhand are advised to undertake sowing of wheat, mustard, gram and pea
- Farmers in Punjab are advised to undertake sowing of wheat, lentil, gram, radish, ghobi sarson, raya and African sarson.
- Farmers in Haryana are advised to undertake sowing of wheat, barseem and gram
- Farmers in Rajasthan are advised to undertake land preparation and sowing of wheat, barley, gram and mustard, ajwain, fenugreek, cumin and isabgol as rainfall is likely during next 2-3 days. Raise nursery for autumn vegetable crops like tomato, brinjal, cauliflower, cabbage and raddish.

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

- **Realised Rainfall:** All the districts in Kerala, Karnataka, Tamil Nadu and Andhra Pradesh received rainfall.
- **Rainfall Forecast:** Rain is likely to occur at many places over Tamil Nadu and Kerala; at many / few places over Coastal Andhra Pradesh and at a few places over remaining region during next three days.
- **Major Crops:**
 - *Mundakan* rice is at tillering stage. Pepper is at maturity stage and arecanut is at nut development / maturity stage in Kerala. New planting is continued for coconut, black pepper, cocoa, cashew, nutmeg, mangosteen, rambutan etc.
 - *Late samba / thaladi* rice (vegetative), groundnut (harvesting), sugarcane (cane development), banana (fruit bearing stage) in Tamil Nadu. This is proper time for sowing or rainfed crops.
 - Rice is at grain maturity / harvesting stage; *rabi* vegetables are at transplanting / early vegetative stage in Andhra Pradesh.
 - Sugarcane (cane development). This is proper time for sowing of gram, safflower, *rabi* sorghum and sunflower in Karnataka. Early sown crops are at early vegetative stage.
- **Advisories:**
 - Heavy rains occurred during first week of November 2010 due to the cyclone 'Jal' in coastal region of Andhra Pradesh, Karnataka and north Tamil Nadu. Due to heavy rains over Andhra Pradesh, particularly in East and West Godavari, Visahakapattinam, Nellore and Prakasam districts during first week of November, standing *rabi* crops in considerable areas are damaged. In addition, water logging is also reported in some areas of crop fields in the region. Lodging of rice, sugarcane and banana crops is reported in certain pockets. Sizeable area of pulses and vegetables has also been damaged. In Kerala, Coastal Karnataka, South Interior Karnataka and Tamil Nadu, harvesting of matured crops and also sowing / transplanting and intercultural operations in plantation crops and vegetable crops have been hampered during the week. In Karnataka coffee, ragi and maize grown in the districts of Chikmagalur, Kodagu and Hassan have been damaged due to rainfall associated with the cyclone "Jal".
 - In view of the torrential rain due to cyclone 'Jal', farmers are advised to arrange for drainage facilities, postpone intercultural operations, application of fertilizers and pesticides to plantation crops and vegetable crops in the region. Sowing / transplanting of crops may be undertaken after draining out the water.

- Due to intermittent rains in Eastern Dry Zone of Karnataka take precautionary measures for harvesting of early sown crops and vegetable crops
- Farmers in North Transition Zone (Dharwad, Haveri, Belgaum) and North East Transition Zone (Bidar) are advised to undertake sowing of safflower, rabi sorghum and Bengal gram.
- Farmers in North Dry Zone (Bijapur) are advised to complete sowing of sunflower, chickpea and irrigated wheat as early as possible. To get more profit, sowing of intercropping systems like Safflower + Chickpea (2:4 row proportion) and Wheat + Chickpea(3:1 row proportion) can be taken up.
- Farmers in Problem Areas Zone (Kottayam) of Kerala are advised to undertake sowing of bitter gourd, snake gourd, ash gourd, pumpkin and planting of banana. Start land preparation and sowing of pancha rice in nursery.
- Farmers in Southern, Central and Northern Zones of Kerala are advised to undertake planting of coconut, black pepper, cocoa, cashew, nutmeg, mangosteen and rambutan in South Zone of Kerala.
- Farmers are advised to undertake intercultural operations and application of fertilizers in *late samba / thaladi* rice in Cauvery Delta Zone (Thanjavur, Nagapattinam, Thiruvarur, Karur, Perambalur and Tiruchirapalli) and sunflower, coriander etc, in Southern Zone of Tamil Nadu.
- Prevailing weather conditions in Scarce Rainfall Zone of Andhra Pradesh are congenial for the incidences of bacterial leaf spot, black arm and boll rot in cotton, leaf folder, blast and neck blast in paddy, maruca pod borer and Heliothis in redgram and Spodoptera in castor. Undertake plant protection measures to control the pests and diseases.
- Prevailing weather conditions are favourable for the incidences of blast, sheath rot, sheath blight, bacterial leaf blight, rice bug in rice, rhinoceros beetle, red palm weevil, bud rot disease and stem bleeding in coconut, spindle bug and yellow leaf disease in arecanut, pollu beetle, quick wilt and burrowing nematode in pepper, Sigatoka leaf spot, burrowing nematode and pseudo stem borer in banana, rhizome rot disease in cardamom and berry borer in coffee in Kerala. Farmers are advised to undertake plant protection measures to control the pests and diseases.
- Plant protection measures may be undertaken after spells of rain in Tamil Nadu, Kerala and Coastal Andhra Pradesh and on a non rainy day in the remaining parts of the region
- **Animal husbandry:**
 - Care should be taken against the decrease in day temperature in Karnataka for silk worm and poultry and dairy rearing houses by maintaining optimum room temperature and hygiene condition. Vaccination for cattle's to be taken up against the out break foot and mouth and rinder pest
 - Prevailing weather conditions are congenial for the occurrence of Hemorrhagic Septicemia and Black Quarter in cattle and ET and sheep pox in sheep in Andhra Pradesh. Undertake vaccination to prevent from infection.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Ratnagiri, Sindhudurg and Kolhapur districts of Maharashtra received rainfall during last week. No significant rain occurred in remaining districts of the states of this region.
- **Rainfall Forecast:** Rain is likely to occur at many places during next 48 hours over Saurashtra & Kutch region and Gujarat region and decrease thereafter. Rainfall is likely at a few places over Konkan & Goa and isolated places over Madhya Maharashtra and Marathwada during the period. Rain is likely at a few places over Vidarbha during next 24 hours and at isolated places thereafter. Isolated heavy rainfall would occur over Gujarat during next 24 hours.
- **Major Crops:**
 - *Kharif* rice (harvesting in Konkan, Kolhapur, Nashik & Pune (western parts) divisions), soyabean (harvesting), cotton (boll formation / maturity / picking), sunflower (harvesting), groundnut (harvesting), red gram (flowering / pod formation), irrigated cotton (boll formation / boll maturity / picking), *rabi* jowar & safflower (sowing / germination), gram, linseed and maize (sowing) and rainfed wheat (sowing) in Maharashtra.

➤ Rice (maturity / harvesting), groundnut (maturity / harvesting), cotton (boll formation / boll maturity / picking), maize (maturity / harvesting), bajra (maturity / harvesting), pigeon pea (flowering / pod formation), sesamum (maturity / harvesting), soybean (maturity / harvesting), garlic, wheat, gram, mustard, *rabi* fennel, cumin and coriander (sowing), sugarcane (planting) and cauliflower (transplanting) in Gujarat.

● **Advisory:**

- As Ratnagiri, Sindhudurg and Kolhapur districts of Maharashtra received rainfall during last week, farmers are advised to postpone irrigation to the standing crops.
- As rain is likely to occur at many places during next 48 hours over Saurashtra and Kutch region and Gujarat region during next 48 hours, farmers are advised to postpone irrigation, intercultural operation and application of fertilizer and plant protection measures to the crops. As isolated heavy rainfall is also likely over Gujarat during next 24 hours, postpone sowing of *rabi* crops over this region.
- Undertake harvesting of already matured crops like *Kharif* rice, soyabean, sunflower and groundnut and picking of cotton in Maharashtra taking the advantage of relatively dry weather.
- Undertake land preparation for preparation of nursery for *rabi* rice and also sowing of horse gram, field bean and cowpea in Konkan region utilizing residual soil moisture.
- As soil moisture status is favourable, undertake sowing of *rabi* jowar, sunflower, gram, safflower and rainfed wheat and also planting of sugarcane in Maharashtra.
- As there is possibility of rainfall at many places during next 48 hours, farmers of Gujarat State are advised to postpone harvesting of *kharif* crops like rice, groundnut, maize, bajra, green and sesamum.
- Undertake sowing of crops like rapeseed, mustard, garlic, wheat, gram, *rabi* fennel, cumin, coriander etc. and vegetables like carrot, onion, raddish, brinjal and transplanting of vegetables like cauliflower and cabbage and also planting of sugarcane in Saurashtra and Kutch region during this period. Undertake field preparation for sowing of wheat.
- Recommended varieties of major crops to be sown in different States of the region are mentioned in Annexure I.
- Taking the advantage of dry condition, intercultural operation and weeding may be carried out in standing crops in Madhya Maharashtra, Marathwada and Vidarbha region of Maharashtra State.
- There may be incidence of mango shoot borer and midge fly on new flush of mango in north konkan region. Farmers are suggested to spray Monocrotophos 35% @ 11 ml / 10 litres of water for their control.
- Prevailing weather is favourable for attack of blast in rice in Pune division of Maharashtra; spray Copper oxychloride 1250 g + Streptocyclin 75 g per ha in 500 liters of water.
- Infestation of jassids crossed ETL in North Saurashtra Zone. Spray Imidachloprid @ 4 ml or Acetamaprid @ 2 g /10 litres of water.
- Apply plant protection measures in Saurashtra and Kutch region and Gujarat region after current spells of rain and in Konkan and Goa on a non-rainy day.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Dry weather prevailed in the region during the week.
- **Rainfall Forecast:** Rain is likely at many places over West Madhya Pradesh; at a few places over East Madhya Pradesh and at a few / isolated places over Chhattisgarh.
- **Major Crops:**
 - This is proper time for sowing of *rabi* crops like wheat, gram, lentil, linseed etc..
- **Advisory:**
 - Farmers in Malwa Plateau Zone in Madhya Pradesh are advised to undertake land preparation for sowing of wheat after 15th November with irrigation facilities. Also undertake sowing / planting of coriander and garlic.
 - Farmers in Bundekhand Zone of Madhya Pradesh are advised to complete sowing of *rabi* crops like wheat, *rabi* vegetables, mustard and wheat.

- Farmers in Gird Zone of Madhya Pradesh are advised to undertake transplanting of winter vegetables.
- Farmers in Kymore Plateau and Satpura Hill Zones are advised to start land preparation for sowing of wheat crop under irrigated conditions. Complete sowing of chickpea, lentil, linseed and field pea at the earliest at optimum soil moisture. Prepare nursery for cauliflower and undertake sowing of potato, coriander and fenugreek.
- Farmers in Vindya Plateau Zone are advised to undertake sowing of wheat under both irrigated and non irrigated conditions. Also undertake sowing / planting of gram, garlic and sugarcane. Also undertake transplanting of carrot, brinjal, tomato, raddish, chilli and cabbage.
- Farmers in Jhabua Hills Zone (Jhabua, Dhar, Alirajpur) are advised to complete harvesting of *kharif* crops and undertake sowing of early wheat (irrigated), gram and maize.
- Farmers in Bastar Plateau Zone are advised to harvest matured paddy and prepare land for sowing of *kharif* crops.
- At present the minimum temperature is around 20°C in Chattisgarh Plain Zone which is favourable for the sowing of *rabi* crops like gram, pea, linseed and mustard. Moreover, due to the rains received during the month of October, there is sufficient moisture in the field. Looking to these conditions farmers are advised for the sowing of *rabi* crops just after the harvesting of the *kharif* crops. Wherever, irrigation facility is available sowing of mustard can also be done. To skip the infestation of aphids in mustard farmers are advised to complete the sowing of the crop by the second week of November. Also undertake planting of potato.
- Weather conditions in Grid Zone of Madhya Pradesh are congenial for the incidences of painted bug in mustard. Farmers are advised to monitor the crop and undertake spraying of Dimethoate @ 1 ml/litre of water after spells of rain.

Animal Husbandry & Poultry

- Humid weather condition prevails during these days hence keep cattle's in dry and clean place. Create neem leaves smoke in night to save them from mosquitoes and bees.
- Undertake vaccination of cattles for the control of Anthrax, Galghotoo, foot and mouth diseases, deworming of animals and maize kadbi should be cut in small pieces by chaff cutter for animal feeding.

Annexure I List of Varieties

Assam

Cauliflower: Improved Japanese, Pusa Synthetic, Pusa Snowhall etc.

Cabbage: Golden Acar, Pride of India, Pusa Mukta etc.

Raddish: Pusa Desi, Pusa Chetki and Pusa Himani.

Brinjal: Pusa Kranti, Cluster, JC-1, Kuchia, Pusa Purple Long, Pusa Purple Round, Pusa Vairab, JC-2, BWR-12 etc.

Knolkhol: White Vienna.

Toria: TS -27, TS- 29 etc.

Potato: Kufri Jyoti, Kufri Chandramukhi, Kufri Sindhuri, Kufri Megha etc.

Rapeseed: TS-38, M-27, TS-29, TS-36, TS-46 etc.

Mustard: TM-2, TM-4, Varuna etc.

Tomato: Punjab Chhuhara, Arka Alok, Pusa Rubi, Sioux, Punjab Keshri, Arka Abhijit, BT-1, VC-48-1 etc.

Lentil: B-77, L-9-12, PL406 and PL81-4.

Pea: T-163, Boneville, HUP-2, Rachna and Pant 14.

Carrot: Nuntez.

Boro rice: Jyotiprasad, Kanaklata, Jaymoti, Boro-1, Boro-2, Masuri etc.

Manipur

Field pea: Rachana.

Meghalaya

Cauliflower: Pusa Snowball, Pusa Synthetic etc.

Cabbage: Pusa Mukta, Pride of India etc.

Bihar

Potato: Kufri Lalima, Kufri Kuber and Kufri Alankar, Kufri Jyoti, Kufri Chandramukhi, Kufri Ahoka, Ranjendra Aloo 1, 2 and 3, Kufri Badshah.

Cauliflower: Kuwari, Patna Early, Pusa Katki, Pusa Deepali and Hajipur Agat.

Gram: Rajendra Chana, K.P.G. 59, Pusa 256, RAU 52, KWR 108, Uday, SG2.

Lentil: Pusa 25, Pant L 406, Mallika, Arun, Pant L 639, BR 25.

Peas: Ratna, Aprna, Harbhajan.

Mustard: Baruna, Pusa Bold and Kranti.

Rapeseed: Rajendar Rai Pichheti, Rajendra Anukul and Rajendra Suflam.

Sarson: Rajendra Sarson-1, Swarna etc.

Sunflower: Morden, Surya, Paradovic, KBSH 1, 44.

Maize: Saktiman 1, 2, 3, 4, Laxmi, Rajendra Shankar Makka 1 and 2.

Jharkhand

Mustard: Pusa Jaikisan, Siwani, Varuna and Kranti, Pusa Bold.

Potato: Kufari Chandramukhi, Kufari Ashoka and Kufari Kanchan.

Pea: Arkel and Azad P-1 for vegetable and D.D.R 23 and swarn Rekha for grain.

Gram: Birsa Chana-3, BG-372, BG-256, KWR-108, Pant G-186, Pant G-114 and BG-1053, BG-1003, KAK-2.

Lentil: P.L.-406, P.L.-639, D.P.L.-15, D.P.I.-62.

Linseed: Shubhra, T-397, Sweta etc.

Brinjal: Pusa Purple Long, Swarn Pratibha, Pusa Hybrid-5, Pusa Hybrid-6, Swarn Shakti.

Onion: Pusa Red, Pusa Ratnar, N-53, Early Grano, Light Red, Arka Niketan, Agrifound Dark Red.

Cabbage: Late Drumhead.

Cauliflower: Snowball-6, Pusa Snowball-21 etc.

West Bengal**White mustard:** Binoy, Subinoy etc.**Mustard:** Sita, vagirathi, Baruna, Agrani, Panchali, Sarama etc.**Wheat:** Rajlakshmi, HP 1701, Janak, HP-1209, BW-11, Sonalika and UP-262.**Orissa****Groundnut:** Smruti, TAG-27, TAG – 24 and JL-24 etc.**Green pea:** Rachana, Arkel and T -163 etc.**Mustard:** Parbhati, Anuradha, PT-303, PT 507, TS-29 & M-27 etc.**Onion:** Nasik Red, Patna Red, Pune Red, Bellary Red, Pusa Ratnar, Pusa Madhavi, Arka Niketan, Arka Pragati, Agrifound Light Red, Agrifound Dark, Punjab Selection, Patna White, Bombay White, Pusa White Round etc.**Karnataka:****Jowar:** variety M-35-1 and Hybrid CSH-10**Bengal gram:** A-1, JG-11, KAK-2 and Vishal.**Ragi:** GPU-45,48 and 26**New Delhi****Wheat:** H.D. 2687, H.D. 2851, H.D. 2894, H.D. 2967.**Gram:** Kabuli type - Pusa 1003, Pusa 1108, Pusa 1105, Pusa 2024; local type –Pusa 329, P.B.G. 1, P.B.G. 72, Pusa 362, Pusa 391.**Mustard:** Rohini, Pusa Jaikisan, Pusa Bold, Vardan, Jaggannath, Jawahar and for rainfed conditions: Pusa Barani, Pusa Aghrani, RH 10.**Lentil:** Pusa Masoor -5 (L-4594)**Oat:** - J.H.O-822, J.H.O-851, Kent, U.P.O.-212, O.L.-9 and**Barseem:** Barseem-1, 2, 3, Masakavi, B.L.10, Vardan, Buland**Garlic:** G-1, G-41, G-50, G-282**Early pea:** Pusa Pragati, Arkel.**Sarson:** Sarson saag, Pusa saag-1**Coriander:** Pant Haritama and Azad Dhanian 1**Potato:-** Kufri Badshah (Late blight tolerant), Kufri Jyoti (Short duration), Kufri Alankar, Kufri Chandramukhi**Himachal Pradesh****Wheat:** HPW-89,147 VL-738 and HS-240**Barley:** HBL-316 and Dolma and oat (Palampur-1)**Raddish:** Japani White, Early Mino White,**Cabbage** Snow ball K-1 Palam Uphar, Golden Acre,**Knol khol** White Bina,**Broccoli** Palm Kanchan, Palam Vichtrta, Palam Samridhi,**Cauliflower** Pride of India,**Peas:** Lincoln, Priya**Jammu & Kashmir****Barseem:** mascavi, pusa giant, BL-1**Mustard:** RLM-514, RLM-619, Kranti, Varuna and RH -30, Under high altitude: KOS-1 and KS-101 (Gulcheen)**Gram:** C-235, K-468, Gourav and PBG-1**Field pea:** T-163, PG-2, Rachna, HFP-3

Wheat: HD2329, PBW-154, PBW-343, Raj-3077, RSP-303 and WH 542 for irrigated areas and PBW 175, PBW 396 and IWP 72 for rainfed areas in cold arid zone, L-738 and PBW-175 under the rainfed conditions, VL-804 and HS-240 under irrigated and rainfed areas in intermediate zone.

Lentil: L-9/12, PL-406 and L-4147

Uttarakhand

Wheat: UP-2382, UP-2338, UP-2584, UP-2572, UP-2554, hd-2687, PBW-550, PBW-343, PBW-502, PBW-154, WH-542

Mustard: Rohini, Kranti, Krashna, Vardan

Gram: Avrodhi, Pant G-114, Pusa-256 or Uday.

Pea: Rachna, Pant P-5, Type-163

Rajasthan

Potato: Kufri-Ashok and Chandramukhi for early sowing, Kufri-Anand, Chipsona-1, 2, Jyoti and Pukhraj, for mid sowing and Kufri-Lalima, Sinduri and Satluj for late sown conditions.

Gram: GNG-469, GNG-663, RSG-44, RSG-888 and for rainfed C-235

Mustard: Pusa Kalyani, T – 59, Varuna, Pusa Bold, RH – 30, APR – 15, Kranti Bio – 902, Pusa Jaikisan

Tomato: Pusa Rubi, Pusa Earli and Vihar

Brinjal: Pusa Summer Prolific Round, Pusa Summer Prolific Long, Meghdoot, Navin and Arka Bahar

Cauliflower: Pusa Snowball 1 and Hissar 1

Cabbage: Pusa Drum Head and Hybrid 10

Radish: Japanese White and Hill Queen

Lentil: T36, BL406, Sihore 74-7 and K75

Barley: RD-2052, RD-2508, RD-2035, RD-2592, RD-2624, RD-2660 & RD-2552,

Fenugreek: RMT-1, RMT-143 & Pusa early bunch

Cumin: RS-1, RZ-19, RZ-209, Gujarat Jira-1, Gujarat jira-2 & Gujarat jira-3

Wheat: Raj-1482, Raj 3077, HD 2009(Arjun), PBW-502, PBW 550, Raj 4037

Haryana

Wheat: WH-157, WH-147, WH 282, WH 542, WH 711, PBW 550, DBW 17, WH 1025 and C-306

Barseem: Mescavi.

Raya: PBR-210 and PBR 91

Gram: PDG 3 and PDG 4

Punjab

Wheat: DBW-17, PBW-502, PBW-343, WH-542, and durum wheat PDW 291, PDW-274 and PDW-233 under irrigated conditions and PBW-527, PBW-175 under rainfed conditions.

Raya: PBR-210, RLM-619, PBR-91 under irrigated conditions and PBR-97 under rainfed conditions

Maharashtra

Rabi jowar: Selection -3, Phule Mauli, Phule Anuradha etc. for low fertile soil, Phule Chitra, Phule Mauli, Maldandi 35 - 1 etc. for medium fertile soil & Phule Vasudha, Phule Yashoda, CSV-22 etc. for black soil.

Sunflower: Modern, Bhanu, EC-68414, Phule Raviraj, K.B.S.H.-1, K.B.S.H.-44 and M.S.F.H.-17.

Safflower: Bhima, Phule Kusuma, Girna, Nari-6, Sharada, Nari-NH-1 and DSH-129.

Gram: Vijay, Vishal, Virat and Dig Vijay.

Sugarcane: COM -88121, CO-0265 (Phule-265), CO -8014, CO -86032 and CO 94012.

Gujarat

Wheat: Arnej - 206, GW-1 & 2.

Rapeseed: Guj. Rapeseed-1 or 2.

Mustard: Varuna, Gujarat Mustard-1, Gujarat mustard-2.

Gram (rainfed): Gujarat Chickpea – 1 & 2.

Gram (irrigated): Gujarat Gram-1 or ICC-4.

Garlic: Gujarat Garlic 1, 2 & 10.

Cabbage: Kranti, Golden Acare, Pride of India, Coppen Market etc.

Cauliflower: Early maturing varieties like Pusa Early, Pusa Dipali, Pusa Kartiki, Early Kuvvari etc. and for medium duration varieties like Pusa synthetic, Early Snowball, Snowball etc.

Carrot: Pusa Kesar, Pusa Yamadgani & Hissar Gairic etc.

Onion: Pusa Red, Nashik Lal, N 53 & H 48 etc.

Raddish: Pusa Hemadri, White ICL, Japanees White, Pusa Rashmi , Pusa Chetaki etc.

Brinjal: Guj. Brinjal – 6, P.L.R. 1, Junagadh Lambagoal, Mahicco – 11, 16 etc.

Cumin: Guj. Cumin- 2, 3, 4.

Coriender: Guj. Coriander – 1, 2.

Madhya Pradesh

Gram: JG-14, JG-06, JG-63, JG-11, JG-11, JG-130, JG-16, JG-322 and JG-01.

Mustard: Pusa Mahak, Pusa Agrani, Pusa Jaikisan, Pusa Bold, Jaggannath etc.

Linseed: PKDL-21.

Lentil: JLS-03.

Sugarcane: Ko. 86032, Ko-J-N 86600 or 86141.

Onion: Udaipur 102, Pusa White, Nasik Red, Nasik Roja etc.

Garlic: G 283, G 1, G 41 and G 323.

Wheat: Amar, Amrita, Harshita and gram JG 130, JG 226, Vshal, Vijay etc in rainfed and semi irrigated condition and rabi Maize cv.: JM- 421, JM- 8, JM- 12, Chandan makka- 3, Ganga- 3, Ganga- 4, HPQM – 1 in irrigated condition.

Wheat: (Jhabua Hila Zone)

Early sown: Amar (HW 2004), Amrita (HI 1500), Harshita (HI 1531)- 1-2 irrigation;

Timely sown: Naveen Chandosi (HI 1418), Swarna (HI 1479), Poorna (HI 1544) – 3-4 irrigation, GW 273, GW 322, GW 366 - 5 - irrigation

Gram: JG 130, JG 226, Vshal, Vijay etc

Rabi Maize cv.: JM- 421, JM- 8, JM- 12, HPQM – 1

Wheat (Vindya Plateau Zone)

Irrigated - GW – 190, GW – 273, Kanchan (GW -332), Mangal, HI – 1077, Lop-1, Malwa Shakthi, Malwa Ratna, Sudha, etc

non irrigated (1 irrigation) Sujatha.

Gram: JG-130, JG-11, JG -315, JG-16, Jacky-9218 & Kabuli channa, Kak-2, JGK -1

Garlic: G-283, G-1, G-41, G-323

Sugarcane: K Jawahar-86141, K Jawahar – 86572, K –N 8632, K-6304, KC-671

Annexure II Contour maps for the week ending 10.11.10

