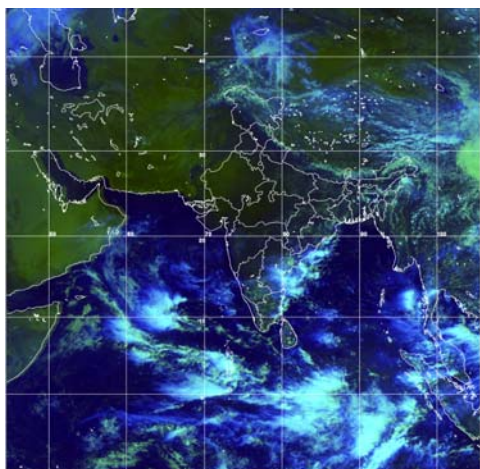




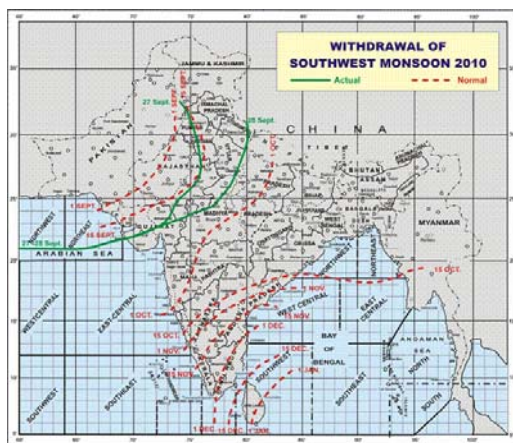
National Agromet Advisory Bulletin

Thursday, 30th September, 2010

(For the period 30th September to 4th October, 2010)



Satellite image 0600 UTC Dated
1st October, 2010



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Executive Summary

Flooding and water logging due to heavy rainfall during earlier weeks in number of states in northern parts of the country is receding as a result of decreased rainfall activity during last week. However, flooding and water logging situation is still persisting in some districts of Uttar Pradesh. Damage occurred in standing crops like rice, soyabean, black gram, green gram, sesamum, jowar and bajra due to continuous submergence in some districts of Central Plain Zone, Bundelkhand and Western Plain Zones in Uttar Pradesh. As reported, sterility of flowers of the crops at flowering stage as well as deterioration of quality of grains at grain formation stage are also likely. Farmers are advised to drain out the excess water from the crop fields and undertake field preparation and sowing of toria and early *rabi* vegetables only after receding of flood water.

Dry conditions prevailed in most of the districts of the States like Jammu & Kashmir, Uttar Pradesh, Uttarakhand, Rajasthan and Madhya Pradesh and are also likely to prevail during next few days. As dry and sunny conditions are favourable for harvesting and post-harvesting operations of *kharif* crops, farmers are advised to undertake harvesting of rice and maize in Jammu & Kashmir, rice in Uttarakhand, bajra, jowar and maize in Rajasthan and soyabean, maize, sorghum, sesame, green gram and black gram in Madhya Pradesh.

In Uttarakhand, farmers are advised to make arrangement to drain out excess water from the fields to save the crops from adverse effect of water logging and to undertake sowing of vegetable pea and garlic under optimum moisture conditions.

The condition of standing crops in many districts of Bihar, Jharkhand and Gangetic West Bengal are improved due to rainfall in last few weeks. Improved soil moisture status has also helped the farmers to start sowing of early *rabi* crops in the fallow lands in these States.

Short duration less water requiring crops like tori, arhar etc. and also vegetables like tomato, okra, brinjal, cauliflower, radish, capsicum etc. are recommended for sowing in Gangetic West Bengal.

Farmers are advised to sow pigeon pea and toria in fallow lands in North East Alluvial Zone and South Bihar and also rapeseed in North West Alluvial Plain Zone in Bihar. Vegetables such as cauliflower, radish etc. can also be sown. Farmers are advised to transplant cauliflower and to sow brinjal.

In fallow lands in Jharkhand, farmers are advised to sow early mustard and toria as sole crops and early mustard + vegetable pea and toria + vegetable pea as intercrops. It is also advised to undertake transplanting of chilli, tomato, brinjal, cabbage and cauliflower.

There is report of infestation of rice crop by case worm and stem borer and also black gram by flea beetle in considerable area of Upper Brahmaputra Valley Zone of Assam. Farmers are advised to arrange for plant protection measures to prevent further spread of the infestation.

Overall crop situation in remaining States of the country are quite satisfactory.

Distribution of rainfall (% departure from normal) for the districts of Uttar Pradesh, Uttarakhand, West Bengal, Bihar and Jharkhand during last five Weeks

State / Districts	01.09.10	08.09.10	15.09.10	21.09.10	29.09.10
East Uttar Pradesh					
Allahabad	-82	-30	-79	157	-100
Ambedkar Nagar	-100	-58	-42	180	-100
Azamgarh	-28	-21	-40	562	-100
Bahraich	-55	-40	-40	69	-100
Ballia	-69	-63	6	93	-68
Balrampur	-93	82	12	256	-95
Banda	7	15	-68	229	-100
Barabanki	-53	-41	-21	46	-98
Basti	-91	24	-64	546	-100
Deoria	-80	-54	176	80	-41
Faizabad	-38	13	-21	114	-100
Farrukhabad	47	149	44	104	-83
Fatehpur	-18	-40	-67	237	-100
Gazipur	-31	-72	-53	43	-100
Gonda	-80	133	-39	51	-100
Gorakhpur	-17	95	47	111	-99
Hardoi	-40	9	43	305	-96
Jaunpur	-79	-48	-39	245	-100
Kanpur City	-92	-31	-48	32	-94
Kanpur Dehat	-83	42	56	-40	-100
Kheri	-25	24	-13	120	-100
Kushi nagar	-3	-54	7	285	-94
Lucknow	-52	-33	-2	58	-99
Maharajganj	-2	40	-81	209	-100
Mau	-86	-44	-42	51	-100
Mirzapur	-92	-43	6	78	-100
Pratapgarh	-25	-65	-67	92	-100
RaiBareilly	-68	-72	-45	126	-100
Sant Ravidas Nagar	-47	-100	59	325	-100
Shrawasti	65	-57	-26	333	-90
Sidharthnagar	-13	0	10	-22	-100
Sitapur	-86	0	23	40	-92
Sonbhadra	-82	39	-53	409	-100
Sultanpur	-34	-21	-28	184	-100
Unnao	-21	-7	29	64	-100
Varanasi	-94	-54	-52	172	-100
West Uttar Pradesh					
Agra	-79	-9	-59	302	-87
Aligarh	-23	437	11	266	-97
Auraiya	-59	-14	-69	91	-98
Badaun	10	95	46	237	-99
Baghpat	-33	101	438	482	410
Bareilly	11	214	94	410	-94
Bijnor	-58	71	45	503	-97
Bulandsahar	-49	196	81	348	-100
Etah	-46	23	64	338	-100
Etawah	-34	61	0	188	-100
Firozabad	-98	72	-29	122	-53
Ghaziabad	-56	-21	239	541	-65
Hamirpur	17	-7	-79	341	-100
Jalaun	-89	-98	-86	252	-100
Jhansi	-55	-27	-58	403	-100
Jotirba Phule Nagar	47	70	343	126	-98
Lalitpur	-48	22	-99	412	-100
Mahamaya Nagar	-42	28	47	111	-78
Mainpuri	-82	24	-13	143	-83
Mathura	-33	110	-7	240	-78
Meerut	-57	17	50	67	-66
Moradabad	17	250	53	65	-82
Muzzaffarnagar	-63	-19	-37	345	-84
Pilibhit	-27	32	7	285	-97
Rampur	-53	115	64	561	-90

State / Districts	01.09.10	08.09.10	15.09.10	21.09.10	29.09.10
Saharanpur	-42	122	234	267	-100
Shahjahanpur	-31	132	73	410	-100
UttaraKhand					
Almora	68	68	173	930	-77
Chamoli	106	237	116	754	-16
Champawat	74	273	-11	809	-70
Dehradun	50	271	71	569	-41
Garhwal Pauri	-55	79	79	462	-52
Garhwal Tehri	-8	258	153	294	-73
Haridwar	-26	102	175	827	-98
Nainital	-1	101	39	1012	-62
Pithorgarh	0	24	-48	584	-54
Rudraprayag	-78	150	-45	168	-56
Udham Sing Nagar	-41	42	-44	292	-41
Uttarkashi	7	159	66	381	-43
Bihar					
Araria	-89	-59	-38	207	-16
Aurangabad	-77	-93	-58	147	-90
Begusarai	-100	-100	-100	-16	338
Bhabua	-99	-87	-38	133	-100
Bhagalpur	-72	-99	39	2	-98
Bhojpur	-95	-85	33	-32	-88
Buxar	-96	-99	-46	125	-99
Darbhanga	-70	-93	-31	89	-90
East Champaran	-27	-69	-64	50	7
Gaya	-100	-81	-74	-50	-83
Gopalganj	25	-33	12	81	-80
Jahanabad	-89	-100	-34	-66	-86
Jamui	-77	-100	-66	37	-91
Kathihar	-86	-92	-41	85	-38
Khagadia	-71	-100	-40	49	-57
Kishanganj	-40	103	-64	6	-34
Madhepura	**	-91	-11	132	-88
Madhubani	-93	-94	-67	36	-77
Monghyar	-55	-99	368	233	97
Muzaffarpur	-92	-95	49	-32	-87
Nalanda	-100	-100	-38	11	30
Patna	-100	-92	-30	-37	-17
Purnea	30	107	-30	91	-58
Rohtas	-82	-96	-34	137	-98
Saharsha	-37	-63	-16	118	-51
Samstipur	-100	-99	-71	-58	-30
Saran	-96	-93	22	-1	-96
Sitamarhi	-96	-68	-60	-27	-100
Siwan	-99	-93	69	231	-9
Supaul	-97	-49	-49	59	-85
Vaishali	-100	-95	-58	-56	84
West Champaran	12	175	-61	169	-39
Jharkhand					
Bokaro	-66	-50	-4	235	-77
Chatra	-73	-98	-27	-17	-97
Dhanbad	-81	-69	42	69	-45
East Singbhum	-83	-61	-89	113	-78
Giridih	-90	-73	83	42	2
Godda	-100	-100	1	-13	-34
Gumla	-6	-37	36	73	-100
Hazaribagh	-90	-75	-39	28	-75
Koderna	**	**	**	-28	-22
Lohardagga	-24	-78	-27	4	-100
Pakur	-100	-100	-59	216	-91
Palamau	-96	-88	-14	115	-99
Ranchi	-59	-54	105	64	-97
Sahebganj	-100	-100	-82	421	-55
West Singbhum	-43	-29	-32	41	-97

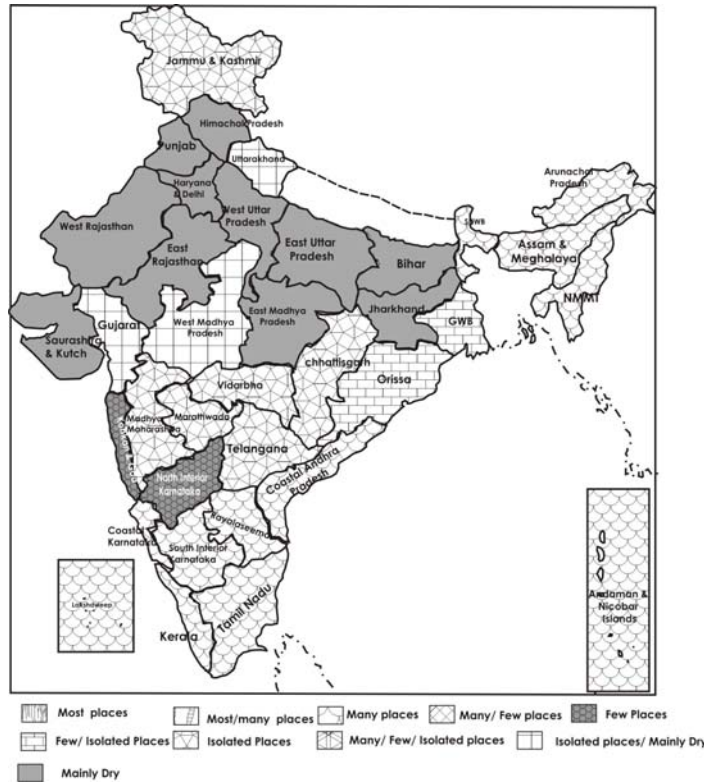
State / Districts	01.09.10	08.09.10	15.09.10	21.09.10	29.09.10
West Bengal					
GWB					
Bankura	-61	-40	24	1	9
Birbhum	-62	-18	-1	91	-68
Burdwan	-55	-70	-5	123	-23
Hooghly	-53	-45	30	121	-38
Howrah	-91	-55	31	93	-56
East Midnapore	-14	-64	1	-4	-82
Murshidabad	-19	-53	-12	181	-38
Nadia	-42	-72	63	47	-19
24 Pargana (N)	-68	-76	6	53	-76
Purulia	-62	-53	-64	48	-45

State / Districts	01.09.10	08.09.10	15.09.10	21.09.10	29.09.10
24 Pargana (S)	-61	-64	-34	83	-80
West Midnapore	-85	-55	-39	100	-49
SHWB					
Coochbehar	-70	-66	85	69	-55
Darjeeling	74	-15	24	59	-40
Jalpaiguri	-3	31	13	45	-17
Malda	-45	-48	-52	-8	-20
Dinajpur (N)	-85	15	37	127	-18
Dinajpur (S)	-99	-49	-36	140	-84
North Sikkim	-28	36	-47	52	30
South Sikkim	39	-54	22	67	-62

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 1430 hours of 3rd October, 2010)



Weather Outlook (upto 1430 hours IST of 5th October, 2010)

- Fairly widespread rainfall would occur over south Peninsular India.
- Decrease in rainfall activity over northeast India.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Araria, Begusarai, East Champaran, Kishanganj, Monghyar, Nalanda and Vaishalidistricts of Bihar, Giridih district of Jharkhand, Balasore district of Orissa, Bankura, Burdwan and Nadia districts of Gangetic West Bengal and most of the districts of Sub Himalayan West Bengal and Sikkim received rain during last week.
- **Rainfall Forecast:** Rain is likely to occur at many places over Sub Himalayan West Bengal and Sikkim during the period. Rain is likely at isolated places over Gangetic West Bengal and Orissa during next 24 hours and increase thereafter. Mainly dry weather is likely to prevail over Bihar and Jharkhand during the period.
- **Major Crops:**
 - Early sown rice (flowering / grain formation), late sown rice (tillering), maize (cob formation / early maturity), sesamum (flowering / pod formation / early maturity), groundnut (pegging / pod formation / early maturity), soybean, green gram (pod formation / early maturity), black gram, kulthi (vegetative), tori (sowing), vegetables like cauliflower, brinjal etc. (sowing / early vegetative / vegetative) in Bihar.
 - Early sown rice (flowering / grain formation), late sown rice (tillering), early sown maize (cob formation / early maturity), sesame (flowering / pod formation / early maturity), groundnut (pegging / pod formation / early maturity), urd, green gram, pignon pea, niger and short duration maize (flowering / pod formation), kulthi (vegetative) and potato, toria and early mustard (sowing), tomato, cabbage and cauliflower (nursery sowing / transplanting), chilli and brinjal (nursery sowing) in Jharkhand.
 - Rice (tillering / flowering / grain formation / early maturity / maturity) and maize (cob formation / early maturity), groundnut (pegging / pod formation / early maturity), pulses, soybean, sesamum and ragi (flowering / pod formation), vegetable crops (vegetative / flowering / fruiting) in Orissa.
 - Sugarcane (cane development), vegetable crops (sowing / germination / early vegetative / vegetative / flowering / fruiting / harvesting), *aus* rice (maturity / harvesting), *aman* rice (tillering), pulses (early vegetative / vegetative / flowering / pod formation), arhar (germination / early vegetative / vegetative), sesame (flowering / pod formation / early maturity) and groundnut (pegging / pod formation / early maturity) in West Bengal.
 - Large cardamom (capsule / grain maturity / harvesting), orange (fruiting / fruit maturity), summer potato (harvesting), maize (harvesting), ginger (vegetative), rice (flag leaf initiation / flowering), *rabi* vegetable (sowing / nursery sowing / transplanting) in Sikkim.
- **Advisories:**
 - As there was no significant rainfall in most of the district of the States of the region except Araria, Begusarai, East Champaran, Kishanganj, Monghyar, Nalanda and Vaishalidistricts of Bihar, Giridih district of Jharkhand, Balasore district of Orissa, Bankura, Burdwan and Nadia districts of Gangetic West Bengal and most of the districts of Sub Himalayan West Bengal and Sikkim, apply irrigation to the standing crops. Postpone irrigation to the crops in the above mentioned districts.
 - The condition of standing crops in many districts of Bihar, Jharkhand and Gangetic West Bengal are improved due to rainfall in last few weeks. Improved soil moisture status has also helped the farmers to start sowing of early *rabi* crops in the fallow lands in these States.
 - In Gangetic West Bengal, farmers are advised to sow short duration less water requiring crops like tori and also vegetables like tomato, okra, brinjal, cauliflower, radish, capsicum etc.
 - Farmers are advised to sow toria in fallow lands in North East Alluvial Zone and South Bihar Alluvial Zone and also rapeseed in North West Alluvial Plain Zone in Bihar. Vegetables such as cauliflower, radish etc. can also be sown. Farmers are advised to transplant cauliflower and to sow brinjal.
 - In fallow lands in Jharkhand, farmers may sow early mustard, potato and toria as sole crops and early mustard + vegetable pea and toria + vegetable pea as intercrops. It is also advised to transplant tomato,

cabbage and cauliflower seedlings and to prepare nurseries to raise seedlings of chilli, tomato, brinjal, cabbage and cauliflower. Marigold and Gladiolus may also be undertaken.

- As soil moisture condition is favourable, Undertake *rabi* groundnut and also other early *rabi* crops like raddish, cabbage, cauliflower, beans, cluster bean and tomato in Orissa.
- Recommended varieties of crops to be sown in different States of the region are mentioned in Annexure I.
- There is a chance of attack of brown plant hopper in rice in New Alluvial Zone of West Bengal under the prevailing weather condition. If the number of insect is more than 15 per plant, apply 0.75 ml Nuvan or Vapona per litre of water or dust quinalphos 1.5 % or carbaril 4 % at lower portion of the stem.
- Due to high humidity and cloudy weather, damping off and circular spots of brown colour appear on the leaves of brinjal in Purba Midnapur district of West Bengal. Spray the crop with Difoltan 80 WP @ 2 g / litre of water when symptom of disease appears.
- Apply plant protection measures after current spells of rain in Sub Himalayan West Bengal and Sikkim and on a non-rainy day in Gangetic West Bengal and Orissa.

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

- **Realised Rainfall:** Most of the districts of Assam (except East Garo Hills, Goalpara, Golghat, Hailakandi, Jorhat, Kamrup, Karbi Analog, Morigaon, Nowgong, Nalbari and Sonitpur) and Arunachal Pradesh (except Lower Subansiri and Tawang) received good rainfall during last week.
- **Rainfall Forecast:** Rain is likely to occur at many places over the region during the period.
- **Major Crops:**
 - Vegetables (flowering / fruiting / harvesting), sugarcane (cane development), maize (maturity), *sali* rice (early vegetative / seedling / tillering / panicle initiation), *ahu* rice (transplanted summer rice) (early maturity / maturity), arhar (flowering / pod formation), sesamum (flowering / pod formation) and black gram and green gram (germination / early vegetative / vegetative) in Assam.
 - Rice (milk / maturity), vegetables (vegetative / flowering / fruiting), *rabi* vegetables (nursery sowing), maize (cob maturity / harvesting), orange (fruiting) and ginger and turmeric (vegetative) in Arunachal Pradesh.
 - Upland rice (early maturity / maturity / harvesting), *aman* rice (tillering) and vegetables (sowing / early vegetative / vegetative / flowering / fruiting) in Tripura.
 - *Sali* rice (tillering / panicle initiation), potato (planting / early vegetative / vegetative), vegetables (sowing / germination / early vegetative / vegetative / flowering / fruiting), maize (cob maturity) in Meghalaya.
- **Advisory:**
 - As rainfall is likely to occur at many places over the States of this region, postpone irrigation, intercultural operation and application of fertilizer and plant protection measures to the standing crops. Also arrange for draining out excess water from the fields to protect the crops from water logging.
 - Farmers in Assam are advised to undertake sowing of toria, radish and tomato in Hills Zone, sowing / transplanting of cabbage, cauliflower and nursery sowing of brinjal in Lower Bramhaputra Valley Zone, sowing of cauliflower and early maturing cabbage, radish, knolkhol and brinjal in Upper Bramhaputra Valley Zone, sowing of early brinjal and vegetables in Barak Valley Zone, sowing of early vegetables like early cauliflower and radish in Central Bramhaputra Valley Zone and sowing of vegetables like cauliflower, cabbage, knolkhol, radish and tomato in North Bank Plain Zone.
 - Farmers in Arunachal Pradesh are advised to raise nursery of hybrid tomato, cauliflower and cabbage in present weather conditions. Farmers are also advised for preparation of field for potato.
 - It is also optimum time for planting of potato in mid hills region of Ri-Bhoi, East Khasi and West Khasi hill Districts of Meghalaya. Farmers are also advised to transplant brinjal and chilli in East Garo, West Garo, South Garo and Ri-Bhoi Districts.

- Prepare land and undertake sowing of mustard and winter season vegetables like pea, French bean, cabbage, palak etc. in Nagaland.
- Recommended varieties of major crops to be sown in different States of the region are mentioned in Annexure I.
- Brown spot disease may also occur in rice in Tripura due to humid weather. Zineb 0.25% @ 3 g per litter of water may be applied to manage the attack.
- High humidity and cloudy weather are congenial for die back disease in Khasi mandarin in Mizoram. Collect and destroy the dropped fruits and also apply appropriate plant protection measures to manage the disease.
- Prevailing weather is congenial for fruit fly in guava in Mizoram. Spray Dimethoate @ 0.03% to manage the insect.
- High temperature and high humidity may favour the development of sigatoka leaf disease in banana in Mizoram. Pruning and burning of infected leaves is recommended; in case of severe infestation mancozeb @ 0.01% may be applied.
- Infestation of Jassids in okra and cowpea may occur during this period in Ri-Bhoi, east Khasi, South Garo and Jaintia district of Meghalaya. To prevent this insect attack, 2-3 spraying of Imidachloprid @ 0.3 ml / litre of water may be done immediately.
- As there is chance of rain at many places over the region, farmers are advised to apply plant protection measures after current spells of rain.
- In present weather conditions, special care should be taken against attack of maggots in the wounds of animals in Arunachal Pradesh. Application of turpentine oil in the wounds followed by application of antibiotics for five days is advised.

NORTH WEST INDIA [J & K, H. P., UTTARAKHAND, PUNJAB, HARYANA, DELHI, UP, RAJASTHAN]

- **Realised Rainfall:** Rain occurred in most of the districts of Himachal Pradesh(except Kangra, Kinnaur and Una), Haryana(except Hisar, Jhajar, Mahendergarh, Panipat, Riwari and Yamunanagar), Delhi, Fatehpur Saheb, Ludhiana, Nawashahar, Patiala, Ropar districts in Punjab, Doda, Jammu and Kathua in Jammu & Kashmir Deoria district in East Uttar Pradesh, Bhagpat district in West Uttar Pradesh, Uttarakhand(except Almora, Garhwal Tehri and Haridwar) and Jhunjhuhu and Sikar in East Rajasthan and Churu and Hanumangarh in West Rajasthan during last week. No significant rainfall occurred in most of the remaining districts in the region.
- **Rainfall Forecast:** Rainfall is likely to occur at isolated places over Jammu & Kashmir and either isolated rainfall or mainly dry weather is likely over West Uttar Pradesh, East Uttar Pradesh, Uttarakhand, Punjab, Haryana, Delhi, Himachal Pradesh, West Rajasthan and East Rajasthan during next three days.
- **Major Crops:**
 - Rice (panicle initiation/flowering), jowar and maize(flowering/grain formation), pigeon pea(vegetative/flowering), vegetable crops (flowering/fruited), early mustard and sarson(sowing) in Delhi
 - Rice (tillering/panicle initiation), vegetables (vegetative / flowering) in Himachal Pradesh.
 - Vegetable crops (flowering / fruited / harvesting), rice (grain formation/maturity), maize(grain formation/maturity), mung(pod formation/maturity), groundnut(pegging), sunflower (vegetative / flowering) in Jammu & Kashmir.
 - Sugarcane (vegetative), rice (grain formation/maturity), soyabean, jowar, bajra, pigeon pea and groundnut (early vegetative / vegetative), toria, mustard(sowing) in Uttarakhand.
 - Sugarcane (vegetative), cotton(vegetative/flowering), maize (vegetative), rice (grain formation), mung, mash (flowering/pod formation) in Punjab.
 - Sugarcane (vegetative), cotton (vegetative), rice(flowering/grain formation), guar and bajra (grain formation/harvesting) in Haryana.

- Rice(tillering/panicle initiation), sugarcane (vegetative), vegetable crops (transplanting / vegetative / flowering), black gram, green gram, sesamum, lobia, maize, pigeon pea + pulses, groundnut and sesamum(early vegetative / vegetative / flowering) in Uttar Pradesh.
- Sugarcane (vegetative), vegetable crops (flowering / fruiting / harvesting), bajra, jowar, maize(grain formation/maturity), soybean, mung, cluster bean, sesamum and groundnut (flowering/grain formation), mustard, taramira and rapeseed(sowing) in Rajasthan.

● **Advisory:**

- As there was good rainfall during last week in most of the districts of Himachal Pradesh, Haryana, Delhi and Uttarakhand during last two weeks, farmers are advised to postpone irrigation to the standing crops. Apply irrigation to the standing crops in Punjab, East Uttar Pradesh, West Uttar Pradesh, East Rajasthan, West Rajasthan and Jammu & Kashmir as there was no significant rainfall during last week in most of the districts and no significant rainfall is likely during next three days.
- Farmers in flood affected districts of Central Plain Zone, Bundelkhand and Western Plain Zone in Uttar Pradesh are advised to drain out the excess water from the fields of standing crops and undertake field preparation and sowing of toria and early *rabi* vegetables only after receding of flood water.
- Farmers in Delhi are advised to undertake sowing of carrot, early pea, radish, spinach and coriander etc. and undertake field preparation for sowing of early mustard and sarson (varieties in Annexure I) under optimum soil moisture conditions. As dry and sunny conditions are favourable for harvesting and post-harvesting operations of *kharif* crops, farmers are advised to undertake harvesting of rice.
- Farmers in Bhabar and Tarai zone(high hills in Nainital district) in Uttarakhand are advised to undertake sowing of early vegetable pea and field preparation for sowing of garlic and undertake sowing of toria, mustard (Uttam Singh Nagar) after drainage of excess water.
- Farmers in sub tropical zone (Jammu, Kathua and Reasi district) are advised to undertake sowing of toria intercropped with gobi sarson. Undertake nursery sowing/sowing of cauliflower, cabbage and knol – khol, potato, radish, carrot, turnip, garlic, methi and spinach during these days. Harvest the matured crops of rice, maize and early sown bajra under the present weather conditions.
- Farmers in Flood Prone Eastern Plain Zone (Alwar, Bharatpur, Dholpur, Karauli, Sawai, Madhopur), Sub humid Southern Plain and Aravalli hill zone and Irrigated North Western Plain Zone (Sriganganagar, Hanumangarh) in Rajasthan are advised to undertake sowing of mustard, taramira and rapeseed utilizing the realized rainfall during last week.
- Undertake harvesting of matured crops of maize, bajra and jowar and field preparation for sowing potato in Flood Prone Eastern Plain zone in Rajasthan. Farmers are advised to undertake planking operations to conserve soil moisture in fallow lands for undertaking sowing of *rabi* crops.
- Farmers in Semi Arid Eastern Plain Zone (Dausa, Ajmer, Tonk, Jaipur districts) in Rajasthan are advised to undertake sowing of early pea utilizing the realized rainfall during last week.
- Farmers in Eastern zone (Bhiwani, Fatehabad, Hissar, Jhajjar, Mahendgarh, Mewat, Rewari, Rohtak and Sirsa districts) in Haryana are advised to undertake transplanting of fruit crops and prepare the field for sowing of mustard and barseem.
- Farmers in Western Plain Zone (Firozpur and Faridkot districts) and western zone(Bathinda, Moga, Muktsar, Mansa, Sangrur districts) of Punjab are advised to undertake sowing of radish, carrot and turnip utilizing the realised rainfall during last week. Complete sowing of toria alone or intercropping with gobi sarson in Central Plain Zone (Amritsar, Kapurthala, Fatehgarh Sahib, Ludhiana, and Jalandhar).
- Continue spraying, application of fertilisers and intercultural operations in East Uttar Pradesh, West Uttar Pradesh, Uttarakhand, Haryana, Delhi, Punjab, Himachal Pradesh, Rajasthan and Jammu & Kashmir.

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

- **Realised Rainfall:** All the districts in Karnataka except Bidar, Gulbarga, Koppal, Raichur and Mysore districts; all the districts in Kerala, all the districts in Tamil Nadu except Cuddalore, Dharmapuri, Kanchipuram, Krishnagiri, Namakkal, Perambalur, Thiruvannamalai and Villupuram districts and Krishna, West Godavari, Hyderabad, Medak, Anantapur, Chiththoor and Kurnool districts in Andhra Pradesh.
- **Rainfall Forecast:** Rain is likely to occur at many places in the region except over Telangana and North Interior Karnataka where rain is likely at isolated / a few places.
- **Major Crops:**
 - Rice is at maturity stage. Pepper is at berry development / maturity stage and arecanut is at nut development stage in Kerala.
 - *Kuruvai* rice (grain development), groundnut (pod formation / development), sugarcane (cane development), banana (fruit bearing stage) in Tamil Nadu.
 - *Kharif* crops viz., maize is at maturity stage, paddy crop is at panicle initiation / flowering stage and groundnut is at pegging in Andhra Pradesh.
 - *Kharif* crops viz., green gram and black gram (maturity), pigeon pea (late vegetative) and sugarcane (cane development) in Karnataka.
- **Advisories:**
 - Due to continuous rains in Krishna Godavari Zone during August-September 2010, green gram and black gram crops were completely damaged. There are also chances of rain in next three days. Hence harvesting of crops may be undertaken after spells of rain with proper storage facilities for the grains.
 - Rain is likely to occur at many places in the region except over Telangana and North Interior Karnataka during next three days; farmers are advised to postpone intercultural operations, application of fertilizers and pesticides and irrigation to plantation crops and vegetable crops.
 - As there was sufficient rainfall in North Dry Zone (Bijapur) in Karnataka with a possibility of rainfall during next three days, farmers are advised to continue sowing of sunflower, desi cotton (Jayadhar and Suyodhar) and start sowing of rabi sorghum and safflower.
 - Farmers in Cauvery Delta Zone in Tamil Nadu are advised to undertake transplanting of *late samba/thaladi*.
 - Farmers in Southern Zone of Kerala are advised to undertake transplanting of *mundakan* rice.
 - Due to congenial weather conditions and excessive vegetative growth of groundnut in Scarce Rainfall Zone of Rayalaseema (Ananthpur and Kurnool) there are chances for incidence of Spodoptera and Helicoverpa. To control, spray thiodicarb @1.5 gm per litre of water. If grown up larvae is noticed, arrange poison baits (Rice bran @ 5 Kg + Jaggery@ 500 g + Monocrotophos or Chlorpyriphos @ 500 ml) during the evening hours to control them.
 - Prevailing weather conditions in Hill zone (Devangere, Tumkur and Chitradurga) in Karnataka are congenial for the incidence of leaf roller in rice, stem borer in maize and jowar and leaf webber in red gram. Farmers are advised to undertake plant protection measures to control the pests.
 - Plant protection measures may be undertaken after spells of rain in the region.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Raigad, Ratnagiri and Sindhudurg districts of Konkan and also Goa, Ahmednagar, Kolhapur, Pune, Sangli and Satara districts of Madhya Maharashtra, Parbhani district of Marathwada received good rain during last week. Most of the remaining districts of the States of the region received no significant rain during last week.
- **Rainfall Forecast:** Rain is likely at a few places in Konkan and Goa and at isolated places in Madhya Maharashtra, Marathwada, Vidarbha and Gujarat region during the period. Mainly dry weather is likely to prevail in Saurashtra and Kutch region.
- **Major Crops:**
 - *Kharif* rice (tillering / panicle initiation in East Vidarbha and panicle initiation / flowering / grain formation (in early variety) in Konkan, Kolhapur, Nashik & Pune (western parts) divisions), *kharif* jowar (flag leaf initiation / flowering), soyabean (pod development / pod maturity), bajra (grain maturity / harvesting), cotton (flowering / boll formation), sunflower (head formation / seed development), groundnut (pod filling / pod maturity), red gram (secondary branching) and irrigated cotton (flowering / boll formation) in Maharashtra.
 - Rice (flowering / grain formation), groundnut (pod formation / early maturity), cotton (floral bud initiation / flowering), maize (cob formation), bajra (grain formation / maturity), pigeon pea and sesamum (flowering / pod formation), soybean, green gram and black gram (pod formation / maturity) and castor (vegetative) in Gujarat.
- **Advisory:**
 - As most of the districts of Gujarat region and Saurashtra and Kutch did not receive sufficient rain during last week, apply irrigation to the standing crops in these districts.
 - As soil moisture status is favourable, undertake sowing of *rabi* jowar, sunflower, gram and safflower in Maharashtra.
 - As there is possibility of less rainfall, start harvesting of already matured groundnut, bajra & soyabean crops in Maharashtra.
 - As there is possibility of clear sky during the period, farmers of North Gujarat region are advised to harvest *kharif* crops like green gram and pearl millet. Also carry out weeding and intercultural operation in standing crops and apply supplementary dose of nitrogen fertilizer taking the advantage of relatively dry weather.
 - Due to increase in temperatures there is chance of infestation of white fly and jassids in *kharif* cotton in Maharashtra; spray Triazophos @ 30 ml in 10 liters of water.
 - The incidence of rice leaf folder is noticed on rice in some part of the Nagpur division of Maharashtra; spray the crop with Carbaryl 50 WP @ 20 g / 10 litres of water and Monocrotophos 36 WSC @ 11 ml / 10 litres of water.
 - Apply plant protection measures on a non-rainy day in Konkan and Goa.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** No significant rainfall occurred during the period.
- **Rainfall Forecast:** Dry weather or isolated rainfall is likely over the region.
- **Major Crops:**
 - *Kharif* crop like soyabean, maize, sorghum, sesame (maturity), green gram and black gram (grain development) in Madhya Pradesh.
 - *Kharif* crops like soyabean, maize, etc (grain development / maturity), green gram (grain development) and sugarcane (cane development) in Chhattisgarh. This is proper time for sowing of early *rabi* crops.
- **Advisory:**
 - Farmers in Bundekhand Zone of Madhya Pradesh are advised to complete harvesting of mature *kharif* crops and undertake land preparation for sowing of *rabi* crops.

- Farmers in Kymore Plateau and Satpura Hill Zone region are advised to prepare nursery for medium duration crop of cauliflower and cabbage and transplanting of seedling in main field at optimum moisture level in the field.
- Looking to the withdrawal of the monsoon, farmers in Chattisgarh Plain Zone (Bilaspur, Dhamtari, Durg, Janjgir, Kabirdham, Kanker, Kawardha, Korba, Mahasamund, Raigarh, Raipur and Rajnandangaon districts) are advised to start land preparation for rabi crop so that sowing of the crops can be started by the first fortnight of the October. Also farmers are advised to undertake transplanting of cabbage, tomato, brinjal, chilli etc.
- Farmers in upland region of Bastar Plateau Zone are advised to undertake sowing of castor, niger, kulthi and toria crops (varieties given in Annexure I).
- Farmers in North Hill Zone (Jashpur, Koriya, Sarguja) are advised undertake sowing of sesamum & horse bean immediately in upland areas.
- Farmers in Gird zone of Madhya Pradesh are advised to start land preparation for sowing of mustard crop utilizing residual soil moisture.

Annexure I List of Varieties

Assam

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

Early cabbage: Golden Acar, Pride of India, Pusa Mukta etc.

Early 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.

Bihar

Tori: RAUTS-17, PT-303, Bhawani and Panchali.

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

Brinjal: Rajendra Baigan-2, Rajendra Annapura, Pant Rituraj, Pant Samrat, Swarn Pratibha and Arka Navnit.

Jharkhand

Vegetable pea: Arkel, Azad Pea-1.

Toria: P.T.-303, Panchali, Bhavani etc.

Potato: Kufri Chandramukhi, Kufri Ashoka, Kufri Kanchan.

Chilli: Pusa Jwala, Pusa Sadabahar, Kalyanpur Lal.

Tomato: Swarn Sampada, Swarn Lalima, Pusa Ruby.

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

Cabbage: Late Drumhead.

Cauliflower: Snowball-6, Pusa Snowball-21.

Marigold: Pusa Basmati, Pusa Narangi.

Gladiolus: American Beauty, Jackson Willy Gold, Her Majesty etc.
early mustard (Pusa Jaikisan, Shivani, Varuna, Kranti)

West Bengal

Radish: Contayl Lal, Red Bombai, Japanese White.

Orissa

Raddish: Pusa chetaki, Pusa Rashmi, and Pusa Himani.

Cauliflower: Pusa Ketaki, and Pusa Deepali.

Cabbage: Pride of India.

Beans: Pusa Parvati and Arka Komal.

Tomato: BT 2, BT 10, BT 12, Neeladri, Sada Bahar, Madhuri, Maharathi, Rashmi and Navin.

Jammu & Kashmir

Cabbage: Golden Acre, Pride of India.

Cauliflower: Giant Snow Ball, Pusa Synthetic.

knol khol: White Vienna and Purple Vienna.

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

Gobi sarson: GSS-1

Potato: K.Badshah, K.Sinduri, K.Chipsona & K.Sona

Radish: P. Reshmi

Carrot: Pusa Kesar, P.Yamdagani

Turnip: PTWG

Garlic: local, yamuna safed, agrifound, parvati

Methi: pusa early bunching and kasuri methi

Spinach: all green

Barseem: mascavi, pusa giant, BL-1

Punjab

Radish: Asiatic (Desi) varieties -Pusa Chetki,

Carrot: PC-34

Turnip: L-1, Desi varieties

Rajasthan

Ashwaghandha: Ashwaghandha-20 and Ashwaghandha-134.

Radish: Pusa Rasmi

Carrot: Pusa Keshar

Early pea: Arkil, Hara bona, VL-3, Jawahar Matar-4, Matar Ageti-6

Mustard: Early sown(irrigated) (15Sep-10Oct) : EJ17, Pusa Mahak, Kanti,

Normal sown (irrigated) (October): Maya, Rohini, Pusa Jai Kisan, Varuna, RGN 13, RGN73, NRCDR-2, NRCHB 506(hybrid)

Normal sown (rainfed): Arawali, RGN48, Geeta, PBR 97

Late sown (irrigated) (November sowing): NRCHB101, SwarnaJyoti, Ashirwad, Vardan

Saline sodic soils: CS-52, CS-54, CS-56, Narendra Rai 1

Taramira: Karan Tara, Narendra Tara, T-27, RTM-314

Yellow Sarson: NRCYS-05-02, YSH-40 Beej Pakhwara

Rapeseed- mustard: Rohini, Pusa Jaikisan, Maya, NRCDR-2, Lakhmi, NRCHB 101 and hybrid NRCHB506

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.

Toria : T-9, Sangam, TL-15

Uttarakhand

Vegetable pea: VL Ageti Mater-7, Vivel Mater-10, Pant Subjee Mater-3, Azad Mater-3 and Arkel

Garlic: VL-Garlic or DARL-52

Toria: Toria 303, Pant toria-507

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.

Chhattisgarh

Niger: JNC-1, JNC-6, JNC-9, GA-10, Ootakmund, KGN-2

Kulthi: AK-21, AK-42, Bastar Kulthi, Birsa Kulthi, VLG-9

Castor: DCS-9, DCH-177, DCH-4, DCH-5

Annexure II Contour maps for the week ending 29.09.10

