

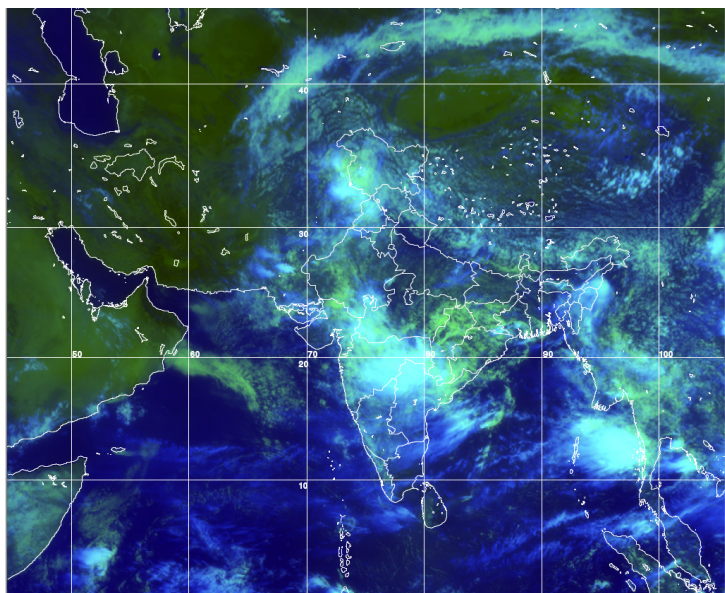


National Agromet Advisory Bulletin

Thursday, 5th August, 2010

(For the period 5th August to 9th August, 2010)

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National Agrometeorological Advisory Service Centre
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Weekly Summary of Agromet Advisory Services in India (week ending on 05.08.10)

Rain occurred in most of the states during last week and agricultural operations were in full swing. This also favoured recovery of rice seedlings in areas like Central Plain Zone in Uttar Pradesh which has experienced stress situation due to subdued rainfall during previous weeks. During the week heavy rainfall occurred in northeastern region which affected normal course of agricultural operations and also favoured attack of pests and diseases. Transplanting of rice seedlings were affected in Assam. Flood tolerant short duration varieties were recommended in areas like Upper Brahmaputra Valley Zone of Assam. Sowing / transplanting of *kharif* crops was continued in different parts of the country during last week. However, due to continuous subdued rainfall activities, some districts of West Uttar Pradesh (Agra, Aligarh and Mainpuri) and Jharkhand (Chatra, East Singhbhum, Gumla, Lohardagga and Ranchi) experienced persistent dry condition affecting normal agricultural operation. The farmers in these districts have been advised to grow short duration varieties of rice or alternate crops requiring less soil moisture after receiving sufficient rainfall. Some of the districts in Haryana (Rohtak), West Bengal (Murshidabad, Nadia, West Midnapur and Dinajpur (S)), Punjab (Fatehgarh Sahib), Bihar (Kathihar, Khagadia and Vaishali) and Karnataka (Chamrajnagar, Tumkur and Mandia) also received deficient rain during last few weeks. Sowing of alternate crops has been advised to the farmers in these districts. The farmers in the above mentioned districts of Jharkhand, Haryana, Gangetic West Bengal and Bihar are advised to apply supplementary irrigation to save the early sown crops.

However, in most parts of the country the condition of crops is quite satisfactory, and good harvest may be expected this year. Condition of major crops and some salient agromet advisories for the crops experiencing adverse weather situation during earlier weeks in different States are given below:

- Due to recent rains, crops are recovering from moisture stress in Navalgund, kundgol, Hubli Taluka of Dharwad district in Karnataka.
- Heavy rains occurred in some parts of Sindhudurg district in Maharashtra. Transplanting of rice has been affected due to standing water. In early transplanted rice also stagnation of water is reported. Draining out excess water and resuming transplanting has been advised in the district.
- Monsoon was vigorous over Saurashtra and Kutch and active over Gujarat region during the week. The activity is likely to decrease in the next few days; therefore, the remaining sowing can be completed. Excess water should be drained out from the fields in groundnut crop in Saurashtra & Kutch.
- In Marigaon area of Assam, around 50% of jute area and 10% horticultural crops are affected due to water logging caused by heavy rainfall. Farmers are advised to drain out the excess water to avoid further damage. Transplanting of rice was also affected due to flood like situation in this district. Continuous rainfall is also reported in Upper Brahmaputra Valley Zone of Assam hindering transplanting of rice. Farmers are advised to select submergence tolerant rice varieties like Jalashree, Jalkuwari, Plawan and short duration rice varieties like Luit, Dishang, Kalang etc.
- Dry conditions prevailed in Central Plain Zone (Allahabad, Chitrakut, Fatehpur, Kaushambi and Pratapgar) of Uttar Pradesh and withering of rice seedlings was reported. But due to recent rainfall, rice crop is recovering from moisture stress.
- Due to high humidity and cloud cover in Kolasib, Aizawl and Mamit districts of Mizoram, there is report of severe incidences of gummosis in mandarin orange and powdery mildew and anthracnose in vegetable crops. Farmers are advised to monitor the crops and undertake plant protection measures after current spells of rain.

Distribution of rainfall (% departure from normal) of the districts receiving subdued rainfall in East Uttar Pradesh, Punjab, Haryana, Bihar and Jharkhand for last five Weeks

Punjab	07.07.10	14.07.10	21.07.10	28.07.10	04.08.10
More than 3 weeks continuously deficient to no rain					
Fatehgarh Saheb	0	-54	-46	-43	-87
2 weeks continuously deficient to no rain					
Bhatinda	-70	-18	83	-63	-29
Faridkot	-62	-5	114	-100	-100
Muktesar	-79	0	107	-50	-90

Haryana	07.07.10	14.07.10	21.07.10	28.07.10	04.08.10
More than 3 weeks continuously deficient to no rain					
Jhajar	57	-52	-34	-96	-34
Panchkkula	91	-45	-50	-61	-56
Rohtak	-21	-78	-52	-89	-42
3 weeks continuously deficient to no rain					
Panipat	15	23	-36	-71	-27
2 weeks continuously deficient to no rain					
Ambala	470	-21	-18	-40	-33
Fatehabad	128	-45	101	-36	-56
Mahendragarh	23	-81	136	-89	-81
Sirsa	104	49	63	-77	-30
Sonepat	121	17	110	-89	-43
New Delhi	120	-11	-11	-84	-34

East Uttar Pradesh	07.07.10	14.07.10	21.07.10	28.07.10	04.08.10
More than 3 weeks continuously deficient to no rain					
Jaunpur	-100	-66	-35	-39	-52
Mau	-97	-71	-29	-71	-100
RaiBareilly	-88	-92	-43	-45	-57
Sultanpur	-18	-67	-30	-25	-24
3 weeks continuously deficient to no rain					
Ballia	-100	-8	-41	-47	-95
Banda	-30	58	-20	-36	-33
2 weeks continuously deficient to no rain					
Ambedkar Nagar	4	-67	17	-84	-83
Azamgarh	-92	-59	11	-69	-42
Balrampur	-43	-36	-19	-29	-95
Basti	-83	-66	1	-91	-89
Deoria	-98	-7	4	-63	-73

Faizabad	-1	-50	104	-48	-51
Gazipur	-88	201	-5	-73	-85
Gorakhpur	-84	83	52	-59	-97
Kushi nagar	-85	-44	19	-53	-100
Maharajganj	-90	-59	-11	-33	-91
Mau	-97	-71	-29	-71	-100
Sant Ravidas Nagar	-100	-62	4	-74	-75
Sidharthnagar	-33	-61	-2	-67	-95

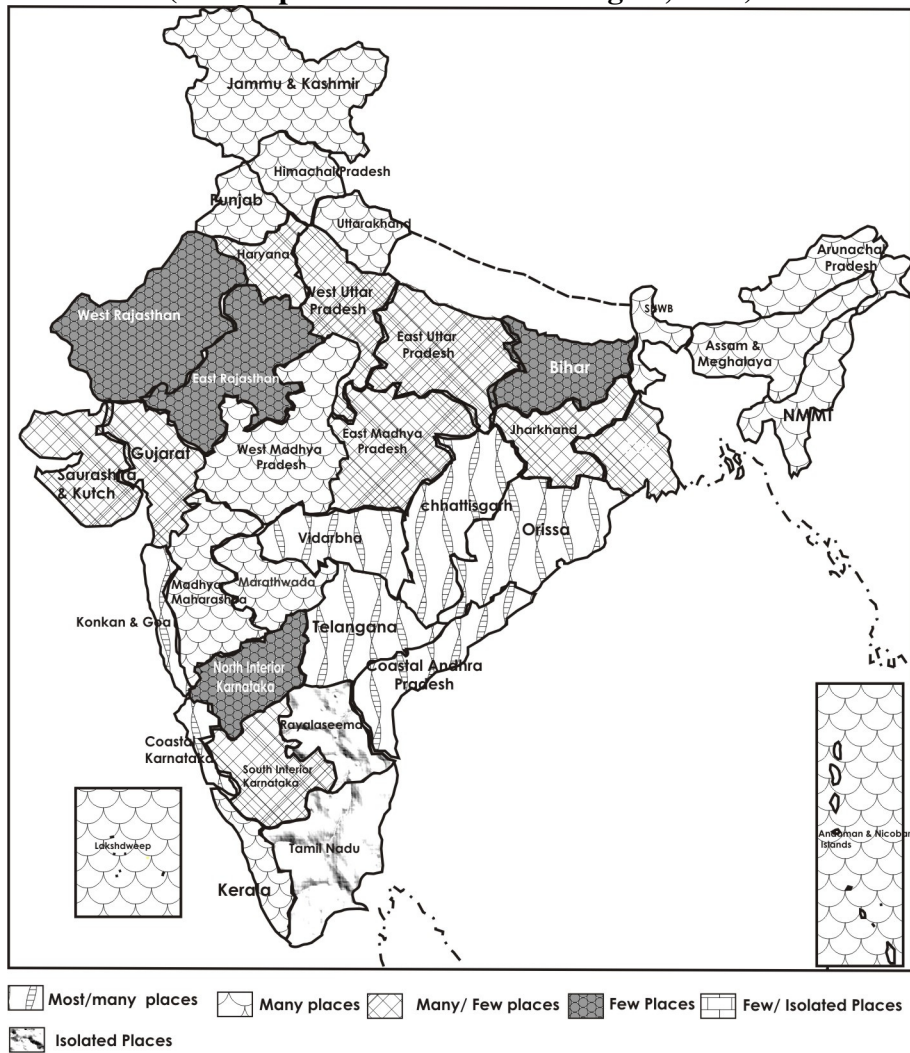
Bihar	07.07.10	14.07.10	21.07.10	28.07.10	04.08.10
More than 3 weeks continuously deficient to no rain					
Khagadia	-91	-37	-47	-64	-71
Sitamarhi	-93	-23	-45	-67	-58
Vaishali	-93	-45	-42	-83	-70
3 weeks continuously deficient to no rain					
Kathihar	-51	16	-85	-90	-74
Madhubani	-64	5	-26	-81	-65
Patna	-69	76	-68	-53	-81
Samstipur	-79	77	-25	-88	-58
2 weeks continuously deficient to no rain					
Darbhanga	-75	98	73	-83	-85
Jamui	-100	21	-16	-29	-56
Madhepura	-93	0	-6	-77	-81
Muzaffarpur	-68	80	-18	-69	-78
Saharsha	-3	97	70	-31	-22
Supaul	-18	-24	-10	-62	-53
West Champaran	-56	153	23	-42	-44

Jharkhand	07.07.10	14.07.10	21.07.10	28.07.10	04.08.10
More than 3 weeks continuously deficient to no rain					
Chatra	-99	-45	-72	-58	-61
East Singbhum	-70	-92	-98	-44	-48
Lohardagg a	-62	-33	-45	-46	-37
Ranchi	-43	-27	-83	-47	-60
3 weeks continuously deficient to no rain					
Gumla	-35	11	-61	-56	-54

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 8th August, 2010)



Weather Outlook (upto 1430 hours IST of 10th August, 2010)

- Fairly widespread rainfall would occur over west coast, Gujarat region, northwest India and northeastern states

Warning

- Isolated heavy to very heavy rainfall would occur over Orissa, Chhattisgarh, Vidarbha, north Andhra Pradesh and Konkan & Goa during next 48 hours.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Rain occurred most of the districts in Himachal Pradesh except Una, Ropar district in Punjab, a few districts except Bhiwani, Fatehabad, Hissar, Jhajar, Jind, Kurukshetra, Mahendragarh, Rohtak, Sirsa and Sonapat district in Haryana, few districts except Anantnag, Badgam, Ladakh(Leh), Pulwama and Srinagar in Jammu & Kashmir, Azamgarh, Banda, Farrukhabad, Mirzapur, Sultanpur, Varanasi in East Uttar Pradesh except Ambedkar Nagar, Azamgarh, Basti, Gazipur, Mau, Sant Ravidas Nagar, most of the districts in West Uttar Pradesh, all districts in Uttarakhand and most of the districts in East Rajasthan and West Rajasthan. No significant rainfall occurred in most of the districts of New Delhi and remaining districts of East Uttar Pradesh during last week.
- **Rainfall Forecast:** Rainfall is likely at many places during next five days in Uttarakhand, Punjab, Jammu & Kashmir and Himachal Pradesh, at many places at East Uttar Pradesh, West Uttar Pradesh during next 24 hours and at a few places thereafter. Rainfall is likely at many places in Haryana and Delhi during next 48 hours and at a few places thereafter. Rainfall is likely at a few places at East Rajasthan and West Rajasthan.
- **Major Crops:**
 - Rice(transplanting), jowar, pigeon pea and maize(sowing), vegetable crops (fruiting / harvesting) in Delhi
 - Rice(transplanting),vegetables (transplanting / vegetative) in Himachal Pradesh.
 - Vegetable crops (flowering / fruiting / harvesting), rice (early vegetative), Early sown maize, groundnut and sunflower (early vegetative) in Jammu & Kashmir.
 - Sugarcane (vegetative), rice (transplanting), soybean, jowar, bajra, pigeon pea and groundnut(sowing) in Uttarakhand.
 - Sugarcane (vegetative), cotton, maize (early vegetative), rice (early vegetative), mung, mash(sowing) in Punjab.
 - Sugarcane (vegetative), cotton (early vegetative), rice, guar, bajra(early vegetative) in Haryana.
 - Sugarcane (vegetative), vegetable crops (sowing), black gram, green gram, jowar, bajra, groundnut, sesamum, lobia, maize, pigeon pea + pulses, groundnut and sesamum(sowing) in Uttar Pradesh.
 - Sugarcane(Vegetative), vegetable crops (flowering / fruiting / harvesting), maize, soybean, bajra, jowar, mung, cluster bean, sesamum and groundnut in Rajasthan.
- **Advisory:**
 - As rainfall is likely at many places during next five days in Uttarakhand, Punjab, Jammu & Kashmir and Himachal Pradesh, at many places at East Uttar Pradesh, West Uttar Pradesh during next 24 hours and at a few places thereafter, at many places in Haryana and Delhi during next 48 hours and at a few places thereafter, farmers are advised to postpone irrigation to the standing crops.
 - Farmers in Delhi are advised to start transplanting of rice and continue sowing of baby corn, sweet corn, guar, bajra, maize, cluster bean, spinach, amaranths and ladyfinger (varieties in Annexure I) utilizing the rainfall during last week.
 - Farmers in Delhi are advised to prepare nurseries of cauliflower for mid season varieties.
 - Farmers in mild hills sub humid zone (Kullu, Mandi, Seobagh) in Himachal Pradesh are advised to complete transplanting of rice and sowing of carrot, turnip and radish may be started in high hills utilizing rainfall during last week.
 - Farmers in Flood Prone Eastern Plain Zone (Alwar, Bharatpur, Dholpur, Karauli, Sawai, Madhopur districts) in Rajasthan are advised to continue sowing of green gram, moth been, cluster bean and sesame in place of bajra utilizing the rainfall during last week(varieties in Annexure I).
 - Undertake sowing of short duration varieties of maize, cowpea, urd and mung in Sub Humid Southern Plain and Aravali Hill Zone (Bhilwara, Chittorgarh, Sirohi, Rajasmund districts) in Rajasthan with available moisture due to rainfall received during last week.
 - Farmers in Semi Arid Eastern Plain Zone (Dausa, Ajmer, Tonk, Jaipur districts) in Rajasthan are advised to complete of pearl millet, sorghum, maize, green gram, moth bean, cowpea and cluster bean, early radish, okra, sweet potato and spinach with rainfall received during last week. Also undertake sowing of rainy

season cucurbits like *khira*, bottle gourd, ridge gourd, bitter gourd, radish sweet potato, cucumber and nursery for mid season cauliflower.

- In Southern Humid Plain Zone (Banswara district) in Rajasthan, undertake sowing of maize, mung, urd, cowpea, soybean and cotton utilising available moisture due to rainfall received during last two weeks.
- Farmers are advised to undertake sowing of soybean in Southeastern Humid Plain Zone (Kota district) and early maturing crops like maize, blackgram, green gram etc. if soybean was not sown yet.
- Farmers in Bhabar and Tarai Zone (Nainital and Uttam Singh Nagar) in Uttarakhand are advised to continue sowing of soybean and complete sowing of soybean, sesamum, moong, bajra and jowar this week with improved varieties of moong in Uttam Singh Nagar (varieties in Annexure I) utilising the rainfall during last week.
- Farmers in Sub Tropical Zone (Jammu and Kathua) in Jammu & Kashmir are advised to sowing of maize, pulses, bajra and groundnut available moisture due to rainfall received during last week.
- Farmers in North Western Plain zone in Uttar Pradesh (Aligarh, Badaun, Bhagpat, Bareilly, Bijnor, Bulandshahar, Farrukhabad, Gaziabad, Jyotiba Phule, Meerut, Moradabad, Muzzaffarnagar, Noida, Pilibhit, Rampur, Saharanpur, Shahajahanpur districts) are advised to complete transplanting of rice utilizing rains this week with 3 to 4 plants per hill, if plants are more than 30 days old and also reduce distance between rows and reduce quantity of recommended fertilizers. Also complete sowing of soybean utilizing rainfall realized during last two weeks.
- Farmers in Central Plain Zone in Uttar Pradesh (Allahabad, Chitrkut, Fatehpur and Kaushambhi districts) are advised to undertake nursery sowing/transplanting of short duration rice varieties utilizing utilizing rainfall realized during last week. Also undertake sowing of maize, pigeon pea, jowar, pigeon pea + urd, moong, lobia as cover crop in between two lines of pigeon pea utilizing rainfall realized during last week.
- Farmers in Bundelkhand zone in Uttar Pradesh are advised to undertake sowing of crops like black gram, green gram, jowar, bajra, groundnut, sesamum and lobia utilising rainfall realized during last week.
- Farmers in Haryana are advised to complete the transplanting of rice in Eastern zone (Bhiwani, Fatehabad, Hissar, Jhajjar, Mahendragarh, Mewat, Rewari, Rohtak, Sirsa districts) and also undertake sowing of guar and bajra in rainfed areas utilizing rainfall during last two weeks.
- Undertake spraying and intercultural operations after current spells of rain in Uttarakhand, Punjab, Jammu & Kashmir and Himachal Pradesh, at many places at East Uttar Pradesh, West Uttar Pradesh during next 24 hours and at a few places thereafter, at many places in Haryana and Delhi during next 48 hours and at a few places thereafter. Continue the above mentioned operations on a non rainy day in West and East Rajasthan.

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

- **Realised Rainfall:** Araria, Bhabua, Kishanganj, Monghyar, Purnea and Rohtas districts of Bihar, Giridih, Godda, Pakur, Sahebganj, West Singhbhum of Jharkhand, most of the districts of Orissa and Sikkim and most of the districts of West Bengal except Murshidabad, Nadia and Dinajpur (S) received good rainfall during last week. Some of the remaining districts of Bihar and Jharkhand also received some rain during last week.
- **Rainfall Forecast:** Rain is likely to occur at many places over Sub Himalayan West Bengal and Sikkim and at a few places over Bihar during next three days. Rain is also likely at most places over Orissa during next 48 hours and at many places over Gangetic West Bengal and Jharkhand during next 24 hours and decrease thereafter. Isolated heavy to very heavy rainfall would occur over Orissa during next 48 hours.
- **Major Crops:**
 - Rice, maize, sesamum, sunflower, groundnut, soybean, castor, black gram, green gram, arhar and vegetables like tomato, cabbage, ladies finger, French bean etc. (sowing / early vegetative) in Bihar and Jharkhand.
 - Rice (direct sowing / transplanting) (sowing / transplanting / germination / early vegetative / tillering) and maize, groundnut, pulses, soybean, sesamum, ragi, cotton, vegetable crops (sowing / germination / early vegetative / vegetative) in Orissa.
 - Sugarcane (vegetative), vegetable crops (vegetative / flowering / fruiting / harvesting), jute (vegetative / harvesting), aus rice (panicle initiation / flowering), aman rice (transplanting / early vegetative / tillering), pulses and vegetables (sowing / germination / early vegetative / vegetative), sesame and groundnut (sowing / germination / early vegetative / vegetative) in West Bengal.

- Large cardamom (capsule formation / transplantation of suckers from nursery), orange (transplantation of seedling from nursery / early fruiting / fruiting), seed potato (tuberization / maturity), summer potato (tuberization), maize (flowering & cob filling / cob harvesting), *khariif* vegetable and off season vegetables (harvesting), ginger (vegetative), rice (early tillering / tillering) in Sikkim.
- **Advisories:**
 - As rain is likely to occur at many places over Sub-Himalayan West Bengal and Sikkim during next three days, at most places over Orissa during next 48 hours and at many places over Gangetic West Bengal and Jharkhand during next 24 hours, postpone irrigation, intercultural operation and application of fertilizer and plant protection measures in these regions during the above mentioned period. Arrange for draining out excess water and also withhold sowing / transplanting in view of heavy to very heavy rain during next 48 hours in Orissa.
 - As there was good rainfall in most of the districts during last couple of weeks and rain is also likely to occur during next few days in Orissa, farmers are advised to undertake field preparation and nursery sowing / direct sowing / transplanting of rice and also sowing of maize, ragi, cotton, pulses (green gram, black gram, arhar, cow pea, rice bean), oilseeds (groundnut, soybean, sesamum, niger), vegetable crops etc.
 - Farmers are advised to undertake sowing of maize, sesamum, sunflower, groundnut, soybean, castor, black gram, green gram, arhar and vegetables like tomato, cabbage, ladies finger, french bean etc. in Bihar utilizing recent rain and also rain likely to occur during next few days.
 - In North West Alluvial Plain Zone in Bihar due to scattered and subdued rainfall in the previous weeks, transplanted rice at establishment stage is facing moisture stress. Also due to low rainfall, transplanting work of rice seedlings is being hampered in many areas. Farmers are advised to transplant in low and medium land areas only. Undertake sowing of short duration rice varieties in South Bihar Alluvial plain zone (Munger, Bhagalpur, Jamui, Lakhisarai, Munger, Nalanda, Nawada, Patna, Rohtas, Sheikhpura).
 - As there is rain in most of the districts of Jharkhand during last week and rain is also likely to occur during next few days, farmers are advised to undertake direct sowing / transplanting of rice and also sowing of *khariif* crops like maize, sesamum, sunflower, groundnut, soybean, castor, black gram, green gram, arhar and vegetables after attaining sufficient soil moisture.
 - Farmers are advised to undertake transplanting with 21 – 25 days old seedlings in New Alluvial Zone, Coastal Saline Zone and Laterite and Red Soil Zone and also to sow arhar and also vegetables like brinjal, okra, pumpkin, bitter gourd, sponge gourd and ridge gourd in upland situation of West Bengal utilizing recent monsoon rainfall as well as rainfall likely to occur during next few days.
 - Undertake sowing of groundnut in coastal saline zone (South 24 Parganas) utilizing the recent rainfall.
 - Also undertake planting of fruit crops like coconut, mango and guava in Coastal Saline Zone of West Bengal.
 - Recommended varieties of major crops to be sown in different States of the region are mentioned in Annexure I.

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

- **Realised Rainfall:** Rainfall occurred in most of the districts of the states in the region during last week.
- **Rainfall Forecast:** Rainfall is likely to occur at many places in the region during the period.
- **Major Crops:**
 - Vegetables (flowering / fruiting / harvesting), sugarcane (cane development), maize, jute, mesta (vegetative), *sali* rice (transplanting / early vegetative / seedling), *ahu* rice (transplanted summer rice) (panicle initiation / flowering / grain formation) and arhar, cotton and sesamum (sowing / germination / early vegetative / vegetative) in Assam.
 - *Jhum* / WRC rice, pulses, sesame and vegetables (germination / early vegetative / vegetative) and maize (sowing / vegetative) in Arunachal Pradesh.
 - Upland rice (tillering), *aman* rice (transplanting / early vegetative) and vegetables like pumpkin, ridge gourd, cucumber, ladies finger (sowing / vegetative) in Tripura.
 - *Sali* rice and transplanted *ahu* rice (transplanting / early vegetative), arhar and potato (sowing / planting / early vegetative), ladies finger, bottle gourd, pumpkin, ridge gourd, cucumber, bitter gourd, snake gourd etc.

(sowing / germination / early vegetative), tomato, chilli and brinjal (transplanting / early vegetative) and maize (vegetative) in Meghalaya.

- **Advisory:**

- As there was good rainfall during last few weeks in most of the districts of the States and rain / thundershower is also likely at many places over the region during the period, postpone irrigation, intercultural operation, application of fertilizers and plant protection measures to maize, sugarcane, jute, green gram, black gram, ginger, turmeric and vegetable crop fields. Also arrange for draining out excess water from the fields in Assam to protect the crops from water logging.
- Farmers in Assam are advised to undertake transplanting of three weeks old seedlings for *sali* rice in the main field and sowing of sesamum and early cauliflower and planting of pine apple with the realized rainfall in Diphu Hills Zone, transplanting of *sali* rice and sowing of sesamum, pigeon pea, black gram and finger millet in Lower Brahmaputra Valley Zone (Barpetha, Bongaigaon, Dhubri, Golpara, Kamrup, Kokhrajhar, Nalbari), transplanting of *sali* rice and sowing of early cauliflower in Upper Brahmaputra Valley Zone, transplanting of *sali* rice and sowing of sesamum and early brinjal in Barak Valley Zone, transplanting of *sali* rice and sowing of *khari*f pulses in Upper Brahmaputra Valley Zone and transplanting of *sali* rice and sowing of sesamum in North Bank Plain Zone.
- Some areas of North Bank Plain Zone of Assam are affected by flood. Under such circumstances transplanting of *sali* rice is affected. Farmers of such areas are advised to collect short duration HYV rice varieties like Luit, Kapili, Kolong, Dishang etc. These varieties can be transplanted or sown within 1st week of September. More over long duration cultivars like Monohar Sali, Andrew Sali and Gitesh can be transplanted with 60 days seedling, where as Praful can be transplanted with 90 days old seedlings. Farmers from the flood affected areas should select cultivars like *Jalashree*, *Jalkuwari*, *Plaban* etc. which remain alive under water up to 15 days before panicle initiation stage. Farmers are advised to plant 6-8 seedlings per hill in flood affected areas.
- Farmers in Arunachal Pradesh are advised to undertake sowing of vegetable crops like ridge gourd, bitter gourd, bottle gourd, pumpkin, okra, etc. and pulses like black gram, green gram, French bean, etc., preferably in raised beds.
- Recommended varieties of major crops to be sown in different States of the region are mentioned in Annexure I.
- Decreasing temperature, high cloud cover and high humidity expected during the coming days are conducive for the incidence of Gummosis disease in Khasi mandarin in Mizoram. So far affected bark should be scraped, cleaned and painted with Bordeaux pasting (1:1.5:10) after current spells of rain for managing of these problems.
- Due to continuous rainfall, mandarin orchard in Mizoram is facing severe infestation of insects *viz*; leaf miner, aphids etc. For leaf miner and aphids weekly spray of neem seed extract or mahua @ 2 % is found quite effective. Carry out the operation after current spells of rain.
- The present weather conditions *viz.*, cloudiness, rain and dew are favourable for the incidence of leaf blight in Nagaland. Spray Ridomil (0.05%) or Mancozeb (0.25%) twice or thrice after current spells of rain to manage the disease.

- **Animal husbandry:**

- As the weather conditions are favourable for the development of hemorrhagic septicaemia, farmers are advised to take precautions. The animals will show high fever, profuse nasal discharge, difficulty in respiration, swelling of the throat and recumbancy which may death within 10-72 hrs.

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

- **Realised Rainfall:** All the districts in Kerala except Thiruvananthapuram, all the districts in Andhra Pradesh except Anantapur, Nellore, Chiththoor, Praksam and Nalgonda districts, all the districts in Karnataka except Bellary, Chamrajnagar, Mandya, Bangalore, Gulbarga and Tumkur. Rain occurred in Nigiris, Chennai and Thiruvallur districts in Tamil Nadu.
- **Rainfall Forecast:** Rain is likely to occur at most/many places in Coastal Karnataka, Coastal Andhra Pradesh and Telangana, many places over Kerala and many/few places over South Interior Karnataka and at a few places

over North Interior Karnataka during next three days. Rain is likely at isolated places over Rayalaseema and Tamil Nadu. Very to very heavy rainfall is likely at isolated places over North Andhra Pradesh during next 48 hours.

- **Major Crops:**

- Transplanting is completed for the *viirippu* paddy and early transplanted paddy is active tillering to flowering stage. Nendran banana, Mango, Nutmeg and banana are in harvest stage. This is time for planting of black pepper, ginger, turmeric, tapioca, cocoa, cashew and vegetables in Kerala.
- *Kuruvai* rice (tillering), green gram and groundnut (grain development), maize (cob development) and sorghum (grain filling) in Tamil Nadu.
- *Kharif* crops viz., cotton, jowar, maize, green gram, groundnut, redgram and castor, etc. (sowing) in Andhra Pradesh. Early sown crops are at early vegetative/ vegetative stage.
- *Kharif* crops viz., pigeon pea, groundnut, bajra, castor, horsegram, sesamum, maize and navane, etc (sowing) and sugarcane (cane development) in Karnataka. Early sown crops are at early vegetative/ vegetative stage.

- **Advisories:**

- Early sown crops in Navalgund, kundgol, Hubli Taluka of Dharwad district in North Interior Karnataka recover from moisture stress due to receipt of good rainfall during last week.
- Due to continuous rainfall in North East Dry Zone (Gulbarga, Raichur) early kharif crops like greengram, blackgram, soybean, redgram and cowpea are suffering due to excess moisture causing ill growth of the crops. Hence it is recommended to dig the proper/ deeper drainage all around the field to drain out the excess soil water immediately.
- Rain is likely to occur at most/many places in Coastal Karnataka, Coastal Andhra Pradesh, Telangana, Kerala and South Interior Karnataka during next three days, farmers are advised to postpone irrigation to plantation crops and vegetable crops. Arrange for drainage facilities in North Andhra Pradesh as very to very heavy rainfall is likely at isolated places during next 48 hours.
- As there are chances of light to moderate rainfall during the next three days farmers in North Dry Zone (Bijapur) are advised to continue sowing of Bajra, Sunflower, Castor, Horsegram, and Navane may be continued.
- Due to forecast of rainfall at most places during next three days, farmers in Coastal Zone of Karnataka are advised to arrange for drainage facilities to avoid water stagnation. Top dress nitrogenous fertilizer (Urea) to paddy crop after spells of rain to rejuvenate the growth.
- Undertake intercultural operations and application of gypsum in groundnut in Scarce Rainfall Zone of Andhra Pradesh (Ananthpur, Kurnool) taking advantage of recently received rains. Also top dress urea @ 20-25 kg per acre in rainfed crops like maize and cotton in Kurnool.
- Due to forecast of higher wind speed in Hill Zone of Karnataka, Western and Southern Zones of Tamil Nadu and Problem Area Zone of Kerala, there is a possibility of lodging of sugarcane and banana plants. Therefore farmers are advised to provide staking for plants.
- Prevailing weather conditions are congenial for the incidence of sucking pests in cotton in Kurnool. Undertake spraying of Monocrotophos and water in 1:4 ratio or Imidacloprid 20 S.L and water in 1:20 ratio with a soft brush on tender part of the stem at 20, 40 and 60 days after sowing. Also there are chances of incidence of damping off in nurseries of vegetable crops. To control, drench nurseries with Copper-Oxy-Chloride @ 3 g per litre of water and apply Carbofuran granules one week before pulling nursery @ 100 g per nursery required for one acre of crop.
- Due to higher humidity, low temperature and frequent rains in Coastal Zone of Karnataka brown leaf spot in rice may occur, hence farmers are advised to undertake spraying of Dithane M - 45 2g/lit of water. Also there are chances of koleroga in arecanut crop; hence farmers are advised to undertake spraying of 1% Bordeaux mixture to control. There is abnormal of leaf webber damage in rice. Hence, farmers are advised to spray Quinolphos @ 2ml/lit of water or monocrotophos 2ml/lit of water along with 2 % Urea to control it.

- Due to congenial weather condition prevailing in Southern Dry Zone (Mysore, Chamarajanagara, Mandya), severe incidences of sigatoka leaf spot disease in banana is reported. Undertake spraying of Hexaconazole @ 1 ml/litre of water.
- Incidences of Spodoptera and other sucking pests are noticed as conditions are congenial for pest population development. To manage spodoptera spray Insect Growth Retardants (IGR) like Lufenuron 10 EC @ 1ml/l or Novuluron 10EC @ 1ml/l and to manage sucking pests like aphids etc. can mix Systemic insecticides like Dimethoate @ 1.75ml/l or Raichur.
- Plant protection measures may be undertaken after spells of rain in Coastal Karnataka, Coastal Andhra Pradesh, Telangana, Kerala and South Interior Karnataka.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Most of the districts of Maharashtra and Gujarat received rain during last week.
- **Rainfall Forecast:** Rain is likely at most places in Konkan and Goa and Vidarbha and at many places in Madhya Maharashtra and Marathwada. Rain is also likely to occur at a few places in Gujarat and Saurashtra & Kutch during next 48 hours and increase thereafter. Isolated heavy to very heavy rainfall is likely at Konkan and Goa and Vidarbha during next 48 hours.
- **Major Crops:**
 - *Kharif* rice (transplanting / early tillering in East Vidarbha and early tillering / tillering in Konkan, Kolhapur, Nashik & Pune (western parts) divisions), jowar and sunflower (early vegetative), soyabean, bajra, cotton and groundnut (early vegetative / vegetative), red gram (sowing / germination / early vegetative), moong (branching / flowering) and irrigated cotton (vegetative / floral bud initiation) in Maharashtra.
 - Rice, groundnut, cotton, castor, maize, bajra, pigeon pea, soybean, sesamum, green gram and black gram (sowing / germination / early vegetative) in Gujarat.
- **Advisory:**
 - As rainfall is likely at most places in Konkan and Goa and Vidarbha, at many places in Madhya Maharashtra and Marathwada and also at a few places in Gujarat and Saurashtra & Kutch during next 48 hours and at many places thereafter, postpone irrigation, intercultural operation and application of fertilizer and plant protection measures to the standing crops in these regions. Also withhold sowing / transplanting for 48 hours in Vidarbha and Konkan and Goa in view of isolated heavy to very heavy rainfall.
 - As Pune, Sangli and Satara districts of Madhya Maharashtra received good rain during last few weeks; farmers are advised to undertake sowing of *kharif* bajra, sunflower, tur, castor, hulga (horse gram) by selecting improved and short duration varieties. Farmers may also undertake sowing of intercrops like sunflower + tur (2:1), tur + cluster bean (1:2) and bajra + tur (2:1) under this situation.
 - In view of rainfall occurred during last week and likely occurrence of rainfall during next few days, farmers in remaining parts of Maharashtra are advised to complete the sowing of *kharif* crops by selecting improved and high yielding varieties of bajra, groundnut, sunflower, *kharif* cotton, red gram, green gram etc. immediately.
 - As rain occurred in most of the districts of Saurashtra and Kutch and Gujarat region and rainfall is also expected over the State during next few days, farmers are advised to complete sowing of the *kharif* crops like groundnut, cotton, castor, maize, bajra, pigeon pea, soybean, sesamum, green gram, black gram and tur in case of crop failure of cotton.
 - Recommended varieties of major crops to be sown in different States of the region are mentioned in Annexure I.
 - There is infestation of green semi looper & tobacco leaf eating caterpillar in soyabean in Vidarbha, spray 5 % Neem extract or Endosulfan 35 % @ 15 ml or Fenvhelrate 20% @ 5 ml in 10 liters of water.
 - Due to heavy rainfall during last week and decrease in temperature and increase in humidity, there is attack of leaf burn disease on potato and tomato crop in Pune division. For control, spray Copper oxychloride 50% @ 2.5 g per litre of water.
 - Due to prevailing weather conditions, there are chances of tikka disease in North Gujarat Zone (Banaskantha, Gandhinagar, Mehsana, Patan, Sabarkantha districts). Spray the solution of 0.25% chlorothalonil during clear sky conditions.

- Apply plant protection measures after current spells of rain in Konkan and Goa, Madhya Maharashtra, Marathwada and Vidarbha and on a non-rainy day in Gujarat region and Saurashtra & Kutch.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rain occurred over all the districts of Madhya Pradesh except Guna and Rajgarh districts and all the districts in Chhattisgarh except Rajpur during the period.
- **Rainfall Forecast:** Rain is likely at most/many places over Madhya Pradesh and Chhattisgarh for the next three days. Very to very heavy rainfall is likely at isolated places over Chhattisgarh during 48 hours.
- **Major Crops:**
 - *Kharif* crop like soyabean, maize, sorghum, green gram and black gram (sowing) in Madhya Pradesh. Early sown crops are at early vegetative/vegetative stage.
 - *Kharif* crops like black gram, green gram, soyabean, maize, etc (sowing), Rice (nursery sowing) and Sugarcane (cane development) in Chhattisgarh. Early sown crops are at early vegetative/vegetative stage.
- **Advisory:**
 - Water stagnation due to excess rainfall is reported in Madhya Pradesh particularly in Kymore Plateau Zone and Jhabua Hills Zone. Farmers are advised to arrange for drainage facilities and drain out immediately as there are chances of rainfall in the next three days.
 - Postpone intercultural operations and application of fertilizers and pesticides in Madhya Pradesh and Chhattisgarh as rain is likely at most/many places.
 - Due to the heavy rains during the last week, soybean, vegetables and other legume crops may be affected in Chhattisgarh. Farmers are advised to arrange for proper drainage to avoid water logging situation. Due to the heavy rainfall and super saturate condition of the soil, nodulation in soybean crop may also be affected. Hence, farmers are advised for top dressing of N @ 15-20 kg per ha.
 - Farmers in Chhattisgarh Plain Zone in Chhattisgarh are advised to undertake sowing of red gram. Avoid sowing during heavy rain and provide drainage facilities.
 - Due to cloudy weather conditions with high humidity, there are chances of incidences of girdle beetle in soyabean and semilooper and pod borer in *kharif* pulses in Chhattisgarh Plain Zone. Farmers are advised to undertake plant protection measures after spells of rain.

Annexure I List of Varieties

Delhi:

Rice: Hybrid varieties- KRH 2, PHB 71, Arich 6444, Pant hybrid Dhan1, Narendra hybrid Dhan 1 and PRH 10; High yielding varieties - Pusa Sughand 5, Pusa Improved Basmati, Pusa 44, Pusa Sughand 4, Pant Dhan 10, Pant Dhan 4, Narendra Dhan 359, Pusa 834, Ranvir Basmati and Taravadi Basmati.

Pigeon pea: Pusa 2001, Pusa 991 and Pusa 992, Paras, Manak and UPAS 120

Maize: AH-421, AH-58 Composites varieties; Pusa composite-3 Pusa composite-4

Cucurbit vegetables: Hybrid varieties: Bottle Gourd- Pusa Naveen, Pusa Sandesh; Bitter Gourd- Pusa Visesh, Pusa-2 mosumi; Pumpkin- Pusa Visvash; Ridge Gourd- Pusa Chikni, Pusa Supriya.

Uttarakhand:

Soybean: Brag, PK-262, PK-327, VL Soya-2 and VL Soya-21, Pant Soybean-1024, Pant Soybean-1042, Pant Soybean-1092, Pant Soybean-1347

Ghagat: VLG-1

Jammu & Kashmir:

Rice: Jaya, RR-8585, PC-19, IET-1410 and Ratna

Groundnut: Punjab No.1, M-13 & JL-24

Maize: GS-2, super composite, mansar, C-6, C-8 and local varieties

Uttar Pradesh:

Rice: Taravadi, Bansmati, Bansmati-370, Pant-15 & Pusa Bansmati-1, Pusa-1121, Sugandh-4, Narendra 118, Narendra-97, Ashwini, Saket-4, Pantdhan-12, Govind, Ratna, Saket-4, Pant-10, 12, Narendra-118, Ashwini, Manhor & Narendra-80

Groundnut: Type-64, Chandra, Kaushal, Prakash & Amber

Soybean: Pant soybean-1024, Pant Soybean-1092, PK-262, PK-472, PK -416, PS -564

Jowar: Hybrid: Vasha, CSH-16, CSH-9, CSH-14, Sankul: CSV-13, CSV-15, Bundela, CSV-13, CSV-15, CSV-17

Maize: Hybrid: Ganga-2, Ganga-1, Sankul: Navin, Kanchan, Sweta, Azad, Surya, Uttam, Desi:Meerut Pili.

Bajra: Hybrid: Pusa-322, Pusa-23, ISMH-451, Sankul: ICMV-155, WCC-75, ICTP-8203, Raj-171, Desi: Mainpuri

Pigeon pea : Bahar, Narendra arhar, Azad, malviya vikas, malviya chamatkar

Black gram: Azad- 1 & 2 , Uttra, Narendra, urd -1, Pant urd-31

Green gram : Samrat, Narendra moong-1, T-44

Sesamum: Shekhar, Pragati

Punjab:

Rice: PR-120, PR-118, PR-116, PR-114, PR-111 and PR-113

Rajasthan:

Maize : Him – 129, Aravali Makka, PEHM-1, PEHM- 2, Pratap Makka-1, Pratap Makka-3, Pratap Makka-5

Jowar : CSV – 15, CSV – 17, Pratap Jowar – 1430, CSH – 13, CSH – 14, CSH-16

Soybean : JS-335, MACS-13, PK – 472, MACS-58, PS – 16, JS – 71 – 05, Pratap Soya-1 **Moong :** K 851, RMG – 62, K – 851, Pusa Baisakhi, RMG 268 and Ganga

Urd : Krishna, T – 9, PU – 19 and Barkha.

Pearmillet: Pusa 334, Pusa 383, HHB 67, HHB 94, Raj 171, ICMH 356, ICTP 820 and RHB 121

Cleaster bean: RGC 936, RGC 986, RGC 1002, RGC 1003, RGC 1017, M83 and HG 365

Sesamum: Pratap, TC 25, RT 46, RT 54, RT 103, RT 125 and Tt 13

Ground nut: GG 2, GG 7, HNG 10, Prakash and M 13

Radish: Pusa Chetki

Cauliflower: Improved Japanese, Pusa hybrid-2 & Himjoyti

Assam:

Sali rice: Ranjit, Bahadur, Vasundhara, Kushal, Piyoli, Moniram, Rangali, Bhogali, Ketkijaha, Satya and Basundhara.

Rice for flood affected areas: Jalashree, Plaban, Jalkonwari.

Short duration HYV *Sali* rice varieties (flood affected areas): like Luit, Kapili, Kolong, Dishang etc.

Long duration *Sali* rice varieties (flood affected areas): Monohar Sali, Andrew Sali and Gitesh, Praful etc.

Red gram: T-21.

Sesamum: AST-1, Madhavi, Vinayak, Punjab Til -1, Gauri, SG 1981, RT-1 etc.

Jute (for seed purpose): Tarun.

Early varieties of cauliflower: Pusa Keteki, Pusa Dipalee, Early Kowari, Jowahar Moti etc.

Meghalaya:

SRI rice: Ranjeet or Naveen.

Bihar:

Rice:

North West Alluvial Plain Zone:

Medium land: Rajshree, Santosh, Rajendra Suvasni, Rajendra Bhagwati.

Low land: Rajshree, R. Sweta, R. Mansoori 1.

South Bihar Alluvial Zone:

Short duration varieties: Pusa 2-21, IR-36, Saket, Prabhat.

Photosensitive tall local varieties: Katarni, Kamini, Sugandha, Tulsi Munjari etc.

Kharif maize: Ganga -11, Shaktiman 1, 2, Devki and Suwan etc.

Jharkhand:

Rice:

Medium land: IR – 36, IR – 64, Rajendra Dhan 202, Kanak, Sugandha, Lalat, BR 10, Birsa Vikar Sugandh Dhan 2, Birsa Vikas Dhan 203, Birsamati, Pro Agro 6444, Birsa Dhan 202, Rajshree etc.

Low land: Birsa Dhan 202, Rajshree, Suvarna (MTU 7029), Sambha Mahsoori (BPT 5204).

Kharif maize: Suwan Composite – 1, HQMP – 1, Birsa Makai – 1, Kanchan, Birsa Vikas–2 etc.

Black gram: T-9, PU-19.

Green gram: K-851, Pusa Vishal.

Groundnut: Birsa Groundnut 2, 3, Verginia, BAU 13.

Soybean: Birsa Soybean, JS 335, Birsa safed soybean 2.

Arhar: Birsa Arhar 1, Bahar.

Orissa:

Rice:

Up land: Khandagiri, Vandana, ZHU XI-26, Parijat, Annada, Heera.

Medium land: Lalat, Konark, Surendra, Naveen, Swarna, Kharavela, Pratikhya, MTU-1001 and Geetanjali (aromatic rice).

Low land: Mahanadi, Moti, Indravati and aromatic rice like Dubraj and Ketakijoha.

Maize:

Composites: Navjot, Megha, Pratap, Shakti 1, Pragati.

Hybrids: Decan 103, Decan 109, Decan 115, Bio 9681, Pro 311, Ganga II, Cargil 900 M, Cargil 633, Sartaj.

Ragi:

Early varieties: Dibyasinha, VL 149.

Medium varieties: Bhairavi, Subhra, Godavari, Chilika.

Cotton: Bunny, Sri Tulasi, Bhaskar and Atal.

Arhar: Mahak, UPAS 120, Asha, Laxmi, Jagruti, Maruti.

Green gram: PDM-54, HUM 1, TARM 1, TARM 2, K 851, Dhauli.

Black gram: Sarala, Pant U 30, Pant U 35, KU 301, KU 300

Cowpea: SEB 2, FS 68, Swarna, SGL 1.

Soybean: JS-72-44, PK-73-163, T-49, Ankur.

Ground nut: AK-12-24, Kisan, Jawan, Smruti.

Sesamum: Uma, Usha, Prachi, Kanaka, Kalika.

Nizer: GA-10 (Deomali), IGP-76 (Sahayadri).

Brinjal: Utkal madhury, Utkal tarrini, Utkal keshari, Pusa kranti
Chilli: Utkal rashmi, Utkal ava, Pusa jwala, Pant C 1, NP 46A
Tomato: Utkal pallavi, Utkal dipti, Panjab chhuara, Pusa hybrid-1
Onion: N 53, Arka kalyan, Agrifound dark red, Arka pragati
Radish: Pusa chetki, Pusa rashmi, Japanese white.
Cowpea: Pusa barsati, Arka garima, Utkal manik, Pusa dofasali.

West Bengal:

Aman rice: IET-4094, 2233, Ratna, Bikash, Kitish, Sasya-shree, IR-42, Swarna, Mashuri, IET-8002, IET-5656, IET-4694, IET-4786, IET-1444, MTU-7029 etc.
Arhar: JSA-59, Pusa-9, Bahar etc.
Coconut: East Coastal, Hazari.
Mango: Himsagar, Bombai, Langra, Amrapali, Mallika.
Guava: Safeda, L-49.
Banana: Joint Governor, Robusta, Kabuli, Mortaman.

Gujarat:

Groundnut: GAUG-10, GG-11, GG-12, GG-13, GG-20 for groundnut (spreading), GAUG-1, GG-2, GG-4, GG-5 for groundnut (bunch).
Castor: GAUCH-1, GCH-2, GCH-4, GCH-5.
Maize: GM-3, GM-4, GM-6, Ganga Safed-2, Farm sameri, Narmda Moti.
Bajra: GHB-183, GHB-215, GHB-316, GHB-528.
Green gram: GM-3, GM-4 and K-851.
Black gram: T-9 and GU-1.
Cowpea: Gujarat cowpea-1, 2, 4 and Pusa Falguni.
Pegion pea: BDN-2, GTH-1, GT-100 and GT-101.
Sesamum: GT-2 or GT-3 for sesamum.
Soybean: Guj. Soyabean-1, Guj. Soyabean-2.

Maharashtra:

Bajra: Shardha (RHRBH-8609), Saburi (RHRBH-8924) and ICTP-8203.
Groundnut: SB-11, Phule Pragati (JL-24), TG-26, Phule Vyas (JL-ii220), Phule Unap and TGP-41 for Madhya Maharashtra, Konkan Gaurav and Trombay Konkan (Tapora) for Konkan.
Red gram: ICPL-87, Vipula, B.M.S.R.-853 & BSMR-736 in Madhya Maharashtra.
Cotton: Indian improved varieties AKA-5, 7 and 8, Indian hybrid varieties like PKV DH-1, American improved varieties AKH-081, PKV-Rajat and AKH-8828 for Vidarbha.
Green gram: Vaibhav, Kopergaon-1 and B.P.M.R-145, Jalgaon 781, S-8, PhuleM-2.
Sunflower: EC-68414, Modern, SS-56, K.B.S.H-1, B

Karnataka:

Red gram: TTB-7, BRG-1 and Hyd-3C
Ragi: Indaf-8, MR-1

Madhya Pradesh:

Paddy:

Early: JR-201, Poornima, JRH-5, JRH-8 (Hybrid)

Medium: IR-36, IR-64, Pusa sugandha-5, MTU-1001, Pusa basmati-1, Mahamaya, Kranti

Late: Syamla, Swarna

Jowar: JJ-741, JJ-938, JJ-1022, JJ-1041 and CSV-15

Arhar: Laxmi, Pragti, Asha, Jagrati, JKM-7 and JKM-189

Soybean: JS-95-60, JS-93-05, JS-97-52, JS-80-21, JS-335, NRC-37

Green gram: K-851, JHawahar moong-721, Pant Moong-4, TJM -3,

Black gram: Pant U 30, RBU – 38, Jawahar Urd-3, JU 86.

Annexure II

Contour maps for the week ending 04.08.10

