

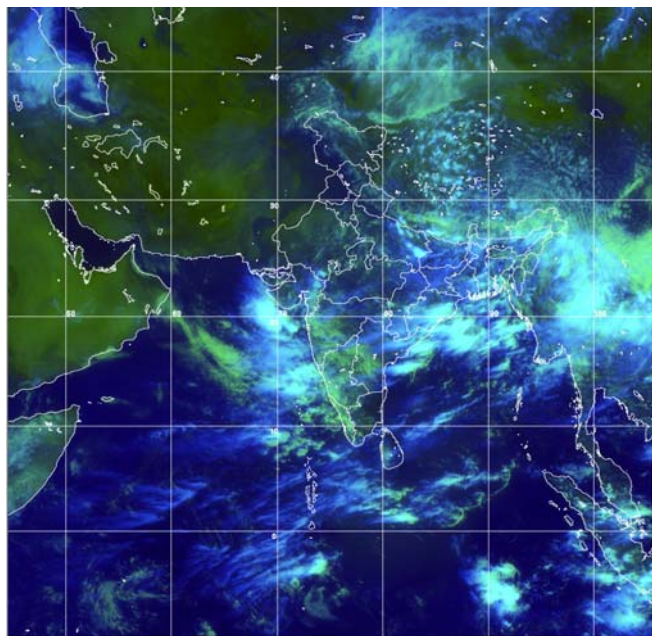


National Agromet Advisory Bulletin

Thursday, 26th August, 2010

(For the period 26th to 30th August, 2010)

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Executive Summary

Agromet Advisory Services in India

Recent rainfall during last week improved conditions in most of the districts in Bihar, Jharkhand and Uttar Pradesh; however the stress situation is still persisting in Gangetic West Bengal due to subdued rainfall activities. Recent rainfall in Bihar, Jharkhand and Uttar Pradesh was highly beneficial for germination and for establishment of seedlings of alternate crops sown during last two weeks and also for sowing of alternate crops in some more areas under contingent plan. Rejuvenation of early transplanted rice, which was facing severe moisture stress conditions during past weeks due to prolonged dry spell in these states, has been observed. Revival of agricultural operations like application of fertilizers and intercultural operation has also been started during this week. During first fortnight of August, deficient / scanty rainfall in Bhundelkhand Zone in Uttar Pradesh resulted moisture stress situation in maize, rice, groundnut, soyabean, etc.; however, good amount of rainfall received during last week helped the crops to recover partially from the stress. Contingency plans for these States are mentioned below.

Following contingency plan may be continued by the farmers in Bihar utilising recent rain.

1. Urd (T-9, Navin, Pant Urd 19 etc.), pigeon pea (Bahar, Narendra, Arhar 1 etc.) and sunflower (Surya, Paradevic, Morden etc.) crops should be sown now. Kulthi and castor crops can also be taken at this time.
2. Yambeam, vegetables such as cauliflower, radish, pointed gourd etc. can also be sown. Farmers are advised to transplant Kuwari, Patna Early, Pusa Katki, Pusa Deepali and Hajipur Agat varieties of cauliflower and to sow Rajendra Baigan-2, Rajendra Annapurna, Pant Rituraj, Pant Samrat, Swarn Pratibha and Arka Navnit varieties of brinjal at this time.
3. In upland areas where rice could not be transplanted owing to deficit rainfall, farmers are advised to take up tori and September arhar. September arhar can be sown immediately after 25th August.

Following contingency measures may be continued in Jharkhand utilizing recent rain.

1. In case of dry condition under upland situation during earlier weeks, due to low water holding capacity, even under intermittent rainfall situation, at this point of time, no crop is recommended except sweet potato (Pusa Safed or Kalmegh) which can be safely transplanted upto September.
2. Under the present scenario farmers are advised for sowing of short duration crops like, urd (Pant U 19, Pant U 31, Birsa Urd 1, Shekher 2), moong bean (Pusa Vishal, Samrat, Medha), pigeon pea (Birsa Arhar 1, Narendra Arhar 1, UPAS 120), kulthi (Madhu, Birsa Kulthi 1), niger (Birsa Nizer 1 & 2) and short duration maize (Vivek Makka, Hybrid- 9, Birsa Vikas Makka 1 & 2) on medium lands.
3. For low lands, the following advisories may be followed:
 - No fresh transplanting of rice is recommended now.
 - No direct sown rice or any other direct sown crop of even short duration is recommended as in case of moderate to heavy rain in Aug-Sept, submergence would cause almost complete failure of the crops. Hence, farmers are advised for early *rabi* crops after August depending on soil moisture status.

Following contingent planning may be undertaken by the farming community in different rainfall deficient districts of West Bengal.

1. In uplands and medium lands, sowing of urd (Navin) and arhar (Bahar and Pusa 9) can be done.
2. In rainfed low lands, photosensitive rice varieties upto 65 days old seedlings can be done @ 40-45 hill/sq. m.
3. Double transplanting of rice can be done with 45 days old seedlings of long duration or photosensitive varieties upto 30th August.
4. Weeding and mulching should be done in already sown maize, arhar and other crops facing dry situation.
5. Available ground water should be used to irrigate the field for sowing of pulses (urd, moong, arhar) and oil seeds (sesame, castor, ground nut) in uplands.

6. Maximum possible ground water should be used to save the rice crops. Fertilizer should be applied judiciously. Avoid high N-dose.

Farmers in Uttar Pradesh are advised to select oilseeds, pulses, bajra and linseed as alternate crops for immediate sowing utilising rain. Farmers are also advised to undertake gap filling and adopt closer spacing for better crop stand.

In West Central Table land Zone (Bargarh, Jharsuguda, Sambalpur, Sonarpur) of Orissa, due to poor rainfall conditions, transplanted rice crop is facing moisture stress conditions. If the crop does not recover, direct sowing of sprouted seeds of medium duration varieties maturing in 120-125 days may be adopted immediately. Also short duration varieties of crops like ragi, sesame, horse gram, green gram, black gram, niger or vegetables like tomato, okra, brinjal, guar, radish may be selected where ever possible.

There is report of good rainfall in most of the districts of Arunachal Pradesh, Assam, Punjab, Haryana, Delhi, Himachal Pradesh, Uttar Pradesh, Rajasthan and all the Southern states. Due to excess rainfall in Delhi during last two weeks, water logging is reported in many field crops like maize, bajra, guar, sorghum, urd, arhar, moong, soybean and early sown vegetables like cucurbits, ladies finger, chilli etc. Due to heavy rainfall, tomato and chilli have been adversely affected in Nagaland. Water logging is also reported in Central Plain Zone of Uttar Pradesh in the crop fields like rice, maize, yellow gram, sesame, jowar and bajra. Draining out of excess water is necessary to prevent crop loss. Adverse impact on crop has been reported due to water logging or flooding in Uttarkashi, Tehri, Rudraprayag and Champa in Uttarakhand, Simla and Simour in Himachal Pradesh and also in raichur in Karnataka. Due to flooding, standing crops have also been affected in Rupnagar, Patiala, Sangrur, SAS Nagar, Ludhiana, Fatehgarh Sahib, Moga, Mansa, Jalandhar, Tarn Taran and Ferozepur districts in Punjab and Ambala, Kurukshetra, Kaithal, Karnal, Fatehabad, Sirsa and Yamunanagar districts in Haryana. Due to heavy rainfall, severe incidences of blight in rice, fruit rot in chilli and bacterial blight in tomato has been reported in Nagaland.

By and large, overall crop condition in the country is mostly normal leading to better crop production in this season.

**Distribution of rainfall (% departure from normal) of the districts in
Uttar Pradesh, Bihar and Jharkhand for last five Weeks**







Uttar Pradesh					
East Uttar Pradesh	28.07.10	04.08.10	11.08.10	18.08.10	25.08.10
Allahabad	14	-76	-90	-19	-6
Ambedkar Nagar	-84	-83	-100	-78	6
Azamgarh	-69	-42	-99	-4	73
Bahraich	14	-90	-76	-73	149
Ballia	-47	-95	-88	-57	-11
Balrampur	-29	-95	-95	-26	220
Banda	-36	-33	-77	-81	-71
Barabanki	47	-80	-84	-81	296
Basti	-91	-89	-73	-56	116
Deoria	-63	-73	-90	-47	24
Faizabad	-48	-51	-85	-58	90
Farrukhabad	37	-1	-53	-41	151
Fatehpur	-1	-66	-58	-52	101
Gazipur	-73	-85	-90	66	76
Gonda	-9	-81	-48	-26	301
Gorakhpur	-59	-97	-95	14	201
Hardoi	113	-40	-82	-61	27
Jaunpur	-39	-52	-100	-56	129
Kanpur City	27	-45	-90	-96	-4
Kanpur Dehat	-11	-48	-83	-95	-47
Kheri	-10	-91	111	-19	313
Kushi nagar	-53	-100	-99	-41	136
Lucknow	157	-44	-100	-79	126
Maharajganj	-33	-91	-96	-63	60
Mau	-71	-100	-85	-54	-10
Mirzapur	4	22	-83	-57	145
Pratapgarh	62	-72	-100	-22	67
Raibareilly	-45	-57	-87	-80	10
Sant Ravidas Nagar	-74	-75	-100	-77	26
Shrawasti	28	-42	-30	-40	220
Sidharthnagar	-67	-95	-96	101	164
Sitapur	48	-82	-71	-45	170
Sonbhadra	-5	-62	-96	-21	-4
Sultanpur	-25	-24	-99	-2	45
Unnao	57	-92	-95	-77	92
Varanasi	-10	48	-87	-25	47
West Uttar Pradesh					
Agra	-59	-27	-92	-77	8
Aligarh	-60	-28	-79	-31	146
Auraiya	-51	65	-90	-54	44
Badaun	-66	30	-66	-35	43
Baghpat	-70	-25	-81	-51	528
Bareilly	-82	96	-26	-26	165
Bijnor	-25	55	-66	-15	118
Bulandshahr	-71	2	-94	-21	143
Etah	-48	18	-68	-76	-57
Etawah	-56	-4	-89	-67	-32
Firozabad	-78	21	-99	-64	27
Ghaziabad	-72	30	-99	25	103
Hamirpur	-59	2	-90	-82	-31
Jalaun	-21	2	-89	-70	79
Jhansi	-42	2	-82	-63	-17
Jotirba Phule Nagar	-29	60	-100	-88	96
Lalitpur	82	33	-60	-63	-9
Mahamaya Nagar	-31	-12	-94	-98	63

	28.07.10	04.08.10	11.08.10	18.08.10	25.08.10
Mainpuri	-51	-16	-100	-67	53
Mathura	-66	11	-100	-26	297
Meerut	-28	-32	-83	-38	24
Moradabad	-58	133	-92	28	202
Muzzaffarnagar	-76	-45	-83	-35	84
Pilibhit	-72	-61	67	-71	156
Rampur	-83	17	-88	-44	108
Saharanpur	77	102	-91	18	99
Shahjahanpur	-26	-42	-21	-6	50
Bihar					
Araria	-21	12	-98	34	-2
Aurangabad	68	-55	-99	-6	-14
Begusarai	**	**	**	-69	140
Bhabua	10	10	-90	-16	16
Bhagalpur	1	-55	-98	-76	153
Bhojpur	-5	-74	-95	-68	24
Buxar	5	-99	-97	42	323
Darbhanga	-83	-85	-94	101	39
East Champaran	8	-99	-69	4	139
Gaya	-1	-56	-81	-33	73
Gopalganj	32	-74	-82	90	-36
Jahanabad	-2	-100	-73	-9	56
Jamui	-29	-56	-100	2	143
Kathihar	-90	-74	-90	-82	21
Khagadia	-64	-71	-93	2	-31
Kishanganj	-18	-2	-98	32	87
Madhepura	-77	-81	-89	19	-27
Madhubani	-81	-65	-91	36	-35
Monghyar	253	101	-68	9	-10
Muzaffarpur	-69	-78	-91	7	55
Nalanda	-14	-66	-91	73	129
Patna	-53	-81	-81	12	76
Purnea	29	-7	-84	45	96
Rohtas	-7	-19	-93	23	7
Saharsha	-31	-22	-96	39	-10
Samstipur	-88	-58	-48	-54	81
Saran	-15	-80	-96	-17	12
Sitamarhi	-67	-58	-75	23	6
Siwan	45	-59	-100	36	-46
Supaul	-62	-53	-100	-6	-45
Vaishali	-83	-70	-98	41	-37
West Champaran					
West Champaran	-42	-44	-91	101	281
Jharkhand					
Bokaro	82	-68	-82	16	98
Chatra	-58	-61	-65	-54	37
Dhanbad	-16	-62	-77	-46	49
East Singbhum	-44	-48	-72	-27	-48
Giridih	15	28	-49	-48	143
Godda	-62	0	-45	-15	65
Gumla	-56	-54	-86	-49	10
Hazaribagh	2	-83	-53	32	59
Koderna	**	-97	**	**	**
Lohardagga	-46	-37	-86	3	39
Pakur	**	150	-100	-62	66
Palamau	5	-77	-89	-62	22
Ranchi	-47	-60	-71	-58	-30
Sahebganj	**	19	-86	-88	19
Santhal Parganas	**	**	**	**	**
West Singbhum	-13	-12	-54	-61	-65

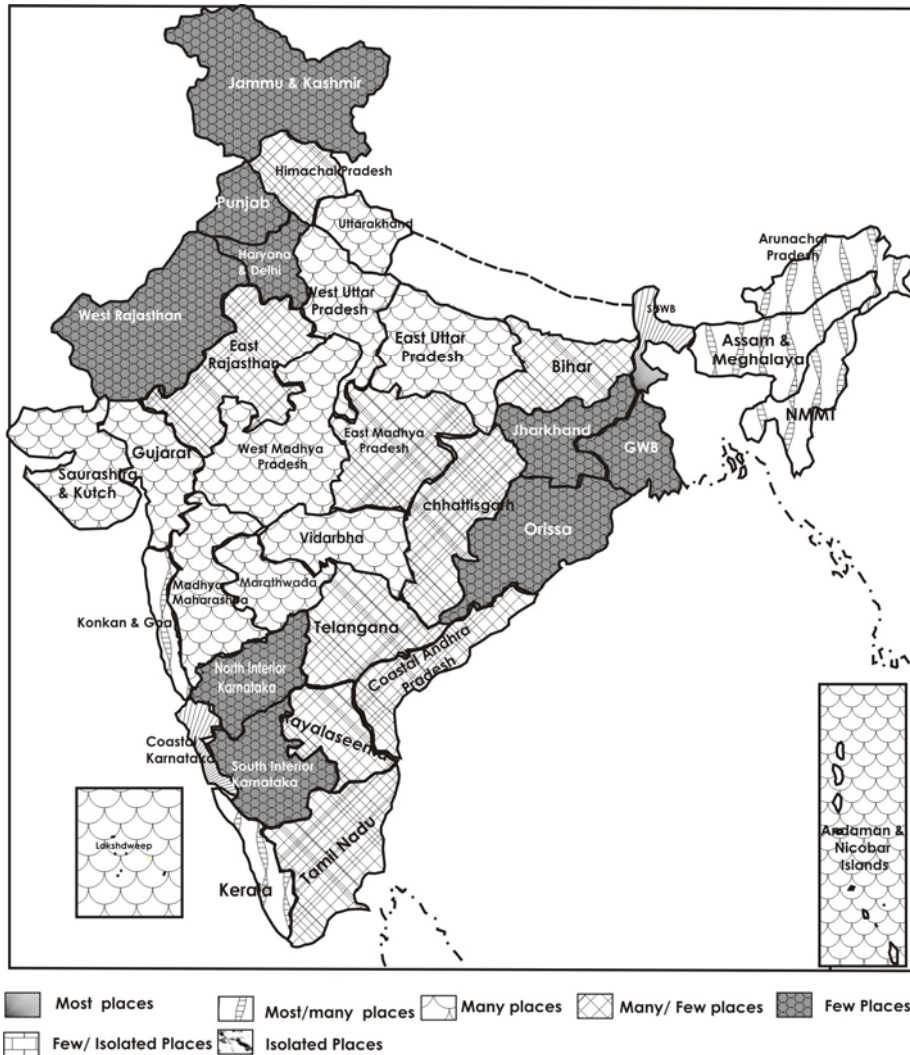
**Distribution of rainfall (% departure from normal) of the districts receiving subdued rainfall
Gangetic West Bengal for last five Weeks**

West Bengal					
More than 3 weeks continuously deficient to no rain					
Gangetic West Bengal	28.07.10	04.08.10	11.08.10	18.08.10	25.08.10
Burdwan	-10	-49	-82	-82	-37
Nadia	-42	-47	-79	-58	-72
West Midnapore	-54	-35	-36	-40	-58
3 weeks continuously deficient to no rain					
Gangetic West Bengal	28.07.10	04.08.10	11.08.10	18.08.10	25.08.10
Bankura	17	-34	-62	-40	-74
Birbhum	-29	-11	-92	-58	-20
Hooghly	-22	43	-74	-46	-33

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 29th August, 2010)



Weather Outlook (upto 1430 hours IST of 31st August, 2010)

- Fairly widespread rain thundershower would occur over Gangetic plains and central India.
- Fairly widespread to widespread rainfall activity would occur over northeastern states and west coast.

Warning

- Isolated heavy to very heavy rainfall would occur over Konkan & Goa, coastal Karnataka and Kerala during next 48 hours.
- Isolated heavy rainfall would occur over Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Madhya Maharashtra, Marathwada, south Gujarat region, Telangana, Rayalaseema, Coastal Andhra Pradesh, Lakshadweep and Andaman & Nicobar Islands during next 48 hours.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Bargarh, Deogarh, Jharsuguda, Kandhamal, Keonjhar, Nawarangpur, Rayagada, Sambalpur and Sundargarh of Orissa, Birbhum, Hooghly, Howrah, East Midnapore, Murshidabad, 24 Pargana (N), Purulia and 24 Pargana (S) districts of Gangetic west Bengal and most of the districts of Bihar, Jharkhand, Sub Himalayan West Bengal and Sikkim received rain during last week.
- **Rainfall Forecast:** Rain is likely to occur at most places over Sub Himalayan West Bengal and Sikkim and at a few places in Orissa, Jharkhand and Gangetic West Bengal during the period. Rain is also likely at many places in Bihar during next 48 hours and decrease thereafter.
- **Major Crops:**
 - Early sown rice (tillering / flowering / grain formation), late sown rice (seedling / early tillering), maize (early vegetative / vegetative / flowering), sesamum, groundnut, soybean, green gram (vegetative / flowering), sunflower, castor, black gram, arhar and vegetables like tomato, cabbage, ladies finger, French bean etc. (sowing / early vegetative / vegetative) in Bihar.
 - Early sown rice (tillering / flowering / grain formation), late sown rice (seedling / early tillering), early sown maize (early vegetative / vegetative / flowering), sesame and groundnut (vegetative / flowering), urd, green gram, pignon pea, kulthi, niger and short duration maize (sowing / early vegetative / vegetative) in Jharkhand.
 - Rice (seedling / early tillering / tillering / flowering / grain formation) and maize, groundnut, pulses, soybean, sesamum, ragi, cotton, vegetable crops (early vegetative / vegetative / flowering) in Orissa.
 - Sugarcane (vegetative), vegetable crops (sowing / germination / early vegetative / vegetative / flowering / fruiting / harvesting), jute (vegetative / harvesting), *aus* rice (flowering / grain formation), *aman* rice (transplanting / early vegetative / tillering), pulses (sowing / germination / early vegetative / vegetative / flowering), sesame and groundnut (sowing / germination / early vegetative / vegetative) in West Bengal.
 - Large cardamom (capsule formation / transplantation of suckers from nursery / capsule maturity), orange (fruiting), seed potato (maturity / harvesting), summer potato (tuberization / maturity), maize (cob maturity / harvesting), *kharif* vegetable and off season vegetables (harvesting), ginger (vegetative), rice (tillering flag leaf initiation) in Sikkim.
- **Advisories:**
 - As rain is likely to occur at most places over Sub Himalayan West Bengal and Sikkim and at many places in Bihar during next 48 hours, postpone irrigation, intercultural operation and application of fertilizer and plant protection measures in these regions.
 - Recent rainfall during last week improved conditions in most of the districts in Bihar and Jharkhand; however the stress situation is still persisting in Gangetic West Bengal due to subdued rainfall activities. Recent rainfall in Bihar and Jharkhand was highly beneficial for germination and for establishment of seedlings of alternate crops sown during last two weeks and also for sowing alternate crops in some more areas under contingent plan. Rejuvenation of early transplanted rice, which was facing severe moisture stress conditions during past weeks due to prolonged dry spell in these states, has been observed. Revival of agricultural operations like application of fertilizers and intercultural operation, has also been started during this week. Contingency plans for these States are mentioned below.
 - Following contingency plan may be continued by the farmers in Bihar:
 4. Urd, pigeon pea and sunflower crops should be sown now. Kulthi and castor crops can also be taken at this time.
 5. Yambeam, vegetables such as cauliflower, radish, pointed gourd etc. can also be sown. Farmers are advised to transplant cauliflower and to sow brinjal at this time.
 6. In upland areas where rice could not be transplanted owing to deficit rainfall, farmers are advised to take up tori and September arhar. September arhar can be sown immediately after 25th August.

- Following contingency measures may be continued in Jharkhand:
 4. In case of dry condition under upland situation during earlier weeks, due to low water holding capacity, even under intermittent rainfall situation, at this point of time, no crop is recommended except sweet potato which can be safely transplanted upto September.
 5. In present scenario farmers are advised for sowing of short duration crops like, urd, green gram, pigeon pea, kulthi, niger and short duration maize on medium lands.
 6. For low lands, the following advisories may be followed:
 - No fresh transplanting of rice is recommended now.
 - No direct sown rice or any other direct sown crop of even short duration is recommended as in case of moderate to heavy rain in Aug-Sept, submergence would cause almost complete failure of the crops. Hence, farmers are advised for early *rabi* crops after August depending on soil moisture status.
- Following contingent planning may be undertaken by the farming community in different rainfall deficient districts of West Bengal.
 7. In uplands and medium lands, sowing of urd, arhar etc. can be done.
 8. In rainfed low lands, photosensitive rice varieties upto 65 days old seedlings can be done @ 40-45 hills / sq. m.
 9. Double transplanting of rice can be done with 45 days old seedlings of long duration or photosensitive varieties upto 30th August.
 10. Weeding and mulching should be done in already sown maize, arhar and other crops facing dry situation.
 11. Available ground water should be used to irrigate the field for sowing of pulses (urd, moong, arhar) and oil seeds (sesame, castor, ground nut) in uplands.
 12. Maximum possible ground water should be used to save the rice crops. Fertilizer should be applied judiciously. Avoid high N-dose.
- In West Central Table land Zone (Balangir, Bargarh, Baudh, Jursiguda, sambalpur, Sonarpur) of Orissa, due to poor rainfall conditions, transplanted rice crop is facing moisture stress conditions. If the crop does not recover, direct sowing of sprouted seeds of medium duration varieties maturing in 120-125 days may be adopted immediately. Also short duration varieties of crops like ragi, sesame, horse gram, green gram, black gram, niger or vegetables like tomato, okra, brinjal, guanr, radish may be selected wherever possible.

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

- **Realised Rainfall:** Most of the districts of Arunachal Pradesh and Assam received rainfall during last week.
- **Rainfall Forecast:** Rain is likely to occur at most places in the region during next 48 hours and decrease thereafter. Isolated heavy rainfall would occur over Assam and Meghalaya during next 48 hours.
- **Major Crops:**
 - Vegetables (flowering / fruiting / harvesting), sugarcane (cane development), maize (silking / tasseling / cob formation), jute and mesta (vegetative / maturity), *sali* rice (transplanting / early vegetative / seedling / tillering), *ahu* rice (transplanted summer rice) (grain formation / early maturity) and arhar, cotton and sesamum (germination / early vegetative / vegetative) in Assam.
 - Rice (booting and panicle initiation), pulses (pod formation / maturity), sesame (vegetative / flowering / pod formation), vegetables (vegetative / flowering / fruiting), maize (cob formation / early maturity), orange (fruiting) and sugarcane (cane development) in Arunachal Pradesh.
 - Upland rice (grain formation), *aman* rice (transplanting / early vegetative / tillering) and vegetables (sowing / early vegetative / vegetative / flowering / fruiting) in Tripura.

- *Sali* rice (transplanting / early vegetative / tillering), potato (sowing / planting / early vegetative / vegetative), vegetables (sowing / germination / early vegetative / vegetative), tomato and maize (vegetative / silking / tasseling / cob formation) in Meghalaya.

- **Advisory:**

- As rainfall is likely to occur at most places over the States of this region, postpone sowing, irrigation, intercultural operation and application of fertilizer and plant protection measures to the standing crops. As there possibility of isolated heavy rain in Assam and Meghalaya during next 48 hours, withheld sowing during this period in these States. Also arrange for draining out excess water from the fields 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, sowing of black gram and green gram, transplanting of early varieties of cauliflower and sowing of radish in Diphu Hills Zone, transplanting of *Sali* rice, finger millet and early cabbage, sowing of sesamum, black gram and green gram in Lower Bramhaputra Valley Zone, transplanting of *sali* rice and sowing of early cauliflower, radish and pulses like black gram and green gram in Upper Bramhaputra Valley Zone, transplanting of *sali* rice and sowing of green gram in Barak Valley Zone, transplanting of *sali* rice and sowing of *kharif* pulses and early vegetables like early cauliflower and radish in Central Bramhaputra Valley Zone and transplanting of *sali* rice and sowing of green gram and black gram in North Bank Plain Zone. Transplanting of *Sali* rice should be completed within this month.
- Transplanting of *sali* rice is affected in some districts of Assam by stagnant water in the field due to heavy rainfall. Farmers of these areas are advised to transplant or sow short duration HYV rice varieties like Luit, Kapili, Kolong, Dishang etc. within 1st week of September. More over long duration cultivars like Monohar Sali, Andrew Sali and Gitesh can also be transplanted with 60 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 complete sowing of vegetable crops like French bean immediately.
- System of Rice Intensification (SRI)* method may be adopted in Ri-Bhoi, East Khasi, West Khasi and South Garo District of Meghalaya. Seed bed preparation and sowing of *sali* rice may be undertaken in Ri-Bhoi, West Garo, East Garo and South Garo Hills Districts. It is also optimum time for sowing of potato in mid hills region of Ri-Bhoi, East Khasi and West Khasi hill Districts.
- Farmers in Manipur are advised to undertake sowing of French bean and transplanting of mid-season variety of cauliflower.
- Recommended varieties of major crops to be sown in different States of the region are mentioned in Annexure I.
- Prevailing weather condition is congenial for fruit fly in guava in Mizoram. Adult lay eggs on the fruit surface, maggot enter the fruits and feed on the soft pulp causing drooping of fruits. Spray dimethoate @ 0.03% to manage the insect.
- Due to high rainfall along with high humidity, ginger is severely infested by soft rot in Mizoram; drenching the affected plant with blitox @ 0.25% is recommended.
- Continuous rainfall has also resulted in trunk and bark eating caterpillar infestation in khasi mandarin in Mizoram. Regular monitoring and killing of larvae by inserting wire inside the tunnel or inserting cotton wetted with kerosene or petrol followed by application of bordeaux mixture (1:1.5:10).
- Due to continuous rainfall, mandarin orchards are facing severe infestation of insects *viz*, leaf miner, aphids etc. in Mizoram; for managing leaf miner and aphids, weekly spray of neem seed extract or mahua @ 2 % are found quite effective.
- As there is chance of rain at most places over the region, farmers are advised to apply plant protection measures after current spells of rain.
- As the weather conditions are favorable for the development of hemorrhagic septicaemia in livestock, farmers are advised to take precautions.

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, Haryana, Jammu & Kashmir, Delhi, Uttar Pradesh and Uttarakhand and in some districts of Punjab (except Faridkot, Fatehgarh Sahib, Ferozpur, Kapurthala, Moga, Muktsar, Nawashahar, Patiala), West Rajasthan (except Barmer, Bikaner, Jaisalmer, Jalore, Jodhpur, Pali, Sri Ganganagar) and East Rajasthan (except Banswara, Bhilwara, Dungarpur, Rajasamand, Sirohi, Udaipur) during last week.
- **Rainfall Forecast:** Rainfall is likely to occur at many places over Uttarakhand and Uttar Pradesh and at a few places over Haryana, Delhi, Punjab, Jammu & Kashmir and West Rajasthan. Rain is likely at many places over Himachal Pradesh for next 24 hours and will decrease thereafter. Rain would occur at a few places over East Rajasthan for next 48 hours and increase thereafter.
- **Major Crops:**
 - Rice (tillering), jowar, pigeon pea and maize (vegetative), vegetable crops (early vegetative / vegetative / flowering) in Delhi
 - Rice (tillering), vegetables (transplanting / vegetative / flowering) in Himachal Pradesh.
 - Vegetable crops (flowering / fruiting / harvesting), rice (tillering), maize, groundnut and sunflower (vegetative / flowering) in Jammu & Kashmir.
 - Sugarcane (vegetative), rice (tillering), soyabean, jowar, bajra, pigeon pea and groundnut (early vegetative / vegetative) in Uttarakhand.
 - Sugarcane (vegetative), cotton, maize (vegetative), rice (tillering), mung, mash (early vegetative / vegetative) in Punjab.
 - Sugarcane (vegetative), cotton (vegetative), rice, guar and bajra (vegetative) in Haryana.
 - Sugarcane (vegetative), vegetable crops (sowing / transplanting / vegetative / flowering), black gram, green gram, sesamum, lobia, maize, pigeon pea + pulses, groundnut and sesamum (sowing / early vegetative / vegetative / flowering) in Uttar Pradesh.
 - Sugarcane (vegetative), vegetable crops (flowering / fruiting / harvesting), maize, soybean, bajra, jowar, mung, cluster bean, sesamum and groundnut (vegetative) in Rajasthan.
- **Advisory:**
 - Recent rainfall during last week improved conditions in most of the districts of Uttar Pradesh. Farmers in Uttar Pradesh are advised to select oilseeds, pulses, bajra and linseed as alternate crops for immediate sowing utilising recent rain and intercrops like tur + sesamum (2:2), tur + jowar (1:1), tur + black gram, green gram (2:2) (varieties in Annexure I). Farmers are also advised to undertake gap filling and adopt closer spacing for better crop stand.
 - Due to excess rainfall in Delhi during last two weeks, water logging is reported in many field crops like maize, bajra, guar, sorghum, urd, arhar, moong, soybean and early sown vegetables like cucurbits, ladies finger, chilli etc. Drain out excess water immediately to avoid damage of crops.
 - As there was good rainfall during last week and rainfall is likely at many places during the period in Uttarakhand, Himachal Pradesh, Jammu & Kashmir and Uttar Pradesh, farmers are advised to postpone irrigation to the standing crops. Also arrange for draining out excess water from the fields of standing crops.
 - Farmers in Delhi are advised to start sowing of radish, spinach, coriander etc. (varieties in Annexure I) utilizing the rainfall during last week.
 - Farmers in hill Zone (Tehri Garhwal, Rudraprayag, Champawat, Uttarkashi, Pitorgarh, Bageshwar and Almora) in Uttarakhand are advised to undertake sowing of turnip, raddish, salad vegetables, beet root and sowing / transplanting of cabbage and broccoli in medium hilly region.
 - Farmers in sub tropical zone (Reasi district) and intermediate zone (Doda, Rajouri and Udhampur) in Jammu & Kashmir are advised to undertake transplanting of cabbage, cauliflower and knol khol.

- Farmers in Eastern zone (Bhiwani, Fatehabad, Hissar, Jhajjar, Mahendragarh, Mewat, Rewari, Rohtak and Sirsa districts) in Haryana are advised to undertake transplanting of fruit crops. Farmers are also advised to sow the toria crop in irrigated field upto 1st week of September with short duration varieties TL 15 & TH 68 for timely wheat sowing.
- Farmers in western zone (Bathinda, Moga, Muktsar, Mansa, Sangrur districts) and Central Plain Zone (Amritsar, Kapurthala, Fatehgarh Sahib, Ludhiana, Jalandhar) of Punjab are advised to undertake planting of evergreen fruit plants like citrus and guava as weather is suitable for the establishment of fruit plants.
- The current temperature and humidity is conducive for attack of late blight in potato and diseases in rajmash in high hill temperate dry zone (Lahul & Spiti & Kinnur). In potato where the foliage is still green and tuber formation is taking place go for spray of Ridomil 2.5 g / litre adding stickers in solution.
- Undertake spraying and intercultural operations after current spells of rain in Uttarakhand, Himachal Pradesh and Uttar Pradesh. Continue the above mentioned operations on a non rainy day in remaining States of the region.

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

- **Realised Rainfall:** All the districts in Karnataka, Kannur, Idukki, Kasargod and Pathanamthitta districts in Kerala, all the districts in Andhra Pradesh except Srikakulam, Vizayanagaram and Visakappattinam districts and all the districts in Tamil Nadu Kanyakumari, Madurai, Perambalur, Sivagangai, Theni, Thirunelveli and Tuticorin districts.
- **Rainfall Forecast:** Rain is likely to occur at most/many places in Coastal Karnataka and Kerala, at many places over Andhra Pradesh during next 48 hours and at a few places thereafter and at a few places over Interior Karnataka during next three days. Rain is likely at many/ a few places over and Tamil Nadu. Isolated heavy to very heavy rainfall is likely to occur over Coastal Karnataka and Kerala and isolated heavy rainfall over North Interior Karnataka during next 48 hours.
- **Major Crops:**
 - Land preparation and sowing has almost completed for upland rice cultivation. Major area of transplanted rice crop is at tillering stage. Irrigated banana is in different growth stages up to 9 months. Vegetable crops are at different growth stages. New planting is continued for coconut, black pepper, ginger, turmeric, tapioca, cocoa, cashew, nutmeg, mangosteen, rambutan etc. in Kerala.
 - *Kuruvai* rice (flowering), groundnut (pegging/pod formation), sugarcane (grand growth), banana (fruit bearing stage) in Tamil Nadu.
 - *Kharif* crops viz., maize is at silking stage, paddy crop is at tillering stage, and groundnut is at flowering in Andhra Pradesh.
 - *Kharif* crops viz., pigeon pea, groundnut, bajra, castor, horsegram, sesamum, maize and navane, etc (late vegetative stage) and sugarcane (cane development) in Karnataka.
- **Advisories:**
 - Rain is likely to occur at most/many places in Coastal Karnataka, Kerala, Andhra Pradesh and Tamil Nadu 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 rain in all the districts of Interior Karnataka, postpone irrigation to the crops. Apply irrigation to the crops in the above districts as there was no rainfall during last week.
 - Taking advantage of recently received rains in Southern Telangana Zone (Hyderabad, Medak, Rangareddy, Nalgonda), farmers are advised to undertake intercultural operations in rainfed crops like maize and cotton.
 - Farmers in North East transition zone (Bidar) in Karnataka are advised to raise nursery for brinjal, tomato, cabbage and cauliflower.

- Good amount of rainfall has been received in most of the places in the North Dry Zone (Bijapur) district during last week. As per the forecast, light to moderate amount of rainfall is expected during the next three days. Taking advantage of these rains sowing of sunflower, castor, horsegram, desi cotton (Jayadhar and Suyodhar) may be continued.
- Good rainfall North East Dry Zone (Gulbarga, Raichur) resulted in good yields of green gram but unfortunately, a continuous rainfall and alternate bright sunshine of previous week leading to the pod shattering and making farmers difficult to harvest the early sown green gram (60- 75 DAS) which is at its harvesting stage. Farmers who used the non shattering type variety like Selection-4 may tolerate to such type of weather condition and reduce the loss .Farmers are advised to ensure proper storage for the harvested produce to prevent from germination of seeds. Farmers are also advised to continue sowing of cotton. Varieties / hybrids of cotton is mentioned in Annexure I.
- Farmers in Cauvery Delta Zone in Tamil Nadu are advised to undertake sowing of rice nursery for samba/thaladi utilizing Mettur dam water (varieties in Annexure I).
- Problem of sucking pests and murda disease (in chilli) occur due to cloudy weather in North Transition Zone (Belghum, Dharwad, Haveri) in Karnataka. To control these, spray with 1.7 ml Rogar / 1.5 ml Metasystox + 2.5 ml Dicofol.
- Due to increase in relative humidity in High Altitude Zone of Kerala, incidences of Sigatoka leaf spot may become severe. Farmers are advised to spray 1% Bordeaux mixture or Bavistin (1g/lit of water) after cutting the severely affected leaves and burning it.
- Due to high humidity, low temperature and cloudy weather in Southern Dry Zone (Chamarajanagara, Mysore, Mandya) of Karnataka, there are chances of incidences of stem borer in maize and leaf spot in banana. To control stem borer in maize, spray Endosulphan -35 EC @ 2ml/lit of water. To control leaf spot in banana spray blitox 3 gm/lit of water. Due to cloudy weather and light to medium showers for next five days, there will be a chance of leaf spot disease infection in tomato. To manage this disease spray Dithane M-45 @ 2gm / lit of water.
- Plant protection measures may be undertaken after spells of rain in Coastal Karnataka, Andhra Pradesh, Tamil Nadu and Kerala and on a non rainy day in Andhra Pradesh and Tamil Nadu.
- **Animal Husbandry**
 - Care should be taken against the decrease in day temperature for silk worm and poultry and dairy rearing houses in Karnataka. Maintain optimum room temperature vaccinate the animals (buffalo, cow, bullock) against Foot and mouth disease.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Broach, Dangs, Daman, Narmada, Navsari, Surat and Valsad in Gujarat region, Kolhapur, Sangli and Solapur districts in Madhya Maharashtra, Hingoli, Latur and Usmanabad districts in Marathwada, Chandrapur, Gondia, Nagpur and Wardha districts in Vidarbha and most of the districts of Konkan and Goa received good rain during last week.

Rainfall Forecast: Rain is likely at most places in Konkan and Goa during next 48 hours and decrease thereafter. Rain is likely to occur at many places during the period over remaining parts of the region. Isolated heavy to very heavy rainfall over Konkan & Goa and isolated heavy rainfall over Madhya Maharashtra, Marathwada and south Gujarat region would occur 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), *kharif* jowar (vegetative), soyabean (flowering / pod formation), bajra (vegetative / flag leaf initiation), cotton and sunflower (vegetative growth / floral bud formation), groundnut (flowering / pegging), red gram (early vegetative / primary branching),

moong (flowering / pod formation / pod maturity) and irrigated cotton (flowering / boll formation) in Maharashtra.

- Rice (tillering), groundnut (flowering / pegging), cotton, maize, bajra, pigeon pea, soybean, sesamum, green gram and black gram (early vegetative / vegetative / flowering) and castor (sowing / germination) in Gujarat.

- **Advisory:**

- As rain is likely at most places in Konkan and Goa and at many places over remaining parts of the region, postpone irrigation, intercultural operation and application of fertilizer and plant protection measures to the standing crops.
- As there is possibility of isolated heavy to very heavy rainfall over Konkan & Goa and isolated heavy rainfall over Madhya Maharashtra, Marathwada and south Gujarat region during next 48 hours, farmers are advised to make arrangement for draining out excess water from the crop fields.
- Transplant seedlings of fennel in Bhal and Coastal Zone, North West Zone and North Gujarat zone of Gujarat State at 90 x 60 cm spacing after dipping in a solution of 0.4% copper fungicide during evening hours.
- Undertake sowing of castor in Middle Gujarat Zone, South Gujarat Zone and South Saurashtra Zone. Adopt seed rate of 6 to 8 kg / ha and spacing of 90 x 60 cm for sowing of castor.
- Also undertake transplanting of brinjal, chilli and tomato in North West Zone of Gujarat State.
- There may be attack of leaf eating and leaf rolling caterpillar in red gram and groundnut in Maharashtra; dusting of 10% Carbaryl powder @ 20 kg per ha or spraying of 25 EC Quinalphos 1000 ml / ha in 500 litres of water may be done.
- Due to cloudy & humid weather, Soyabean gets affected by leaf eating caterpillar (Spodoptera) in western Maharashtra plain zone; spray 500 ml S.L.N.P.V.(Magic) in 500 litres of water or 25% Cypermethrin 200 ml / ha in 500 litres of water.
- Due to favourable weather condition, 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 Fenvalerate 20% @ 5 ml in 10 liters water.
- Due to continues cloudy weather there is infestation of sap sucking insects (white fly, aphids & jassids) in *kharif* cotton in Nasik, Nagpur, Latur, Amravati division and Ahmednagar district; spray Acitaprid 20% @ 4 g with sticker in 10 liters of water.
- Due to favourable weather, infestation of semilooper in castor crop crossed ETL. To manage semilooper infestation, arrange to install T type structure for sitting of birds. Also spray Quinalphos @ 20 ml / 10 litres of water.
- Due to congenial weather condition, the infestation of leaf webber in sesamum is initiated in North Saurashtra Zone of Gujarat; spray Endosulfan @ 20 ml / 10 litres of water.
- Apply plant protection measures after current spells of rain.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rain occurred over all the districts of Madhya Pradesh except Balaghat, Badwani, Jabalpur, Katni, Umaria, Bhopal, Dewas, Hoshangabad, Sehore and Ratlam districts and all the districts in Chhattisgarh except Kawardana and Surguja districts during the period.
- **Rainfall Forecast:** Rain is likely at many places over East Madhya Pradesh and Chhattisgarh for the next 48 hours and at a few places there after. Rain is likely at many places over West Madhya Pradesh for the next three days.
- **Major Crops:**
 - *Kharif* crop like soyabean, maize, sorghum, green gram and black gram (vegetative / late vegetative) in Madhya Pradesh.

- *Kharif* crops like black gram, green gram, soyabean, maize, etc (vegetative / late vegetative), and Sugarcane (cane development) in Chhattisgarh. This is proper time for nursery sowing of rainy season vegetables.
- **Advisory:**
 - Postpone intercultural operations and application of fertilizers and pesticides in Madhya Pradesh and Chhattisgarh as rain is likely at many places.
 - Farmers in Kymore Plateau and Satpura Hill Zone (Jabalpur) and Gird Zone (Ashoknagar, Gwalior, Morena, Bhind, Guna, Shoepur, Shivpuri) are advised to continue transplanting tomato, brinjal and chilli and other vegetable crops. Also undertake planting of fruit crops in pits prepared at recommended distance.
 - Due to forecast of moderate wind speed, farmers in Bundelkhand Zone (Tikamgarh) in Madhya Pradesh are advised to provide support to pomegranate plants to prevent from lodging.
 - Farmers in Bastar Plateau Zone are advised to undertake replanting immediately as per availability of seedling, where late sown seedlings of paddy are affected due to flood. Sow black gram, sesame, horse bean or vegetables at places where upland paddy is destroyed due to flood water. Caster oilseed can be sown in sufficient moisture condition (varieties given in Annexure I).
 - Farmers in North Hill Zone (Jashpur, Korja, Surguja) of Chhattisgarh are advised to undertake planting of horticultural crops like mango, papaya, jack fruit, guava. Planting of chilli, tomato & brinjal may be done immediately. Sowing of sesamum & horse bean may be done immediately in upland areas of deficient rainfall.
 - Present weather condition in Chhattisgarh Plain Zone (Bilaspur, Dhamtari, Durg, Janjgir, Kabirdham, Kanker, Kawardha, Korba, Mahasamund, Raigarh, Rajnandangaon, Raipur) is favourable for the incidence of tobacco caterpillar in soybean, groundnut and urd. Farmers are advised to keep watch over the crop and in the initial stage collect the caterpillars and destroy. In case of severe incidence farmers are advised for the spraying of Thiodon / Endosulphan @ 400-500 ml/acre mixed in 200 liter water.
- **Animal Husbandry:**
 - Looking to cloudy weather increase light duration in poultry farms to maintain egg production.
 - Provide proper aeration for cattle as humidity is rising.

Annexure I List of Varieties

Bihar

Urd: T-9, Navin, Pant Urd 19 etc.

Pigeon pea: Bahar, Narendra, Arhar 1 etc.

Sunflower: Surya, Paradevic, Morden etc.

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

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

Jharkhand

Urd: Pant U 19, Pant U 31, Birsa Urd 1, Shekher 2.

Green gram: Pusa Vishal, Samrat, Medha.

Pegion pea: Birsa Arhar 1, Narendra Arhar 1, UPAS 120.

Kulthi: Madhu, Birsa Kulthi 1.

Niger: Birsa Nizer 1 & 2.

Short duration maize: Vivek Makka, Hybrid- 9, Birsa Vikas Makka 1 & 2.

Sweet potato: Pusa Safed, Kalmegh.

West Bengal:

Urd: Navin.

Arhar: Bahar and Pusa 9 etc.

Assam

Sali rice: Ranjit, Bahadur, Kushal, Mashuri.

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.

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

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

Green gram: T-44, Kopergaon, K-851, ML-56, ML-131, Pratap, SG 21-5 etc.

Black gram: T-9, T-27, Pant U-19, T-122, SB 121, KU 301, USJD 113 etc.

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

Early raddish: Pusa Desi, Pusa Chetki and Pusa Himani.

Meghalaya

SRI rice: Ranjeet, Naveen.

Delhi

Coriander: Pant Haritama.

Jammu & Kashmir

Cabbage: Golden Acre, Pride of India.

Cauliflower: Giant Snow Ball, Pusa Synthetic.

knol khol: White Vienna and Purple Vienna.

Uttar Pradesh

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: TA-9, Pant Urid -19, Ta -65, Azad- 1, IPU-94-1, Narendra urd -1.

Green gram : Samrat, Narendra Moong-1, T-44.

Sesamum: Shekhar, Pragati.

Haryana

Toria: T 9 and Sangam

Karnataka

Red gram: TTB-7, BRG-1 and Hyd-3C

Ragi: Indaf-8, MR-1

Cotton: Bunny, Neeraja, Bhakti, Kanaka

Tamil Nadu:

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

Late Thaladi ADT 39 and ADT 42

Gujarat:

Castor: GAUCH-1, GCH-2, GCH-4, GCH-5, GCH-6 and GC-2.

Fennel: Guj. Fennel- 2.

Chhattisgarh

Sesamum: JNC-1, JNC-9, G.A.-10, G.N.-2

Horse bean: AK-21, AK-42, Bastar Kulthi, Birsa Kulthi, BLG-9 .

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

Annexure II Contour maps for the week ending 25.08.10

