

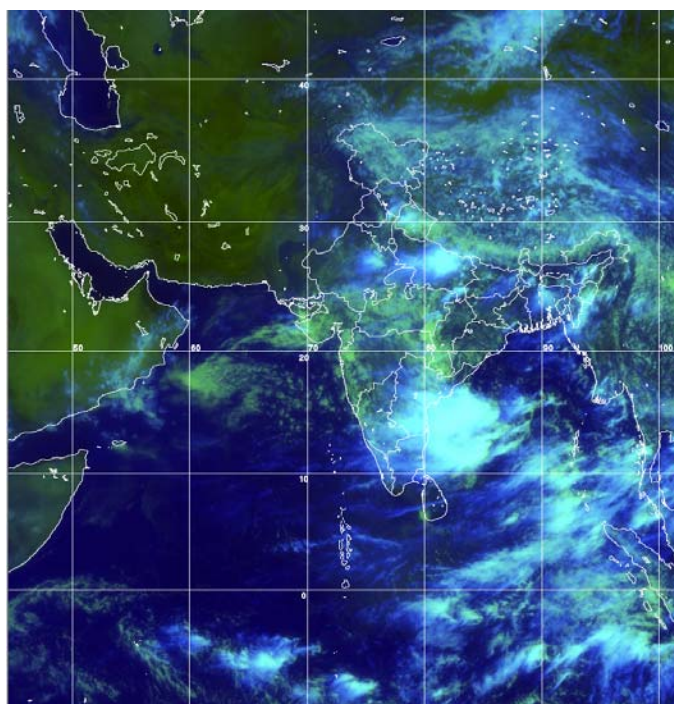


National Agromet Advisory Bulletin

Wednesday, 1st September, 2010

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Executive Summary

Moisture stress conditions still prevail in most of the districts of Gangetic West Bengal, and a few districts of Orissa and Jharkhand. Farmers, who lost their crops or could not sow their crops at all due to deficient rainfall during earlier weeks in the above mentioned states, are advised to adopt recommended contingency measures utilizing recent rainfall (details of the contingency plans have been mentioned in Zonewise agromet advisories). Statewise crop situation due to various rainfall conditions is mentioned below.

In West Uttar Pradesh, especially in Bundelkhand Zone, poor rainfall conditions prevailed during first fortnight of August hampering crop stand and agricultural operations. During that period crops like urd, sesame, groundnut, sorghum, maize, moong, rice, red gram, soyabean and bajra were at critical stages and faced moisture stress situation. But good amount of rainfall received during third week of August onward was beneficial for these crops and agricultural operations have also been resumed.

In New Alluvial Zone (Burdwan, Howrah, Hoogly, Murshidabad, Nadia, North 24 Parganas) in West Bengal, transplanted rice is facing acute dry condition and life saving irrigation is advised. In Laterite and Red Soil Zone (Bankura, Birbhum, Purulia, West Midhnapur), short duration varieties of crops like black gram are advised as alternate crops. In Old Alluvial Zone (South Dinajpur, Maldah), the farmers, who could not transplant rice still now due to deficient rainfall, can undertake sowing of other short duration crops (details of the contingency plans have been mentioned in Zonewise agromet advisories on page no. 5).

In North Eastern Coastal Plain Zone (Bhadrk, Balasore, Jajpur) of Orissa, due to poor rainfall and use of aged seedling, blast disease is spreading. This condition also led to emergence of weeds. In West Central Table Land Zone (Boudh, Sambalpur, Sonapur), crop stand is very poor. Farmers may go for other alternate crops like horse gram, green gram, black gram and vegetable crops like tomato, brinjal, bhindi, guar and radish which require low water. In the standing crops of black gram and green gram, application of boron and foliar spray of 2% urea, respectively, will mitigate dry conditions.

In Bihar and Jharkhand, rainfall occurred in most of the districts during last couple of weeks which helped the standing crops to recover partially from moisture stress and helped the farmers to sow alternate crops under contingent plan (details of the contingency plans have been mentioned in Zonewise agromet advisories on page no. 6)

There are some reports of adverse impact of excess rainfall on crops from different parts of the country. Water logging situation is reported in North Gujarat Zone which caused damage to cotton and kidney bean. Draining out of excess water is necessary to avoid further damage.

Pulse crops are suffering from water logging due to heavy and continuous rainfall in Gulbarga and Yadgir districts of North Interior Karnataka. Proper drainage should be arranged to avoid water stagnation in the *kharif* crop fields to save the crops from adverse impact. Continuous rainfall and alternate bright sunshine for past 15 days also led to the pod shattering and make difficulties for the farmers to harvest the matured green gram (60-80 DAS) which is at its harvesting stage.

Rice leaf folder incidences are reported in Kohima and Mokokchung districts of Nagaland. Due to heavy rainfall, tomato and chilli crops have been damaged in addition to spread of diseases like bacterial blight and fruit rot.

In remaining parts of the country, overall crop condition is mostly normal and there are prospects for good crop production.

Distribution of rainfall (% departure from normal) receiving subdued rainfall of the districts in Orissa, Uttar Pradesh, Gangetic West Bengal and Jharkhand for last five Weeks

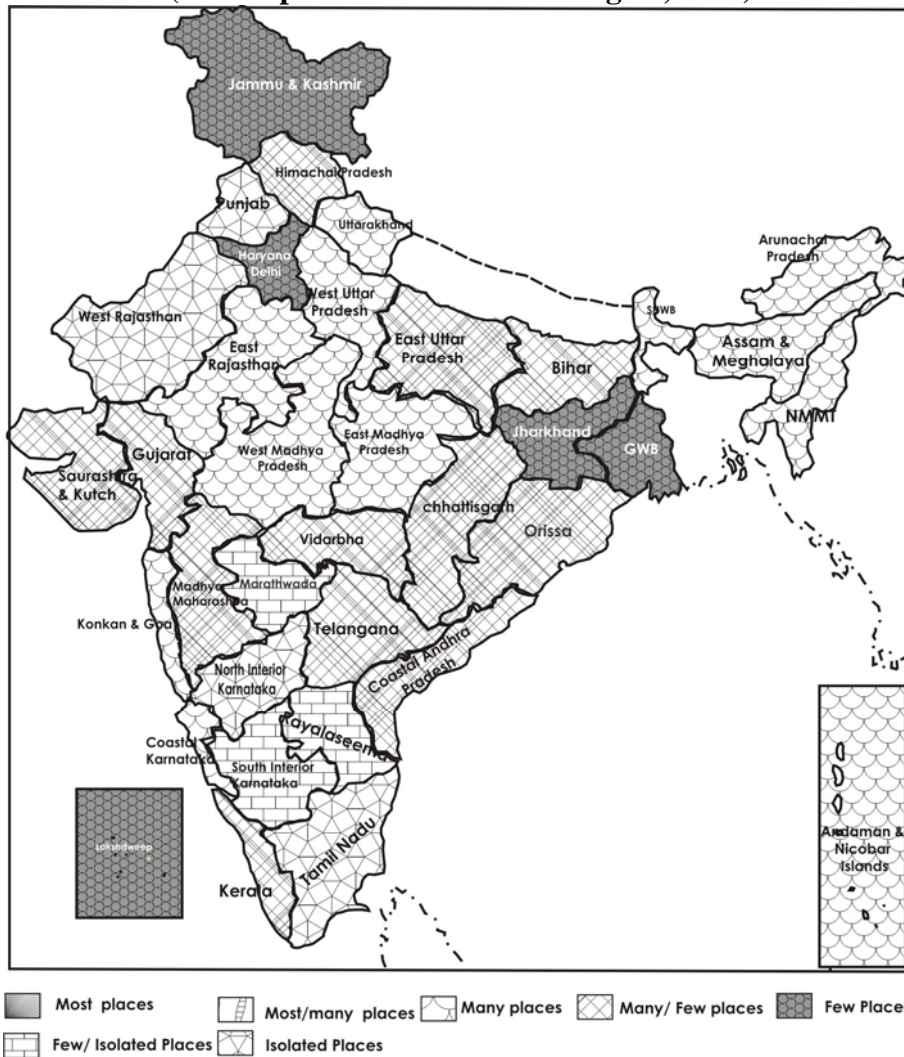
Orissa	04.08.10	11.08.10	18.08.10	25.08.10	01.09.10
More than 3 weeks continuously deficient to no rain					
Mayurbhanj	-33	-42	-72	-53	-62
Sambalpur	-29	-74	-82	-49	-54
Kendrapara	-76	-40	-94	-72	-38
3 weeks continuously deficient to no rain					
Angul	-29	9	-73	-72	-51
Balasore	-31	24	-71	-76	-73
Bhadrak	-56	-10	-60	-54	-44
Bolangir	-46	39	-66	-46	-48
Boudh	-64	41	-54	-55	-52
Cuttack	-31	75	-35	-62	-46
Dhenkanal	-17	25	-65	-47	-51
Jajpur	-29	-3	-53	-79	-20
Kalahandi	-41	199	-68	-82	-49
Koraput	28	41	-56	-58	-25
Nawapara	-76	36	-29	-60	-76
Rayagada	-19	53	-48	-34	-38
Sonepur	-57	46	-80	-62	-58
West Bengal					
More than 3 weeks continuously deficient to no rain					
GWB					
Bankura	-34	-62	-40	-74	-61

Birbhum	-11	-92	-58	-20	-62
Burdwan	-49	-82	-82	-37	-55
Hooghly	43	-74	-46	-33	-53
Nadia	-47	-79	-58	-72	-42
West Midnapore	-35	-36	-40	-58	-85
2 weeks continuously deficient to no rain					
GWB					
Howrah	40	-35	118	-26	-91
24 Pargana (N)	31	-61	-19	-23	-68
24 Pargana (S)	-10	-52	-12	-29	-61
Uttar Pradesh					
More than 3 weeks continuously deficient to no rain					
East Uttar Pradesh					
Kanpur Dehat	-48	-83	-95	-47	-83
West Uttar Pradesh					
Etah	18	-68	-76	-57	-46
Etawah	-4	-89	-67	-32	-34
Jharkhand					
More than 3 weeks continuously deficient to no rain					
East Singbhum	-48	-72	-27	-48	-83
Ranchi	-60	-71	-58	-30	-59
West Singbhum	-12	-54	-61	-65	-43

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 4th August, 2010)



Weather Outlook (upto 1430 hours IST of 4th September, 2010)

- Increase in rainfall activity over northwest India, Andhra Pradesh and Orissa.
- An upper air cyclonic circulation may form over west central and adjoining northwest Bay of Bengal around 4 September which may subsequently develop into a low pressure area.

Warning

- Isolated heavy to very heavy rainfall would occur over Konkan & Goa during next 48 hours.
- Isolated heavy rainfall would occur over East Rajasthan, Gujarat, West Madhya Pradesh, Madhya Maharashtra, Coastal Karnataka and Andaman & Nicobar Islands during next 48 hours.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Deogarh, Gajapati, Ganjam, Jagatsingpur, Jajpur, Jharsuguda, Kandhamal, Kendrapara, Keonjhar, Khurda, Koraput, Malkangiri, Nawarangpur, Nayagarh, Puri, Rayagada and Sundargarh districts of Orissa, East Midnapore and Murshidabad districts of Gangetic west Bengal, Darjeeling and Jalpaiguri districts of Sub Himalayan West Bengal, Gopalganj, Kishanganj, Purnea and West Champaran districts of Bihar, Gumla district of Jharkhand and all the districts of Sikkim received 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 in Jharkhand and Gangetic West Bengal during the period. Rain is also likely at a few places in Bihar during next 24 hours and at a few places in Orissa during next 48 hours and will increase thereafter.
- **Major Crops:**
 - Early sown rice (flowering / grain formation), late sown rice (early tillering / tillering), maize (vegetative / flowering), sesamum, groundnut, soybean, green gram (vegetative / flowering / pod formation), black gram, castor, kulthi, tori, arhar and vegetables like cauliflower, brinjal etc. (sowing / early vegetative / vegetative) in Bihar.
 - Early sown rice (flowering / grain formation), late sown rice (early tillering / tillering), early sown maize (vegetative / flowering), sesame and groundnut (vegetative / flowering / pod formation), urd, green gram, pignon pea, niger and short duration maize (early vegetative / vegetative / flowering), kulthi (sowing / early vegetative / vegetative) and safflower, potato and toria (sowing) and in Jharkhand.
 - Rice (early tillering / tillering / flowering / grain formation) and maize, groundnut, pulses, soybean, sesamum, ragi, cotton, vegetable crops (vegetative / flowering / pod formation) in Orissa.
 - Sugarcane (cane development), vegetable crops (sowing / germination / early vegetative / vegetative / flowering / fruiting / harvesting), jute (harvesting), *aus* rice (grain formation / early maturity), *aman* rice (early vegetative / tillering), pulses (sowing / germination / early vegetative / vegetative / flowering / pod formation), sesame and groundnut (early vegetative / vegetative / flowering / pod formation) in West Bengal.
 - Large cardamom (capsule formation / capsule maturity), orange (fruiting), seed potato (maturity / harvesting), summer potato (tuberization / maturity), maize (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 many places over Sub Himalayan West Bengal and Sikkim during the period, postpone irrigation, intercultural operation and application of fertilizer and plant protection measures in these regions. Also complete these operations within 24 hours in Bihar and within 48 hours in Orissa as rain is likely to occur over these regions after this period.
 - Moisture stress conditions still prevail in most of the districts of Gangetic West Bengal, some districts (Mayurbhanj, Boudh, Sambalpur, Nawapara, Sonapur, Balasore and Angul) of Orissa and East Singhbhum, West Singhbhum and Ranchi districts of Jharkhand of this region. Fair quantity of rainfall received in remaining districts of these states and most of the districts of Bihar during last couple of weeks, which has given relief to the crops from moisture stress to a limited extent. Farmers, who lost their crops or could not sow their crops at all due to deficient rainfall during earlier weeks, are advised to adopt recommended contingency measures utilizing recent rainfall.
 - In Gangetic West Bengal, deficient rainfall condition still persists and contingency measures are advocated to cope up with the situation. In New Alluvial Zone (Burdwan, Howrah, Hoogly, Murshidabad, Nadia, North 24 Parganas), transplanted rice is facing acute dry condition and life saving irrigation is advised. Other contingency plans for this region are as follows:
 1. September sown Arhar can be sown with 30 cm spacing in lowlands or in medium lands.
 2. Urd (Navin) and sweet potato can be sown upto 20th September if some soil moisture is available.

3. Kulthi as sole crop or as mixed cropping with sweet potato can be undertaken upto 20th September.
- In Bihar and Jharkhand, rainfall occurred in most of the districts during last couple of weeks which helped the standing crops to recover partially from moisture stress and helped the farmers to sow alternate crops under contingent plan. Contingency measures for the farmers who could not sow the crops till date, are given below:
 - Following contingency plan may be continued by the farmers in Bihar.
 1. Urd (T-9, Navin, Pant Urd 19 etc.) should be sown now. Kulthi and castor crops can also be taken at this time.
 2. Yambeam, vegetables such as cauliflower, radish 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.
 - 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 which can be safely transplanted upto September.
 2. If the crops could not be sown till date, the farmers are advised to adopt the following measures in medium land situation.
 - Safflower, a deep rooted crop with very less water requirement, should be sown as a sole crop even on the residual moisture.
 - The farmers may also undertake the crops like vegetable pea, toria, maize, potato and kulthi as a sole crop and also vegetable pea + maize (1:1), toria + vegetable pea (4:3), kulthi + safflower (2:4) as intercropping.
 - Raising seedlings of cabbage, cauliflower, tomato etc. as well as cultivation of marigold and gladiolus as a sole crop may be adopted by the farmers near urban areas.
 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.
 - In North Eastern Coastal Plain Zone (Bhadrk, Balasore, Jajpur) of Orissa, due to poor rainfall and use of aged seedling, blast disease is spreading. This condition also led to emergence of weeds. In West Central Table Land Zone (Boudh, Sambalpur, Sonapur), crop stand is very poor. Farmers may go for other alternate crops like horse gram, green gram, black gram and vegetable crops like tomato, brinjal, bhindi, guar and radish which require low water. In the standing crops of black gram and green gram, application of boron and foliar spray of 2% urea, respectively, will mitigate dry conditions.
 - Recommended varieties of 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:** East Kameng, Lohit, Papumpara, Upper Siang, West Kameng and West Siang districts of Arunachal Pradesh and Cachar, Dibrugarh, East Khasi Hills, Hailakandi, Jorhat, Karbi Analog, Karimganj, Kokrajhar, Lakhimpur, Morigaon, Nowgong, Sibsagar, Sonitpur and Tinsukia districts of Assam received 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 (cob formation), jute and mesta (maturity), *sali* rice (transplanting / early vegetative / seedling / tillering), *ahu* rice (transplanted summer rice) (grain formation / early maturity), arhar and sesamum (early vegetative / vegetative / flowering) and black gram and green gram (sowing / germination) in Assam.
- Rice (booting and panicle initiation), pulses (pod formation / maturity), sesame (vegetative / flowering / pod formation), vegetables (vegetative / flowering / fruiting), maize (cob formation / maturity), orange (fruiting) and sugarcane (cane development) in Arunachal Pradesh.
- Upland rice (grain formation / early maturity), *aman* rice (early vegetative / tillering) and vegetables (sowing / early vegetative / vegetative / flowering / fruiting) in Tripura.
- *Sali* rice (transplanting / early vegetative / tillering), potato (planting / early vegetative / vegetative), vegetables (sowing / germination / early vegetative / vegetative / flowering / fruiting), maize (silking / tasseling / cob formation) in Meghalaya.

- **Advisory:**

- As rainfall is likely to occur at many places over the States of this region, postpone sowing, 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 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 black gram and green gram and nursery sowing of brinjal 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 early brinjal 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 week.
- 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.
- Farmers in Arunachal Pradesh are advised to raise nursery of hybrid tomato, cauliflower and cabbage in present weather conditions.
- System of Rice Intensification (SRI)* method may be adopted in Ri-Bhoi, East Khasi, West Khasi and South Garo District of Meghalaya. 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, transplanting of mid-season variety of cauliflower and nursery sowing for capsicum.
- Recommended varieties of major crops to be sown in different States of the region are mentioned in Annexure I.
- The prevailing weather condition is congenial for guava wilt incidence in Mizoram; drenching of soil with 15 g Bavistin around the basin of tree is effective.
- 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.
- Prevailing mean temperature of 21-33⁰C is congenial for bacterial leaf blight in rice in Mizoram; dissolve Streptocycline @ 1-2 g in 5 liters of water and 2.5 g Ceresan @ 0.5% in one liter of water to spray the crop.
- 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.

- Due to continuous rain, flea beetle infestation may increase in banana in Nagaland. Farmers are advised to follow clean cultivation and sanitation in the orchards.
- 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.

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 Lahul and Spiti), Jammu & Kashmir(except Leh), Delhi, Uttar Pradesh(except Allahabad, Ambedkar Nagar, Balrampur, Basti, Kanpur City, Sitapur, Sonbhadra, Varanasi in East UP, Firozabad, Jalaun, Mainpuri in West UP), Uttarakhand and East Rajasthan during last week. No significant rainfall occurred in most of the districts of Punjab, Haryana and West Rajasthan.
- **Rainfall Forecast:** Rainfall is likely to occur at few/many places over Himachal Pradesh, East Rajasthan, Uttarakhand and Uttar Pradesh and at a few places over Haryana, Delhi and Jammu & Kashmir during next three days. Rain is likely at isolated places over West Rajasthan and Punjab. Isolated heavy rainfall would occur over East Rajasthan during next 48 hours.
- **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/panicle initiation), mung, mash (early vegetative / vegetative) in Punjab.
 - Sugarcane (vegetative), cotton (vegetative), rice, guar and bajra (vegetative) in Haryana.
 - Rice(tillering), sugarcane (vegetative), vegetable crops (sowing / 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), maize, soybean, bajra, jowar, mung, cluster bean, sesamum and groundnut (vegetative) in Rajasthan.
- **Advisory:**
 - Recent rainfall during last two weeks 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.
 - Farmers are advised to spray solution of 5 kg zinc sulphate & 20 kg urea in 1000 lit. of water per acre if symptoms of *khaira* disease are seen (yellow / red leaves) in rice in rainfall deficit areas of Basti, Kanpur, Etah and Etawah districts.
 - Farmers in Delhi are advised to drain out excess water from vegetable crop fields to avoid damage of crops. Farmers are advised to undertake sowing of sweet corn, baby corn, radish, spinach and coriander etc. (varieties in Annexure I) utilizing the rainfall during last week.
 - As there was good rainfall during last week and rainfall is likely at many places during the period in East Rajasthan, 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 in East Rajasthan. Apply irrigation to the standing crops in West Rajasthan and

Punjab as there was no significant rainfall in most of the districts during last week and no significant rainfall is likely during next three days.

- Farmers in hill Zone (Tehri Garhwal, Rudraprayag, Champawat, Uttarkashi, Pitorgarh, Bageshwar and Almora) in Uttarakhand are advised to undertake sowing of early vegetable pea (high hills in Nainital district) and planting of litchi(Uttam Singh Nagar) in Bhabar and tarai zone, turnip, raddish, salad vegetables, beet root and sowing / transplanting of cabbage and broccoli in medium hilly region of hill zone(Tehri Gharwal, Rudraprayag, Champawat, Uttarkashi, Pitorgarh, Bageshwar and Almora districts).
- 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 and sowing of cole crops in polyhouses, nursery sowing of cauliflower, transplanting of off season onion in sub montane and low hills sub tropical zone (Chamba, Hamirpur, Una and Kangra districts).
- Farmers in Sub Humid Southern Plain and Aravalli Hill Zone (Chittorgarh, Rajsamand, Udaipur district) in Rajasthan are advised to undertake sowing of ashwaghandha and ajwain 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. 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 Plain Zone (Ferozepur and Faridkot districts) of Punjab are advised to undertake sowing of radish, carrot and turnip. Apply need based irrigation to standing rice and cotton crops to avoid stress at flowering stage as there was no significant rainfall in these districts during last week and no significant rainfall is likely during next three days.
- Farmers in western zone (Bathinda, Moga, Muktsar, Mansa and Sangrur districts) of Punjab are advised to undertake sowing of radish and turnip utilizing the realized rainfall during last two weeks.
- Due increase in temperature with high humidity in sub-tropical zone of Jammu & Kashmir(Kathua, Jammu and Reasi districts) incidence of hairy caterpillars is likely in moong and mash crop. Farmers are advised to destroy the young larvae in gregarious phase or spray the crop with Endosulfan @0.07% or quinalphos@ 0.03% or Dichlorovos @ 0.05%.
- Undertake spraying, application of fertilisers and intercultural operations after current spells of rain in East Rajasthan, Uttarakhand, Himachal Pradesh and Uttar Pradesh. The above mentioned operations may be carried out on a non rainy day in Haryana, Delhi and Jammu & Kashmir and continued in remaining States of the region.

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

- **Realised Rainfall:** All the districts in Coastal Karnataka, North Interior Karnataka and Bellary, Chikmagalur, Davangare, Kodagu and Shimoga districts in South Interior Karnataka, all the districts in Kerala, all the districts in Andhra Pradesh except Anantapur, Chittoor, Cuddappah and Kurnool districts and Nilgiris, Salem, Thanjavur and Thiruvarur districts in Tamil Nadu.
- **Rainfall Forecast:** Rain is likely to occur at many places in Coastal Karnataka, at a few/many places over Coastal Andhra Pradesh, Telangana and Kerala and at isolated/ few places over remaining places. Isolated heavy to very heavy rainfall is likely to occur over Coastal Karnataka during next 48 hours.
- **Major Crops:**
 - Rice is at panicle emergence to grain filling stage. Harvesting of banana is almost completed. Pepper is at berry development stage and arecanut is at nut development stage. 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 cob formation stage, paddy crop is at tillering stage and groundnut is at flowering / pegging in Andhra Pradesh.
- *Kharif* crops viz., green gram and black gram (pod development / maturity), pigeon pea (early vegetative) and sugarcane (cane development) in Karnataka. This is proper time for sowing of sunflower.
- **Advisories:**
 - Due to continuous rains in North East Dry Zone (Gulbarga, Raichur) in Karnataka, green gram crop was affected at harvesting stage. Coupled with alternate bright sunshine for the last 15 days, pod shattering is also observed leading to severe loss of crop. As there are chances of rainfall again, arrange for proper storage facilities for the harvested produce to avoid germination of green gram seeds.
 - In Gulbarga & Yadgir districts of North Interior Karnataka, waterlogging in pulse crop fields is reported due to heavy and continuous rainfall. Arrange for drainage facilities to avoid water stagnation in the *kharif* crop fields.
 - Due to favourable weather conditions and receipt of good amount of rainfall in Andhra Pradesh, farmers are advised to undertake intercultural operations and application of fertilizers and pesticides depending upon forecast of rainfall.
 - Due to excess rainfall, waterlogging condition is reported in Southern Telangana Zone (Hyderabad, Medak, Rangareddy, Nalgonda). Farmers are advised to drain out excess water from the fields. Top dress with urea @ 25-30 kg per acre in rainfed crops like maize and cotton after draining out excess water.
 - Due to continuous rains in North East transition zone (Bidar) in Karnataka from last five days waterlogging condition is reported in the crop fields; so drain out excess water from the fields to avoid further damage.
 - Rain is likely to occur at many places in Coastal Karnataka and at a few/many places over Coastal Andhra Pradesh, Telangana and Kerala during next three days; farmers are advised to postpone intercultural operations, application of fertilizers and pesticides and irrigation to plantation crops and vegetable crops. Arrange for drainage facilities over Coastal Karnataka as there are chances of isolated heavy to very heavy rainfall during next 48 hours
 - As there was rain in all the districts of North Interior Karnataka, postpone irrigation to the crops.
 - Good amount of rainfall has been received at most of the places in North Dry Zone (Bijapur) in Karnataka during last week. As per the forecast, light to moderate amount of rainfall is expected during the next five days. Taking advantage of these rains sowing of sunflower, castor, horse gram, desi cotton (Jayadhar and Suyodhar) may be continued.
 - Late transplanting with aged seedling is observed in Central Dry Zone (Sirsi) in Karnataka. Under such circumstances, farmers are advised to use 4-6 seedlings per hill while planting instead of 2-3 seedlings per hill.
 - Farmers in Cauvery Delta Zone in Tamil Nadu are advised to undertake sowing of rice nursery for *latte samba/thaladi* utilizing Mettur dam water (varieties in Annexure I).
 - Present cloudy conditions coupled with high humid conditions over Scarce Rainfall Zone of Rayalaseema (Ananthpur, Kurnool) were favourable for the incidence of late leaf spot in groundnut. Spray Hexaconazole @ 2ml or Chlorothalanil @2g or Carbendizam @ 1 g + Mancozeb @ 2g/litre of water to control the disease.
 - Due to high humidity and cloudy weather prevailing in Southern Dry Zone (Chamarajanagara, Mysore, Mandya) in Karnataka and in Northern Zone (Kannur, Kasargod, Kozikod, Malappuram) in Kerala, banana plants may be affected by Sigatoka leaf spot disease; spray Hexaconazole @ 1 ml/liter of water to control the disease.

- Due to congenial weather condition prevailing in Chamarajanagara, there are chances of incidences of stem borer in maize; spray Endosulphan 35 EC @ 2 ml/ltr of water to control the pest.
- Under the prevailing weather conditions in Northern Zone (Kannur, Kasargod, Kozikod, Malappuram), there is a chance of attack of leaf sheath and leaf rot. Carbendazim @1g or Propiconazol @ 1ml/ litre of water can be sprayed to bring down incidence of fungal diseases on stem and sheath. There are also chances for the incidences of leaf roller in shaded condition. Unfold the folded leaves with a thorny twig and spray Quinalphos @ 2 ml/ litre of water. Trichogramma cards also can be used to control leaf folder @ 1card/ 5 cents
- Plant protection measures may be undertaken after spells of rain in Coastal Karnataka, Coastal Andhra Pradesh, Telangana and Kerala.
- **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.
 - Prevailing weather conditions are congenial for the occurrence of Hemorrhagic Septicemia and Black Quarter in cattle and ET and sheep pox in sheep in Andhra Pradesh; to prevent the diseases, vaccinate the animals.
 - The vector activity will increase in rainy months in North Eastern Zone (Chennai, Cuddalore, Thiruvallur, Kancheepuram, Vellore, Villupuram) in Tamil Nadu which may cause arthropod borne diseases like Anaplasmosis, Theiloriosis and Trypanosomiasis in cattle. Hence it is advised to avoid stagnation of water near animal sheds. The diseases can also be prevented by using fly repellents.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Most of the districts of the States of the region received good rain during last week.
- **Rainfall Forecast:** Rain is likely at many places in Konkan and Goa during the period. Rain is likely to occur at many places in Gujarat, Saurashtra and Kutch and Madhya Maharashtra during next 24 hours and decrease thereafter. Rain is likely to occur at a few places in Vidarbha and at isolated places in Marathwada during next 48 hours and increase thereafter. Isolated heavy to very heavy rainfall over Konkan & Goa and isolated heavy rainfall over Gujarat and Madhya Maharashtra would occur during next 48 hours.
- **Major Crops:**
 - *Kharif* rice (early tillering in East Vidarbha and tillering in Konkan, Kolhapur, Nashik & Pune (western parts) divisions), *kharif* jowar (vegetative), soyabean (flowering / pod formation), bajra (flag leaf initiation / flowering), cotton (floral bud initiation / flowering), sunflower (vegetative / floral bud formation), groundnut (flowering / pegging), red gram (early vegetative / primary branching), moong (flowering / pod formation / pod maturity at some places) and irrigated cotton (flowering / boll formation) in Maharashtra.
 - Rice (tillering / panicle initiation / flowering), groundnut (flowering / pegging / pod formation), cotton, maize, bajra, pigeon pea, soybean, sesamum, green gram and black gram (vegetative / flowering) and castor (germination / early vegetative) in Gujarat.
- **Advisory:**
 - As rain is likely at many places in Konkan and Goa, Gujarat, Saurashtra and Kutch and Madhya Maharashtra, 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 Gujarat and Madhya Maharashtra during next 48 hours, farmers are advised to make arrangement for draining out excess water from the crop fields.
 - As rain occurred in most of the districts of the remaining parts of this region, postpone irrigation to the crops.

- Farmers in North Sourashtra Zone of Gujarat State are advised to sow Purva Til during first fortnight of September keeping seed rate of 3 kg / ha.
- Due to heavy rain cotton in black soil is likely to be infested by cotton para wilt in Central Maharashtra Plateau Zone; apply solution of 1.5 kg Urea + 1.5 kg MOP in 100 liters @ 150-200 ml / plant followed by 2 % DAP in 100 liters @ 150-200 ml / plant after 10days.
- Due to continues cloudy weather there is infestation of sap sucking pest (white fly, aphids & jassids) in *kharif* cotton in Nasik, Nagpur, Latur, Amravati divisions and Ahmednagar districts of Maharashtra; spray Acitamaprid 20% @ 4 g with sticker in 10 liters of water. Infestation likely to increase in West Vidarbha; if infestation exceeds ETL, spray Dimethoate 30% @ 10 ml or methyl dimeton 25% @ 8 ml or Acitamaprid 20% @ 4 g in 10 litres water.
- The incidence of rice leaf folder is reported on rice in some parts of 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.
- Due to cloudy and 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, infestation of semilooper in castor crop crossed ETL in North Sourashtra Zone of Gujarat State. To manage the semilooper infestation, arrange to install T type structur for sitting of birds or spray Quinalphos 20 ml / 10 litres of water.
- Infestation of leaf webber in sesame also crossed ETL in North Sourashtra Zone of Gujarat State. Spray Endosulfan @ 20 ml / 10 litres of water immediately.
- Apply plant protection measures after current spells of rain in Konkan and Goa, Gujarat, Saurashtra and Kutch and Madhya Maharashtra.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rain occurred over all the districts of Madhya Pradesh except Balaghat, Narsingpur, Panna, Seoni, Shahdod, Badwani, Bhind, Datia, Gwalior, Morena, Rajgarh and Sheopur Kalani districts and all the districts in Chhattisgarh except Bilaspur, Korba, Kowardana and Surguja districts during the period.
- **Rainfall Forecast:** Rain is likely at many places over Madhya Pradesh and at a few/ many places over Chhattishgarh for the next three days. Isolated heavy to very heavy rainfall is likely over West Madhya Pradesh during next 48 hours.
- **Major Crops:**
 - *Kharif* crop like soyabean, maize, sorghum, sesame, green gram and black gram (late vegetative) in Madhya Pradesh.
 - *Kharif* crops like black gram, green gram, soyabean, maize, etc (late vegetative), and sugarcane (cane development) in Chhattisgarh. This is proper time for nursery sowing and transplanting of rainy season vegetables.
- **Advisory:**
 - Postpone intercultural operations and application of fertilizers and pesticides in Madhya Pradesh and Chhattisgarh as there are chances of rain during next three days. Arrange for drainage facilities in West as there are chances for isolated heavy to very heavy rainfall during next 48 hours
 - Due to excess rainfall in Jhabua Hills Zone (Jhabua, Dhar, Alirajpur) in Madhya Pradesh, farmers are advised to arrange for proper drainage for release of excess water from the crop fields.
 - Farmers in Gird Zone (Ashoknagar, Gwalior, Morena, Bhind, Guna, Shoepur, Shivpuri) in Madhya Pradesh 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.
 - Those farmers who couldn't sow field crops in Kymore Plateau and Satpura Hill Zone (Jabalpur) are advised to undertake sowing of lady's finger and cowpea.
 - 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. Caster and horse bean can be sown in sufficient moisture condition (varieties given in Annexure I).

- Farmers in North Hill Zone (Jashpur, Korla, Surguja) of Chhattisgarh are advised to undertake planting of horticultural crops like mango, papaya, jack fruit, guava. Transplanting of chilli, tomato & brinjal may be done immediately. Sowing of sesamum & horse bean may be done immediately in upland areas of deficient rainfall.
- Due to favourable weather conditions in Jhabua Hills Zone (Jhabua, Dhar, Alirajpur) in Madhya Pradesh, there are chances of incidences of tobacco caterpillar and pod borer in kharif pulses; spray Trizophos 40 EC or Profenophos @ 2.0 ml/l for control.
- 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 crops 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.
- Plant protection measures may be undertaken after spells of rain in Madhya Pradesh and Chhattisgarh.
- **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

Assam

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

Brinjal: Pusa Kranti, Pusa Purple Long, Pusa Purple Round etc.

Meghalaya

SRI rice: Ranjeet, Naveen.

Bihar

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

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

Sweet potato: Pusa Safed, Kalmegh.

Safflower: Birsa Sarguja-1, Birsa Sarguja-2 etc.

Vegetable pea: Arkel, Azad Pea-1.

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

Maize: H.Q.P.M.-1, Suwan.

Potato: Kufri Chandramukhi, Kufri Ashoka, Kufri Kanchan.

Kulthi: Birsa Kulthi-1, Madhu.

Marigold: Pusa Basmati, Pusa Narangi.

Gladiolus: American Beauty, Jackson Willy Gold, Her Majesty etc.

West Bengal

Urd: Navin.

Arhar: Sarad and Pusa 9.

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.

Punjab

Radish: Asiatic (Desi) varieties -Pusa Chetki,

Carrot: PC-34

Turnip: Desi varieties

Haryana

Toria: T 9 and Sangam

Rajasthan

Ashwaghandha: Ashwaghandha-20 and Ashwaghandha-134.

Uttarakhand

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

Tamil Nadu:**Rice:**

Late samba and thaladi: ADT 38, ADT 46, Improved White Ponni, IR 20, Ambai 19, Paiyur1, Trichy 1, Trichy 3 and Co 50. For late Thaladi ADT 39 and ADT 42.

Late thaladi: ADT 39 and ADT 42.

Chhattisgarh

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 01.09.10

