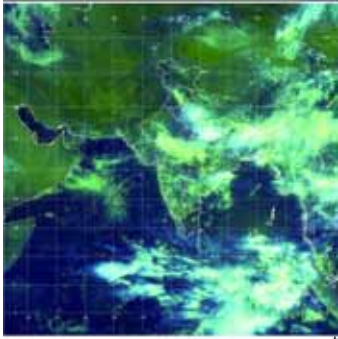




National Agromet Advisory Bulletin

Thursday, 13th August, 2009 (For the period 13th August to 17th August, 2009)



Satellite image 5 UTC Dated 13th August

Chief Synoptic Feature (Based on 0530 hours IST observations of 13th August 2009)

- The upper air cyclonic circulation over northeast Madhya Pradesh, southeast Uttar Pradesh and adjoining north Chhattisgarh persists and extends upto lower tropospheric levels. Under its influence, scattered to fairly widespread rainfall activity with isolated heavy to very heavy fall is likely over Madhya Pradesh during next 48 hours.
- Due to shift of monsoon trough slightly northward, fairly widespread to widespread rainfall activity with isolated heavy to very heavy falls is likely over Himachal Pradesh, Uttrakhand and Uttar Pradesh during next 2-3 days.
- Fairly widespread rainfall activity is also likely over northeastern states and adjoining east India with isolated heavy to very heavy fall over Assam & Meghalaya, Arunachal Pradesh, Sub-Himalayan West Bengal & Sikkim and Bihar during next 3-4 days.
- **KALPANA-1 Cloud Imagery at 0530 hours IST** shows convective clouds over Sub-Himalayan west Bengal & Sikkim, parts of Bihar, Uttar Pradesh and adjoining Uttrakhand. Low/medium clouds are seen over parts of northwest, west, central, east and Peninsular India.

Salient Agromet Advisories for Farmers

In general, most of the States in Northeast, East and northern parts particularly Himachal Pradesh, Madhya Pradesh, Chattisgarh, Uttar Pradesh and Uttarakhand received sufficient rainfall during last week. This rainfall was beneficial for the standing crops as well as sowing/transplanting of kharif crops in these regions. Though rainfall activity is subdued in the peninsula and parts of central India, crop condition is found to be satisfactory and farmers in the above mentioned regions are advised to apply light irrigation where the crop is facing stress condition. In the remaining parts of the country crop condition is found to be satisfactory. Brief advisory for the farmers in the country is placed in Annexure (enclosed).

Andhra Pradesh: As the rainfall is not adequate in some districts of the State, different districtwise cropping strategies including sowing of short duration *kharif* crops is advised in many parts of the State. Farmers in Telangana and Rayalaseema are advised to take short duration alternate crop in those areas having sufficient soil moisture. In Rayalaseema farmers are advised to wait for sowings of rainfed groundnut till 15th August.

Assam: Complete transplanting of *sali* rice.

Arunachal Pradesh: Continue transplanting of rice.

Chhattisgarh: Farmers are advised to complete transplanting of rice.

Karnataka: Undertake sowing of short duration alternate *kharif* crops in Interior Karnataka where sufficient amount of rainfall received. In north Interior Karnataka use water from naturally available sources like ponds, wells, rivers for irrigation to already sown/transplanted *kharif* crops.

Madhya Pradesh: Farmers are advised to complete transplanting of rice.

Bihar: Transplanting of aged rice seedlings may be done with increased number of seedlings. Farmers are advised to take pigeon pea in upland areas utilizing the realized rainfall.

Jharkhand: Undertake intercultural and weeding operations particularly in maize, arhar, groundnut.

Gujarat: Continue sowing of castor, tur. Undertake intercultural and weeding operations.

Maharashtra: Transplanting of rice is advised in Vidarbha. In Marathwada, west Vidarbha and Madhya Maharashtra, apply irrigation to already sown/transplanted crops.

East Uttar Pradesh: Direct seeding of rice is advised with improved varieties. Select short duration varieties of alternate crops like urd and pigeon pea and adopt closer spacing to compensate the yield loss.

West Uttar Pradesh: Sowing/transplanting of rice, urd, moong, groundnut and vegetables is advised.

Rajasthan: Sowing of Early maturing varieties of moth bean, cowpea and cluster bean is advised.

Punjab: Irrigation to rice crop may be applied two days after the ponded water has infiltrated into the soil.

Haryana: Complete sowing of short duration varieties of pearl millet, moong, urad, toria. Farmers are advised to conserve moisture.

New Delhi: Present weather is conducive for sowing of sweet corn and baby corn. Undertake transplanting of rice with realized rainfall.

Himachal Pradesh: Continue transplanting of vegetables and planting of horticulture crops.

Jammu & Kashmir: Continue transplanting of Basmati rice utilizing the realized and expected rainfall during next 5 days.

Nagaland Manipur Mizoram Tripura: Continue transplanting of rice. Oilseed crops like sesame, groundnut can be sown upto August end with early maturing varieties.

Sikkim: Water level of 3-4 cm should be maintained in rice field.

Tamil Nadu: Continue sowing of crops like cotton, groundnut and transplanting of rice seedlings.

Uttarakhand: Undertake sowing of urd with realized rainfall.

West Bengal: Complete transplanting of rice. Retting of jute may be continued

Orissa: Complete sowing of green gram and black gram.

Issued by National Agrometeorological Advisory Service Centre,
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The bulletin is also displayed in the website (<http://www.imdagrimet.org>) of the Division

Zonewise Agromet Advisories

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

- **Major Kharif Crops:** Rice, Vegetables
- **Crop Stage:** Sowing, transplanting
- **Crop Condition:** Good.
- **Realised Rainfall:** Many districts received good rainfall
- **Rainfall distribution for last 5 weeks**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
More than 3 weeks continuously deficient to no rain					
Chamba	-69	-34	-80	-100	-87
Kinnaur	208	-77	-60	-98	-92
Lahaul and Spiti	-42	-72	-68	-97	-97
Shimla	**	-85	-35	-90	-32
Sirmaur	11	-64	-27	-92	-77
2 weeks continuously deficient to no rain					
Kangra	-59	10	5	-73	-23
Solan	-69	-63	48	-79	-67
Week by week rainfall distribution during last few weeks					
Bilaspur	-19	-11	167	-37	2
Hamirpur	-54	25	62	-57	43
Kullu	-23	-39	-57	-66	15
Mandi	-24	-69	-44	-73	18
Una	-62	103	187	-42	25

- **Rainfall Forecast:** Many places during next 24 hours and most places thereafter with isolated heavy rainfall
- **Advisory:**
- Transplanting of rice may be completed to avoid reduction in yields. Transplanting solanaceous vegetable crops may be taken up with realized rainfall.
- Farmers are advised for drainage in already sown maize and soybean fields.
- **Major Seasonal Crop:** Fruit crops, Flower crops and Vegetables
- Undertake weeding, intercultural operations and top dressing of fertilizers after current spells of rain.
- Farmers are also advised to arrange the staking in vegetable crops to avoid the damage.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - fruit rot in tomato, chilli and Shimla mirchi, spray Dithane M-45 @ 2-3 g per litre of water at 10-15 days interval.
 - red pumpkin beetle and fruit fly in curcubits, spray Malathion 1ml/litres +50 gram gur or sugar. For control of red pumpkin beetle spray cypermethrin @ 30ml per 30 litres water in one kanal.
 - white fly in cucurbits, tomato and French bean, for control spray acephate @ 0.05% (7 g/ litres of water) and direct the spray on lower leaves.
 - Undertake spraying after current spells of rain.

Uttarakhand

- **Realised Rainfall:** Most districts of Uttarakhand received good rainfall.
- **Rainfall distribution for last 5 weeks**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
Almora	-42	9	-66	-91	-37
Chamoli	-35	23	14	-91	-66
Champawat	-3	70	-15	-90	26
Dehradun	-77	-26	27	-63	31
Garhwal Pauri	-63	-12	44	-59	-15
Garhwal Tehri	-73	-37	-62	-90	-75
Haridwar	-67	124	101	-68	-51
Nainital	-46	-73	-22	-97	-7
Pithorgarh	-35	2	-17	-57	-12
Rudraprayag	-69	-46	-47	-91	-86
Udham Sing Nagar	-55	-84	-45	-88	-86
Uttarkashi	35	176	29	-83	-88

- **Rainfall Forecast:** Many places during next 24 hours and most places thereafter with isolated heavy to very heavy rainfall.
- **Major Kharif Crops:** Rice, Soyabean, Groundnut, Tur, mung, sesame.
- **Crop Stage:** Transplanting
- **Crop Condition:** Good
- **Advisory:**
 - Undertake weeding and intercultural operations in early transplanted rice after current spells of rain.
 - Undertake sowing of urd with realized rainfall.
- **Major Seasonal Crop with stage:** Sugarcane ratoon (early vegetative), cabbage, garlic, tomato (vegetative), maize, French bean (early vegetative),
- **Crop Condition:** Good
- **Advisory:** Apply weeding and intercultural operation after current spells of rain.
 - Undertake planting of mango, litchi, guava, citrus, loquat and amla and sowing of annual flower crops.
 - Farmers are advised to postpone irrigation to the standing crops as there was good rainfall in most of the districts during last week and rainfall is likely at many places during next 24 hours and most places thereafter with isolated heavy to very heavy rainfall. Provide adequate drainage facilities to avoid waterlogging due to heavy rainfall.
- **Advisory for Plant Protection:** Weather conditions are favourable for mild incidences of –
 - khaira disease in rice in valleys, if appears in the crop under irrigation, farmers are advised to spray the solution of 5 kg zink sulphate and 20 kg urea in 1000 litre of water/ per hectare for control of the said disease.
 - Undertake spraying of pesticides after current spells of rain

Punjab

- **Realised Rainfall:** Six out of 16 districts of Punjab received good rainfall
- **Rainfall distribution for last 5 weeks**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
More than 3 weeks continuously deficient to no rain					
Amritsar	-24	-68	-52	-92	-100
Bhatinda	47	-84	-22	-21	-100
Fatehgarh Saheb	-48	-88	-76	-68	-100
Ferozpur	-88	-100	-72	-75	-100
Muktesar	-56	-100	-84	-26	-100
2 weeks continuously deficient to no rain					
Hoshiarpur	-64	-16	190	-51	-28
Sangrur	117	-4	49	-55	-97
Week by week rainfall distribution during last few weeks					
Faridkot	-14	-100	-100	147	-100
Gurdaspur	-77	60	-13	11	-62
Jalandhar	-49	-80	245	113	-72
Kapurthala	-20	127	226	-21	130
Ludhiana	-3	-26	136	91	-95
Moga	-4	-100	-17	-6	-95
Nawashahar	-65	-20	54	100	-68
Patiala	-59	-53	34	-6	-100
Ropar	-55	91	63	-36	-6

- **Rainfall Forecast:** few places.
- **Major Kharif Crops:** Rice, maize, guar, til, urd, bajra, cowpea, cotton,
- **Crop Stage:** Sowing/ Early vegetative
- **Crop Condition:** Rice crop is in satisfactory condition.
- **Advisory:** Irrigation to rice crop may be applied two days after the pounded water has infiltrated into the soil but the rice fields should not be allowed to develop cracks. Last dose of nitrogen through 35-40 kg urea may be applied, if already not given. In case of iron deficiency, spray 1 per cent ferrous sulphate solution 2-3 times at weekly intervals.
- **Major Seasonal Crop with stage:** Sugarcane and Vegetables
- **Advisory:** Undertake weeding, intercultural operations in sugarcane and cotton on a non rainy day.
 - Start sowing of radish, cauliflower using 250 g seed of mid season varieties like Punjab Giant 26 and Giant Snow Ball in one marla bed area and planting of *kharif* onion both with bulbsets as well as seedlings where adequate rainfall received.
 - Undertake sowing of non-legume fodders in mixture with legume fodders like maize + cowpea, sorghum + guara.
 - Farmers are advised to apply irrigation to the standing crops as there was no significant rainfall in many of the districts during last week.
- **Advisory for Plant Protection:** Weather conditions are favourable for mild incidences of –
 - stem borer should be sprayed with either of the insecticide i.e. 350 ml of Hostathion 40 EC or 560 ml monocrotophos 36 SL or one litre of Dursban 20 EC in 100 litres of water per acre.
 - whitefly and jassid in cotton. Farmers are advised to monitor their fields regularly and check the population on economic threshold level with the recommended chemicals at recommended doses and not to go for mixtures for the control of jassid and whitefly.
 - Spray chemicals on a non rainy.

Haryana

- **Realised Rainfall:** Most districts of Haryana received deficient/scanty rainfall.
- **Rainfall distribution for last 5 weeks**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
More than 3 weeks continuously deficient to no rain					
Bhiwani	-32	-97	-62	-88	-100
Faridabad	-80	-100	-61	-97	-100
Fatehabad	-11	-61	-87	-84	-100
Gurgaon	-94	-83	-46	-96	-93
Hissar	-52	-96	-58	-94	-100
Karnal	-49	-100	-50	-66	-100
Mahendragarh	-54	-97	-75	-100	-95
Panchkkula	-73	-79	-33	-82	-83
Panipat	-45	-100	-72	-100	-94
Rewari	-9	-100	-98	-100	-100
Rohtak	-77	-69	-26	-99	-100
Sirsa	-64	-99	-92	-100	-100
Yamunanagar	-7	-55	-45	-64	-53
2 weeks continuously deficient to no rain					
Chandigarh	-74	-48	94	-29	-99
Jind	-30	-100	23	-84	-94
Jhajar	-49	-77	18	-82	-100
Sonepat	-50	-87	59	-71	-97
Ambala	-67	-61	14	-74	-86
Week by week rainfall distribution during last few weeks					
Kurukshetra	-90	-91	-74	-12	-100
Katihah	-76	-33	-38	-14	-100

- **Major Kharif Crops:** Rice, maize, guar, bajra, cotton
- **Crop Stage:** Sowing/ transplanting
- **Crop Condition:** Sowing could not be completed due to insufficient rainfall in Southern Haryana. Northern Haryana is mainly having irrigation facility, But due to insufficient rain rice transplanting stage is affected. Sowing of Bajra, Pulses and Jowar is continued.
- **Rainfall Forecast:** Many places during next 24 hours and increase thereafter.
- **Advisory:** Advise to complete transplanting of basmati varieties Basmati 370 and Basmati 386 in northern part of Haryana and short duration *kharif* crops where adequate rainfall received under contingent planning based on the cut off dates of sowing (See Annexure). In the transplanted the rice, they save the crop with the available water resources. Farmers are advised to keep the rice field in saturated condition instead of maintaining stagnated water condition.
 - Farmers are advised to conserve the moisture in the already sown standing crops by intercultural operations and along with removing excess seedlings in bajra and trash mulching in sugarcane.
- **Major Seasonal Crop with stage:** Spring sugarcane (early vegetative/vegetative), vegetable crops (vegetative), cotton (early vegetative) and berseem (vegetative)
- **Crop Condition:** Good
- **Advisory:**
 - Undertake hoeing and weeding and apply the remaining dose of nitrogen fertilizer to the sugarcane after current spells of rain.
 - Farmers are advised to apply irrigation to the standing crops as there was no significant rainfall in most of the districts during last week.
 - Farmers are advised to undertake weeding and hoeing in cotton and intercultural operations in tomato, onion and chilli after current spells of rain.
- **Advisory for Plant Protection:** Weather conditions are favourable for mild incidences of –

- jassid in cotton crop, spray the crop with recommended insecticide by the University if there is incidence of jassid after current spells of rain.

Delhi

- **Realised Rainfall:** Good amount of rainfall in the State
- **Rainfall distribution for last 5 weeks**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
New Delhi	-94	-89	84	-95	-57

- **Rainfall Forecast:** many places.
- **Major Kharif Crops:** Maize, vegetables and rice
- **Crop Stage:** Sowing, transplanting
- **Crop Condition: Satisfactory**
- **Advisory:** Present weather is conducive for sowing of black gram with realized rainfall.
- Undertake transplanting of rice with realized rainfall.
- Farmers are also advised to undertake sowing of sweet corn varieties like Madhuri, vin orange and baby corn varieties like H. M. 4. Sowing of sweet corn may be completed before 15th August.
- Major Seasonal Crop with stage: Vegetables (flowering / fruiting / harvesting)
- **Crop Condition: Good**
- **Advisory:** During this week farmers are advised to do intercultural operation in vegetable crops after spells of rain. Present weather conditions are highly favourable for nursery preparation of mid-season cauliflower and short duration radish (Pusa Desi), spinach and onion.

Uttar Pradesh

- **Realised Rainfall:** Many districts of East Uttar Pradesh received good rainfall and many districts of West U.P. received deficient/scanty rainfall
- **Rainfall distribution for last 5 weeks**

East Uttar Pradesh					
More than 3 weeks continuously deficient to no rain					
Allahabad	**	-39	-57	-95	-85
Ballia	-99	-82	-27	-78	-61
Banda	-10	-65	-94	-97	-91
Farrukhabad	-13	-66	-71	-96	-83
Fatehpur	-57	-98	-80	-92	-90
Kanpur City	52	-86	-84	-97	-85
Kanpur Dehat	-18	-81	-98	-89	-68
Kushi nagar	-99	-100	-50	-58	-81
Mau	-100	-99	-63	-86	-73
Unnao	-32	-91	-22	-73	-78
3 weeks continuously deficient to no rain					
Mirzapur	-43	6	-76	-100	-100
Sant Ravidas Nagar	-47	6	-38	-100	-55
2 weeks continuously deficient to no rain					
Ambedkar Nagar	-100	-86	-11	-80	-69
Azamgarh	-37	-94	18	-100	-71
Bahraich	-41	-33	27	-32	-34
Balrampur	-84	-99	136	-75	49
Barabanki	27	-71	139	-74	-73
Basti	-90	-68	15	-72	-71
Faizabad	-81	-91	65	-88	-70
Gonda	-58	-92	47	-79	-73
Gorakhpur	-80	-23	46	-77	-32

Hardoi	-79	-67	84	-64	-60
Jaunpur	-15	-79	45	-93	-87
Kheri	-43	-46	-7	-59	-38
Lucknow	-48	-87	12	-20	-59
Maharajganj	-100	-79	**	-41	-70
Pratapgarh	33	-11	55	-91	-89
RaiBareilly	-24	-75	-13	-86	-98
Shrawasti	-83	-33	57	-28	-41
Sitapur	16	-91	66	-73	-82
Sonbhadra	-60	18	-8	-100	-95
Sultanpur	-71	-91	169	-70	-86
Varanasi	-63	-30	32	-100	-86
Week by week rainfall during previous week for remaining districts					
Balrampur	-84	-99	136	-75	49
Deoria	-96	-98	-64	-96	-6
Gazipur	-84	-67	-47	-98	12
West Uttar Pradesh					
More than 3 weeks continuously deficient to no rain					
Agra	-43	-58	-87	-100	-96
Aligarh	-70	-100	-56	-96	-93
Badaun	52	-86	-51	-71	-92
Etah	-56	-95	-78	-98	-89
Etawah	32	-62	-97	-92	-87
Firozabad	12	-87	-84	-100	-20
Hamirpur	117	-42	-97	-99	-93
Jotirba Phule Nagar	-28	-100	-84	-44	-100
Mahamaya Nagar	-87	-98	-96	-95	-99
Mainpuri	-31	-56	-98	-100	-61
Meerut	-57	-96	-66	-66	-81
Muzzaffarnagar	-75	-94	-90	-60	-98
Rampur	-65	-92	-72	-98	-89
Shahjahanpur	-15	-99	-34	-80	-63
3 weeks continuously deficient to no rain					
Auraiya	11	-12	-99	-90	-74
Bijnor	-57	6	-64	-79	-74
Jalaun	23	-2	-100	-96	-96
Jhansi	43	40	-99	-100	-96
Lalitpur	28	-3	-94	-100	-73
Mathura	-65	-6	-99	-100	-94
Moradabad	-45	41	-68	-92	-93
Saharanpur	-50	-19	-82	-79	-96
2 weeks continuously deficient to no rain					
Bareilly	-17	-89	4	-79	-92
Bulandsahar	-67	-90	-15	-92	-95
Pilibhit	-77	-98	-4	-71	-78
Week by week rainfall during previous week for remaining districts					
Ghaziabad	-73	-91	-57	-11	-81

- **Rainfall Forecast:** Many places during next 24 hours and most places thereafter with isolated heavy to very heavy rainfall
- **Major Kharif Crops: East UP:** Rice, mung, jowar, bajra.
- **West UP:** Rice, groundnut, urd, mung and vegetables
- **Crop Stage:** Sowing/ early vegetative stage
- **Crop Condition:**

- **East UP:** Crop sowing has been affected due to insufficient rain
- **West UP:** Crop sowing has been affected due to insufficient rains.
- **Advisories:**
 - Sowing of early varieties of cauliflower, tomato, celeri at an elevated place may be undertaken and give support to creepers and vegetables plants.
 - Undertake weeding, intercultural operations in early sown crops after current spells of rain.
- **Major Seasonal Crop with stage:** Sugarcane (vegetative) and vegetables (vegetative/fruited), mango (fruit setting)
- **Crop Condition: Good**
- **Advisory**
 - Undertake weeding, intercultural operations and application of fertilizers in the standing crops like sugarcane, vegetables and mentha after current spells of rain.
 - Continue field preparation and planting of turmeric and ginger
 - Farmers are advised to postpone irrigation to the standing crops as rainfall is likely at many places during next 24 hours and most places thereafter with isolated heavy to very heavy rainfall. Provide adequate drainage facilities to avoid waterlogging due to heavy rainfall.
- **Plant Protection:** Weather conditions are favourable for mild incidences of fruit borer in tomato and brinjal, spray the solution of Carbaryl @ 2 g / litre of water after current spells of rain.

J & K

- **Major Kharif Crops:** Rice, maize, vegetables
- **Rainfall distribution for last 5 weeks**

State/Districts	22.07.09	29.07.09	05.08.09	12.08.09
More than 3 weeks continuously deficient to no rain				
Ladakh(Leh)	-100	-92	-100	-100
Udhampur	-31	-57	-73	-32
3 weeks continuously deficient to no rain				
Kupwara	72	-37	-90	-95
2 weeks continuously deficient to no rain				
Anantnag	-44	76	-83	-58
Doda	-75	36	-78	-76
Kathua	-4	-10	-59	-29
North Baramula	-61	30	-83	-95
Pulwama	-86	147	-49	-50
Srinagar	-74	12	-93	-66
Week by week rainfall distribution during last few weeks				
Jammu	127	-55	35	18

- **Crop Stage:** transplanting
- **Crop Condition:** improving due to recent rainfall.
- **Realised Rainfall:** Good rainfall in many of the districts.
- **Rainfall Forecast:** few places.
- **Advisory:** Farmers are advised to take up sowing of short duration varieties of normally sown green gram and black gram crops and transplanting of late varieties of rice using 4-5 seedlings per hill utilizing the realized and expected rainfall during next 5 days.
- **Major Seasonal Crop with stage: Vegetables** (vegetative/flowering/fruited)
- **Crop Condition:** Good
- **Advisory:** Sowing of carrot and nursery sowing of knol khol may be done. Undertake harvesting of matured vegetable crops like brinjal, tomato, bhindi.
- **Plant Protection:** Apply phorate 10G @ 10 kg/ha or carbofuron 3G @ 20 kg/ha for control of root weevil and thread worms in rice on a non rainy day.

Rajasthan

- **Realised Rainfall:** Most districts received scanty rainfall in both the sub-divisions
- **Rainfall distribution for last 5 weeks**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
East Rajasthan					
More than 3 weeks continuously deficient to no rain					
Alwar	-32	-29	-26	-97	-94
Jaipur	-28	-25	-73	-100	-89
Jhunjhunu	26	-82	-73	-100	-94
Karauli	-53	-62	-73	-100	-71
Sawai Madhopur	-38	-37	-89	-100	-76
Sikar	-5	-80	-80	-100	-95
3 weeks continuously deficient to no rain					
Ajmer	19	18	-57	-100	-74
Baran	-43	50	-81	-100	-99
Bhilwara	8	53	-27	-100	-76
Bundi	-32	88	-87	-100	-94
Dausa	-51	4	-59	-100	-91
Jhalawar	48	125	-29	-100	-93
Kota	6	93	-53	-100	-93
Tonk	11	36	-68	-100	-94
2 weeks continuously deficient to no rain					
Bharatpur	-30	-16	31	-96	-71
Chittorgarh	13	94	37	-99	-65
Dungarpur	-44	366	121	-100	-82
Rajsamand	109	101	56	-100	-76
Sirohi	7	162	98	-98	-93
Udaipur	75	184	142	-99	-81
More than 3 weeks continuously deficient to no rain					
West Rajasthan					
Churu	-11	-84	-23	-100	-98
Hanumangarh	-33	-92	-44	-100	-100
Nagaur	-11	-48	-82	-100	-95
2 weeks continuously deficient to no rain					
Barmer	82	60	182	-100	-100
Bikaner	119	13	2	-100	-100
Jaisalmer	-24	-53	49	-100	-100
Jalore	8	44	19	-99	-100
Jodhpur	-33	-4	2	-100	-100
Pali	22	83	20	-99	-93
Sri Ganganagar	54	-92	10	-100	-100

- **Rainfall Forecast:** Many places in East Rajasthan with isolated heavy to very heavy rainfall at isolated places and few places in West Rajasthan.
- **Major Kharif Crops:**
- **East Rajasthan:** Cowpea, bajra, maize
- **West Rajasthan:** Pearl millet, sorghum, maize, cluster bean, Sesamum, Pigeonpea, Groundnut
- **Crop Stage:** Sowing
- **Crop Condition:** Satisfactory
- **Advisory: East Rajasthan:** Continue sowing of cowpea, sesame and bajra. Sow early maturing improved sesame varieties like RT125, RT 127 and RT 46. In case of late sowing prefer early maturing varieties of green gram, moth bean, cowpea, clusterbean and sesame instead of millets. Intercrop early maturing varieties of pearl millet with early maturing varieties of greengram, mothbean, cowpea, clusterbean and sesame.
- Arrange for drainage facilities to avoid water stagnation.

- **West Rajasthan:** Continue sowing of *kharif* crops (Pearl millet, sorghum, cowpea, soybean, urd, Sesamum, Pigeonpea, Groundnut).
- **Major Seasonal Crop with stage:** vegetable crops (flowering / fruiting / harvesting)
- **Crop Condition: Good**
- **Advisory:** Undertake intercultural operations in bajra, jowar, sweet gourd, cucumber, pumpkin, bitter gourd, tinda, tomato and ladies finger
- **Plant Protection:**
 - Spray Malathion 50 EC @ 1.0 ml or Endosulfan 35 EC @ 1.5 ml per litre water to control mango hopper in mango tree
 - Spray Karathane @ 1 ml or Sulphur Fungicide @ 2.5 g / litre of water to control .powdery mildew in mango and vegetables
 - Spray Endosulphan @ 2 ml per litre of water to control fruit borer in tomato, brinjal and bhindi in Banswara.
 - Spray chemicals after spells of rain in East Rajasthan and on a non rainy day in West Rajasthan.

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

Bihar

- **Realised Rainfall:** Most of the districts of Bihar received good rainfall.
- **Rainfall distribution for last 5 weeks**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
More than 3 weeks continuously deficient to no rain					
Bhojpur	-97	-96	-48	-98	-60
Kishanganj	**	-96	-70	-68	-99
Nalanda	-86	-46	-49	-92	-65
Siwan	-100	-87	-50	-73	-22
2 weeks continuously deficient to no rain					
Aurangabad	-64	16	7	-98	-78
Begusarai	-46	-41	27	-77	-65
Bhabua	**	-49	90	-100	-78
Gaya	-77	-78	2	-98	-69
Jhanabad	**	-49	9	-100	-86
Monghyar	-67	53	32	-53	-40
Rohtas	-41	-72	16	-95	-32
Saran	-100	-96	9	-93	-71
Week by week rainfall distribution during last few weeks					
Araria	-98	-72	-20	72	49
Bhagalpur	-62	-54	183	72	-17
Buxar	-89	61	-14	-99	115
Darbhanga	-95	-84	123	133	-32
East Champaran	-90	-96	123	60	105
Gopalganj	-100	-89	116	-53	40
Jamui	-93	-73	40	-98	-4
Kathihar	-89	-84	-5	88	-28
Khagadia	-79	-14	40	-29	8
Madhepura	-99	-94	-37	212	-77
Madhubani	-93	-65	191	121	-64
Muzaffarpur	-91	-92	6	-8	-52
Patna	-84	-85	-41	-88	81
Purnea	-78	-76	86	64	87
Saharsha	-98	-76	39	251	64
Samstipur	-72	-61	34	-18	1
Sitamarhi	-100	-99	26	141	-70
Supaul	-100	-74	88	110	-72
Vaishali	-98	-97	-86	-100	34
West Champaran	-84	-88	68	107	58

- **Rainfall Forecast:** Most places over Bihar during next 48 hours and at many places thereafter with isolated heavy to very heavy rainfall.
- **Major Kharif Crops:** urd, sunflower, maize and pigeon pea
- **Crop Stage:** Sowing/transplanting
- **Crop Condition: Good**
- **Advisory**
 - Farmers are advised to continue sowing of contingent crops like tur pigeon pea in upland areas in place of rice. Utilising the realized rainfall, farmers are advised to do paddy transplanting only in medium and low land situations with increased seedlings.
 - Farmers are advised to prepare the nursery for sowing of tobacco crop. Farmers are also advised to do the transplanting of early varieties of cauliflower.
- **Major Seasonal Crop with stage:** Sugarcane (vegetative/grand growth), fodder maize, jowar, lobia and sudan grass (vegetative)
- **Crop Condition:** Satisfactory
- **Advisory:**
 - Undertake intercultural operations, application of fertilizers after current spells of rain.
 - Postpone irrigation to the standing crops as there was good rainfall in most of the districts during last week and more rainfall along with isolated heavy to very heavy rainfall is likely. Provide adequate drainage facilities to avoid waterlogging due to heavy rainfall.
- **Plant Protection:** Weather conditions are favourable for mild incidences of
 - diseases in poultry birds. Care should be taken to ensure that poultry feeds and bed of the poultry house do not get wet from rain water.

Jharkhand

- **Realised Rainfall:** Many districts of Jharkhand received good amount of rainfall.
- **Rainfall distribution for last 5 weeks**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
More than 3 weeks continuously deficient to no rain					
Bokaro	-5	-66	-33	-95	-74
Godda	**	-31	-63	-100	-100
Koderna	-87	-28	-76	-100	-86
Ranchi	33	-23	-72	-29	-60
3 weeks continuously deficient to no rain					
Dhanbad	-54	-19	-29	-35	-71
Hazaribagh	-40	24	-62	-98	-97
Lohardagga	-93	1	-60	-96	-77
2 weeks continuously deficient to no rain					
East Singbhum	92	-25	32	-64	-59
Gumla	**	-13	-8	-85	-74
Palamau	-26	-15	-15	-99	-79
Week by week rainfall distribution during last few weeks					
Giridih	-74	-43	-66	38	-33
Santhal Parganas	-38	-75	-38	-10	-65
West Singbhum	-92	-22	-7	-74	-9

- **Rainfall Forecast:** Many places
- **Major Kharif Crops:** Maize, Arhar, Til, Ragi, Vegetables
- **Crop Stage:** Sowing
- **Crop Condition:** Crop condition is improving.
- **Advisory:** Continue sowing of maize in upland, middle land.

- **Major Seasonal Crop with stage:** Sugarcane (vegetative/grand growth),
- **Crop Condition: Good**
- **Advisory:** Farmers are advised to undertake weeding, intercultural operations in sugarcane after current spells of rain.
 - Undertake planting of mango variety like Mallika, Amrapali, Langra, Himsagar in the pits already filled with soil and manures.
 - Undertake transplanting of brinjal, chilly, tomato utilizing the realized rainfall.

Orissa

- **Realised Rainfall:** Most of the districts received good rainfall.
- **Rainfall Forecast:** Many places over Orissa
- **Major Kharif Crops:** Rice, ragi, arhar, maize, green gram, blackgram
- **Crop Stage:** Satisfactory
- **Crop Condition:** Transplanting is continued.
- **Advisory:** Complete transplanting of rice.
 - Go for bushening of direct sown paddy in medium and low land at 21 days stage. Apply 16 kg nitrogen per acre at bushening followed by weeding and gap filling. Drain out the excess water at the time of fertilizer application and pond it again after one day. If basal dose fertilizer not applied, apply 18 kg Urea, 100 kg SSP and 26 kg MOP while bushening followed by top dressing of 35 kg Urea after 7 to 10 days.
 - Complete sowing of sesame, greengram and blackgram and vegetables like lady's finger, cowpea and cluster bean and raise vegetable nurseries for cauliflower, brinjal, tomato and chillies in uplands.
 - Undertake sowing of niger after 15th August in fallow upland. Grow high yielding varieties suitable for Orissa climate such as Deomali and IGP-76
- **Major Seasonal Crop with stage:** Sugarcane (early vegetative), vegetables (fruiting / harvesting), onion (vegetative), jute (vegetative),
- **Crop Condition: Good**
- **Advisory:** Undertake weeding, intercultural operations and application of fertilizers after current spells of rain.

Plant Protection: Weather conditions are favourable for aphid in the maize crop. Apply 300 ml Metasystox in 200 litre of water per acre as foliar spray after current spells of rain.

West Bengal

- **Realised Rainfall:** Most of the districts of West Bengal received good rainfall
- **Rainfall distribution for last 5 weeks:**

West Bengal					
More than 3 weeks continuously deficient to no rain					
SHWB					
Coochbehar	-95	-89	-31	-41	-32
3 weeks continuously deficient to no rain					
GWB					
Midnapore	8	17	-21	-21	-28
2 weeks continuously deficient to no rain					
GWB					
Howrah	-47	102	48	-73	-38
Districts received sufficient rainfall during previous week					
GWB					
Bankura	5	-15	-1	101	-24
Birbhum	-53	-14	-55	103	-36
Burdwan	-51	-59	-26	105	-17
Hooghly	-64	-34	-3	38	49
Murshidabad	-89	-77	34	6	155
Nadia	-78	-43	-50	127	120
24 Pargana (N)	-69	-5	-17	7	200
Purulia	14	-35	8	28	-24
24 Pargana (S)	-31	52	8	-56	7

SHWB					
Darjeeling	-33	-52	22	-6	-35
Jalpaiguri	-81	-70	12	-6	10
Malda	-86	1	-8	-12	-3
Dinajpur (N)	-98	-83	12	59	97
Dinajpur (S)	-81	-98	77	146	55

- **Rainfall Forecast:** Many places with heavy to very heavy rainfall at isolated places
- **Major Kharif Crops:** Rice, vegetables
- **Crop Stage:** transplanting
- **Crop Condition: Good**
- **Advisory:** Complete transplanting of rice seedlings.
 - Undertake transplanting of vegetable with the realized rainfall
 - Removal of excess water from the seedbed is advised.
- **Major Seasonal Crop with stage:** Sugarcane (vegetative), jute (harvesting)
- **Crop Condition: Good**
- **Advisory:**
 - Undertake retting of jute crop.
 - As rain/thundershowers are likely at many places over the State with heavy rainfall at isolated places is likely during next 48 hours, postpone irrigation and inter-cultural operations and provide drainage facilities to remove excess water.
- **Plant protection:** in bitter melon, cucumber mite is becoming severe in many places. To control, it apply Fenazaquin 10 EC @ 1.5 ml per litre of water. In pointed melon, fruit and vine rot is in severe condition. Remove the infected fruits and vine from the land. Spray Metalaxyl + Mancozeb @ 2.5 gm per litre of water. Reapply it after 10 to 15 days depending upon the disease condition.
 - Spray chemicals after spells of rain.

Sikkim

- **Realised Rainfall:** Good amount of rainfall was received over the state.
- **Rainfall distribution for last 5 weeks:**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
Sikkim	-30	-51	-14	-55	-53

- **Rainfall Forecast:** Many places with heavy to very heavy rainfall at isolated places during next 48 hrs.
- **Major Seasonal Crop with stage: Very High hills: Summer Potato:** Tuberization/Tuber Maturity/Early Harvesting; **High Altitude Maize:** Late Vegetative/Flowering (b) **High hills: Off-Season Vegetable crops:** Vegetative/Late Vegetative; **Seed Potatoes:** Tuberization/Tuber-Maturity/Early-Harvesting; (c) **High/ Medium/ Low hills: Maize:** Flowering/ Cob Maturity/ Early Harvesting; **Kharif Vegetables:** Vegetative/Late Vegetative; **Large Cardamom:** Transplanting of Seedlings/ Secondary Flowering/Primary Capsule Formation/Capsule formation & maturity (**low hills**) (**d**) **Medium & Low Hills: Rice:** tillering **Ginger:** Early Vegetative/Vegetative; **Orange:** Nursery Transplanting of Seedlings/ Flowering/ Early Fruiting/Fruiting.
- **Crop Condition: Good**
- **Advisory:** Deshooting/debugging of newly planted to 1 – 4 years old trees, upto a basal height of 40 – 50 cm should be done on monthly basis.
 - Nursery beds of large cardamom suckers may be mulched properly with dried forest leaves in order to prevent soil erosion and weed growth.
 - Inter-cultivate in the transplanted paddy as per usual practice in order to incorporate FYM/compost and to break and scratch the compact soil. This would make the soil loose and aerate it.
 - Water level of 5 cm to at least 3/2.5 cm should be maintained in transplanted paddy fields for better yield. During the tillering stage, in the medium hills, water level of 3-4 cm should be maintained to enable maximum tillering as in case of insufficient water, tillering will be less and facilitate excess growth of weeds.

- Top dressing of ginger with organic manures and mulching to be done after spells of rain and on monthly basis. Proper drainage to be maintained and weeding to be done after spells of rain.
- Diseased/pest infested suckers may be removed and destroyed.
- Chirke and Foorkey infected cardamom plants may be destroyed by uprooting and buried in the pits at regular intervals.

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

Assam

Realised Rainfall: Many districts received good rainfall during last week.

- **Rainfall distribution for last 5 weeks:**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
More than 3 weeks continuously deficient to no rain					
Dhubri	-94	-93	-29	-52	-63
Nowgong	-88	-41	-63	-74	-63
2 weeks continuously deficient to no rain					
Jorhat	-45	-42	16	-20	-56
Karbi Analog	-12	9	72	-31	-29
Week by week rainfall distribution during last few weeks					
Barpeta	-84	-64	42	344	-9
Bongaigaon	-90	-84	19	110	-34
Cachar	-70	-65	48	120	32
Darrang	-41	-79	171	106	-60
Dibrugarh	-47	-20	-55	56	71
East Garo Hills	-79	-100	-46	-17	-80
East Khasi Hills	-63	-67	57	-10	-10
Goalpara	-95	-51	25	166	-62
Golghat	20	-60	87	44	-64
Hailakandi	-90	-66	-68	-6	-40
Kamrup	-66	-44	99	59	-45
Karimganj	-49	-59	-58	91	84
Kokrajhar	-100	-95	-35	71	8
Lakhimpur	-26	-19	-48	58	31
Morigaon	-14	-5	6	-81	7
Nalbari	-29	-59	37	-3	7
Sibsagar	-43	-23	-33	-4	-36
Sonitpur	11	-46	-3	4	-70
Tinsukia	-84	-42	-48	19	16

- **Rainfall Forecast:** Many places with isolated heavy rainfall
- **Major Kharif Crops: Sali paddy**
- **Crop Stage: Transplanting**
- **Crop Condition:** Transplanting of sali rice is continued.
- **Advisory:** Continue trang
- **Crop Condition:** Transplanting of sali rice is continued.
- **Advisory:** Continue transplanting of sali paddy may be continued with 21-25 days old seedlings in case of semi dwarf and short duration varieties and 30-40 days in case of long duration and local variety Pusa Ketki, Pusa Dipali etc. in the 1st fortnight of August. High yielding varieties of green gram such as T-44, K-801 etc. and black gram(T-9, T-27 etc.) may be sown under the prevailing weather conditions.
- Postpone irrigation to the crops as rainfall at many places is likely along with isolated heavy rainfall. Provide adequate drainage facilities to avoid waterlogging.
- Use Prafulla or Gitesh variety of *Sali* rice for staggered transplanting in scanty rainfall situations.

- In lower Brahmaputra valley, aged seedlings of late rice varieties like Manohar Sali, Mainagiri, etc may be used for late planting condition. Sowing of Sesamum and Black gram should be started immediately in upland situation. Seed rate of black gram is 2-3 kg/bigha
- **Major Seasonal Crop with stage:** vegetables (vegetative / flowering / fruiting / harvesting), early *ahu* rice (tillering / panicle initiation), *Capsularis* jute (vegetative / harvesting), *Olorius* jute (vegetative), maize (vegetative) and sugarcane (vegetative),
- **Crop Condition:** Good
- **Advisory:**
 - As rain/thundershowers are likely at many places over the State, postpone irrigation.
- **Plant protection:** Weather conditions are favourable for mild incidences of –
 - pollu beetle in pepper, farmers are advised to apply Endosulfan 35EC or Dimethoate 30EC @ 1ml/ lit of water against grubs after current spells of rain.
 - stem bleeding in coconut tree. In case of infected plant, infected portion of stem should be scraped out completely and apply Bordeaux paste or coal tar after current spells of rain.

Arunachal Pradesh

- **Realised Rainfall:** Most of the districts received good rainfall
- **Rainfall distribution for last 5 weeks:**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
More than 3 weeks continuously deficient to no rain					
Changlang	-90	-82	-93	-65	-90
Week by week rainfall distribution during last few weeks					
East Kameng	-79	-41	78	54	-14
East Slang	-85	-99	-27	-2	-38
Lohit	-81	-84	-50	-6	124
Lower Subansiri	-86	-46	-28	-40	40
Papumpara	28	96	146	40	-9
Tawang	-80	-92	-9	-27	16
Tirap	-21	-61	15	67	28
Upper Subansiri	-88	-77	47	71	15
West Kameng	-48	33	229	96	-63
West Siang	**	-97	5	-20	**

- **Major Kharif Crops:** *jhum* rice, WRC rice, millets
- **Crop Stage:** vegetative
- **Crop Condition:** Good.
- **Realised Rainfall:** Most of the districts received good rainfall
- **Rainfall Forecast:** Many places
- **Advisory:** Postpone irrigation, weeding and intercultural operations. Maintain 3-5 cm standing water in rice field. Water logging in the field must also be avoided. Earthing up may be done after current spells of rain.
- **Major Seasonal Crop:** Vegetables
- Harvest the matured vegetable crops.
- **Plant Protection:** Prophylactic measure for protection of seed ginger rhizome from fungal disease may be taken.

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

Andhra Pradesh

- **Realised Rainfall:** Most of the districts in the State particularly Telangana and Rayalaseema received scanty rainfall except some districts in coastal Andhra Pradesh.
- **Rainfall distribution for last 5 weeks**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
More than 3 weeks continuously deficient to no rain					
Coastal Andhra Pradesh					
Guntur	-80	-86	-94	-91	-85
Krishna	-38	-47	-97	-87	-83
Nellore	-71	-83	-85	-23	-66
Prakasam	-36	-87	-100	-89	-80
3 weeks continuously deficient to no rain					
East Godavari	-19	-15	-91	-72	-69
Sirkakulam	86	42	-95	-32	-54
Visakhapatnam	76	-19	-83	-71	-79
West Godavari	-47	9	-93	-66	-51
Vizianagram	100	54	-92	-19	94
More than 3 weeks continuously deficient to no rain					
Telangana					
Adilabad	52	-66	-81	-99	-60
Hyderabad	-58	-45	-99	-100	-78
Karimnagar	30	-55	-90	-100	-72
Mehabubnagar	-61	-57	-98	-99	-86
Medak	-49	-56	-94	-100	-70
Nalgonda	-62	-68	-99	-100	-96
Nizamabad	41	-51	-88	-100	-80
Rangareddy	-38	-54	-96	-100	-87
Warangal	-4	-41	-97	-98	-98
3 weeks continuously deficient to no rain					
Khammam	43	-8	-92	-95	-75
More than 3 weeks continuously deficient to no rain					
Rayalaseema					
Anantapur	-84	-84	-91	-85	-81
Cuddapah	-96	-92	-99	-73	-86
Kurnool	-59	-81	-96	-84	-72
Week by week rainfall distribution during last few weeks					
Chittoor	-86	-93	-86	-11	-89

- **Rainfall Forecast:** Isolated places in Rayalaseema and at a few places in Telangana and coastal Andhra Pradesh
- **Major Kharif Crops:** Cotton, soybean, jowar, black gram, green gram, pearl millet, finger millet, jowar, green gram, groundnut, sunflower, rice, brinjal, tomato and chillies.
- **Crop Stage:** Sowing
- **Crop Condition:** Satisfactory. Sowing of crops like ground nut, jowar, maize, pulses, sesame, sunflower and cotton is affected in Rayalaseema and Telangana. Rainfed crops are under moisture stress condition in the State.
- **Advisory:** As the rainfall is not adequate in the State, different districtwise cropping strategies including sowing of short duration *kharif* crops is advised in many parts of the State. Farmers in Rayalaseema are advised to take short duration rainfed groundnut till 15th August. Take up sowings of rainfed crops like groundnut, cotton, redgram, castor etc. in those areas having sufficient soil moisture in Telangana. Protect the already sown crops with life saving irrigation.
- **Major Seasonal Crop:** Sugarcane and Vegetables
 - Farmers are advised to undertake intercultural operations in sugarcane, vegetables, early sown crops to keep the fields weed free in Telangana. Apply irrigation to the crops.
 - Harvesting of the muskmelon should be completed on bright sunny day.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - aphids in groundnut crop in Rayalaseema. To control spray monocrotophos @ 1.6 ml/lt. or dimethoate @ 2.0 ml/litre.
 - sucking pests in cotton. Apply Monocrotophos solution (Monocrotophos @ 25 ml in 100 ml of water) with soft brush on tender part of the stem at 20, 40 and 60 days after sowing.

- rice thrips and hispa.
- Incidence of Red pumpkin beetle is noticed gourds like bottle gourd, ridge gourd, snake gourd and cucurbits. Control it by spraying Carbaryl 50 WP @ 3 g per litre of water.

Karnataka

- **Realised- Rainfall:** Coastal Karnataka received good rainfall. Most of the districts in Interior Karnataka received scanty/deficient rain.
- **Rainfall distribution for last 5 weeks**

Karnataka					
State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
More than 3 weeks continuously deficient to no rain					
North Interior Karnataka					
Bagalkote	5	-35	-89	-79	-98
Bidar	-49	-63	-91	-100	-69
Bijapur	-40	-78	-92	-98	-94
Gulbarga	-55	-63	-94	-99	-81
Koppal	29	-85	-98	-84	-97
Raichur	-73	-91	-99	-88	-48
South Interior Karnataka					
Bellary	-25	-38	-93	-76	-70
Kolar	-81	-84	-92	-54	-80
Tumkur	-75	-35	-98	-21	-57
3 weeks continuously deficient to no rain					
Coastal Karnataka					
Uttar Kannada	50	8	-43	-54	-77
North Interior Karnataka					
Belgaum	277	200	-56	-53	-62
Dharwad	108	48	-73	-58	-89
Gadag	51	7	-95	-89	-87
South Interior Karnataka					
Chamarajnaragar	24	235	-100	-55	-81
Chickmagalur	150	169	-54	-26	-74
Chitradurga	12	2	-81	-86	-24
Hassan	-17	50	-54	-88	-92
Mandya	-10	16	-88	-26	-97
Week by week rainfall distribution during last few weeks					
Coastal Karnataka					
Dakshin Kannada	34	48	-47	-3	-51
Udupi	50	43	-20	6	-57
North Interior Karnataka					
Haveri	226	150	-7	-3	-72
South Interior Karnataka					
Bangalore Rural	-63	-68	-97	8	-4
Bangalore Urban	-83	-88	-100	6	-33
Davangere	43	111	-57	-38	-7
Kodagu	107	247	-48	-14	-43
Mysore	85	263	-89	6	-54
Shimoga	109	182	17	-15	-45

- **Rainfall Forecast:** Many places in coastal Karnataka and South Interior Karnataka and few places in North Interior Karnataka.
- **Major Kharif Crops:** Jowar, Maize, Bajra, Redgram, Ragi, Greengram, Blackgram, Cowpea, Sesamum, Groundnut, Sunflower, Soyabean, Cotton.
- **Crop Stage:** Sowing/ transplanting. Early sown crops are at early vegetative/vegetative stage.
- **Crop Condition:** Satisfactory. Due to poor rainfall in many parts of north/south interior Karnataka, sowing of rainfed crops have been affected.

- **Advisory:** Continue transplanting of rice in coastal Karnataka. Undertake sowing of short duration alternate *kharif* crops in Interior Karnataka where sufficient amount of rainfall received (See Annexure I). In the already transplanted rice field in North Interior Karnataka, apply irrigation to save the crop.
- **Major Seasonal Crop:** Sugarcane and Vegetables
- Undertake ratooning in sugarcane. Undertake intercultural operations in sugarcane and early sown crops to keep the field weed free on a non rainy in North Interior Karnataka and after current spells of rain in South Interior Karnataka and coastal Karnataka.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - powdery mildew disease in green gram, spray Carbendazim 0.1%.
 - thrips, mites and murda-complex disease in chilli, spray 1.7 ml Rogar or 1.5 ml Metasystox +2.5ml Dicofol per litre of water.
 - Undertake spraying on a non rainy day in South Interior Karnataka and after current spells of rain in coastal Karnataka.

Kerala

- **Realised Rainfall:** Most of the districts of the state received sufficient amount of rain.
- **Rainfall distribution for last 5 weeks**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
3 weeks continuously deficient to no rain					
Ernakulam	-31	49	-49	-20	-75
Idukki	16	82	-74	-37	-42
Kollam	-44	95	-76	-51	-67
Malappuram	24	119	-59	-40	-59
Palakkad	84	177	-60	-34	-77
Thiruvananthapuram	-32	74	-90	-42	-95
Wyanad	35	110	-84	-67	-82
Week by week rainfall distribution during last few weeks					
Alappuzha,	-59	46	-66	-16	-86
Kannur	3	96	-40	-5	-40
Kasaragod	-24	21	-50	-2	-55
Kottayam	-59	25	-81	25	-71
Kozhikode	33	151	-44	-6	-60
Thrissur	-2	119	-67	-2	-74
Pathanamthitta	-48	16	-65	**	-56

- **Rainfall Forecast:** Many places
- **Major *Kharif* Crops:** Rice
- **Crop Stage:** Tillering in problem area zone.
- **Crop Condition:** Good.
- **Advisory:** Intercultural operations, application of fertilizers and pesticides may be continued after current spells of rain.
- **Major Seasonal Crop:** Vegetables and plantation crops (coconut, arecanut, pepper and cashew).
- Intercultural operations, application of fertilizers and pesticides may be continued after current spells of rain
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - leaf folder and stem borer in paddy fields. Farmers may go for Tricho cards (*Trichogramma chilonis* against leaf folder and *Trichogramma japonicum* against stem borer) if their incidence noticed.
 - thrips in broadcasted rice field, spray carbaryl or dimethoate @250ml/ha.
 - Undertake spraying current spells of rain.

Tamilnadu

- **Realised Rainfall:** Most of the districts of the state received deficient/scanty rain.
- **Rainfall distribution for last 5 weeks**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
More than 3 weeks continuously deficient to no rain					
Dharmapuri	-76	-86	-100	-93	-100
Karur	-100	-99	-100	-95	-24
Krishnagiri	-65	-94	-100	-36	-86
Namakkal	-100	-89	-93	-69	-80
Ramanathapuram	-100	-99	-100	-44	-91
Thanjavur	-97	-79	-100	-60	-65
Virudhunagar	-100	-100	-100	-100	-89
3 weeks continuously deficient to no rain					
Kanyakumari	45	204	-100	-61	-95
Nilgiris	110	189	-71	-42	-57
Tirunelveli	147	687	-100	-96	-97
Week by week rainfall distribution during last few weeks					
Chennai	-99	-91	-25	-12	-29
Coimbatore	611	1127	-7	162	24
Cuddalore	-100	-75	-100	247	-96
Dindigul	-95	-46	-99	-16	-83
Erode	-100	19	-100	-11	-93
Kanchipuram	-99	-98	-37	154	-90
Madurai	-100	-99	-98	220	-59
Nagapattinam	-100	-96	-100	306	-33
Perambalur	-100	-92	-100	29	-97
Pondicherry	-75	-93	-100	129	-61
Pudukottai	-100	-63	-97	-2	-98
Salem	-97	-15	-91	85	-93
Sivaganga	-100	-97	-78	167	9
Theni	388	358	-87	36	-66
Tiruvallur	-98	-93	-31	63	-67
Tiruvannamalai	-100	-100	-100	171	-96
Tiruvarur	-100	-100	-100	-2	5
Trichy	-100	-100	-100	5	-100
Tuticorin	-100	-81	-100	12	-100
Vellore	-100	-99	-94	29	-100
Villupuram	-79	-93	-100	286	-89

- **Rainfall Forecast:** Isolated places
- **Major Kharif Crops:** Groundnut, pulses and rice
- **Crop Stage:** Sowing/transplanting
- **Crop Condition:** Good
- **Advisory:** Continue sowing of crops like pulses, groundnut and transplanting of rice seedlings wherever sufficient rainfall received during last week.
- **Major Seasonal Crop:** Sugarcane, banana and vegetables.
 - Intercultural operations, application of fertilizers may be continued in vegetables and sugarcane
 - Apply irrigation to the standing crops as there was no significant rainfall in most of the districts during last week.
 - Due to the forecast of high wind speed for coming days, provide staking for banana in Virudhunagar and rubber and banana in Kanyakumari.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - sheath blight in rice, spray edifenphos at 1 l / ha to control the disease.
 - cigatago leaf spot in banana. If incidence is noticed, spray carbendazim @ 1 g / l.
 - mealy bug incidence in papaya, cotton and mulberry crops. Look out for the incidence and spray Neem oil 3% to avoid the spread of the pest incidence to other crops.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT, RAJASTHAN]
Maharashtra

- **Realised Rainfall:** Most of the districts of the Konkan & Goa and Vidarbha received rain and most of the districts in Madhya Maharashtra, Marathwada received no rain
- **Rainfall distribution for last five weeks**

Maharashtra					
State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
More than 3 weeks continuously deficient to no rain					
Konkan & Goa					
Mumbai	189	-41	-46	-98	-92
Ratnagiri	51	-22	-34	-81	-84
Madhya Maharashtra					
Dhule	52	-30	-56	-100	-82
Solapur	40	-53	-85	-100	-99
Marathwada					
Beed	40	-38	-93	-100	-96
Latur	15	-44	-96	-99	-81
Nanded	51	-71	-97	-100	-81
Usmanabad	49	-56	-67	-100	-100
Vidarbha					
Washim	7	-25	-73	-100	-96
Yeotmal	-45	-36	-73	-100	-79
3 weeks continuously deficient to no rain					
Konkan & Goa					
Goa	70	-1	-66	-73	-88
Raigad	67	**	-25	-91	-86
Sindhudurg	122	-7	-42	-76	-80
Madhya Maharashtra					
Jalgaon	12	53	-41	-99	-93
Sangli	62	15	-30	-92	-77
Marathwada					
Aurangabad	15	39	-55	-99	-90
Jalna	126	31	-68	-100	-88
Parbhani	45	-17	-89	-100	-85
Vidarbha					
Akola	-11	29	-50	-100	-70
Amraoti	-11	59	-50	-100	-93
Bhandara	143	32	-62	-93	-68
Buldhana	-9	42	-43	-100	-78
Chandrapur	2	28	-62	-99	-68
Gadchiroli	41	14	-44	-99	-41
Gondia	142	55	-60	-98	-70
Nagpur	118	49	-30	-99	-63
Wardha	-20	28	-51	-100	-87
2 weeks continuously deficient to no rain					
Konkan & Goa					
Mumbai	189	-41	-46	-98	-92
Raigad	67	**	-25	-91	-86
Ratnagiri	51	-22	-34	-81	-84
Sindhudurg	122	-7	-42	-76	-80
Thane	32	113	81	-93	-85
Madhya Maharashtra					
Ahmednagar	-2	-1	-1	-99	-99
Jalgaon	12	53	-41	-99	-93
Kolhapur	176	104	59	-71	-72
Nandurbar	-2	69	3	-95	-64
Nasik	-11	252	269	-90	-61
Pune	23	-1	-1	-94	-91

Sangli	62	15	-30	-92	-77
Satara	132	70	81	-84	-65

- **Rainfall Forecast:** Many places over Konkan & Goa and Madhya Maharashtra, at few places over Vidarbha and isolated over the Marathwada.
- **Major Kharif Crops:** Rice, ragi, cotton, Vegetables, Pulses, bajra, groundnut, tur, horse gram, soybean, jowar
- **Crop Stage:** Rice in seedlings/ transplanting and other *kharif* crops are in early vegetative stage. Irrigated cotton is at vegetative/ floral bud formation and early sown green gram & black gram are at flowering stage.
- **Crop Condition:** Good in Konkan and Satisfactory in other areas.
- **Advisory:** Complete transplanting of rice in Vidarbha. For one month old seedlings, 4 to 5 seedlings per hill may be transplanted.
 - Transplanting of rice is advised in Vidarbha. Alternative crops like sunflower, castor, pearl millet, sesamum can be sown till August 15th.
- **Major Seasonal Crop:** Fruit crops, Sugarcane and vegetables
 - Apply second dose of nitrogenous fertilizers to *kharif* rice in Konkan & Kolhapur divisions.
 - Spray 2 % Urea in soyabean at flowering stage.
 - Apply supplementary irrigation in Marathwada
 - Undertake intercultural operation, fertilizer application in early sown crops, sugarcane and vegetables after current spells of rain in Konkan & Goa and Madhya Maharashtra, on a non rainy day over Vidarbha
 - **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - blast in cotton in central vidarbha zone. Spray copper oxy chloride @ 25 gm + Streptocyclin @ 1 gm in 10 liters of water.
 - blue beetle and leaf folding caterpillar & blast in *kharif* paddy. For control of blue beetle and leaf folding caterpillar, spray carbaril powder @ 2gm / lit of water with 1 ml sticker and for control of blast disease in transplanted rice field, spraying of Carbendazim @ 1gm / liter or copper-oxy-chloride @ 2.5gm/liter of water with 1 ml. sticker may be done.
 - There is attack of leaf girdle beetle on soyabean crop in western Maharashtra plain zone and Central Maharashtra plateau zone. For control, spray Dimethoate @ 30% 10 ml or Endosulfan @ 35% @15 ml per 10 lit of water. Also there is attack of green semilooper in Latur, Amravati and Nadpur division, spray Endosulfan 35% @17ml per 10 liters of water.
 - Undertake spraying after current spells of rain in Konkan & Goa and Madhya Maharashtra, on a non rainy day over Vidarbha.

Gujarat

- **Realised Rainfall:** Most of the districts of the state received no significant rain.
- **Rainfall Forecast:** Few places.
- **Major Kharif Crops:** Rice, castor, pigeon pea, cotton, groundnut, bajra, sesamum, cluster bean, pulses
- **Crop Stage:** Sowing
- **Crop Condition:** Crop condition is satisfactory
- **Advisory:** Continue sowing of castor, tur
- **Major Seasonal Crop:** Fruit crops, Sugarcane and vegetables
 - Undertake intercultural operation and application of fertilizer and plant protection measures to the early sown standing crops.
 - Undertake planting of different fruit crops like mango, sapota, pomegranate, lemon, guava, custard apple etc.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - seedling rot in vegetable nursery, drench nursery with Bordeaux mixture@ 0.6% or Ridomil MZ@0.05% on a non rainy day.

- collar rot and root rot diseases are observed in cotton and groundnut. Spray carbandezim @10 gm + mencozeb @ 20 gm in 10 liters of water on a non rainy day.

CENTRAL INDIA [M.P., CHHATTISGARH]

Madhya Pradesh

- **Realised Rainfall:** Sufficient amount of rain received in most of the districts in East Madhya Pradesh and deficient/scanty rains in West Madhya Pradesh.
- **Rainfall distribution for last 5 weeks**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
More than 3 weeks continuously deficient to no rain					
Chhatarpur	20	-23	-94	-100	-89
Katni	-52	-69	-89	-100	-76
Panna	22	-30	-97	-100	-92
Satna	1	-25	-90	-100	-96
Umaria	-53	-35	-44	-100	-88
3 weeks continuously deficient to no rain					
Balaghat	45	108	-59	-95	-48
Damoh	-10	-9	-83	-100	-39
Dindori	-60	26	-71	-100	-78
Mandla	-44	39	-47	-100	-63
Narsingpur	-63	187	-59	-100	-22
Rewa	112	-14	-90	-100	-61
Seoni	42	145	-29	-100	-49
Shahdol	8	53	-92	-100	-77
Sidhi	13	34	-96	-100	-99
Tikamgarh	63	12	-97	-100	-83
2 weeks continuously deficient to no rain					
Chindwara	78	275	-14	-100	-96
Jabalpur	-43	225	-79	-100	13
Sagar	-30	44	-72	-100	25
State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
West Madhya Pradesh					
More than 3 weeks continuously deficient to no rain					
Badwani	20	-57	-32	-100	-86
Bhind	33	-51	-95	-97	-75
Morena	-14	-79	-97	-100	-87
3 weeks continuously deficient to no rain					
Bhopal	-3	368	-21	-100	-63
Datia	72	31	-99	-98	-86
Guna	-23	21	-71	-100	-20
Gwalior	52	-11	-93	-96	-91
Mandsaur	90	201	-24	-99	-54
Neemuch	39	27	-44	-100	-91
Raisen	-31	90	-37	-99	-56
Rajgarh	-9	282	-23	-100	-92
Sehore	14	146	-20	-99	-88
Sheopur Kalani	-89	-7	-97	-100	-55
Shivpuri	38	71	-80	-100	-48
Vidisha	-12	12	-55	-100	-41
2 weeks continuously deficient to no rain					
Betul	-27	223	-15	-100	-98
Dewas	-19	45	24	-99	-65
Dhar	84	1	66	-99	-80
Harda	-81	62	190	-100	-100
Hosangabad	-27	194	70	-99	-88

Indore	60	97	188	-99	-96
Jhabua	-15	15	98	-97	-94
Khandwa	4	87	36	-100	-96
Khargone	15	7	123	-98	-94
Ratlam	-20	35	91	-99	-68
Shajapur	-24	121	14	-100	-67
Ujjain	21	155	58	-99	-75

- **Rainfall Forecast:** Many places
- **Major Kharif Crops:** Rice, jowar, sunflower, maize, jowar and soybean
- **Crop Stage:** Sowing/transplanting. Early sown crops in early vegetative stage.
- **Crop Condition:** Good. However in Gwalior and Chambal divisions soybean and rice crops are under water stress conditions
- **Advisory:** Complete the transplanting of rice at earliest by reducing row distance and 2-3 seedlings per hill. Transplant the 14 days old seedlings in main field of rice for SRI system. Transplant the rice seedlings by lehi system if farmers couldn't follow SRI system.
 - Continue sowing of short duration *kharif* crops like rice, jowar, sunflower, maize, jowar and soybean.
 - Manage proper drainage facilities in the field. Follow inter cropping of maize and mung with soybean.
- **Major Seasonal Crop with stage:** Sugarcane (cane development), cotton (boll development/ maturity) and vegetable crops (vegetative)
- **Crop Condition: Good**
- **Advisory:** Undertake intercultural operations after spells of rain in the seasonal crop.
- **Plant Protection:** Weather conditions are favourable for-
 - fruit fly in okra in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts, spray trizophos crops in open weather conditions @ 1.5 ml per liter.
 - fruit fly in bhindi, tomato, beetle guard, cucurbit in Tikamgarh, Chattarpur and Datia, spray Malethyon 50 EC 1 ml or Trijophos 40 EC 1.5 ml per litre of water.
 - Sucking pest in soyabean in Bhopal, Sehore, Damoh, Vidisha, Raisen, Sagar, Sehore.
 - Application of pesticides may be undertaken after spells of rain.
- **Animal Husbandry:** To control ticks and mite in cattle, sheep and goat, apply butox / deltox @ 4 ml / litre of water on the body in Jhabua and Dhar districts.
- Arrange vaccination for animals to protect from the disease Galgotu, Langadi and Anthrex in Sagar, Bhopal, Vidisha, Damoh, Raisen, Sehore.

Chattisgarh

- **Realised Rainfall:** Most of the districts received good amount of rain.
- **Rainfall distribution for last 5 weeks**

State/Districts	15.07.09	22.07.09	29.07.09	05.08.09	12.08.09
More than 3 weeks continuously deficient to no rain					
Dantewara	78	-37	-74	-87	-69
Surguja	10	-21	-81	-95	-57
3 weeks continuously deficient to no rain					
Durg	218	71	-70	-99	-26
Janjgir	120	41	-86	-100	-42
Koriya	-30	90	-92	-99	-63
Raigarh	111	166	-73	-99	-55
Rajandgaon	169	42	-43	-99	-43
2 weeks continuously deficient to no rain					
Bastar	83	6	-3	-96	-47
Kanker	184	-9	-14	-100	-41
Korba	91	-3	-17	-98	-21
Week by week rainfall distribution during last few weeks					
Bilaspur	12	16	-70	-97	24
Dhamtari	507	29	-47	-100	23

Jashpurnagar	-2	32	-23	-70	-9
Kowardna	-55	15	-89	-100	42
Mahasumund	220	480	-58	-100	14
Raipur	200	147	-71	-97	-4

- **Rainfall Forecast:** Many places in north Chattisgarh and few places in south Chattisgarh.
- **Major Kharif Crops:** Rice, soybean, maize, sesamum, tur.
- **Crop Stage:** Sowing/transplanting
- **Crop Condition:** Good
- **Advisory:** Farmers are advised to undertake transplanting of rice. In case of older seedlings transplant two to three plants per hill. Where the nursery of rice is not raised, farmers are advised for *lehi* cultivation or line sowing.
 - Undertake sowing of soybean, pigeonpea with soybean.
 - Conditions are favourable for biasi of direct seeded rice. Hence, wherever direct seeded dry sown rice is of about 25-30 days old, biasi operation can be performed. After biasi operation Saghan Chalai should be done at the earliest.
 - Undertake sowing of maize, groundnut and black gram (in light soils of transmahanadi belt of Chhattisgarh).
- **Major Seasonal Crop with stage:** Sugarcane (vegetative), vegetables (flowering / fruiting / harvesting), irrigated maize (vegetative)
- **Crop Condition:** Good
- **Advisory:** Intercultural operation and earthing up and also application of fertilizers may be continued on after spells of rain in north Chattisgarh and on a non rainy day in south Chattisgarh.

Annexure I

Bangalore (urban) and Tumkur

- Farmers are advised to raise nursery of Fingermillet (ragi). Short duration varieties for direct sowings can be taken up(Indaf-8,Indaf-9,HR-911,PR-202 and MR-10). In the tank fed area, farmers are advised to go for preparation of paddy nursery. The Medium duration varieties recommended are: IR-3864, Puspa ,IR-20 & Hybrid KRH-1 KRH-2 Short duration Rasi(IET-1444), Tellahamsa, Mangala, Mukthi(CTH-3)

Bidar

- The farmers are advised to go for sowing of niger, horsegram, bajra, sunflower as an alternative crop.
- Those farmers who have irrigation facilities can sow the pigeon pea with 25% extra seeds than recommended seed rate

Technology Tips for Mitigating Drought in Sugarcane

- In the event of drought 60 kg K₂O/ha may be applied with last irrigation
- Weed control through herbicides may be taken in late planted cane (2; 4-D @1.5 kg/ha)
- If there are no rains then mulching by dry leaves and grasses may be done to conserve soil moisture.
- Spray of 2.5% each of urea and Kcl in the situations of prolonged drought
- The hoeing in inter row spacing may be undertaken to create dust mulch to break soil capillaries for checking surface moisture loss.

Bijapur

- Contingency crops for August first fortnight sowing in red and shallow black soils: In places where sowing was not taken up during June and July due to non receipt of rainfall, sowing of bajra,

sunflower, Navane, Horsegram and intercropping of Sunflower + Castor in 4:2 row proportion is advised.

- Contingency crops for August first fortnight sowing in medium to deep black soils : Sowing of bajra, sunflower, horsegram, *herbicum* cotton (Jayadhar, Suyodhar), intercropping of Sunflower + Castor in 4:2 row proportion, and cotton as relay crop in Ground nut crop can be taken up.
- To conserve moisture in the lands where *kharif* sowing is not done and that land is spared for *rabi* sowing, compartment bunds/contour bunds can be made and/or repeated intercultivation to conserve water can be practiced.
- Due to low rainfall during July in the district, some area has not been sown. This may result in shortage of fodder to animals. So, sowing of fodder crops like fodder sorghum and maize, cowpea, horse gram can be given preference in the land where the *kharif* crops have not been sown and also on lands which are spared for sowing of *rabi* crops.

Raichur and Gulbarga

- In areas left unsown due to lack of rainfall and land areas sown by early season *kharif* crops like greengram, blackgram etc., and harrowed due to lack of soil moisture are to be kept ready for late sowing of late *kharif* crops like Sunflower, Navane, Horsegram and Bajra (even for fodder) and Medium to Long duration Tur crop(2/3 increased seed rate) sowings after receiving sufficient rain.
- Avoid inter culturing after 40 DAS of greengram.
- Inter cultivation is to be done in tur crops for moisture conservation and weed removal.
- Irrigated Cotton sowing/dibbling can be done wherever sufficient rainfall is received with varieties/Hybrids like Bunny, Neeraja, Bhakti, Kanaka etc. for sowing with proper spacing.