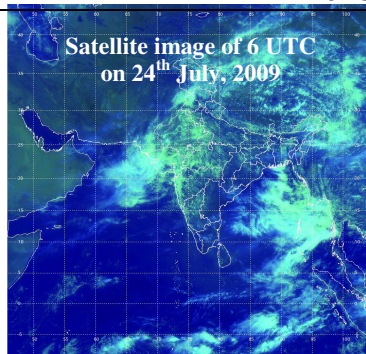




National Agromet Advisory Bulletin

Thursday, 23rd July, 2009 (For the period 23rd to 27th July, 2009)



Chief Synoptic Feature (Based on 1430 hours IST observations of 24th July 2009)

Widespread rainfall activity with heavy to very heavy rainfall at a few places and extremely heavy falls (≥ 25 cm) at isolated places is likely over southwest Madhya Pradesh, north Madhya Maharashtra, north Konkan and south Rajasthan during next 24 hours and over Gujarat state during next 2-3 days.

An upper air cyclonic circulation lies over Gangetic West Bengal and neighbourhood. Under its influence, fairly widespread rainfall activity is likely over West Bengal & Sikkim and northeast India during next 2-3 days.

Subdued rainfall activity is likely over central and adjoining east and Peninsular India during next 2-3 days.

KALPANA-1 Cloud Imagery at 1430 hours IST shows convective clouds over parts of eastcentral & southeast Bay of Bengal, Andaman Sea and north & adjoining central Arabian Sea. Low/medium clouds are seen over parts of western Himalayan region, remaining parts of west India, central, east, Peninsular and northeast India.

Salient Agromet Advisories for Farmers

The *kharif* crops in the peninsular, central parts and most parts of eastern region are in good condition and sowing and transplanting of the *kharif* crops are in full swing due to well distributed rainfall during last week. Because of the receipt of good amount of rainfall in earlier rainfall deficient states like Maharashtra, Gujarat, Rajasthan, J&K, Jharkhand farmers are advised to continue sowing/transplanting. Farmers in Bihar, Uttarakhand, Manipur, East UP, Haryana and parts of Assam, Rayalaseema and sub-Himalayan West Bengal are advised to sow short duration *kharif* crops because of insufficient rainfall or wait for the cut off dates for sowing of alternate crop.

Salient Agromet Advisory for the Problem Areas

Due to delay and insufficient rainfall following advisories for farmers are recommended:

Bihar: Farmers are advised to take sunflower, maize and pigeon pea in upland areas in place of rice where adequate rainfall is received. Transplanting of already raised rice seedlings may be done with irrigation facility. (Details of the advisory Annexure 1).

Uttarakhand: Transplanting of rice and sowing of short duration pigeon pea, groundnut, soybean is advised.

Manipur: Continue transplanting of rice with life saving irrigation. Avoid to take up alternate long duration crop in deficient rainfall areas.

East UP: Due to delayed monsoon/ insufficient rains, contingent plan is recommended: based on the age of seedling of rice. If nursery is around 30 days old, transplant 3-4 seedlings/hill in stead of 2. If it is 35-40 days old, cut 3-4 cm top portion of the seedling and then transplant. If no rice nursery is raised, go for direct sowing. Select alternate crops like mung, jowar, bajra, urd etc.

Haryana: Farmers are advised to transplant of short duration Basmati paddy after receipt of sufficient monsoon rainfall. If the farmers have already transplanted the rice, they save their crop with the available water resources. Farmers are advised to do the sowing of pearl millet after sufficient amount of rainfall in the areas where bajra sowing has not been done. Continue sowing of short duration *kharif* crops under contingent planning based on the cut off dates of sowing. (See Annexure 2).

Parts of Assam: Transplanting of sali rice is advised. Advise for applying life saving irrigation for the already transplanted sali rice in rainfall deficient districts of the State.

Rayalaseema: Farmers in Rayalaseema are advised to wait till the revival of monsoon and take short duration or alternate crop till the end of July.

Sub-Himalayan West Bengal: Continue transplanting of rice seedlings and vegetables with life saving irrigation. Due to scarcity of water start to prepare the nursery seedbed in polythene sheet.

Salient advisories for Sub-Division with delayed Monsoon (Maharashtra, Gujarat, Rajasthan, J & K, Jharkhand)

Maharashtra: Continue transplanting of rice in Konkan and Kolhapur regions. Sowing of short duration crops like bajra, tur, horse gram is advised in Madhya Maharashtra and Marathwada. Sowing of short duration crops viz; soybean, hybrid bajra, sunflower, coriander etc. Sowing of cotton and tur is advised in Vidarbha.

Gujarat: Undertake transplanting of rice. Transplant 4-5 leaved erect seedling at 20 cm x 15 cm spacing at the rate of two seedlings per hill. Water level in the field should be kept low while transplanting. Continue sowing of green gram, black gram, cluster bean, cowpea, groundnut, bajra, sesamum, pulses, cotton in all the districts.

Rajasthan: Continue sowing of cowpea and bajra is advised in East Rajasthan, continue sowing of *kharif* crops (Pearl millet, sorghum, maize, cluster bean, Sesamum, Pigeonpea, Groundnut) in West Rajasthan

Jammu & Kashmir: Farmers are advised to take short duration varieties of normally sown green gram and black gram crops and transplanting of late varieties of rice utilizing the realized and expected rainfall during next 5 days.

Jharkhand: Continue sowing of rice in upland and sowing of short duration rice variety in mid and low land.

In the remaining subdivisions farmers are advised to continue either sowing or transplanting of *kharif* crops

Issued by National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division, India Meteorological Department, Shivajinagar, Pune.

The bulletin is also displayed in the website (<http://www.imdagrimet.org>) of the Division

Comparison of weekly rainfall distribution (in % dep.) in different Met. Sub-divisions during past 5 weeks

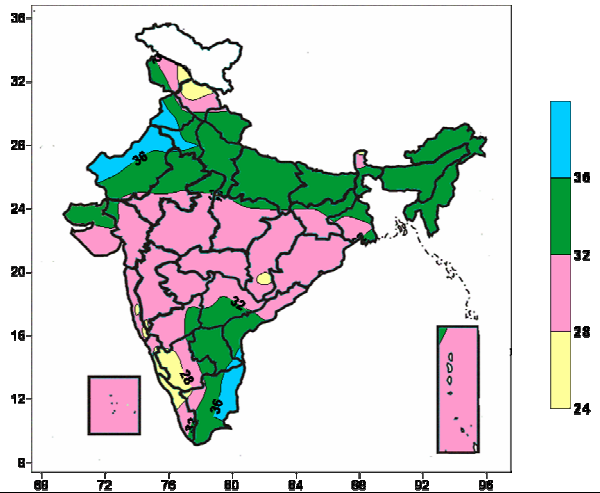
Sub-division	Cumulative Rainfall for the period									
	24 th June		1 st July		8 th July		15 th July		22 nd July	
	Normal (mm)	% Dep.	Normal (mm)	% Dep.	Normal (mm)	% Dep.	Normal (mm)	% Dep.	Normal (mm)	% Dep.
A & N Islands	108.4	80	96.1	-20	90.4	-15	93.8	-73	97.8	-17
Arunachal Pradesh	128.9	-61	132.5	15	126.7	41	128.2	-75	142.1	-69
Assam and Meghalaya	142.1	-67	131.3	-14	127.7	-13	138.5	-66	121.2	-63
NMMT	82.1	-50	77.4	29	73.8	-14	85.2	-37	75.1	-32
SH West Bengal & Sikkim	138.0	-42	130.5	9	137.3	9	135.6	-66	128.4	-62
Gangetic West Bengal	59.5	-92	76.7	-32	72.1	-6	73.9	-33	69.4	-9
Orissa	58.9	-90	71.4	-28	81.0	23	76.7	214	79.7	170
Jharkhand	50.3	-99	70.2	-23	76.7	-8	74.7	-31	78.8	-28
Bihar	45.3	-78	63.1	2	74.8	-33	80.6	-85	78.9	-71
East Uttar Pradesh	26.6	-100	51.5	-33	58.8	-47	76.2	-49	81.0	-63
West Uttar Pradesh	15.1	-100	35.5	-53	51.5	-88	65.2	-23	61.7	-51
Uttarakhand	47.1	-99	64.9	-7	83.8	-79	101.1	-39	97.0	14
Haryana, Chandigarh & Delhi	10.7	-100	19.7	11	28.4	-82	46.8	-55	41.3	-85
Punjab	9.5	-100	20.8	13	35.8	-93	45.5	-29	44.4	-30
Himachal Pradesh	22.1	-93	37.4	-53	48.6	-93	64.5	-35	72.0	-38
J & K	11.2	-67	18.4	-82	29.4	-38	38.7	-37	47.7	-16
West Rajasthan	6.4	-50	13.0	-67	20.1	-41	22.9	14	26.4	-14
East Rajasthan	15.1	-61	30.6	-24	40.5	-39	51.6	0	58.5	42
West M. P.	30.4	-94	52.1	-35	63.4	-34	68.3	-1	68.4	82
East M. P.	41.3	-99	73.1	-61	83.0	-8	86.0	8	83.3	61
Gujarat region	33.9	-79	59.8	-88	85.7	-55	84.5	14	74.7	91
Saurashtra & Kutch	27.9	-32	37.1	35	48.2	-47	44.3	97	46.3	239
Konkan and Goa	198.1	-67	255.7	-29	263.3	65	227.3	62	235.8	21
Madhya Maharashtra	33.5	0	47.5	-73	57.5	16	54.5	60	54.2	53
Marathwada	41.4	-43	42.8	-44	36.8	53	34.3	47	44.9	-26
Vidarbha	51.5	-85	73.9	-14	75.4	13	76.9	30	70.3	22
Chhattisgarh	56.3	-99	82.1	-53	91.3	-9	86.1	96	88.7	37
Coastal A. P.	24.1	-68	32.4	-25	35.8	-17	30.1	-4	36.2	-33
Telangana	38.2	-78	46.7	-49	47.6	-46	45.6	8	58.4	-49
Rayalseema	12.8	8	12.8	-22	16.5	-80	17.0	-79	22.4	-87
TamilNadu & Pondicherry	9.5	-56	8.6	-4	14.5	-12	15.5	-34	16.3	9
Coastal Karnataka	249.0	-58	271.1	-47	274.6	124	253.3	46	289.0	26
N. I. Karnataka	21.5	52	25.6	-77	23.6	-12	26.4	73	30.4	7
S. I. Karnataka	31.6	-58	45.1	-72	56.8	68	49.0	70	50.2	127
Kerala	161.0	-41	194.5	-8	203.5	24	170.6	-13	165.3	93
Lakshadweep	80.6	49	64.8	82	60.8	169	63.7	-74	65.5	-34

The subdivisions like Uttar Pradesh and Himachal Pradesh received scanty / deficient rain in all the 5 weeks; Jharkhand, Bihar, Haryana, Chandigarh & Delhi, Punjab, Jammu & Kashmir, and Rayalseema received scanty / deficient rain in 4 out of last 5 weeks; Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura Gangetic West Bengal, , Sub Himalayan West Bengal & Sikkim, Uttarakhand, East Rajasthan, West Rajasthan, West Madhya Pradesh, Gujarat, Marathwada, Coastal Andhra Pradesh and Telengana received scanty / deficient rain in 3 out of last 5 weeks. Remaining States received normal / excess rain in 2 or more weeks during last 5 weeks.



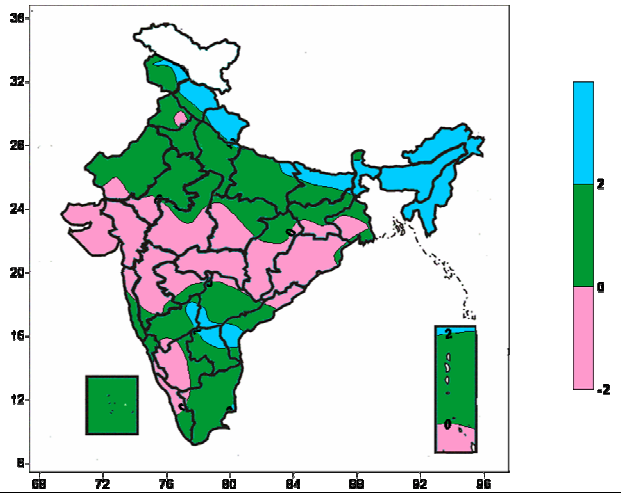
Contour maps for the week ending 22.07.09

Actual Mean Maximum Temperature (°C) in India for the week ending 22.07.09



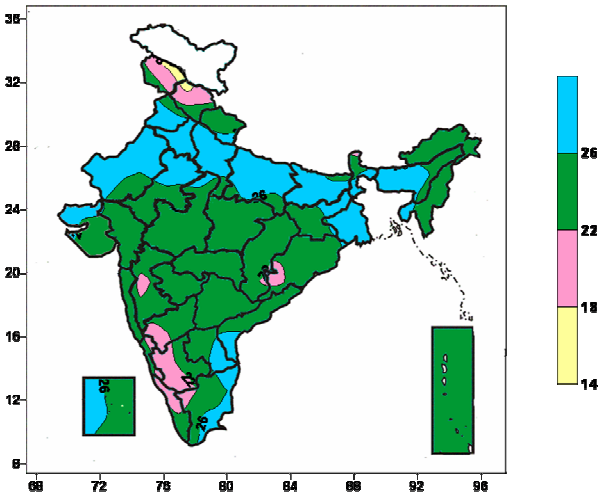
Actual Mean Maximum temperature ranged between 36°C and above over some parts of Punjab, Haryana, West Rajasthan, Coastal Andhra Pradesh, Raylaseema, coastal Tamil Nadu, 32 to 36°C over most parts of Rajasthan, Uttar Pradesh, Uttarakhand, Bihar, Northeast India, North Saurashtra & Kutch, Raylaseema, some parts of Jammu & Kashmir, Punjab, Haryana, Gujarat, Madhya Pradesh, Jharkhand, West Bengal, Coastal Andhra Pradesh, Telengana, South & North Interior Karnataka, Tamil Nadu, Kerala, Andamana & Nicobar Island, 24 to 28°C over some parts of Jammu & Kashmir, Himachal Pradesh, Chattisgarh, Tamil Nadu, Kerala, South & Coastal Interior Karnataka, Konkan & Goa, 28 to 32°C over remaining parts of the country.

Maximum Temperature (°C) Anomaly in India for the week ending 22.07.09



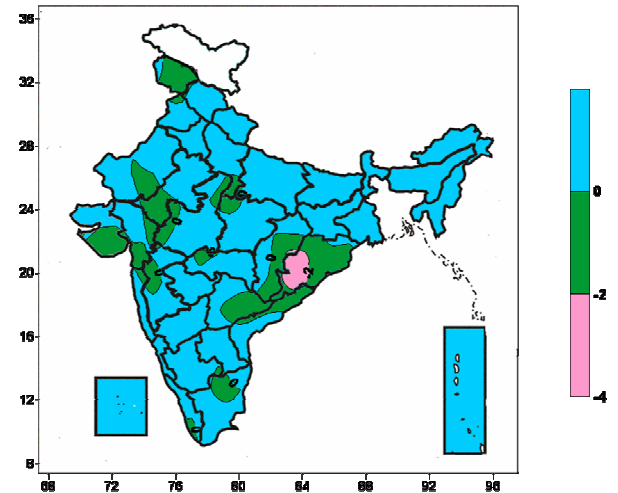
Actual Mean Maximum temperature anomaly ranged between 2°C and above over most parts of Himachal Pradesh, Uttarakhand, Northeast India, Sub-Himalyan West Bengal, some parts of Jammu & Kashmir, East Uttar Pradesh, Bihar, Sikkim, Andhra Pradesh, North Interior Karnataka, Andaman & Nicobar Islands, -2 to 0°C most parts of Orissa, Chattisgarh, Maharashtra, Madhya Pradesh, Gujarat, Saurashtra & Kutch, some parts of Punjab, Rajasthan, Jharkhand, Gangetic West Bengal, Coastal Andhra Pradesh, Telengana, Tamil Nadu, Kerala, Karnataka, Andaman & Nicobar Island, 0 to 2°C over remaining parts of the country.

Actual Mean Minimum Temperature (°C) in India for the week ending 22.07.09



Actual Mean Minimum Temperature ranged between 26°C and above over most parts of Punjab, Haryana, Delhi, Uttar Pradesh, Bihar, Gangetic West Bengal, Tripura, West Rajasthan, some parts of Uttarakhand, Jharkhand, Sub-Himalayan West Bengal, Assam, Coastal Andhra Pradesh, Rayalaseema, Saurashtra & Kutch, Tamil Nadu, Lakshadweep, 18 to 22°C over some parts of Jammu & Kashmir, Himachal Pradesh, Orissa, Chattisgarh, Karnataka, North Kerala, Madhya Maharashtra, Tamil Nadu, 14 to 18°C over some parts of Jammu & Kashmir,

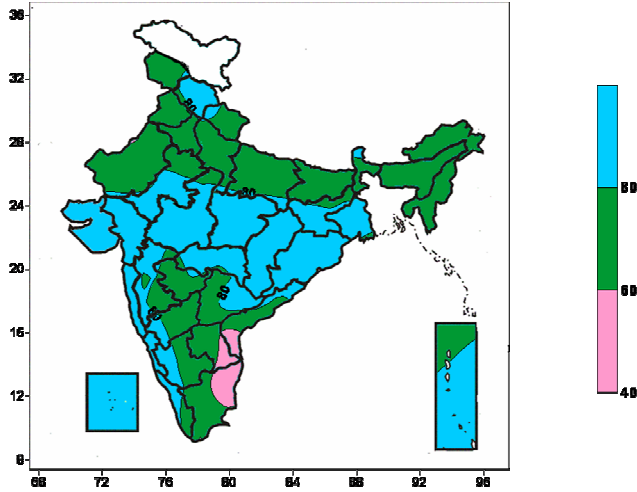
Minimum Temperature (°C) Anomaly in India for the week ending 22.07.09



Minimum Temperature anomaly ranged between -2 to 0°C over most parts of Jammu & Kashmir, Orissa, some parts of Punjab, west Uttar Pradesh, Rajasthan, Gujarat, Saurashtra & Kutch, Chattisgarh, Madhya Pradesh, Coastal Andhra Pradesh, Telengana, Tamil Nadu, Kerala, South Interior Karnataka, Madhya Maharashtra, Konkan, Vidarbha, 0 to 2°C over remaining parts of the Country.

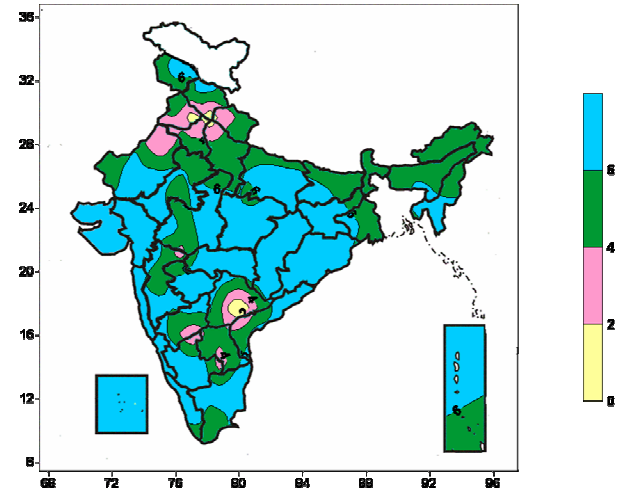
Himachal Pradesh, 22°C to 26°C over remaining parts of the country.

Relative Humidity (%) over India for the week ending 22.07.09



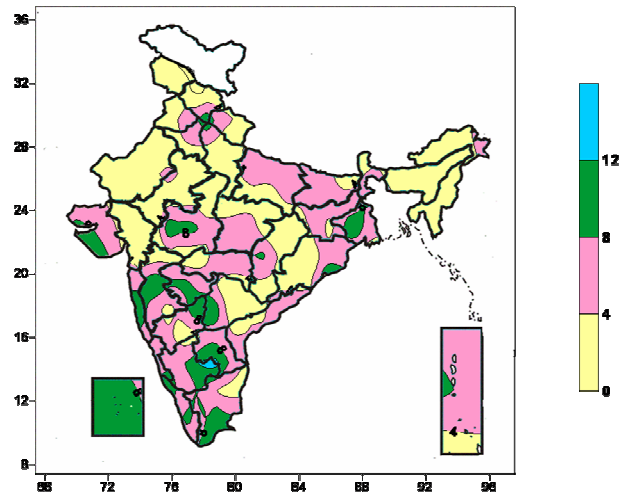
Relative humidity more than 80% over most parts of Himachal Pradesh, Jharkhand, Gangetic West Bengal, Sikkim, Orissa, Chattisgarh, Madhya Pradesh, East Rajasthan, Gujarat, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra, Vidarbha, Coastal Karnataka, Lakshdweep, Andaman & Nicobar Islands, some parts of Uttarakhand, Uttar Pradesh, Marathwada, Interior Karnataka, Kerala, Coastal Andhra Pradesh, Telengana, 40 to 60% over some parts of Rayalaseema, Coastal Andhra Pradesh, Tamil Nadu, 60 to 80 % over remaining parts of the country.

Cloud amount (okta) over India for the week ending 22.07.09



Cloud amount 6 okta and above over most parts East Uttar Pradesh, Jharkhand, Mizoram, Tripura, Orissa, Chattisgarh, Madhya Pradesh, Gujarat, Saurashtra & Kutch, Maharashtra, Coastal Karnataka, South Interior Karnataka, Kerala, Tamil Nadu, Lakshdweep, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Himachal Pradesh, Bihar, Gangetic West Bengal, Assam & Meghalaya, Manipur, Rajasthan, North Interior Karnataka, Andhra Pradesh, 2 to 4 okta over some parts of Himachal Pradesh, Uttarakhand, Punjab, Haryana, West Uttar Pradesh, West Rajasthan, West Madhya Pradesh, Madhya Maharashtra, Interior Karnataka, Andhra Pradesh, 0 to 2 okta over some parts Punjab, Haryana, Himachal Pradesh, Uttarakhand, East Uttar Pradesh, 4 to 6 okta over remaining parts of the country.

Wind speed (knots) over India for the week ending 22.07.09



Wind speed ranged between 12 knots and above over some parts of South Interior Karnataka, 8 to 12 knots over most parts of Lakshdweep Islands, some parts of Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Gangetic West Bengal, Orissa, Chattisgarh, West Madhya Pradesh, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra, Marathwada, Karnataka, Telangana, Rayalaseema, Kerala, Tamil Nadu, Andaman & Nicobar Islands, 4 to 8 knots over most parts of East Uttar Pradesh, Bihar, Jharkhand, West Bengal, Madhya Pradesh, Saurashtra & Kutch, Vidarbha, Karnataka, Coastal Andhra Pradesh, Andaman & Nicobar Islands, some parts of Himachal Pradesh, Uttarakhand, Punjab, Haryana, West Uttar Pradesh, Arunachal Pradesh, Orissa, Chattisgarh, Rajasthan, Konkan & Goa, Madhya Maharashtra, Marathwada, Telangana, Rayalaseema, Kerala, Tamil Nadu, Lakshdweep, 0 to 4 knots over remaining parts of the country.

Zonewise Agromet Advisories

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

Himachal Pradesh

- **Realised Rainfall:** Many districts received rainfall
- **Rainfall sheet**

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
More than 3 weeks continuously deficient to no rain					
Chamba	-80	-94	-95	-69	-34
Kullu	-93	-72	-90	-23	-39
Lahaul and Spiti	-100	-98	-94	-42	-72
3 weeks continuously deficient to no rain					
Mandi	-100	-18	-84	-24	-69
Solan	-100	-16	-96	-69	-63
Districts received sufficient rainfall during previous week					
Bilaspur	-100	-59	-99	-19	-11
Hamirpur	-100	-69	-100	-54	25
Kangra	-100	-45	-93	-59	10
Kinnaur	-7	4	-86	208	-77
Shimla	-100	-29	-89	**	-85
Sirmaur	-100	-56	-95	11	-64
Una	-100	1	-100	-62	103

- **Rainfall Forecast:** Few places

Major Kharif Crops: Rice, Vegetables

- **Crop Stage:** Sowing, transplanting
- **Crop Condition:** Good. Apple is facing moisture stress in fruit development stage.
- **Advisory:** In view the late onset of monsoon and the light rain occurring in the mid himalayan region, farmers are advised that resowing of *kharif* crops like maize, soybean, horsegram, amaranth, blackgram and til may be done with recommended late varieties short duration in rainfed region of mid and high hill of Himalayas.
- Direct sowing of rice may be taken up. Transplanting of rice seedling should be completed and at one 2-3 seedling should be transplanted per hill. Transplanting solanaceous vegetable crops may be taken up where adequate rainfall was received.
- Under low rainfall conditions, apply irrigation in rice, 3 days after disappearance of ponded water before cracks are developed in soil.

Major Seasonal Crop: Fruit crops, Flower crops and Vegetables

- Undertake weeding, intercultural operations and top dressing of fertilizers on a non rainy day.
- 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 –
- khaira disease in irrigated rice, spray the solution of 5 kg zink sulphate and 20 kg of urea in water per hectare may be done.
- black spot disease on fruits in apple orchards, spray of Dithane Z-78 @ 0.2 percent (2 gm/litre of water) and Carbendazim @ 0.1 percent (1 gm/litre of water) may be taken up alternately at an interval of 25 days.
- 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.
- Undertake spraying on a non rainy day.

Uttarakhand

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

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
More than 3 weeks continuously deficient to no rain					
Dehradun	-100	-57	-67	-77	-26
Garhwal Tehri	-100	-66	-99	-73	-37
Nainital	-100	-63	-98	-46	-73
Rudraprayag	-100	-80	-94	-69	-46
Udham Sing Nagar	-100	-100	-100	-55	-84
Districts received sufficient rainfall during previous week					
Almora	**	-100	-74	-42	9
Chamoli	-87	-59	-42	-35	23
Champawat	-100	196	-95	-3	70
Garhwal Pauri	-100	-37	-99	-63	-12
Haridwar	-100	84	-98	-67	124
Pithoragarh	-100	-90	-70	-35	2
Uttarkashi	-100	282	-61	35	176

- **Rainfall Forecast:** Many places during next 48 hours and decrease thereafter.

Major Kharif Crops: Rice, Soyabean, Groundnut, Tur.

- **Crop Stage:** Sowing/ transplanting
- **Crop Condition:** Good
- **Advisory:**

- Continue transplanting of rice seedlings.
- Undertake transplanting of vegetable with life saving irrigation.
- The nursery bed should be prepared near the pond for irrigation or removal of excess water from the seedbed.

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.
- **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:** Many districts of Punjab received deficient/scanty rainfall
- **Rainfall distribution for last 5 weeks**

More than 3 weeks continuously deficient to no rain					
State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
Amritsar	-100	-44	-100	-24	-68
Ferozpur	-100	-80	-97	-88	-100
3 weeks continuously deficient to no rain					
Fatehgarh Saheb	-100	34	-100	-48	-88
Jalandhar	-100	45	-95	-49	-80
Muktesar	-100	31	-69	-56	-100
Nawashahar	-100	23	-95	-65	-20
Patiala	-100	59	-95	-59	-53

Districts received sufficient rainfall during previous week					
Bhatinda	-100	165	-88	47	-84
Faridkot	-100	-9	-100	-14	-100
Gurdaspur	-100	-31	-100	-77	60
Hoshiarpur	-100	**	-99	-64	-16
Kapurthala	-100	58	-92	-20	127
Ludhiana	-100	137	-61	-3	-26
Moga	-100	-63	-100	-4	-100
Ropar	-100	28	-98	-55	91
Sangrur	-100	-47	-95	117	-4

- **Rainfall Forecast:** Few places

Major Kharif Crops: Rice, maize, guar, til, urd, bajra, cowpea, cotton,

- **Crop Stage:** Sowing/ transplanting
- **Crop Condition:** Rice crop is in satisfactory condition and rice transplanting completed under assured irrigation in Punjab including Basmati (50%).
- **Advisory:** Complete transplanting of rice(basmati varieties) and sowing of maize, til, urd, guar, bajra may be continued where adequate rainfall was received.

Major Seasonal Crop with stage: Sugarcane and Vegetables

- **Advisory:** Undertake weeding, intercultural operations in sugarcane and cotton on a non rainy day.
 - Harvesting of the muskmelon should be completed on bright sunny day.
 - Start sowing of radish where adequate rainfall was received.
 - Farmers are advised to apply irrigation to the standing crops as there was no significant rainfall in most of the districts during last week.
- **Advisory for Plant Protection:** Weather conditions are favourable for mild incidences of –
 - fruit borer of brinjal and okra. Spray sevin/hexavin 50 WP @ 800 g for brinjal and 500 g for okra in 100-125 litre water per acre on a non rainy day.
 - leaf curl in cotton, follow clean cultivation to prevent the incidence of mealy bug, destroy kanghi buti (sida spl.) and Peeli buti which act as collateral host of cotton leaf curl on a non rainy day.
 - damping off in vegetables. Drench the soil with 200 g captan in 100 litre water on a non rainy day.

Haryana

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

More than 3 weeks continuously deficient to no rain					
State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
Faridabad	-100	-76	-69	-80	-100
Hissar	-100	-37	-84	-52	-96
Katihah	**	-23	-100	-76	-33
Panchkkula	-100	-81	-100	-73	-79
Rohtak	-100	-20	-86	-77	-69
Sirsa	-100	-97	-93	-64	-99
3 weeks continuously deficient to no rain					
Ambala	-100	127	-80	-67	-61
Bhiwani	-100	18	-68	-32	-97
Chandigarh	-100	-7	-97	-74	-48
Gurgaon	-100	-18	-21	-94	-83
Jind	-100	60	-75	-30	-100
Karnal	-100	48	-88	-49	-100
Kurukshetra	**	-11	-90	-90	-91
Mahendragarh	-100	223	-96	-54	-97
Sonepat	-100	120	-95	-50	-87
Districts received sufficient rainfall during previous week					
Fatehabad	-100	-38	-96	-11	-61

Rewari	**	30	-44	-9	-100
Yamunanagar	-100	-64	-98	-7	-55

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 (67% completed). Sowing Bajra (45%), Pulses (95%), Jowar(5%) area is covered.
- **Rainfall Forecast:** Few places.
- **Advisory:**
 - Advise to complete transplanting of basmati varieties Basmati 370 and Basmati 386 in northern part of Haryana and short duration kharif crops under contingent planning based on the cut off dates of sowing. (See Annexure 2). In the transplanted the rice, they save the crop with the available water resources.
 - Farmers are advised to conserve the moisture in the already sown standing crops by intercultural operations.

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 on a non rainy day.
 - 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 on a non rainy day.
 - **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 on a non rainy day.

Delhi

- **Realised Rainfall:** Almost dry condition prevailed
- **Rainfall distribution for last 5 weeks**

More than 3 weeks continuously deficient to no rain

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
New Delhi	-100	-48	-92	-94	-89

- **Rainfall Forecast:** few places.

Major Kharif Crops: Maize, vegetables and rice

- **Crop Stage:** Sowing, transplanting
- **Crop Condition:** Satisfactory
- **Advisory:** In view of less rain, farmers are advised to go for short duration crops especially pulses like green gram, moong, soyabean, sesamum and coarse cereals like sorghum and pearl millet as they can survive in less water conditions. They are also advised to take maize and fodder crops. In moong recommend varieties are Pusa Vishal, Pusa Ratna and Pusa 9351.

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. Present weather conditions are highly favourable for nursery preparation of mid-season cauliflower and short duration radish (Pusa Desi), spinach and onion. Farmers are advised to **conserve rain water** in the field judiciously by proper bund making. Bunds should be taller and broader.

Uttar Pradesh

- **Realised Rainfall:** Many districts of Uttar Pradesh received deficient/scanty rainfall
- **Rainfall distribution for last 5 weeks**

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
East Uttar Pradesh					
More than 3 weeks continuously deficient to no rain					
Ambedkar Nagar	-100	-70	-90	-100	-86
Ballia	-100	-36	-67	-99	-82
Balrampur	-100	-37	-96	-84	-99
Basti	-100	-34	-55	-90	-68
Fatehpur	-100	-100	-42	-57	-98
Hardoi	-100	-40	-95	-79	-67
Kushi nagar	-100	-32	-83	-99	-100
Mau	-100	-97	-22	-100	-99
RaiBareilly	-100	-96	-91	-24	-75
Sultanpur	-100	-59	-75	-71	-91
Unnao	-100	-100	-100	-32	-91
Varanasi	-100	-72	-38	-63	-30
3 weeks continuously deficient to no rain					
Bahraich	-100	38	-59	-41	-33
Faizabad	-100	18	-27	-81	-91
Kheri	-100	137	-87	-43	-46
Maharajganj	-100	14	-31	-100	-79
Shrawasti	-100	156	-99	-83	-33
Sidharthnagar	-100	16	-54	-72	-24

Azamgarh	-100	-62	7	-37	-94
Deoria	-100	-58	-17	-96	-98
Gazipur	-100	-96	-5	-84	-67
Gonda	-100	47	-15	-58	-92
Gorakhpur	-100	-67	264	-80	-23
Lucknow	-100	-55	-18	-48	-87
Districts received sufficient rainfall during previous week					
Allahabad	-100	-42	-47	**	-39
Banda	-100	-65	-35	-10	-65
Barabanki	-100	-8	-96	27	-71
Farrukhabad	-100	-88	-100	-13	-66
Jaunpur	-100	-90	-90	-15	-79
Kanpur City	-100	-87	-77	52	-86
Kanpur Dehat	-100	-47	-82	-18	-81
Mirzapur	-100	-92	-26	-43	6
Pratapgarh	-100	-100	-3	33	-11
Sant Ravidas Nagar	-100	43	89	-47	6
Sitapur	-100	17	-90	16	-91
Sonbhadra	-100	-79	20	-60	18

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
West Uttar Pradesh					
More than 3 weeks continuously deficient to no rain					
Agra	-100	-58	-91	-43	-58
Bulandsahar	-100	-36	-78	-67	-90
Etah	-100	-100	-95	-56	-95
Ghaziabad	-100	-100	-100	-73	-91
Jotirba Phule Nagar	-100	-100	-100	-28	-100
Mahamaya Nagar	-100	-79	-77	-87	-98
Mainpuri	-100	-100	-100	-31	-56

Pilibhit	-100	-62	-100	-77	-98
Rampur	-100	-94	-99	-65	-92
3 weeks continuously deficient to no rain					
Aligarh	-100	-3	-99	-70	-100
Meerut	-100	-7	-81	-57	-96
Muzzaffarnagar	-100	30	-100	-75	-94
Districts received sufficient rainfall during previous week					
Auraiya	-100	-98	-95	11	-12
Badaun	-100	-100	-100	52	-86
Baghpat	-100	158	-89	-19	-20
Bareilly	-100	-17	-99	-17	-89
Bijnor	-100	-3	-100	-57	6
Etawah	-100	-100	-93	32	-62
Firozabad	-100	-100	-100	12	-87
Hamirpur	-100	-71	-50	117	-42
Jalaun	-100	-100	-96	23	-2
Jhansi	-100	-82	-85	43	40
Lalitpur	-100	-68	-40	28	-3
Mathura	-100	-74	-50	-65	-6
Moradabad	-100	-59	-100	-45	41
Saharanpur	-100	-77	-98	-50	-19
Shahjahanpur	-100	55	-100	-15	-99

- **Rainfall Forecast:** Few places.

Major Kharif Crops: East UP: Rice, mung, jowar, bajra.

- **West UP:** Rice, groundnut, urd, mung and vegetables
- **Crop Stage:** Sowing/ transplanting
- **Crop Condition:**
 - **East UP :** Crop sowing has been affected due to insufficient rain.
 - **West UP:** Crop sowing has been affected due to insufficient rains.
- **Advisory:** Due to delayed monsoon/ insufficient rains, following contingent plan is recommended in East U.P

East UP:

- If nursery is around 30 days old, transplant 3-4 seedlings/hill in stead of 2, after filling the water in the field.
- If it is 35-40 days old, cut 3-4 cm top portion of the seedling and then transplant.
- If no rice nursery is raised, go for direct sowing under rainfed conditions.
- Select alternate crops like mung, jowar, bajra, urd etc.
- Sowing of *Kharif* crops may be done in sufficient moisture.
- **Advisory for West UP:** Sowing/transplanting of rice, urd, mung, groundnut and vegetables is advised.
 - Transplant the rice seedling days after filling the water in the field & transplant 3-4 seedlings/hill together, if the seedlings are more than 30 days old and keep distance 15 cm between plants & 20 cm between rows.
- **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 on a non rainy day
 - Continue field preparation and planting of turmeric and ginger
 - Apply irrigation to the crops
 - **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 on a non rainy day. To control the incidences of

J & K

- **Realised Rainfall:** Rain has just started.
- **Rainfall Forecast:** few places.

Major Kharif Crops: Rice, maize, vegetables

- **Crop Stage:** Sowing, transplanting
- **Crop Condition:** improving due to recent rainfall.
- **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 utilizing the realized and expected rainfall during next 5 days.

Major Seasonal Crop with stage: Vegetables (vegetative to fruiting)

- **Crop Condition:** Satisfactory
- **Advisory:** Undertake intercultural operations and application of fertilizers and pesticides in vegetable crops like brinjal, tomato, chilli, capsicum, bhindi, beans, cucurbits and pumpkin on a non rainy day.
- **Plant Protection:** Spray Endosulphan @ 0.07%, or carbryl @0.1% or DD Chlorvos @0.03% on a non rainy day to control fruit borer in tomato, brinjal and bhindi crop in Jammu, Kathua and Kashmir.
- Spray Metalaxyl @ 0.2% solution on a non rainy day to control downy mildew in onion in Srinagar region.

Rajasthan

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

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
West Rajasthan					
More than 3 weeks continuously deficient to no rain					
Jaisalmer	-100	-66	-76	-24	-53

Hanumangarh	-100	-82	-17	-33	-92
Districts received sufficient rainfall during previous week					
Barmer	-41	-53	-95	82	60
Bikaner	-67	-100	87	119	13
Churu	-99	-73	-1	-11	-84
Jalore	-100	-91	-98	8	44
Jodhpur	-87	-52	-47	-33	-4
Nagaur	-18	-61	-61	-11	-48
Pali	-89	-38	-66	22	83
Sri Ganganagar	-99	-100	140	54	-92

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
East Rajasthan					
3 weeks continuously deficient to no rain					
Jaipur	-99	28	-58	-28	-25
Karauli	-100	111	-91	-53	-62
Sawai Madhopur	-100	-8	-74	-38	-37
2 weeks continuously deficient to no rain					
Alwar	-100	70	-19	-32	-29
Districts received sufficient rainfall during previous week					
Ajmer	-100	-58	-10	19	18
Banswara	2	-72	-76	-28	115
Baran	-100	-33	10	-43	50
Bharatpur	-100	17	-6	-30	-16
Bhilwara	-96	-66	-22	8	53
Bundi	-100	-13	-46	-32	88

Chittorgarh	-32	-33	34	13	94
Dausa	-100	39	-73	-51	4
Dholpur	-100	21	-76	30	-43
Dungarpur	-28	-80	-60	-44	366
Jhalawar	-98	-12	-48	48	125
Jhunjhunu	-100	49	-53	26	-82
Kota	-96	-1	55	6	93
Rajsamand	-24	-24	-22	109	101
Sikar	-100	71	-64	-5	-80
Sirohi	-18	-99	-80	7	162
Tonk	-100	-51	-86	11	36
Udaipur	-89	-91	-83	75	184

- **Rainfall Forecast:** Few places.

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 and bajra is advised.
- **West Rajasthan:** Continue sowing of *kharif* crops (Pearl millet, sorghum, maize, cluster bean, Sesamum, Pigeonpea, Groundnut) is advised.
- Avoid sowing during spells of heavy rain.

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 after spells of rain. Arrange for drainage facilities as heavy to very heavy rainfall is expected at a few places during next 48 hours.
- **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.

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

Bihar

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

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
More than 3 weeks continuously deficient to no rain					
Kathihar	-99	-43	-60	-89	-84
Samstipur	-100	-40	-79	-72	-61
Sitamarhi	-80	-82	-35	-100	-99
Siwan	-100	-89	-81	-100	-87
3 weeks continuously deficient to no rain					
Bhagalpur	-96	12	-28	-62	-54
Bhojpur	-100	-14	-55	-97	-96
Darbhanga	-98	12	-37	-95	-84
East Champaran	-78	-12	-33	-90	-96
Saharsha	-72	171	-49	-98	-76
Vaishali	-100	37	-75	-98	-97
2 weeks continuously deficient to no rain					

Araria	40	-17	9	-98	-72
Gaya	-100	-17	29	-77	-78
Muzaffarpur	-95	11	-13	-91	-92
Patna	-100	-19	18	-84	-85
Purnea	-24	103	35	-78	-76
West Champaran	-100	154	21	-84	-88
Districts received sufficient rainfall during previous week					
Aurangabad	-100	-64	-60	-64	16
Buxar	-100	-71	-77	-89	61
Jhanabad	**	**	**	**	-49
Khagadia	-80	-14	-60	-79	-14
Madhepura	**	**	**	-99	-94
Monghyar	-75	2	36	-67	53

- **Rainfall Forecast:** Few places.

Major Kharif Crops: urd, sunflower, maize and pigeon pea

- **Crop Stage:** Sowing/transplanting
- **Crop Condition:** Already sown crops are in stress condition
- **Advisory**

- Farmers are advised to continue sowing of contingent crops like urd, sunflower, maize, til and pigeon pea in upland areas in place of rice. Where irrigation facility is available, farmers are advised to do paddy transplanting only in medium and low land situations by SRI method. (Detail of the contingency plan is given in Annexure 1)
- Farmers are advised to sow maize, lobia and jowar as green fodder crops where there is very little scope for irrigation in upland situations.

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 on a non rainy day.
- Apply irrigation to the standing crops as there was no significant rainfall in most of the districts during last week.

Jharkhand

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

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
More than 3 weeks continuously deficient to no rain					
Giridih	-100	-23	-24	-74	-43
2 weeks continuously deficient to no rain					
Santhal Parganas	-95	-36	-17	-38	-75
Districts received sufficient rainfall during previous week					
Bokaro	-100	-1	-40	-5	-66
Dhanbad	-100	-23	26	-54	-19
East Singhbhum	-100	-84	25	92	-25
Godda	**	**	**	**	-31
Gumla	**	**	**	**	-13
Hazaribagh	-100	-14	-19	-40	24
Koderna	**	**	**	-87	-28
Lohardagga	**	**	**	-93	1
Pakur	**	**	**	**	-59
Palamau	-100	3	-5	-26	-15
Ranchi	-100	-33	29	33	-23

Sahebganj	**	**	**	**	**
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- **Rainfall Forecast:** Few places.
- Major Kharif Crops:** Maize, Arhar, Til, Ragi, Vegetables
- **Crop Stage: Sowing**
- **Crop Condition:** Improving from stress condition
- **Advisory:** Due to delay in monsoon and insufficient rain, contingency plan for sowing of til, mung, maize, arhar, ragi, vegetables in upland, middle land and low land is advised.
- Major Seasonal Crop with stage:** Sugarcane (vegetative/grand growth),
- **Crop Condition: Good**
- Advisory:** Farmers are advised to undertake weeding, intercultural operations in sugarcane on a non rainy day.
- Undertake transplanting of brinjal, chilly, tomato with irrigation facilities.

Orissa

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

Orissa	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
Angul	-99	-45	70	177	244
Balasore	-95	-15	-77	116	112
Bargarh	-100	-35	155	246	325
Bhadrak	-79	-20	-39	252	310
Bolangir	-95	-65	9	247	213
Boudh	-99	-24	107	373	218
Cuttack	-97	26	159	288	204
Deogarh	-100	-55	33	30	91
Dhenkanal	-100	-60	69	291	315
Gajapati	-55	14	26	147	149
Ganjam	-66	-29	15	355	146
Jagatsingpur	-82	-66	205	217	315
Jajpur	-100	14	-3	171	178
Jharsuguda	-100	-56	115	-8	101
Kalahandi	-95	-47	-22	325	257
Kandhamal	-89	-1	-3	386	309
Kendrapara	-93	-57	39	251	535
Keonjhar	-99	-42	-5	315	142
Khurda	-94	39	29	342	172
Koraput	-81	-49	-51	202	87
Malkangiri	-87	-70	-38	75	10
Mayurbhanj	-97	-3	21	142	38
Nawapara	-100	-64	33	263	304
Nawarangpur	-68	24	-21	130	33
Nayagarh	-80	53	-6	564	369
Puri	-92	-2	45	254	319
Rayagada	-45	13	37	144	77
Sambalpur	-99	-70	-12	107	154
Sonepur	-93	-27	127	318	351
Sundargarh	-100	-18	8	10	78

- **Rainfall Forecast:** Few places
- Major Kharif Crops:** Rice, ragi, arhar, maize, green gram, blackgram
- **Crop Stage: Satisfactory**
- **Crop Condition:** Sowing in medium land is continuing.
- Upland sowing of paddy and non-paddy crops continued at some places.
- Transplanting during last week affected due to heavy rain.

- **Advisory:** Raise new rice nursery where more than 50% of plants in broadcasted fields or seedlings in the nursery have been damaged. The following short duration varieties of paddy may be sown to raise new seedlings. Low land- Swarna, Puja, Pratikshya, Medium land- Parijat Lalat, Surendra.
- Nursery may be prepared in raised beds in the lands having well drainage facility.
- In the direct seeded fields having less than 50% damage, take up the following measures after the flood water is receded.
 - Bring plants from dense hills and fill in the gaps where there are no plants after beushening.
 - Clean the field from weeds.
 - Apply 12 kg Nitrogen and 6 kg Potash fertilizer per acre to produce faster growth and development of rice
- 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 after the rain stops.

Major Seasonal Crop with stage: Sugarcane (early vegetative), vegetables (fruiting / harvesting), onion (vegetative), jute (early vegetative),

- **Crop Condition: Good**

- **Advisory:** Drain out excess water from the non-paddy crops, nurseries, sugarcane and vegetable fields to avoid waterlogging. As excess rainfall was received during last week postpone irrigation.
- Harvest all the cultured fish from the pond and drain out water from it for complete drying. In perennial ponds where water draining is impossible, apply Mahua oil cake 1 t/acre to kill all the predatory and weed fishes. Clear the aquatic weeds from the pond and strengthen the embankments.
- **Plant Protection:** Weather conditions are favourable for cut worm in rice. Apply chloropyriphos around the bund to prevent the entry of cut worm to the unaffected field and spray 2 ml chloropyriphos in 1 litre water in the afternoon/cool hour after current spells of rain.

West Bengal

- **Realised Rainfall:** Many districts of West Bengal received sufficient rainfall except in Urshidabad, Coochbehar, Dinajpur (north and south).
- **Rainfall distribution for last 5 weeks:**

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
More than 3 weeks continuously deficient to no rain					
GWB					
Hooghly	-91	-23	-65	-64	-34
3 weeks continuously deficient to no rain					
Murshidabad	-99	22	-51	-89	-77
2 weeks continuously deficient to no rain					
Burdwan	-100	-36	27	-51	-59
Nadia	-89	7	-2	-78	-43
Districts received sufficient rainfall during previous week					
Bankura	-100	-65	-1	5	-15
Birbhum	-94	-34	-5	-53	-14
Howrah	-84	-6	-85	-47	102
Midnapore	-91	-45	-15	8	17
24 Pargana (N)	-80	-52	-39	-69	-5
Purulia	-100	-55	22	14	-35
24 Pargana (S)	-83	-10	30	-31	52

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
SHWB					
More than 3 weeks continuously deficient to no rain					
Dinajpur (S)	-67	-100	-49	-81	-98
3 weeks continuously deficient to no rain					
Coochbehar	-42	31	-41	-95	-89

2 weeks continuously deficient to no rain					
Darjeeling	-37	-8	62	-33	-52
Jalpaiguri	-6	88	39	-81	-70
Dinajpur (N)	**	-11	9	-98	-83
Districts received sufficient rainfall during previous week					
Malda	-100	-35	-33	-86	1

- **Rainfall Forecast:** Many places.

Major Kharif Crops: Rice, vegetables

- **Crop Stage:** transplanting
- **Crop Condition: Good**
- **Advisory:** Continue transplanting of rice seedlings.
 - Undertake transplanting of vegetable with life saving irrigation.
 - The nursery bed should be prepared near the pond for irrigation or removal of excess water from the seedbed.

Major Seasonal Crop with stage: Sugarcane (vegetative), jute (vegetative)

- **Crop Condition: Good**
- **Advisory:** Due to scanty/deficient rain conditions in New alluvial zone, jute crop at harvesting stage is affected. Farmers are advised to conserve the moisture in the soil.
- **Plant protection**
 - Rainfall along with high humidity may lead to rhizome rot of ginger and turmeric in Coastal saline Zone. Raise the level of the beds to help the surplus rain water to flow freely; drench the soil around the rhizome with any Copper oxy chloride preparation (0.4%) @ 5 litre / sq. m. or spray with Metalaxyl 75 WP @ 1.5 g / litre of water before the appearance of the disease.
 - Spray chemicals after spells of rain.

Sikkim

- **Realised Rainfall:** Deficient rainfall is received over the state.
- **Rainfall distribution for last 5 weeks:**

Sikkim	-67	-57	-2	-30	-51
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- **Rainfall Forecast:** Many places.
- **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:** seedling/tillering **Ginger:** Early Vegetative/Vegetative; **Orange:** Nursery Transplanting of Seedlings/ Flowering/ Early Fruiting/Fruiting.
- **Crop Condition: Good**
- **Advisory:** The orchard must be inspected from time to time and plugging of trunk borer holes repeated and light pruning of undesirable growth/ sprouts emerging out of the trunks and removal of parasitic plants should be done.
 - Inter-cultivate the transplanted paddy seedlings 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.
 - 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 deficient/scanty rainfall during last week. During last week Bongaigaon, Darrang, Dhubri, East Garo Hills, Kokrajhar districts received scanty/no rainfall.
- **Rainfall distribution for last 5 weeks:**

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
More than 3 weeks continuously deficient to no rain					
Bongaigaon	-37	-55	-56	-90	-84
Dhubri	-25	-75	-60	-94	-93
Hailakandi	-98	-51	-75	-90	-66
Nowgong	-83	-63	-65	-88	-41
Sibsagar	11	-86	-32	-43	-23
3 weeks continuously deficient to no rain					
Barpeta	-54	103	-32	-84	-64
Jorhat	-90	-2	-20	-45	-42
Kokrajhar	-40	-4	-29	-100	-95
2 weeks continuously deficient to no rain					
Darrang	-100	-51	156	-41	-79
Dibrugarh	-47	-2	38	-47	-20
East Garo Hills	-97	286	88	-79	-100
East Khasi Hills	-59	132	113	-63	-67
Goalpara	-80	-12	46	-95	-51
Kamrup	-89	-9	4	-66	-44
Karimganj	-53	-33	36	-49	-59
Nalbari	-54	45	-2	-29	-59
Districts received sufficient rainfall during previous week					
Golghat	-17	-75	1	20	-60
Karbi Analog	-48	-60	-14	-12	9
Lakhimpur	-80	-1	-27	-26	-19
Morigaon	-87	-15	-16	-14	-5
Sonitpur	-66	8	-46	11	-46

- **Rainfall Forecast:** Many places over the region during next 48 hours and increase in intensity thereafter

Major Kharif Crops: Sali paddy

- **Crop Stage: Transplanting**
- **Crop Condition:** Transplanting of sali rice is affected in some areas of North Bank Plain zone due to flood while some areas are affected by drought like situation. During last week Bongaigaon, Darrang, Dhubri, East Garo Hills, Kokrajhar districts received scanty/no rainfall.
- **Advisory:** Farmers are advised to sow short duration rice varieties like Luit, Kapili, Kolong, Dishang etc. These varieties can be transplanted or sown within 1st week of September. More over long duration cultivars like Monohar Sali, Andrew Sali and Gitesh can be transplanted with 60 days seedling, where as Praful can be transplanted with 90 days old seedlings. Therefore, farmers should be ready with this type of cultivars to cope up with flood or drought like situation. In the remaining areas of the zone, transplanting of *sali* paddy may be continued with varieties like Ranjit, Mahsuri, Bahadur, Kushal etc. If rice can not be transplanted due shortage of water sow green gram varieties like T 44, Kopergaon Pratap, ML-56, K-851, etc. and black gram varieties like T-9, T-122, T-27, Pant U-19 and Saonia-mah in place of rice.

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 region during next 48 hours and increase in intensity thereafter, postpone irrigation, weeding and intercultural operations. As maize and jute crops are sensitive to water logging, provide adequate drainage facilities to remove excess water.
 - Harvesting and retting of *Capsularis* jute should be done preferably at pre-flowering stage (120 days after sowing) to get better quality fibre. At present the water temperature in the retting tanks is ideal for retting of jute. Late sown *Capsularis* jute may be harvested after current spells of rain and kept in the field in standing position for 3-4 days before retting for proper defoliation.
- **Plant protection:** Weather conditions are favourable for mild incidences of –
 - foot rot and leaf spot in betel vine. In addition to keeping the root zone free from water stagnation, apply four drenches (in root zone) with 1% Bordeaux mixture at 30 days interval and spray (on leaves) 0.5% Bordeaux mixture at 15 days interval during rainy season. Drenching and spraying should be done after current spells of rain
 - It is observed that pluckable shoots of tea are severely infested by *Helopeltis*, a serious insect pest of tea in this region. Farmers are advised to spray Thiamethoxam @ 20gm or Endosulfan @ 250ml per 100 lit of water at 10-15 days interval in the early morning or late evening after current spells of rain. They are also advised to keep the ground free from weeds.

Arunachal Pradesh

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

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
More than 3 weeks continuously deficient to no rain					
Changlang	-99	-80	-63	-90	-82
Lower Subansiri	-98	-73	-87	-86	-46
3 weeks continuously deficient to no rain					
Upper Subansiri	56	-15	-70	-88	-77
2 weeks continuously deficient to no rain					
East Kameng	-95	81	92	-79	-41
East Slang	-91	64	10	-85	-99
Lohit	-42	-3	95	-81	-84
Tawang	-78	-52	-12	-80	-92
Tirap	78	-30	-1	-21	-61
Districts received sufficient rainfall during previous week					
Papumpara	45	138	22	28	96
West Kameng	61	333	449	-48	33
West Siang	-95	47	81	**	-97

- **Rainfall Forecast:** Many places during next 48 hours and increase in intensity thereafter.

Major Kharif Crops: *jhum* rice, WRC rice, millets

- **Crop Stage:** vegetative
- **Crop Condition:** Good.
- **Advisory:** Postpone irrigation, weeding and intercultural operations. Maintain 3-5 cm standing water in rice field.

Major Seasonal Crop: Vegetables

- Undertake weeding, intercultural operations and top dressing of fertilizers after current spells of rain.
- Plant Protection:** Prophylactic measure for protection of seed ginger rhizome from fungal disease may be taken. Water logging in the field must also be avoided.

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

Andhra Pradesh

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

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
More than 3 weeks continuously deficient to no rain					
Coastal Andhra Pradesh					
Guntur	-88	-90	-61	-80	-86
Krishna	-99	-72	-43	-38	-47
Nellore	-7	-30	-41	-71	-83
Prakasam	-24	-98	-66	-36	-87
Districts received sufficient rainfall during previous week					
East Godavari	-96	-49	62	-19	-15
Sirkakulam	-59	49	37	86	42
Visakhapatnam	-73	51	-42	76	-19
Vizianagram	-36	82	-28	100	54
West Godavari	-94	-63	19	-47	9

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
Telangana					
More than 3 weeks continuously deficient to no rain					
Hyderabad	-87	-96	-57	-58	-45
Mehabubnagar	-82	-99	-78	-61	-57
Medak	-59	-91	-75	-49	-56
Nalgonda	-86	-98	-78	-62	-68
Rangareddy	-38	-81	-31	-38	-54
Districts received sufficient rainfall during previous week					
Adilabad	-85	28	-35	52	-66
Karimnagar	-56	-29	-37	30	-55
Khammam	-89	-84	-40	43	-8
Nizamabad	-86	-40	-10	41	-51
Warangal	-94	-51	-42	-4	-41

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
Rayalaseema					
More than 3 weeks continuously deficient to no rain					
Anantapur	-50	-83	-82	-84	-84
Kurnool	17	-95	-77	-59	-81
3 weeks continuously deficient to no rain					
Chittoor	71	39	-72	-86	-93
Cuddapah	-11	103	-90	-96	-92

- **Rainfall Forecast:** Few places over Telangana. Isolated places over Coastal Andhra Pradesh and Rayalaseema
- **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:** Sowing of crops like ground nut, jowar, maize, pulses, sesame, sunflower and cotton is affected in Rayalaseema.
- **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 or alternate crop till the end of July.

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 on a non rainy day in Telangana. Apply irrigation in Rayalaseema.
- Harvesting of the muskmelon should be completed on bright sunny day.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - stem borer in rice, spray Cartap hydrochloride @ 2 g or Phosphomidon @ 2 ml per litre of water or apply Cartap hydrochloride granules @ 8-10 kg per acre upto 20-25 days after planting.
 - smut in sugarcane. To control, dip the setts in Propiconazole solution @ 1 ml per litre of water for 15 minutes before planting. In ratoon crop, spray Propiconazole @ 0.5 ml per litre of water at 30 to 35 days after ratooning and 2nd spray at 30 days after the 1st spray.
 - Undertake spraying on a non rainy day in Telangana.

Karnataka

- **Realised Rainfall:** Most of the districts in the three sub-divisions of the state received good amount of rain.
- **Rainfall distribution for last 5 weeks**

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
North Interior Karnataka					
More than 3 weeks continuously deficient to no rain					
Bijapur	50	-75	-55	-40	-78
Gulbarga	108	-85	-34	-55	-63
Raichur	35	-68	-95	-73	-91
2 weeks continuously deficient to no rain					
Bidar	-41	-96	-53	-49	-63
Districts received sufficient rainfall during previous week					
Bagalkote	134	-75	-29	5	-35
Belgaum	56	-73	3	277	200
Dharwad	-15	-49	33	108	48
Gadag	-55	-40	16	51	7
Haveri	-80	-88	118	226	150
Koppal	221	-91	-80	29	-85

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
South Interior Karnataka					
More than 3 weeks continuously deficient to no rain					
Bangalore Rural	-75	-45	-71	-63	-68
Bellary	-54	-98	-63	-25	-38
Kolar	86	-59	-79	-81	-84
2 weeks continuously deficient to no rain					
Bangalore Urban	-93	-40	5	-83	-88
Tumkur	-13	-54	17	-75	-35
Districts received sufficient rainfall during previous week					
Chamarajnagar	-45	-87	29	24	235
Chickmagalur	-64	-66	108	150	169
Chitradurga	32	-82	74	12	2
Davangere	-9	-52	85	43	111
Hassan	-80	-81	-21	-17	50
Kodagu	-57	-66	86	107	247
Mandya	-23	-99	19	-10	16
Mysore	-93	-79	57	85	263
Shimoga	-72	-76	115	109	182

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
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Coastal Karnataka					
Dakshin Kannada	-71	-40	122	34	48
Udupi	-76	-28	148	50	43
Uttar Kannada	-42	-58	115	50	8

- **Rainfall Forecast:** many places with heavy to very heavy rainfall at isolated places in coastal Karnataka and at a few places in 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:** Due to poor rainfall in Bidar, Bijapur, Koppal, Gulbarga and Raichur, sowing of crops have been affected.
- **Advisory:** Continue transplanting of rice in coastal Karnataka. Sowing of short duration *kharif* crops is advised in Interior Karnataka.

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 day in Interior Karnataka and after current spells of rain in coastal Karnataka.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - leaf eating caterpillars in greengram, spray the crop with 4 g Carbaryl or 2 ml Chlorpyrifos dissolved in one liter of water. In the areas where there is scarcity of water, dusting of Quinolphos (1.5 %) or Fenvalarate(0.4 %) may be done.
 - 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 Interior Karnataka and after current spells of rain in coastal Karnataka.

Kerala

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

Kerala	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
Alappuzha,	-26	47	-3	-59	46
Kannur	-30	8	52	3	96
Ernakulam	-30	25	18	-31	49
Idukki	-64	-3	9	16	82
Kasaragod	-40	-19	65	-24	21
Kollam	-18	5	-42	-44	95
Kottayam	-22	7	-7	-59	25
0Kozhikode	-71	51	95	33	151
Malappuram	-52	-12	18	24	119
Palakkad	-50	-29	38	84	177
Pathanamthitta	-27	4	7	-48	16
Thiruvananthapuram	3	-27	-38	-32	74
Thrissur	4	-13	37	-2	119
Wyanad	-77	-75	-15	35	110

- **Rainfall Forecast:** Few places.

Major Kharif Crops: Rice

- **Crop Stage:** Transplanting
- **Crop Condition:** Due to heavy rain pepper, cardamom and rice were affected.

Advisory: Continue transplanting of rice. Farmers are advised to drain out excess water from the field to avoid water stagnation.

Major Seasonal Crop: Vegetables and plantation crops (coconut, arecanut, pepper and cashew).

- Intercultural operations, application of fertilizers and pesticides may be continued on a non rainy day.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –

- thrips in broadcasted rice field, spray carbaryl or dimethoate @ 250ml/ha.
- sheath blight in transplanted rice, spraying of Pseudomonas culture @ 15 g / l is advised
- pollu beetle in pepper, bud rot in coconut and soft rot in ginger;
- Undertake spraying on a non rainy day.

Tamilnadu

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

State/Districts	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
More than 3 weeks continuously deficient to no rain					
Chennai	-76	-87	-67	-99	-91
Dharmapuri	-100	-100	-63	-76	-86
Kanchipuram	-89	-37	-91	-99	-98
Karur	-75	-95	-100	-100	-99
Krishnagiri	-71	-100	-76	-65	-94
Ramanathapuram	-100	-74	-98	-100	-99
Tiruvallur	15	-81	-82	-98	-93
Tiruvannamalai	-100	-100	-95	-100	-100
Tuticorin	-100	-100	-100	-100	-81
Vellore	-39	-65	-96	-100	-99
Villupuram	-90	-27	-64	-79	-93
Virudhunagar	-100	-100	-100	-100	-100
3 weeks continuously deficient to no rain					
Cuddalore	-84	70	-65	-100	-75
Dindigul	-100	219	-92	-95	-46
Madurai	-100	228	-99	-100	-99
Nagapattinam	-100	25	-100	-100	-96
Namakkal	-93	114	-43	-100	-89
Pondicherry	-89	52	-39	-75	-93
Pudukottai	-77	32	-66	-100	-63
Sivaganga	-100	61	-84	-100	-97
Thanjavur	-100	101	-81	-97	-79
Tiruvarur	-100	90	-100	-100	-100
Trichy	107	86	-55	-100	-100
Districts received sufficient rainfall during previous week					
Coimbatore	-50	200	579	611	1127
Erode	-94	59	-2	-100	19
Kanyakumari	79	-69	-65	45	204
Nilgiris	-49	-27	36	110	189
Salem	-40	-85	95	-97	-15
Theni	2	299	471	388	358
Tirunelveli	-89	-84	-35	147	687

- **Rainfall Forecast:** Isolated places
- **Major Kharif Crops:** Groundnut, pulses and rice
- **Crop Stage:** Sowing/transplanting
- **Crop Condition:** Satisfactory
- **Advisory:** Continue sowing of crops like pulses, groundnut and transplanting of rice seedlings.

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 during last week except in Coimbatore, Nilgiris, Kanyakumari, Theni and Thirunelveli. Postpone irrigation in the above districts as there was sufficient rainfall during last week.
- Due to the forecast of high wind speed during next 5 days, provide staking for banana in Virudhunagar and rubber and banana in Kanyakumari.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –

- little leaf in brinjal in Coimbatore, sucking pests in vegetable crops in Erode and leaf spot in banana in Kanyakumari districts; undertake plant protection measures on a non rainy day to control the pests.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT, RAJASTHAN]

Maharashtra

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

2 weeks continuously deficient to no rain					
Maharashtra	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
Vidarbha					
Yeotmal	-90	27	-17	-45	-36

Maharashtra	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
Konkan & Goa					
Goa	-59	-21	199	70	-1
Mumbai	-88	11	55	189	-41
Raigad	-72	-50	-17	67	**
Ratnagiri	-72	-37	115	51	-22
Sindhudurg	-60	54	247	122	-7
Thane	-66	-58	-31	32	113
Madhya Maharashtra					
Ahmednagar	114	-93	101	-2	-1
Dhule	13	-46	33	52	-30
Jalgaon	-34	-26	65	12	53
Kolhapur	-72	-63	46	176	104
Nandurbar	-24	-87	-61	-2	69
Nasik	15	-72	133	-11	252
Pune	-30	-96	-59	23	-1
Sangli	-53	-98	12	62	15
Satara	-27	-78	5	132	70
Solapur	108	-80	-49	40	-53
Marathwada					
Aurangabad	-62	-60	93	15	39
Beed	17	-29	227	40	-38
Jalna	-74	-47	131	126	31
Latur	-56	-64	**	15	-44
Nanded	-72	-14	-28	51	-71
Usmanabad	-3	-98	-14	49	-56
Parbhani	-45	-33	25	45	-17
Vidarbha					
Akola	-92	62	85	-11	29
Amraoti	-94	13	118	-11	59
Bhandara	-100	-52	-26	143	32
Buldhana	-38	13	127	-9	42
Chandrapur	-99	-62	11	2	28
Gadchiroli	-90	-50	-46	41	14
Gondia	-90	-40	-34	142	55
Nagpur	-92	34	43	118	49
Wardha	-94	31	30	-20	28
Washim	-47	-37	-29	7	-25

- **Rainfall Forecast:** Most places. Heavy to very heavy rainfall at a few places with isolated extremely heavy falls ($\geq 25\text{cm}$) is likely over north Madhya Maharashtra and North Konkan during next 48 hours.

Major Kharif Crops: Rice, ragi, cotton, Vegetables, Pulses, bajra, groundnut, tur, horse gram, soybean, jowar

- **Crop Stage:** Rice, ragi in seedlings/ transplanting and other *kharif* crops are in sowing/ germination. Early sown crops are at early vegetative growth stage.
- **Crop Condition:** Good
- **Realised Rainfall:** Most of the districts of the state received good rain except Beed, Nanded & Osmanabad districts in Marathwada and Dhule and Solapur in Madhya Maharashtra as they received deficient rain during last week.
- **Rainfall sheet**
- **Rainfall Forecast:** Most places over Konkan & Goa, Many places over Madhya Maharashtra, Few places over Marathawada and Vidarbha. Heavy to very heavy rainfall at a few places over Konkan & Goa, Heavy to very heavy rainfall at a few places with isolated extremely heavy falls ($\geq 25\text{cm}$) is likely over north Madhya Maharashtra and North Konkan during next 24 hours.
- **Advisory:** Continue transplanting of rice in Konkan and continue transplanting after current spells of rain in North Konkan and North Madhya Maharashtra. For one month old seedlings, 4 to 5 seedlings per hill be transplanted.
 - Sowing of short duration crops like bajra, tur, horse gram is advised in Madhya Maharashtra. Sowing of short duration crops viz; soybean, hybrid bajra, sunflower, coriander etc. and intercropping systems (bajra + pigeon pea, soybean+ pigeon pea etc.) is advised in Marathwada. Sowing of cotton and rice is advised in Vidarbha. Where the sowing was delayed in Vidarbha, undertake sowing of only early duration desi/american varieties (AKA-7, AKH081). Use 25-30% more than recommended seed rate. By reducing cotton rows, one or two rows of pigeon pea may be incorporated as intercrop. Avoid sowing of sorghum or to a limited extent early (CSH-14, CSH-17) and medium duration (CSH-9, SPH-388) varieties can be sown. Use 25-30% more than recommended seed rate and also ensure control measures for possible infestation of shoot fly in late sown crop of sorghum.
 - One row of pigeon pea may be incorporated as intercrop after every 3 or 6 rows of sorghum. Soybean crop can be sown till 25th July with variety JS-335 or TAMS 98-21. To reduce the risk of late sowing preferably go for pigeon pea + soybean (1:2) intercropping or after every 6 or 9 rows of soybean, one row of pigeon pea may be sown. Avoid sowing of green gram and black gram. Alternative crops like sunflower, castor, pearl millet, sesamum can be sown till August 15th.

Major Seasonal Crop: Fruit crops, Sugarcane and vegetables

- Undertake intercultural operation, fertilizer application in early sown crops, sugarcane and vegetables after current spells of rain in Konkan, Madhya Maharashtra, on a non rainy day in Marathwada and Vidarbha.
- **Plant Protection:** Weather conditions are favourable for mild incidences of –
 - bud rot in coconut and koleroga (immature nut drop) in arecanut in Konkan. For control, spray 1% Bordeaux mixture when there is no rain.
 - mealy bug in early sown cotton in Central Vidarbha Zone. For control spray Verticilium lecani @ 4 gm in 10 liters of water or Methyl dimeton 25 % WSC @ 4 ml or Dichlorovos 76% WSC @ 0.7 ml/ liter water.
 - There is attack of leaf eating caterpillar on soyabean crop in western Maharashtra plain zone. For control, spray Nimark 5% or Trizophos 0.4% or Chloropyriphos 0.04% or Acephate 0.07% or Endosulfan 35 EC @ 715 ml per 500 liters of water. Also there is attack of gurdle bettle pest. For control, spray Diamethoate 30% @ 100 ml or Endosulfan 35% @ 15 ml per 100 liters of water.
 - Apply plant protection measures after current spells of rain in Konkan, Madhya Maharashtra, on a non rainy day in Marathwada and Vidarbha.

Gujarat

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

Gujarat Region	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
Ahmedabad	-87	-95	-70	81	38
Anand	-99	-99	-81	35	34

Banaskantha	-92	-91	-97	48	63
Baroda	-55	-99	-26	-1	12
Broach	-73	-96	2	-50	49
Dahod	-73	-91	-55	7	21
Dangs,	-49	-86	-38	-37	109
DNH & Daman	-51	-53	-10	66	147
Gandhinagar	-97	-100	-56	71	-14
Kheda	-92	-100	-81	6	59
Mehsana	-100	-99	-87	58	102
Narmada	-80	-96	-69	-3	131
Navsari	-95	-72	-53	-17	182
Panchmahal	-69	-99	-36	-16	16
Patan	-100	-86	-88	-5	51
Sabarkantha	-65	-99	-39	60	103
Surat	-93	-72	-58	4	210
Valsad	-56	-55	-48	21	144
Saurashtra, Kutch & Diu region					
Amreli	-4	-42	14	173	200
Bhavnagar	-55	-67	-23	46	187
Diu	-70	-27	-58	**	**
Jamnagar	-75	154	-76	177	353
Junagarh	23	41	-5	159	428
Kutch	-78	50	-92	70	184
• Porbandara	• 8	• 172	• -88	• 171	• 744
Rajkot	-83	-41	14	44	143
Surendranagar	-36	-39	-55	70	-18

- **Rainfall Forecast:** Most places. Heavy to very heavy rainfall at a few places with isolated extremely heavy falls ($\geq 25\text{cm}$) is likely over Gujarat state during next 48 hours.

Major Kharif Crops: Rice, castor, pigeon pea, cotton, groundnut, bajra, sesamum, cluster bean, pulses

- **Crop Stage:** Sowing
- **Crop Condition:** Crop sowing is improving. 70% of the sowing is completed in Gujarat state. In view of the active to vigorous monsoon conditions for the next 2-3 days i.e. up to 25th July conditions are favourable for further sowing.
- **Advisory:** Undertake transplanting of rice. Transplant 4-5 leaved erect seedling at 20 cm x 15 cm spacing at the rate of two seedlings per hill. Water level in the field should be kept low while transplanting.
 - Continue sowing of castor, green gram, black gram, cluster bean, cowpea, groundnut, bajra, sesamum, pulses, cotton.

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 after current spells of rain.
- Undertake planting of different fruit crops like mango, sapota, pomegranate, lemon, guava, custard apple etc.
- Remove excess water in rice/ vegetable nursery beds. Drain it regularly from nursery.
- **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% after current spells of rain.

CENTRAL INDIA [M.P., CHHATTISGARH]

Madhya Pradesh

- **Realised Rainfall:** Good amount of rain is received in most of the districts.
- **Rainfall distribution for last 5 weeks**

East Madhya Pradesh	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
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More than 3 weeks continuously deficient to no rain					
Katni	-100	-72	12	-52	-69

East Madhya Pradesh	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
Balaghat	-100	-60	4	45	108
Chhatarpur	-100	-15	-24	20	-23
Chindwara	-100	-31	138	78	275
Damoh	-100	-72	-15	-10	-9
Dindori	-100	-100	13	-60	26
Jabalpur	-100	-37	-65	-43	225
Mandla	-100	-99	-25	-44	39
Narsingpur	-100	-79	-68	-63	187
Panna	-100	-100	-32	22	-30
Rewa	-100	-83	-12	112	-14
Sagar	-91	-43	-23	-30	44
Satna	-100	-72	3	1	-25
Seoni	-92	-49	**	42	145
Shahdol	-100	-100	-42	8	53
Sidhi	-100	-43	-10	13	34
Tikamgarh	-100	-61	-86	63	12
Umaria	-100	31	-59	-53	-35
West Madhya Pradesh	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
Badwani	-100	-97	-61	20	-57
Betul	-97	-21	96	-27	223
Bhind	-100	-98	-100	33	-51
Bhopal	-77	-20	-47	-3	368
Datia	-100	-21	14	72	31
Dewas	-100	28	-32	-19	45
Dhar	-87	-55	-41	84	1
Guna	-100	-57	-74	-23	21
Gwalior	-100	-72	-79	52	-11
Harda	-100	46	-1	-81	62
Hosangabad	-100	-40	-35	-27	194
Indore	-71	67	-77	60	97
Jhabua	-100	-84	81	-15	15
Khandwa	-79	-32	-34	4	87
Khargone	-79	7	26	15	7
Mandsaur	-100	-100	-83	90	201
Morena	-100	-2	-99	-14	-79
Neemuch	-100	-90	119	39	27
Raisen	-98	-88	-33	-31	90
Rajgarh	-96	-85	-56	-9	282
Ratlam	-86	-57	-88	-20	35
Sehore	-100	-11	-59	14	146
Shajapur	-94	-89	-27	-24	121
Sheopur Kalani	-100	-49	-92	-89	-7
Shivpuri	-100	13	-63	38	71
Ujjain	-98	28	-52	21	155
Vidisha	-100	-18	-68	-12	12
Chattisgarh					
Bastar	-99	-47	-16	83	6
Bilaspur	-100	-63	22	12	16
Dantewara	-100	-82	3	78	-37
Dhamtari	-99	-56	-4	507	29
Durg	-100	-64	-51	218	71
Janjgir	-100	-98	-34	120	41

Jashpurnagar	-100	-75	-6	-2	32
Kanker	-100	-93	-5	184	-9
Korba	-100	-95	-10	91	-3
Koriya	-100	-27	-12	-30	90
Kowardna	-100	-3	-40	-55	15
Mahasumund	-100	-52	237	220	480
Raigarh	-100	-51	37	111	166
Raipur	-99	-61	-1	200	147
Rajandgaon	-97	-46	-22	169	42
Surguja	-100	9	-65	10	-21

- **Rainfall Forecast::** most places with heavy to very heavy falls at a few places over southwest Madhya Pradesh and at a few places over rest of the state.

Major Kharif Crops: Rice, jowar, sunflower, maize, jowar and soybean

- **Crop Stage: Sowing/transplanting**
- **Crop Condition:** Good. Soybean (in both regions) is at germination stage and condition is also improving due to good rainfall during last week.
- **Advisory:** Continue raising the nursery of paddy (short duration).
 - 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.
 - Avoid sowing during spells of heavy rain.

Major Seasonal Crop with stage: Sugarcane (cane development), cotton (boll development/ maturity) and vegetable crops (vegetative)

- **Crop Condition: Good**
- **Advisory:** Undertake intercultural operations 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 over southwest Madhya Pradesh and on a non rainy day over rest of the state.
- **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**

Chattisgarh	24.06.09	01.07.09	08.07.09	15.07.09	22.07.09
Bastar	-99	-47	-16	83	6
Bilaspur	-100	-63	22	12	16
Dantewara	-100	-82	3	78	-37
Dhamtari	-99	-56	-4	507	29
Durg	-100	-64	-51	218	71
Janjgir	-100	-98	-34	120	41
Jashpurnagar	-100	-75	-6	-2	32
Kanker	-100	-93	-5	184	-9
Korba	-100	-95	-10	91	-3
Koriya	-100	-27	-12	-30	90
Kowardna	-100	-3	-40	-55	15

Mahasumund	-100	-52	237	220	480
Raigarh	-100	-51	37	111	166
Raipur	-99	-61	-1	200	147
Rajandgaon	-97	-46	-22	169	42
Surguja	-100	9	-65	10	-21

- **Rainfall Forecast:** Few places.

Major Kharif Crops: Rice, soybean, maize, sesamum, tur.

- **Crop Stage:** Sowing
- **Crop Condition:** Good
- **Advisory:** Farmers are advised to continue sowing of early and medium varieties of rice (upto 100 day).
 - Undertake sowing of soybean, pegenpea with soybean are advised.
 - Due to sufficient rainfall observed during past week, conditions are now favourable for transplanting of rice. Hence, wherever rice seedlings are ready for transplanting farmers are advised for transplanting of rice.
 - 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 after draining out excess water and on a non rainy day.
- Due to continuous excess rains water logging conditions has been created in the fields of upland crops and vegetables. Hence, proper drainage facilities should be provided in Soybean, black gram, ground nut and other upland crops and vegetables to drain out the excess water from the fields to avoid water logging conditions.

Annexure I

Contingent Plan for Bihar

- Mid July is a peak time for rice transplanting. In delayed rain situation protect rice seedling and transplanting can be done after providing irrigation. Prefer early /mid duration rice variety for transplanting.
- In deficit rain situation adopt SRI method of rice cultivation.
- Shaktiman 1 and 2, Deoki and suwan varieties of maize could now be sown looking to very low rainfall and dismal monsoon situations. Apply 30 kg nitrogen, 60 kg phosphorus and 40 kg potassium per hectare at the time of sowing.
- In upland and medium land situations, sow T-9, Pant urd 30 and pant urd 19 varieties of urd. These varieties will mature in 70 to 75 days and will give good return in place of paddy in the wake of weak monsoon and low rainfall conditions.
- Weather is conducive for nursery preparation of onion and cauliflowers. The early varieties of cauliflowers may be chosen at this time.

Annexure II

Contingent Plan for Haryana South western Zone

Gaur & Moong

- Undertake sowing of Guar HG 563 and HG 365 by mid July.
- Grow recommended moong bean varieties except, Asha/ K-851. In situation where farmer does not wish to keep the field fallow, the order of priority of crop is Moong (Bharpai and Satya) & Bajra short duration hybrid HHB 197/ HHB-67 improved.
- Under condition of delayed sowing of crops, seed rate may be increased by 10%.
- Apply recommended dose of fertilizers.
- Some area may be used for growing of cowpea fodder.

Bajra

- Sowing should be done preferably using ridger seeder on the shoulders of ridges.
- Grow short duration hybrids viz. HHB 197 and HHB-67 improved. Avoid Bajra sowing beyond 1st week of August.
- Apply recommended dose of fertilizer. Ensure nursery raising if, irrigation is available. Transplant three weeks old seedlings on rainy days.
- Apply life saving irrigation.
- Follow interculture operations to control weeds using wheel hand hoe and conserve moisture.
- Thinning to reduce 1/3rd population should be done in timely sown crop.

Cotton

- Light irrigation should be provided by making ridges at square formation for timely sown crop.
- Frequent intercultural operations should be followed to remove weeds and conserve soil moisture.
- In case irrigation is not available, spray the crop with 2% urea solution.
- Appearance of pseudo-fruiting due to drought invites insect-pest attack particularly spotted boll worm, which should be controlled if population attains economic threshold value.

Contingent Crop for rice in North Eastern /South-Western Zone

- **2 week delay in onset of monsoon:**
- Follow the recommended package of practices.
- Grow short duration varieties, viz. HKR 47, Govind in PR Group, CSR 30, Traori Basmati, Basmati 370 and Pusa 1121 in Basmati Group.
- **3-5 week delay in onset of monsoon**
- Increase area under basmati/short duration varieties.
- Instead of flooding keep the soil just wet to avoid development of cracks in the soil.
- Foliar application of 2% urea with 0.5% Zinc sulfate to stimulate crop growth.
- Maintain nursery and planting of 55 days old seedling is possible for mid-duration high yielding varieties at closer spacing.
- Seedling should be transplanted erect and not more than 2-3 cm deep.