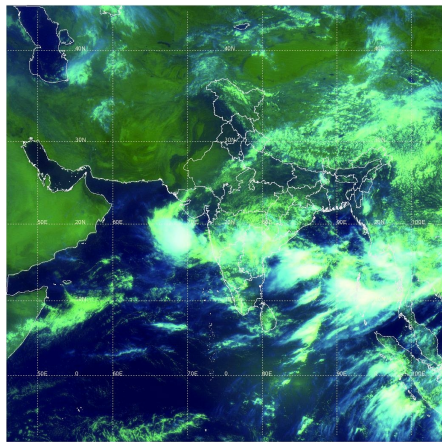




National Agromet Advisory Bulletin

Thursday, 11th September, 2008

(For the period 11th to 15th September, 2008)



12th September, 2008, 5 UTC



Flood situation in Bihar has improved. The severely affected districts are Madhepura, Araria, Purnea, Katihar, Khagaria, Supaul, and Saharsa and about 60-70% area of the standing crops like jute, rice and sugarcane were submerged.

The rising level of rivers with continuous rain caused flood situation in Assam during last week. Flood caused substantial losses of crops in 16 districts especially *ahu* and *sali* rice, vegetables, jute etc. Kamrup, Dhubri, Goalpara, Dibrugarh, Sonitpur, Nalbari, Barpeta, Lakhimpur, Dhemaji, Morigaon, Nogaon and Dibrugarh are the worst affected districts in the current wave of flood.









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

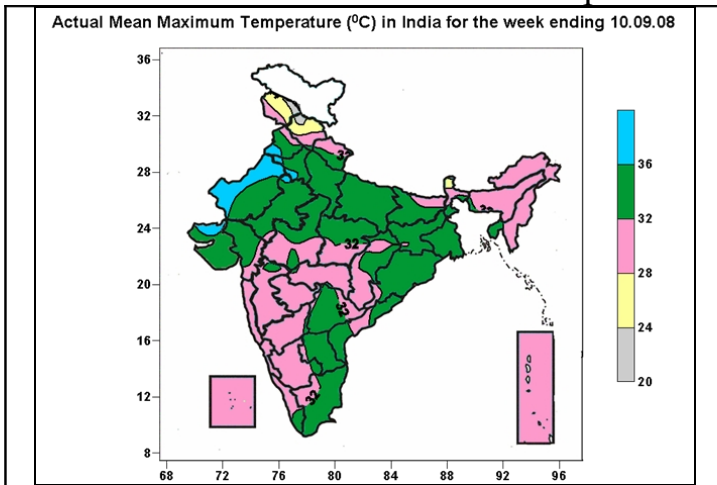
The bulletin is also displayed in the website (<http://www.imdagrimet.org>) of the Division

Comparison of weekly rainfall distribution (in % dep.) in different Met. Sub-divisions during past 5 weeks					
Sub-division	Cumulative Rainfall (% Dep.) for the period				
	13 th August	20 th August	27 th August	3 rd September	10 th September
A & N Islands	26	-55	0	-46	5
Arunachal Pradesh	25	20	-10	61	-13
Assam and Meghalaya	0	15	-15	121	-13
NNMT	-7	-23	-16	26	-23
SH West Bengal & Sikkim	-3	73	-3	143	17
Gangetic West Bengal	13	21	-77	-1	8
Orissa	64	9	6	-49	11
Jharkhand	18	49	-62	-54	-4
Bihar	19	101	-59	45	15
East Uttar Pradesh	-10	90	-49	-74	20
West Uttar Pradesh	-48	59	-57	-89	14
Uttaranchal	-14	19	06	-78	-5
Haryana, Chandigarh and Delhi	38	9	-19	-86	5
Punjab	73	92	-83	-53	26
Himachal Pradesh	-26	48	-35	-73	-10
J & K	-14	21	-1	-67	11
West Rajasthan	23	3	-19	-99	8
East Rajasthan	-9	-55	-69	-89	-10
West M. P.	8	-78	-58	-94	-23
East M. P.	3	-50	-63	-71	-13
Gujarat region	172	-32	-46	-91	-14
Saurashtra & Kutch	24	-49	-68	-94	-25
Konkan and Goa	182	-25	-71	-81	0
Madhya Maharashtra	179	-40	-54	91	-1
Marathwada	0	-79	-62	10	-25
Vidarbha	-5	-74	-49	-57	-19
Chhattisgarh	3	-4	-49	-44	-12
Coastal A. P.	146	47	-17	-71	14
Telangana	189	-11	-42	-65	8
Rayalseema	7	0	46	89	29
TamilNadu & Pondicherry	-29	148	75	49	33
Coastal Karnataka	141	-9	-90	-62	-17
N. I. Karnataka	142	-63	-51	91	0
S. I. Karnataka	188	-2	2	281	25
Kerala	61	-57	-78	70	-22
Lakshadweep	-45	4	-23	295	7

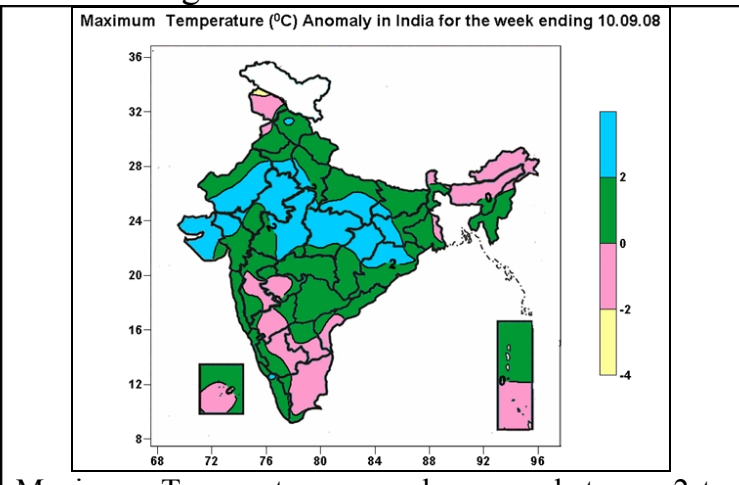
The sub divisions like West Madhya Pradesh and Saurashtra & Kutch received scanty / deficient rain in at least 4 out of last 5 weeks and Himachal Pradesh, West Uttar Pradesh, Jharkhand, East Rajasthan, Madhya Pradesh, Gujarat, Konkon & Goa, Marathwada, Vidarbha and Kerala received scanty / deficient rain in at least 3 out of last 5 weeks. Other subdivisions received normal or excess rain for at least 3 weeks out of last 5 weeks.

	(20% or more excess rainfall)		(-60 to -99 % scanty rainfall)
	(-19 to +19% normal rainfall)		(-100% no rainfall)
	(-20 to -59% deficient rainfall)		(Data not available)

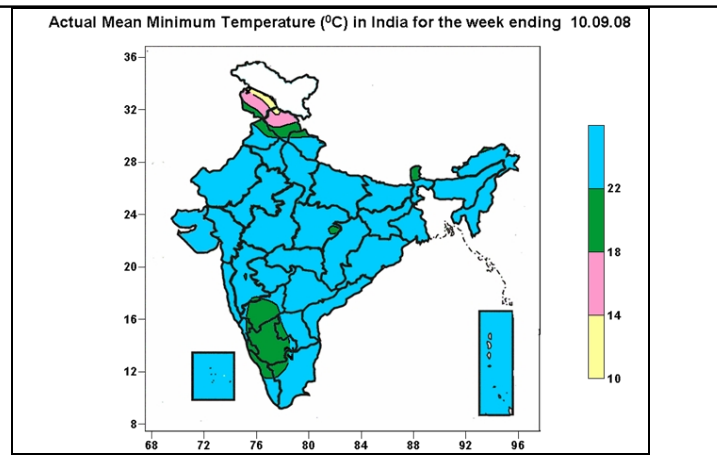
Contour maps for the week ending 10.09.08



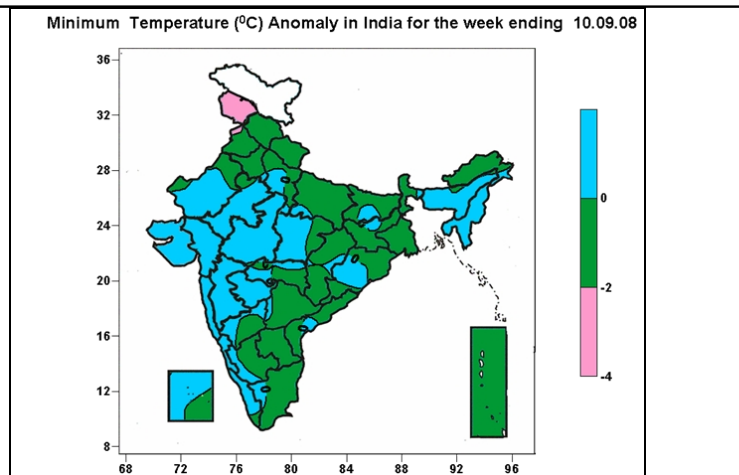
Actual Mean Maximum Temperature ranges between 36 to 40°C in some parts of Punjab, Haryana, West Rajasthan and North Gujarat 32 to 36°C over some parts of Uttarakhand, Tripura, Madhya Pradesh, Kerala, most parts of Punjab, Haryana, Uttar Pradesh, North East India, Rajasthan, Madhya Pradesh, Gujarat, Andhra Pradesh, Tamil Nadu, 24 to 28°C in some parts of Jammu & Kashmir, Himachal Pradesh and Sikkim and 28 to 32°C in remaining part of the country.



Maximum Temperature anomaly ranges between 2 to 4°C most parts of West and Central India -2 to 0°C in some parts of Jammu & Kashmir West Bengal, Lakshadweep and Andaman Nicobar Island, most parts of Madhya Maharashtra, Marathwada, Rayalaseema, Coastal Andhra Pradesh, Interior Karnataka, Tamil Nadu, -4 to -2°C in some parts of Jammu & Kashmir and 0 to 2°C in remaining parts of the country.

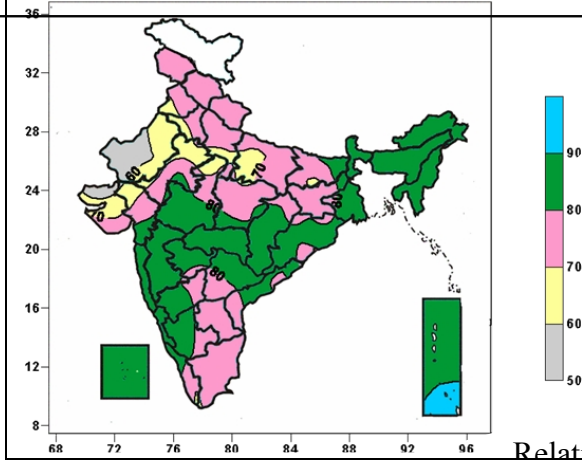


Actual Mean Minimum Temperature ranges between 18 to 22°C in some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, East Madhya Pradesh, b Andhra Pradesh, Kerala, Tamil Nadu most parts of Interior Karnataka, 14 to 18°C in some parts of Jammu & Kashmir and Himachal Pradesh and 22 to 26°C in remaining parts of the country.



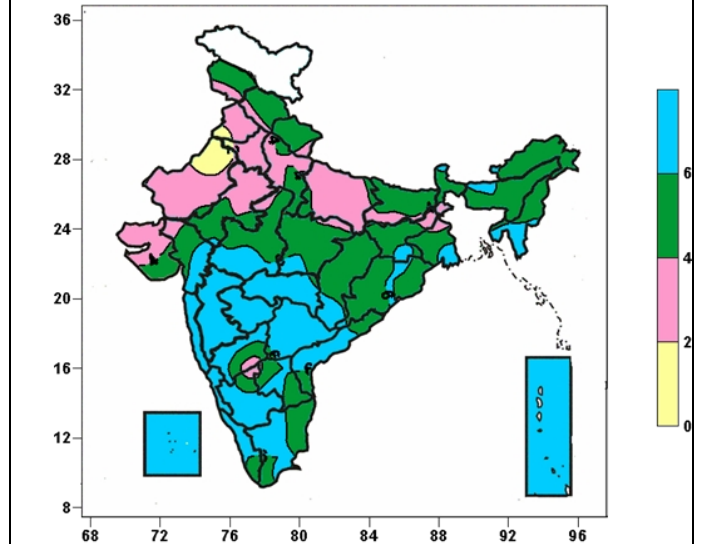
Minimum Temperature anomaly ranges between 0 to 2°C over some parts of Bihar, Jharkhand, Orissa, Coastal Andhra Pradesh, Interior Karnataka, Tamil Nadu, Lakshadweep, most parts of West, Central and East India, Kerala, Coastal Karnataka -4 to -2 °C over Some parts of Jammu & Kashmir, Punjab and -2 to 0°C over remaining parts of the country.

Relative Humidity (%) over India for the week ending 10.09.08



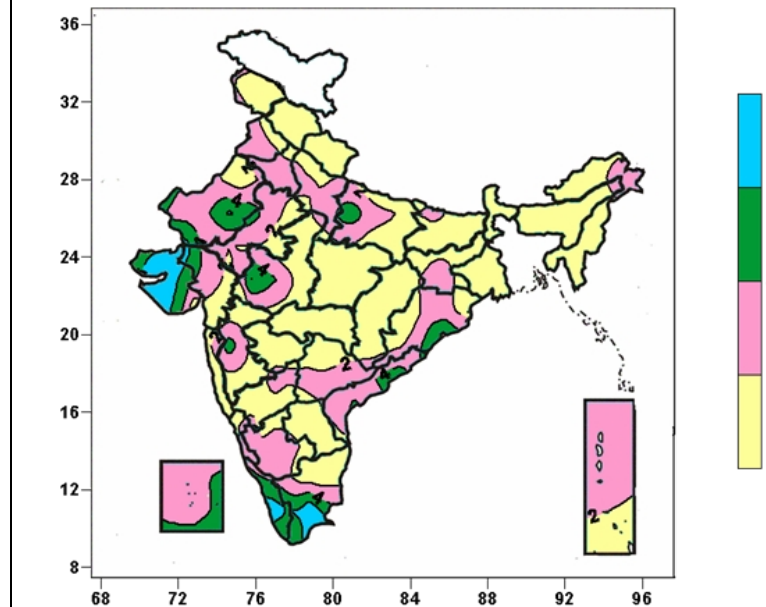
Relative humidity was ranges above 80 to 90% in most parts of North East, East, Central India, Karnataka, Lakshadweep, Andaman & Nicobar Island, 60 to 70% over some parts of Punjab, Haryana, Uttar Pradesh, Rajasthan, Gujarat 50 to 60% over west Rajasthan, north Gujarat and 70 to 80% in remaining part of the country.

Cloud amount (okta) over India for the week ending 10.09.08



Cloud amount ranges between 6 upto 8 okta in some parts of Sikkim, Assam & Meghalaya, Orissa, Gujarat, Madhya Pradesh, West Bengal, Kerala, most parts of Maharashtra, Andhra Pradesh, Karnataka, Lakshadweep, Andaman & Nicobar Island, and 2 to 4 okta in most parts of Rajasthan, Punjab, Uttar Pradesh and some parts of Bihar, West Bengal, Gujarat, interior Karnataka and 0 to 2 okta in some parts of Punjab, Haryana, north Rajasthan and 4 to 6 okta in remaining part of the country.

Wind speed (knots) over India for the week ending 10.09.08



Wind speed ranges between 6 to 8 knots in some parts of Saurashtra & kutch, Kerala and Tamil Nadu. 4 to 6 knots in some parts of Rajasthan, Gujarat, West Madhya Pradesh, Uttar Pradesh, Madhya Maharashtra, Orissa, Coastal Andhra Pradesh, Tamil Nadu, Kerala, Lakshadweep and 2 to 4 knots in some parts of Bihar, Assam, Arunachal Pradesh, Jharkhand, Tamil Nadu, Madhya Maharashtra and most parts of Haryana, Punjab, Rajasthan, Uttar Pradesh, Orissa, Coastal Andhra Pradesh, Telengana, Coastal Karnataka, South Interior Karnataka, Andaman Nicobar and Lakshadweep Islands and 0 to 2 knots in remaining parts of the country.

Districts experiencing stress condition

***Most stress	13/08/08	20/08/08	27/08/08	03/09/08	10/09/08
Arunachal Pradesh					
Changlang	-58	-49	-54	-78	-85
Lower Subansiri	29	-71	-89	-21	-50
Punjab					
Faridkot	304	-100	-100	-100	-100
Muktesar	92	-100	-100	-100	-78
Haryana					
Faridabad	4	-77	-45	-98	-96
Hissar	46	-54	-100	-100	-97
Katihai	-13	-34	-100	-70	-85
Kurukshetra	-31	-31	-100	-86	-91
Mahendragarh	-4	-25	-100	-100	-64
Panipat	-45	-36	-100	-33	-99
Rewari	-21	-53	-100	-100	-66
Rohtak	7	-31	-100	-100	-83
Madhya Pradesh					
East Madhya Pradesh					
Balaghat	-91	-66	-54	-65	-27
Chindwara	-55	-83	-86	-35	-31
Damoh	-25	-83	-76	-53	-87
Dindori	-96	-62	-64	-94	-63
Jabalpur	-100	-100	-80	-99	-59
Narsingpur	-100	-86	-21	-87	-92
Sagar	-91	-97	-74	-79	-56
Seoni	-100	-88	-81	-72	-47
Sidhi	-36	-22	-77	-70	-100
Tikamgarh	264	-41	-55	-94	-100
West Madhya Pradesh					
Bhopal	27	-97	-79	-99	-69
Guna	-100	-88	-81	-98	-41
Gwalior	-12	-39	-30	-99	-45
Harda	-100	-90	-100	-100	-82
Hosangabad	-97	-93	-88	-85	-55
Raisen	-79	-85	-53	-94	-68
Sehore	-100	-97	-68	-99	-59
Sheopur Kalani	-82	-88	-52	-100	-66
Shivpuri	-26	-26	-83	-96	-77

Chattisgarh	13/08/08	20/08/08	27/08/08	03/09/08	10/09/08
Durg	-100	-57	-69	-37	-44
Kanker	-100	-75	-75	-90	-46
Uttar Pradesh					
East Uttar Pradesh					
Deoria	**	-74	-100	-100	-68
Sonbhadra	-82	-34	-78	**	-100
Unnao	-100	-99	-77	-94	-79
West Uttar Pradesh					
Firozabad	-90	**	-100	-100	-100
Jalaun	-38	-29	-67	-91	-100
Jhansi	-68	-38	-96	-63	-92
Meerut	-100	-77	-57	-93	-90
Uttrakhand					
Pithorgarh	-52	-81	-47	-79	-99
Rudraprayag	-29	-31	-62	-52	-60
Bihar					
Supaul	-61	-71	-100	-24	-73
Jharkhand					
West Singbhum	-75	-60	**	-100	-79
Rajasthan					
East Rajasthan					
Ajmer	95	-96	-96	-100	-44
Banswara	5	-96	-70	-91	-33
Baran	-45	-84	-69	-99	-52
Chittorgarh	105	-97	-51	-100	-59
Dungarpur	22	-96	-45	-100	-75
Jhalawar	-30	-95	-47	-100	-38
Kota	-65	-83	-82	-99	-23
Rajsamand	-28	-89	-70	-100	-59
Sirohi	-30	-99	-92	-100	-100
Udaipur	79	-99	-30	-98	-47
West Rajasthan					
Barmer	62	-100	-100	-100	-100
Churu	83	-64	-100	-100	-24
Jalore	64	-100	-60	-100	-100
Jodhpur	-58	-100	-84	-100	-100
Nagaur	1	-76	-83	-100	-77
Pali	84	-100	-93	-100	-96

Gujarat	13/08/08	20/08/08	27/08/08	03/09/08	10/09/08
Ahmedabad	35	-45	-67	-95	-100
Anand	98	-62	-82	-80	-89
Baroda	170	-70	-52	-88	-63
Dahod	99	-61	-31	-94	-41
Kheda	178	-57	-65	-90	-87
Navsari	355	-43	-78	-80	-28
Panchmahal	118	-58	-41	-99	-77
Saurashtra, Kutch & Diu region					
Diu	242	-94	-81	-100	-100
Jamnagar	0	-22	-100	-98	-100
Junagarh	43	-82	-99	-100	-93
Kutch	46	-53	-100	-99	-99
Porbandara	22	-90	-100	-100	-100
Maharashtra					
Marathwada					
Nanded	18	-95	-84	-72	-28
Vidarbha					
Bhandara	-7	-63	-59	-43	-76
Gondia	11	-67	-69	-68	-44
Orissa					
Balasore	**	-26	-85	-20	-21
Jajpur	**	-36	-29	-74	-53
Malkangiri	**	-56	-87	-96	-22
Andhra Pradesh					
Telangana					
Adilabad	-75	-75	-77	-43	-23

****More stress Districts**







Assam	13/08/08	20/08/08	27/08/08	03/09/08	10/09/08
Morigaon	-11	-6	-68	-35	-60
Himachal Pradesh					
Bilaspur	82	123	-71	-38	-29
Kangra	-49	26	-43	-49	-50
Sirmaur	-40	12	-52	-98	-73
Punjab					
Gurdaspur	3	133	-83	-88	-64
Nawashahar	-13	338	-100	-91	-26
Sangrur	-62	26	-100	-74	-100

Haryana	13/08/08	20/08/08	27/08/08	03/09/08	10/09/08
Ambala	109	40	-85	-71	-48
Fatehabad	-28	343	-100	-100	-100
Gurgaon	-4	5	-99	-100	-100
Jhajar	169	-9	-88	-100	-28
Jind	37	10	-91	-69	-100
Karnal	-18	25	-96	-83	-58
Sonepat	96	90	-100	-29	-85
Yamunanagar	-43	-8	-72	-96	-86
Madhya Pradesh					
East Madhya Pradesh					
Chhatarpur	-100	9	-68	-88	-69
Katni	**	-6	-96	-30	-68
Rewa	-100	58	-92	-49	-88
Satna	-100	75	-99	-81	-90
West Madhya Pradesh					
Datia	-63	-9	-94	-90	-90
Chattisgarh					
Korba	-100	13	-55	-75	-74
Koriya	-91	84	-74	-86	-83
Raipur	-96	-16	-53	-30	-31
Uttar Pradesh					
East Uttar Pradesh					
Allahabad	143	48	-92	-94	-91
Azamgarh	-69	48	-100	-100	-100
Banda	-24	11	-83	-83	-85
Barabanki	24	121	-63	-93	-85
Hardoi	-89	176	-29	-100	-66
Kanpur City	-47	191	-74	-65	-89
Pratapgarh	-25	-4	-99	-96	-89
RaiBareilly	-6	127	-31	-67	-38
Shrawasti	-51	131	-88	-100	-72
Sitapur	91	216	-55	-85	-56
Varanasi	-13	412	-67	-82	-45
West Uttar Pradesh					
Agra	-37	77	-77	-100	-91
Aligarh	-62	230	-49	-100	-43
Auraiya	-68	145	-35	-100	-100
Bareilly	-49	187	-63	-90	-64

West Uttar Pradesh	13/08/08	20/08/08	27/08/08	03/09/08	10/09/08
Bijnor	-100	-17	-83	-100	-79
Etawah	-50	36	-28	-100	-100
Hamirpur	-47	15	-31	-83	-100
Mathura	72	79	-31	-100	-39
Moradabad	-21	44	-57	-100	-82
Shahjahanpur	-12	221	-21	-100	-78
Uttarakhand					
Dehradun	31	48	-26	-67	-62
Bihar					
Aurangabad	91	30	-82	-97	-96
Bhojpur	7	89	-73	-39	-30
Buxar	216	87	-72	-99	-89
Gaya	-27	55	-59	-76	-87
Jharkhand					
Bokaro	26	77	-73	-63	-100
Dhanbad	-9	9	-62	-32	-94
Giridih	**	69	-88	-38	-92
Palamau	72	62	-61	-100	-80
Santhal Parganas	23	-4	-84	-22	-86
Rajasthan (East Rajasthan)					
Bharatpur	-6	33	-84	-100	-64
Dholpur	9	-6	-89	-88	-55
Gujarat					
Gujarat region					
Banaskantha	163	95	-67	-100	-100
DNH & Daman	279	-19	-80	-83	-25
Gandhinagar	265	25	-38	-100	-95
Patan	89	-17	-49	-100	-100
Valsad	343	-3	-84	-89	-36
Saurashtra, Kutch & Diu region					
Rajkot	78	8	-84	-79	-91
Surendranagar	92	-12	-38	-93	-83
Orissa					
Nawapara	**	-7	-34	-31	-65
West Bengal					
GWB					
Murshidabad	-65	44	-86	-79	-94
Purulia	-18	49	-83	-52	-26
Andhra Pradesh	13/08/08	20/08/08	27/08/08	03/09/08	10/09/08

Coastal Andhra Pradesh					
East Godavari	67	67	-44	-81	-21
* Stress Districts					10/09/08
Assam					
Jorhat	6	-36	1	-36	-72
Nowgong	-44	-17	30	-66	-59
Sibsagar	-90	-69	-19	-29	-58
Himachal Pradesh					
Mandi	-47	8	-13	-65	-55
Shimla	5	132	20	-86	-23
Punjab					
Moga	45	28	76	-44	-100
Haryana					
Panchkkula	7	-63	-15	-96	-82
Madhya Pradesh					
East Madhya Pradesh					
Mandla	-30	-85	8	-83	-34
Shahdol	**	-81	-1	-81	-77
West Madhya Pradesh					
Bhind	1	-2	32	-86	-65
Vidisha	-100	-71	-92	-99	-49
Chattisgarh					
Bilaspur	-86	-19	-13	-24	-69
Kawardna	-75	-77	-13	-67	-71
Mahasumund	-100	-53	-2	-83	-62
Surguja	-90	26	-38	-22	-91
Uttar Pradesh					
East Uttar Pradesh					
Ambedkar Nagar	**	**	**	-100	-100
Bahraich	-15	91	-5	-88	-68
Basti	69	6	8	-73	-55
Gonda	-59	124	76	-56	-100
Kanpur Dehat	-65	39	-1	-97	-30
Kheri	-5	147	-15	-69	-50
Kushi nagar	-86	**	**	-94	-94
Maharajganj	-77	**	**	-85	-92
Uttarakhand	13/08/08	20/08/08	27/08/08	03/09/08	10/09/08
Almora	-96	-88	4	-100	-100

Chamoli	17	-24	25	-61	-93
Champawat	33	85	80	-75	-94
Garhwal Tehri	-55	172	-9	-100	-88
Nainital	-49	233	-19	-87	-93
Uttarkashi	39	-15	77	-88	-24
Bihar					
Bhagalpur	26	75	59	-44	-71
Jharkhand					
East Singbhum	-35	173	50	-61	-59
Hazaribagh	123	248	-15	-33	-92
Ranchi	48	38	63	-49	-97
West Singbhum	-75	-60	**	-100	-79
Gujarat region					
Broach	129	-76	15	-90	-43
Mehsana	132	-35	10	-99	-100
Sabarkantha	118	-24	52	-97	-76
Saurashtra, Kutch & Diu region					
Amreli	50	-95	2	-73	-64
Bhavnagar	87	-89	36	-98	-29
Orissa					
Bolangir	**	79	7	-65	-20
Boudh	**	-31	83	-56	-26
Deogarh	**	-24	-7	-70	-76
Dhenkanal	**	-9	10	-78	-56
Jharsuguda	**	138	1	-89	-68
Keonjhar	**	-22	78	-52	-21
Khurda	**	-4	24	-31	-33
Mayurbhanj	**	-10	-7	-67	-51
Puri	**	-38	17	-93	-28
Sambalpur	**	-2	40	-49	-57
Sonepur	**	43	119	-60	-82
Tamil Nadu					
Tiruvarur	-91	**	26	-26	-63
Andhra Pradesh					
Coastal Andhra Pradesh					
Nellore	200	200	26	-77	-29

	(20% or more excess rainfall)		(-60 to -99 % scanty rainfall)
	(-19 to +19% normal rainfall)		(-100% no rainfall)
	(-20 to -59% deficient rainfall)		(Data not available)

*** Most stress (more than 3 weeks continuously deficient to no rain)

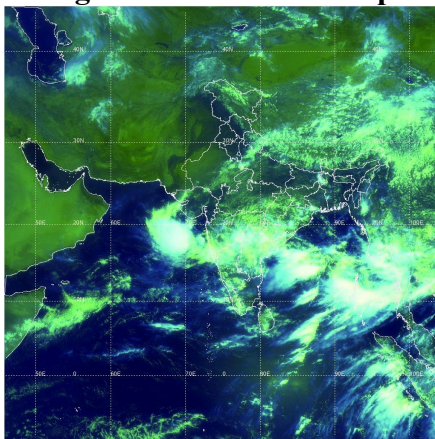
**More stress (3 weeks continuously deficient to no rain)

*Stress (2 weeks continuously deficient to no rain)

Chief Synoptic Feature (Based on 1430 hours IST observations of 11th September, 2008)

- Morning's well marked low pressure area over westcentral Bay of Bengal & adjoining coastal Andhra Pradesh with associated upper air cyclonic circulation extending upto mid-tropospheric level persists. Under its influence fairly widespread rainfall activity with isolated heavy to very heavy falls is likely over Andhra Pradesh and south coastal Orissa during next 48 hours.
- The current meteorological analysis and Numerical Weather Prediction models indicate fairly widespread rainfall activity with isolated heavy falls along the west coast during next 2-3 days.

Satellite image of 5 UTC on 12th September 08



Zone-wise Forecast

NORTHWEST INDIA [J & K, H. P., UTTARAKHAND, PUNJAB, HARYANA, DELHI, WEST UP] (Forecast valid upto 1430 hours IST of 14th September, 2008)

- Isolated rain/thundershowers are likely over Haryana, Himachal Pradesh, Uttarakhand and West Uttar Pradesh.
- Mainly dry weather is likely over the rest region.

Quantitative District Weather Forecast for next five days:

- There is no chance of occurrence of rainfall in J&K, Punjab, Haryana and Delhi. Light rainfall will occur in Uttarakhand and West UP.

EAST INDIA [EAST UP, JHARKHAND, BIHAR, ORISSA, WEST BENGAL & SIKKIM] (Forecast valid upto 1430 hours IST of 14th September, 2008)

- Rain/thundershowers are likely at many places over coastal Orissa.
- Rain/thundershowers are likely at a few places over West Bengal & Sikkim and interior Orissa.
- Isolated rain/thundershowers are likely over the rest region.

Quantitative District Weather Forecast for next five days:

- Light to rather moderate rainfall will occur over the region.

NORTHEAST INDIA [Arunachal Pradesh, NMM & T, Assam, Meghalaya,] (Forecast valid upto 1430 hours IST of 14th September, 2008)

- Rain/thundershowers are likely at a few places over Nagaland, Manipur, Mizoram & Tripura.

- Isolated rain/thundershowers are likely over the rest region.

Quantitative District Weather Forecast for next five days:

- Light to rather moderate rainfall will occur over the region.

SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS] (Forecast valid upto 1430 hours IST of 14th September, 2008)

- Rain/thundershowers are likely at many places over Andaman & Nicobar Islands, Coastal Karnataka, and Andhra Pradesh.
- Rain/thundershowers are likely at a few places over the rest region.

Quantitative District Weather Forecast for next five days:

- Light to rather moderate rainfall will occur in Telangana, Rayalaseema, Interior Karnataka and Tamil Nadu and rather moderate to moderate rainfall will occur over remaining part of the region.

WEST INDIA [GOA, MAHARASHTRA (OTHER THAN VIDARBHA), GUJARAT, RAJASTHAN] (Forecast valid upto 1430 hours IST of 14th September, 2008)

- Rain/thundershowers are likely at many places over Konkan & Goa, Gujarat Region and Madhya Maharashtra.
- Rain/thundershowers are likely at a few places over Marathawada.
- Isolated rain/thundershowers are likely over Saurashtra & Kutch during next 24 hours and increase thereafter.
- Isolated rain/thundershowers are likely over the rest region outside west Rajasthan where it will be mainly dry.

Quantitative District Weather Forecast for next five days:

- There is no chance of occurrence of rain in West Rajasthan, light to rather moderate rain will occur over remaining parts of the region.

CENTRAL INDIA [M.P., CHHATTISGARH, VIDARBHA] (Forecast valid upto 1430 hours IST of 14th September, 2008)

- Rain/thundershowers are likely at a few places over south Chhattisgarh, and West Madhya Pradesh.
- Isolated rain/thundershowers are likely over the rest region.

Quantitative District Weather Forecast for next five days:

- **Light to rather moderate rainfall will occur over the region.**

Warning:

- Isolated heavy to very heavy rainfall is likely over Andaman & Nicobar Islands, Konkan & Goa, Coastal Karnataka, Andhra Pradesh and south coastal Orissa.

Weather Outlook from 1430 IST of 14th to 1430 IST of 16th September, 2008 (Based on numerical weather products):

- Scattered to fairly widespread rainfall activity is likely along the west coast and of north-eastern parts of peninsular India.

Zonewise Agromet Advisories

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

Himachal Pradesh

- **Major Standing crops:** Vegetables (vegetative / flowering / fruiting / harvesting), Maize (tasseling / silking / cob formation), Rice (tillering / panicle initiation), Apple (fruit development / maturity), Tea (plucking), new planting of evergreen fruit plants.
- As there was rain in Chamba, Hamirpur, Kullu and Solan districts during last week, postpone irrigation to the crops in these districts. As there was no significant rain during last couple of weeks in most of the remaining districts of the State and rain is likely to occur only at isolated places for next three days, apply irrigation to the standing crops.
- As the weather condition is favourable, undertake intercultural operation in the standing crops.
- It is optimum time for planting of evergreen plants like Mango, litchi, guava, citrus, loquat and amla in Sub-mountain & Low hills Sub tropical zone.

Plant Protection:

- Weather is conducive for the attack of leaf minor in new growth of citrus. Spray 10 ml Matasystox or Malathion @ 10 ml in 10 litre of water.
- The weather is congenial for spread of fruit rot in tomato, chilli and *shimla mirch*. For control apply Dithane M - 45 @ 2 – 3 g per litre of water in 10 – 15 days interval.
- Rice blast is appearing and there is also more chance of infestation as weather condition is conducive. For control, spray Blitox-50 (3 g per litre of water) or Bavistin (1 g per litre of water). Weather is also conducive for infestation of rice hispa. For control, chlorpyrifos 20 EC @ 2.5 ml per litre may be applied if infestation crosses economic threshold level.
- **Animals:** Weather is conducive for spread of foot and mouth disease (FMD) and galgotu in animals. Farmers are advised for vaccination of animals against FMD.
- **Poultry:** As humidity is increasing, replace the poultry houses with fresh litter to avoid wetting and keep the houses clean. Climate is also congenial for attack of Diarrhia and cocksedia. Consult the nearby veterinarian under these circumstances.

Uttarakhand

- **Major Standing Crops:** Sugarcane (vegetative), Maize, groundnut and vegetables (vegetative/flowering/early maturity), Rice (early vegetative / tillering, grain formation/early maturity in Nainital district), Urd(early vegetative), soybean(flowering/pod formation).
- As there was insufficient rain in all the districts of the State during last few weeks and rain / thundershowers are likely at isolated places during next three days, apply irrigation to the crop.
- Farmers are advised to undertake sowing of toria after harvesting of matured rice. Select Pant Toria-30, Pant toria-303 or PT 507 varieties.

- Application of fertilizers and intercultural operation in early sown crops may be carried out.
- Maintain 3 – 5 cm of water in rice the field.

Punjab

- **Major Standing Crops:** Rice (early vegetative/vegetative), Horticultural crops (vegetative), Sugarcane (vegetative), Early sown cotton (late vegetative/squaring stage), maize, groundnut (early vegetative to late vegetative), and Sunflower (vegetative/flowering).
- As most of the districts received insufficient rain during last few weeks and mainly dry weather is likely to occur in Punjab for next three days, farmers are advised to apply irrigation and continue intercultural operations.
- Farmers are advised to continue sowing of *desi* varieties of radish, peas, potato, palak and late season varieties of cauliflower and planting of fruits crops like sweet orange, lime mango and guava utilizing the rainfall during last week and available irrigation facilities.
- As there are chances of *pyrilla* in sugarcane and grasshopper in sugarcane, farmers are advised to monitor the crop and need to undertake control measures as the weather is favourable for spraying.

Haryana

- **Major Standing Crops:** Rice (early vegetative / tillering), Sugarcane (vegetative), Horticulture crops (vegetative), Sunflower (vegetative/flowering), Early sown cotton(late vegetative/squaring stage) and Bajra(vegetative).
- As most of the districts received insufficient rain during last few weeks and isolated rainfall is likely to occur in Haryana for next three days, farmers are advised to apply irrigation and continue intercultural operations.
- Farmers are advised to continue application of top dressing of urea to bajra.
- Farmers are advised to continue sowing of *desi* varieties of radish, peas, potato, palak and late season varieties of cauliflower and planting of fruits crops like sweet orange, lime mango and guava utilizing the rainfall during last week and available irrigation facilities.

Delhi

- **Major Standing crops:** Maize (cob formation), arhar (flowering / pod formation), bajra (flowering / grain formation) and fodder sorghum (vegetative), Sugarcane (vegetative), *Kharif* rice (flowering / milk / dough).
- As there is no chance of rain, weather is favourable to undertake intercultural operation to keep the crop fields weed free.
- As weather is favourable, farmers are advised to apply nitrogen in *kharif* rice and maintain 3 – 5 cm of standing water after 48 hours of application of fertilizer.
- As the weather is favourable, farmers are advised to prepare land and undertake sowing of *toria*.
- As this is the optimum time, the farmers are advised to prepare land and sow raddish, turnip and carrot and also prepare nurseries for tomato. Select varieties from Pusa Deshi, Pusa Rashim etc. for raddish, Pusa Sweta, Pusa Kanchan etc. for turnip and Pusa Kesar, Pusa Mighali etc. for carrot for sowing.
- As weather will be conducive, farmers are advised to undertake earthing up in sugarcane crop to prevent lodging.

Plant Protection

- There is chance of attack of rice bug in rice due to favourable weather condition. Farmers are advised to apply Endosulfan @ 2 ml / litre of water to control the insect.

Uttar Pradesh

- **Major Standing Crops:** Summer sugarcane (vegetative), Mango trees (fruit setting), Kharif Rice (early vegetative), Kharif pulses and maize (early vegetative).
- As there was insufficient rain in most of the districts during last two weeks and rain/thundershowers are likely at isolated places over the State during next three days, apply irrigation to sugarcane and early sown kharif crops.
- Undertake weeding, intercultural operations, application of fertilizers and pesticides in early sown crops like maize, til and urd.
- Topdressing of recommended amount of Nitrogen may be done in early transplanted rice.
- Prepare field for sowing of toria utilizing the rainfall received during last week.
- Undertake transplanting of brinjal, tomato and chillies (plains) and cauliflower in hilly region. Complete sowing of soyabean utilizing the rainfall received during last week and rainfall is expected during next 5 days.
- **Plant Protection:** Weather conditions are conducive for mild incidences citrus canker in Allahabad, Banda, Barari, Chitrakut, Hamirpur, Jalaun, Jhansi, Lalitpur and Mahoba districts. Monitor the crop and spray Blitox @ 3-4 g/liter of water to control canker.

J & K

- **Major Standing Crops:** Pulses (vegetative), Rice (dough stage), Maize (harvesting) in Kashmir division.
- Undertake sowing of turnip in the nursery in Kashmir divisions.
- Undertake thinning in carrot in Kashmir division.
- Due to presence of sufficient moisture in the soil in Jammu division, undertake sowing of toria crop in fallow land. Farmers can go for sowing of radish (var. Pusa Chetki, Japanese white & Pusa Reshmi), carrot (var. Pusa Kesar), turnip (var. PTWG), garlic (var. local, large segmented), spinach (prickly seeded) and Methi (P.E.B.K.methi).
- Undertake harvesting of crops like maize and fodder crops and vegetable crops like tomato, cucurbit and capsicum in Kashmir division.
- **Plant Protection:** Monitor brinjal, tomato and bhindi crops for phytoplasma in Jammu region. Rogue out the affected plant to prevent further spread.
- Present weather is congenial for hispa and stem borer in rice and downy mildew and smut in bajra. Monitor the crops for the pest and diseases and spray the crop with Carbofuran @ 20 kg/ha to control stem borer and Quinalphos @ 1 litre/ha to control hispa. Rogue out downey mildew and smut affected bajra plants and destroy completely to prevent further spread in Jammu region.
- Weather is congenial for mild incidences of canker in citrus. Monitor the citrus trees and collect and destroy the affected fruits and spray Terramycin @ 1 g/10 litre of water to control the disease.

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

Bihar

- **Major Standing Crops:** Sugarcane (vegetative), *Kharif* rice (early vegetative / tillering), Maize (vegetative), Pulses(vegetative)
- Due to receding of flood water, crop situation in North Bihar is improving. Provide drainage facilities in the already sown crops and regular agricultural operations may be continued in this part of the State. In areas, where the farmers who could not transplant rice or where transplanted rice crop has been damaged due to flood are advised to sow urd as an alternative crop and the variety Navin is suitable for sowing in north Bihar region. Farmers are advised to carry out intercultural weeding and operations under the prevailing weather condition in South Bihar and as the districts received poor rainfall in Supaul, Aurangabad, Bhojpur, Buxar, Gaya, East Singbhum and Bhagalpur districts, apply irrigation to maize.
- Timely transplanted paddy crop is in flag leaf stage while late transplanted paddy crop is in tillering stage North east alluvial plain zone. Farmers are advised to maintain 3-5 cm water depth in the rice

field for better growth and development of the crops as during these two stages of crop growth and development, the crop needs 3-5cm water depth in the field. In timely transplanted rice crop apply last one fourth dose of urea and in late transplanted rice crop apply second dose i.e second one fourth dose of urea as top dressing.

- Farmers are advised to prepare nursery beds for sowing of winter tomato, cauliflower and cabbage in south Bihar by taking advantage of realized rainfall during last week and rainfall is also expected during next five days.
- Farmers are advised to plough the fields immediately North west alluvial plain zone utilizing the rainfall during last week and rainfall is also expected during next five days, so that the lands become ready for sowing of rape seed and mustard in time.
- As there was insufficient rainfall in most of the districts of the State during last week and rain/thundershowers are likely at isolated places over the State, apply irrigation to the standing sugarcane, maize, arhar, til, sunflower and vegetable crops.
- Due to dry and humid weather the rice crop in north east alluvial plain zone may be affected by some insects like stem borer, leaf roller and swarming caterpillar and disease like blast, bacterial leaf blight and sheath blight. If there is damage of such insects and diseases beyond economic damage, apply Carbofuron in the wet soil @ 25kg/hectare. Similarly in case of attack of blast diseases spray bavistin @ 1-2gm/liter water.
- In flood affected areas there may be the chance of attack of Amphistomiasis and foot and mouth disease in animals. The animals should be vaccinated for safeguard.
- Undertake intercultural operations, spraying and application of fertilizers in rice, maize, vegetables and pulse crops in south Bihar alluvial zone and north east alluvial zone.

Jharkhand

- **Major Standing Crops:** Kharif rice, arhar and Early sown maize (early vegetative).
- As there was no significant rainfall in most of the districts during last week and rain/thundershower are likely at isolated places over the State for the next three days, apply irrigation to early sown maize, arhar, urd and vegetables.
- Farmers are advised to undertake transplanting of bringal, tomato, cauliflower with application of organic manure in the fallow upland field as early vegetable crop.
- After weeding of rice, apply 18 kg of urea in midland and 22 kg in low land as top dressing per acre in Saheibganj, Godda, Pakur, Dumka, Deoghar, Jamtara, Giridih, Dhanbad, Kodarma districts and 20 kg urea in midland, 25 kg in lowland per acre in Ranchi, Khunti, Bokaro, Hazaribag Ramgarh, Chatra, Garwah, Palamu, Latehar, Lohardagga, Gumla, Simdega districts and undertake bushing and topdressing of 25 kg Urea/acre in East Singhbhum, West Singhbhum and Saraikela.
- Undertake intercultural operations, spraying and application of fertilisers in early sown maize, arhar, urd and vegetables.

Orissa

- **Major Standing crops:** *Kharif* Rice (proper time for transplanting), Sugarcane (vegetative), Maize, cotton (proper time for sowing of maize and cotton), Early sown crop (early vegetative), Early sown Jute (early vegetative).
- Complete sowing of niger and castor in the fallow up lands of East & South Eastern coastal plain zone comprising of Cuttack, Gajapati, Ganjam, Jagatsighpur, Nayagarh, Khurda, Kendrapara, Puri, North Central Plateau zone comprising of Mayurbhanj, Keonjhar and also Bhubaneswar districts as rainfall occurred in these districts during last week and good amount of rainfall is expected during next five days. High yielding varieties of niger such as Deomali and IGP-76 and castor such as Aruna, Jyoti, Kranti, S-1 and GC-2 can be sown. Also undertake sowing of sesame and pre-rabi pulses like green gram, black gram, horse gram in the up and up-medium lands.

- As rain is likely at many places in coastal Orissa, postpone irrigation to the standing crops in coastal Orissa and as also there was in sufficient rainfall in most of the districts in interior Orissa during last two weeks and rain is likely at a few places, postpone irrigation to the crops in interior Orissa. Provide adequate drainage facilities in south coastal Orissa as heavy to very heavy rainfall is expected at isolated places.
- Farmers are advised to apply top dressing of fertilizers in transplanted rice and other crops.
- Due to prevailed high rainfall and cloudy conditions in Bargarh, Bolangir, Boudh, Chiplima, Jharsuguda, Sambalpur, and Sonepur, there is possibility of stem borer and gall midge incidence in rice. Apply Carbofuran 3G @ 12 kg/ac.
- There is possibility of occurrence of aphid in maize crop in the prevailing weather in Keonjhar and Mayurbhanj districts and apply 300 ml Metasystox in 200 litre of water per acre as foliar spray.
- There is incidence of leaf folder and case worm in paddy in Western central table land zone. Apply Monocrotophos @ 2ml /litre of water or Chloropyrifos @ 2ml /lit of water.
- Postpone application of fertilizers, spaying and undertaking of weeding in coastal Orissa as rain is likely at many places along with heavy rain in the coastal region and continue these operations on a non rainy day in interior Orissa.

West Bengal

- **Major Standing Crops:** Sugarcane (vegetative), jute (maturity / harvesting), *Aus* rice (grain maturity), *aman* rice (tillering / panicle initiation).
- Weather condition is favourable to undertake intercultural operation on a non-rainy day to keep the fields weed free.
- Drain out water from the fields of *aus* rice 10 – 15 days before harvesting.
- As the weather condition is favourable, continue transplanting of seedlings and sowing of seeds of winter vegetables like radish, spinach and broccoli etc.
- Under prevailing weather prepare nurseries for early cauliflower and capsicum. Select improved varieties of cauliflower like Kanwari, Jowhar, Moti, Early Patna etc. For cultivation of one bigha of capsicum, two seedbeds (3m x 1m) are sufficient. 50 gm seeds are needed for each seedbed.

Plant Protection:

- Apply plant protection measures on a non-rainy day.
- In the prevailing weather situation, infestations of fungal leaf spot may be seen in vegetables in New Alluvial Zone. Apply 2.5 gm Dithane M-45 mixed with one litre of water to control the attack.
- Sheath blight disease is now becoming severe in *aman* rice in New Alluvial Zone and there is also more chance of infestation in New Alluvial Zone and Coastal saline Zone due to favourable weather condition. To prevent the disease apply Carbendazim @ 1 gm or Propiconazole @ 1 ml per litre of water to the standing crop.
- In the prevailing weather situation, infestations of fruit and shoot borer may be noticed in brinjal in New Alluvial Zone. To control brinjal fruit and shoot borer apply Spinosad 45 SC @ 1 ml per litre of water.
- There is chance of attack of blast in *aman* rice in Red Lateritic zone. For controlling blast farmer friends can spray with carbendazim 50% (Bavistin) @ 1gm per litre of water.

Sikkim

- **Major Standing Crops:** Orange (fruiting/harvesting), large cardamom (capsule development / maturity), ginger (late vegetative), maize (harvesting), rice (active tillering).
- As rain/thundershower are likely at a few places over the State, apply irrigation to orange, large cardamom, ginger and vegetable crops.
- This is proper time for sowing of rabi vegetable crops like cabbage, cauliflower, carrot, Chinese cabbage, knol-khol, garden peas radish, spinach, turnip etc. in medium and low hills. Undertake land preparation and sowing of the vegetable crops in the nursery when the temperature is in the range of 15-20°C.

- During the tillering stage, drain out excess water due to excess rainfall and maintain water level of 3-4 cm in rice fields in medium and high hills to enable maximum tillering.
- **Plant Protection:** Chirke and foorkey infected large cardamom plants may be destroyed by uprooting / burial at regular intervals in the pits. Regular inspections may be carried out to observe caterpillar/ shoot borer/shoot fly incidence if any and may be hand picked and destroyed mechanically. 1% Bordeaux mixture or copper oxychlorid @ 3gm/ltr of water may be sprayed to the cardamom plants on an on rainy day to protect from fungal diseases.
- Weather conditions are congenial for mild incidences of fruit fly in orange. Monitor the trees and apply Sevin baits on an on rainy day to control the pest.
- Monitor ginger for bacterial wilt in Medium and High hills and collect and destroy the affected plants completely to prevent further spread of the disease.

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

Assam

- **Major Standing crops:** Sugarcane (vegetative), arhar (vegetative), early transplanted *sali* rice (early vegetative / tillering), vegetables (sowing / vegetative / flowering / fruiting).
- The rising level of rivers with continuous rain caused flood situation in Assam during last week. Flood caused substantial losses of crops in 16 districts especially *ahu* and *sali* rice, vegetables, jute etc. Kamrup, Dhubri, Goalpara, Dibrugarh, Sonitpur, Nalbari, Barpeta, Lakhimpur, Dhemaji, Morigaon, Nogaon and Dibrugarh are the worst affected districts in the current wave of flood.
- As most of the districts of the State received good amount of rain during last couple of weeks, postpone irrigation to the standing crops. Also arrange for draining out excess water from the fields of flood affected area.
- Farmers are advised to collect the *sali* rice seeds of the varieties like Disang, Luit, Kapili, IR –50 and Sonamukhi and to go for direct sowing in flood affected areas after receding of flood water. For one bigha land, 7-8 kg seeds are required.
- In chronically flood-affected areas, aged seedlings of *Sali* rice varieties like Andrew Sali, Monohar Sali, Kmj-1-19- 1 etc. up to 50-60 days may be transplanted up to 15th September. 4-6 seedlings per hill should be transplanted at closer spacing (15X15 cm).
- As weather is favourable, farmers are advised for weeding and topdressing of urea fertilizer in medium and long duration varieties of *Sali* rice at tillering stage. For top-dressing, the requirement of urea is 3 kg per bigha.
- Prepare land and sow cauliflower, raddish, brinjal, tomato, knolkhol etc. The varieties of cauliflower like Pusa Ketaki, Pusa Deepali, Early Kuwary etc. can be sown. Select varieties from Pusa Himani, Pusa Deshi etc. for sowing of raddish and Pusa Kranti, Pusa Purple Long, Pusa Purple Round, JC-1, JC-2 etc. for brinjal, Punjab Chhuhara, Punjab Kesri, Sioux, Pusa Ruby, Arka Abha, Arka Alok, Arka Abhijit, BT-1, Bilahi-1, Bilahi-2 for tomato and White Vienna for knolkhol.
- This is also proper time for sowing of sesamum, black gram, green gram and toria. Select recommended varieties like Madhabi, Gauri, Binayak, Punjab Til No-1 etc. for sesamum, T-9, T-27, Pant U-19, T-122 etc. for black gram, T-44, Koper Gaon, ML-56, ML-131 for green gram and TS-27, TS-25 for toria.
- The farmers who have not vaccinated their domestic live stocks like cattle, goat and pigs, should vaccinate against Foot and mouth disease as well as anthrax disease. They should not be fed with water submerged rotted grasses and fed with anti worm drugs. Poultry birds should be fed with antibiotics and vitamins after consulting veterinary doctors.
- Fisheries should be well protected with nylon nets in view of flood situation.

Arunachal Pradesh

- **Major Standing crops:** Ginger (rhizome formation), Vegetables (harvesting), Wet seeded rice (vegetative), Jhum rice (grain formation), Millets (grain formation) and maize (maturity).

- As there was sufficient rainfall in most of the districts during last two weeks and rain/thundershower are likely at isolated places over the State, postpone irrigation to the standing maize (cob formation), millet and ginger crops.
- Undertake intercultural operations, application of fertilizers and pesticides in ginger and wet seeded rice.
- Farmers are advised to continue land preparation and sowing of winter vegetables by utilizing the realized rainfall during last week and also rainfall is likely at isolated places over the State.

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

Andhra Pradesh

- **Major Standing Crops:** Sugarcane (grand growth), Rice (transplanting/vegetative)
- As rain/thundershower are likely at many places over the State along with isolated heavy to very heavy rainfall during next 48 hours, postpone irrigation to the standing crops. Arrange drainage facilities to avoid water stagnation due to excess rainfall.

Coastal AP

Plain Land

- Farmers in Krishna, Guntur and Prakasam districts are advised to complete transplanting of rice (BPT 5204) at the earliest.
- Farmers are advised to complete land preparation and sowing of chillies in Guntur and Prakasam districts by utilizing monsoon showers.
- **Plant Protection:** Attack of stem borer is reported in rice in Srikakulam and Vijayanagaram districts. Attack of blast is also reported. Farmers are advised to undertake plant protection measures after spells of rain to control the pests and diseases.
- Monitor pulse crops for tobacco caterpillar and bacterial leaf spot. Spray Chlorpyrifos @ 2.5 ml/l or Acephate @ 1.0 g/l of water after spells of rain to control the larvae at early stage. For the control of the grown up larvae, undertake poison baiting with rice bran, jaggary and Chlorpyrifos/Monocrotophos @10:1:1 ratio. For the control of bacterial leaf spot in pulse crops like green gram and black gram, spray Copper oxychloride @ 3 g/l + Streptocyclin @ 0.1 g/l of water after spells of rain.
- Weather is congenial for mild incidences of aphids, mealy bugs and jassids in cotton. Spray Monocrotophos in 1:4 or Imidaclopride in 1:20 ratio with water after spells of rain and also at 20, 40 and 60 days after sowing to control the pests.
- Due to congenial weather, attack of stem borer is reported in maize. Monitor the crop and spray Carbofuran 3G @3 kg/acre after spells of rain.

High Altitude Areas

- Farmers in high altitude regions of Srikakulam, East Godavari, Vijayanagaram, Visakappattinam and Khammam are advised to continue sowing of pulse crops like rajma and niger as there is a possibility of 100-125 mm of rainfall during next five days.
- **Plant Protection:** Attack of blast is reported in paddy and ragi. Farmers are advised to undertake plant protection measures after spells of rain to control the disease.

Rayalaseema

- Farmers in all the districts are advised to go for intercultural operation in early sown *kharif* crops after spells of rain.
- Farmers in Anaparthi and Kurnool are advised to continue transplanting of rice and planting of new orchards (papaya, ber, custard apple, mango and banana).

- **Plant Protection:** Attack of Spodoptera, Heliothis and sucking pests is reported in groundnut in Ananthapur and Cuddappah districts. Farmers are advised to undertake plant protection measures after spells of rain to control the pests.
- Attack of stem borer in paddy, leaf miner and sucking pests in groundnut and internode borer in sugarcane is reported in Chiththoor district. Farmers are advised to undertake plant protection measures after spells of rain to control the pests and diseases.

Telangana

Farmers in Karimnagar, Nizamabad and Adilabad districts are advised to undertake intercultural operations and application of fertilizers and pesticides in early sown crops after spells of rain.

- **Plant Protection:** Attack of stem borer is reported in rice. Spray Carbofuran @ 10 kg/acre after spells of rain to control the pest.
- Weather conditions are conducive for mild incidences of Spodoptera in soyabean in Adilabad. Monitor the crop for the pests and undertake plant protection measures after spells of rain to control the pest.
- Weather conditions are congenial for the attack of mealy bug in cotton. Monitor the crops for the pests and spray Dichlorvas @ 1 ml/litre of water after spells of rain to control the pest.

Karnataka

- **Major Standing Crops:** Annual sugarcane (tillering), Early sown Kharif crops (vegetative).

Coastal Karnataka

- Farmers in Udupi and Dakshin Kannada districts are advised to undertake intercultural operations after spells of rain in early transplanted rice, arecanut, coconut, cashew and banana. Apply second dose of fertilizers (urea, rock phosphate and potash). Apply FYM @ 15-30 kg/tree in addition to fertilizers to plantation crops after spells of rain.
- Undertake intercultural operations, application of fertilizers and pesticides after spells of rain.
- **Plant Protection:** Due to high humidity during last week, attack of leaf folder is noticed in rice. Farmers are advised to monitor the crop and spray Quinalphos @ 2 ml/litre after spells of rain to prevent further incidence.
- Due to high humidity, Colerago may attack arecanut. Monitor the crop and spray Bordeaux mixture @ 1% after spells of rain.

North Interior Karnataka

- Due to receipt of sufficient rainfall in Bellary, Bijapur, Bagalkot and Koppal districts during last week (90-115 mm) and also with a possibility of light rain during next five days, farmers are advised to undertake sowing of sunflower in red soils and shallow black soils. Sunflower and cotton in medium to deep black soils.
- Farmers in Bidar region are advised to continue sowing of sunflower with realized rainfall during last week (125 mm) and also with a possibility of 30 mm of rainfall during next five days.
- In view of sufficient amount of rainfall received during last week (120 mm) and also with a possibility of 20 mm of rainfall during next five days, farmers in Gulbarga district are advised to continue sowing of sunflower (KBSH 1, RSH 1, SP 275, SP244 and Darsa Kaveri).
- Farmers in Raichur area are advised to continue sowing of cotton (DCH-32, DHH-11, NHH-44 and Bt Hybrids) and sunflower (Morden, BSH-1, KBSH-1, RSFH-1) with realized rainfall during last week (95 mm) and also with a possibility of light rain during next five days.
- **Plant Protection:** Due to cold and cloudy weather conditions, attack of sucking pests in cotton, leaf eating caterpillars and leaf spot in groundnut and thrips, mites and murda-complex disease in chillies is reported in Dharwad district. Also necrosis is noticed in sunflower. Spray Dimethoate @ 1.7 ml to control sucking pests in cotton, Methyl Demeton @ 1 ml/litre of water to control eating caterpillars and Chlorothalonil @ 0.2% to control leaf spot in groundnut. Spray 1.7 ml Roger or 1.5 ml Metasystox +2.5ml Dicofol per liter of water to control thrips, mites and murda-complex disease in

chillies. To control sunflower necrosis, spray Imidachloprid 17.8 S.L @ 0.25 ml or Oxidematon 25 EC @ 1.5 ml per liter of water. Spray chemicals on a non rainy day to control the pests and diseases.

- Due to continuous rain, powdery mildew is reported in black gram and green gram. Spray Carbendazim @ 1 g/litre of water. Also sucking pests, leaf eating caterpillar and stem fly are noticed. Spray Monocrotophos @ 1 ml or Dimethoate @ 1.75 ml/liter of water on a non rainy day to control the pests and diseases.
- Monitor citrus for canker and spray Streptomycin Sulphate (0.5 g) + Copper oxi-chloride (2g)/liter of water on a non rainy day to control the disease.

South Interior Karnataka

- Farmers in Bangalore, Kolar and Tumkur are advised to undertake intercultural operations and application of fertilizers in early sown crops. Undertake gap filling in millets to maintain optimum plant population. Apply Gypsum @ 200 kg/acre in 30 days old groundnut. Undertake intercultural operations, application of fertilizers and pesticides on a non rainy day.
- Farmers in Mysore and Tumkur districts are advised to undertake sowing of ragi (GPU 28 and Indaf 5), sunflower (KBSH 41 and 44), maize (NAC 6004 and NAC 6002 varieties and Nityashri hybrid) and short duration pulses like green gram, black gram, cowpea and horse gram during this month. With the receipt of water from KRS, undertake transplanting of rice (Thella, Hamza, KRH 1, Mangala, Mukthi, Bilimukthi and Rasi) and undertake planting of sugarcane (CO varieties – 419, 62175, 7804, 8371 and 86032).
- **Animal Husbandry:** Undertake vaccination against FMD and Anthrax in cattle in Bangalore, Kolar and Tumkur.
- **Plant Protection:** Due to cloudy weather conditions in Mysore and Tumkur districts, attack of blast is reported in rice and ragi nursery. Spray Hinosan or Kitacin @ 1 ml/litre of water on a non rainy day to control the disease.
- There are chances of Tikka leaf spot in groundnut, sucking pests like thrips, aphids and white fly in cotton, stem borer in maize, blast in rice and rhizome rot and soft rot in ginger in Shimoga. Farmers are advised to monitor the crops for the pest and disease and spray Carbendazim 2 g/litre of water to control rice blast and Tikka leaf spot in groundnut. Spray Imidochloprid @ 0.6gm/ltr of water to control sucking pests in cotton. Spray Ridomil MZ @ 2g/litre and Streptomycin @ 0.5g/litre to control rhizome rot and soft rot in ginger. Spray chemicals on a non rainy day to control the pests and diseases.

Kerala

- **Major Standing Crops:** Rice (grain maturity/harvesting), coconut, areca nut, banana, black pepper, rubber, vegetables.
- Rain/thundershowers are likely to occur at a few places for the next three days, farmers are advised to apply irrigation to rice and plantation crops.
- This is proper time for sowing of chillies, brinjal, amaranthus and tomato in the nursery and direct sowing of gourds and bhindi in the main field in Kasragod with a possibility of good amount of rainfall in the next five days. Undertake land preparation and sowing of the crops.
- This is proper time for sowing of *mundakan* rice in nursery in Thiruvananthapuram, Thrissur, Malappuram, Kasargod, Kozhikode and Kannur districts with a possibility of good amount of rainfall in the next five days. Select among Mangala, Mashurie, H-4 and Karuna (long duration varieties). Select among Matta triveni, Kanjana, Jaya, Athira and Aiswarya (short/medium duration varieties) where water availability is not sufficient to raise long duration rice. Complete harvesting of virippu rice.

- Farmers in Malappuram, Kasargod, Kozhikode and Kannur districts are advised to undertake intercultural operations and application of fertilizers in plantation crops (coconut, arecanut, pepper and cashew) on a non rainy day.
- **Plant Protection:** Weather conditions are favourable for the attack of thrips in rice nursery in Thrissur. Monitor the crop and spray Dimethoate @ 1.7 ml/litre of water on a non rainy day to control thrips.
- Monitor black pepper for foot rot due to congenial weather in Kasargod. Rogue out the affected crops and destroy completely to prevent further spread.
- Attack of mahali disease is reported in arecanut in Thrissur, Malappuram, Kasargod, Kozhikode and Kannur districts. Apply 1% Bordeaux mixture on a non rainy day to control the disease.

Tamilnadu

- **Major Standing Crops :** Rice (*Kuruvai*) (vegetative), Early, Mid Sugarcane (cane development/ maturity stage), Special season sugarcane (grand growth stage) Sorghum (vegetative) Cotton (boll maturity/picking stage)
- Apply irrigation to groundnut, sugarcane and pulse crops as rain/ thundershowers likely at a few places over the State.
- Undertake intercultural operations and application of fertilizes and pesticides in Kuruvai rice in Thanjavur, Trichy, Karur, Nagappattinam and Perambalur districts.
- Undertake sowing of bhindi, Dolichos, chillies and cowpea in Chennai, Cuddalore, Kanchipuram, Thiruvarur, Thiruvannamalai, Vellore and Villupuram districts using irrigation water.
- Farmers in Namakkal are advised to go for direct sowing of rice as there was good amount of rainfall during last week and with a possibility of light rains in the next five days.
- Farmers in Thirunelveli, Tuticorin and Virudunagar are advised to undertake sowing of chillies in nursery with a possibility of light to moderate rains in the next five days.
- Due to rainy conditions in Chennai, Cuddalore, Kanchipuram, Thiruvallur, Vellore, Villupuram, increase in vector activity resulting in a slight rise in arthropod borne diseases particularly blood protozoans like Anaplasmosis, Theileriosis and Trypanosomiasis and viral disease such as blue tongue amongst farm animals is expected. Undertake vector control for ticks and flies and midges under the guidance of veterinarians. Also avoid stagnation which can allow for fly and midges breeding sites. Also undertake prophylactic drenching with appropriate medication, for fluke infections like amphistomiasis and liveflukes.
- **Plant Protection:** Present weather is conducive for mild incidences of leaf folder in paddy in Coimbatore district. Spray Monocrotophos @1 litre/ha to control the disease.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT, RAJASTHAN]

Maharashtra

- **Major Standing Crops:** Sugarcane (pre-seasonal) (elongation / cane development), sugarcane (*Suru*) (active growth / elongation), irrigated cotton (squaring/ flowering), *kharif* groundnut (pegging in Kolhapur & Pune, vegetative / flowering in other parts of the State), *kharif* cotton (squaring / flowering in Nasik, Latur and Amravati, vegetative / floral bud initiation in other districts), *kharif* rice (panicle initiation / flowering in South Konkan, flag leaf initiation in North Konkan, Pune and Kolhapur and Satara districts and tillering in other parts of the State), soybean (pod formation / pod maturity in Kolhapur and flowering / pod formation in other districts), tur (vegetative / branching), sunflower (head formation/flowering), black gram (pod formation) and green gram (pod maturity in Pune, Latur and Amravati division and pod formation in other divisions).

- As there was good rain during last week in most of the districts of the State and there is also possibility of rain for next five days, postpone irrigation to the standing crops. Arrange for draining out of excess water from the crop fields in Konkan due to possibility of isolated heavy to very heavy rain during next 48 hours. Also postpone application of fertilizers and plant protection measures in Konkan under prevailing weather condition.
- In Konkan, maintain 3 – 5 cm water in *kharif* rice field after draining out excess water.
- The weather is favourable for carrying out intercultural operation in Madhya Maharashtra, Marathwada and Vidarbha to keep the field weed free. Perform the same on a non-rainy day in Madhya Maharashtra and Marathwada. Postpone the same in Konkan due to possibility of rain at many places.

Plant protection

- Apply plant protection measures on a non-rainy day in Madhya Maharashtra and Marathwada.
- In cotton, there is chance of occurrence of mealy bug, aphids and jassids in Nasik and Latur division and aphids and jassids in Aurangabad due to favourable weather condition. To control mealy bug in cotton, spray *Verticillium lecanii* or *Metarizium annesopli* bacteria @ 40 gm in 10 liters water. If infestation is more spray 75 % Aciphet @ 30 gm or 76% Dichlorovhos @ 20 ml or 40% Trizophos @ 20 ml in 10 liters of water with 20 gm soap powder. To control aphids & jassids in cotton, spray 5 % Neem extract or 35 % Endosulphan @ 14 ml or 30 % Dimethoate @ 10 ml in 10 litres of water with 10 ml sticker
- There is chance of infestation of blast in *kharif* rice in Nagpur and Kolhapur division. For control spray Carbendazim @ 1 g / lit or Copper-oxy- chloride @ 2.5 g / lit of water with 1 ml sticker.
- Infestation of white woolly aphids (WWA) is reported in sugarcane in Pune and Kolhapur divisions of Madhya Maharashtra. There may be more infestation of this insect under prevailing weather condition. Monitor the crop for white woolly aphids and for effective control spray 500 ml Endosulphan 35 % + 1000 ml Metasystox & 500 ml Sticker or 500 gm detergent powder / ha in 500 liters of water. For the biological control of WWA, release 25000 larvae of *Chrysoperla carnea* or *Dipha aphidivora* / ha as predator after 15 days from the above dose.
- Infestation of tobacco caterpillar in soybean is reported in Nagpur, Akola, Wardha, Bhandara, Chandrapur and Gadchiroli districts of Vidarbha. More than 50% soybean area in Chandrapur has been affected due to tobacco caterpillar infestation. Due to favourable weather condition, there may be more infestation of this insect. Monitor the crop for the pest and spray Chlorpyriphos @ 2 litres/ha.

Gujarat

- **Major Standing Crops:** Sugarcane (cane development), *Kharif* groundnut (flowering / pegging), *Kharif* cotton (vegetative / flowering), *Kharif* rice (panicle initiation / flowering), other *kharif* crops (early vegetative / vegetative / flowering).
- As there was sufficient rain in Dangs, Narmada, Navsari, Surat and Valsad districts during last week and there is possibility of rain during next five days, farmers are advised to postpone irrigation in these districts. As there was no significant rain during last few weeks in remaining districts of the State, apply irrigation to the standing crops.
- As weather condition is favourable, apply nitrogen to cotton and tobacco as top dressing.
- Under prevailing weather condition, undertake intercultural operation to keep the crop fields weed free.
- As the weather conditions are favourable, farmers are advised for sowing castor in South Gujarat (Heavy rainfall). Adopt spacing of 90 cm X 60 cm and Seed rate of 5-6 kg per hectare. Varieties like GCH-4, GCH-5 and GCH-6 may be selected for sowing.

Plant protection

- There is chance of infestation of downy mildew disease in pearl millet in Middle Gujarat region. Farmers are advised to Spray Mencozeb @ 0.02% or Metalexil @ 0.15% to control downy mildew disease.
- There is chance of infestation of mealy bug in cotton in South Gujarat and North Saurashtra region. To control the mealy bug, dusting of methyl parathion 2% or fenvalrate 0.4% dust should be done surrounding the plants and field boundaries. Spray the crop with profenophos 50 EC @ 20 ml in 10 litres of water along with 10 gram washing powder.
- There is chance of infestation of tikka leaf spot in groundnut in North Saurashtra region. To control the tikka leaf spot farmers are advised to apply chlorothalonil @ 25 gm or hexaconazole @ 5 ml in 10 litre of water.

Rajasthan

- **Major Standing Crops:** Groundnut, bajra, jowar, maize, sesame, cluster beans, red gram, cotton, vegetables. All the crops are at vegetative stage.
- As rain/thundershower are likely at isolated places over east Rajasthan and mainly dry weather is likely to prevail over west Rajasthan during next three days, apply irrigation to the crops.

East Rajasthan

- Farmers in Alwar, Bharatpur, Dholpur, Karauli and Sawai Madhepur are advised to complete planting of mango, guava, lime, ber, aonla, pomegranate and karonda etc. with a possibility of light rains during next five days.
- This is proper time for sowing of mustard in Alwar, Bharatpur, Dholpur, Karauli and Sawai Madhepur districts with a possibility of light rains during next five days. Undertake land preparation and sowing of mustard. Select among Pusa gold, Maya, Vasundhara, PR 15, 45, Bio 902, NRCSB 506, 101 and Varuna.
- This is proper time for sowing of radish (Pusa Rasmi), carrot, mid cauliflower and winter brinjal in Ajmer and Tonk with a possibility of light rains during next five days. Undertake land preparation and sowing of the crops. Before sowing treat the seeds with Thiram @ 2.5 gm per kg seeds.
- Undertake field preparation and sowing of rainfed taramira, toria and mustard in Dausa and Jaipur with a possibility of light rains during next five days. Farmers are advised to procure seed, fertilizers and chemical in advance for the sowing of same crops.
- Vaccinate the cattle to save from infections against FMD in Alwar, Bharatpur, Dholpur, Karauli and Sawai Madhepur.
- **Plant Protection:** Weather conditions are favourable for mild incidences of Tikka leaf spot in groundnut in Alwar, Dholpur, Bikaner and Jaisalmer. Monitor the crop for the pest. To control the pest, spray Carbendazim @ 500 ppm.
- Weather conditions are favourable for mild incidences of white fly and jassids in cotton in Alwar and Dholpur. Monitor the crop for the pest. To control the pest, spray Dimethoate or Methyl Demeton @ 1 litre/ha.
- Weather conditions are favourable for mild incidences of shoot borer in jowar in Alwar, Bharatpur, Karauli, Sawai Modhpur. Spray Endosulphan 35 EC @ 1.25 litre/ha to control the pest.
- Downy mildew disease may attack pearl millet crop (at panicle initiation stage) in Alwar, Bharatpur, Karauli, Sawai Modhpur. Spray Zineb @ 2.5 kg or Mencozeb @ 2 kg per hectare 2-3 times at an interval of 3 days.
- Weather conditions are favourable for mild incidences of stem borer in maize in Karauli, Alwar, Dholpur, Sawai Modhpur. Spray Endosulphan 35 EC @ 1.25 litre/ha to control the pest.

- Due to congenial weather, there are chances of mild incidences of white fly in soyabean and sucking pests in vegetable crops in Banswara. Spray Dimethoate @ 2 ml/litre of water to control the epsts.

West Rajasthan

- Farmers in Jalore and Jodhpur are advised to sow bajra and other pulse crops with a possibility of light rains during next five days. Short duration varieties of pulse crops may be taken up for sowing. Optimum spacing may be maintained. Carry out intercultural operations and application of fertilizers in early sown crops.
- Weather condition is conducive for sowing of chillies and other vegetables in Barmer, Churu, Jalore and Jodhpur. Farmers are advised to sow the crops with a possibility of light rains during next five days.
- Undertake sowing of sweet gourd, cucumber, pumpkin, bitter gourd, tinda, tomato and ladies finger in Barmer, Churu, Jalore and Jodhpur with a possibility of light rains during next five days.
- Undertake intercultural operations and application of fertilizers in early sown cabbage in Barmer, Churu, Jalore and Jodhpur.
- Farmers in Pali district are advised to undertake planting of short duration fodder crops on priority basis. Apply first dose of nitrogen fertilized to cotton crop. Undertake land preparation and sowing for rabi crops where kharif crops were not undertaken.
- **Plant Protection:** Weather conditions are favourable for mild incidences of bacterial blight in cluster beans in Bikaner and Jaisalmer districts. Monitor the crops for the disease. To control bacterial blight, spray Streptocyclin @ 1g/10 liters of water + Copper oxychloride @ 0.2%
- Weather conditions are favourable for mild incidences of leaf eating caterpillar in bajra, pulses, fruits and vegetable crops in Barmer, Churu, Jalore and Jodhpur. Spray Qunalphos @ 1.5 kg or Endosulphan @ 4.25 kg/hectre to control the pest. For controlling sucking pests, spray Monocrotophos @ 1 ml/litre of water.
- Monitor groundnut for crown rot in Barmer, Churu, Jalore and Jodhpur. Apply Trichiderma @ 1 kg/ha.
- Weather conditions are favourable for mild incidences of pink boll worm in cotton in Sriganganagar and Hanumangarh. Spray Endosulfan @ 2.5 ml/liter of water to control the epsts.

CENTRAL INDIA [M.P., CHHATTISGARH]

Madhya Pradesh

- **Major Standing Crops:** Sugarcane (grand growth), soyabean (vegetative), maize (vegetative), cotton (vegetative) and vegetable crops (nursery/transplanting).
- As there was no significant rainfall during last week except in Badwani, Betul, Dhar, Dewas, Indore, Jhabua, Mandasaur, Khandwa, Khargone districts and rain / thundershower is likely at a few places over west M.P. and isolated places over East M.P, apply irrigation to the crops. Postpone irrigation in the above districts as there was sufficient rainfall received during last week.
- Prepare land for sowing of lentil in Gird zone covering Morena, Bhind, Gwalior, Shivpuri Guna Sheopur, Ashoknagar districts.
- Undertake land preparation and planting of *kharif* vegetables like brinjal, tomato, early cauliflower and chilli in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts and cauliflower, cabbage and tomato in Bhind, Gwalior, Shivpuri Guna Sheopur, Ashoknagar as there is possibility of 20-60 mm rainfall in the State during next five days. Also undertake planting of guava, citrus, mango and anola during this period.
- **Animal Husbandry:** Provide proper ventilation and clean water to cattle and arrange for vaccination to save them from infectious disease in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts. Create smoke during the night in cattle shade to prevent cattle from mosquitoes and bees.

- **Poultry:** Due to possibility of Coccidiosis in poultry birds in Sehore, maintain sanitation and aeration in the sheds.
- **Plant Protection:** As there is chance of outbreak of sucking pests is increasing in cotton and fruits and vegetable crops in Jabhua hills zone, spray Emidachloroprid 0.30-0.35 ml/litre for control in cotton and spray Methyl Dimethon 25 EC 1 ml/litre to control the pest in fruits and vegetable crops.
- Weather conditions are favourable for leaf eating and sucking pests on Soyabean, black gram and green gram, with grain eating insects in gird zone. For control spray 500 ml of ethyl Parathyon 50 in 500 litre water /ha or sprinkle Methyle Parathyon (2%) powder 15 to 20 Kg /ha.
- There is chance of attack of semilooper and girdle beetle in soybean in Jabalpur, Katni, Panna, Rewa, Satna, Seoni and Sidhi districts. Monitor the crop for the pests and undertake plant protection measures to control the pest.
- Weather conditions are favourable for the incidences of green leaf hopper in maize and sucking pests in vegetable crops. Apply Phorate to control green leaf hopper and spray Methyl Demeton @ 1 ml/litre of water to control sucking pests.
- Monitor groundnut for Tikka leaf spot in Khargone, Khandwa and Harda districts. Spray Mancozeb @ 2 g/liter of water. There is chance of attack of semilooper and girdle beetle in soybean. Spray Traizophos 40 EC @ 2 ml/litre of water.
- Monitor black gram, green gram and soyabean for hockmoth in Sehore. Spray Profenophos 50 E.C. @ 1.5 litres/hectre in 500 litres water Also monitor soyabean for tobacco caterpillar. Spray Quinalphos @ 1.5 litres/hectre in 600 litres water to control the pest at early stage.
- There is a possibility of stem borer in maize and jowar. Apply Phorate 10 G @ 8-10 granules/plant.
- Spraying may be done on non rainy day in west M.P.

Chattisgarh

- **Major Standing Crops:** Sugarcane (vegetative), Soybean and black gram (flowering / pod formation), groundnut (flowering / pegging), *kharif* rice (tillering / panicle initiation), pigeon pea, green gram and sesame (vegetative / flowering / pod formation).
- As Bastar, Dantewara, Jashpurnagar and Rajandgaon districts received rain during last week, postpone irrigation to the standing crops in these districts. As the remaining districts received little or no significant rain during last week and rain / thundershower is likely to occur only at isolated / a few places over the State during next three days, apply irrigation to the standing crops in these districts.
- As the weather condition is favourable, undertake intercultural operation to keep the crop fields weed free. Also apply 2nd split dose of N at 6 weeks after transplanting in *kharif* rice.
- This is proper time for preparation of land and transplanting of tomato, chilli and brinjal if nurseries are ready. Farmers are also advised to prepare nurseries of tomato, chilli, brinjal and also early varieties of cabbage and cauliflower.
- Present weather is favourable for sowing of niger and horse gram in upland areas of entire state. Sowing of these crops should be completed within the first fortnight of September.

Plant protection

- Incidence of stem borer may occur in *kharif* rice due to favourable weather condition, hence it is advised to keep watch over the crop and install light trap for initial control. If the incidence is higher, apply Carbofuron 3 G @ 10 kg / acre.
- Present weather conditions remain favourable for multiplication of tobacco catter piller. Incidence of this insect is reported in soybean from Kabirdham, Durg and Rajnandgaon districts. Monitor the crop for the pest and spray Chlorpyriphos @ 2 litres/ha or Dichlorvas (DDVP) @ 625 ml / ha.
- Under present weather conditions incidence of blast may occur in rice crop. Hence, it is dvised to keep watch over the crops and in case of higher incidence spray Saaf or Beam @ 1 ml/liter of water.

