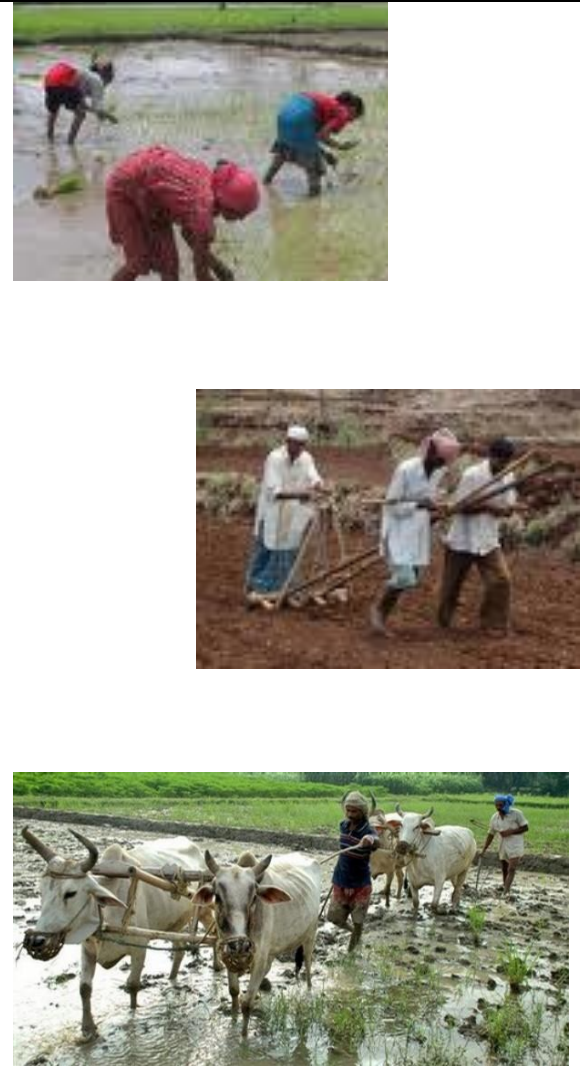
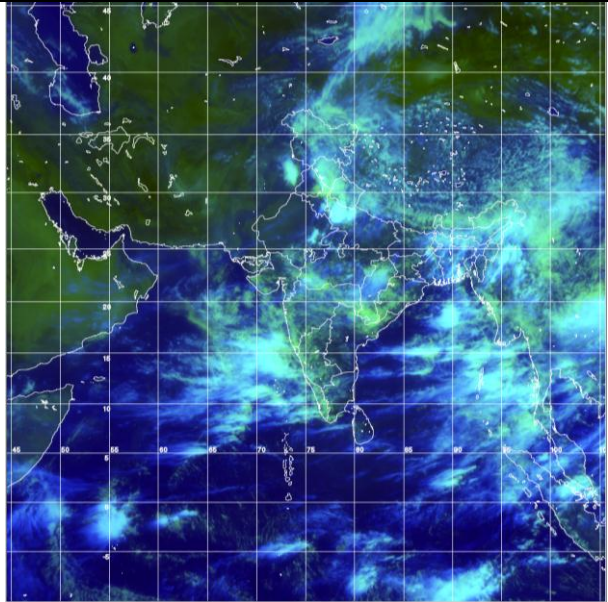
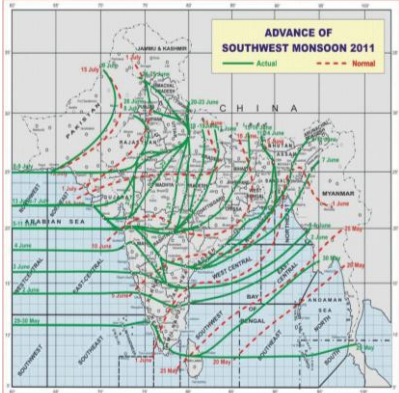




National Agromet Advisory Bulletin

Thursday, 14th July, 2011

(For the period 14th to 18th July, 2011)

	<p>Satellite image 0600 UTC Dated 15th July, 2011</p>  <p>Northern limits of monsoon on 9th July, 2011</p> 
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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.gov.in>)

of the Division

Executive Summary

Due to receipt of good rainfall during last week in Maharashtra, Gujarat, Karnataka and Andhra Pradesh, already sown crops, suffering from moisture stress due to dry spell during earlier weeks, are likely to recover from moisture stress situation. West Rajasthan, Gujarat, Saurashtra, Kutch & Diu, parts of Madhya Maharashtra and Marathwada, where sufficient rain didn't occur during earlier weeks of the monsoon season, received good rainfall during last week and the farmers in these regions are advised to undertake sowing of *kharif* crops utilizing monsoon rainfall.

As deficient rain occurred in most of the districts of Rayalseema, farmers are advised to wait for sufficient rainfall to occur to undertake sowing of *kharif* crops. Apply supplementary irrigation to save the already sown crops from moisture stress due to prolonged dry spell.




Utilising the wide spread / fairly wide spread rain occurred in most of the districts in Arunachal Pradesh, Assam, Himachal Pradesh, Madhya Pradesh, West Uttar Pradesh, Uttarakhand, Rajasthan, Konkan & Goa, Orissa, West Bengal, Coastal Karnataka, North Interior Karnataka, Coastal Andhra Pradesh, Telangana and remaining parts of Madhya Maharashtra and Marathwada during last week, farmers are advised to continue sowing of *kharif* crops in these states.

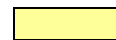
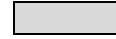

Realised rainfall for the States of Maharashtra, Gujarat, Rajasthan, Andhra Pradesh during last few weeks.

State/Districts	Actual	15.06.11	Actual	22.06.11	Actual	29.06.11	Actual	06.07.11	Actual	13.07.11
East Rajasthan										
Ajmer	16.6	155	1.7	-80	73.7	265	1.1	-96	17.0	-48
Alwar	10.8	61	21.7	133	38.7	108	9.1	-65	57.7	32
Banswara	7.0	-60	4.3	-81	23.7	-44	15.1	-68	77.4	16
Baran	18.8	43	66.1	244	573.6	1878	16.7	-62	73.1	31
Bharatpur	14.4	193	17.0	47	60.3	275	53.4	122	80.4	81
Bhilwara	16.0	55	5.4	-60	105.5	327	6.2	-85	38.3	-10
Bundi	12.3	39	3.0	-82	184.8	645	8.2	-78	24.3	-53
Chittorgarh	21.5	81	8.3	-44	89.2	189	4.5	-89	41.3	-22
Dausa	19.0	150	10.0	-13	80.8	262	0.0	-100	43.0	-15
Dholpur	34.5	423	33.6	154	33.8	56	24.4	-31	59.7	24
Dungarpur	0.6	-95	0.2	-99	9.5	-72	8.3	-82	79.4	39
Jaipur	9.9	18	13.2	31	88.6	275	6.3	-74	34.9	-13
Jhalawar	38.8	196	39.6	76	299.4	802	32.1	-38	77.4	39
Jhunjhunu	7.7	-30	25.8	117	55.0	191	16.2	-20	29.2	-14
Karauli	12.5	101	24.6	105	93.3	313	6.1	-77	51.3	15
Kota	18.6	71	43.3	130	349.3	1152	19.0	-56	47.4	-5
Pratapgarh	16.5	-6	1.9	-93	89.9	88	22.0	-56	109.2	60
Rajsamand	4.4	-59	0.0	-100	26.4	-11	2.4	-93	27.7	-26
Sawai Madhopur	0.9	-90	37.6	198	154.3	621	19.1	-47	51.2	15
Sikar	5.4	-39	9.8	-3	82.1	301	23.6	10	30.3	-6
Sirohi	0.0	-100	0.1	-99	0.8	-98	8.5	-86	102.4	69
Tonk	15.2	92	25.8	85	128.5	427	7.3	-75	29.2	-29
Udaipur	11.9	-12	0.0	-100	24.5	-22	7.7	-83	44.4	-6
West Rajasthan										
Barmer	0.0	-100	0.0	-100	0.0	-100	0.1	-99	50.7	236
Bikaner	0.0	-100	5.9	-27	3.2	-63	1.3	-90	21.3	22
Churu	0.0	-100	31.7	199	107.9	770	31.3	76	11.9	-60
Hanumangarh	1.0	-86	30.3	230	9.4	-4	8.0	-56	5.1	-79
Jaisalmer	0.0	-100	0.0	-100	0.0	-100	0.0	-100	41.7	223
Jalore	0.0	-100	0.0	-100	0.0	-100	2.7	-92	85.8	230
Jodhpur	0.0	-100	3.6	-48	4.3	-60	8.2	-54	25.9	16
Nagaur	6.1	0	12.1	25	41.9	125	7.8	-59	24.9	-17
Pali	0.3	-96	0.5	-95	17.3	-3	1.3	-96	44.2	44
Sri Ganganagar	2.0	-61	5.1	-33	3.4	-54	2.7	-82	3.1	-80
Gujarat Region										
Ahmedabad	1.6	-87	0.0	-99	0.0	-100	0.1	-99	144.0	191
Anand	0.0	-100	0.0	-100	0.1	-99	0.9	-98	104.0	58

Banaskantha	0.0	-100	0.0	-100	0.0	-100	0.0	-100	72.6	35
Baroda	0.0	-100	0.4	-99	0.0	-100	4.4	-93	137.9	75
Broach	0.4	-98	2.8	-93	0.0	-100	6.7	-90	94.5	50
DNH	3.2	-93	33.5	-72	28.9	-77	**	**	283.1	46
Dahod	0.0	-100	0.0	-100	2.6	-95	9.9	-81	56.1	-15
Daman	4.8	-89	30.5	-75	30.2	-76	**	**	306.0	58
Dangs	3.0	-93	25.0	-68	25.0	-73	2.0	-98	197.0	18
Gandhinagar	0.0	-100	2.5	-89	0.0	-100	1.5	-97	146.8	120
Kheda	0.0	-100	0.1	-99	0.0	-100	2.3	-96	82.7	25
Mehsana	0.0	-100	0.0	-100	0.1	-99	0.1	-99	111.1	74
Narmada	0.0	-100	15.8	-67	1.2	-98	11.1	-86	128.8	27
Navsari	14.4	-51	28.0	-72	6.8	-95	29.0	-82	174.8	6
Panchmahal	0.0	-100	0.0	-100	0.3	-99	3.6	-93	108.0	36
Patan	0.0	-100	0.0	-100	0.0	-100	2.7	-93	68.7	61
Sabarkantha	0.0	-100	0.5	-97	1.6	-96	5.8	-89	159.9	119
Surat	1.6	-93	32.4	-53	1.0	-99	16.1	-85	162.0	33
Tapi	0.0	-100	25.3	-66	0.0	-100	15.7	-86	174.0	38
Valsad	10.4	-73	27.1	-77	22.3	-84	40.4	-77	259.9	56
Saurashtra, Kutch & Diu region										
Amreli	0.5	-97	0.0	-100	0.0	-100	5.4	-88	105.8	190
Bhavnagar	0.0	-100	0.0	-100	0.0	-100	8.3	-80	115.3	225
Diu	48.8	228	1.9	-95	0.0	-100	**	**	130.9	107
Jamnagar	20.8	66	0.1	-99	0.0	-99	13.1	-72	108.8	271
Junagarh	139.9	403	4.3	-93	5.1	-93	6.3	-93	88.8	54
Kutch	1.2	-81	0.0	-100	0.0	-99	0.6	-98	43.0	92
Porbandar	121.1	463	1.7	-98	0.1	-99	4.5	-93	56.6	-4
Rajkot	23.7	74	0.0	-99	0.0	-100	6.3	-85	169.9	366
Surendranagar	0.0	-100	0.0	-100	0.0	-100	2.0	-94	208.7	542
Maharashtra										
Konkan & Goa										
Goa	348.2	61	319.4	25	213.0	-17	186.6	-28	320.5	42
Mumbai	308.0	195	48.8	-72	25.9	-86	40.7	-81	309.7	94
Raigad	368.2	220	165.2	-14	103.3	-59	54.8	-82	350.0	40
Ratnagiri	390.7	133	315.3	33	178.2	-38	131.7	-56	310.7	24
Sindhudurg	417.9	104	313.8	19	175.1	-34	160.6	-39	276.1	26
Thane	106.6	71	106.4	-18	62.4	-64	50.3	-77	355.4	61
Madhya Maharashtra										
Ahmednagar	13.3	-44	0.2	-99	6.2	-76	28.3	26	62.4	179
Dhule	20.8	-7	0.3	-99	2.8	-93	16.8	-51	39.8	-8
Jalgaon	3.1	-87	3.6	-90	5.1	-89	7.6	-80	60.8	43
Kolhapur	167.1	195	95.5	-1	173.7	34	79.9	-52	85.7	-49
Nandurbar	30.2	27	11.5	-66	2.3	-96	28.2	-47	106.2	43
Nasik	12.0	-56	17.0	-60	26.7	-48	15.2	-73	107.1	41
Pune	62.1	119	27.6	-23	31.8	-41	9.3	-86	47.1	-38
Sangli	22.7	0	39.4	44	9.3	-70	15.6	-46	12.2	-69
Satara	66.8	157	96.0	167	49.8	8	16.0	-70	73.4	24
Solapur	2.6	-90	5.6	-76	7.9	-63	47.2	173	40.3	97
Marathwada										
Aurangabad	10.2	-67	0.9	-97	5.3	-86	13.5	-56	67.8	132
Beed	22.3	-35	10.0	-69	13.9	-56	56.8	111	99.6	277
Hingoli	19.3	-41	72.2	10	30.3	-47	21.7	-62	39.1	-20
Jalna	6.1	-83	1.2	-97	14.7	-60	18.4	-45	78.4	129
Latur	17.9	-42	3.4	-92	4.3	-89	51.6	22	50.7	25
Nanded	34.4	12	33.6	-28	9.1	-81	23.7	-50	53.9	8
Usmanabad	7.7	-77	8.3	-75	6.3	-76	23.6	-24	59.7	99
Parbhani	22.3	-33	13.1	-73	14.6	-69	19.2	-56	83.4	104
Vidarbha										
Akola	42.9	51	9.7	-78	29.2	-43	12.1	-71	64.3	38
Amraoti	46.0	86	12.3	-70	37.2	-25	21.5	-56	46.1	-21
Bhandara	124.5	358	43.5	-8	52.4	-27	23.1	-73	39.1	-53
Buldhana	6.4	-77	2.2	-95	15.9	-67	12.3	-69	139.6	253
Chandrapur	38.5	54	32.0	-41	89.9	14	15.6	-82	47.3	-46

Gadchiroli	16.4	-44	31.7	-52	95.8	10	21.8	-76	52.3	-48
Gondia	22.6	-8	52.1	1	86.4	16	7.9	-92	26.3	-72
Nagpur	32.0	18	31.0	-35	32.6	-46	23.6	-64	33.6	-57
Wardha	31.1	9	17.7	-67	51.4	-17	21.3	-62	46.5	-29
Washim	20.5	-37	30.1	-42	43.1	-35	23.0	-57	84.0	47
Yeotmal	41.5	44	27.7	-51	62.0	3	49.2	-12	43.2	-31
Andhra Pradesh										
Coastal Andhra Pradesh										
East Godavari	63.6	192	8.4	-78	3.6	-91	39.7	-20	23.6	-44
Guntur	6.2	-69	0.6	-97	10.8	-57	59.1	89	19.1	-31
Krishna	16.3	-31	5.4	-81	19.9	-51	82.5	72	35.7	-17
Nellore	23.4	61	0.2	-98	3.7	-73	13.4	-25	6.8	-62
Prakasam	8.9	-47	0.0	-100	4.1	-72	38.8	87	16.6	-2
Sirkakulam	54.2	72	7.6	-82	35.9	-7	51.2	18	68.7	73
Visakhapatnam	39.5	40	3.5	-90	8.2	-78	54.0	42	64.3	86
Vizianagram	42.9	39	2.8	-92	21.9	-45	41.2	-6	26.9	-25
West Godavari	22.9	-9	9.6	-74	9.5	-78	72.3	38	37.0	-28
Telangana										
Adilabad	16.5	-43	23.4	-61	43.5	-29	65.1	1	57.3	-13
Hyderabad	8.9	-60	10.2	-63	8.5	-78	46.9	43	22.4	-29
Karimnagar	9.1	-73	15.7	-64	21.0	-56	74.9	28	51.7	-2
Khammam	45.1	57	15.6	-64	22.9	-54	63.9	16	50.9	-10
Mehabubnagar	7.5	-66	8.3	-53	21.1	-17	23.0	-25	24.7	-21
Medak	12.8	-49	8.8	-78	12.6	-71	53.8	24	49.0	8
Nalgonda	11.2	-52	1.8	-92	12.3	-61	41.1	38	40.1	48
Nizamabad	24.6	-23	21.3	-56	10.1	-79	71.4	15	76.9	33
Rangareddy	16.1	-30	4.7	-83	11.1	-66	19.7	-46	31.2	-18
Warangal	13	-57	12.8	-69	19.2	-60	126.0	123	43.7	-19
Royalaseema										
Anantapur	5.9	-59	0.7	-92	11.9	28	14.1	64	4.4	-70
Chittoor	5.5	-74	0.1	-99	1.8	-85	46.0	176	3.6	-83
Cuddapah	14.2	-28	0.0	-100	5.8	-59	17.9	21	7.0	-61
Kurnool	5.7	-75	0.5	-97	10.2	-46	20.5	5	12.8	-48

 (20% or more) excess rainfall
 (-19 to +19%) normal rainfall
 (-20 to -59%) deficient rainfall

 (-60 to -99 %) scanty rainfall
 (-100%) no rainfall
 ** Data not available

In view of likely occurrence of widespread / fairly widespread rain / thundershowers along west coast and over central & adjoining peninsular India, western Himalayan region, Uttar Pradesh, east Rajasthan, Gujarat region, northeastern states and West Bengal & Sikkim, farmers are advised to postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the already sown crops. Isolated heavy to very heavy rainfall would occur over Uttarakhand, Haryana, West Uttar Pradesh, northeastern states, Konkan & Goa, coastal & north interior Karnataka, Kerala and Madhya Maharashtra during next 48 hours and isolated heavy rainfall would occur over Jammu division of Jammu & Kashmir, Himachal Pradesh, Marathwada, west Madhya Pradesh and Gujarat region during next 24 hours. Farmers in these States are advised to arrange adequate drainage facilities in the already sown crop fields to avoid water stagnation.

Advisories for Pests and Diseases: Due to favourable weather conditions, there are incidences of red spider mite in tapioca and leaf roller in groundnut in Tamil Nadu, late blight in tomato in Karnataka, apex and fruit borer in brinjal, fruit dropping (*Koleroga*) and rotting in arecanut in Maharashtra and fruit fly in bitter gourd, yellow vein mosaic in okra, semilooper in jute and leaf rot in betel vine in Orissa. Farmers are advised to undertake appropriate plant protection measures to control the pests and diseases.

Distribution of rainfall for remaining states of the country during last week

State/Districts	Actual	13.07.11			
Arunachal Pradesh			Gurdaspur	35.7	-36
Changlang	72.6	-34	Hoshiarpur	25.4	-56
East Kameng	75.4	-11	Jalandhar	27.0	-48
East Siang	195.8	-8	Kapurthala	68.5	151
Lohit	89.3	-33	Ludhiana	15.8	-67
Lower Subansiri	8.0	-84	Mansa	7.9	-70
Papumpara	86.8	-42	Moga	6.5	-81
Tawang	21.0	-89	Muktesar	0.0	-100
Tirap	135.6	-19	Nawashahar	27.7	-66
Upper Siang	283.4	94	Patiala	52.6	6
Upper Subansiri	23.8	-58	Ropar	25.6	-61
West Kameng	138.0	-26	Sangrur	4.4	-89
West Siang	0.0	-100	Mohali	51.1	3
Assam			TarnTaran	3.7	-91
Barpeta	72.3	-56	Haryana		
Bongaigaon	131.0	-27	Ambala	121.9	59
Cachar	100.2	-12	Bhiwani	10.7	-69
Darrang	**	**	Chandigarh	33.8	-55
Dhubri	47.3	-68	Faridabad	24.8	-47
Dibrugarh	78.1	-37	Fatehabad	7.8	-70
East Garo Hills	105.0	26	Gurgaon	53.8	-1
East Khasi Hills	219.9	-48	Hissar	14.8	-53
Goalpara	84.4	-30	Jhajar	19.3	-34
Golghat	99.0	37	Jind	37.5	-19
Hailakandi	50.7	-45	Katihah	20.3	-46
Jaintia Hills	**	**	Karnal	33.3	-43
Jorhat	84.0	-8	Kurukshetra	50.7	-3
Kamrup	17.1	-81	Mahendragarh	6.9	-82
Karbi Analog	94.7	58	Palwal	38.4	-17
Karimganj	124.4	-19	Panchkkula	83.8	1
Kokrajhar	100.3	-48	Panipat	6.4	-89
Lakhimpur	81.0	-46	Rewari	61.1	67
Morigaon	60.9	-38	Rohtak	17.0	-63
N.C.Hills	188.7	234	Sirsa	0.4	-98
Nowgong	39.8	-52	Sonepat	64.6	22
Nalbari	25.7	-76	Yamunanagar	103.9	55
Sonitpur	37.4	-59	New Delhi	19.2	-67
Sibsagar	111.1	20	Jammu & Kashmir		
Tinsukia	39.1	-69	Anantnag	4.5	-66
Himachal Pradesh			Badgam	7.2	-15
Bilaspur	32.3	-54	Doda	12.4	-51
Chamba	67.3	4	Jammu	85.2	26
Hamirpur	38.3	-45	Kathua	56.8	-24
Kangra	67.6	-44	Kupwara	8.6	-9
Kinnaur	11.1	28	Ladakh(Leh)	0.0	-100
Kullu	22.4	-45	Pulwama	5.0	-47
Lahaul and Spiti	0.0	-100	Srinagar	9.1	6
Mandi	67.6	-19	Udhampur	14.0	-83
Shimla	43.3	-27	East Madhya Pradesh		
Sirmaur	210.5	71	Anuppur	30.5	-69
Solan	87.1	-5	Balaghat	42.4	-60
Una	8.5	-90	Chhatarpur	59.6	-10
Punjab			Chindwara	154.3	122
Amritsar	2.1	-95	Damoh	53.4	-27
Barnala	1.5	-96	Dindori	57.6	-44
Bhatinda	7.1	-67	Jabalpur	18.1	-77
Faridkot	0.0	-100	Katni	45.0	-42
Fatehgarh Saheb	23.3	-61	Mandla	66.9	-33
Ferozpur	1.3	-96	Narsingpur	44.8	-45
			Panna	23.7	-69
			Rewa	29.8	-51
			Sagar	53.6	-34
			Satna	9.2	-84
			Seoni	83.8	-3
			Shahdol	2.5	-97
			Sidhi	31.4	-57
			Singrauli	26.4	-39
			Tikamgarh	76.9	17
			Umaria	45.6	-38
			West Madhya Pradesh		
			Alirajpur	97.5	45
			Asoknagar	64.6	13
			Badwani	60.5	33
			Betul	48.6	-27
			Bhind	63.3	17
			Bhopal	96.2	27
			Burhanpur	28.4	-36
			Datia	64.0	14
			Dewas	75.8	16
			Dhar	92.3	58
			Guna	93.6	28
			Gwalior	58.7	-10
			Harda	66.3	-15
			Hosangabad	48.3	-50
			Indore	68.4	22
			Jhabua	67.7	22
			Khandwa	83.7	39
			Khargone	62.4	32
			Mandsaur	61.0	14
			Morena	62.2	29
			Neemuch	33.2	-34
			Raisen	110.7	34
			Rajgarh	122.3	71
			Ratlam	133.1	134
			Sehore	51.2	-38
			Shajapur	63.7	3
			Sheopur Kalani	112.2	61
			Shivpuri	81.9	33
			Ujjain	102.1	73
			Vidisha	74.1	-7
			East Uttar Pradesh		
			Allahabad	22.4	-64
			Ambedkar Nagar	6.4	-91
			Azamgarh	18.7	-74
			Bahraich	24.7	-68
			Ballia	27.1	-65
			Balrampur	6.3	-93
			Banda	19.7	-70
			Barabanki	35.6	-57
			Basti	85.2	24
			Chandauli	1.0	-99
			Deoria	25.0	-66
			Faizabad	33.2	-53
			Farrukhabad	34.8	-48
			Fatehpur	5.5	-93
			Gazipur	24.6	-64
			Gonda	63.3	-15
			Gorakhpur	25.8	-66
			Hardoi	35.6	-48
			Jaunpur	21.6	-71

Kannauj	4.4	-92
Kanpur City	21.1	-63
Kanpur Dehat	19.0	-65
Kaushambi	0.0	-100
Kheri	22.7	-73
Kushi nagar	12.7	-86
Lucknow	14.2	-81
Maharajganj	39.5	-58
Mau	29.0	-61
Mirzapur	15.5	-73
Pratapgarh	24.3	-65
RaiBareilly	13.1	-82
Sahuji Maharajnagar	38.0	-41
Sant Kabirnagar	8.5	-89
Sant Ravidas Nagar	0.0	-100
Shrawasti	33.3	-57
Sidharthnagar	66.5	-25
Sitapur	37.0	-45
Sonbhadra	14.5	-78
Sultanpur	9.0	-90
Unnao	17.0	-75
Varanasi	13.4	-81
West Uttar Pradesh		
Agra	24.9	-56
Aligarh	39.7	-27
Auraiya	12.9	-80
Badaun	37.4	-51
Baghpat	36.7	-36
Bareilly	62.2	-26
Bijnor	52.2	-39
Bulandsahar	36.4	-42
Etah	18.0	-71
Etawah	28.7	-52
Firozabad	38.8	-32
GBNagar	175.0	209
Ghaziabad	42.1	-26
Hamirpur	27.5	-51
Jalaun	23.5	-59
Jhansi	76.8	10
Jotirba Phule Nagar	45.5	-40
Kanshiramnagar	14.4	-77
Lalitpur	92.0	23
Mahamaya Nagar	37.7	-30
Mahoba	3.2	-94
Mainpuri	27.0	-56
Mathura	1.0	-97
Meerut	47.0	-32
Moradabad	13.3	-83
Muzzaffarnagar	29.2	-57
Pilibhit	19.7	-75
Rampur	13.3	-84
Saharanpur	102.0	35
Shahjahanpur	36.1	-49
UttaraKhand		
Almora	52.2	-33
Bageshwar	34.5	-56
Chamoli	73.2	25
Champawat	69.0	-49
Dehradun	104.0	-30
Garhwal Pauri	96.6	-21
Garhwal Tehri	29.9	-58
Haridwar	135.9	46

Nainital	32.6	-76
Pithorgarh	43.9	-60
Rudraprayag	61.3	-51
Udham Sing Nagar	20.6	-80
Uttarkashi	156.5	79
Bihar		
Araria	129.1	27
Arwal	21.7	-67
Aurangabad	7.2	-90
Banka	24.8	-65
Begusarai	0.0	-100
Bhabua	30.2	-64
Bhagalpur	23.2	-68
Bhojpur	2.5	-97
Buxar	12.8	-81
Darbhanga	29.3	-55
East Champaran	45.1	-45
Gaya	9.5	-88
Gopalganj	54.1	-33
Jahanabad	25.9	-60
Jamui	16.4	-78
Katihar	30.4	-64
Khagadia	34.8	-60
Kishanganj	112.7	-11
Lakhisarai	45.1	-36
Madhepura	25.3	-74
Madhubani	30.0	-62
Monghyar	1.0	-99
Muzaffarpur	19.5	-74
Nalanda	5.2	-93
Nawada	11.4	-83
Patna	1.0	-99
Purnea	119.1	12
Rohtas	14.3	-81
Saharsha	61.2	-44
Samstipur	13.5	-82
Saran	42.6	-52
Sheikpura	7.0	-89
Sheohar	12.2	-82
Sitamarhi	24.7	-65
Siwan	22.4	-72
Supaul	76.8	-29
Vaishali	12.1	-84
West Champaran	38.8	-59
Jharkhand		
Bokaro	10.4	-85
Chatra	0.5	-99
Deoghar	30.5	-60
Dhanbad	11.5	-84
Dumka	9.2	-88
East Singbhum	58.9	-25
Garhwa	0.0	-100
Giridih	13.8	-79
Godda	31.0	-52
Gumla	25.1	-68
Hazaribagh	22.0	-69
Jamtara	20.1	-75
Khunti	60.0	-18
Koderna	19.4	-70
Latehar	7.0	-90
Lohardagga	50.7	-30
Pakur	7.5	-91

Palamau	14.2	-79
Ramgarh	1.0	-99
Ranchi	16.2	-78
Sahebganj	0.0	-100
Seraikela	34.4	-56
Simdega	16.3	-82
West Singbhum	67.7	-17
West Bengal		
GWB		
Bankura	25.5	-61
Birbhum	28.8	-64
Burdwan	39.6	-40
Hooghly	13.2	-81
Howrah	30.5	-57
East Midnapore	83.4	37
Murshidabad	18.8	-77
Nadia	13.6	-81
24 Pargana (N)	63.8	-13
Purulia	16.0	-78
24 Pargana (S)	49.3	-52
West Midnapore	18.9	-72
SHWB		
Cooch Behar	168.0	-28
Darjeeling	237.2	42
East Sikkim	132.6	11
JalpaiguriI	183.4	-17
Malda	19.9	-73
North Dinajpur	90.4	-20
North Sikkim	105.1	25
South Dinajpur	18.8	-78
South Sikkim	143.7	20
West Sikkim	**	**
Karnataka		
Coastal Karnataka		
Dakshin Kannada	180.0	-31
Udupi	240.3	-16
Uttar Kannada	171.5	-24
North Interior Karnataka		
Bagalkote	20.4	11
Belgaum	20.4	-61
Bidar	49.8	46
Bijapur	12.5	-36
Dharwad	21.4	-44
Gadag	5.8	-67
Gulbarga	25.7	-5
Haveri	22.0	-48
Koppal	11.9	-23
Raichur	15.2	-30
Yadgir	35.3	24
South Interior Karnataka		
Bangalore Rural	23.4	38
Bangalore Urban	18.8	-2
Bellary	10.6	-33
Chamarajnagar	2.8	-84
Chichballapur	5.9	-70
Chickmagalur	40.3	-74
Chitradurga	3.6	-72
Davangere	5.9	-72
Hassan	11.6	-76
Kodagu	73.4	-64
Kolar	8.0	-53
Mandya	1.3	-88

Mysore	9.7	-56
Ramnagara	34.3	81
Shimoga	86.1	-39
Tumkur	7.5	-54
Kerala		
Alappuzha	73.9	-43
Kannur	161.3	-37
Ernakulam	144.6	-8
Idukki	85.3	-51
Kasaragod	258.2	-1
Kollam	46.5	-50
Kottayam	85.1	-43
Kozhikode	155.6	-32
Malappuram	59.0	-70
Palakkad	33.9	-76
Pathanamthitta	44.3	-65
Thiruvananthapuram	15.6	-70
Thrissur	71.6	-61
Wyanad	41.3	-84
Tamil Nadu		
Chennai	13.9	-28
Coimbatore	7.3	-39
Cuddalore	6.2	-60
Dharmapuri	9.6	-51
Dindigul	16.3	21
Erode	10.4	-3
Kanchipuram	14.9	-24
Kanyakumari	7.7	-71
Karur	0.0	-100
Krishnagiri	4.2	-80
Madurai	15.2	5
Nagapattinam	10.2	-19
Namakkal	13.9	-16
Nilgiris	16.5	-72
Perambalur	4.8	-32
Puducherry	0.2	-99
Pudukottai	29.5	36
Ramanathapuram	3.2	-31
Salem	11.0	-52
Sivaganga	17.5	14
Thanjavur	9.8	-46
Theni	11.0	37
Tirunelveli	1.9	-80
Tiruvallur	26.7	32
Tiruvannamalai	3.2	-85
Tiruvarur	1.6	-90
Toothukudi	0.0	-100
Trichy	2.0	-86
Vellore	2.8	-87
Villupuram	22.3	67
Virudhunagar	2.4	-70

Weather Forecast (Valid upto 1430 hours of 17th July, 2011)



Major Feature of Weather Forecast upto 1430 hours IST of 17th July, 2011

- Fairly widespread rain/thundershowers would occur along west coast and over central & adjoining peninsular India.
- Fairly widespread rain/thundershowers would also occur over western Himalayan region, Uttar Pradesh, east Rajasthan, Gujarat region, northeastern states and West Bengal & Sikkim.
- Scattered rain/thundershowers would occur over Bihar, Jharkhand, Orissa and Chhattisgarh during next 48 hours and increase thereafter.
- Scattered rain/thundershowers would occur over remaining parts of the country outside west Rajasthan, Tamilnadu and Rayalaseema where it will be isolated.

Weather Warning

- Isolated heavy to very heavy rainfall would occur over Uttarakhand, Haryana, West Uttar Pradesh, northeastern states, Konkan & Goa, coastal & north interior Karnataka, Kerala and Madhya Maharashtra during next 48 hours.
- Isolated heavy rainfall would occur over Jammu division of Jammu & Kashmir, Himachal Pradesh, Marathawada, west Madhya Pradesh and Gujarat region during next 24 hours.

Weather Outlook up to 1430 hours IST of 19th July, 2011

- Fairly widespread rainfall would occur over many parts of the country outside southeast peninsular India where it will be scattered.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Araria, Bhabua, East Champaran, Gopalganj, Kathihar, Khagadia, Kishanganj, Lakhisarai, Madhubani, Purnea, Saharsha, Saran, Supaul and West Champaran districts of Bihar, Deoghar, East Singbhum, Godda, Khunti, Lohardagga, Seraikela and West Singbhum districts of Jharkhand, Balasore, Bhadrak, Cuttack, Deogarh, Dhenkanal, Gajapati, Ganjam, Jagatsingpur, Jajpur, Kendrapara, Keonjhar, Khurda, Koraput, Mayurbhanj, Nawarangpur, Puri, Sambalpur and Sundargarh of Orissa, Burdwan, Howrah, East Midnapore, 24 Pargana (N) and 24 Pargana (S) districts of Gangetic West Bengal and most of the districts of Sub Himalayan West Bengal and Sikkim received rain during last week.
- **Rainfall Forecast:** Fairly widespread rain / thundershowers would occur over West Bengal & Sikkim. Scattered rain / thundershowers would occur over Bihar, Jharkhand and Orissa during next 48 hours and increase thereafter.
- **Advisories:**
 - In view of likely occurrence of fairly widespread rain / thundershowers over West Bengal & Sikkim during the period and scattered rain / thundershowers over Bihar, Jharkhand and Orissa during next 48 hours and likely increase thereafter, farmers are advised to postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops in these States.
 - In Jharkhand prepare nursery bed for long duration rice varieties utilizing the recent monsoon rain.
 - Farmers in Western Plateau Zone of Jharkhand are advised to continue sowing of *kharif* crops like rice, maize, groundnut, urd, arhar etc. utilizing monsoon rain. Prepare the land and undertake sowing / transplanting of *kharif* vegetables like bhindi, bean, tomato, French bean, cauliflower, cabbage etc.
 - In view of occurrence of rain of 30-40 mm in 3-4 days in South Eastern Plateau Zone of Jharkhand, farmers are advised to start sowing of maize, arhar, green gram, black gram, groundnut as the rain recharged soil profile which will help in germination, emergence and establishment of crops. Also complete sowing of arhar as sole crop as well as intercrop with any of the crops like jowar, maize, groundnut, soybean, urd, moong bean and Okra.
 - Undertake nursery sowing of rice, sowing of maize, arhar, vegetables like okra, bitter gourd, cluster bean, cow pea, ridge gourd, lady's finger, brinjal, tomato and chillies in Orissa utilizing monsoon rain.
 - Farmers in Chiplima district of Orissa are advised to complete transplanting of rice by 15th of July. Also undertake sowing of ragi and sesame as the weather is optimum for sowing of these crops.
 - Farmers in West Bengal are advised to undertake sowing of maize, direct sowing of *aus* rice, wet seed bed preparation of *aman* rice and sowing of cauliflower.
 - Farmers in Bihar are advised to undertake sowing of *kharif* maize, *kharif* fodder crops (jowar, Dinanath grass and bajra), mishri kand and transplanting of fruit trees. Nursery sowing of scented rice is also advised. Utilizing monsoon rainfall occurred during past few days, farmers in the districts of North Bihar and North West Alluvial Plain Zone of Bihar are also advised to transplant

rice seedlings, if ready, in medium and low land areas. Farmers are also advised to remove weeds from the *kharif* maize and apply urea @ 40 kg per hectare.

- Farmers in South Bihar Alluvial Zone, whose seedlings are ready, are advised to undertake transplanting of vegetables crops like brinjal, tomato, chilli and cauliflower on ridges. Farmers are also advised to start sowing of rainy season cucurbits on ridges.
- Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
- The weather is now congenial for attack of top borer insect in the spring planted sugarcane crop in North West Alluvial Plain Zone of Bihar; apply Phorate 10 G @ 33 kg per hectare in the root zone of the crop and carry out the earthing up operation.
- Weather is conducive for the occurrence of blast and brown spot disease in nurseries of rice in South Eastern Plateau Zone of Jharkhand; spray Bavistin @ 1 g or Beam (Tricyclazole) @ 6 g per liter of water.
- Fruit and shoot borer in brinjal has been found in Cuttack district of Orissa. To control it install Pheromone trap and spray 4 g Sevin WP or 2 ml Malathion in 1 litre water alternatively.
- At present, high temperature and humidity in New Alluvial Zone can promote fungal attack in Rice Seedbed; spray Carbendazim and Mancozeb mixture @ 1 g / litre of water.
- Under prevailing weather condition, in Terai Zone of West Bengal, there are chances of incidence of blast and sheath blight in the nursery bed of rice. To manage this disease spray Bavistin @ 1 g / litre of water. In this weather condition fruit and shoot borer may be a problem for brinjal; spray Chlorpyrifos 2.5 ml / litre of water. There may also be infestation of vine and fruit rot in pointed gourd and *Phytophthora* in betel vine in this region; to manage this diseases, spray Mancozeb 64% + Metalaxyl 8% @ 1.5 g / litre of water.
- Due to cloudy weather and high humidity in old Alluvial Zone of West Bengal, there is possibility of infestation of collar rot in yam; to manage this disease, spray Carbendazim @ 1 g and Thiram @ 2 g together per litre of water. Fruit and shoot borer may be a problem for brinjal in this weather condition. To manage this, spray Lamdacyhalothrin 2.5 EC @ 1.5 ml / litre of water.
- In Coastal Saline Zone of West Bengal, due to high humidity, *Collectotrichumpiperis* (local name chitla) disease symptoms may appear on the leaf blade of Beetle Vine. Farmers are advised to spray Bordeaux mixture (4:4:50) @ 0.5% or any Copper oxychloride preparation @ 0.3-0.4% at an interval of 15 days.
- Under prevailing weather condition, cucurbitaceous crops may be infested by fruit fly in Hill Zone of West Bengal. For protection against fruit fly, a mixture containing 200 g sugar, 20 ml Malathion and 20 litres of water may be applied.
- In Chiplima district of Orissa, fruit fly in bitter gourd, yellow vein mosaic virus (YMV) in Okra, semilooper in jute and leaf rot in betel vine have been observed. For fruit fly in bitter gourd, spray Malathion @ 2 ml / litre of water, for YMV in Okra, spray Imidacloprid @ 5 ml in 10 litres of water, for semilooper in jute, spray Thiodan @ 2 ml / litre of water and for leaf rot in betel vine, spray Bordeaux mixture @ 0.5% at 15 to 20 days interval.
- In Bhadrak district of Orissa, semilooper in jute has been observed; spray Thiodan @ 2 ml / litre of water.
- Undertake plant protection measures after current spells of rain in the region.
- Stages of major crops are mentioned in Annexure I.

Animal Husbandry

- Due to frequent showers for last few days in North Eastern Plateau Zone of **Orissa**, Coastal Saline Zone of West Bengal and South Eastern Plateau Zone of Jharkhand, there is a chance of fungal diseases in poultry birds. To prevent it poultry litter should be rearranged by mixing lime in the litter. RD vaccine should be given immediately to the chicks which are 7 days old. To prevent coxidirosis disease spray antibiotic solution named Kohrsolin-TH in the poultry house.
- Due to heavy rainfall in Coastal Saline Zone of West Bengal cattle may be attacked by ulcer in foot and mouth. Wash the wound by Potassium permanganate and keep them in dry condition.
- In Old Alluvial Zone of West Bengal, vaccination against the diseases *viz.* FMD, HS & BQ may be carried out to protect the dairy animals.

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

- **Realised Rainfall:** Most of the districts of Arunachal Pradesh and Assam received rain during last week.
- **Rainfall Forecast:** Fairly widespread rain / thundershowers would occur over the region during the period. Isolated heavy to very heavy rainfall would occur over the States of the region during next 48 hours.
- **Advisory**
 - As fairly widespread rain / thundershowers would occur over the states of this region, farmers are advised to postpone irrigation, intercultural operations and application of fertilizer and plant protection measures to the crops.
 - As isolated heavy to very heavy rainfall would occur over the States of the region during next 48 hours, farmers are advised to arrange for adequate drainage to remove excess water from the field.
 - In Assam, farmers are advised to complete sowing of groundnut, pigeon pea, sesame, arhar and nursery sowing of *sali* rice.
 - Farmers in Mid Tropical Hill Zone in Nagaland are advised to complete sowing of groundnut, soyabean and prepare nurseries for rice crop.
 - Farmers are advised to undertake top dressing of urea in *ahu* rice after current spells of rainfall in Ri-bhoi, Jaintia and Khasi Hill districts of Meghalaya. In view of occurrence of fairly widespread rainfall and isolated heavy rainfall, also provide adequate drainage to avoid water stagnation in ginger and turmeric.
 - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
 - In Sub Tropical Hill Zone in Arunachal Pradesh, provide support to summer vegetable crops to climb, as high intensity of rainfall at this stage may damage the plants.
 - As there is possibility of fairly widespread rain along with isolated heavy rain and as maize is highly sensitive to water logging, arrange for adequate drainage to drain out excess water from the field of maize in Mizoram and Nagaland.
 - In Central Brahmaputra zone in Assam, as pesticide application is not possible due to rainy weather, arrangement of bamboo perch may be made as an effective measure to control the possible infestation of hairy caterpillar and semi-looper in jute through predatory birds.
 - In Mizoram, due to continuous rainfall, infestation of trunk borer and bark eating caterpillar is observed in Khasi Mandarin; farmers are advised to monitor and kill larva by inserting a wire inside the tunnel. Also, due to high humidity and rainfall, incidence of pseudo stem weevil is more in banana; farmers are advised to remove unwanted suckers, dry and infected leaves, sheaths and petioles. Chance of incidence of jassids and hoppers may be more in *okra*; farmers are advised undertake prophylactic spray of neem oil and garlic mixture at fortnightly intervals.
 - In Mild Tropical Plain Zone of Tripura, due to the prevailing cloudy and humid weather, there is more chance of attack of fungal diseases in the vegetables; farmers are advised to spray Calixin @ 1 ml per litre of water to manage the attack.
 - Due to excessive soil moisture, there is chance of root and stem rot disease in sesame in Mild Tropical Plain Zone of Tripura; farmers are advised to remove excess water and spray Copper Fungicide *i.e.* Indofil @ 3 g per litre of water. Also, there is chance of fungal attack in the vegetables; spray Calixin @ 1 ml per liter of water.
 - Apply plant protection measures after current spells of rain.
 - Stages of major crops are mentioned in Annexure I.

Animal Husbandry:

- Vaccinate cattle, goat and pigs against foot and mouth disease (FMD) as well as anthrax disease in Meghalaya.

- Immunizations against Brucellosis, FMD, HS, BQ and Anthrax diseases in cattle and buffaloes and swine fever in pigs may be carried out in Upper, Lower and Central Brahmaputra Valley Zone in Assam. It is also advised to vaccinate (RDF1) against Ranikhet disease in one week old chicks and against Gamboro disease in two weeks old chicks.
- In Tripura, poultry farmers are advised to choose the birds like Vanaraja, Gramapriya etc. along with the local birds suitable for this hot and humid weather. To protect the birds from Coccidiosis disease, litter should be kept dry and hygienic, clean water and balanced diet with sufficient minerals should be provided to the birds. The infected birds may be kept in isolation. Medicine like Coximeretc @ 0.5 g per liter of water may be given for one week to manage the attack. Clean the poultry shed periodically with phenyl solution.
- In Mizoram, due to continuous rainfall and high humidity, there is chance of ring worm in cattle. Keep the animals clean and dry; also protect wounds from flies to avoid infestation of maggots. Also, vaccinate and deworm the pigs from swine fever and internal parasite.
- In North Bank Plain Zone in Assam, due to rainy condition, calves may infected by worms; farmers are advised to feed medicines like Piperzine or Mebendazole thrice in a month.

NORTHWEST INDIA [JAMMU & KASHMIR, HIMACHAL PRADESH, UTTARAKHAND, PUNJAB, HARYANA, DELHI, UTTAR PRADESH & RAJASTHAN]

- **Realised Rainfall:** Most of the districts of Haryana, Himachal Pradesh, Uttarakhand, Uttar Pradesh, few districts of Jammu & Kashmir, Punjab, Rajasthan received rainfall.
- **Rainfall Forecast:** Fairly widespread rainfall is likely over western Himalayan region, Punjab, Haryana, Delhi, Uttar Pradesh, East Rajasthan. Isolated heavy to very heavy rainfall would occur over Uttarakhand, Haryana, West Uttar Pradesh during next 48 hours and isolated heavy rainfall would occur over Jammu division of Jammu & Kashmir, Himachal Pradesh during next 24 hours.
- **Advisory:**
 - As most of the districts of Himachal Pradesh, Uttarakhand, East Rajasthan, West Rajasthan received rainfall during last week, postpone irrigation to the crops. As rainfall expected in Jammu & Kashmir, Uttar Pradesh during next three days, postpone irrigation to the standing crops. Arrange for drainage facilities in Uttarakhand, Haryana, West Uttar Pradesh, Jammu division of Jammu & Kashmir, Himachal Pradesh as isolated heavy rain is likely during next 48 hours.
 - Farmers in Kapurthala, Patiala and Mohali districts in Punjab and Ambala, Gurgaon, Kurukshetra, Rewari, Sonapat, Yamunanagar districts in Haryana are advised to complete transplanting of rice and undertake sowing of bhindi. Farmers in the above districts in Haryana are also advised to prepare the field and undertake sowing of bajra and guar. Farmers in the remaining districts are advised to undertake land preparation and keep the inputs ready as soon as sufficient rainfall is received.
 - Farmers in Uttar Pradesh are advised to undertake nursery sowing of rice and sowing of maize, groundnut, jowar, bajra, moong, arhar and til.
 - Farmers in Kangra and Sirmaur districts in Himachal Pradesh are advised to continue direct sowing of rice, sowing of kulthi, hybrid chari, direct sowing of khira bitter gourd, sowing of ginger, arbi and amaranthus and planting of mango, litchi and guava etc. Farmers in the remaining districts are advised to undertake sowing of *kharif* crops as sufficient rainfall was received.
 - Farmers in Delhi are advised for sowing of guar, bajra, spinach, amaranths, ladies finger, maize, fodder sorghum, fodder lobia and cucurbitaceous crops. Farmers are also advised to undertake preparation of nursery for tomato, chilli, brinjal and early cauliflower.
 - Undertake sowing of pearl millet, sorghum, maize, soybean, moth bean, chilli and cluster bean in East Rajasthan and West Rajasthan due to occurrence of monsoon rain.
 - Farmers in Uttarakhand are advised to undertake nursery sowing of rice, soyabean and finger millet and undertake transplanting of chilli and Simla mirch.
 - Farmers in Jammu and Kathua districts in Jammu and Kashmir are advised to undertake direct sowing/transplanting of rice, sowing of maize, til, pulses, groundnut, bajra, nursery sowing of

chilli, tomato, brinjal and capsicum in Jammu region. Farmers in the remaining districts are advised to undertake land preparation and keep the inputs ready for sowing as soon as sufficient rainfall is received.

- In Bhabar and Tarai Zone of Uttarakand, farmers are advised to monitor the deficiency of Zinc in rice. If deficiency is appearing on the leaves then spray a solution of 5 g of zinc sulphate and 20 g of Urea per liter of water.
- In Himachal Pradesh weather is conducive for attack of stored grains pests like rice weevil, lesser grain borer and rice moth. In Grain store bins put one pouch of cellphos (3g) or quinolphos (12g).
- In Mild Hills Sub Humid Zone farmers are advised to control fruit borer in Pomegranate, spray Ripcord @ 200 ml or Challenger 80 ml of water. To control bacterial black spot diseases, spray the mixture of Copper Oxychloride @ 400 g and three parts of Straptocycline (18-20 g) per 200 liters of water.
- In Central Plain Zone of Punjab, as pulses are sensitive to standing water, drain out excess water from the fields particularly Mash and monitoring of lady finger, chilli and cucurbitaceous crops against attack of mite and jassid in brinjal is advised. Spraying of phosmite @ 1.5 - 2 ml per litre of water is advised to control mite while spraying of Dimethoate 30 EC @ 2 ml/liter of water against jassid is advised.
- In Western Zone of Punjab, sugarcane top borer may be checked by applying 12 kg carbofuran encapsulated 3 G or Phorate encapsulated 10 G at the base of the shoots.
- Farmers in Delhi are advised for constant monitoring of cucurbitaceous crops against attack of fruit fly and ladyfinger crop against attack of hopper and jassid. Take proper plant protection measures.
- Spraying may be undertaken after current spells of rain in Himachal Pradesh, Uttarakhand, Jammu & Kashmir, Punjab, Haryana, Delhi, East Rajasthan and Uttar Pradesh.
- Stages of major crops are mentioned in Annexure I.
- **Animal Husbandary**
 - In some parts of Uttar Pradesh and Rajasthan, farmers are advised to keep their animals under trees during the day time. Give them fresh water for drinking and balanced feed with mineral mixture and green fodder.

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

- **Realised Rainfall:** All the districts in Kerala except Thiruvananthapuram, Coastal Karnataka, Bidar in North Interior Karnataka, Chickmagalur, Kodagu and Shimoga districts in South Interior Karnataka, Krishna, Srikakulam, Vishakapatnam and West Godavari districts in Coastal Andhra Pradesh, Adilabad, Karimnagar, Khammam, Medak, Nalgonda, Nizamabad, Rangareddy and Warangal districts in Telangana received good rainfall. No significant rainfall occurred in Tamil Nadu except in Pudukkottai, Rayalseema in Andhra Pradesh and the remaining parts of the region.
- **Rainfall Forecast:** Fairly widespread rain is likely at Coastal Karnataka and Kerala. Fairly widespread rain is likely at North Interior Karnataka and Telangana for 48 hours and scattered thereafter. Fairly widespread rain is likely at South Interior Karnataka and Coastal Andhra Pradesh for next 24 hours and scattered thereafter. Scattered / isolated rain/thundershowers would occur over the rest of the region.
- **Advisories:**
 - Deficient rainfall has been received in most of the districts in Interior Karnataka except Bidar, Gulbarga, Chickmagalur, Kodagu and Shimoga during last week. Withering of early sown rainfed crops like green gram, black gram, soybean and groundnut etc. are reported in some parts of Gulbarga district. Due to receipt of normal rainfall in the district during last week, crop stand is likely to improve along with forecast of fairly wide spread rainfall in the region during next 48 hours. Farmers are advised to continue land preparation and sowing of kharif crops like red gram, cotton and nursery sowing of rice. Avoid sowing of black gram.

- As poor rainfall situation is observed in North Interior Karnataka, following intercropping systems can be taken up in light and medium black soils. Bajra + Redgram in 2:1 row proportion; Redgram + Groundnut (spreading) in 3:1 or 4:2 row proportion to make efficient use of available soil and water resources and to get higher returns. Use short duration varieties of redgram for sowing
- As there was rainfall in all the districts in Kerala except Thiruvananthapuram, Coastal Karnataka, Bidar in North Interior Karnataka, Chickmagalur, Kodagu and Shimoga districts in South Interior Karnataka, Krishna, Srikakulam, Vishakapatnam and West Godavari districts in Coastal Andhra Pradesh, Adilabad, Karimnagar, Khammam, Medak, Nalgonda, Nizamabad, Rangareddy and Warangal districts in Telangana and Pudukkottai in Tamil Nadu, postpone irrigation to the crops. Due to forecast of rainfall in Karnataka, Coastal Andhra Pradesh and Telangana during next two - three days, postpone irrigation to the crops.
- Deficient / scanty rainfall has been received in most of the districts in Rayalaseema during last three weeks. As cut off dates for sowing of kharif crops are 30th July, famers are advised to start land preparation and keep the inputs ready. Undertake sowing of crops like cotton, jowar, maize, castor, groundnut, pigeon pea, green gram, etc., only after receiving a cumulative rainfall of 60 to 75mm of rainfall which charges soil profile for better germination.
- Due to receipt of monsoon showers during last week along with forecast rains, farmers are advised to continue wet seeding of rice, new planting of black pepper and vegetable in Kerala and irrigated cotton, nursery sowing of rice, sowing of hybrid jowar, maize, ragi, sugarcane, sunflower, ground nut, red gram and horticulture crops in Karnataka.
- Farmers in the Krishna Godavari Zone of Andhra Pradesh are advised to take kharif sowings if the soil moisture is sufficient for blackgram, greengram and redgramm and other kharif crops in the district. Also undertake sowing of rice in the nursery.
- Farmers in North East Transition Zone of Karnataka are advised to take up sowing of pigeon pea and soybean, earthing up operation of sugar-cane and transplanting of paddy.
- Due to high humidity in the Coastal Zone of Tamil Nadu, rotting of nuts and bunches of tree noticed in arecanut. Hence, farmers are advised to go in for spraying of 1% Bordeaux mixture to control it.
- As the wind speed is expected to increase in the Hill Zone of Karnataka and Western Zone of Tamil Nadu, farmers are advised to take up staking for banana and propping for sugarcane.
- Farmers in the High Rainfall Zone of Tamil Nadu are advised to take up planting of rubber and fruit crops.
- Stem borer incidences are noticed in the paddy crops in the North Eastern Zone of Tamil Nadu. Farmers are advised to apply suitable insecticides. In the case of horticulture crops follow drip irrigation method to manage water shortage.
- Farmers in the South Zone of Tamil Nadu are advised to monitor the incidence of heart rot in banana, magnesium deficiency and sucking pests in cotton and stem borer in rice and follow appropriate remedial measures.
- Late blight of tomato disease was noticed in the Southern Zone of Karnataka. To control , spray Mancozeb @ 2gm/lt of water.
- Incidence of sucking pests is noticed in the Scarce Rainfall Zone of Andhra Pradesh. To control, spray Dimethoate @ 1 ml per litre of water.
- Present weather is conducive for bud rot and leaf rot diseases in expected in coconut and leaf roller and stem borer in paddy in the Problem Area Zone of Kerala. Suitable protection measures may be undertaken to prevent their attack.
- Undertake plant protection measures after spells of rain in Kerala, Coastal Karnataka and on non rainy day in remaining regions.
- Varieties are mentioned in Annexure II.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised rainfall:** All districts in Maharashtra and Gujarat States except Sangli in Madhya Maharashtra and Gondia in Vidarbha received significant rain during last week.
- **Rainfall forecast:** Widespread rain over Konkan and Goa, fairly widespread rain over Madhya Maharashtra, Vidarbha and Gujarat region and scattered rain over Saurashtra and Kutch likely to occur during the period. Fairly widespread rain would occur over Marathwada during next 48 hours and decrease thereafter. Isolated heavy to very heavy rainfall over Konkan & Goa and Madhya Maharashtra during next 48 hours and isolated heavy rainfall over Gujarat region and marathwada during next 24 hours likely to occur.
- **Advisory:**
 - As significant rain occurred in almost all the districts of Maharashtra and Gujarat States during last week and rain is also likely to occur during next 3 days, farmers are advised to postpone irrigation to the crops. As widespread rain over Konkan and Goa and fairly widespread rain over Madhya Maharashtra, Vidarbha and Gujarat region likely to occur, farmers in the districts of these regions are advised to postpone intercultural operation and application of fertilizer and plant protection measures. In view of occurrence of isolated heavy rainfall in Konkan and Goa, Madhya Maharashtra, Marathwada and Gujarat region, farmers are advised to arrange adequate drainage to avoid water stagnation in the crop fields.
 - Farmers of Konkan region in Maharashtra are advised to drain out excess water from rice nursery and already transplanted rice fields. Also undertake transplanting of 30 days old nagli seedlings at 20 x 15 cm spacing by dibbling method.
 - Farmers in Konkan and Kolhapur Division of Madhya Maharashtra are advised to undertake transplanting of 20 to 22 days old rice seedlings having 12 to 15 cm height and 6 leaves keeping 15 cm X 15 cm distance in early maturing varieties and 20 cm X 15 cm distance in mid late and late maturing varieties.
 - Farmers of East Vidarbha are advised to undertake transplanting of 20 – 22 days old seedlings of *kharif* rice at 20 cm x15 cm distance and plant 2-3 seedlings per hill.
 - Taking advantage of recent monsoon rainfall, farmers of Madhya Maharashtra, Marathwada and Vidarbha are advised to continue sowing of *kharif* jowar, groundnut, cotton, red gram, green gram and soyabean.
 - Utilising recent monsoon rainfall, farmers of Madhya Maharashtra and Marathwada are advised to undertake planting of *adsali* sugarcane. Select 10-11 months old cane sets.
 - This is the proper time of planting of all fruit crops in Konkan and Kolhapur Division.
 - Farmers in South Gujarat Heavy Rainfall Zone are advised to undertake transplanting of rice utilizing the rain water during these days.
 - Farmers in North Gujarat Zone are advised to undertake sowing of groundnut, green gram, black gram, cluster bean, cowpea, sesame etc. utilizing the recent rainfall.
 - Farmers in Middle Gujarat Zone are advised to carry out transplanting of rice and drain out excess water regularly from vegetable nursery in view of likely occurrence of rainfall.
 - Farmers in Bhal and Coastal Zone are advised to undertake sowing of *kharif* crops and transplanting of rice and vegetables.
 - Farmers in North Saurashtra Zone of Gujarat are advised to prepare land and undertake sowing of *kharif* crops like *kharif* groundnut, *kharif* bajra, pulses, sesame, B.T.Cotton etc.
 - Farmers in South Saurashtra Zone of Gujarat are advised to undertake sowing of *kharif* crops. Also apply second dose of fertilizers @ 40 kg N / ha (88 kg urea / ha or 200 kg Ammonium Sulphate per ha) in pre-sown cotton after current spells of rain.
 - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
 - Due to cloudy and rainy weather, there is increase in infestation of apex and fruit borer in brinjal in Western Maharashtra Scarcity Zone; collect and destroy infested fruit, install Pheromone traps @ 10 / acre. For control spray 4 % Neemark or Profenophos @ 20 ml in 10 liters water.

- Due to prevailing weather, the fruit dropping (Koleroga) in arecanut is observed in some parts of the Sindhudurg district; spray 1% Bordeaux or 0.37% Copper oxy chloride (37 g / 10 liters of water).
- Due to cloudy weather in South Gujarat Zone, there are chances of incidence of sucking pests in cotton. Farmers are advised to spray 1.7 ml Roger or 1.5 ml Metasystox + 2.5 ml Dicofol per liter of water to control the pests and diseases.
- Stages of major crops are mentioned in Annexure I.

Animal Husbandry

- Vaccinate animals against HS and BQ in Gujarat.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rain occurred in most of the districts in Madhya Pradesh and Chattisgarh.
- **Rainfall Forecast:** Fairly widespread rain/thundershowers would occur over the region during next three days. Isolated heavy rainfall would occur over west Madhya Pradesh during next 24 hours.

Advisory:

- As there was good rainfall in most of the districts in Madhya Pradesh and Chattisgarh during last week, postpone irrigation to the crops. Arrange for drainage facilities in the crop fields over west Madhya Pradesh as isolated heavy rainfall would occur during next 24 hours.
- As there was good rainfall received during last week in the region, farmers are advised to undertake land preparation and nursery sowing of rice and sowing of soyabean, moong, urad, maize, groundnut, pigeon pea, *khari fonion*, brinjal, tomato and chilli. Farmers in Chhattisgarh are advised to undertake land preparation and nursery sowing of rice, vegetables and planting of turmeric and ginger.
- There is possibility of light to medium rainfall and partly cloudy sky during next five days, hence farmers are advised to keep watch of onion nursery plants and remove excess water and do weeding in the seed bed. Farmers are advised to do sowing of the kharif vegetables like- ladyfinger, cucurbits during this week. Farmers are advised to start the transplant of rainy seasonal flower to main field, in end of this week.
- Farmers in Bundelkhand Zone are advised to apply the rhizobium culture after seed treatment of pulses crops like soybean, groundnut. Also there is possibility of light rain at few places during next five days; in case of high rainfall and heavy soils, farmers are advised to sow the soybean on ridges and furrow method.
- Farmers in Satpura Plateau Zone in Madhya Pradesh are advised to undertake transplanting of vegetables like brinjal, tomato, cauliflower and chilli. Also farmers in Malwa Plateau Zone are advised for sowing of Kharif crops and transplanting of tomato, brinjal, chilli.
- The farmers in Jhabua Hill Zone are advised to complete sowing of early mature varieties of Maize- JVM 421, Soybean – JS 9560 or short duration crops i.e. urd, moong as soon as possible. Farmers in Gird Zone of Madhya Pradesh are advised to prepare paddy nursery for transplanted paddy cultivation and collect seeds and fertilizers for kharif crops sowing. Also farmers in Central Narmada Valley Zone are advised to sow til, jowar, soyabean and maize.
- Farmers in Chattisgarh Plain Zone are advised for field preparation and sowing of rice for nursery raising/direct seeding. The weather conditions are favourable for proper germination of maize, soyabean, groundnut, sesame, pigeon pea, urd, kodo in uplands.
- Looking to the weather conditions in Chattisgarh Plain Zone farmers are advised for earthing in Kharif vegetable crops viz, tomato, brinjal etc. sown during last month and staking in climber crops. Moreover, looking to the rainfall activity farmers are also advised for the proper drainage management in the vegetable fields.
- Weather is congenial for Flea Beetle in soyabean in Satpura Plateau Zone of Madhya Pradesh, spray Quinolphos 25 EC 2 ml or Methy Paration 50 EC 2 ml per litre of water.

- As there is possibility of light rain at few places and cloudy sky during next five days in Budelkhand Zone of Madhya Pradesh, monitor the chilly and tomato crops for leaf curl disease. If found, it is advised to spray of Methyl demeton 25 E.C. in clear sky condition @ 2.0 ml. per litre of water. Also for the control of wilt disease in early sown chilly crop, spray the crop with solution of Carvendazime in clear sky condition @ 2 gram per litre of water.
- Stages of major crops are mentioned in Annexure I.
- Weather is congenial for sucking pests in bhindi and other vegetables, spray Metasystox or Dimethoate 1 ml per litre of water.
- Spray chemicals after spells of rain.
- **Animal Husbandry & Poultry**
- In present weather, supply the supplements food, mix. Vitamins and energy food material along with calcium content to dairy animals in Bundelkhand Zone of Madhya Pradesh. Provide de-warming to the calf of dairy animals and keep on dry and clean shade. During the weather it is advised to do vaccination against PPR disease in Goats.
- In Malwa Plateau Zone of Madhya Pradesh, provide the animal's clean water, balance and nutrients rich food. etc. and vaccination to Goats and other cattle's. Also provide neat, clean, dry and well shaded place for animals. Insure vaccination to protect animals from infections/diseases like Black Quarter and FMD etc.
- Due to rains at this period, farmers should vaccinate their animals for Khurpaka-Muhpaka and Galgotu disease in Jhabua Hill Zone.

Annexure I Major Crops

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

- Sugarcane (early vegetative / vegetative), rice, *kharif* maize, *kharif* arhar, til, sorghum, jowar, lobia for green fodder, mishri kand (sowing) and fruit trees (transplanting) in Bihar.
- Sugarcane (early vegetative / vegetative), papaya (transplanting), turmeric, ginger, elephant foot yam (planting / vegetative), rice (nursery sowing / transplanting), rainy season vegetables like bhindi, bean, tomato, French bean, cauliflower, cabbage etc. (sowing), maize, pigeon pea, urd, moong bean, groundnut (sowing), sweet potato (nursery preparation), marua (transplanting) in Jharkhand.
- Arhar (sowing), maize (sowing / early vegetative), mango, papaya, marigold, tuberose (planting), cowpea (sowing / early vegetative), *kharif* vegetables (sowing / vegetative), sugarcane (vegetative), *kharif* rice (transplanting), groundnut (sowing), chrysanthemum, ragi (sowing), turmeric and ginger (planting), yam (sowing), sesamum, green gram, black gram, niger (sowing), mango, cashewnut (planting) in Orissa.
- *Aman* rice, cauliflower (nursery preparation), *aus* rice (direct sowing), *kharif* maize (sowing), jute (early vegetative / vegetative), mango, coconut, guava, banana (planting) and *kharif* vegetables (sowing / planting / vegetative) in West Bengal.
- Large cardamom (secondary flowering / capsule formation), *kharif* vegetables (late vegetative), orange (flowering / early fruiting.), ginger (germination / early vegetative), rice (transplanting / early tillering), maize (tasseling / silking / cob formation / cob maturity), seed potato (tuberization) in Sikkim.

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

- Sugarcane (active vegetative), early *ahu* rice (milk), *sali* rice (seedling / transplanting), *olitorius* jute (early vegetative / vegetative), maize (tasseling / silking / cob formation / cob maturity), groundnut (sowing), arhar (sowing), ginger / turmeric (vegetative), pigeon pea (sowing), sesame (sowing), green gram (sowing), banana (planting) and khasi mandarin (sowing) in Assam
- Rice (nursery preparation / transplanting / vegetative), French bean, okra (flowering / fruiting / maturity), maize (tasseling / silking / cob formation / maturity) and ginger / turmeric (planting /

vegetative), summer vegetables, millet (vegetative / flowering / fruiting / maturity) in Arunachal Pradesh.

- Soyabean, groundnut (sowing / vegetative), *kharif* rice (nursery raising / transplanting), rice bean and black gram (sowing), ginger and turmeric (vegetative), cowpea (sowing) in Manipur.
- Rice (nursery preparation / transplanting), *kharif* maize (vegetative / knee high stage), groundnut, soyabean (sowing / vegetative), okra (sowing / vegetative), ginger and turmeric (planting / vegetative), *khasi* mandarin (fruit bearing), banana (vegetative / fruiting / maturity), cucurbits (sowing / vegetative) in Mizoram.
- *Aus* or *kharif* rice (tillering), *aman* rice (nursery preparation / transplanting), vegetables (flowering / fruiting), maize (tasseling / silking / cob formation), and groundnut (sowing / vegetative) in Tripura.
- *Ahu* rice (panicle initiation / flowering / grain filling), *kharif* maize (tasseling / silking), vegetables (vegetative / flowering / fruiting), *sali* rice (transplanting), ginger and turmeric (vegetative), jute and mesta (vegetative) in Meghalaya.
- Soyabean, groundnut (sowing), *kharif* maize (vegetative), okra (flowering / fruiting), tomato (planting) and banana (fruiting), jhum rice (dough), rice (nursery preparation) in Nagaland.

NORTHWEST INDIA [JAMMU & KASHMIR, HIMACHAL PRADESH, UTTARAKHAND, PUNJAB, HARYANA, DELHI, UTTAR PRADESH & RAJASTHAN]

- Tomato, chilli (transplanting), brinjal & cucurbits crops (flowering/fruiting), lentil (pod formation), maize, hybrid cluster bean, baby corn, Pigeon pea (sowing/ vegetative), green gram and black gram, cotton (sowing), Sugarcane(sowing) in Delhi.
- Vegetables (flowering / fruiting / harvesting), garlic, ginger (planting), bhindi, (transplanting), cucurbits (transplanting), Khira, summer squash, bitter gourd, tur, brinjal, Shimla mirch, pepper and tomato (transplanting), Apple (fruit development), pomegranate (flowering), ginger, arbi, amaranthus, turmeric, rice, maize (sowing/transplanting) in Himachal Pradesh.
- Berseem (vegetative), cucurbits (vegetative / flowering/maturity), onion (vegetative), capsicum, chilli, brinjal (nursery sowing / transplanting), *kharif* fodder viz. maize, jowar, bajra, cowpea (sowing/transplanting), early sown maize (vegetative/knee high), *kharif* pulses, moong, mash (sowing), rice (nursery sowing / transplanting), *Kharif* oilseed like sunflower, summer brassica etc. (sowing) in Jammu & Kashmir.
- Chilli, capsicum (transplanting), tomato (vegetative/maturity/harvesting) and lahi (flowering / fruiting), sugarcane (planting), rice (nursery sowing/transplanting), mango, litchi (fruiting / maturity/harvesting), foxtail millet, maize, okra, bottle gourd, bitter gourd, ginger, turmeric, soyabean (sowing / planting), sorghum, pigeon pea and pearl millets(sowing) in Uttarakhand.
- Spring sugarcane (sprouting), berseem (vegetative), vegetables, sugarcane (sowing/ germination), pulses, cotton, okra (sowing/vegetative), rice (sowing/transplanting) in Punjab.
- Sugarcane (spring season) (planting/emergence/early vegetative), barseem (vegetative), pulses, moong, mash, pigeon pea (sowing), rice(sowing/transplanting) in Haryana.
- Rice (land preparation for raising nursery / transplanting), winter sugarcane (vegetative growth), summer sugarcane (initial growth), cucurbits like gourd, bitter gourd, cucumber, etc. and another vegetables like lady's finger, tomato, brinjal, chilli etc.(flowering / fruiting / maturity), black gram, baby corn/ maize / fodder maize, vegetables (vegetative/flowering/fruiting), groundnut, jowar, bajra, arhar, til (sowing) in Uttar Pradesh.
- Rice (nursery sowing/transplanting), pearl millet, sorghum, maize, soybean, chilli and cluster bean (sowing) in Rajasthan.

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

- Kuruvai rice (nursery/vegetative), cotton (boll formation), vegetables (nursery / transplanting/ fruiting), sugarcane (vegetative/ grand growth), groundnut (vegetative/ flowering), maize(vegetative/harvest/ tasseling),sorghum(vegetative/flowering),black gram(flowering/ harvest) in Tamil Nadu.

- Sugarcane (ratooning/vegetative), mango (fruiting / harvesting), cotton (sowing / vegetative), hybrid jowar, maize, ragi, sugarcane, sunflower, groundnut, red gram and horticulture crops (sowing) in Karnataka. Early sown crops are at early vegetative stage.
- Maize (Sowing to seedling stage), jowar, cotton(vegetative), sugar-cane and pulse crops like green gram (sowing), rice (nursery / transplanting stage), groundnut (early sown crop-flowering/late sown crop- vegetative) in Andhra Pradesh.
- *Virippu* rice (tillering/transplanting) and black pepper (berry development), ginger(vegetative), turmeric and vegetable crops (seedling) in Kerala.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- Sugarcane (*adsali*) (planting / grand growth), sugarcane (pre-seasonal) (vegetative), sugarcane (*suru*) (early vegetative), *Kharif* rice (transplanting in Konkan, Kolhapur, Pune, Nashik Division and seedling / transplanting in East Vidarbha), jowar, soyabean, groundnut (sowing / germination / early vegetative in Kolhapur division and sowing/ germination in other divisions), cotton (sowing / germination / early vegetative in Madhya Maharashtra, Marathwada and Vidarbha), red gram, green gram (sowing / germination / early vegetative).
- *Kharif* bajra (sowing), brinjal and tomato (sowing / transplanting), sugarcane (vegetative), groundnut (seedling / early vegetative / vegetative), *kharif* pulses (sowing), cotton (germination / seedling / vegetative), rice (sowing / seedling / transplanting) in Gujarat.

CENTRAL INDIA[M.P., CHHATTISGARH]

- Sugarcane (vegetative), vegetables (flowering and fruiting), moong, urad, maize, soybean, sesame, groundnut, jowar groundnut, pigeon pea, *kharif* onion, brinjal, tomato and chilli etc (sowing) in Madhya Pradesh
- Rice (seedling / tillering), sugarcane (planting), maize, groundnut, arhar, green gram and sesame (sowing), ginger and turmeric (planting) in Chhattisgarh.

Annexure II List of Varieties

Orissa

Arhar:

Early duration- Prabhat, Upas-120, ICPL-86012, ICPL-87.

Medium duration - Asha, Visakha, DA-11, C-11 etc.

Papaya: Honey Dew, Kurg Honey Dew, Co-1, Co-2, Pusa Delicious, Pusa Majestic, Pusa Dwarf and Pusa Giant.

Cow pea:

Bush type – Pusa Phalguni, Pusa Komal, SEB-2, Pusa Barsati.

Runner type - American Long and Banarasi Long.

Other improved varieties - Russian Giant, EC-4316, NP-3, C-152, UPC-286, UPC-5286 and IGFI-450.

Okra:

Improved high yielding varieties: – Utkal Gourav, Arka Anamika, Uphar, Parvani Kranti.

Hybrid varieties: - Varsa, Vijay, Vishal, Tara, Adhunik, Atyadhunik and Supriya.

Bitter gourd: Pusa Domousumi, Coimbatore Long Green and Arka Harit.

Ridge gourd: Pusa Najdar, Jaypur Long and any local variety.

Cluster bean: Pusa Naubahar.

Ginger: Suprava, Suruchi, Surabhi.

Turmeric: Roma, Surama, Rang, Rashmi etc.

Maize: Navjot, Shakti, Decan-107, Decan-109.

Rice:

Extra early - Kaling-3.

Early - Khandagiri, Bandana, Pathara, Parijat, Annada, Jogesh, Siddant.

Medium - Pratikshya, Manaswini, Tapaswini MAS, Konark, Kharavela, Naveen, Abhisek, Lalat, MAS MTU-1001, MTU-1010, Konark, Gajapati, Surendra, Lalat.

Late - CR-1009, CR-1018, Swarna (MTU-7029), Indravati, Mahanadi, Puja, Ramachandi, Kanchana, Sarala, Lunishree, Ranidhan, Mrinalini, RGL-2837, Ketakijoha, Moti, Padmini, Kanchana, Mahanadi, Jagabandhu.

Fine - CR-1014, BPT-5204.

Flash flood areas - Swarna Sub-1.

Yam: Shreekirti, Shreerupa, Hatikhoj, Shreeshilpi; small yam – Shreelata, Shreekala.

White yam: Shreesubhra, Shreepriya, Shreedhanya.

Groundnut: Ak-12-24, TG-3, TG- 38, TMV 2, ICGS -11, JL-24 and Smruti for oil.

Ragi: Divyasingh, AKP-2, AKP-3, AKP-7, Godavari, Neelachal, Bhairavi, Shubhra and Chilika.

Chrysanthemum:

Yellow - Chandrama, Kiku, Biory, Super Giant and Evening Star.

White - Snow Ball, Inoscence and Premier.

Red - Brave, Rustic, Alfred and Wilson.

Sesamum: Kanaka, Kalika, Vinayak, Uma, Prachi, Tilottama, Nilima.

Green gram: K-851, PDM-11, PDM-54, OUM-11-5.

Black gram: T-9, Pant U-11, Pant U-19, Pant U-30.

Niger: Deomali, Niger-1.

Cashew nut: BPP-4, Bhubaneswar-1, VRI-2, Hybrid 2-17.

Banana: Dwarf Cavendis, Robusta, G-9 and Tissue cultured Banana.

Mango: Baiganpalli, Totapuri, Bombay green, Suvarnarekha, Neelam, Himsagar, Langra, Dusheri, Amrapalli, Mallika, Ratna, Sindhu, Alphanso, Keshar etc.

West Bengal

Aman Rice: Kshitish, Sasyashree, IR-42, Swarna, Mashuri, IET-8002, 4094, 2233, Ratna, Bikash.

Rice: Upland situation (110-120 days) - Rasi, Khitish, Bhupen, CST-7-1, PNR-519, Kunti, Ajaya, CSR-6.

Shallow low land (130-140 days) - Manassarovar, MTU-7029 (swarnamasuri), MTU-1001, MTU-1010, Naveen, IET-5656.

Semi deep water (150-160 days) - Jogen, Sabita, Purnendu, lunshri, Amulya, CR-1009, CR-1018, Sarala.

Banana: Mortoman, Chapa, Kathali, Singapuri.

Jharkhand

Turmeric: Rajendra Sona.

Ginger: Burdwan and Nadia.

Elephant foot yam: Gajendra.

Maize: Birsa-1, Birsa Vikas-1, Suhan-1, Suwan Composite 1 (100 days) and hybrid variety - HQPM 1 (100 days), composite variety – Birsa Makka 1 (80-85 days) and hybrid variety - Kanchan (80-85 days), Birsa Vikash Makka 2 (70-80 Days).

Rice: Swarna (MTU 7029), Rajshree, BPT 5204 (Sambha Mahsuri), Birsamati and for hybrid rice - Proagro or Arize 6444; for medium land rice - IR 36, 64, Lalat, Naveen, Sahbhagi, BR 10, Kanak, Rajendra Dhan 202, Sugandha, Birsa Vikash Sugandh Dhan 2, Birsa Vikash Dhan 203 and Birsamati.

Urd: T 9, Pant U 19, 30, 35 and Birsa Urd 1.

Moong bean: Pusa Vishal, SML 668, K 885, PS 16, Pant Moong 2 and PDM 11.

Pigeon pea: Birsa Arhar (210 days), Bahar (240 days) and ICPH 2671 (210 days).

Finger millet: Birsa Marua 2, A 404 and GPU 45, 47.

Groundnut: AK 12-24, Birsa Moongfali 1, 2, 3 and bold type – Birsa Bold (BAU 13).

Sweet Potato: Birsa Sakarkand-1 and Sri Bhadra.

Bihar

Rice: Mansuri, Rajendra Mansuri, Nata Mansuri, Rajendra Sweta, Santosh, Rajshree, Satyam, Pankaj, Swarna (MTU 7029), Sita, Kank and IR-36.

Kharif maize: Shaktiman 2, Shaktiman 3, Shaktiman 4 and Deoki.

Scented rice: Sugandha, Kamani, Rajendra Suwasani and Rajendra Kasturi.

Mishri kand: Rajendra Misrikand 1.

Assam

Sali rice:

High yielding varieties: Ranjit, Bahadur, Satyaranjan, Mahsuri, Peoli, Moniram, Pankaj, Kushal, Basundhara, Ketekijoha, Aghoni, Jalashree, Jalkuwari, Plaban.

Medium duration: Satya and Basundhara.

Short duration: Luit, Kapili, Kolong, Dishang.

Other: Jalashree, Jalkuwari, Plaban.

Green gram: T44, ML131, Pratap.

Banana:

Medium tall varieties: Chenichampa, Mulbhog, Borjahaji.

Tall varieties: Bhimkal, Purakal, Manohar.

Arhar: T-21

Groundnut: TG-1A, DL-24.

Sesame : AST-1, Madhabi, Vinayak, Punjab til -1, Gouri.

Manipur

Soyabean: J.S.335.

Cowpea: Yard Long Bean and Pusa Barsati.

Delhi**Hybrid cluster bean:** Pusa Komal, Pusa Sukamol,

Kharif maize: Hybrids:AH-421,AH-58

Baby corn: HM-4.**Sugarcane:** Karan-1, Karan-2, Co-64, and Co-1496.**Late varieties of Cotton:** H-777, H-974, H-1098.**Pigeonpea** - Pusa 2001, Pusa991, Pusa992, Paras manak, UPAS 120.**Cucurbits: Bottle Gourd-** Pusa Naveen, Pusa Santushti, Pusa Sandesh; **Bitter Gourd-** Pusa Visesh,Pusa-2 mosumi; **Pumpkin-** Pusa Visvash; **Ridge Gourd-** Pusa Chikni, Pusa Supriya**Maize:** Hybrid: AH-421, AH-58 Composites: Pusa composite-3 Pusa composite-4.**Soybean:** Pusa-9712, Pusa-9814, and Pusa-16.**Fodder Sorghum:** Pusa chari-9, Pusa chari-6.**Himachal Pradesh****Cauliflower:** Sweta, Madhuri**Cabbage:** Golden Acre, Varun**Tomato:** 7711, Him sona, Him 1**Capsicum green:** California wonder, Mahabharat, Capsicum yellow : US 616**Cucumber:** Kiyam**Summer squash:** hybrid green**Lettuce:** Iceberg**Brinjal :** Arka Nidhi, PPC**Ageti bhindi :** P-8, Prabhini kranti, Arka anamika**Frenchbean :** Contender**Pepper :** Surjmukhi**Broccoli:** Palam Samridhi**Rajmash :** Triloki, Jwala, baspa Kailash**Jammu & Kashmir****Rice :** Jaya, RR-8585, IET-1410, Ratna, PC-19, GS-2, mansar, trikuta, C-5 and C-8

Direct sowing : Jaya, RR-8585, PC-19, IET-1410 and Ratna

Brinjal : PPL, PPC & PPR**Chillies :** NP-46A, Pusa jawala**Maize :** var.GS-2, mansard, trikuta, C-5 and C-8, GS-2, Super composite, Mansar, C-6, C-8 and Local**Pulses:** Mash: Pant U-19, Moong: PDM-54, ML-131 and ML-818.**Groundnut:** Punjab no.1, M-13 and JL-24,**Bajra:** WCC-75, ICMS-7703 and Hybrid M.H.B-110,**Til:** Punjab Til-1.**Punjab****Paddy :** Pusa Basmati 1, Pusa 1121, Punjab Basmati 2, Punjab Mehak and Super Basmati during these days and Basmati 370 and Basmati 386, PAU 201, PR 120, PR 118, PR 116, PR 114, PR 113, PR 111, PR 115 etc.**Okra :** Punjab 7 / Punjab 8**Radish :** Punjab Ageti, Pusa Chetk**Haryana****Baisakhi Mung:** K851 and Type 44 and Muskan

Pigeon pea: UPAS 120, T-21.

Uttar Pradesh

Black Gram(Urad): Narendra Urad-1, Pant Urad-30,

Green gram (moong): Samrat, Narendra moong-1,

Groundnut:TG37A, Koshal

Til : Ta-4, Ta-78, Bhokhar, Pragati

Jowar: Bundela CSV-13,CSV-15, CSV-17, S.B.P.-1388, Vijeta, Mau Ta-2, Varsha, C.S.B.-15, C.S.H.-5, C.S.H.-9, C.S.H.-14 and C.S.H.-16, C.S.H.-13, C.S.H.-23

Bajra:WCC-75, Raj-171,

Hybrid var.- H.H.B.-60, 67, M.H.179, Pusa-332, Pusa-23, I.C.M.H.-451

Composite var.- H.C.-4, I.C.M.B.-8440, WCC-75, I.C.M.V.-155, W.C.C.-75, I.C.T.P.-8203, Raj-171

Desi-Mainpuri

Arhar: Type-21, Manak, Paras, Pusa-992.Vkbi&2, Pusa-6, I.C.P.L.-151

short duration varieties - Prabhat, U.P.A.S.-120, long duration varieties- Bahar, Azad, Narendra Arhar-1, Malaviya Arhar-15.

Soyabean: PK-472, JS-335, P.S.-1024, MAUS-47, N.R.C.-37, Lobia (UPS-4200),

Summer Sugarcane: K.S. 97264, K.S.-8432, K.S.-767, K.S.-92423, K.S.-95268, K.S.-98268, K.S.-96275, K.S.-95270

Maize : Azad Uttam, Azad Kamal, Kanchan, Sweta, Megha, Hybrid varieties : Ganga-2, Ganga-5, Ganga-11, Sartaj, Prakash, Pusa Hybrid-1, Pusa Hybrid-2 and Gourav, Tarun, Navin, Kanchan, D-765, Amar, Azad_Duccan-107, Duncan-103, Prakash, Shaktiman-2 (Protein), Pusa early Hybrid-1 and 2, Prabhat, Desi-Meerut Peeli.

Rice :

Sugandhit var. – Kasturi, Pusa Basmati-1, Ta-3, Basmati-370 and Haryana Basmati-

early maturing var. : Narendra-97, Pant Dhan-12, Ashwini, Saket-4, Ratna, Pant Dhan-12, Narendra-80, Malviya Dhan-3022.

Mid-time maturing var. Pant dhan-10, Narendra-359, Sarju-52, Kranti

Hybrid var: Narendra-2, Pant Hybrid Dhan-1, PHB-71, Pro-Agro-6201, Pro-Agro-6444, PRH-10, DRRS-2

Gourd: Kalyanpur Lambi Hari, Pusa Meghdoot,

Pumpkin : Azad pumpkin-1, Narendra pumpkin-1,

Taroi- Kalyanpur Chikni, Pusa Chikni,

Bitter gourd: Baramasi, Narendra Baramasi,

Cucumber – Kalyanpur Hara

Lady's finger – Azad Bhindi-1,2, Parmani, Kranti, Pusa Sawani, Vaishali, Selection-1

Brinjal : Azad-1 type-3, Pusa purple log, Azad Baingan gol, Kranti

Mango : **early maturing var. :** Mumbai Hara, Mumbai Peela, **mid-maturing var.:** Dashhari, Lagada, Safeda Lucknow, **late maturing var.-**Amrapali, Mallika, Chousa, Fazali.

Uttarakhand

Maize : Ganga-2, Ganga-7, African Tall, Ganga-5, Pusa Hybrid-1, Pusa Hybrid-2 and Composite varieties like Gaurav, Amar or Surya, Him, Ganga Makka-9, Ganga Makka-11

Lobia : Russian Joint, EC-4216, UPC-5286 etc.

Okra : VL Bhindi-1

Soyabean : Brag, PK-262, VL Soya-2, VL Soya 21, VL Soya-47, pant soya-1042, 1092 and PRS-1

Gahat :VLG-1

Ugal : VL-7, PRB-1

Rajasthan

Rice : JC152(90 to 95 days), JC5(100 to 110 days), JC10(100 to 120 days), RC9(80 to 85 days), RC19(60 days), Ratan BK79, Jay Basmati 370] Kasturi(IET8580)] Taravari Basmati, Pusa Sugand 4 & 5, Pusa improved Basmati-1.

Moth : RGC197, RMO 257, RMO 435, RMO 423, RMO 225 and RMO 40,

- i. **Pearl millet:** Pusa 334, Pusa 383, HHB 67, HHB 94, Raj 171, ICMH 356, ICTP 8201 and RHB 121, H.H.B.-67(I), I.C.T.P.-8203, H.H.B.-60, Raj.- 171, G.H.B.-538, R.H.B.-90 and I.C.M.H.-356, Raj 171, H.H.B. 67, Pusa 334, Pusa 383, HHB 67, HHB 94, Raj 171, ICMH 356, ICTP 8201, RHB 121 MH-169, RHB 90, RHB121, CZP 9802, ICMH356, Pusa-334, HHB-67, HHB-94.

Moong : K-851(60 to 65 days), Pusa Baishaki(60 to 80 days), RMG62(60 to 65 days) ML131, 267, Ganga-1(Jamunothri), Ganga-8 (Gangothri), SML668, SUM-2, K-851, , ML131, Pusa 267,

Sorghum: Improved varieties/hybrids - CSV 15, CSH 14, CSH 16,CSH 5-6,9,SPV 245, 346, 475, 96, CSV 15, SSG-59-3 and MP-Chari, CSV-15, CSV-17, Pratap Jowar-1430 and green fodder, varieties are Rajasthan Chari-1, Rajasthan Chari-2, SPV-837, and MP-Chari.

Cluster bean: Improved varieties - RGC 936, RGC 986, RGC 1002, RGC 1003, RGC 1017, and HG 365.

Sesamum: Improved varieties - Pratap, TC 25, RT 46, RT 54, RT 103, RT 125 and Tt 13.

Ground nut: Improved varieties - GG 2, GG 7, HNG 10, Prakash and M 13.

Green gram: Improved varieties - K 851, RMG 62, RMG 268 and Ganga

Bajra: R.H.B-121, H.H.B.-67(I), I.C.T.P.-8203, H.H.B.-60, Raj.- 171, G.H.B.-538, R.H.B.-90 and I.C.M.H.-356

Guar: HG 75, RGC 936, RGC 197, RGC 966, RGC 1017, RGC 1002 and RGC 1003 a

Maize: Sagar Ganga white 2, Sagar Ganga 5, Pratap maize 2, 5, PEHM-2 and Mahi Kanchan

Til : R.T. 46, TC 25, C50(Pratap) RT 46, 103 and125

Urd : Krishna, T-9, pant U19, Pant U 31, RBU 38, Barka, KU 96-3.

Arhar: Prabhat, Gwalior-3, UPAS 120, ICPL 87, 151, ICPH-8.

Soybean: MACS 58, 450, JS 80-21 335, 93-0, PS16, PK472, NRC-12, Pratap soya 2, RKS24.

Groundnut : RSB 87, RS 138, JL 24, RG 14,

Cowpea: C-52, RS-9, FS-68, RC-19, RC-101

Andhra Pradesh

Blackgram: LBG-20, LBG-623, T-9, Madira-307 and LBG-752

Greengram: LGG-407, LGG-430, LGG-460 warangal-2

Redgram: LRG-30, LRG-38, LRG-41, ICPL-8863, ICPL-87117

Groundnut: TAG-24, JL-24, K-6, K-9, Narayani, ICGV-91114

Sesame: Gauri, Madhavi, YLN-11, YLH-17, YLH-66

Paddy: MTU-7029 (Swarna),MTU-2067 (Chaitanya), MTU-2077, Krishnaveni, BPT-5204 (sambamashuri), BPT-1768(Bapatlasannalu), MTU-1061 (Indra), NLR-T-145 (Swarnamukhi), NLR-34449 (Nelluri mashuri), NLR-9674 (kothamolokolukulu),NLR- 28523 (Sriranga), NLR-3BPT-5204 (sambamashuri), Pushkala(RGL-2624), IR-64 and MTU-9993,MTO-1010, MTU-1001, Vasundhara,Swarna and Srikakulam sannalu

Karnataka

Green gram : Selection – 4, BGS-9

Black gram : TAU – 1, DU – 1, T-9

Soybean : JS - 335

Jowar : DSV – 2

Upland paddy: Amrut or Prasanna

Paddy: Jaya, Mandya Vijay, IR-20,MAS-26.

Ragi: Indaf-8, MR-1, 2 and 6.
Redgram: TTB-7, BRG-1, 2, ICP-7035
Maize: Ganga-11, Deccan-103, NAC-1137
Tur Var.: (Medium to Long Duration) PT-221, GS-1, ICP-8863 (Maruti), ICPL-87119 (Asha) WRP-1, , &
Short Duration Var: like ICPL-87 (Pragati), Selection-31 (Zone 2 irrigated areas), GCS-11-39 (Zone-2)
Cowpea : C-152, PKB-4
Groundnut : DH-3-30 , PRI-2

Gujarat

Rice: GR-12, GR-104, GR-9, GR-8, Dandi, GR-7, Gurjari, NAUR-1, GNR-2, Sukhvel-20, GR-3, 4, 6, 7 (early maturing cultivars), GR-101, 102, 103, 104, Narmada and Masuri (late maturing cultivar).
Irrigated groundnut: GG-20 (North Saurashtra Zone).
Kharif groundnut: GG-2, GG-5, TG-26, TPG-41, TAG-37 for bunch and GG-20 for semi spreading groundnut (North Gujarat Zone), GG-11, GG-12, GG-13, GG-20 (South Saurashtra Zone), GG-7.
Irrigated hybrid cotton and B.T. cotton: G. Cot. 6, 8, 10 and Govt. approved varieties of B.T. cotton.
Pulses:
Green gram: GM-3, GM-4, K-851.
Black gram: T-9, GU-1.
Cowpea: Gujarat Cowpea -1, 2, 3, 4, Pusa Falguni.
Pegion pea: BDN-2, GT-100, GTH-1 (North Saurashtra Zone).
Kharif bajra: GHB-558, 577, 538, 719, 732, 744.
Sesame: GT-2 or GT-3.

Maharashtra

Cotton variety for Central Vidarbha region: AKA-5, AKA-7, AKA-8; hybrid variety PKV DH-1; American variety like AKH-081, PKV-Rajat, AKH-8828.
Kharif bajra: Sradha, Saburi, Phule Shanti and improved varieties from ICTP-8203, ICMV-155.
Groundnut: SB-11, Phule Pragati, Phule Vyas, Phule Unap, TPG-41, TG-26.
Red gram: ICPL-87, Vipulla, BSMR-853, 736 for Madhya Maharashtra, ICPL-87119 (Asha), C-11 for Vidarbha.
Moong: Jalgaon-781, S-8, Phule M-2.
Sunflower: EC-68414, SS-56, Bhanu.
Soybean: JS-335, 93-05, Phule Kalyani (DS-228), MACS-58, 450 for Madhya Maharashtra, TAMS-37, 98-21, 71, 81 and JS-335 for Vidarbha, MAUS-71, 81, 158, 47, 61, 61-2 and JS-335 for Marathwada.
Cotton: AKA-5, AKA-7, AKA-8, PKV DH-1, AKH-081, PKV-Rajat, AKH-8828 for Central Vidarbha.
Adsali Sugarcane: CO-86032 (Neera), COM-88121, COM-0265 (Phule-265).

Madhya Pradesh

Maize- JM 12, JVM 421, JM 13, JM 216; **Hybrid varieties:** HPQM-1, Payonior 30R77, Sinzenta NK 30, Monsanto Allrounder, Bioseed 9681;
Soybean: JS 9560 (85 days), JS 9305 (90-95 days), JS 335 (110 days);
Urd: JU 86, JU 3, T- 9 etc
Moong: K851, Jowar moong-721, Pant moong-4, TJM-3,
Urd: Oant U-30, RBU-38, Jowar Urd-3, RJU-88.
Arhar: Laxmi, Pragti, Asha, Jagrati, JKM-7 and JKM-189
Mango: Kesar, Aamrapali, Dasahri, Mallika, Guava: seedless, Sardar, Allahabadi safeda,
Amla: chakaiya, NA 3, NA 7, **Pomegranet:** Ganesh, Mradula.
Paddy for direct sowing in Jabalpur:
Medium: IR-36, IR-64, Pusa sugandha-5, MTU-1001
Late: Mahsuri, Safari-17, Syamla, Swarna

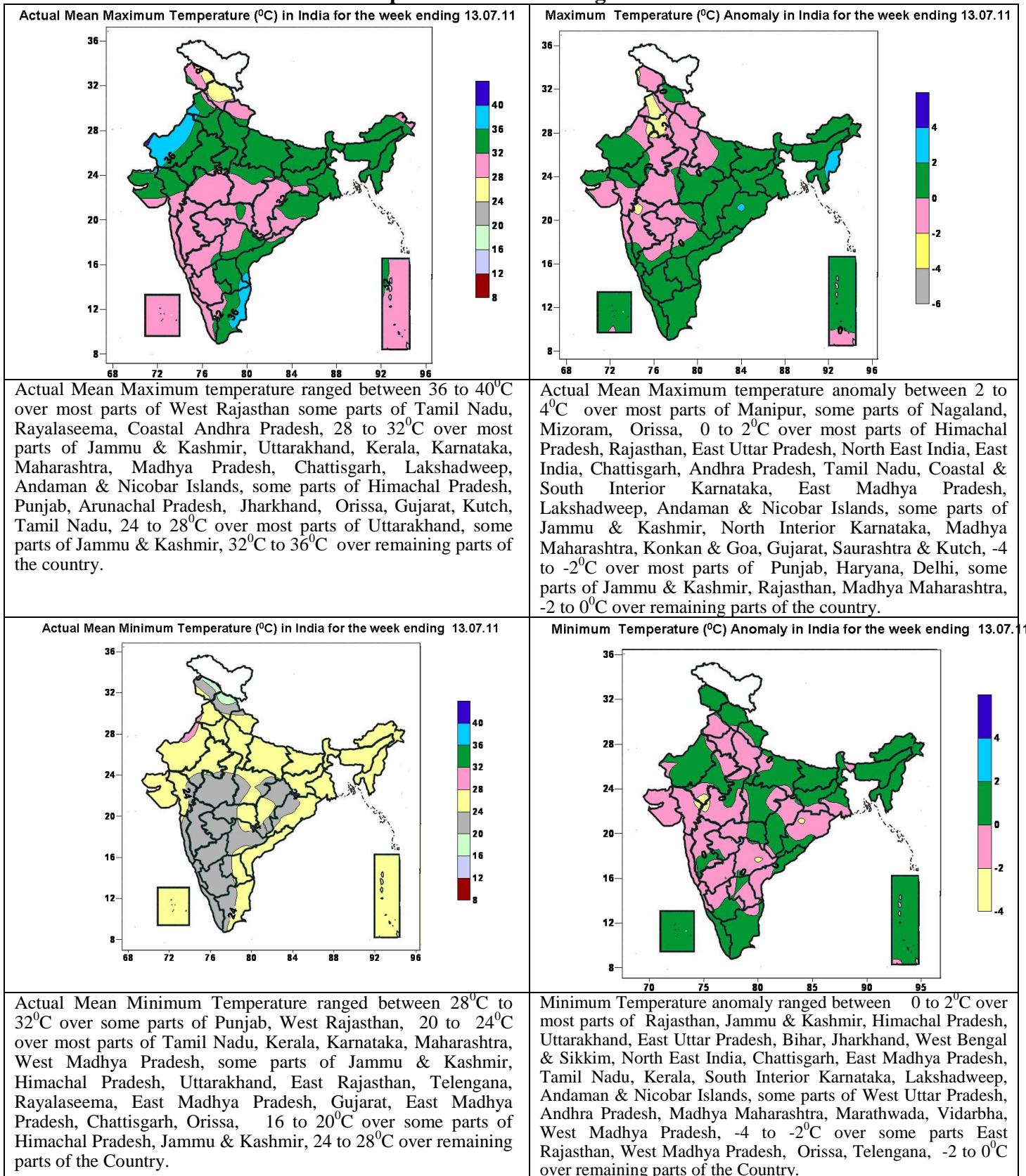
Chattisgarh

Paddy: MTU-1001, MTU-1010, IR-64, IR-36, Poornima, Annada, Mahamaya, Karma, Mahsuri, Bamleshwari, Swarna

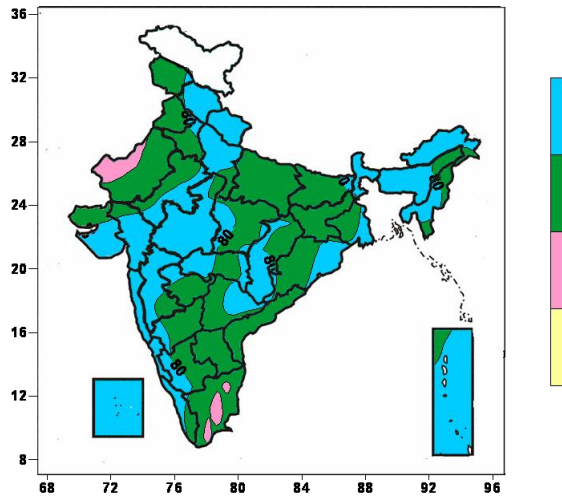
Soyabean: JS 335, Indira Soya-09, JS 93-05

Annexure III

Contour maps for the week ending 13.07.2011

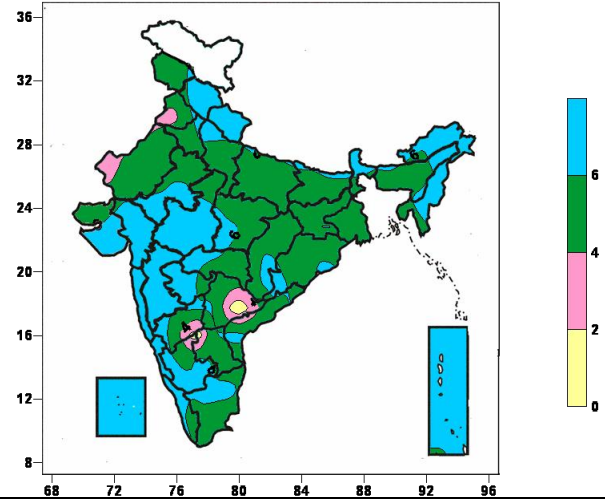


Relative Humidity (%) over India for the week ending 13.07.11



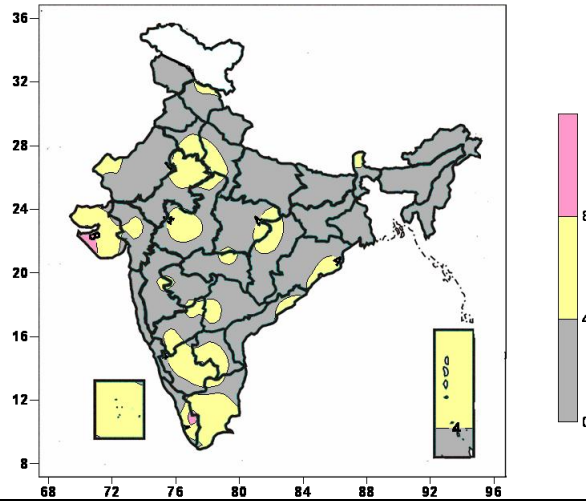
Relative humidity between 80% and above over most parts of Himachal Pradesh, Uttarakhand, West Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh Assam & Meghalaya, Manipur, Mizoram, Tripura, Kerala Coastal Karnataka, Konkan & Goa, Madhya Maharashtra, Gujarat, Saurashtra & Kutch, West Madhya Pradesh, Lakshadweep, Andaman & Nicobar Islands, some parts of East Rajasthan, Jammu & Kashmir, Gangetic West Bengal, Bihar, Orissa, Chattisgarh, Telengana, North & South interior Karnataka, Marathwada, Vidarbha, East Madhya Pradesh, 40 to 60% over some parts of West Rajasthan, Tamil Nadu, 60 to 80% over remaining parts of the country.

Cloud amount (okta) over India for the week ending 13.07.11



Cloud amount 6 okta and above over most parts of Himachal Pradesh, Uttarakhand, Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Kerala, Coastal Karnataka, South Interior Karnataka, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat, Saurashtra & Kutch, West Madhya Pradesh, Lakshdweep and Andaman & Nicobar Islands, some parts of East Rajasthan, Jammu & Kashmir, Uttar Pradesh, Bihar, Sub-Himalayan West Bengal, Orissa, Chattisgarh, Andhra Pradesh, Tamil Nadu, North Interior Karnataka, Vidarbha, East Madhya Pradesh, 2 to 4 okta over some parts of Punjab, West Rajasthan, Andhra Pradesh, North & south Interior Karnataka, 0 to 2 okta over some parts of Andhra Pradesh, North & south Interior Karnataka, 4 to 6 okta over remaining parts of the country.

Wind speed (knots) over India for the week ending 13.07.11



Wind speed ranged between above 8 knots and above over some parts of Kutch, Kerala, 4 to 8 knots over most parts of Haryana, Delhi, Sikkim, Saurashtra & Kutch, South Interior Karnataka, Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands, some parts of Himachal Pradesh, West Uttar Pradesh, Orissa, Chhattisgarh, North Interior Karnataka, Andhra Pradesh, Madhya Pradesh, Gujarat, Vidarbha, Madhya Maharashtra, Marathwada, Vidarbha, 0 to 2 knots over remaining parts of the country.