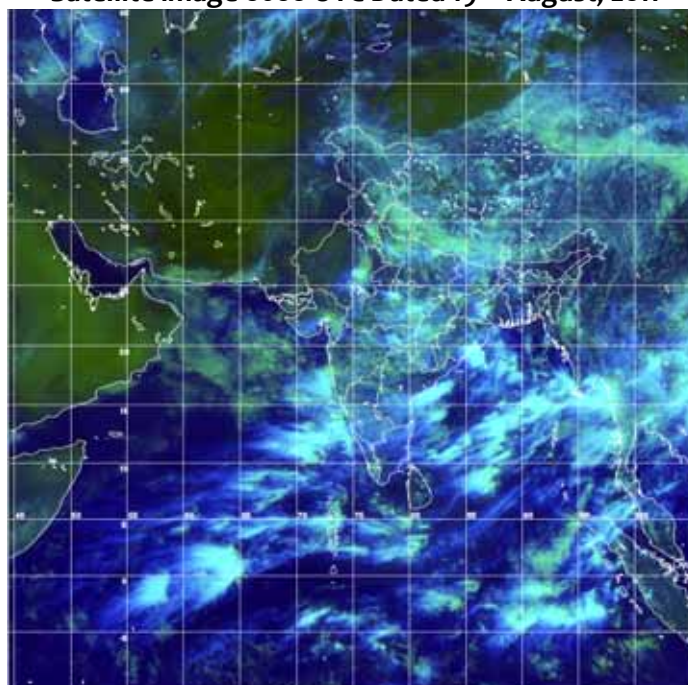




# National Agromet Advisory Bulletin

Thursday, 18<sup>th</sup> August, 2011  
(For the period 18<sup>th</sup> August to 22<sup>nd</sup> August, 2011)

Satellite image 0600 UTC Dated 19<sup>th</sup> August, 2011



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 amount of rainfall during last two weeks transplanting of paddy was completed in most parts of the country and this rain also helped the normal growth of standing paddy crop. There are reports of damage of standing paddy crop in low lying areas of West Bengal and parts of Assam and Meghalaya. The paddy crop which was facing moisture stress condition during the end of July in parts of Bihar and Jharkhand also benefited due to adequate rainfall during last two weeks. Farmers in East Uttar Pradesh were benefited with the recent rainfall as paddy is the major crop sown in this area. At present, parts of Madhya Maharashtra and Marathwada region, standing crops like cotton, soybean, sesamum, niger etc. are facing moisture stress condition. Farmers in these areas are advised to give irrigation to the standing crops. There are also some reports of moisture stress condition in parts of Haryana. As there was sufficient rainfall in Rayalaseema during last week, groundnut crop is likely to recover from wilting symptoms especially in Anantapur, Cuddapah and Kurnool. Farmers are advised to continue sowing of groundnut and short duration varieties of red gram, black gram, castor and field bean. Fruit dropping have been noticed in Himachal Pradesh in Apples, Pomogranates and cherries due to heavy rainfall during last week.

In view of good amount of rainfall reported from most / many districts of Arunachal Pradesh, Assam, Himachal Pradesh, Punjab, West Madhya Pradesh, Chhattisgarh, Uttar Pradesh, Uttarakhand, Bihar, Jharkhand, East Rajasthan, Gujarat, Konkan and Goa, Madhya Maharashtra, Vidarbha, Orissa, West Bengal, Kerala, Coastal, South Interior Karnataka and Rayalaseema during last week. Widespread / fairly widespread rainfall is also likely to occur during next three days in East Uttar Pradesh, East India, Northeastern states and along west coast, farmers of these parts of the country are advised to complete sowing of *kharif* crops. Postpone irrigation in the already sown crops.




As isolated heavy to very heavy rainfall would occur over Orissa, Coastal Karnataka and Kerala during next 48 hours and isolated heavy rainfall would occur over East Uttar Pradesh, Bihar, Jharkhand, West Bengal and Sikkim, Assam & Meghalaya, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura 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.

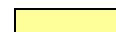

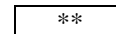
Due to deficient rainfall during last fortnight in Marathwada, infestation of girdle beetle in soyabean above ETL was noticed. Due to heavy rainfall during the week in Himachal Pradesh, black spot may occur in apples and there is a chance of stem borer attack due to water logging in maize. Farmers are advised to undertake appropriate plant protection measures to control the pests and diseases. No other major pest and disease incidences were observed during last week in the country.

**Realised rainfall for the States of Maharashtra, Haryana, Himachal Pradesh and Andhra Pradesh during last few weeks**

State/Districts	Actual	20.07.11	Actual	27.07.11	Actual	03.08.11	Actual	10.08.11	Actual	17.08.11
<b>Himachal Pradesh</b>										
Bilaspur	89.3	4	21.1	-75	26.7	-67	20.5	-78	302.2	359
Chamba	37.6	-60	35.0	-63	10.5	-87	63.0	-25	122.0	64
Hamirpur	96.2	-15	39.2	-61	47.8	-50	70.9	-28	361.0	212
Kangra	95.5	-37	127.4	-21	79.4	-52	262.2	61	256.0	55
Kinnaur	5.5	-55	40.6	272	2.6	-73	24.9	122	74.7	430
Kullu	28.4	-54	50.1	-16	16.4	-67	54.9	43	204.3	408
Lahaul and Spiti	2.6	-94	0.2	-99	0.0	-100	16.0	-45	93.4	183
Mandi	45.2	-59	118.9	0	36.0	-70	94.1	-6	249.5	174
Shimla	44.3	-43	55.2	-17	5.2	-92	52.8	-3	105.5	89
Sirmaur	115.3	-4	86.8	-38	34.0	-72	55.6	-57	126.7	-6
Solan	138.9	41	30.4	-68	10.2	-88	16.0	-81	113.8	24
Una	120.8	63	33.6	-52	13.2	-84	115.1	51	322.4	329
<b>Haryana</b>										
Ambala	55.9	-10	93.3	37	33.2	-50	23.9	-63	58.2	3
Bhiwani	8.5	-74	0.0	-100	10.5	-65	25.9	-15	6.6	-82
Chandigarh	103.1	65	41.8	-34	33.2	-54	36.9	-57	91.5	29
Faridabad	25.5	-39	17.0	-65	27.5	-32	39.3	-8	90.3	126
Fatehabad	6.5	-71	0.8	-98	13.3	-52	26.9	10	7.0	-70
Gurgaon	2.0	-96	32.0	-42	26.6	-38	16.0	-68	38.2	-25
Hissar	8.7	-69	2.3	-93	17.8	-28	18.2	-33	2.0	-94
Jhajar	1.5	-96	0.0	-100	58.9	85	2.7	-92	12.0	-68
Jind	1.9	-95	1.4	-95	25.3	-17	12.0	-64	27.4	-9
Katihah	4.0	-91	0.0	-100	18.3	-47	3.5	-92	12.5	-71
Karnal	11.0	-80	25.0	-35	16.3	-63	22.9	-50	51.5	-15
Kurukshetra	5.2	-90	2.6	-94	0.2	-99	14.6	-65	25.9	-52
Mahendragarh	26.1	-40	0.0	-100	12.4	-52	12.0	-69	19.6	-62
Palwal	1.6	-96	46.8	-5	13.8	-66	42.6	0	65.3	63
Panchkkula	63.0	-17	27.3	-65	9.8	-89	28.8	-64	58.4	-27
Panipat	1.4	-97	1.4	-97	0.5	-99	5.7	-86	31.5	-38
Rewari	9.8	-80	3.5	-93	1.2	-97	22.1	-63	24.1	-56
Rohtak	1.1	-98	1.2	-98	13.3	-62	24.7	-32	9.4	-78
Sirsa	18.3	-25	0.0	-100	9.4	-64	88.3	500	20.2	-20
Sonepat	19.4	-58	9.4	-83	9.9	-78	19.3	-51	45.5	-19
Yamunanagar	69.7	9	29.1	-62	35.1	-59	17.5	-79	94.9	29
New Delhi	10.5	-82	17.8	-72	11.9	-80	13.4	-80	72.8	27
<b>Maharashtra</b>										
<b>Konkan &amp; Goa</b>										
Goa	405.3	54	169.2	-36	338.4	44	152.3	-20	78.7	-54
Mumbai	404.8	111	120.6	-20	542.6	237	35.3	-70	40.7	-67
Raigad	565.0	97	172.3	-31	557.6	102	136.6	-31	116.9	-47
Ratnagiri	719.6	157	308.6	14	695.5	149	138.8	-35	93.7	-56
Sindhudurg	467.9	86	235.9	-14	434.5	89	125.8	-31	75.9	-54
Thane	356.5	46	65.7	-67	473.5	132	90.7	-47	120.6	-29
<b>Madhya Maharashtra</b>										
Ahmednagar	35.1	47	21.8	-5	20.0	-8	2.2	-88	3.9	-77
Dhule	56.8	62	24.3	-40	14.5	-62	31.5	-15	19.3	-25
Jalgaon	53.3	24	21.3	-51	77.4	57	41.5	-24	8.3	-80
Kolhapur	287.6	75	136.8	-17	140.5	-4	123.8	-6	81.2	-34
Nandurbar	78.7	10	39.8	-42	43.0	-37	88.8	34	109.2	110
Nasik	98.2	37	50.2	-29	57.2	-27	34.1	-49	56.8	-4
Pune	130.1	85	25.8	-60	38.5	-47	23.2	-61	34.4	-40
Sangli	50.5	38	18.2	-41	18.2	-46	10.9	-60	17.7	-28

Satara	187.1	201	65.0	22	73.3	22	60.6	36	63.3	43
Solapur	20.5	-11	11.0	-57	40.2	53	2.2	-89	1.0	-95
<b>Marathwada</b>										
Aurangabad	34.7	-4	25.5	-35	48.6	17	16.1	-55	4.3	-86
Beed	98.5	224	46.5	32	37.3	9	9.1	-64	1.8	-94
Hingoli	49.9	-2	19.5	-66	33.4	-51	53.3	-3	14.1	-77
Jalna	50.3	38	43.8	4	39.1	-9	23.2	-34	3.3	-90
Latur	136.7	228	26.4	-57	87.3	40	11.7	-72	6.9	-86
Nanded	70.5	47	17.8	-73	91.1	35	31.7	-33	16.1	-72
Usmanabad	38.4	20	10.5	-73	60.7	47	2.1	-93	3.2	-90
Parbhani	104.4	164	70.7	22	48.6	-19	17.2	-55	7.1	-86
<b>Vidarbha</b>										
Akola	58.0	1	34.3	-40	7.4	-85	24.7	-60	19.4	-51
Amraoti	95.9	57	62.1	6	18.2	-71	65.7	-6	53.2	0
Bhandara	167.0	86	75.9	-5	10.5	-88	161.8	41	47.0	-44
Buldhana	71.9	65	19.0	-58	35.1	-29	26.4	-53	8.3	-79
Chandrapur	68.6	-13	42.2	-51	42.4	-55	107.4	12	84.3	1
Gadchiroli	121.0	18	56.4	-47	36.7	-68	136.7	28	101.2	-5
Gondia	143.5	42	146.3	63	27.7	-72	151.3	39	47.8	-49
Nagpur	140.7	95	64.6	1	20.1	-72	129.5	72	52.3	-5
Wardha	94.9	55	53.1	-15	24.2	-64	92.0	25	82.5	33
Washim	96.0	71	40.3	-29	33.8	-44	51.8	-27	16.8	-71
Yeotmal	92.8	53	36.8	-41	38.3	-40	64.6	-4	45.0	-25
<b>Andhra Pradesh</b>										
<b>Coastal Andhra Pradesh</b>										
East Godavari	58.9	30	26.1	-49	46.5	12	42.4	-6	60.7	35
Guntur	14.6	-54	49.7	26	65.2	85	8.5	-70	22.1	-44
Krishna	47.5	10	44.7	-23	104.8	113	13.0	-68	34.7	-31
Nellore	2.1	-90	24.5	-7	38.1	116	6.0	-70	9.8	-58
Prakasam	5.0	-78	20.3	-25	16.2	-28	8.2	-47	13.7	-38
Sirkakulam	21.1	-52	18.2	-62	73.9	70	25.3	-43	37.9	-19
Visakhapatnam	17.7	-56	33.0	-28	58.9	48	32.4	-13	32.1	-29
Vizianagram	18.7	-52	43.0	-4	52.9	26	10.0	-72	34.8	-23
West Godavari	63.5	27	37.5	-40	102.1	108	20.6	-63	42.2	-25
<b>Telangana</b>										
Adilabad	81.0	19	26.7	-67	110.2	45	48.4	-28	29.6	-58
Hyderabad	51.5	33	60.9	17	17.8	-63	6.5	-84	15.8	-67
Karimnagar	76.1	47	36.3	-43	61.2	2	20.4	-63	33.2	-39
Khammam	104.2	75	34.9	-52	45.9	-38	27.5	-54	50.7	-21
Mehabubnagar	9.6	-74	53.9	27	68.3	59	13.7	-56	16.7	-58
Medak	81.8	62	31.3	-49	86.0	44	29.4	-36	46.5	-14
Nalgonda	21.1	-43	55.3	29	23.2	-35	3.5	-88	10.5	-71
Nizamabad	123.4	118	50.3	-34	135.3	81	38.0	-42	36.9	-49
Rangareddy	26.6	-37	39.6	-22	57.6	23	5.9	-82	24.8	-47
Warangal	81.1	42	29.3	-59	114.6	91	9.1	-83	57.5	-2
<b>Rayalaseema</b>										
Anantapur	4.2	-72	51.4	194	10.4	-33	12.1	-19	24.6	59
Chittoor	9.0	-63	67.8	138	24.4	27	14.5	-46	63.1	161
Cuddapah	0.7	-97	70.0	141	18.1	-22	3.6	-86	31.5	25
Kurnool	2.7	-89	53.6	71	39.4	33	14.7	-43	30.9	5

 (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

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

State / Districts	Actual	17.08.11
<b>Arunachal Pradesh</b>		
Changlang	31.3	-72
East Kameng	49.2	-27
East Siang	223.6	37
Lohit	42.6	-63
Lower Subansiri	70.0	26
Papumpara	194.0	76
Tawang	60.0	-59
Tirap	29.6	-75
Upper Siang	55.4	-59
Upper Subansiri	72.6	29
West Kameng	137.0	-6
West Siang	**	**
<b>Assam</b>		
Barpeta	159.3	-3
Bongaigaon	181.4	34
Cachar	80.6	-26
Darrang	198.8	47
Dhubri	130.0	39
Dibrugarh	150.6	63
East Garo Hills	347.1	329
East Khasi Hills	522.3	119
Goalpara	54.9	-43
Golghat	63.1	1
Hailakandi	45.3	-53
Jaintia Hills	179.0	-27
Jorhat	115.3	55
Kamrup	65.0	-11
Karbi Analog	56.4	18
Karimganj	226.0	118
Kokrajhar	263.0	54
Lakhimpur	216.3	83
Morigaon	59.0	-17
N.C.Hills	61.0	37
Nowgong	37.6	-38
Nalbari	86.3	15
Sonitpur	151.6	7
Sibsagar	81.2	7
Tinsukia	110.3	12
<b>Himachal Pradesh</b>		
Bilaspur	302.2	359
Chamba	122.0	64
Hamirpur	361.0	212
Kangra	256.0	55
Kinnaur	74.7	430
Kullu	204.3	408
Lahaul and Spiti	93.4	183
Mandi	249.5	174
Shimla	105.5	89
Sirmaur	126.7	-6
Solan	113.8	24
Una	322.4	329
<b>Punjab</b>		
Amritsar	52.9	15
Barnala	42.8	10
Bhatinda	69.7	123

Faridkot	21.6	-29
Fatehgarh Saheb	201.3	387
Ferozpur	44.8	81
Gurdaspur	103.4	51
Hoshiarpur	161.7	157
Jalandhar	156.5	236
Kapurthala	75.4	120
Ludhiana	195.1	320
Mansa	10.2	-70
Moga	33.6	-1
Muktesar	6.0	-77
Nawashahar	263.8	386
Patiala	93.6	130
Ropar	233.1	318
Sangrur	31.6	-19
Mohali	37.2	-9
TarnTaran	39.1	-15
<b>Jammu &amp; Kashmir</b>		
Anantnag	44.9	225
Badgam	58.2	547
Doda	67.6	248
Jammu	202.2	149
Kathua	95.4	-6
Kupwara	6.5	-45
Ladakh(Leh)	5.0	25
Pulwama	23.4	76
Srinagar	22.9	71
Udhampur	100.5	-8
<b>East Madhya Pradesh</b>		
Anuppur	145.7	40
Balaghat	78.9	-39
Chhatarpur	33.6	-64
Chindwara	16.6	-77
Damoh	18.4	-80
Dindori	199.1	87
Jabalpur	50.6	-55
Katni	1.0	-99
Mandla	132.2	0
Narsingpur	**	**
Panna	24.4	-76
Rewa	0.4	-100
Sagar	37.0	-64
Satna	55.2	-42
Seoni	73.6	-19
Shahdol	91.0	-2
Sidhi	0.0	-100
Singrauli	122.0	83
Tikamgarh	39.8	-55
Umariya	79.8	-31
<b>West Madhya Pradesh</b>		
Alirajpur	124.6	123
Asoknagar	2.5	-97
Badwani	48.7	15
Betul	44.8	-43
Bhind	58.1	-28
Bhopal	**	**
Burhanpur	7.5	-88

Datia	15.7	-81
Dewas	55.0	-33
Dhar	78.1	41
Guna	50.4	-38
Gwalior	42.0	-45
Harda	11.7	-89
Hosangabad	35.5	-72
Indore	61.0	-1
Jhabua	98.2	101
Khandwa	29.1	-58
Khargone	29.6	-44
Mandsaur	34.9	-43
Morena	265.8	232
Neemuch	55.5	-19
Raisen	17.2	-83
Rajgarh	13.7	-82
Ratlam	156.1	143
Sehore	20.5	-78
Shajapur	23.9	-67
Sheopur		
Kalani	9.5	-88
Shivpuri	12.7	-81
Ujjain	64.9	9
Vidisha	42.3	-56
<b>Chattisgarh</b>		
Bastar	15.2	-83
Bijapur	67.5	-41
Bilaspur	114.7	31
Dantewara	101.6	16
Dhamtari	34.6	-59
Durg	24.0	-70
Janjgir	99.8	-11
Jashpurnagar	135.9	37
Kanker	80.5	-22
Korba	140.1	19
Koriya	199.6	103
Kawardha	37.0	-46
Mahasumund	44.8	-50
Narayanpur	59.5	-40
Raigarh	58.6	-33
Raipur	41.3	-51
Rajandgaon	33.6	-56
Surguja	126.9	49
<b>East Uttar Pradesh</b>		
Allahabad	146.8	102
Ambedkar Nagar	103.0	58
Azamgarh	73.3	-3
Bahraich	66.4	5
Ballia	43.8	-39
Balrampur	49.2	-34
Banda	172.5	79
Barabanki	128.6	62
Basti	74.0	3
Chandauli	91.0	20
Deoria	99.5	8
Faizabad	71.1	8



Farrukhabad	121.5	44
Fatehpur	54.6	-36
Gazipur	99.9	29
Gonda	53.3	-23
Gorakhpur	65.6	-22
Hardoi	154.5	135
Jaunpur	69.7	2
Kannauj	142.3	70
Kanpur City	70.0	3
Kanpur Dehat	156.3	141
Kaushambi	80.5	15
Kheri	162.6	117
Kushi nagar	48.5	-48
Lucknow	234.3	216
Maharajganj	14.6	-86
Mau	76.0	-7
Mirzapur	167.8	133
Pratapgarh	78.0	5
RaiBareilly	67.3	-11
Sahuji Maharajnagar	174.0	117
Sant Kabirnagar	30.0	-62
Sant Ravidas Nagar	67.0	-12
Shrawasti	97.1	53
Sidharthnagar	46.8	-39
Sitapur	187.3	162
Sonbhadra	146.7	93
Sultanpur	60.3	-18
Unnao	100.9	28
Varanasi	133.6	145
<b>West Uttar Pradesh</b>		
Agra	38.6	-49
Aligarh	111.3	78
Auraiya	176.6	165
Badaun	90.6	23
Baghpat	41.5	-31
Bareilly	213.5	181
Bijnor	277.0	218
Bulandsahar	124.8	74
Etah	62.5	-12
Etawah	122.3	68
Firozabad	73.4	13
GBNagar	162.0	199
Ghaziabad	75.0	30
Hamirpur	84.1	-3
Jalaun	119.4	45
Jhansi	56.2	-33
Jotirba Phule Nagar	153.3	85
Kanshiramnagar	145.5	105
Lalitpur	21.0	-75
Mahamaya Nagar	135.1	96
Mahoba	48.6	-48
Mainpuri	89.5	21
Mathura	40.3	-35
Meerut	100.9	43
Moradabad	262.8	227
Muzzaffarnaga r	42.1	-39
Pilibhit	163.4	104

Rampur	101.2	38
Saharanpur	19.3	-73
Shahjahanpur	103.8	40
<b>UttaraKhand</b>		
Almora	247.6	235
Bageshwar	123.0	67
Chamoli	128.9	64
Champawat	387.8	353
Dehradun	275.9	61
Garhwal Pauri	191.2	57
Garhwal Tehri	233.3	255
Haridwar	307.1	222
Nainital	376.3	247
Pithorgarh	218.7	83
Rudraprayag	172.4	3
Udham Sing Nagar	336.0	228
Uttarkashi	219.6	75
<b>Bihar</b>		
Araria	167.0	119
Arwal	91.8	34
Aurangabad	112.6	89
Banka	50.4	-10
Begusarai	77.2	-1
Bhabua	163.5	116
Bhagalpur	49.7	-11
Bhojpur	31.0	-50
Buxar	23.2	-66
Darbhangha	63.3	5
East Champaran	69.6	22
Gaya	188.1	161
Gopalganj	67.2	4
Jahanabad	95.1	75
Jamui	98.5	56
Kathihar	53.5	-22
Khagadia	44.8	-34
Kishanganj	242.1	110
Lakhisarai	50.1	-14
Madhepura	85.5	37
Madhubani	46.2	-21
Monghyar	77.0	32
Muzaffarpur	75.7	34
Nalanda	105.6	82
Nawada	50.3	-21
Patna	40.8	-32
Purnea	167.6	159
Rohtas	165.3	126
Saharsha	129.5	114
Samstipur	109.2	95
Saran	41.5	-40
Sheikpura	32.8	-40
Sheohar	44.0	-38
Sitamarhi	45.2	-36
Siwan	27.3	-62
Supaul	100.9	67
Vaishali	20.4	-68
West Champaran	80.7	7
<b>Jharkhand</b>		
Bokaro	224.7	232
Chatra	145.5	86

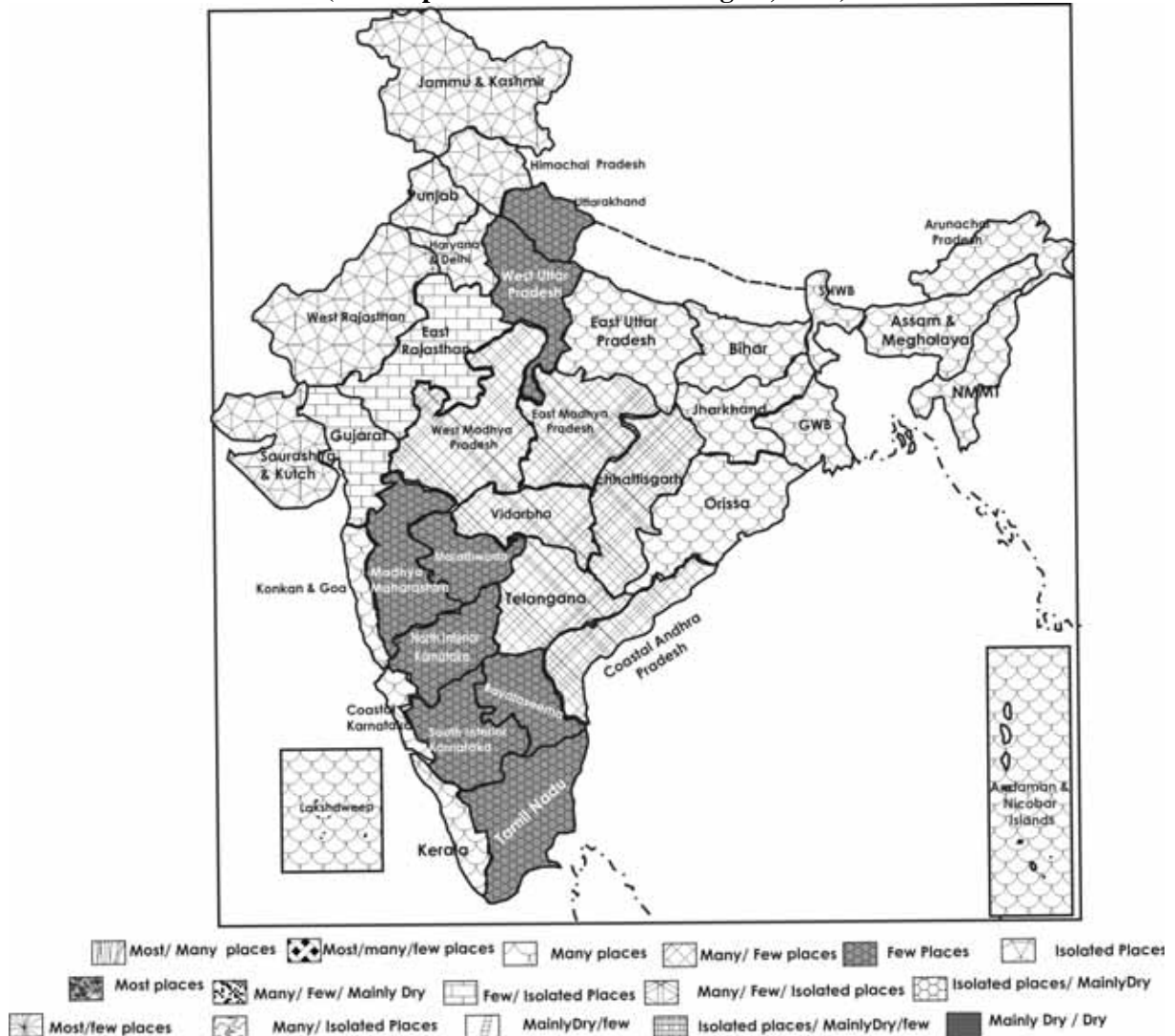
Deoghar	161.2	146
Dhanbad	181.3	188
Dumka	102.1	33
East Singbhum	206.4	191
Garhwa	157.4	83
Giridih	177.0	192
Godda	91.9	70
Gumla	142.0	62
Hazaribagh	63.6	-8
Jamtara	132.0	52
Khunti	160.3	144
Koderna	104.6	76
Latehar	178.0	162
Lohardagga	206.3	222
Pakur	113.0	26
Palamau	172.9	124
Ramgarh	312.8	351
Ranchi	235.7	259
Sahebganj	204.8	174
Seraikela	140.3	125
Simdega	112.2	28
West Singbhum	174.5	127
<b>East Rajasthan</b>		
Ajmer	57.5	37
Alwar	52.8	-2
Banswara	52.7	-11
Baran	26.5	-63
Bharatpur	31.0	-45
Bhilwara	34.2	-41
Bundi	22.7	-63
Chittorgarh	40.8	-37
Dausa	76.6	36
Dholpur	13.8	-80
Dungarpur	55.8	22
Jaipur	65.1	38
Jhalawar	8.1	-90
Jhunjhunu	20.1	-43
Karauli	44.0	-40
Kota	27.3	-59
Pratapgarh	33.4	-48
Rajsamand	120.3	151
Sawai	50.1	-21
Sikar	46.9	30
Sirohi	250.4	213
Tonk	65.5	21
Udaipur	57.8	27
<b>West Rajasthan</b>		
Barmer	101.4	324
Bikaner	44.1	141
Churu	19.3	-12
Hanumangarh	27.3	38
Jaisalmer	92.8	340
Jalore	135.2	267
Jodhpur	42.4	68
Nagaur	30.7	14
Pali	73.6	107
Sri Ganganagar	62.5	238
<b>Gujarat Region</b>		
Ahmedabad	147.3	217
Anand	236.0	254

Banaskantha	158.5	267
Baroda	210.7	193
Broach	100.6	104
DNH	132.2	-18
Dahod	144.9	153
Daman	115.8	-29
Dangs	138.0	12
Gandhinagar	206.5	338
Kheda	156.4	168
Mehsana	171.6	271
Narmada	173.0	110
Navsari	127.6	7
Panchmahal	159.8	123
Patan	211.7	419
Sabarkantha	144.2	147
Surat	148.1	87
Tapi	112.9	17
Valsad	141.9	11
<b>Saurashtra, Kutch &amp; Diu region</b>		
Amreli	42.7	47
Bhavnagar	72.3	123
Diu	31.3	-11
Jamnagar	58.9	104
Junagarh	78.1	108
Kutch	180.9	572
Porbandar	5.5	-84
Rajkot	115.1	248
Surendranagar	116.1	260
<b>Orissa</b>		
Angul	104.3	27
Balasore	117.9	48
Bargarh	76.2	-14
Bhadrak	103.4	21
Bolangir	56.3	-36
Boudh	104.4	13
Cuttack	74.3	-1
Deogarh	79.1	-35
Dhenkanal	173.5	102
Gajapati	42.9	-36
Ganjam	30.8	-44
Jagatsingpur	34.9	-55
Jajpur	127.2	63
Jharsuguda	64.5	-39
Kalahandi	117.1	15
Kandhamal	77.9	-15
Kendrapara	73.7	-20
Keonjhar	111.1	38
Khurda	46.3	-40
Koraput	29.7	-70
Malkangiri	64.0	-47
Mayurbhanj	114.5	32
Nawapara	43.7	-42
Nawarangpur	56.3	-53
Nayagarh	107.7	27
Puri	52.5	-23
Rayagada	65.5	-1

Sambalpur	102.9	-15
Sonepur	46.0	-60
Sundargarh	84.3	-12
<b>West Bengal</b>		
<b>GWB</b>		
Bankura	120.0	68
Birbhum	110.0	49
Burdwan	116.1	66
Hooghly	136.0	127
Howrah	139.6	115
East Midnapore	102.0	40
Murshidabad	119.7	79
Nadia	157.1	154
24 Pargana (N)	145.8	94
Purulia	142.5	105
24 Pargana (S)	200.1	121
West Midnapore	200.4	176
<b>SHWB</b>		
Cooch Behar	202.4	-7
Darjeeling	257.8	69
East Sikkim	153.3	81
Jalpaiguri	229.6	43
Malda	154.9	142
North Dinajpur	126.2	68
North Sikkim	87.1	-11
South Dinajpur	212.3	258
South Sikkim	229.9	172
West Sikkim	68.0	-30
<b>Karnataka</b>		
<b>Coastal Karnataka</b>		
Dakshin Kannada	184.3	-14
Udupi	196.8	-16
Uttar Kannada	129.4	-27
<b>North Interior Karnataka</b>		
Bagalkote	8.0	-51
Belgaum	10.9	-65
Bidar	23.8	-48
Bijapur	4.5	-78
Dharwad	7.8	-71
Gadag	6.0	-62
Gulbarga	24.7	-41
Haveri	10.9	-61
Koppal	14.6	-21
Raichur	10.3	-65
Yadgir	19.5	-51
<b>South Interior Karnataka</b>		
Bangalore Rural	123.4	347
Bangalore Urban	102.3	219
Bellary	12.4	-35
Chamarajnar	20.2	54
Chichballapur	68.0	198
Chickmagalur	53.5	-53
Chitradurga	1.9	-84
Davangere	3.9	-82

Hassan	12.1	-60
Kodagu	54.4	-60
Kolar	56.6	175
Mandya	10.2	-10
Mysore	13.7	-5
Ramnagara	48.6	114
Shimoga	66.6	-37
Tumkur	22.5	27
<b>Kerala</b>		
Alappuzha	94.4	34
Kannur	88.3	-31
Ernakulam	80.8	-14
Idukki	92.8	-29
Kasaragod	112.0	-26
Kollam	12.5	-76
Kottayam	99.3	15
Kozhikode	87.8	-23
Malappuram	85.2	-9
Palakkad	56.6	-33
Pathanamthitta	82.9	8
Thiruvananthapuram	0.3	-99
Thrissur	92.6	-13
Wyanad	46.3	-65
<b>Tamil Nadu</b>		
Chennai	11.0	-67
Coimbatore	11.7	28
Cuddalore	38.6	37
Dharmapuri	65.7	214
Dindigul	45.5	222
Erode	31.4	188
Kanchipuram	60.1	60
Kanyakumari	0.0	-99
Karur	22.8	104
Krishnagiri	66.2	198
Madurai	46.6	182
Nagapattinam	37.1	82
Namakkal	33.4	49
Nilgiris	42.2	-6
Perambalur	29.8	106
Pudukcherry	103.6	233
Pudukottai	29.1	29
Ramanathapuram	33.2	245
Salem	56.0	115
Sivaganga	32.7	106
Thanjavur	36.9	62
Theni	21.7	164
Tirunelveli	2.5	-49
Tiruvallur	55.8	79
Tiruvannamalai	157.7	400
Tiruvarur	23.3	14
Toothukudi	7.4	118
Trichy	24.4	73
Vellore	72.2	148
Villupuram	55.8	104
Virudhunagar	27.8	136

## Weather Forecast (Valid upto 1430 hours of 21<sup>st</sup> August, 2011)



### Major Feature of Weather Forecast upto 1430 hours IST of 21<sup>st</sup> August, 2011

- Fairly widespread rain/thundershowers would occur over east Uttar Pradesh, east India, northeastern states, Lakshadweep, Andaman & Nicobar Islands and along west coast.
- Scattered rain/thundershowers would occur over central and adjoining peninsular India during next 24 hours and increase thereafter.
- Isolated rain/thundershowers would occur over remaining parts of the country.

### Weather Warning

- Isolated heavy to very heavy rainfall would occur over Orissa, coastal Karnataka and Kerala during next 48 hours.
- Isolated heavy rainfall would occur over east Uttar Pradesh, Bihar, Jharkhand, West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura during next 24 hours.



### Weather Outlook up to 1430 hours IST of 23<sup>rd</sup> August, 2011

- Fairly widespread rain/thundershowers would occur over Gujarat, west coast and northeastern states.
- Subdued rainfall activity over remaining parts of the country.

### Zonewise Agromet Advisories

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

- **Realised Rainfall:** Most of the districts of the States of the region received rainfall during last week.
- **Rainfall Forecast:** Fairly widespread rain/thundershowers would occur over the region. Isolated heavy to very heavy rainfall would occur over Orissa during next 48 hours and isolated heavy rainfall would occur over Bihar, Jharkhand, West Bengal & Sikkim during next 24 hours.
- **Advisories:**
  - In view of likely occurrence of fairly widespread rain / thundershowers over the States of the region during the period, farmers are advised to postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops in these States. In view of isolated heavy to very heavy rainfall over Orissa and isolated heavy rainfall would occur over Bihar, Jharkhand, West Bengal & Sikkim farmers are advised to arrange for adequate drainage to avoid water stagnation in the fields.
  - In Jharkhand, farmers are advised to complete transplanting of rice within a week using SRI method. Undertake sowing of urd and improved & short duration varieties of horse gram in upland in Central and North Eastern Plateau Zone of Jharkhand.
  - 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. A good amount of rain has been occurred during last 4 days and light to heavy rain is also expected during next four days. Hence, maintain the water level in rice field and well drained field of different upland crops.
  - In South Eastern Plateau Zone of Jharkhand, farmers are advised to undertake sowing of maize, arhar, green gram, black gram and groundnut. 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 sowing of arhar, green gram black gram and cowpea, transplanting of rice and planting of mangoes, marigold in Orissa utilizing monsoon rain. 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, early tomato and cauliflower, transplanting of *aman* rice in low land and start cultivation of mushroom. Drain out excess water from already planted ginger and turmeric fields in Terai Zone.
  - Moderate to heavy rainfall has been forecasted for the next four days in laterite and red soil zone of West Bengal. Farmers are advised to postpone irrigation and provide drainage facilities to avoid waterlogging. Apply 16:24:8 kg N: P: K per acre as total fertilizer & for top dressing apply 16:0:8 N: P: K for composite variety. for hybrid variety 19:28:10 as total & for top dressing 19:0:9 at 30 DAS after current spells of rain.
  - In New Alluvial Zone of West Bengal, maintain stagnant water (2 to 3 cm) upto 10 days in rice field after transplanting due to realised rainfall. Increase the depth of stagnant water with age of crop.
  - Due flooding situation occurred in Coastal Saline Zone then check the drainage system. Farmers are advised to restrict seedling destruction under submerged field condition. In place of destruction use those seedlings for gap filling in the field.
  - Farmers in Old Alluvial Zone of West Bengal are advised to complete transplanting of Kharif rice within this week and maintain 2-3cm depth of water in the field up to 7-10 days.
  - Farmers in the districts of North West Alluvial Plain Zone of Bihar are advised to transplant short duration rice varieties with available rain water and remove the weeds from the field.

- Farmers in South Bihar Alluvial Zone are advised to undertake transplanting of vegetable crops like brinjal, tomato, chilli and cauliflower on ridges, if seedlings are ready. This is time for late sowing of arhar, sesame and also for transplanting of fruit trees. As sowing time of long and medium duration varieties of rice in the nursery is almost over, short duration varieties of rice should be sown in the nursery as soon as possible. Farmers are also advised to transplant ready seedlings of rice through SRI method.
- Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
- In some pockets, of Western Plateau Zone of Jharkhand, rice crops are attacked either by stem borer or leaf eater insects like rice hispa, leaf roller etc., spray monocrotophos @ 1.5 ml per litre of water or chlorpyrifos @ 2 ml per litre of water during clear weather condition. In the solution of insecticide, mix Tipol or Sandovit @ 0.5 ml per litre of solution.
- Prevailing weather condition is conducive for attack of tikka/ leaf spot disease in groundnut in Western Plateau Zone of Jharkhand, spray the fungicide Kavach (@ 2 gm per litre of water) or Indofil M-45 (5 gm) + Bavistin (1 gm) in 4 litres of water during clear weather.
- The current weather is favourable for infestation of root rot of pointed gourd. Spray 10 g Plantomycine along with 20 g Blitox 50 in 10 litre water. Thrips in Chilli has been found, spray 300 ml Ethion or 400 ml Carbosulphan/ acre in Khurda, Keonjhar, Puri, Cuttack, Ganjam, Jagatsingpur and Nayagarh districts of Orissa.
- Due to prevailing weather there may be aphids and thrips attack in Orissa on maize crop, so apply Dimethoate 30EC @ 400ml/acre and for yellow vein mosaic virus in arhar, take prophylactic spray to control insect vector with dimethoate @ 300g a. i./ha or methyl demeton @ 250g a.i./ha in Keonjhar and Mayurbanj districts of Orissa.
- In the less rainfall areas of the North Eastern Plateau Zone of Orissa, in sugarcane crop there is chances of top borer attack, then release Trichogamma @ 20000/acre for 2-4 times to control the bore and in Jajpur district of North Eastern Coastal Plane Zone of Orissa, for control of pyrilla spray Chloropyrifos @ 400 ml/acre in 200 litre of water and for red rot spray Mancozeb @ 750 gm/acre in 200 litre of water
- In Old Alluvial Zone of West Bengal, fruit and shoot borer may infest brinjal in this weather condition. To manage this, spray Lamdacyhalothrin 2.5 EC @ 1.5 ml or Neem oil 2-3ml per litre of water. Also there may be infestation of collar rot on vegetables; spray Copper oxychloride (Blitox) @ 4g/ Tricyclazole @ 0.5g/ *Trichoderma viridae* @ 4g per litre of water.
- In this weather condition, in New Alluvial Zone of West Bengal, combined attack of downy mildew and mosaic may be seen in bitter gourd and pointed gourd; apply Redomil –MZ @ 2 g per litre of water.
- Undertake plant protection measures after current spells of rain.
- Stages of major crops are mentioned in Annexure I.

#### **Animal Husbandry**

- During this monsoon season there is a chance of black-quarter in Coastal Saline Zone of West Bengal; keep the cattle clean and if this disease occur, promptly give penicillin and tetracycline and inoculate into the site of lesion. Cattle may also be attacked by worm infection. Give medicine after testing the stool and prohibit grazing in the field, keeping them under shade.
- In North Eastern Plateau Zone of Orissa, periodic vaccination *viz.* FMD, HS and BQ may be carried out to protect the dairy animals. Clean and hygienic water should be fed to dairy animals. Keep the animal shed clean. RD vaccine should be given immediately to the chicks which are 7 days old. To prevent coxidioidis disease spray antibiotic solution named Kohrsolin-TH in the poultry house.

#### **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 states of this region during next 24 hours. Isolated heavy rainfall is likely to occur over the States of the region during next 24 hours.
- **Advisory**
  - As most of the districts of Assam and Arunachal Pradesh received rain during last week and also fairly widespread rain / thundershowers would occur over the states of this region, farmers are advised to postpone irrigation to the crops in this region. Farmers are also advised to postpone intercultural operations and application of fertilizer and plant protection measures. In view of occurrence of isolated heavy rainfall during next 24 hours, farmers are advised to arrange for adequate drainage to avoid water stagnation.
  - In Assam, farmers are advised to continue sowing of pulses, pigeon pea, cauliflower (early varieties), radish and planting of banana and pine apple. Taking the advantage of adequate rain during last few weeks, farmers are also advised to prepare the land and undertake transplanting of *sali* rice. Also start sowing of black gram, brinjal (early varieties), country bean, Dolichos Bean, marua etc.
  - In flood prone areas in Lower Brahmaputra Valley Zone in Assam, farmers are advised to raise nursery seedlings in flood free area or high lands and transplant at a convenient time.
  - In Manipur, for flooded areas, contingency nurseries with late variety / cold tolerant variety RC Maniphou 7 may be raised.
  - Farmers in Tripura are advised to undertake preparation of main field and complete transplanting of *aman* rice.
  - Farmers in Arunachal Pradesh are advised to undertake preparation of main field and complete transplanting of rice at the earliest.
  - Farmers in Mid Tropical Hill Zone in Nagaland are advised to complete sowing of groundnut, soyabean, pulses and undertake transplanting of rice crop.
  - Farmers in the States of the region are advised not to allow the rain water to stand in the maize crop as this crop is highly sensitive to standing water.
  - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
  - In Central Brahmaputra Valley Zone in Assam, present situation of alternate drying and wetting condition may favour the occurrence of rotting of leaves and stems of beetle vine and quick wilt of black pepper. Prophylactic application of Bordeaux mixture may prevent the spread / outbreak of the diseases.
  - In Hill Zone of Assam, there is chance of infestation of rice hispa where the crops are at tillering stage; farmers are advised to monitor the crop and spray Quinolphos @ 2 teaspoonful / 5 litres of water to control the attack.
  - In North Bank Plain Zone in Assam, there is chance of attack of gummosis disease on citrus due to heavy rainfall and high relative humidity. Farmers are advised to clean the affected portion and wash with 'potash water'. Bordeaux mixture should be used in affected area. As preventive measure, it is essential to drain out excess water from the area. The weather is also favourable for pollu beetle grabs in black pepper, which feed on tender berries; therefore, farmers are advised to apply Endosulfan 35 EC or Dimmethoate 30 EC @ 1 ml / litre of water against grabs.
  - In North Bank Plain Zone in Assam, farmers are advised to drain out the excess water as well as to move kerosene soaked rope over the crop to protect the rice from the case worm infection.
  - In North Bank Plain Zone in Assam, due to water stagnation in root zone, the betel vine may be infected with foot rot and leaf spot diseases. In addition to keeping the root zone free from water stagnation, apply four drenches (in root zone) with 1% Bordeaux mixture at 30 days interval and spray (on leaves) 0.5% Bordeaux mixture at 15 days interval.
  - In Sub Tropical Hill Zone of Arunachal Pradesh, there is high possibility of infestation of sheath blight on rice. Farmers are advised to remove collateral hosts from bunds and spray Spencer / Bavistin @ 2 g / litre of water.

- In Mizoram, there is chance of infestation of rice stem borer, leaf hopper and plant hopper on rice due to substantial increase in minimum temperature and evening humidity and an appreciable decrease in sunshine hours with occasional rainfall; farmers are advised to monitor the crop and to apply Nuvacron / Monocil 36 SL @ 1020 WG in 400 litre of water per ha. Also, due to prevailing weather conditions, there is chance of incidence of gummosis in Khasi Mandarin; farmers are advised to scrap the diseased portion and apply Bordeaux paste. There is also chance of tikka disease in groundnut due to warm and moist weather conditions; farmers are advised to burn plant disease debris. In severe case, foliar spray with Bordeaux Mixture (4:4:50) is recommended.
- Due to hot and humid conditions and high wind speed, there is also chance of sigatoka leaf spot on banana in Mizoram and Tripura; farmers are advised to apply Mancozeb @ 0.01%. There is also chance of development of tikka disease in groundnut. To prevent, foliar spray with Bordeaux mixture (4:4:50) is recommended. In low land, sheath blight may be noticed in rice due to stagnation of rain water; the disease can be checked by spraying of Bavistin 50 WP @ 200 g or Tilt 25 EC or Monceren 250 SC @ 200 ml in 200 litres of water.
- In Ri-Bhoi, East Khasi and West Khasi hill districts of Meghalaya, there is chance of occurrence of blast disease in rice; farmers are advised to spray Carbendazim 50 WP @ 1-1.5 g / litre of water. There is chance of wilt in banana; farmers are advised to drench the field with 1-2 % Bordeaux mixture.
- In Nagaland, due to high moisture in the soil, there is chance of stem rot in papaya; farmers are advised to spray Copper oxychloride @ 3 g / litre of water.
- In Mild Tropical Plain Zone of Tripura, due to the prevailing humid weather, there is chance of attack of gundhi bug and sheath blight in upland rice; farmers are advised to spray Imidachloprid @ 1.5 ml per liter of water for gundhi bug and surf @ 1 g per litre of water for sheath blight.
- Apply plant protection measures after current spells of rain.
- Stages of major crops are mentioned in Annexure I.

#### **Animal Husbandry:**

- Undertake immunizations against Brucellosis, Foot and mouth disease (FMD), HS, BQ and Anthrax diseases in cattle and buffaloes in Central Bramhaputra Valley Zone in Assam.
- Farmers in Arunachal Pradesh are advised to avoid dumping excreta and also to undertake deworming with broad spectrum anthelmintic viz., Albendazole, Fenbendazole etc. Also provide adequate clean water to the pigs throughout the day in present weather condition.
- Farmers in Manipur are advised to deworm the cattle, sheep, goat etc. and vaccinate against Haemorrhagic Septicemia. It is also advised to vaccinate poultry birds against Coccidiosis, Ranikhet, Gumboro etc. It is also advised to deworm and vaccinate pigs with SFV (Swine Fever vaccine).
- In Mizoram, vaccinate and deworm the pigs from swine fever and internal parasite. Avoid dampness to prevent from coccidiosis in poultry. Add coccidiostats in the poultry feed for prevention of this disease.

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

- **Realised Rainfall:** Most of the districts of Himachal Pradesh, Uttar Pradesh, Uttarakhand, many districts of Rajasthan, Jammu & Kashmir, Punjab, Haryana, Delhi of this region received rainfall.
- **Rainfall Forecast:** Fairly widespread rain/thundershowers is likely to occur over east Uttar Pradesh and isolated rain/thundershowers would occur over remaining parts of this region. Isolated heavy rainfall would occur over east Uttar Pradesh during next 24 hours.
- **Advisory:**
  - As most of the districts of Himachal Pradesh, Uttar Pradesh, Uttarakhand, many districts of Rajasthan, Jammu & Kashmir, Punjab, Haryana, and Delhi received rainfall during last week,

- postpone irrigation to the standing crops. Provide drainage facilities in East Uttar Pradesh as isolated heavy rainfall places is likely during next 24 hours.
- Farmers are advised to adopt proper drainage to remove stagnant water from standing crops in Uttarakhand due to receipt of excess rainfall during last week. Application of Urea as top dressing and weeding may be undertaken after current spells of rain.
  - Farmers in Bhabar and Tarai Zone of Uttarakhand are advised to undertake sowing of raddish, transplanting of broccoli and harvesting of matured frenchbean, tomato, brinjal crops and also fodder grass.
  - Farmers in Uttar Pradesh are advised to undertake sowing of vegetables viz. brinjal, chilli, lady's finger, onion, gourd, bottle gourd, cucumber, toria and new planting of mango, banana, papaya, banana, amrud, amla and lemon. Give mechanical support to banana and sugarcane crop to avoid lodging due to wind.
  - Farmers in Delhi are advised for hoeing and weeding of standing crops including vegetables. Transplanting of brinjal, tomato, chilli, cauliflower and cabbage on raised bed may be undertaken and farmers are advised to undertake transplanting of seedlings. Farmers are also advised to prepare nurseries of cauliflower for mid season. Transplanting of onion may be undertaken. Undertake sowing of sarson saag, radish, spinach and coriander.
  - Farmers in Punjab and Haryana are advised to start sowing of radish, cauliflower using 250 g seed of mid season varieties. It is the right time for planting evergreen fruit orchards of citrus, mango, litchi, jamun, guava and loquat. Apply need based irrigation to sugarcane crop. Provide drain out excess standing water from cotton, orchards, vegetable and maize field. Irrigation to rice crop may be withheld as there was sufficient rainfall during last week.
  - Continue sowing of sweet potato, Ashwagandha, cowpea, raddish, cauliflower, green gram, moth bean, cluster bean in West Rajasthan utilising the realised rainfall. Farmers are advised to apply first dose of nitrogen in bajra and continue hoeing and weeding. Farmers are advised to harvest matured pods of cluster beans.
  - Nursery sowing of early varieties of cauliflower and cabbage may be undertaken in mid hills regions of Himachal Pradesh.
  - Farmers in Jammu and Kashmir are advised to undertake sowing/nursery sowing of radish, cabbage and carrot, transplanting of basmati rice, cauliflower, knol khol and chillies, planting of fruit plants like mango, citrus, litchi, loquat, guava and papaya. Farmers are advised to undertake top dressing in late transplanted rice, early sown maize, vegetable crops like bhindi, chillies, pumpkin, sponge gourd, bitter gourd, bottle gourd, tomato and cauliflower.
  - Due to prevailing weather in Himachal Pradesh, scab and other diseases in apple orchards may appear. Farmers are advised to spray Dithane M- 45(2.0g/L) as preventive spray on clear day and apply micronutrient in orchards to control fruit drop problem. Heavy rains are expected in next week so skip irrigation and ensure proper drainage to flowers beds. Weather is conducive for attack of blue beetle in roses and balsam, for control spray metacid @ 0.05%.
  - In Bhabar and Tarai zone of Uttarakhand, due to heavy rainfall during last week and excess moisture conditions, bacterial leaf blight (BLB) and bacterial leaf streak diseases are expected in rice. If incidence is more than 10 % then farmers are advised to spray 200 g Blightox-50 & 6 g streptomycin dissolved in 200 litres of water per acre two times within 10 days.
  - Attack of tobacco caterpillar is observed in Narma cotton at some places of Srigananagr district of Rajasthan. Farmers are advised to install pheromone traps in the field or use Nuwaluron 10 EC 1.0 ml or Emomectine Benzate 5 SG 0.5 gm per litre. Attack of spotted bollworm is also seen in indigenous cotton, for control farmers are advised to spray Fenvelrate 20 EC or Indoxacarb 14.5 S.C. 1 ml / litre water.
  - In present weather condition in Delhi, constant monitoring for brown plant hopper in paddy field is advised. Farmers are advised to enter into the middle of the crop field and see mosquito like insect at the basal portion of the plant.
  - Farmers in Punjab and Haryana are to monitor the sugarcane crop for pyrilla and whitefly attack on crops. The standing cucurbits should be kept under vigil for symptoms of blight and spray as per recommendation. There can be development of anthracnose and blight in chilli after rains. So apply fungicides as per recommendation.



- Due to presence of congenial weather bristle beetle attack the maize in Jammu & Kashmir, under such situation spray the crop with carbaryl @0.1% or endosulfan @ 0.07%, when weather remains clear.
- In Jammu & Kashmir, stem and root borer may likely to infect the rice crop due to prevailing weather situation under such situation, farmers are advised to apply Phorat 10G@ 10kg/ha or Carbenidazim3G @ 20 kg/ha, when 5% dead hearts or egg mass/m<sup>2</sup>.
- Farmers are advised to postpone plant protection sprays in East Uttar Pradesh and continue spraying in the remaining region.
- Spraying may be undertaken after current spells of rain in the region.
- Stages of major crops are mentioned in Annexure I.
- **Animal Husbandary**
  - In some parts of Uttar Pradesh, farmers are advised to protect domestic animals from coming in direct contact with rains. Do not allow water to stagnant in their sheds. Try to keep their litter dry.
  - In Himachal Pradesh, Weather is conducive for spread of FMD and galghotu so, farmers are advised for vaccination of animals against FMD.

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

- **Realised Rainfall:** Most of the districts in Kerala except Thiruvananthapuram, Coastal Karnataka, Bangalore Rural & Urban, Chickballapur, Chickmagalur, Kodagu, Kolar, Mysore, Ramnagara and Shimoga districts in South Interior Karnataka, most districts in Coastal Andhra Pradesh except Nellore, Guntur and Prakasam, Karimnagar, Khammam, Medak, Warangal and Nizamabad in Telangana and most districts in Tamil Nadu received good rainfall. No significant rainfall occurred in North Interior Karnataka and the remaining parts of the region.
- **Rainfall Forecast:** Fairly widespread rainfall is likely in Kerala and Coastal Karnataka and scattered rainfall is likely in Coastal Andhra Pradesh during next 48 hrs. and increase thereafter. Scattered rain/thundershowers would occur over remaining parts of peninsular India. Isolated heavy to very heavy rainfall is likely in Coastal Karnataka and Kerala during next 48 hours.
- **Advisories:**
  - As there was sufficient rainfall in most of the districts in Kerala except Thiruvananthapuram, Coastal Karnataka, Bangalore Rural & Urban, Chickballapur, Chickmagalur, Kodagu, Kolar, Mysore, Ramnagara and Shimoga districts in South Interior Karnataka, most districts in Coastal Andhra Pradesh except Nellore, Guntur and Prakasam, Karimnagar, Khammam, Medak, Warangal and Nizamabad in Telangana and most districts in Tamil Nadu, drain out excess water and postpone irrigation to the crops. Apply irrigation to the crops in North Interior Karnataka, where there was no significant rainfall. Provide drainage facilities in Kerala and Coastal Karnataka as heavy rainfall is expected during next 48 hours.
  - Farmers in the Krishna Godavari Zone of Andhra Pradesh are advised to undertake gap filling in cotton, *kharif* sowing of black gram, green gram, red gram, cotton and maize etc., utilizing realized rainfall.
  - Farmers in the Eastern Dry Zone of Karnataka are advised to go for sowing as light to medium rain is expected in the coming four days and follow ploughing for better rain water infiltration and other land preparation activities.
  - Farmers in the North Dry Zone of Karnataka are advised to take up plant protection measures, harvest the matured green gram crop and continue sowing of desi cotton, horse gram, maize and sunflower, since light to moderate amount of rainfall is expected at few places.
  - Farmers in the Southern Dry Zone of Karnataka are advised to undertake sowing of rice, ragi, sugarcane, cotton, sunflower, cowpea, soyabean, horsebeans, gram and horticulture crops.
  - Farmers in North East Dry Zone of Karnataka are advised to undertake intercultivation and hand weeding in early sown pigeon pea and cotton crops. Harvesting of greengram is to be done carefully as there is forecast of rainfall. Farmers are advised to continue sowing of pigeon pea in North East Dry Zone of Karnataka.

- Farmers of North Transition Zone are advised to provide protective irrigation at the critical stages of crops, wherever possible, undertake plant protection measures to prevent the crop withering from the biotic stress (sucking pests in cotton and defoliators in groundnut, soybean and other crops.) and uproot and destroy the heavily infested and infected crops with insects and diseases.
- Farmers in the Coastal Zone of Karnataka are advised to spray the monocrotophos @ 1.5 ml/lit of water, since late planted paddy crop was infested with thrips. Due to higher humidity, low temperature and frequent rains, it is likely that leaf folder may occur on rice. Hence farmers are advised spray Quinolphos @ 2ml/lit of water. Rotting of nuts and bunches of tree are also noticed. Hence farmers are advised to spray 1% Bordeaux mixture.
- Farmers in the North Western Zone of Tamil Nadu are advised to go in for late sowing of groundnut after treating the seeds with Trichoderma viridii at a rate of 10 grams for every 1 kg of seed and planted at space of 30 cm between rows and 10 cm between plants as they received rainfall last week.
- As wind speed is high in High Altitude Hilly Zone of Tamil Nadu, wind breaks / shelter belts may be provided in wind prone areas and sowing / planting may be completed by the end of this month.
- In rainfed areas of southern Telangana zone of Andhra Pradesh, where sowings have not been done, sow castor, sunflower, ragi, horsegram, redgram (close spacing) and forage crops as contingent crops. Taking advantage of recently received rains, top dress with urea @ 20-25 kg per acre in rainfed crops like maize and cotton.
- Due to prevailing weather condition in the Problem areas zone of Kerala, attack of black bug is noticed in different fields. The farmers are advised to keep regular watch over the fields and if the attack is found, they are advised to drain off the field completely and consult the agricultural officer.
- Due to cold weather, pest and disease problems are noticed in groundnut, thrips, mites and murda -complex disease in chilli, sucking pest problem and cut worms in cotton and brown plant hopper in rice. Hence farmers in the North Transition Zone of Karnataka are advised to undertake precautionary measures to prevent their attack.
- Due to continuous rain and decrease in temperature rust disease was noticed in soyabean in the North East Transition Zone of Karnataka. To control, spray Propiconazole or Hexaconazole 1 ml per liter of water. Thrips, aphid and stem fly were also noticed in greengram/ blackgram. As a control measure spray Imidachlorprid @ 0.3 ml per litre of water.
- In Southern Dry Zone of Karnataka, brinjal crop is affected by shoot and fruit borer and turmeric crop by trips insects. Spray carbaril @ 4 gm/lt. of water to control shoot and fruit borer and mancozeb @ 2 gm/lts of water to control trips. In paddy field zinc deficiency was noticed. To overcome this, apply zinc sulphate @ 8 kg/acre without mixing with fertilizer.
- In Kuruvai rice, diseases like bacterial leaf blight and bacterial leaf spot is noticed in Cauvery Delta Zone of Tamil Nadu, due to prevailing weather condition. To control, apply 1 kg Pseudomonas fluorescence per acre along with 20 kg of FYM or sand in the main filed. There is wide spread occurrence of black bug. To control the pest, spray acephate @ 250 gm/acre (or) profenophas 400 ml/ acre along with sticking agent in the base of rice crop.
- Monitor thrips and leafhopper infection in cotton, mealybug infection in tapioca and red hairy caterpillar in groundnut in Western Zone of Tamil Nadu and take the appropriate management measures. Since pod formation is a critical stage, one or two irrigation is essential for rain-fed sorghum and the farmers are advised to raise one row of cowpea for every five rows of rainfed groundnut wherever red hairy caterpillar is endemic.
- Stem borer incidences are found in the paddy field in Southern Zone of Tamil Nadu. Monitor it using the light trap and spray neem oil @ 20 ml/lit or Azadirachtin @ 3 ml/lit in the morning hours, tie trichogramma card @ 2 cc/acre and in when it reaches above ETL spray profenophos at 2.0 ml/lit of water or Chlorpyriphos @ 2 ml per litre of water.
- Sucking pests, Helicoverpa, Spodoptera, bud necrosis and leafminer were noticed in early sown groundnut crop in the Scarce Rainfall Zone of Andhra Pradesh. To control bud necrosis, spray 1.6 ml monocrotophos or 2 ml dimethoate in lit of water and spray Monocrotophos @ 1.6 ml or Chlorpyriphos @ 2.0 ml per litre of water to control leaf miner.

- Banded leaf and sheath blight is observed in maize in some districts of Northern Telangana Zone of Andhra Pradesh. As and when the symptoms are noticed, stripping of the affected bottom 2-3 leaves along with their sheath and spraying of propiconazole @ 1 ml/l in endemic areas is recommended.
- Due to prevailing dry weather sucking pest complex (thrips, jassids, mites and whitefly etc.) occur in pulses and cotton in the Krishna Godavari Zone of Andhra Pradesh. Farmers are advised to undertake appropriate plant protection measures.
- Undertake plant protection measures after spells of rain in Kerala, Coastal Karnataka and on a non-rainy day over remaining region.
- Varieties are mentioned in Annexure II.

#### WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised rainfall:** All districts in Gujarat region and all districts in Saurashtra and Kutch region except district Porbandar and most of the districts in Konkan & Vidarbha received significant rain during last week.
- **Rainfall forecast:** Fairly wide spread rainfall would occur over Konkan and Goa, Scattered/fairly wide spread rainfall would occur over Vidarbha region. Scattered rainfall would occur over Madhya Maharashtra and Marathwada. Isolated rainfall would occur over Saurashtra and Kutch region and isolated/scattered rainfall would occur over Gujarat region.
- **Advisory:**
  - Farmers are advised to postpone irrigation in Gujarat, Konkan and Vidarbha as there was sufficient rainfall during last week. In view of occurrence of widespread rain over Konkan and Vidarbha, farmers are advised to postpone irrigation, application of plant protection measures and fertilizers to the crops.
  - Due to deficient rainfall during last fortnight in Marathwada, moisture stress in soyabean, sesamum, niger is reported and infestation of girdle beetle in soyabean above ETL and infestation of aphids, jassids in cotton, *jowar*, *tur* is noticed below ETL, farmers are advised to provide irrigation and apply necessary plant protection measures.
  - As Ahmednagar, Sangli and Solapur districts of Madhya Maharashtra received deficient rain during last two weeks, farmers are advised to apply irrigation to standing crop.
  - Utilizing monsoon rain, farmers of east Vidarbha region are advised to complete the transplanting of 20 to 22 days old rice seedlings.
  - Maintain water level 5 cm by bunding of rice field in Konkan, Kolhapur division and 2-3 cm water level in other. Cleaning of bunds and proper drainage of water should be done.
  - Undertake hoeing and weeding in early sown *kharif jowar*, soyabean, groundnut, cotton, *bajra*, maize to keep the crop weed free, after current spells of rain in Vidarbha. Earthing up may be completed in 35 to 40 days old groundnut.
  - This is the proper time of planting of all fruit crops in Konkan and Kolhapur division.
  - As prevailing weather is favourable, farmers of Madhya Maharashtra and Marathwada are advised to complete planting of *adsali* sugarcane.
  - In Vidarbha zone, for better growth of cotton boll and control of red leaf in cotton, spray Magnesium Sulphate 1 kg + DAP @ 4 kg/acre. Spray 2% Urea or DAP at flowering stage on soyabean in East Vidarbha.
  - Farmers in Bhal and Coastal Zone are advised to complete sowing of castor up to 25<sup>th</sup> August to protect the crop from the castor semi lopper. Carry out transplanting of vegetables and plantation of horticulture crops.
  - Farmers in South Gujarat Zone are advised to apply first spray of 2% DAP solution in greengram and blackgram at flowering stage and second spray after 15 day of first spray.
  - Farmers in South Gujarat Heavy Rainfall Zone are advised to apply remaining half dose i.e. 40 kg Nitrogen by using Ammonium Sulphate.

- Farmers in North Gujarat Zone are advised to carry out transplanting of different horticultural crops and complete transplanting of vegetable crops. Also avoid the water stagnate condition in low land areas.
- Farmers in South Saurashtra Zone of Gujarat are advised for sowing of pigeon pea between two rows of groundnut crop in relay cropping and for sowing of castor. Also apply second dose of fertilizers @ 40 kg N/ha (88 kg urea/ha or 200 kg Ammonium Sulphate per ha) after vapsa condition in cotton crop.
- Due to receipt of sufficient rainfall in Middle Gujarat Zone, farmers are advised not to irrigate the crops, avoid spraying of insecticide/pesticides, avoid application of fertilizers. Also prepare land for transplanting of Tobacco crop.
- Suitable varieties of the crops for sowing are mentioned in Annexure II.
- Due to prevailing weather there is mild incidence of leaf cater pillar and spodoptera in soyabean in Sangli District, spray Quinolphos 25% @20 ml or Chloropyriphos 220EC@20 ml in 10 litres water.
- Due to subdued rain, there may be incidence of leaf folder and blue beetle in rice in Konkan, for control of leaf folder spray Monocrotophos @ 12 ml /10 litres of water and for control of blue beetle spray Monocrotophos 36WSC @ 14 ml or Carbaryl 50 WP @ 20 g or Cypermethrin 25 EC @ 2.4 ml/10 litres of water or dust 2% Methyl Parathion dust @ 20 kg/ha. Under prevailing weather there may be incidence of army worm in rice in East Vidarbha, spray Cypermethrin 10% @ 6 ml in 10 litres water or dust Methyl parathion dust 2%(20 kg/ha) in the evening.
- Due to favourable weather, infestation of sap sucking pest (aphids, jassids, thrips) may increase in cotton in Central Vidarbha zone, if infestation exceeds ETL (10 pests/ leaf) spray Dimethoate 30% @ 10 ml or Methyl Dimeton 25% @8 ml in 10 litres water. Due to continues cloudy weather there may be infestation of white fly, aphids and jassids in western Maharashtra scarcity zone, spray Acitamiprid@4 g+ sticker in 10 litres water.
- Due to prevailing weather there may be incidence of downy mildew and powdery mildew in vegetables in Ratnagiri, Raigad and Thane district, spray Dithane M-45 or Dithane Z-78 each @ 2.5 g/lit of water at an interval of 10 to 15 days.
- Due to cloudy weather there may be more infestation of thrips in onion in western Maharashtra scarcity zone, spray Carbosulfan@10 ml or Deltamethrin @20 ml/ 10 litres water at 10 to 15 days interval.
- Due to light rain there may be incidence of shoot fly in jowar in Marathwada region, spray Quinolphos @20 ml in 10 litres water.
- There is infestation of mealy bug on branches, leaf and fruit of custard apple in Pune division, spray Imidacloprid or Thiamethoxam or Colathianidin @3 g/10 liter water.
- Due to cloudy weather condition, there is a chance of downey mildew in pearl millet and maize. Farmers in Middle Gujarat Zone are advised to spray Carbendazim 3g/litre.
- There is a possibility of occurrence of hoppers and tip burn in mango in South Gujarat Heavy Rainfall Zone. Farmers are advised to spray Carbaryl (4gm/lit) and wettable Sulphur (3gm/lit) respectively.
- To control leaf curl virus spread by thrips in chillies, farmers in South Gujarat Heavy Rainfall Zone are advised to spray the crop with Imedachlopride 2.8 ml or Carbaryl 50 % WP 40 gm in 10 liter water.
- Stages of major crops are mentioned in Annexure I.

### **Animal Husbandry**

- Protect animals by sheltering them in safer places in Gujarat.
- Provide green fodder and cool water for drinking. Vaccination should be done to animals (cows, buffaloes and sheep) against foot and mouth disease and to sheep against P.T.R. disease under the guidance of veterinary doctors. Protection should be given to dairy / farm animals, sheep,

goat and poultry birds from heavy rains and cold winds. Do not allow to store water in animal shed. Pits in cattle shed should be filled with soil.

### CENTRAL INDIA[M.P., CHHATTISGARH]

- **Realised Rainfall:** Sufficient rain occurred in most of the districts in Madhya Pradesh and Chattisgarh
- **Rainfall Forecast:** Scattered rainfall is likely during next 24 hours over the region and widespread rain/thundershowers would occur over thereafter.
- **Warning:** Isolated heavy rainfall would occur over East Madhya Pradesh and Chhattisgarh after 48 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 as isolated heavy to very heavy rainfall would occur over Madhya Pradesh during next 48 hours.
- Due to excess rainfall occurred during last week, farmers in Jhabua Hill Zone are advised to prepare proper drainage system for drainage of excess water in the field to escape the crops from water lodging condition. Runoff water diverted to the recharging structure so rain water is store and the water level is improved.
- Farmers in Jhabua Hill Zone of Madhya Pradesh are advised to carry out transplaning of fruit plants like mango, guava, anola, citrus, chickoo and pomegranate etc.
- Farmers in Malwa Plateau and Kymore Plateau and Satpura Hill Zones are advised for transplanting of tomato, brinjal and chilly.
- Farmers in Vindya Plateau, Central Narmada Valley and Gird Zone are advised for proper drainage of water in field of soyabean, arhar, til, jowar and maize.
- Farmers in Central Narmada Valley Zone are advised to prepare nursery for cabbage and cauliflower and transplant of fruit plants i.e. Papaya, Guava and Mango.
- In Chattisgarh Plain Zone, farmers are advised to undertake biasi operation of direct seeded rice wherever sufficient moisture is available. After biasi operation SaghanChalai should be done at the earliest.
- Due to sufficient rainfall in Bastar Plateau Zone of Chattisgarh, oilseed and pulses crops like urad, horsegram (Kulthi), niger (ramtil), moong (greengram) and urad (blackgram) crops may be sown in upland marhan situation.
- Due to prevailing weather, thrips, insects, blast disease and Brown spot disease are affecting the rice crop in Dantewara and Bijapur district of Chattisgarh, spray Profenophos or Dimethoate 2:1 mls in one litre of water for thrips, Beam or Baan 1 gms./ litre of water for blast and Furadon, Chlorpyrifos or Carbofuran 3 G 10-12 Kg./ acre for brown spot.
- Due to prevailing weather in Narayanpur and Bastar district of Chattisgarh, it is being observed that attack of insect-pests and diseases is enhanced. In this particular situation, farmers shouldn't use the fertilizers and bunds should be properly cleaned. The control measures should be adopted accordingly.
- Due to water logging in plant nursery beds in Malwa Plateau Zone of Madhya Pradesh, fungal attack in plant nurseries may be there, so avoid water logging by providing drainage and if attack is there apply fungicide.
- Weather is congenial for blue beetle on soyabean in Madhya Pradesh, spray Prophenophos @ 2 litre per ha or Monocrotophos 1.5 litre per ha.
- Weather is congenial for semi lopper in the soybean crop in Bundelkhand Zone of Madhya Pradesh, farmers are advised to spray Quinolphos 25 E.C. @ 2.0 ml per litre of water. Also there is possibility of attack of yellow mosaic in soybean, urd, moong crops; If found, spray of Methyl dameton 2.0 ml. or Emedachloprid 1/2 ml. per litre of water for their control.
- Weather is congenial for attack of girdle beetle in Central Narmada Valley Zone in soybean of Madhya Pradesh, spray Trizophos 0.75 lit/ha or Quinolphos 0.75lit/ha
- Spray chemicals after spells of rain in the region.
- Stages of major crops are mentioned in Annexure I.



### Animal Husbandry & Poultry

- Provide the animal's with clean water, balance and nutrients rich food. etc. in Malwa Plateau Zone of Madhya Pradesh. Also vaccination in Goats and other cattle's. Ensure vaccination to protect animals from infections/diseases like Black Quarter and FMD etc.
- Humid weather condition is prevailed in Kymore Plateau and Satpura Hill Zone hence keep cattle's in dry and clean place. Also create neem leaves smoke in night to save them from mosquitoes and bees. Arrange for vaccination for Foot and Mouth disease, and anthrax. Use potassium permanganate @ 5 ml per liter of water for infected animals.
- In Budelkhand Zone of Madhya Pradesh, four to five hours bulb light should be provided in the poultry houses during night on account of likelihood of clouds and shortened photoperiod in this week. Farmers are advised to prevent the goat from wetting in rain and also do the vaccination against P.P.R to Goats. Also use new liter material in the poultry houses like saw dust, wheat straw to avoid excessive moisture. Provide de-worming to the calf of dairy animals and keep on dry and clean shade.

## Annexure I Major Crops

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

- Sugarcane (early vegetative / vegetative), rice, *kharif* maize, *kharif* arhar, sesame, sorghum, jowar, lobia for green fodder, mishrikand (sowing / vegetative), onion, radish (sowing), cauliflower and fruit trees (transplanting) in Bihar.
- Sugarcane (early vegetative / vegetative), papaya (transplanting), turmeric, ginger, elephant foot yam (vegetative / tuber development stage), rice (transplanting/ vegetative), rainy season vegetables like bhindi, bean, tomato, french bean, cauliflower, cabbage etc. (vegetative / flowering / fruiting), maize, pigeon pea, urd, moong bean, groundnut( vegetative) and sweet potato (transplanting / vegetative)in Jharkhand.
- Arhar and maize (sowing / early vegetative), papaya, marigold, tuberose (planting), cowpea (sowing / early vegetative), *kharif* vegetables (sowing / vegetative), sugarcane (vegetative), *kharif* rice (transplanting / tillering), groundnut (sowing / early vegetative), chrysanthemum, ragi (sowing / vegetative), turmeric and ginger (planting / early vegetative), yam (sowing), sesamum, green gram, black gram, niger (sowing / early vegetative), mango, banana, lemon, cashew nut, marigold(planting) in Orissa.
- *Aman* rice (transplanting / tillering), tomato, cauliflower (nursery preparation / transplanting), *aus* rice (tillering), *kharif* maize (sowing / tillering), jute (vegetative / harvesting), mango, coconut, guava, banana (planting) and *kharif* vegetables (sowing / planting / vegetative / fruiting) in West Bengal.
- Large cardamom (capsule formation / transplanting of suckers from nursery/grain maturity;), *kharif* vegetables (harvesting), orange (fruiting.), ginger (germination / early vegetative), rice (early tillering), maize (harvesting), seed potato (tuberization) in Sikkim.

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

- Sugarcane (active vegetative), *ahu* rice (flowering / grain formation / ripening), *sali* rice (transplanting / tillering), *olitorius* jute (maturity / harvesting / retting), Capsularis jute, (harvesting / retting / fibre extraction), maize (vegetative), sesame, groundnut (early vegetative / vegetative), arhar, pigeon pea, raddish, cauliflower and brinjal (early variety) (sowing / early vegetative) and jute (for seed production) (early vegetative), ginger / turmeric (vegetative), black / green gram (sowing / vegetative), banana (planting), cowpea (sowing / vegetative) and khasi mandarin (sowing / vegetative) in Assam.
- Rice (nursery preparation / transplanting / tillering), tuber crops (vegetative), soyabean and groundnut (vegetative) and maize (tasseling / silking /cob formation / maturity / harvesting) in Arunachal Pradesh.

- Soyabean (flowering / pod formation), groundnut (pod formation), *kharif* rice (transplanting / tillering), ginger and turmeric (vegetative / rhizome formation), early cauliflower (transplanting), tomato (nursery raising), lemon (fruiting / harvesting) in Manipur.
- *Ahu* rice (panicle initiation / flowering / grain filling), arhar (sowing / vegetative), vegetables (vegetative / flowering / fruiting / maturity), *sali* rice (transplanting / tillering), early cauliflower and cabbage (transplanting / vegetative), ginger and turmeric (rhizome formation), *Khasi* mandarin (flowering / fruiting), banana (vegetative) in Meghalaya.
- Rice (transplanting / tillering), *kharif* maize (tasseling / silking / cob formation), groundnut (flowering), soyabean (vegetative / flowering), okra (sowing / vegetative), ginger and turmeric (planting / vegetative), *khasi* mandarin (new planting / vegetative / fruiting), French Bean, rice bean, urd and moong bean (vegetative / flowering / pod formation), banana (vegetative / fruiting), cucurbits (sowing / vegetative) in Mizoram.
- Soyabean (flowering), groundnut, green gram and black gram (sowing / vegetative), rice (transplanting), maize (cob formation / maturity), okra (flowering / fruiting), lowland rice (transplanting), banana (fruiting), colocasia (flowering) and papaya (transplanting) in Nagaland.
- *Aus* or *kharif* rice (panicle initiation / flowering / grain formation), *aman* rice (transplanting / early tillering), upland / jhum rice (flowering / milk), cucurbits and other vegetables (flowering / fruiting), maize (tasseling / silking / cob formation) and sesame (vegetative / flowering / pod formation) in Tripura.

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

- Tomato, chilli, paddy (transplanting/early vegetative), 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, and tomato (transplanting), Apple (fruit development/maturity), pomegranate (fruit development), ginger, arbi, amaranthus, turmeric, rice, maize (sowing/transplanting) in Himachal Pradesh.
- Berseem (vegetative), cucurbits (vegetative / flowering/maturity), onion (seed bed preparation), capsicum, chilli, brinjal (nursery sowing / transplanting), raddish, carrot, turnip, cauliflower, cabbage, broccoli (sowing / transplanting), *kharif* fodder viz. maize, jowar, bajra, cowpea (growth / harvesting), early sown maize (initiation of tassel emergence / grain development), maize (vegetative / silking), *kharif* pulses, moong, mash (flowering / pod development), rice (tillering/panicle initiation), *Kharif* oilseed like groundnut, sunflower, summer brassica etc. ( vegetative/ flowering / seed development), orchards (apple-fruit development and pear – maturity) in Jammu & Kashmir.
- Chilli, capsicum (transplanting), tomato (vegetative/maturity/harvesting) and lahi (flowering / fruiting), sugarcane (planting), rice (tillering/ panicle initiation), litchi, loquat, peach, citrus (flowering / fruiting), mango (early varieties) (flowering), maize (cob formation), foxtail millet, okra, bottle gourd, bitter gourd, ginger, turmeric, soyabean (sowing / planting), sorghum, pigeon pea, urd and pearl millets(sowing) in Uttarakhand.
- *Spring* sugarcane (sprouting), berseem (vegetative), vegetables(fruiting), sugarcane (germination/tillering), pulses (seedlings), cotton (ball initiation), okra (sowing/vegetative), rice (sowing/transplanting), maize (knee height stage) in Punjab.
- Sugarcane (spring season) (planting/emergence/early vegetative), barseem (vegetative), pulses, moong, mash, pigeon pea (sowing), rice (transplanting/tillering) in Haryana.
- Rice (Transplanting), winter sugarcane (vegetative growth / formative), summer sugarcane (initial growth / formative stage), cucurbits like gourd, bittle gourd, cucumber, etc. and another vegetables like lady's finger, tomato, brinjal, chilli etc. (sowing / flowering/fruiting), black gram, baby corn/ maize / fodder maize, vegetables (vegetative/flowering/fruiting), groundnut, jowar, bajra, til, moong,

urd, moong, lobia (early vegetative), arhar (sowing /early vegetative), tomato, brinjal, cabbage (sowing) in Uttar Pradesh.

- Rice (nursery sowing/transplanting), narma cotton, desi cotton (flowering / boll formation in Sriganaganagar), sweet potato(sowing), pearl millet, sorghum, maize, soybean, chilli, moong, cowpea, urd, sorghum and cluster bean (sowing) in Rajasthan.

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

- Kuruvai rice (**panicle initiation/flowering**), cotton (vegetative to flowering), vegetables (nursery / transplanting/ fruiting), sugarcane (vegetative/ grand growth/maturity), groundnut (vegetative/ flowering / peg formation/ pod development/maturity), maize (vegetative/flowering/harvest/), sorghum (vegetative), black gram (flowering/ harvest), green gram (harvest) in Tamil Nadu.
- Sugarcane (ratooning/vegetative), cotton (sowing / vegetative), hybrid jowar, maize, ragi, sugarcane, sunflower, groundnut, red gram and horticulture crops (vegetative) in Karnataka. Early sown crops are at early vegetative stage.
- Maize (Sowing to seedling stage), jowar, cotton (vegetative), sugarcane and pulse crops like green gram (vegetative), red gram(vegetative), rice (nursery / transplanting stage), groundnut (Early sown-pod initiation & development stage/Late sown crop - flowering stage/ vegetative), in Andhra Pradesh.
- *Virippu* rice (tillering/panicle initiation/flowering) and black pepper (berry development), ginger (vegetative), turmeric and vegetable crops (flowering to harvesting stage) *Mundakan* rice (sowing/transplanting) in Kerala.

#### **WEST INDIA [GOA, MAHARASHTRA, GUJARAT]**

- Sugarcane (new *adsali* - planting / old *adsali* - grand growth), sugarcane (pre-seasonal (vegetative), sugarcane (*suru*) (early vegetative), *Kharif* rice (early tillering in Konkan, Kolhapur, Pune, Nashik Division and transplanting in East Vidarbha), jowar (vegetative ), soyabean (flowering/ pod formation in Kolhapur division and branching/ flowering in other division), groundnut ( vegetative / flowering ), cotton (vegetative), red gram (early vegetative) and green gram (flowering / pod formation).
- *Kharif* bajra (vegetative), vegetables (transplanting / vegetative), sugarcane (vegetative), groundnut (vegetative / flowering / pegging), *kharif* pulses (sowing / germination / vegetative), cotton (vegetative / flowering), rice (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 chillietc.(sowing), rice (transplanting) in Madhya Pradesh.
- Rice (seedling / tillering), sugarcane (planting), maize (flowering), groundnut, arhar, green gram and sesame (sowing), ginger, turmeric, papaya, mango and guava (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** – PusaPhalguni, PusaKomal, SEB-2, PusaBarsati.

**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** – UtkalGourav, ArkaAnamika, Uphar, ParvaniKranti.

**Hybrid varieties** – Varsa, Vijay, Vishal, Tara, Adhunik, Atyadhunik and Supriya.

**Bitter gourd:** PusaDomousumi, Coimbatore Long Green and ArkaHarit.

**Ridge gourd:** PusaNajdar, Jaypur Long and any local variety.

**Cluster bean:** PusaNaubahar.

**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, Inocence 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, Tissue cultured Banana – Hampa, Patakpara, Bantal and Kabuli.

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

**Lemon:** Ureka, Lisbon, Bhillafranka of lemon and Kagazilembu, Mexican lime, Sarbati lime and Tahita of lime.

**Marigold:** Giant Ball, African Yellow, Giant Ball African Orange, Early Yellow, Early Orange, Serakola, Africut, Sun Giant, Crown Of Gold, Spun Gold and Cuprid Yellow.

**West Bengal**

**Aman 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, Amulya, CR-1009, CR-1018, Sarala.

**Banana:** Mortoman, Chapa, Kathali, Singapuri.

### **Jharkhand**

**Turmeric:** RajendraSona.

**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 – BirsaMakka 1 (80-85 days) and hybrid variety - Kanchan (80-85 days), BirsaVikashMakka 2 (70-80 Days).

**Rice:** Swarna (MTU 7029), Rajshree, BPT 5204 (SambhaMahsuri), Birsamati and for hybrid rice – Proagro or Arize 6444; for medium land rice – IR 36, 64, Lalat, Naveen, Sahbhagi, BR 10, Kanak, RajendraDhan 202, Sugandha, BirsaVikashSugandhDhan 2, BirsaVikashDhan 203; Birsamati, early duration varieties – Vandana, Lalat, BirsaDhan 108, 109, 110.

**Horse gram:** Birsa Kulthi-1 (95 days), G.H.G.-20 (75 days).

**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:** BirsaArhar (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, BirsaMoongfali 1, 2, 3 and bold type – Birsa Bold (BAU 13).

**Sweet Potato:** Birsa Sakarkand-1 and Sri Bhadra.

**Sesame:** KankeSafed and Krishna.

**Horse Gram:** Birsa Kulthi-1 (95 days), G.H.G.-20.

### **Bihar**

**Rice:** Mansuri, RajendraMansuri, NataMansuri, RajendraSweta, Santosh, Rajshree, Satyam, Pankaj, Swarna (MTU 7029), Sita, Kank and IR-36.

Short duration varieties: Pusa 2-21, IR-36, Saket-4, Prabhat and photosensitive tall local varieties like Katarni, Kamini, Sugandha, TulsiMunjari.

**Kharifmaize:** Shaktiman 2, Shaktiman 3, Shaktiman 4 and Deoki.

**Scented rice:** Sugandha, Kamani, RajendraSuwasani and RajendraKasturi.

**Mishrikand:** RajendraMisrikand 1.

**Onion:** N-53, Agrifound Dark Red and Baswant 780.

**Tomato:** DBRT-2, ArkaVikash, PusaGaurav, Labonita, Marglov, Punjab Kesri, Sweet 72, Pant Bahar and hybrid varieties such as Vaishali, Rupali, Navin, Ratna, ARTH-3.

**Brinjal:** Rajendra Baigan-2, Rajendra Annapurna, Pant Baigan, PusaAnmol, Pusa Purple Long, ArkaNavneet, Pusa Hybrid-5.

**Radish:** PusaChetki, PusaDeshi, PusaHimani, PusaReshmi, JapaniSafed, ArkaNishant.

**Cauliflower:** Kuwari, Patna Early, PusaKatki, PusaDipali, HajipurAgaat.

**Pointed gourd:**RajendraParwal 1, RajendraParwal 2, F.P. 1, F.P. 3.

### **Assam**

**Sali rice:**

**Long duration:** Monohar Sali, Andrew Sali, Gitesh.

**Short duration:** Luit, Kapili, Kolong, Dishang.

**Others:** Jalashree, Jalkuwari, Plaban.

**Arhar:** T-21.

**Early cauliflower:** Early Kunwari, Pusa Deepali, Pusa Katki.

**Green gram:** T-44, Kopergaon, K-851, ML-56, ML-131.

**Black gram:** SB 121 (Saonia Mah), T-9, T-27, Pant U-19, T-122, KU 301, USJD 113, T 9, T27.



**Radish:** Pusa Desi, Pusa Himani, Pusa Chetki.  
**Cowpea:** RC 19, TVX-944-02E.  
**Dolichos Bean :** Pusa Early Profile and SD-18.

### Meghalaya

**Arhar:** T-21.

### Manipur

**Rice:** RC Maniphou 7.

### Delhi

**Hybrid cluster bean:** Pusa Komal, Pusa Sukamol,  
**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.  
**Soybean:** Pusa-9712, Pusa-9814, and Pusa-16.  
**Fodder Sorghum:** Pusa chari-9, Pusa chari-6.

### Himachal Pradesh

**Cauliflower:** Sweta, Madhuri  
**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, Basmati-370, Sanwal Basmati, Local Basmati (Ranbir)  
**Brinjal :** PPL, PPC & PPR  
**Raddish:** Japanese white  
**Carrot:** . Nantes and Pusa Yamdagini  
**Turnip :** Purple Top White Globe  
**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.  
**Cabbage:** GA, POI

### 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

**Arhar** : T-7, Amar, Bahar, Narendra Arhar-1, Azad, Malaviya -13, Pusa-9.

**Maize** : Tarun, Navin, Kanchan, Sweta, Navjyoti, Ganga-1 and 2, Duccan-107.

**Moong** : Pant Moong-1, Pant Moong-2, Pant Moong-3, Pant Moong-4, P.D.M.-11, P.D.M.-54, Narendra Moong-1, Samrat, K.M.-2241, K.M.-1995.

#### **Vegetables:**

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

**Gourd**: Kalyanpur Lambi Hari, Pusa Meghdoot, **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

**Onion** : N-53, AG found Dark Red, Arka Kalyan.

**Lobia**: Improved varieties T & 5269, T&2, UPC & 4200, Pusa Komal, 5269

Lobia: for green fodder : Russian joint, U.P.C.-5286, Bundel Lobia-1, B.P.C.-9202.

**Mango**: early var.: Bambai Hara, Gopal Bhog, Medium var.: Dabhahari, Langada, Lucknow Safeda, late var.: Chouda, Amrapali, Mallika, Swarn Rekha.

**Banana**: Dwarf Kovindis, Basrai Dwarf, for vegetables purpose: Hari chhal.

**Pappaya**: Pusa Delecius, Pusa Mejestry, Pusa Dwarf, Pusa joint, C.O.-1,2,3.

**Amrud**: Lucknow-49, Alahabadi Safeda, Banarasi Surkh, Chittidar, Apil colour, Arkamrudula

**Awala**: Chakaiya, Krushna, Kanchan, Narendra Awala-6,7, Lakshmi-52

**Lemon**: Kagji gol, Hybrid-2

### 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

Urd : Pant Urd-19, Pant Urd-30. Pant Urd-31 or Pant Urd-35

Cabbage: GA, POI

### 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.

- 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  
**Moth bean**: RMO-40, RMO-435, RMO-225, RMO 257, RMO 423  
**Cowpea** : FS-68, RC-19 and 101  
**Maize**: Sagar Ganga white 2, Sagar Ganga 5, Pratap maize 2, 5, PEHM-2 and Mahi Kanchan  
**Arhar**: Prabhat, Gwalior-3, UPAS 120, ICPL 87, 151, ICPH-8.  
**Soyabean**: 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-152, JC-5, JC-10, C-52, RS-9, FS-68, RC-19, RC-101 and RCP-27  
**Tomato**: Pusa Ruby, Pusa early dwarf, Roma  
**Brinjal**: Pusa long, Meghdoot, ArkaBahar, Pusa summer and prolific round  
**Fodder grass** : Desmodium, Muslai, Gold, Penicum Koleratum.  
**Cucumber**: Balam, PusaSahyog, **Radish** : Pusa Chetki, **Cauliflower** : Improved Japanese, Pusa hybrid-2 & Himjyoti  
**Guava**: Allahabad safeda and Lucknow 49, **Pomegrante**: Ganesh, Jhalore and Seedless, **Orange**: Nagpur and Kinnoo, **Lime**: Kagzi and Baramasi, **Aonla**: Banarshi, Krishana, Kanchan, Chakaiya, NA7, NA9 and NA10, **Ber**: Sonor, Thornless, Katha Alwar, Gola, and Seb  
**Sweet potato**: Pusa Safed, Pusa Lal, Pusa Sunhari & L-20  
**Ashwaghandha**: Ashwaghandha-20 and Ashwaghandha-134

### **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 (kothamolakolukulu), 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.**

Sugarcane : CO-419 , CO-62175, & CO-7804  
 Sunflower : Modern, KBSH-1,41,42, &44  
 Field bean : HA-3,4

Green gram : Selection – 4, BGS-9  
 Black gram : TAU – 1, DU – 1, T-9  
 Soybean : JS - 335  
 Jowar : DSV – 2  
 Rubber: RRIM-600 ,RRII 105, GT-1  
 Paddy: Mangala, Mukthi, KMP-105  
 Ragi: GPU-26,28,45 &48, HR-911, Indaf-5,9 PR-205  
 Redgram: TTB-7, BRG-1, 2, ICP-7035 , CPI-7035  
 Maize: Ganga-11, Deccan-103, NAC-1137, NAH-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)  
 Pigeon pea: PT-221, GS-1, ICP-8863 (Maruti),ICPL-87119 (Asha)WRP-1,TS-3-R ICPL-87(Pragati),  
 GCS-11-39 (Zone-2)

### **Gujarat**

**Cluster bean:** G.Guar-2.  
**Caster:** GAUCH-1, GCH-2, GCH-4, GCH-5, 6 or 7.  
**Pegion pea:** BDN-2, Viashali, ICPL-87, Gujarat-100.  
**Sesame:** GT-1 or GT-2.

### **Maharashtra**

**Red gram:** ICPL-87, Vipulla, BSMR-853, 736 for Madhya Maharashtra, ICPL-87119 (Asha), C-11 for Vidarbha.  
**Adsali Sugarcane:** CO-86032 (Neera), COM-88121, COM-0265 (Phule-265).  
**Banana:** Basrai, Shrimanti and Gradnine.  
**Mrug Banana:** Basrai, Shrimanti, Gradnine.

### **Madhya Pradesh**

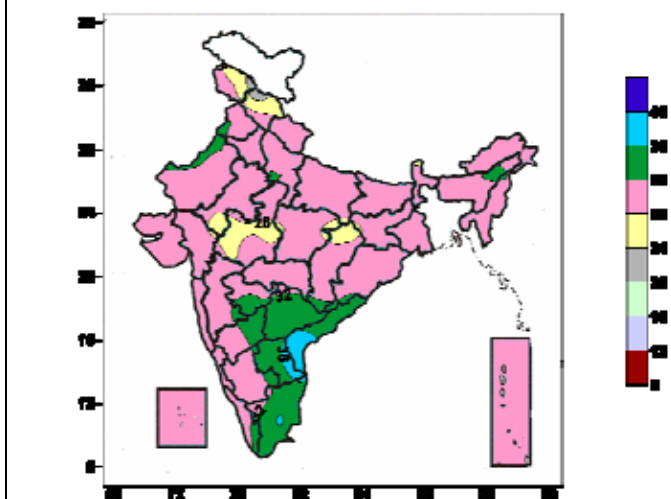
**Maize-** JM 12, JVM 421, JM 13, JM 216; **Hybrid varieties:** HPQM-1, Payonior 30R77, Sinzenta NK 30, Monsento Allrounder, Bioseed 9681;  
**Soybean:** JS 9560 (85 days), JS 9305 (90-95 days), JS 335 (110 days);  
**Urd:** JU 86, JU 3, T- 9 etc  
**Moong:** K851, Jowar moong-721, Pant moong-4, TJM-3,  
 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.  
**Short duration varieties for Jabalpur**  
**Paddy-**JR-201, Poornima, JRH-5, JRH-8 (Hybrid), IR-36, JR-503SV-1  
**Jowar-**JJ-741, JJ-938, JJ-1022, JJ-1041 and CSV-15  
**Arhar-**Laxmi, Pragti, Asha, Jagrati, JKM-7 and JKM-189  
**Soybean-**JS-95-60, JS-93-05, JS-97-52, JS-80-21, JS-335, NRC-37  
**Moong-**Pusa Vishal, K-851, JN-721, Jawahar-99-37, HUM-1, HUM-2, JM-98-90, PDM-11  
**Urd-**JU-2, JU-3, JU-86, T-9, JCB-623, LGB-884 and TAU-1

### **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.

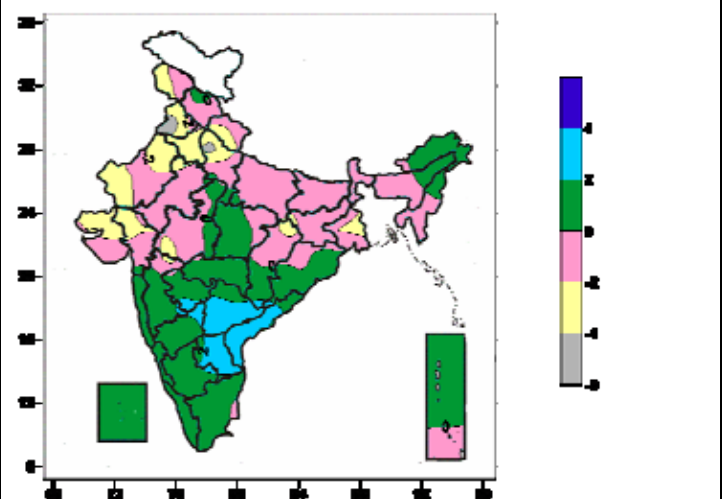
### Annexure III Contour maps for the week ending 17.08.2011

**Actual Mean Maximum Temperature (°C) in India for the week ending 17.08.11**



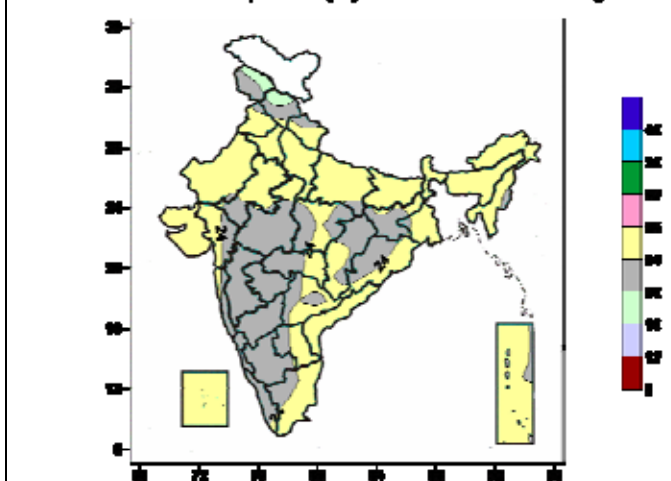
Actual Mean Maximum temperature ranged between 36 to 40°C over some parts of Coastal Andhra Pradesh, Raylaseema, Tamil Nadu, 32 to 36°C over most parts of Andhra Pradesh, Tamil Nadu, some parts of Punjab, West Rajasthan, West Uttar Pradesh, Assam, Chattisgarh, Orissa, North & South Interior Karnataka, Kerala, Madhya Maharashtra, Marathwada, 24 to 28°C over some parts of Jammu & Kashmir, Himachal Pradesh, East Rajasthan, East Uttar Pradesh, Sikkim, Madhya Pradesh, Chattisgarh, 20 to 24 °C over some parts of Jammu & Kashmir, Himachal Pradesh, 28 to 32°C over remaining parts of the country.

**Maximum Temperature (°C) Anomaly in India for the week ending 17.08.11**



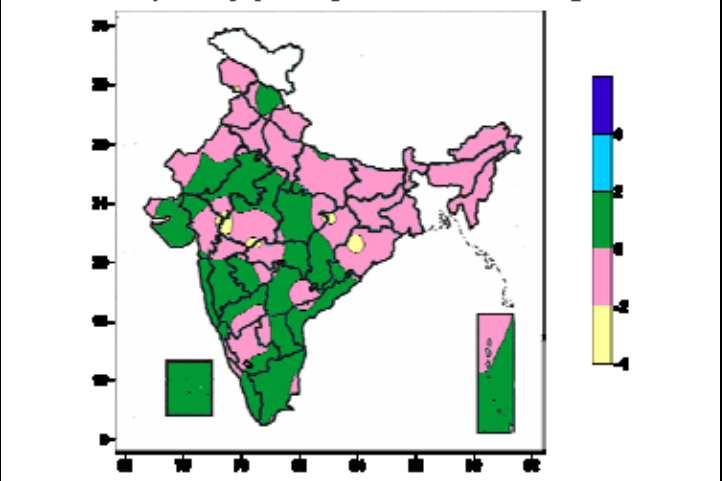
Actual Mean Maximum temperature anomaly between 2 to 4°C over most parts of Andhra Pradesh, some parts of North & South Interior Karnataka, Madhya Maharashtra, Marathwada, -2 to 0°C over most parts of Jammu & Kashmir, Himachal Pradesh, Rajasthan, East Uttar Pradesh, Bihar, Jharkhand, West Bengal & Sikkim, Assam, Manipur, Mizoram, Tripura, West Madhya Pradesh, some parts of Uttarakhand, West Uttar Pradesh, Meghalaya, Arunachal Pradesh, Nagaland, East Madhya Pradesh, Madhya Maharashtra, Chattisgarh, Orissa, Gujarat, Saurashtra & Kutch, Andaman & Nicobar Islands, -4 to -2°C over most parts of Haryana, Delhi, some parts of Jammu & Kashmir, Punjab, Rajasthan, Uttarakhand, West Uttar Pradesh, Jharkhand, Gangetic West Bengal, Chattisgarh, West Madhya Pradesh, Gujarat, Saurashtra & Kutch, -6 to -4°C some parts of Punjab, Haryana, West Uttar Pradesh, 0 to 2°C over remaining parts of the country.

**Actual Mean Minimum Temperature (°C) in India for the week ending 17.08.11**



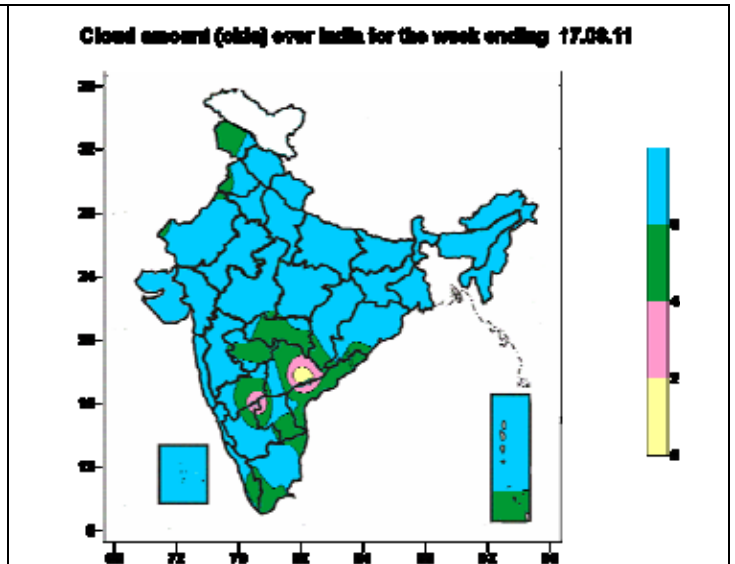
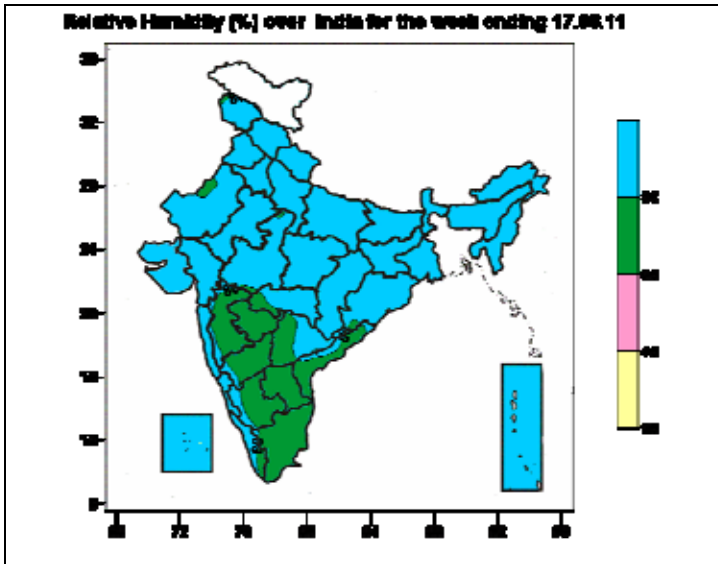
Actual Mean Minimum Temperature ranged between 20 to 24°C over most parts of Jharkhand, Madhya Pradesh, Maharashtra, Karnataka, Kerala, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Rajasthan, East Uttar Pradesh, Chattisgarh, Orissa, Telangana, Raylaseema, Tamil Nadu, Gujarat, 16 to 20°C Jammu & Kashmir, Himachal Pradesh, 24 to 28°C over remaining parts of the Country..

**Minimum Temperature (°C) Anomaly in India for the week ending 17.08.11**



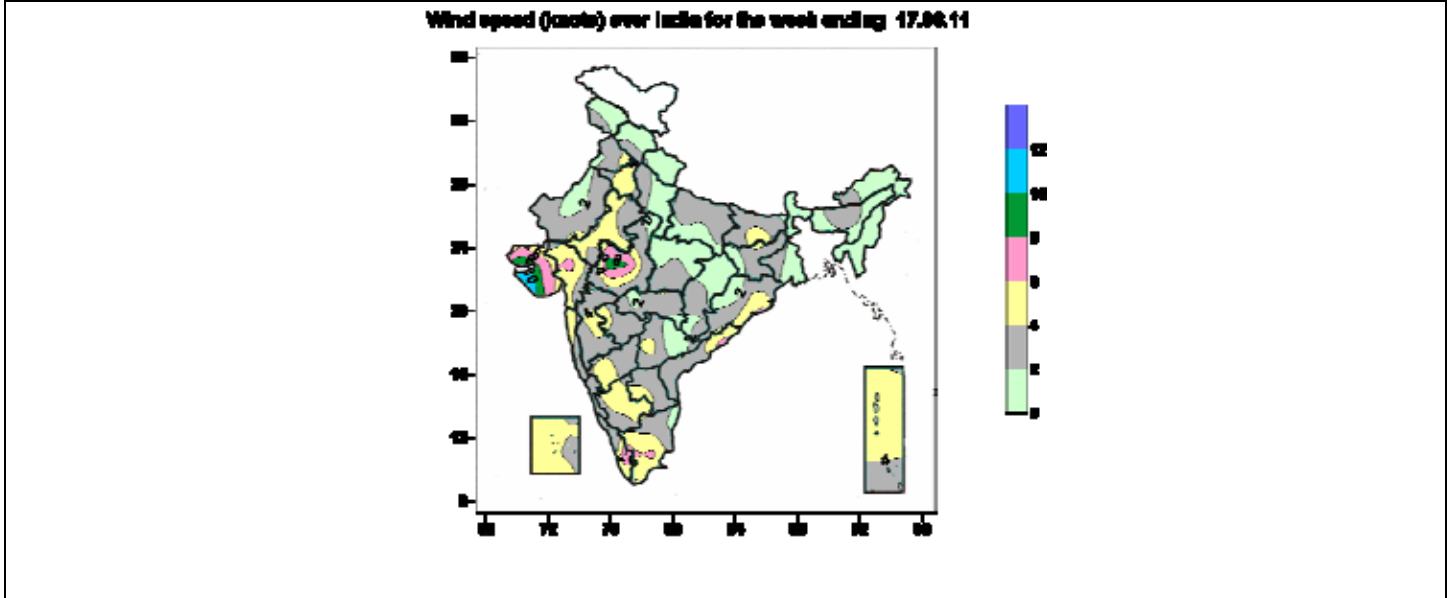
Minimum Temperature anomaly ranged -2 to 0°C over most parts of Jammu & Kashmir, Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh, East India, North East India, Chattisgarh, West Madhya Pradesh, Gujarat, South Interior Karnataka, some parts of Himachal Pradesh, Rajasthan, East Madhya Pradesh, Andhra Pradesh, Tamil Nadu, Kerala, Coastal & North Interior Karnataka, Maharashtra (except Konkan & Goa), Saurashtra, Andaman & Nicobar Islands, -4 to -2°C over some parts of Orissa, Chattisgarh, East Rajasthan, Madhya Pradesh, Vidarbha, Gujarat, 0 to 2°C over remaining parts of the Country.





Relative humidity between 60 to 80% over most parts of Andhra Pradesh, Tamil Nadu, South & North Interior Karnataka, Madhya Maharashtra, Marathwada, some parts of West Rajasthan, Orissa, Kerala, Vidarbha, West Madhya Pradesh, 80% and above over remaining parts of the country.

Cloud amount 4 to 6 okta over most parts of Jammu & Kashmir, Andhra Pradesh, Marathwada, Vidarbha, some parts of Punjab, West Rajasthan, Chattisgarh, Orissa, Madhya Pradesh, Tamil Nadu, Kerala, North & South Interior Karnataka, 2 to 4 okta over some parts of Andhra Pradesh, North & south Interior Karnataka, 0 to 2 okta over some parts of Telengana, 6 okta and above over remaining parts of the country.



Wind speed ranged between 8 to 10 knots over some parts of Saurashtra & Kutch, 6 to 8 knots over some parts of West Madhya Pradesh, Saurashtra & Kutch, Gujarat, Tamil Nadu, Kerala, 4 to 6 knots over most parts of Haryana, Delhi, East Rajasthan, Gujarat, Tamil Nadu, South Interior Karnataka, Lakshadweep, Andaman & Nicobar Islands, some parts of Punjab, West Rajasthan, West Madhya Pradesh, Bihar, Jharkhand, Orissa, Andhra Pradesh, Kerala, North Interior Karnataka, Maharashtra (except Vidarbha), Saurashtra & Kutch, 0 to 2 knots over most parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, West Uttar Pradesh, West Bengal, Sikkim, North East India, East Madhya Pradesh, Chattisgarh, some parts of Punjab, West Rajasthan, East Rajasthan, West Madhya Pradesh, Jharkhand, Orissa, Vidarbha, Telengana, Tamil Nadu, 2 to 4 knots over remaining parts of the country.