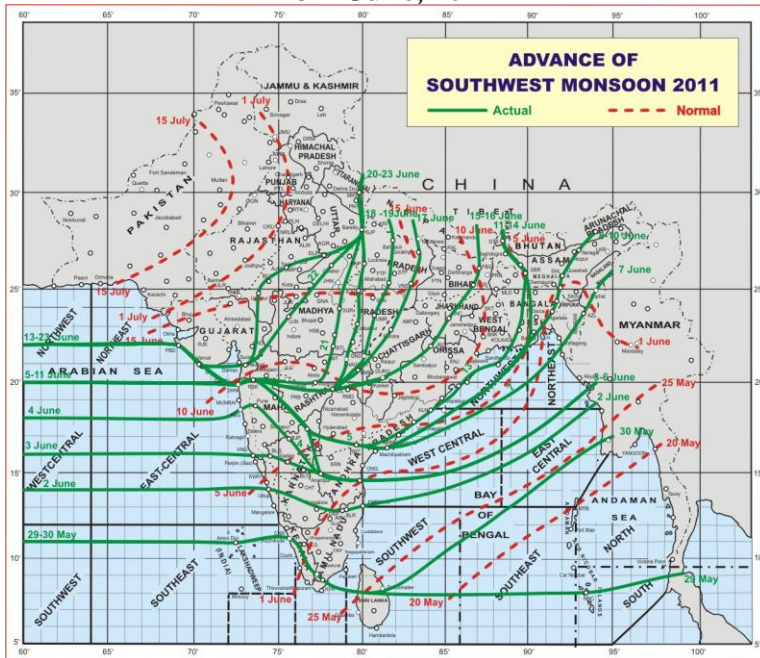


National Agromet Advisory Bulletin

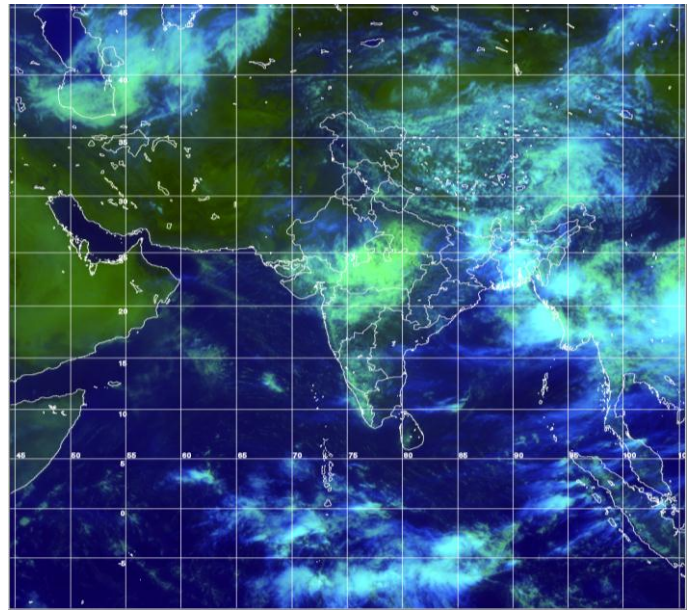
Thursday, 23rd June, 2011

(For the period 23rd to 27th June, 2011)

Northern limits of monsoon on
23rd June, 2011



Satellite image 0600 UTC Dated 24th June, 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

Southwest monsoon has further advanced in some more parts of Gujarat region, remaining parts of Madhya Pradesh, some more parts of west Uttar Pradesh and some parts of east Rajasthan. The northern limit of monsoon (NLM) passes through 22.0°N / 60.0°E, Veraval, Navsari, Udaipur, Tonk, Shahjahanpur, Mukteshwar and Lat 31.0°N / Long. 80.0°E. Condition are favourable for further advance of southwest monsoon over some more parts of Arabian sea and Gujarat state, east Rajasthan and some more parts of west Uttar Pradesh during next 48 hours.

Rainfall occurred in many districts over Kerala, Coastal Karnataka, Assam, Arunachal Pradesh, Bihar, Jharkhand, West Bengal, Himachal Pradesh, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Orissa and also Konkan region of Maharashtra. There are also chances for wide spread / fairly wide spread rains in West Madhya Pradesh, East Rajasthan, West Bengal and Sikkim, northeastern states and west coast.

Heavy to very heavy rainfall would occur at isolated places over East Rajasthan and West Madhya Pradesh during next 48 hours. Farmers are advised to provide adequate drainage facilities in the sown crop fields in these States. Isolated thundersqualls would occur over Punjab, Haryana, Delhi, Rajasthan and West Uttar Pradesh during next 24 hours. Farmers are advised to provide support to the standing crops to avoid lodging and also to store the harvested crops at safer places.

Due to high wind speed caused by depression over South Bengal during last week, scaffold of pointed gourd and bitter gourd got damaged in many places in New Alluvial Zone of West Bengal; to avoid further damage, farmers are advised to drain out the excess water from the fields and repair the structure. Otherwise, the crop condition is satisfactory in remaining States of the country.

Farmers are advised to undertake following agricultural operation in respective States.

Kerala: Continue transplanting of *virippu* rice and planting of black pepper, ginger, turmeric and vegetable crops. Arrange drainage facilities to avoid water stagnation.

Karnataka: Farmers in South Interior Karnataka are advised to undertake sowing of cotton, nursery sowing of rice, sowing of hybrid jowar, maize, ragi, sugarcane, sunflower, groundnut, red gram and horticultural crops. Farmers in North Interior Karnataka are advised to undertake nursery sowing of rice, *kharif* crops such as green gram, black gram, pigeon pea, jowar, soybean, maize, Bt. cotton and hybrid cotton, red gram, bajra, sesamum and groundnut. Farmers in Coastal Zone of Karnataka are advised to undertake transplanting of rice in SRI system and prepare nursery for late planting and new planting of cashew, mango, papaya and coconut.

Andhra Pradesh: Farmers in North Coastal Zone of Andhra Pradesh are advised to undertake sowing of groundnut, red gram, rice and sugarcane. Farmers in Krishna Godavari Zone are advised to take up sowing of black gram, green gram, red gram, cotton, jowar, maize, castor and groundnut. Farmers in south Coastal Andhra Pradesh are advised to continue sowing of maize, jowar, cotton, rice and pulse like green gram. Farmers in Rayalaseema are advised to continue sowing of groundnut. Farmers in Telangana are advised to continue sowing of rainfed crops like cotton, jowar, maize, castor, groundnut, pigeon pea, green gram etc.

Maharashtra: Farmers are advised to continue nursery sowing of rice and ragi over Konkan. Farmers in South Madhya Maharashtra and South Marathwada are advised to continue sowing of *kharif* jowar, groundnut, red gram, moong and soybean and nursery sowing of rice. In East Vidarbha, continue sowing of cotton and nursery sowing of rice. Farmers in North Marathwada and west Vidarbha are advised to keep their fields ready utilising recent rainfall and wait for optimum soil moisture to reach for carrying out sowing operation.

Gujarat: Farmers in Bhal and Coastal Zone are advised to undertake nursery sowing of rice. Farmers in North Gujarat Zone are advised to undertake land preparation and sowing of irrigated hybrid cotton and B.T. cotton. Farmers in North Saurashtra Zone and North Gujarat Zone are advised to undertake land preparation and keep the fields ready for for sowing of *kharif* crops.

Madhya Pradesh: Undertake land preparation and sowing of moong, urad, maize, soybean, sesame, groundnut, jowar groundnut, pigeon pea, *kharif* onion, brinjal, tomato and chilli etc.

Chhattisgarh: Undertake land preparation and nursery sowing of rice and also sowing of vegetables and planting of turmeric and ginger.

Jharkhand: Undertake sowing of *kharif* crops like rice, maize, groundnut, urd, arhar, sowing / transplanting of *kharif* vegetables like bhindi, bean, tomato, French bean, cauliflower, cabbage etc.

West Bengal: Farmers are advised to undertake field preparation and planting of ginger, turmeric and arum, sowing of *aus* rice, nursery sowing of *aman* rice and land preparation and sowing for pigeon pea.

Orissa: Continue nursery sowing of rice, sowing of maize, arhar, vegetables like okra, bitter gourd, cluster bean, cow pea and ridge gourd.

Bihar: Farmers are advised to undertake sowing of medium duration rice varieties in the nursery and sowing of *kharif* maize.

Sikkim: Undertake nursery sowing of rice.

Uttar Pradesh: Undertake nursery sowing of rice and sowing of maize, groundnut, jowar, bajra, moong, arhar and til.

East Rajasthan: Undertake sowing of pearl millet, sorghum, maize, soybean, chillies & cluster bean.

Uttarakhand: Undertake nursery sowing of rice, soyabean and finger millet and undertake transplanting of chilli and Simla mirch.

Northeastern States: Continue nursery sowing of *sali* rice, sowing of groundnut, pigeon pea, summer vegetables, arhar and planting of ginger, turmeric and papaya in Assam. Undertake sowing of groundnut, soyabean and nursery sowing of rice in Nagaland. Undertake nursery sowing of rice in Manipur. Undertake nursery sowing of *sali* rice in Meghalaya.

Advisories for Himachal Pradesh, Punjab, Haryana, Delhi and Jammu & Kashmir: Due to receipt of pre-monsoon showers in most of the districts during last week in Himachal Pradesh, postpone irrigation to standing crops. Farmers in these States are also advised to undertake land preparation utilizing pre-monsoon shower for *kharif* crops.

Advisories for Pests and Diseases: Due to favourable weather conditions, there are incidences of stem borer in rice, red palm weevil in coconut and internode and top shoot borer in sugarcane in Tamil Nadu, leaf rot in coconut in Kerala, shoot and fruit borer, red mites in brinjal and bhindi, early shoot borer in sugarcane in Andhra Pradesh, mealy bug in papaya, little leaf and malformed leaf in Karnataka, head borer in cabbage in Jharkhand and leaf curl and mosaic in chilli in Rajasthan. Farmers are advised to undertake appropriate plant protection measures to control the pests and diseases.

Distribution of rainfall (% departure from normal) for India during last week.

State/Districts	Actual	22.06.11	State/Districts	Actual	22.06.11	State/Districts	Actual	22.06.11
Arunachal Pradesh			Amritsar	3.3	-57	Udhampur	0.8	-96
Changlang	133.4	7	Barnala	0.8	-89	East Madhya Pradesh		
East Kameng	12.9	-86	Bhatinda	1.3	-78	Anuppur	110.4	107
East Siang	7.3	-96	Faridkot	0.0	-100	Balaghat	75.6	42
Lohit	81.2	-25	Fatehgarh Saheb	6.0	-19	Chhatarpur	162.7	536
Lower Subansiri	40.3	-50	Ferozpur	14.4	115	Chindwara	79.9	96
Papumpara	130.5	-6	Gurdaspur	27.7	163	Damoh	324.8	820
Tawang	63.0	-61	Hoshiarpur	23.3	91	Dindori	174.0	186
Tirap	122.0	-30	Jalandhar	29.7	302	Jabalpur	186.6	430
Upper Siang	208.6	-15	Kapurthala	14.0	460	Katni	95.0	203
Upper Subansiri	84.8	110	Ludhiana	39.6	360	Mandla	139.3	260
West Kameng	61.5	-62	Mansa	0.5	-95	Narsingpur	117.5	230
West Siang	**	**	Moga	48.0	674	Panna	173.3	485
Assam			Muktesar	0.0	-100	Rewa	225.4	644
Barpeta	46.5	-72	Nawashahar	3.3	-62	Sagar	194.2	388
Bongaigaon	26.8	-82	Patiala	9.9	83	Satna	210.9	532
Cachar	90.9	-29	Ropar	11.2	22	Seoni	136.5	141
Darrang	**	**	Sangrur	5.2	-27	Shahdol	119.6	229
Dhubri	72.4	-58	Mohali	2.0	-63	Sidhi	268.0	854
Dibrugarh	83.6	-16	TarnTaran	3.3	-57	Singrauli	110.8	304
East Garo Hills	166.9	-6	Haryana			Tikamgarh	140.4	635
East Khasi Hills	269.7	-32	Ambala	37.5	81	Umaria	212.0	584
Goalpara	54.0	-63	Bhiwani	0.0	-100	West Madhya Pradesh		
Golghat	29.6	-55	Chandigarh	36.0	14	Alirajpur	0.0	-100
Hailakandi	19.2	-83	Faridabad	11.0	120	Asoknagar	131.0	527
Jaintia Hills	**	**	Fatehabad	0.5	-91	Badwani	1.5	-94
Jorhat	25.5	-61	Gurgaon	10.5	38	Betul	52.0	32
Kamrup	3.4	-97	Hissar	0.8	-87	Bhind	51.0	325
Karbi Analog	44.0	-36	Jhajar	3.3	-17	Bhopal	38.0	10
Karimganj	47.8	-70	Jind	0.0	-100	Burhanpur	28.2	-29
Kokrajhar	87.3	-55	Katihah	0.8	-92	Datia	68.1	370
Lakhimpur	99.7	-26	Karnal	9.9	-28	Dewas	56.6	59
Morigaon	33.0	-63	Kurukshetra	3.8	-77	Dhar	2.6	-93
N.C.Hills	4.2	-95	Mahendragarh	11.0	22	Guna	63.4	189
Nowgong	69.8	-13	Palwal	0.8	-83	Gwalior	46.4	194
Nalbari	13.8	-92	Panchkkula	18.7	-20	Harda	41.8	17
Sonitpur	43.8	-48	Panipat	22.1	151	Hosangabad	105.6	198
Sibsagar	52.3	-15	Rewari	6.1	8	Indore	1.1	-97
Tinsukia	19.6	-80	Rohtak	4.9	-31	Jhabua	0.0	-100
Himachal Pradesh			Sirsa	0.0	-100	Khandwa	2.7	-92
Bilaspur	36.0	46	Sonepat	18.2	117	Khargone	0.0	-100
Chamba	32.8	91	Yamunanagar	27.2	-10	Mandsaur	19.6	-19
Hamirpur	62.9	102	New Delhi	21.7	55	Morena	0.9	-90
Kangra	33.6	45	Jammu & Kashmir			Neemuch	28.2	34
Kinnaur	1.1	-88	Anantnag	7.9	10	Raisen	111.7	212
Kullu	9.4	-46	Badgam	14.8	270	Rajgarh	53.7	106
Lahaul and Spiti	0.6	-93	Doda	2.8	-68	Ratlam	0.0	-100
Mandi	20.4	-28	Jammu	19.2	88	Sehore	85.0	148
Shimla	8.3	-71	Kathua	46.1	294	Shajapur	59.9	119
Sirmaur	63.1	121	Kupwara	1.5	-74	Sheopur Kalani	28.0	70
Solan	40.4	36	Ladakh(Leh)	0.3	-40	Shivpuri	87.2	343
Una	53.0	899	Pulwama	1.9	-55	Ujjain	14.4	-49
Punjab			Srinagar	0.6	-83	Vidisha	145.3	393

State/Districts	Actual	22.06.11
Chattisgarh		
Bastar	25.2	-61
Bijapur	37.9	-52
Bilaspur	74.4	33
Dantewara	34.2	-44
Dhamtari	56.4	12
Durg	95.3	91
Janjgir	63	13
Jashpurnagar	282.4	313
Kanker	73.7	15
Korba	64.2	5
Koriya	218.4	304
Kowardna	35	-32
Mahasumund	59.4	-4
Naraynpur	47	-23
Raigarh	67.3	15
Raipur	89	65
Rajandgaon	42.4	-29
Surguja	161.3	173
East Uttar Pradesh		
Allahabad	79.9	440
Ambedkar Nagar	56.3	168
Azamgarh	119.9	555
Bahraich	71.6	124
Ballia	68.7	131
Balrampur	41.2	1
Banda	75.7	388
Barabanki	43.2	202
Basti	51.7	78
Chandauli	112.0	493
Deoria	47.5	49
Faizabad	102.6	336
Farrukhabad	26.7	85
Fatehpur	25.4	124
Gazipur	103.9	352
Gonda	54.3	92
Gorakhpur	39.7	-2
Hardoi	8.4	-43
Jaunpur	96.9	506
Kannauj	5.0	-62
Kanpur City	51.1	344
Kanpur Dehat	91.3	914
Kaushambi	39.6	222
Kheri	7.9	-76
Kushi nagar	3.8	-90
Lucknow	17.7	34
Maharajganj	13.0	-72
Mau	150.0	484
Mirzapur	127.2	666
Pratapgarh	61.1	251
RaiBareilly	40.6	180
Sahuji Maharajnagar	143.2	1064
Sant Kabirnagar	31.0	-10
Sant Ravidas	166.0	778

State/Districts	Actual	22.06.11
Nagar		
Shrawasti	43.2	35
Sidharthnagar	7.7	-80
Sitapur	32.1	85
Sonbhadra	184.8	592
Sultanpur	83.7	375
Unnao	64.3	350
Varanasi	168.9	969
West Uttar Pradesh		
Agra	17.3	101
Aligarh	34.2	375
Auraiya	8.8	-5
Badaun	33.5	179
Baghat	21.9	164
Bareilly	18.3	3
Bijnor	26.6	127
Bulandsahar	20.7	159
Etah	38.0	258
Etawah	11.5	9
Firozabad	68.8	631
GBNagar	37.0	429
Ghaziabad	3.7	-61
Hamirpur	73.6	546
Jalaun	19.9	75
Jhansi	79.6	457
Jotirba Phule Nagar	68.0	631
Kanshiramnagar	77.3	629
Lalitpur	188.0	1075
Mahamaya Nagar	24.7	149
Mahoba	18.6	127
Mainpuri	66.7	541
Mathura	0.0	-100
Meerut	3.7	-73
Moradabad	40.1	204
Muzzaffarnagar	0.0	-100
Pilibhit	11.6	-51
Rampur	4.6	-81
Saharanpur	15.0	-26
Shahjahanpur	18.6	-1
UttaraKhand		
Almora	17.7	-41
Bageshwar	68.0	124
Chamoli	10.6	-63
Champawat	52.0	15
Dehradun	50.5	39
Garhwal Pauri	25.5	-1
Garhwal Tehri	14.4	-46
Haridwar	53.3	88
Nainital	52.7	-4
Pithorgarh	74.0	1
Rudraprayag	51.0	-10
Udham Sing Nagar	9.0	-79
Uttarkashi	31.8	-12
Bihar		

State/Districts	Actual	22.06.11
Araria	45.8	-24
Arwal	188.4	590
Aurangabad	136.9	506
Banka	78.3	112
Begusarai	185.0	314
Bhabua	147.5	400
Bhagalpur	93.9	67
Bhojpur	74.4	167
Buxar	122.8	339
Darbhanga	24.6	-36
East Champaran	20.3	-50
Gaya	266.8	896
Gopalganj	34.9	-11
Jahanabad	151.6	443
Jamui	83.4	133
Kathihar	106.8	60
Khagadia	85.8	89
Kishanganj	14.0	-87
Lakhisarai	99.2	144
Madhepura	45.7	-19
Madhubani	22.4	-53
Monghyar	0.6	-99
Muzaffarpur	46.9	13
Nalanda	242.3	657
Nawada	118.0	265
Patna	126.0	231
Purnea	50.2	-26
Rohtas	165.1	579
Saharsha	33.3	-32
Samstipur	49.3	7
Saran	134.5	306
Sheikpura	138.4	301
Sheohar	35.1	-21
Sitamarhi	14.1	-68
Siwan	107.6	232
Supaul	19.9	-59
Vaishali	76.0	136
West Champaran	25.0	-61
Jharkhand		
Bokaro	229.2	395
Chatra	165.2	376
Deoghar	148.7	240
Dhanbad	188.8	323
Dumka	174.9	231
East Singbhum	288.9	478
Garhwa	**	**
Giridih	151.3	231
Godda	**	**
Gumla	227.6	329
Hazaribagh	98.7	137
Jamtara	233.4	318
Khunti	**	**
Koderna	96.0	155
Latehar	265.0	713
Lohardagga	430.1	849
Pakur	260.0	328

State/Districts	Actual	22.06.11
Palamau	206.4	607
Ramgarh	270.4	548
Ranchi	365.8	745
Sahebganj	37.4	-49
Seraikela	**	**
Simdega	199.8	289
West Singhbhum	195.0	297
East Rajasthan		
Ajmer	1.7	-80
Alwar	21.7	133
Banswara	4.3	-81
Baran	66.1	244
Bharatpur	17.0	47
Bhilwara	5.4	-60
Bundi	3.0	-82
Chittorgarh	8.3	-44
Dausa	10.0	-13
Dholpur	33.6	154
Dungarpur	0.2	-99
Jaipur	13.2	31
Jhalawar	39.6	76
Jhunjhunu	25.8	117
Karauli	24.6	105
Kota	43.3	130
Pratapgarh	1.9	-93
Rajsamand	0.0	-100
Sawai Madhopur	37.6	198
Sikar	9.8	-3
Sirohi	0.1	-99
Tonk	25.8	85
Udaipur	0.0	-100
West Rajasthan		
Barmer	0.0	-100
Bikaner	5.9	-27
Churu	31.7	199
Hanumangarh	30.3	230
Jaisalmer	0.0	-100
Jalore	0.0	-100
Jodhpur	3.6	-48
Nagaur	12.1	25
Pali	0.5	-95
Sri Ganganagar	5.1	-33
Gujarat Region		
Ahmedabad	1.6	-87
Anand	0.0	-100
Banaskantha	0.0	-100
Baroda	0.0	-100
Broach	0.4	-98
DNH	3.2	-93
Dahod	0.0	-100
Daman	4.8	-89
Dangs	3.0	-93
Gandhinagar	0.0	-100
Kheda	0.0	-100
Mehsana	0.0	-100
Narmada	0.0	-100

State/Districts	Actual	22.06.11
Navsari	14.4	-51
Panchmahal	0.0	-100
Patan	0.0	-100
Sabarkantha	0.0	-100
Surat	1.6	-93
Tapi	0.0	-100
Valsad	10.4	-73
Saurashtra, Kutch & Diu region		
Amreli	0.5	-97
Bhavnagar	0.0	-100
Diu	48.8	228
Jamnagar	20.8	66
Junagarh	139.9	403
Kutch	1.2	-81
Porbandar	121.1	463
Rajkot	23.7	74
Surendranagar	0.0	-100
Maharashtra		
Konkan & Goa		
Goa	319.4	25
Mumbai	48.8	-72
Raigad	165.2	-14
Ratnagiri	315.3	33
Sindhudurg	313.8	19
Thane	106.4	-18
Madhya Maharashtra		
Ahmednagar	0.2	-99
Dhule	0.3	-99
Jalgaon	3.6	-90
Kolhapur	95.5	-1
Nandurbar	11.5	-66
Nasik	17.0	-60
Pune	27.6	-23
Sangli	39.4	44
Satara	96.0	167
Solapur	5.6	-76
Marathwada		
Aurangabad	0.9	-97
Beed	10.0	-69
Hingoli	72.2	10
Jalna	1.2	-97
Latur	3.4	-92
Nanded	33.6	-28
Usmanabad	8.3	-75
Parbhani	13.1	-73
Vidarbha		
Akola	9.7	-78
Amraoti	12.3	-70
Bhandara	43.5	-8
Buldhana	2.2	-95
Chandrapur	32.0	-41
Gadchiroli	31.7	-52
Gondia	52.1	1
Nagpur	31.0	-35
Wardha	17.7	-67
Washim	30.1	-42

State/Districts	Actual	22.06.11
Yeotmal	27.7	-51
Orissa		
Angul	122.3	91
Balasore	208.2	205
Bargarh	64.3	13
Bhadrak	208.6	230
Bolangir	54.0	-17
Boudh	60.4	18
Cuttack	145.4	104
Deogarh	66.9	-1
Dhenkanal	126.1	88
Gajapati	30.1	-46
Ganjam	16.4	-63
Jagatsingpur	126.0	67
Jajpur	284.2	281
Jharsuguda	81.5	20
Kalahandi	83.9	14
Kandhamal	85.9	67
Kendrapara	221.7	297
Keonjhar	145.6	133
Khurda	74.6	23
Koraput	33.7	-39
Malkangiri	52.8	-5
Mayurbhanj	220.3	169
Nawapara	34.8	-31
Nawarangpur	35.7	-43
Nayagarh	57.9	-16
Puri	64.7	18
Rayagada	44.9	-12
Sambalpur	92.8	37
Sonepur	64.9	19
Sundargarh	139.8	116
West Bengal		
GWB		
Bankura	385.1	692
Birbhum	190.3	265
Burdwan	221	397
Hooghly	179.3	253
Howrah	184.9	202
East Midnapore	213.9	197
Murshidabad	195.5	283
Nadia	172.8	151
24 Pargana (N)	211.3	213
Purulia	316.5	515
24 Pargana (S)	200	118
West Midnapore	309.4	378
SHWB		
Cooch Behar	55.8	-71
Darjeeling	186.2	34
East Sikkim	107.2	-9
Jalpaiguri	105.5	-42
Malda	96.2	61
North Dinajpur	65.2	-35
North Sikkim	79.3	-37
South Dinajpur	67	-16
South Sikkim	102.5	-13

State/Districts	Actual	22.06.11
West Sikkim	**	**
Karnataka		
Coastal Karnataka		
Dakshin Kannada	111.8	-56
Udupi	143.4	-50
Uttar Kannada	209.3	2
North Interior Karnataka		
Bagalkote	3.6	-77
Belgaum	30.6	3
Bidar	13.2	-64
Bijapur	1.5	-92
Dharwad	31.0	18
Gadag	5.2	-67
Gulbarga	5.2	-81
Haveri	34.7	27
Koppal	0.3	-98
Raichur	0.0	-100
Yadgir	1.5	-94
South Interior Karnataka		
Bangalore Rural	5.4	-44
Bangalore Urban	0.4	-96
Bellary	3.0	-79
Chamarajnaragar	11.3	-4
Chichballapur	0.2	-98
Chickmagalur	48.4	-52
Chitradurga	6.5	-28
Davangere	18.1	17
Hassan	16.6	-48
Kodagu	128.8	-10
Kolar	0.5	-92
Mandya	2.0	-78
Mysore	14.6	-18
Ramnagara	0.0	-100
Shimoga	85.2	-9
Tumkur	1.6	-85
Kerala		
Alappuzha	85.5	-30
Kannur	175.2	-18
Ernakulam	157.5	4
Idukki	184.7	25
Kasaragod	157.4	-36
Kollam	71.3	-25
Kottayam	137.5	3

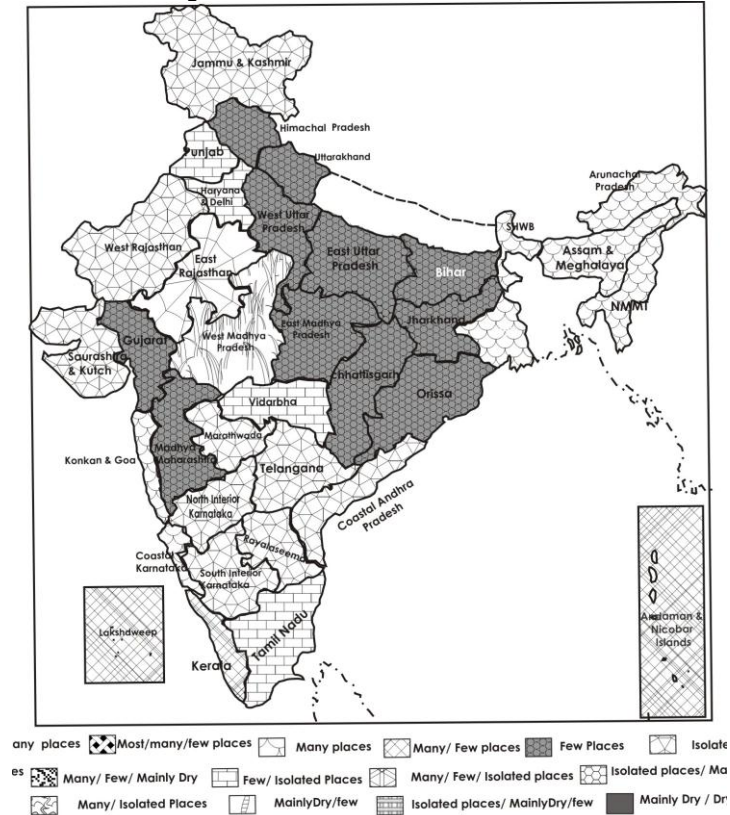
State/Districts	Actual	22.06.11
Kozhikode	133.8	-36
Malappuram	137.4	-12
Palakkad	139.5	22
Pathanamthitta	84.6	-29
Thiruvananthapuram	31.3	-47
Thrissur	138.1	-9
Wyanad	174.6	2
Tamil Nadu		
Chennai	0.0	-99
Coimbatore	13.4	91
Cuddalore	0.0	-100
Dharmapuri	0.0	-100
Dindigul	0.6	-92
Erode	1.6	-59
Kanchipuram	0.0	-99
Kanyakumari	9.1	-73
Karur	0.0	-100
Krishnagiri	0.0	-100
Madurai	0.0	-100
Nagapattinam	0.0	-100
Namakkal	0.9	-88
Nilgiris	62.0	35
Perambalur	0.0	-100
Puducherry	0.3	-95
Pudukottai	1.4	-87
Ramanathapuram	0.0	-100
Salem	2.4	-82
Sivaganga	0.0	-100
Thanjavur	0.0	-100
Theni	18.0	372
Tirunelveli	7.0	-16
Tiruvallur	0.0	-100
Tiruvannamalai	0.0	-100
Tiruvarur	0.0	-100
Toothukudi	0.0	-100
Trichy	0.0	-100
Vellore	0.0	-100
Villupuram	0.0	-100
Virudhunagar	0.0	-100
Andhra Pradesh		
Coastal Andhra Pradesh		
East Godavari	8.4	-78

State/Districts	Actual	22.06.11
Guntur	0.6	-97
Krishna	5.4	-81
Nellore	0.2	-98
Prakasam	0.0	-100
Sirkakulam	7.6	-82
Visakhapatnam	3.5	-90
Vizianagram	2.8	-92
West Godavari	9.6	-74
Telangana		
Adilabad	23.4	-61
Hyderabad	10.2	-63
Karimnagar	15.7	-64
Khammam	15.6	-64
Mehabubnagar	8.3	-53
Medak	8.8	-78
Nalgonda	1.8	-92
Nizamabad	21.3	-56
Rangareddy	4.7	-83
Warangal	12.8	-69
Rayalaseema		
Anantapur	0.7	-92
Chittoor	0.1	-99
Cuddapah	0.0	-100
Kurnool	0.5	-97

LEGEND

- EXCESS 20% OR MORE
- NORMAL +19% TO - 19%
- DEFICIENT - 20% TO - 59%
- SCANTY - 60% TO - 99%
- NO RAIN - 100%
- ** DATA NOT AVAILABLE

Weather Forecast (Valid upto 1430 hours of 26th June, 2011)



Major Feature of Weather Forecast upto 1430 hours IST of 26th June, 2011

- Widespread rain/thundershowers would occur over west Madhya Pradesh and east Rajasthan during next 48 hours and decrease thereafter.
- Fairly widespread rain/thundershowers would occur over West Bengal & Sikkim, northeastern states and west coast.
- Scattered rain/thundershowers would occur over Uttarakhand, Uttar Pradesh and east Madhya Pradesh.
- Isolated rain/thundershowers would occur over rest of the country.

Weather Warning

- Heavy to very heavy rainfall would occur at isolated places over east Rajasthan and west Madhya Pradesh during next 48 hours.
- Isolated thundersqualls would occur over Punjab, Haryana, Delhi, Rajasthan and west Uttar Pradesh during next 24 hours.

Weather Outlook up to 1430 hours IST of 28th June, 2011

- Decrease in rainfall activity over central India.
- Slight increase in rainfall activity over east India.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Most of the districts of the States of the region received rain during last week.
- **Rainfall Forecast:** Fairly widespread rain / thundershowers would occur over West Bengal and Sikkim and scattered over remaining States of the region.
- **Advisories:**
 - As most of the districts of all the States of the region received rainfall during last week, postpone irrigation to the standing crops in these States. As fairly wide spread rain / thundershowers would occur over West Bengal and Sikkim, farmers are also advised to postpone intercultural operation and application of plant protection measures to the standing crops.
 - In Jharkhand prepare nursery bed for long duration rice varieties utilizing the recent monsoon rain.
 - Farmers in Western Plateau Zone of Jharkhand are advised to start sowing of *kharif* crops like rice, maize, groundnut, urd, arhar etc. utilizing monsoon rain. Prepare the land for sowing / transplanting of *kharif* vegetables like bhindi, bean, tomato, French bean, cauliflower, cabbage etc.
 - Undertake nursery sowing of rice, sowing of maize, arhar, vegetables like okra, bitter gourd, cluster bean, cow pea and ridge gourd in Orissa utilizing monsoon rain.
 - Farmers in Bihar are advised to undertake sowing of medium duration rice varieties in the nursery utilizing recent monsoon rain. These varieties can be sown till 30th June. Prepare nursery @ 1/10th of the total area to be transplanted. Farmers in this State are also advised to sow *kharif* maize crop.
 - Farmers in West Bengal are advised to undertake field preparation and planting of ginger, turmeric and arum, sowing of *aus* rice, nursery bed preparation of *aman* rice and land preparation and sowing for pigeon pea. Drain out excess water from already planted field of ginger and turmeric and carry out earthing up after current spells of rain.
 - Due to high wind speed caused by depression over South Bengal during last week, scaffold of pointed gourd and bitter gourd got damaged in many places in New Alluvial Zone of West Bengal; to avoid further damage, farmers are advised to drain out the excess water from the fields and repair the structure.
 - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
 - Under prevailing weather tea may be infested by mites in Hill Zone of West Bengal; spray Dicofol @ 1 ml / litre of water. Drainage channels are to be maintained. Cucurbitaceous crops may also be infested by fruit fly. The crop may be baited with any contact insecticide like Carbaryl with a mixture of 1 g Carbaryl and 10 g sugar in 100 litres of water.
 - Due to cloudy weather and high humidity, fungal collar rot may be seen in New Alluvial Zone of West Bengal in yam. Keep the field weed free and clean and apply Carbendazim (1 g) and Thiram (2 g) together per litre of water. In this weather, attack of powdery mildew may also be seen in sweet gourd. If spots like white powder are seen on the leaves, stems and fruits, apply 1 ml Tridomorf or 1 ml Dinocap per litre of water.
 - Under present weather condition there is a chance of attack of Bihar hairy caterpillar and mites in jute in Old Alluvial Zone of West Bengal. To control mite attack, spray Dicofol @ 2 ml / litre of water and to control hairy caterpillar, either caterpillars should be collected and burnt or spray Monocrotophos @ 1 ml / litre of water.
 - Under prevailing weather condition mite attack can be found in jute field in Terai Zone of West Bengal; spray Dicofol (Kelthane) @ 2 ml / litre of water. In this weather condition cut worm may be a problem. To manage cut worm wet the soil with Chlorpyrifos @ 3 ml / litre of water at morning. Semi looper is also a problem in this weather condition; spray Endosulphan @ 2 ml / litre or chlorpyrifos @ 2.5 ml / litre of water. Vine and fruit rot may also be a problem for pointed gourd; to manage this disease spray mancozeb 64% + matalaxy 18% @ 1.5 g / litre of water.
 - Weather is favourable for incidence of fruit and shoot borer of brinjal in Coastal Saline Zone of West Bengal; spray Spinosad @ 2.5 ml / litre or Dimilin @ 0.75 g / or Padan @ 1g / litre of water at 7-10 days interval.
- Decrease in rainfall activity over central India.

- Undertake plant protection measures after current spells of rain in West Bengal and on a non-rainy day in remaining States of the region.
- Stages of major crops are mentioned in Annexure I.
- **Animal Husbandry**
 - Due to frequent showers for last few days in Coastal Saline Zone of West Bengal there is a chance of fungal diseases in poultry birds. To prevent it poultry litter should be rearranged by mixing lime in the litter. RD vaccine should be given immediately to the chicks which are 7 days old. To prevent coxidirosis disease spray antibiotic solution named Kohrsolin-TH in the poultry house.
 - At the time of preparation of pond in Old Alluvial Zone of West Bengal, lime @ 40 kg and farm yard manure @ 1000 Kg should be applied per bigha per 3 ft depth. In nursery ponds, stocking of fish seeds @ 2-3 lakhs and fry @ 40,000 per bigha per 3 ft depth can be done. Periodic vaccination viz. FMD, HS & BQ may be carried out to protect the dairy animals. Clean and hygienic water should be fed to dairy animals.
 - To avoid hot humid stress in livestock provide clean drinking water and supplement with mineral mixture. Vaccination should be administered in all domestic animals in this month in South Eastern Plateau Zone of Jharkhand.

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

- **Realised Rainfall:** Most of the districts of Arunachal Pradesh and Assam received rain during last week.
- **Rainfall Forecast:** Fairly widespread rain / thundershowers would occur over the region during the period.
- **Advisory:**
 - As fairly widespread rain / thundershowers would occur over the states of this region, farmers are advised to postpone irrigation, intercultural operation and application of fertilizer and plant protection measures to the crops.
 - In Assam, sowing of groundnut, pigeon pea, summer vegetables, arhar and planting of ginger, turmeric and papaya may be carried out. Farmers are also advised to undertake land preparation and to sow seeds of *sali* rice in nursery beds.
 - Farmers in Mid Tropical Hill Zone in Nagaland are advised to start sowing of groundnut, soyabean and prepare nurseries for rice crop.
 - As there is good rainfall in Sub-Tropical Plain Zone of Manipur, sowing of rice seeds may be started after soaking and incubation.
 - Undertake nursery preparation for *sali* rice utilizing recent monsoon rainfall in Ri-bhoi, Jaintia and Khasi Hill districts of Meghalaya.
 - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
 - In Lower Brahmaputra Valley Zone in Assam, undertake top dressing of *kharif* maize at the knee high stage and start earthing up after current spells of rain. As maize crop is very sensitive to water logging, make arrangement for proper drainage.
 - In Mild Tropical Plain Zone in Tripura, earthing up must be done to avoid lodging of maize due to heavy wind.
 - Prevailing high humidity in Mild Tropical Hill Zone of Mizoram, favours the incidence of jassids and hoppers in *okra*; farmers are advised to take prophylactic measure spraying neem oil and garlic mixture at fortnightly intervals.
 - In central Brahmaputra zone in Assam, as pesticide application is not possible in rainy weather, arrangement of Bamboo perch may be made as an effective measure to control the hairy caterpillar and semi-looper in jute through predatory birds.
 - In Mizoram, due to rainfall, infestation of trunk borer is observed in Khasi Mandarin; farmers are advised to monitor and kill larva by inserting a wire inside the tunnel. Also, due to fluctuation of temperature and high humidity with occasional rainfall, incidence pseudo stem weevils is more in banana; farmers are advised to remove unwanted suckers, dry and infected leaves, sheaths and petioles. Weather is also favourable for powdery mildew on summer vegetables; if infestation is severe farmers are advised to spray wettable sulphur @ 1500 g / ha at 10 days interval.

- Apply plant protection measures after current spells of rain.
- Stages of major crops are mentioned in Annexure I.

Animal Husbandry:

- Vaccination may be given to broiler poultry to control ranikhet disease in Ri-Bhoi, South Garo, East Garo and West Garo Districts of Meghalaya. Farmers of Ri-Bhoi, West Khasi and East Khasi Hill Districts of Meghalaya are advised to release fish prawn in their ponds during this period.
- Immunizations against FMD, HS and BQ (black quarter) in cattle & buffaloes and swine fever in pigs may be carried out during pre-monsoon season in Central Brahmaputra Valley Zone in Assam. Vaccination (RDF1) against Ranikhet disease in one week old chicks and against Gamboro disease in two weeks old chicks may be also carried out.

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

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

- **Realised Rainfall:** Most of the districts in Coastal Karnataka and Kerala, Belgaum, Haveri and Dharwad in North Interior Karnataka, Chickmagalur, Kodagu and Shimoga in South Interior Karnataka and Nilgiris in Tamil Nadu received good rainfall. No significant rainfall occurred in remaining parts of the region.
- **Rainfall Forecast:** Fairly widespread rain is likely at Coastal Karnataka after 24 hours and Kerala after 48 hours. Scattered / isolated rain/thundershowers would occur over the rest of the region.
- **Advisories:**
 - Due to receipt of monsoon showers during last week along with forecast rains, farmers are advised to continue transplanting for *virippu* rice, new planting of black pepper, ginger, turmeric and vegetable in Kerala, transplanting of *Kuruvai* rice, *khariif* vegetables in Tamil Nadu, irrigated cotton, nursery sowing of rice, sowing of hybrid jowar, maize, ragi, sugarcane, sunflower, ground nut, red gram and horticulture crops in Karnataka and sowing of groundnut in Rayalaseema.
 - Farmers in Southern Telangana Zone of Andhra Pradesh are advised to take up sowings of rainfed crops like cotton, jowar, maize, castor, groundnut, pigeon pea, green gram, etc., only after receiving a cumulative rainfall of 60-75 mm, to have better germination and crop establishment.
 - Farmers in Krishna Godavari Zone of Andhra Pradesh are advised to take up the dry and irrigated dry crops and suitable varieties pertaining to different irrigated dry crops viz., cotton, jowar, maize, castor, groundnut, redgram, greengram and blackgram, only after receiving monsoon rains, since S W monsoon may be delayed.
 - Farmers in Southern Zone of Kerala are advised to undertake weeding in the transplanted paddy during the week, as light rains are expected in the coming week.
 - Farmers in Coastal Zone of Karnataka are advised to transplanting rice seedlings in SRI method of paddy cultivation, since it is very difficult to transplant the paddy seedling in wetland due to shortage of water. It is the right time for application of fertilizer and farm yard manure in the paddy field based on soil test and prepare the paddy nursery for late planting. It is the ideal time for planting cashew, mango, papaya and coconut.
 - Farmers in the Southern Zone of Tamil Nadu are advised to take propping in sugarcane and banana, as the wind speed is high.
 - As there has been continuous rain since the last week and also there is forecast for receiving light to moderate rainfall for the week ahead, farmers in the High Altitude Hill Zone of Tamil Nadu are advised to ensure good drainage and no water logging in fields and irrigation can be scheduled accordingly. Farmers are advised to give protective sprays to check the spread of diseases due to the prevailing wet conditions. Sowing of seeds can be taken up utilizing the received rainfall.
 - Stem borer incidences are noticed in the paddy crops in the North Eastern Zone of Tamil Nadu. Farmers are advised to apply suitable insecticides to control them.

- The expected weather is conducive for boll worm incidence in cotton, moth incidence in paddy, maize, cotton and vegetable crops and internode borer in sugarcane in the Western Zone of Tamil Nadu. Set pheromone trap to monitor boll worm, light trap to monitor moth incidence and release *Trichogramma* egg parasites to control internode borer.
- The prevailing weather with high temperature and moderate humidity is conducive for the incidence of aphids and in cotton, leaf miner in groundnut and mealy bug in rice in the South Zone of Tamil Nadu. Spray monocrotophos 750 ml / ha to control leaf miner, imidachloprid 100 ml / ha to control aphids and phosalone 2.5 l / ha to control boll worms.
- Leaf rot is observed to be severe in certain pockets in coconut in the Southern Zone of Kerala. Remove the rotten portions from the spear and two adjacent leaves and pour 300ml of fungicidal solution (Hexaconazole 5EC-2ml or Mancozeb 3g in 300ml of water) at the base of the spear.
- Incidence of shoot and fruit borer, red mites is noticed in brinjal and bhendi is noticed in the Scarce Rainfall Zone of Rayalaseema. To control Shoot and fruit borer clip the infested shoots and destroy and spray Profenophos @ 2 ml per litre of water and to control red mites spray Dicofol @ 5 ml or Wettable Sulphur @ 3 g per litre of water.
- Incidence of early shoot borer is noticed in sugarcane in Southern Telangana Zone of Andhra Pradesh. Undertake protection measures to prevent its attack.
- Undertake plant protection measures after spells of rain in Kerala and Karnataka and on a non- rainy day in Tamil Nadu.
- Varieties are mentioned in Annexure II.
- **Animal Husbandry**
- Vaccinate before onset of monsoon the animals (cow, buffalow, bullock) against Foot and mouth disease (FMD vaccination), BC vaccination against Black Quarter and also vaccinate against Haemorrhagic Septcaemia. Vaccinate (ET vaccine) sheep and goats against Enterotoxemia before onset of monsoon.
- **Major Crops:**
- *Kuruvai* rice (transplanting/early vegetative), cotton (pod formation), vegetables (nursery / transplanting), sugarcane (vegetative/ grand growth), groundnut(pod formation) in Tamil Nadu.
- Sugarcane (ratooning/vegetative), mango (fruiting / harvesting), hybrid jowar, maize, ragi, sugarcane, sunflower, groundnut, red gram and horticulture crops (sowing) in Karnataka.
- Maize, jowar, cotton, sugar-cane and pulse crops like green gram (sowing), rice (sowing/transplanting) in Andhra Pradesh.
- *Virippu* rice (transplanting / early vegetative) and black pepper, ginger, turmeric and vegetable crops (sowing / planting) in Kerala.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised rainfall:** Junagarh and Porbandar districts in Saurashtra and Kutch and most of the districts of Konkan, Kolhapur, Sangli and Satara districts in Madhya Maharashtra, Hingoli and Nanded districts in Marathwada, Bhandara, Chandrapur, Gadchiroli, Gondia, Nagpur and Washim districts in Vidarbha received rain during last week.
- **Rainfall forecast:** Fairly wide spread rain over Konkan and Goa, scattered rain over Madhya Maharashtra and Gujarat region and isolated rain over Marathwada and Saurashtra and Kutch would occur during the period. Isolated rain is likely to occur over Vidarbha during next 48 hours and scattered thereafter. Condition are favourable for further advance of southwest monsoon over some more parts of Gujarat state.

Advisory:

- As significant rain occurred during last week over Junagarh and Porbandar districts in Saurashtra and Kutch and most of the districts of Konkan, Kolhapur, Sangli and Satara districts in Madhya Maharashtra, Hingoli and Nanded districts in Marathwada, Bhandara, Chandrapur, Gadchiroli, Gondia, Nagpur and Washim districts in Vidarbha, postpone irrigation to the already sown crops

in these districts. As fairly wide spread rain would occur over Konkan and Goa, postpone intercultural operation and application of fertilizer and plant protection measures to the crops.

- With the advancement of monsoon, farmers in Marathwada and Vidarbha are advised to undertake sowing of *kharif* jowar, groundnut, cotton, red gram, green gram and soybean after ensuring optimum moisture in the field. As there was adequate rain in east Vidarbha, farmers are advised to complete the nursery sowing of *kharif* rice.
- Farmers in Madhya Maharashtra are advised to undertake sowing of BT cotton at 90X90 or 120X60 cm distance with the help of optimum soil moisture in the field.
- Taking advantage of prevailing weather, farmers of Madhya Maharashtra and Marathwada are advised to undertake preparatory tillage in view of planting of *adsali* sugarcane from 15th July onwards.
- Farmers in South Gujarat Heavy Rainfall Zone are advised to carry out sowing of *kharif* crops utilising recent rainfall. Also prepare the seedbeds for sowing of improved varieties of rice.
- Farmers in Middle Gujarat Zone and Bhal and Coastal Zone are advised to raise nursery for transplanted rice.
- Due to mainly cloudy sky and no rain forecast, farmers in North Gujarat Zone are advised to carry out gap filling and apply light irrigation for better germination in already sown groundnut, hybrid cotton / BT. cotton and also arrange for preparation of nurseries of *kharif* vegetable viz., tomato, brinjal and chilli.
- Farmers in North Saurashtra Zone of Gujarat are advised to prepare land and keep the inputs ready for sowing of *kharif* groundnut, *kharif* bajra, pulses, sesamum, B.T.Cotton etc.
- As the wind speed is expected to increase beyond 19 km / hr in South Gujarat Zone, susceptible crops like banana and sugarcane need to be protected with great care. For banana, staking may be provided and for sugarcane propping may be done to counteract the effect of wind speed.
- Farmers in South Saurashtra Zone of Gujarat are advised to arrange the inputs like fertilizers, seeds and pesticides well in time and may start sowing of pre-monsoon groundnut and cotton, if irrigation facilities are available.
- Due to cloudy and rainy weather there is increase in attack of fruit and apex borer in brinjal in western Maharashtra scarcity zone; spray 4% Neemark or Fipronil @ 15 ml or Trizophos @ 20 ml in 10 liters of water.
- Due to frequent light rainfall in South Gujarat Heavy Rainfall Zone, incidence of fruit borer and blight and blast may occur on vegetables. For control of fruit borer farmers are advised to spray Polytrin 'C' @ 0.1% or Spinosad @ 0.2%, while for control of blight and blast spray Mancozeb or Tubaconazole @ 0.2% or Ridomil @ 0.25%.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rain occurred in east Madhya Pradesh and also in Ashoknagar, Betul, Bind, Datia, Dewas, Guna, Gwalior, Hoshangabad, Sehore, Raisen, Rajgarh, Shajapur, Sheopur Kalani, Shivpuri and Vidisha districts of West Madhya Pradesh. Rain occurred in Chattisgarh except Baster and Dantewara.
- **Rainfall Forecast:** Wide spread / fairly wide spread rain will occur over west Madhya Pradesh scattered rain will occur over east Madhya Pradesh and Chattisgarh. Heavy to very heavy rainfall would occur at isolated places over west Madhya Pradesh during next 48 hours.
- **Advisory:**
 - As monsoon has been advanced in Madhya Pradesh, farmers in Madhya Pradesh are advised to undertake land preparation and keep the inputs ready for nursery sowing of rice, sowing of moong, urad, maize, groundnut, pigeon pea, *kharif* onion, brinjal, tomato and chilli. Farmers in Chhattisgarh are advised to undertake land preparation and nursery sowing of rice, vegetables and planting of turmeric and ginger.

- As rainfall is received during last week and there is possibility of rainfall during next two days in Bundelkhand Zone, hence farmers are advised to start the sowing of soybean, maize, moong, urd, sesame, groundnut and jowar.
- As rainfall is received during the week in Kymore Plateau and Satpura Hill Zone of Madhya Pradesh, farmers are advised to sow vegetables like maize, soybean, arhar, brinjal, tomato, cauliflower, onion and chilly and prepare field for direct sowing of rice. Farmers in Nimar Valley and Central Narmada Zone are advised to sow kharif crops.
- Farmers in Jhabua Hill Zone are advised to prepare paddy nursery for transplanted paddy cultivation and for sowing of moong, urad, soybean and maize and prepare field for transplanting of new fruit plants. Also sowing should be done at proper moisture in the field. Farmers in Gird Zone are advised to prepare nursery for paddy.
- Farmers in Northern Hill Zone of Chattisgarh are advised to prepare land and undertake sowing for groundnut, arhar, maize and for planting of turmeric and ginger.
- Stages of major crops are mentioned in Annexure I.
- Weather is congenial for sucking pests in bhindi and other vegetables, spray *Metasystox* or *Di-Methoate* 1 ml per litre of water. Spray chemicals after spells of rain.
- **Animal Husbandry & Poultry**
- There is possibility of Medium Cloud conditions in Gird Zone of Madhya Pradesh during next 5 days, Cattle should keep airy and cool place, provide balanced and nutrient rich feed having protein, carbohydrate, fat vitamins and antibiotics.
- Before the onset of monsoon dairy farmers in Bundelkhand Zone are advised to arrange the vaccines to protect the animals toward mouth and jahari fever disease and to develop the immunity power. Also saw dust and dry lime should be placed on surface to avoid excessive humid conditions in hen houses.
- Due to rains at this period, farmers should vaccinate their animals for Khurpaka-Muhpaka and Galgotu disease in Jhabua Hill Zone.

Annexure I Major Crops

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

- Sugarcane (early vegetative / vegetative) and rice, *kharif* maize, *kharif* arhar, til, sorghum, jowar, lobia for green fodder (sowing) in Bihar.
- Sugarcane (early vegetative / vegetative), mango and litchi (harvesting), papaya (transplanting), turmeric, ginger, elephant foot yam (planting / vegetative), rice (nursery sowing), rainy season vegetables like bhindi, bean, tomato, French bean, cauliflower, cabbage etc. (sowing), maize, pigeon pea, urd, moong bean, groundnut (land preparation / sowing) in Jharkhand.
- Mango, papaya, marigold, tuberose (planting), cowpea (sowing / early vegetative), *kharif* vegetables (sowing) and sugarcane (vegetative), *kharif* rice, groundnut, chrysanthemum, ragi (sowing), turmeric and ginger (planting), yam (sowing) in Orissa.
- Mango (harvesting), *aman* rice, *aus* rice, jute, pigeon pea (sowing / nursery sowing) and turmeric, ginger, aurum (planting) in West Bengal.
- Large cardamom (vegetative lag phase / primary flowering / secondary flowering / capsule formation), *kharif* vegetables (transplanting / vegetative/ late vegetative), orange (flowering / transplanting of saplings from nursery), ginger (germination / early vegetative), rice (sowing / nursery sowing / early tillering) in Sikkim

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

- Sugarcane (cane development / active vegetative), *bau* rice (sowing / early vegetative / tillering), normal *ahu* rice (transplanting / early vegetative / tillering), early *ahu* rice (panicle initiation / flowering / booting), *sali* rice (nursery sowing / sowing / seedling), jute (early vegetative / vegetative), summer vegetables (vegetative / flowering / fruiting / harvesting), maize (tasseling / silking / cob formation / cob maturity), bhindi (sowing), groundnut (land preparation/sowing), banana (planting), arhar (sowing), ginger / turmeric (vegetative) in Assam.
- Rice (nursery preparation / transplanting / vegetative), French bean, okra (vegetative / flowering / fruiting), maize (tasseling / silking / cob formation / maturity) and ginger / turmeric (planting / vegetative), summer vegetables, millet (vegetative / flowering / fruiting / maturity) in Arunachal Pradesh.
- Rice (tillering / panicle initiation), soyabean, groundnut (sowing / vegetative), onion (bulb formation / maturity / harvesting), *kharif* rice, rice bean and black gram (land preparation / sowing), ginger and turmeric (early vegetative), cowpea (sowing) in Manipur.
- Rice (nursery preparation / transplanting), *kharif* maize (sowing / vegetative / knee high stage), groundnut, soyabean (sowing / vegetative), okra (vegetative / flowering / fruiting / harvesting), other summer crops (vegetative / flowering / pod formation), ginger and turmeric (planting / vegetative), *khasi* mandarin (fruit bearing), banana (vegetative / fruiting / maturity), cucurbits (flowering / fruiting / harvesting) in Mizoram.
- *Aus* or pre *kharif* rice (sowing / tillering), *aman* rice (land preparation / sowing), summer vegetables (flowering / fruiting), maize (flowering) and groundnut (sowing / vegetative) in Tripura.
- *Ahu* rice (panicle initiation / flowering / grain filling), summer maize (tasseling / silking / cob formation), sugarcane (growing), summer vegetables (sowing / vegetative / flowering / fruiting), *sali* rice (nursery sowing / transplanting), ginger and turmeric (vegetative) in Meghalaya.
- Maize (vegetative / tasseling / silking / cob formation), okra (flowering / fruiting), tomato (planting) and banana (fruiting), rice (nursery preparation) in Nagaland.

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

- Tomato, chilli (transplanting), brinjal & cucurbits crops (flowering/fruiting), lentil (pod formation), maize, hybrid cluster bean, baby corn, Pigeon pea (sowing/ vegetative), green gram and black gram, cotton (sowing), Sugarcane(sowing) in Delhi.
- Potato (tuber formation/harvesting), vegetables (flowering / fruiting / harvesting), garlic, ginger (planting), pea, potato, bhindi, (sowing), cucurbits (transplanting), Khira, summer squash, bitter gourd, tur, brinjal, Shimla mirch, pepper and tomato (nursery sowing), Apple (fruit development), pomegranate (flowering), ginger, arbi, amaranthus, turmeric, rice, maize (sowing) in Himachal Pradesh.
- Berseem (vegetative), oats (flowering), field pea (pod formation), cucurbits (vegetative / flowering), onion (vegetative), cauliflower, cabbage, carrot (fruiting/harvesting), tomato (fruiting/harvesting), onion, (transplanting), capsicum, chilli, brinjal (nursery sowing / transplanting), summer pulses, moong mash (vegetative/ dough stage / reproductive stage), cowpea (vegetative), okra (fruiting), *kharif* fodder viz. maize, jowar, bajra, cowpea (field preparation / sowing), early sown maize(vegetative), *kharif* pulses, moong, mash (land preparation), rice (nursery sowing / transplanting), *Kharif* oilseed like sunflower, summer brassica etc. (sowing), summer moong (vegetative) in Jammu & Kashmir.
- Potato (7000-800-ft a.s.l.) (sowing), moong, urd (flowering / pod formation), barley (tillering), garlic, seasonal vegetables (flowering/ harvesting), onion (vegetative / harvesting), chilli, capsicum (transplanting), tomato (sowing / early vegetative) and lahi (flowering / fruiting), sugarcane (planting), rice (nursery sowing/transplanting), mango, litchi (fruiting / pre-maturity / maturity), foxtail millet, maize, okra, bottle gourd, bitter gourd, ginger, turmeric (sowing) in Uttarakhand.
- Spring sugarcane (sprouting), berseem (vegetative), African sarson (pod formation/maturity), radish (vegetative), ghobi sarson (vegetative), oilseeds (raya, taramira) (maturity/harvesting), papaya, onion (harvesting), vegetables, sugarcane (sowing/ germination), summer pulses, cotton, okra, radish (sowing), rice (nursery sowing) in Punjab.

- Sugarcane (spring season) (planting/emergence/early vegetative), barseem (vegetative), summer pulses, moong, mash, pigeon pea (sowing) in Haryana.
- Rice (land preparation for raising nursery), winter sugarcane (vegetative growth), summer sugarcane (initial growth), cucurbits vegetables like gourd, bitter melon, cucumber, etc. and other vegetables like lady's finger, tomato, brinjal, chilli etc. (flowering / fruiting/maturity), cabbage, cauliflower (harvesting) and moong, urd, (maturity / harvesting), black gram, baby corn/ maize / fodder maize, vegetables (vegetative/flowering/fruiting), groundnut, jowar, bajra, arhar, til (sowing) in Uttar Pradesh.
- Rice (nursery sowing), winter sugarcane (initial growth), lentil (maturity), ajwain, fenugreek and isabgol (vegetative), potato (tuberization / maturity), cabbage (late vegetative / head formation), fodder jowar & bajra (sowing), cotton (sowing), early tomato (flowering / fruiting), summer moong (maturity/ harvesting), groundnut, maize and vegetables viz. chilli, Shimla Mirch, Brinjal, Early cauliflower, tomato (field preparation for nursery sowing) in Rajasthan.

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

- *Kuruvai* rice (transplanting/early vegetative), cotton (pod formation), vegetables (nursery / transplanting), sugarcane (vegetative/ grand growth), groundnut (pod formation) in Tamil Nadu.
- Sugarcane (ratooning/vegetative), mango (fruiting / harvesting), hybrid jowar, maize, ragi, sugarcane, sunflower, groundnut, red gram and horticulture crops (sowing) in Karnataka.
- Maize, jowar, cotton, sugar-cane and pulse crops like green gram (sowing), rice (sowing/transplanting) in Andhra Pradesh.
- *Virippu* rice (transplanting / early vegetative) and black pepper, ginger, turmeric and vegetable crops (sowing / planting) in Kerala.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- Sugarcane (*adsali*) (active tillering), sugarcane (pre-seasonal) (vegetative), sugarcane (*suru*) (early vegetative), *Kharif* rice (nursery sowing / germination in Konkan, Kolhapur Division), jowar, soyabean, groundnut (sowing in Kolhapur Division), cotton (sowing / germination in Madhya Maharashtra and parts of Marathwada).
- *Kharif* bajra (sowing), brinjal and tomato (nursery sowing), sugarcane (vegetative), groundnut (seedling / early vegetative / vegetative), *kharif* pulses (sowing), cotton (seedling), rice (nursery sowing and seedling) in Gujarat.

CENTRAL INDIA [M.P., CHHATTISGARH]

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

Annexure II List of Varieties

Orissa

Arhar :

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

Medium duration - Asha, Visakha.

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

Cow pea:

Bush type - Pusa Phalguni, Pusa Komal.

Runner type - American Long and Banarasi Long.

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

Okra:

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

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

Bitter gourd: Pusa Domousumi, Coimbatore Long Green and ArkaHarit.

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

Cluster bean: Pusa Naubahar.

Ginger: Suprava, Suruchi, Surabhi.

Turmeric: Roma, Surama, Rang, Rashmi etc.

Fodder maize: African Tall.

Fodder Cowpea: EC-4216.

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.

Cotton: MCU-5 and Sabita.

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

Chrysanthemum:

Yellow - Chandrama, Kiku, Biory, Super giant and Evening star.

White - Snow ball, Inoscence and Premier.

Red - Brave, Rustic, Alfred and Wilson.

Sesamum: Kanaka, Kalika, Vinayak, Uma.

West Bengal

Arum: BCC-17, BCC-33, BCC-02, BCC-01, BCC-9.

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

Pigeon pea: Sweta, Churni.

Rice:

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

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

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

Jharkhand

Turmeric: Rajendra Sona.

Ginger: Burdwan and Nadia.

Elephant foot yam: Gajendra.

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

Rice: Swarna (MTU 7029), Rajshree, BPT 5204 (Sambha Mahsuri), Birsamati and for hybrid rice - Proagro or Arize 6444.

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

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

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

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

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

Bihar

Rice: Mansuri, Rajendra Mansuri, Nata Mansuri, Rajendra sweta, Santosh, Rajshree, Satyam.

Kharif maize: Shaktiman 2, Shaktiman 3 Shaktiman4, and Deoki.

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

Arhar: Laxmi, Pragti, Asha, Jagrati, JKM-7 and JKM-189

Mango: Kesar, Aamrapali, Dasahri, Mallika, Guava: seedless, Sardar, Allahabadi safeda, **Amla:** chakaiya, NA 3, NA 7, **Pomegranet:** Ganesh, Mradula.

Paddy for directo sowing in Jabalpur:

Medium: IR-36, IR-64, Pusa sugandha-5, MTU-1001

Late: Mahsuri, Safari-17, Syamla, Swarna

Chattisgarh

Paddy: MTU-1001, MTU-1010, IR-64

Assam

Papaya: Ranchi, Washington, Halflong, Coorg Honeydew etc.

Bhindi: Parvani Kranti, Arka Anamica.

Ahu rice :tall variety :prafulla, Gitesh.

Sali rice:

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

Medium duration:Satya and Basundhara.

Banana:

Medium tall varieties: Chenichampa, Mulbhog.

Tall varieties: Bhimkal, Purakal, Manohar.

Arhar : T-21.

Groundnut : TG-1A, DL-24.

Tripura

Amam Rice: SwarnaMasuri, Naveen, Puja, Krishnahamsa.

Ridge gourd: Pusa Nasdar, Satputia.

Cucumber: Japanese Long, Straight 8.

Manipur

Soyabean : J.S.335.

Cowpea: Yard Long Bean & PusaBarsati.

Meghalaya

Tuber crop: SreeVijaya (Cassava), Muktakeshi (Taro).

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

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

Paddy:

MTU-7029 (Swarna), MTU-2067 (Chaitanya), MTU-2077, Krishnaveni, BPT-5204 (sambamashuri), BPT-1768 (Bapatlasannalu), MTU-1061 (Indra), NLR-T-145 (Swarnamukhi), NLR-34449 (Nelluri mashuri), NLR-9674 (kothamolokolukulu), NLR- 28523 (Sriranga), NLR-3BPT-5204 (sambamashuri),

Karnataka.

Green gram : Selection – 4, BGS-9

Black gram : TAU – 1, DU – 1, T-9

Soybean : JS - 335

Jowar : DSV – 2

Upland paddy: Amrut or Prasanna

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

Ragi: Indaf-8, MR-1, 2 and 6.

Redgram: TTB-7, BRG-1, 2, ICP-7035

Maize: Ganga-11, Deccan-103, NAC-1137

Tur Var.: (Medium to Long Duration) PT-221, GS-1, ICP-8863 (Maruti), ICPL-87119 (Asha) WRP-1, , & Short Duration Var: like ICPL-87 (Pragati), Selection-31 (Zone 2 irrigated areas), GCS-11-39 (Zone-2)

Kerala

Banana: nendran, poovan, njalippoovan, robusta, and palayankodan

Bindi: CO1 , Aruna, Arka Anamika, Arka Abhay and Susthira

Gujarat

Rice: GR-12, GR-104, GR-9, GR-8, Dandi, GR-7, Gurjari, NAUR-1, GNR-2, Sukhvel-20, GR-3, 4, 6, 7 (early maturing cultivars), GR-101, 102, 103, 104, Narmada and Masuri (late matured cultivar).

Irrigated groundnut: GG-20 (North Saurashtra Zone).

Kharif groundnut: GG-2, GG-5, TG-26, TPG-41, TAG-37 for bunch and GG-20 for semi sprading groundnut (North Gujarat Zone), GG-11, GG-12, GG-13, GG-20 (South Saurashtra Zone).
Irrigated hybrid cotton and B.T. cotton: G. Cot. 6, 8, 10 and Govt. approved varieties of B.T. cotton.

Pulses:

Green gram: GM-3, GM-4, K-851.

Black gram: T-9, GU-1.

Cowpea: Gujarat Cowpea -1, 2, 4, Pusa Falguni.

Pegion pea: BDN-2, GT-100, GTH-1 (North Saurashtra Zone).

Kharif bajra: GHB-558, 577, 538, 719, 732, 744.

Sesamum: GT-2 or GT-3.

Maharashtra

Cotton variety for Central Vidarbha region: AKA-5, AKA-7, AKA-8; hybrid variety PKV DH-1; American variety like AKH-081, PKV-Rajat, AKH-8828.

Kharifbajra: Sradha, Saburi, Phule Shanti and improved varieties from ICTP-8203, ICMV-155.

Groundnut: SB-11, Phule Pragati, Phule Vyas, Phule Unap, TPG-41, TG-26.

Red gram: ICPL-87, Vipulla, BSMR-853, 736 for Madhya Maharashtra, ICPL-87119 (Asha), C-11 for Vidarbha.

Moong: Jalgaon-781, S-8, Phule M-2.

Sunflower: EC-68414, SS-56, Bhanu.

Soyabean: JS-335, 93-05, Phule Kalyani (DS-228), MACS-58, 450 for Madhya Maharashtra, TAMS-37, 98-21, 71, 81 and JS-335 for Vidarbha, MAUS-71, 81, 158, 47, 61, 61-2 and JS-335 for Marathwada.

Cotton: AKA-5, AKA-7, AKA-8, PKV DH-1, AKH-081, PKV-Rajat, AKH-8828 for Central Vidarbha.

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.

Himachal Pradesh

Cauliflower: Sweta, Madhuri

Cabbage: Golden Acre, Varun

Tomato: 7711, Him sona, Him 1

Capsicum green: California wonder, Mahabharat, Capsicum yellow : US 616

Cucumber: Kiyani

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 : IET-1410, K-39, Ratna, PC-19, RR-8585, Jaya, Ratna, China-1039, Basmati 370, Ranbir basmati, Sambal basmati and hybrid KRH-2 & PHB-71

Brinjal : PPL, PPC & PPR

Chillies : NP-46A, Pusa jawala

Maize : var.GS-2, mansard, trikuta, C-5 and C-8

Punjab

Paddy : PAU 201, PR 120, PR 118, PR 116, PR 114, PR 113, PR 111, PR 115 etc

Okra : Punjab 7 / Punjab 8

Radish : Punjab Ageti, Pusa Chetk

Haryana

Baisakhi Mung: K851 and Type 44 and Muskan

Pigeon pea: UPAS 120, T-21.

Uttar Pradesh

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

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

Groundnut:TG37A

Jowar:Bundela CSV-13,CSV-15, CSV-17

Bajra:WCC-75, Raj-171,

Maize:Azad, Uttam,Sweta

Arhar: Upas-120

Soyabean: PK-472, JS-335,MAUS-47, Lobia(UPS-4200)

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

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

Rice : **early maturing var.** : Narendra-97, Pant Dhan-12, Ashwini,

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

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

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

Rajasthan

Cotton : improved varieties : RG-8, RG-18, hybrid varieties : Raj D.H.-9

Bikaneri Nerma (190-200 days), Ganganagar Ageti (170-180 days), RST-9 (185-200 days) & RG-8 (Desi ,170-180 days).

Narma Kapas: R.S. 2013, R.S.-810, R.S.-875 and R.S.T.-9

B.T. Narma : M.R.C.H. 7017, M.R.C.H.6304, M.R.C.H. 6025, R.C.H. 134, R.C.H. 314, J.K.C.H. 1947, N.C.E.H. 6

Rice : P.R. 106, B.K. 190, Mahi Sugandha (Basmati) Jaya, RR-8585, PC-19, IET-1410 and Ratna

Chilli : Pusa Jwala, N.P.46-A, PantC-2, Pusa Sadabahar, G-3, G-5 and RCH-1.

Shimla Mirch : yellow wonder, California wonder, Bulnose and Arka Mohini.

Maize: Him – 129, Aravali Makka, PEHM-1, PEHM- 2, Pratap Makka-1, Pratap Makka-3, Pratap Makka-5, GS-2, mansar, trikuta, C-5 and C-8 etc.

Kharif crops like (Gwar (Cluster bean) : R.G.C. 938, R.G.C. 986, R.G.C. 1002, H.G. 365

Bajra : Raj 171, H.H.B. 67

Til : R.T. 46

Moong : Ganga-1 (Jamnotri), Ganga-8(Gangotri), S.M.L.-668, M.U.M.-2

Moth : R.M.O. 40)

Pearl millet: Composite: RCB-2, WCC-75, Raj-171, ICTP- 8203, Hybrid: RHB-90, RHB-121, ICMH-356, HHB-60, HHB-67,

Sorghum: CSH-6 (90-100 days), CSV-10 (100-110 days), CSV-15 (104-140 days), CSV-17, Pratap Jowar-1430 etc.

Green fodder: Sorghum Chari-1, Rajasthan Chari-2, SPV-837, and MP-Chari.

Maize: Bassi selected (80-85 days), Mahi Kanchan (75-80 days) & Ageti-76 (85-95 days), Him – 129, Aravali Makka, PEHM-1, PEHM- 2, Pratap Makka-1, Pratap Makka-3, Pratap Makka-5, etc.

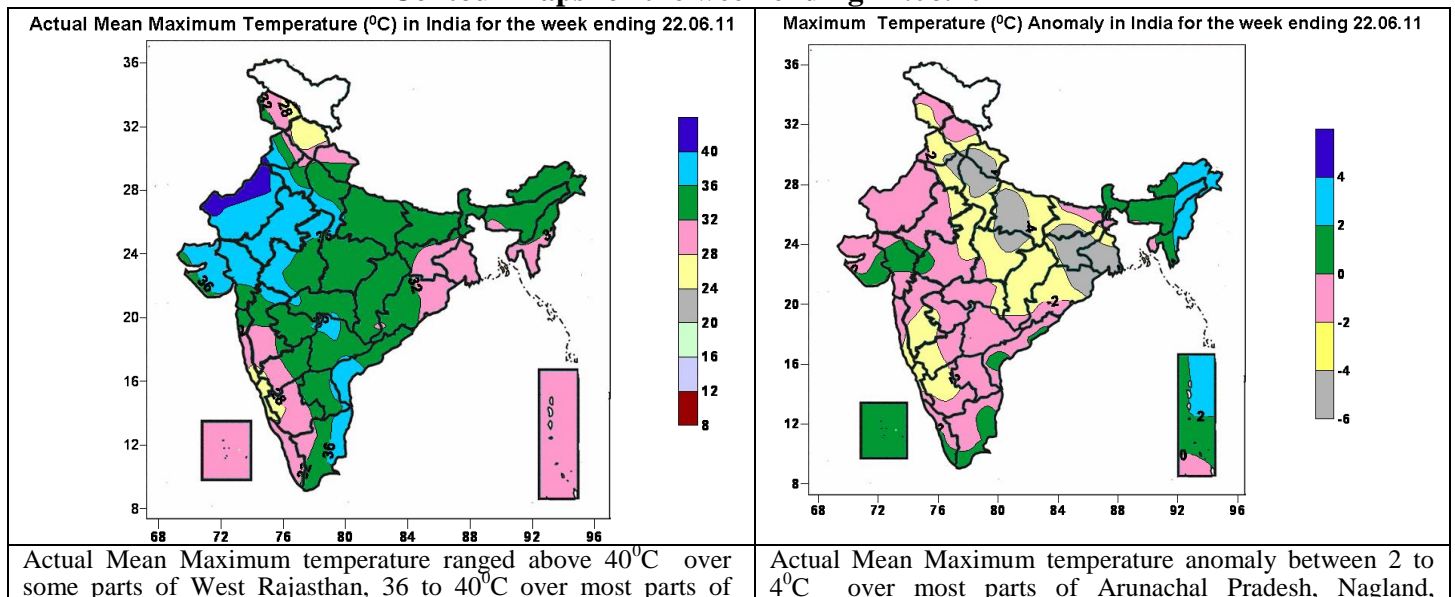
Green gram: RMG-62, RMG-268. RMG-492 & RMG-344

Cowpea: FS-68, RC-19 and RC-101

Groundnut : M-13, GG-20, TG-37A, TG-39, GG-2, J-38, TG-37- A, Pratap mungphali-1, Pratap mungphali-2.

Soybean : JS-335, MACS-13, PK – 472, MACS-58, PS – 16, JS – 71 – 05, Pratap Soya-1.

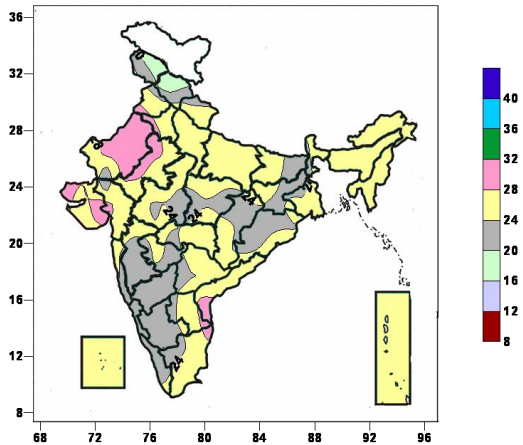
Annexure III Contour maps for the week ending 22.06.2011



Rajasthan, Gujarat, Saurashtra & Kutch, some parts of Punjab, Haryana, West Uttar Pradesh, Andhra Pradesh, West Madhya Pradesh, Tamil Nadu, Madhya Maharashtra, Vidarbha, 28 to 32°C over most parts of Jammu & Kashmir, Jharkhand, Gangetic West Bengal, Tripura, Kerala, South & North Interior Karnataka, Konkan & Goa, Madhya Maharashtra, Lakshadweep, Andaman & Nicobar Islands, some parts of Himachal Pradesh, Uttarakhand, Assam, Mizoram, Tamil Nadu, 24 to 28°C over most parts of Himachal Pradesh, Coastal Karnataka, some parts of Jammu & Kashmir, North & South Interior Karnataka, 32°C to 36°C over remaining parts of the country.

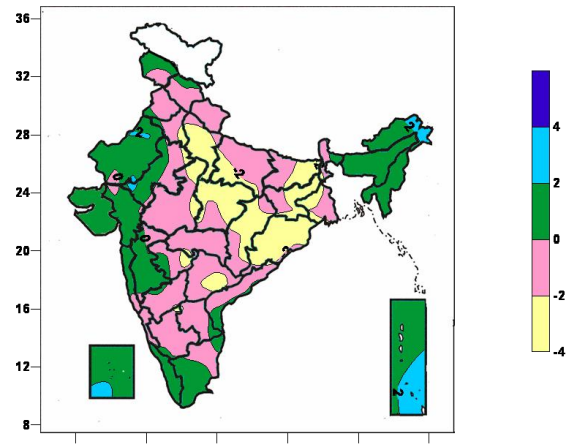
Manipur, some parts of Assam & Meghalay, Andaman & Nicobar Islands, 2 to 0°C over most parts of Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Tripura, Gujarat, Lakshadweep, Andaman & Nicobar Islands, , some parts of Arunachal Pradesh, Mizoram, Coastal Andhra Pradesh, Tamil Nadu, Kerala, Saurashtra, -4 to -2°C over most parts of Punjab, Chattisgarh, Karnataka, Madhya Maharashtra, Goa, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, East Rajasthan, Haryana, Uttar Pradesh, Gangetic West Bengal, Orissa, Marathwada, Vidarbha, , Konkan, 0 to 2°C over remaining parts of the country.

Actual Mean Minimum Temperature (°C) in India for the week ending 22.06.11



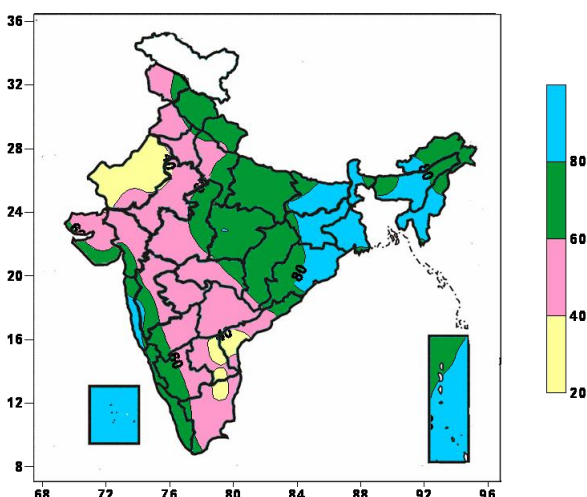
Actual Mean Minimum Temperature ranged between 28°C to 32°C over most parts of West Rajasthan, some parts of East Rajasthan, Gujarat, Saurashtra & Kutch, Coastal Andhra Pradesh, Raylaseema, Tamil Nadu, 20 to 24°C over most parts of Orissa, Kerala, Karnataka, Madhya Maharashtra, Konkan & Goa, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, West Rajasthan, Punjab, Bihar, Jharkhand, West Bengal, Chattisgarh, Telengana, Rayalaseema, Tamil Nadu, Marathwada, Vidarbha, Madhya Pradesh, Gujarat, 16 to 20°C over some parts of Jammu & Kashmir, Himachal Pradesh, 24 to 28°C over remaining parts of the Country.

Minimum Temperature (°C) Anomaly in India for the week ending 22.06.11



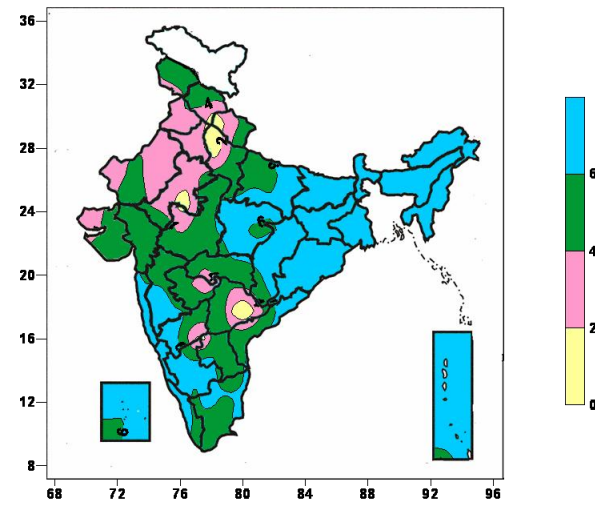
Minimum Temperature anomaly ranged between 2 to 4°C over some parts Rajasthan, Arunachal Pradesh, Lakshadweep, Andaman & Nicobar Islands, 0 to 2°C over most parts of West Rajasthan, North East India, Tamil Nadu, Kerala, Madhya Maharashtra, Konkan & Goa, Gujrat, Saurashtra & Kutch, Lakshadweep, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, East Rajasthan, Sub-Himalayan West Bengal, Coastal Andhra Pradesh, Raylaseema, South Interior Karnataka, Marathwada, -4 to -2°C over most parts of West Uttar Pradesh, East Madhya Pradesh, Orissa, Chattisgarh, some parts of East Rajasthan, Haryana, East Uttar Pradesh, Bihar, Jharkhand, West Bengal, Telengana, Madhya Pradesh, Marathwada, -2 to 0°C over remaining parts of the Country.

Relative Humidity (%) over India for the week ending 22.06.11



Relative humidity between 80% and above over most parts of West Bengal & Sikkim, Assam, Mizoram, Manipur, Tripura,

Cloud amount (okta) over India for the week ending 22.06.11

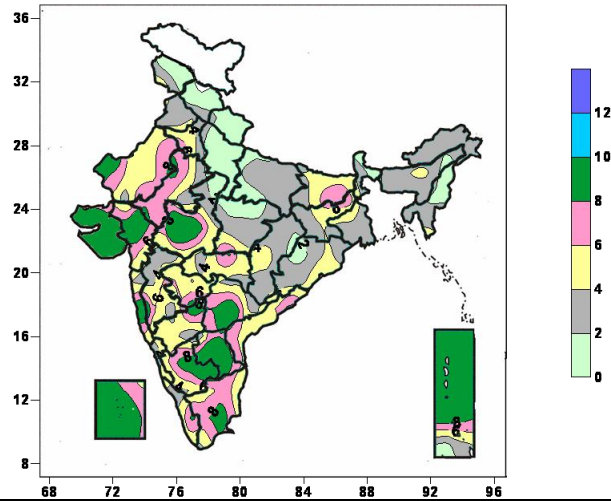


Cloud amount 6 okta and above over East and North East India, Kerala, Karnataka, Konkan & Goa, Madhya

Orissa, Konkan & Goa, Lakshdweep, Andaman & Nicobar Islands, some parts of Arunachal Pradesh, Meghalaya, Nagaland, 40 to 60% over most parts of Jammu & Kashmir, Punjab, Haryana, Delhi, East Rajasthan, West Uttar Pradesh, West Madhya Pradesh, Gujarat, Saurashtra & Kutch, Madhya Maharashtra, Vidarbha, Andhra Pradesh, Tamil Nadu, South Interior Karnataka, some parts of Chattisgarh, Madhya Maharashtra, West Rajasthan, 20 to 40% over most parts of West Rajasthan, 60 to 80% over remaining parts of the country.

Mahrashtra, Lakshadweep, Andaman & Nicobar Islands, 2 to 4 okta over most parts of Rajasthan, Punjab, Haryana, Delhi, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, West Uttar Pradesh, Andhra Pradesh, South & North Interior Karnataka, Marathwada, Vidarbha, Saurashtra & Kutch, West Madhya Pradesh, 0 to 2 okta over some parts of Uttarakhand, East Rajasthan, West Uttar Pradesh, Telengana, 4 to 6 okta over remaining parts of the country.

Wind speed (knots) over India for the week ending 22.06.11



Wind speed ranged between above 8-10 knots over most parts of Lakshadweep Islands and Andaman and Nicobar, Gujarat, some parts of West Rajasthan, Madhya Pradesh, South Interior Karnataka, Rayalseema, Telangana and Tamilnadu. 6-8 knots over most parts of Tamilnadu and some parts of Rajasthan, Madhya Pradesh, Andhra Pradesh, Bihar, Jharkhand, South Interior Karnataka and Lakshadweep. 4-6 knots over some parts of central India, Southern India, Haryana, Bihar, Jharkhand and Rajasthan. 2-4 knots over parts of Madhya Pradesh, Uttar Pradesh, West Bengal, North East India, Orissa, Punjab and Madhya Maharashtra. 0-2 knots many parts of Uttarakhand, Himachal Pradesh and some parts of Jammu Kashmir, Uttar Pradesh and North East India.