



National Agromet Advisory Bulletin

Thursday, 22nd September, 2011

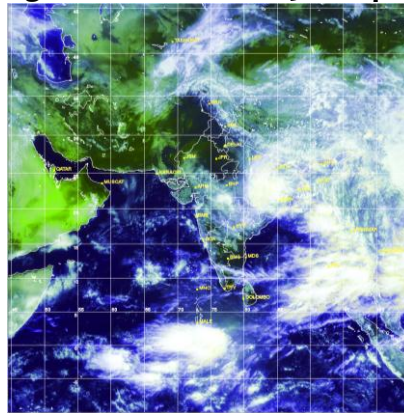
(For the period 22nd to 26th September, 2011)

Monsoon Watch

Mainly dry weather continues to prevail over Punjab, Haryana, west Rajasthan and Saurashtra & Kutch during last 3 days. An anticyclonic circulation has developed over Rajasthan and neighbourhood at 1.5 Km above mean sea level. Analysis of satellite imageries shows dry air prevalence over Punjab, Haryana and west Rajasthan during last 3 days. Interpretation of current meteorological conditions indicates dry weather would prevail over above regions during next 45 days, therefore monsoon is likely to withdraw from parts of northwest India during next 48 hours.



Satellite image 0600 UTC dated 23rd September, 2011



The depression over northwest Bay of Bengal and adjoining coastal areas of north Orissa and Gangetic West Bengal moved slightly westwards. It is likely to move westnorthwestwards and cross Orissa, West Bengal coast close to Balasore.

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

The depression over northwest Bay of Bengal and adjoining coastal areas of north Orissa and Gangetic West Bengal moved slightly westwards. It is likely to move westnorthwestwards and cross Orissa, West Bengal coast close to Balasore. Farmers in these regions are advised to arrange for extensive drainage facilities to avoid waterlogging and damage of crops.

Good rainfall received during last week in Himachal Pradesh, Jammu & Kashmir, Chhattisgarh, Uttarakhand, Bihar, Jharkhand, East Rajasthan, Konkan and Vidarbha may favour sustained crop growth helping in good *kharif* crop production. Subdued rainfall activity was observed during last week over some districts of Interior Karnataka and Andhra Pradesh. However, there is no report of significant adverse impact on the crops of these regions.

Due to recent floods in few districts of Orissa, the non-paddy crops in coastal areas are completely damaged due to submergence of flood water for more than three days. The sowing of non-paddy crops in uplands and up medium lands could not be completed due to excess water in the lands, which remained fallow due to drought occurred during August. The harvesting of jute could not be made, even at the harvesting stage. In the flood affected districts of Orissa, where the crops were partially affected, the farmers were advised to adopt following measures:

- Arrange for draining out excess water from both the paddy and non-paddy crops.
- Undertake hoeing and weeding of non-paddy crops like maize, cotton, pulses, sesame etc, followed by top dressing after receding of rain water.
- Keep the harvested jute standing in bundles and undertake retting after the water gets cleared of turbidity.
- Make the lodged paddy crops upright.
- Spray water to the paddy leaves to remove mud.
- In case poorly drained land, the urea may be applied as mud balls prepared by mixing with wet soil.

As fairly widespread / widespread rain / thundershowers would occur over Orissa, Bihar, Jharkhand, West Bengal, Sikkim, Chhattisgarh, North Eastern States and East Uttar Pradesh, farmers are advised to postpone irrigation, intercultural operation and application of fertilizer and plant protection measures to the crops. There are also chances of scattered heavy to very heavy rainfall over north Orissa and isolated heavy rainfall over south Orissa, Jharkhand, north Chhattisgarh, Bihar and Gangetic West Bengal during next 48 hours; farmers in these regions are advised to arrange adequate drainage facilities in the already sown crop fields to avoid water stagnation and crop damage.

Due to prevailing weather, incidences of gundhi bug and bacterial leaf blight in rice in Kerala, blight in pigeon pea, fruit borer, leaf spot and leaf rot in bhindi in Karnataka, stem borer in maize in Orissa, hairy caterpillar in moong and urd in Jharkhand and sheath blight in rice in Punjab are reported. Farmers are advised to undertake appropriate plant protection measures to control the pests and diseases.

Overall *kharif* crop production in the country is expected to be good due to well distributed rainfall despite some damages in few pockets in the country. Farmers are advised to undertake land preparation for *rabi* crops after harvesting of *kharif* crops.

Distribution of rainfall for the country during last week

State/Districts	Actual	21.09.11
Arunachal Pradesh		
Changlang	24.4	-76
East Kameng	86.0	40
East Siang	247.4	56
Lohit	93.2	34
Lower Subansiri	29.0	-37
Papumpara	59.0	-48
Tawang	41.0	-72
Tirap	70.4	-25
Upper Siang	208.4	21
Upper Subansiri	22.0	-55
West Kameng	101.5	-30
West Siang	**	**
Assam		
Barpeta	137.8	-6
Bongaigaon	191.6	88
Cachar	59.0	-18
Darrang	**	**
Dhubri	38.1	-58
Dibrugarh	75.4	-4
East Garo Hills	104	30
East Khasi Hills	341.4	162
Goalpara	94.6	20
Golghat	30.1	-45
Hailakandi	36.9	-32
Jaintia Hills	64.0	-60
Jorhat	6.7	-88
Kamrup	55.5	29
Karbi Analog	4.4	-90
Karimganj	53.0	-52
Kokrajhar	150.8	22
Lakhimpur	100.5	1
Morigaon	12.3	-74
N.C.Hills	0.0	-100
Nowgong	14.8	-67
Nalbari	130.3	65
Sonitpur	39.1	-34
Sibsagar	169.9	289
Tinsukia	129.7	50
Himachal Pradesh		
Bilaspur	43.2	24
Chamba	84.1	295
Hamirpur	33.2	9
Kangra	73.9	58
Kinnaur	7.8	-25
Kullu	36.0	54
Lahaul and Spiti	27.1	32
Mandi	28.3	-8
Shimla	16.5	-19
Sirmaur	37.5	4
Solan	18.2	-41
Una	61.7	123
Punjab		
Amritsar	33.6	190
Barnala	28.8	167
Bhatinda	77.2	533
Faridkot	41.8	895

Fatehgarh Saheb	90.3	515
Ferozpur	50.1	318
Gurdaspur	53.6	109
Hoshiarpur	38.9	67
Jalandhar	29.9	67
Kapurthala	36.4	217
Ludhiana	99.4	468
Mansa	23.1	115
Moga	34.0	91
Muktesar	82.4	858
Nawashahar	28.1	62
Patiala	53.3	238
Ropar	20.1	-26
Sangrur	64.1	494
Mohali	22.7	44
TarnTaran	5.5	-52
Haryana		
Ambala	63.6	128
Bhiwani	32.9	207
Chandigarh	29.5	-1
Faridabad	37.8	106
Fatehabad	48.0	375
Gurgaon	15.2	-12
Hissar	44.6	254
Jhajar	23.8	115
Jind	42.3	258
Katihah	29.3	42
Karnal	39.6	93
Kurukshetra	51.8	132
Mahendragarh	28.5	169
Palwal	26.5	45
Panchkkula	17.3	-36
Panipat	53.9	208
Rewari	13.6	32
Rohtak	42.2	200
Sirsa	38.4	152
Sonepat	75.4	336
Yamunanagar	40.2	70
New Delhi	59.3	161
Jammu & Kashmir		
Anantnag	90.9	604
Badgam	15.2	105
Bandipore	**	**
Baramula	43.6	300
Doda	29.2	189
Ganderwal	78.6	1073
Jammu	44.5	69
Kargil	2.0	100
Kathua	46.8	11
Kistwar	**	**
Kulgam	98.0	660
Kupwara	34.8	309
Ladakh(Leh)	2.8	38
Poonch	149.5	310
Pulwama	39.6	571
Rajouri	78.7	128
Ramban	80.8	700
Reasi	53.5	47

Samba	72.0	174
Shopian	**	**
Srinagar	30.0	347
Udhampur	51.4	42
East Madhya Pradesh		
Anuppur	45.2	-1
Balaghat	35.5	-1
Chhatarpur	59.4	41
Chindwara	37.9	11
Damoh	93.6	96
Dindori	21.2	-39
Jabalpur	18.5	-50
Katni	22.5	-40
Mandla	47.5	9
Narsingpur	16.0	-66
Panna	42.8	4
Rewa	5.0	-87
Sagar	38.9	-14
Satna	8.3	-78
Seoni	41.6	-7
Shahdol	6.1	-83
Sidhi	48.4	15
Singrauli	51.6	31
Tikamgarh	26.2	-25
Umaria	3.6	-92
West Madhya Pradesh		
Alirajpur	16.3	-44
Asoknagar	12.0	-70
Badwani	8.3	-70
Betul	21.0	-46
Bhind	77.3	193
Bhopal	40.2	15
Burhanpur	45.5	41
Datia	32.8	-20
Dewas	35.2	6
Dhar	1.1	-97
Guna	12.3	-61
Gwalior	37.4	-8
Harda	66.8	67
Hosangabad	39.1	-26
Indore	4.5	-88
Jhabua	24.0	-7
Khandwa	60.3	73
Khargone	16.4	-43
Mandsaur	2.2	-90
Morena	62.0	121
Neemuch	5.3	-76
Raisen	92.9	115
Rajgarh	12.6	-55
Ratlam	9.8	-65
Sehore	32.1	-2
Shajapur	0.0	-100
Sheopur Kalani	102.8	416
Shivpuri	25.8	-17
Ujjain	3.0	-90
Vidisha	52.4	43
Chattisgarh		
Bastar	123.6	184

Bijapur	168.4	297
Bilaspur	45.2	24
Dantewara	146.0	251
Dhamtari	87.1	146
Durg	49.3	43
Janjgir	56.5	71
Jashpurnagar	60.2	58
Kanker	75.3	65
Korba	112.9	203
Koriya	64.7	84
Kawardha	26.0	-15
Mahasumund	146.7	387
Narayanpur	49.2	23
Raigarh	36.4	10
Raipur	124.7	292
Rajandgaon	49.7	26
Surguja	36.1	0
East Uttar Pradesh		
Allahabad	56.2	68
Ambedkar Nagar	5.0	-86
Azamgarh	23.3	-56
Bahraich	18.1	-61
Ballia	54.2	27
Balrampur	36.1	-9
Banda	37.0	4
Barabanki	35.4	-33
Basti	18.5	-58
Chandauli	14.8	-54
Deoria	6.5	-88
Faizabad	72.8	60
Farrukhabad	59.2	108
Fatehpur	39.2	-5
Gazipur	37.1	-22
Gonda	48.7	-11
Gorakhpur	86.1	43
Hardoi	39.3	23
Jaunpur	29.1	-39
Kannauj	38.3	15
Kanpur City	22.3	-37
Kanpur Dehat	16.4	-45
Kaushambi	28.3	-16
Kheri	30.5	-29
Kushi nagar	11.0	-84
Lucknow	27.2	-29
Maharajganj	18.0	-71
Mau	22.5	-57
Mirzapur	36.9	-11
Pratapgarh	37.0	-13
RaiBareilly	18.3	-54
Sahuji		
Maharajnagar	7.0	-83
Sant Kabirnnagar	45.0	-9
Sant Ravidas Nagar	44.0	37
Shrawasti	35.2	-25
Sidharthnagar	29.5	-38
Sitapur	72.5	142
Sonbhadra	48.3	45
Sultanpur	71.5	54
Unnao	33.3	-2
Varanasi	63.0	53

West Uttar Pradesh		
Agra	7.7	-74
Aligarh	19.8	-35
Auraiya	48.1	50
Badaun	23.0	-28
Baghpat	61.3	210
Bareilly	57.7	74
Bijnor	22.0	-37
Bulandsahar	28.4	-14
Etah	10.3	-67
Etawah	36.0	13
Firozabad	9.5	-77
GBNagar	29.0	5
Ghaziabad	25.8	-14
Hamirpur	101.6	202
Jalaun	27.2	-24
Jhansi	13.1	-67
Jotirba Phule Nagar	29.0	-14
Kanshiramnagar	52.0	64
Lalitpur	28.0	-20
Mahamaya Nagar	1.5	-95
Mahoba	16.4	-52
Mainpuri	18.5	-39
Mathura	32.2	71
Meerut	1.4	-96
Moradabad	45.7	32
Muzzaffarnagar	24.3	-18
Pilibhit	57.2	79
Rampur	21.1	-52
Saharanpur	14.3	-48
Shahjahanpur	16.2	-41
UttaraKhand		
Almora	81.2	151
Bageshwar	84.0	160
Chamoli	33.1	43
Champawat	49.5	38
Dehradun	123.8	119
Garhwal Pauri	62.3	33
Garhwal Tehri	21.2	-31
Haridwar	25.8	-21
Nainital	76.6	19
Pithorgarh	49.9	5
Rudraprayag	54.8	22
Udham Sing Nagar	83.4	85
Uttarkashi	23.2	-57
Bihar		
Araria	258.4	318
Arwal	110.7	141
Aurangabad	72.9	59
Banka	89.1	116
Begusarai	149.5	170
Bhabua	126.8	189
Bhagalpur	97.9	122
Bhojpur	38.2	-30
Buxar	59.4	24
Darbhanga	190.1	399
East Champaran	150.6	185
Gaya	84.9	89
Gopalganj	31.8	-46
Jahanabad	88.2	28

Jamui	35.1	-23
Kathihar	108.9	100
Khagadia	30.2	-58
Kishanganj	330.1	302
Lakhisarai	83.0	71
Madhepura	179.1	287
Madhubani	100.1	107
Monghyar	94.0	93
Muzaffarpur	174.2	201
Nalanda	238.2	375
Nawada	184.7	362
Patna	168.0	224
Purnea	256.0	304
Rohtas	48.4	-12
Saharsha	81.3	72
Samstipur	87.9	76
Saran	90.9	82
Sheikpura	72.2	131
Sheohar	139.0	205
Sitamarhi	114.9	152
Siwan	45.7	-24
Supaul	95.8	102
Vaishali	219.6	315
West Champaran	111.1	44
Jharkhand		
Bokaro	71.2	54
Chatra	62.7	6
Deoghar	**	**
Dhanbad	74.8	51
Dumka	**	**
East Singbhum	76.5	68
Garhwa	75.0	72
Giridih	87.7	107
Godda	73.8	85
Gumla	**	**
Hazaribagh	106.0	131
Jamtara	81.6	61
Khunti	**	**
Koderna	169.0	393
Latehar	141.1	182
Lohardagga	80.8	84
Pakur	84.0	46
Palamau	140.8	257
Ramgarh	63.6	39
Ranchi	73.7	66
Sahebganj	**	**
Seraikela	**	**
Simdega	**	**
West Singbhum	13.2	-68
East Rajasthan		
Ajmer	7.4	34
Alwar	34.9	260
Banswara	15.6	-19
Baran	26.9	43
Bharatpur	57.1	299
Bhilwara	26.2	240
Bundi	48.2	355
Chittorgarh	22.4	92
Dausa	51.8	308
Dholpur	37.7	63

Dungarpur	13.1	-1
Jaipur	32.4	256
Jhalawar	12.6	-38
Jhunjhunu	58.5	462
Karauli	62.4	319
Kota	44.4	239
Pratapgarh	21.2	-1
Rajsamand	20.6	100
Sawai Madhopur	35.8	152
Sikar	21.9	231
Sirohi	35.5	212
Tonk	23.4	160
Udaipur	23.1	65
West Rajasthan		
Barmer	12.5	237
Bikaner	5.0	-22
Churu	21.4	186
Hanumangarh	41.3	545
Jaisalmer	5.2	148
Jalore	14.8	290
Jodhpur	2.4	-38
Nagaur	13.8	123
Pali	10.1	71
Sri Ganganagar	46.8	876
Gujarat Region		
Ahmedabad	6.5	-58
Anand	10.5	-42
Banaskantha	18.9	41
Baroda	12.0	-59
Broach	15.7	-27
DNH	46.9	9
Dahod	18.1	-37
Daman	67.4	57
Dangs	23.0	-56
Gandhinagar	13.0	-10
Kheda	10.8	-49
Mehsana	11.9	-30
Narmada	9.4	-66
Navsari	29.6	-12
Panchmahal	8.3	-69
Patan	6.0	-43
Sabarkantha	18.1	-3
Surat	32.0	20
Tapi	7.7	-75
Valsad	51.2	49
Saurashtra, Kutch & Diu region		
Amreli	5.1	-73
Bhavnagar	23.8	52
Diu	0.0	-100
Jamnagar	32.3	330
Junagarh	32.5	100
Kutch	6.8	16
Porbandar	35.9	185
Rajkot	24.2	65
Surendranagar	11.7	22
Maharashtra		
Konkan & Goa		
Goa	96.3	73
Mumbai	58.2	43
Raigad	74.6	27




Ratnagiri	63.7	10
Sindhudurg	112.7	87
Thane	32.0	-35
Madhya Maharashtra		
Ahmednagar	26.7	-6
Dhule	18.5	4
Jalgaon	15.0	-26
Kolhapur	23.7	-36
Nandurbar	5.8	-76
Nasik	16.5	-41
Pune	21.4	-39
Sangli	15.4	-55
Satara	36.8	14
Solapur	15.8	-64
Marathwada		
Aurangabad	30.7	12
Beed	32.1	-21
Hingoli	83.0	175
Jalna	33.0	25
Latur	45.9	28
Nanded	30.6	-21
Usmanabad	11.5	-75
Parbhani	57.4	57
Vidarbha		
Akola	27.2	13
Amraoti	30.9	15
Bhandara	28.8	-12
Buldhana	32.4	40
Chandrapur	33.1	12
Gadchiroli	48.8	55
Gondia	40.8	24
Nagpur	32.5	2
Wardha	47.1	65
Washim	39.6	23
Yeotmal	34.4	20
Orissa		
Angul	121.0	213
Balasore	107.0	117
Bargarh	73.2	120
Bhadrak	36.0	-28
Bolangir	70.0	82
Boudh	88.9	87
Cuttack	93.0	115
Deogarh	79.1	140
Dhenkanal	136.6	216
Gajapati	41.9	-42
Ganjam	29.9	-43
Jagatsingpur	35.7	-17
Jajpur	57.5	-5
Jharsuguda	24.9	-36
Kalahandi	70.2	66
Kandhamal	52.7	11
Kendrapara	66.7	23
Keonjhar	131.5	174
Khurda	67.4	20
Koraput	84.1	39
Malkangiri	62.2	46
Mayurbhanj	83.8	67
Nawapara	70.7	122
Nawarangpur	114.4	130


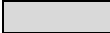

Nayagarh	74.0	39
Puri	101.0	107
Rayagada	55.9	13
Sambalpur	71.6	118
Sonepur	23.0	-31
Sundargarh	73.8	101
West Bengal		
GWB		
Bankura	121.8	191
Birbhum	84.1	55
Burdwan	120.8	146
Hooghly	124.5	171
Howrah	134.9	175
East Midnapore	84.1	61
Murshidabad	114.7	131
Nadia	103.3	147
24 Pargana (N)	186.3	231
Purulia	96.3	130
24 Pargana (S)	110.5	122
West Midnapore	98.6	130
SHWB		
Cooch Behar	347.9	201
Darjeeling	258.5	142
East Sikkim	149.6	112
Jalpaiguri	300.2	142
Malda	83.3	69
North Dinajpur	226.4	190
North Sikkim	102.5	23
South Dinajpur	150.3	136
South Sikkim	142.0	101
West Sikkim	72.0	-13
Karnataka		
Coastal Karnataka		
Dakshin Kannada	148.4	152
Udupi	199.0	174
Uttar Kannada	96.7	78
North Interior Karnataka		
Bagalkote	18.7	-55
Belgaum	5.8	-82
Bidar	16.5	-58
Bijapur	22.0	-49
Dharwad	7.1	-82
Gadag	7.2	-83
Gulbarga	17.7	-64
Haveri	10.0	-70
Koppal	8.5	-83
Raichur	16.8	-60
Yadgir	23.9	-50
South Interior Karnataka		
Bangalore Rural	36.9	-36
Bangalore Urban	40.7	-28
Bellary	6.3	-87
Chamarajnaragar	7.0	-83
Chichballapur	30.7	-39
Chickmagalur	41.3	-5
Chitradurga	13.6	-61
Davangere	11.9	-72
Hassan	10.3	-70
Kodagu	46.6	0
Kolar	22.0	-55

Mandya	11.0	-73
Mysore	13.2	-60
Ramnagara	19.3	-69
Shimoga	55.3	78
Tumkur	25.0	-48
Kerala		
Alappuzha	77.8	23
Kannur	123.4	209
Ernakulam	54.1	-19
Idukki	49.6	-21
Kasaragod	132.4	159
Kollam	45.7	-9
Kottayam	69.7	21
Kozhikode	87.3	73
Malappuram	55.6	21
Palakkad	31.3	-9
Pathanamthitta	52.5	-10
Thiruvananthapuram	8.9	-75
Thrissur	34.1	-42
Wyanad	50.5	1
Tamil Nadu		
Chennai	133.0	377
Coimbatore	4.2	-80
Cuddalore	27.7	-26
Dharmapuri	19.5	-63
Dindigul	4.4	-87
Erode	2.5	-92

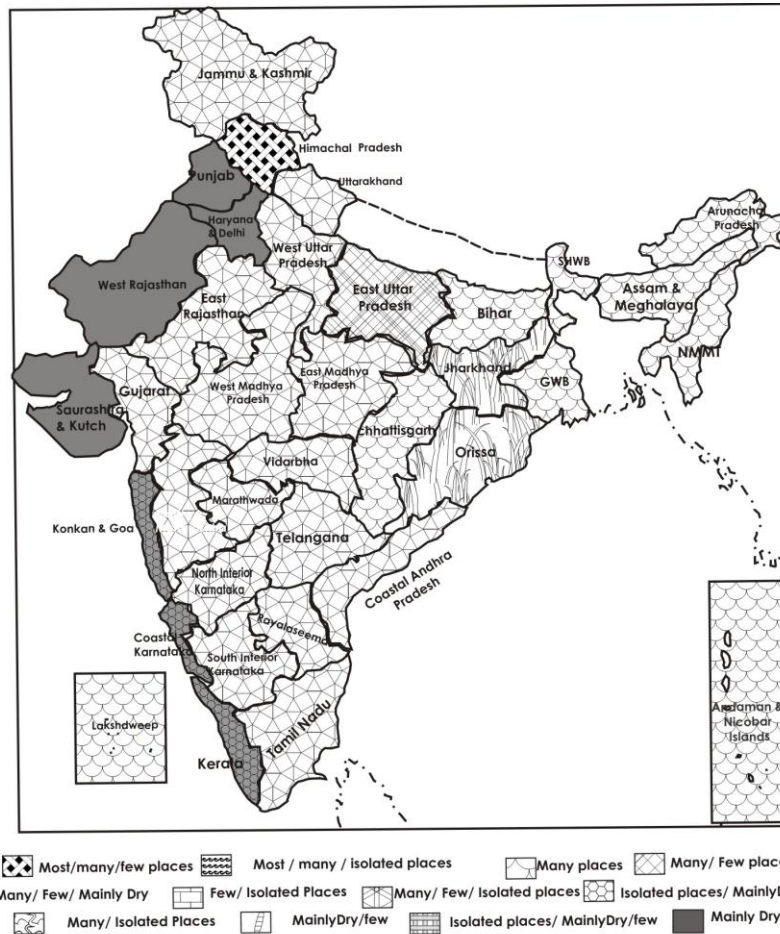
Kanchipuram	102.0	177
Kanyakumari	0.3	-99
Karur	1.6	-94
Krishnagiri	11.5	-80
Madurai	0.8	-97
Nagapattinam	11.9	-54
Namakkal	16.0	-57
Nilgiris	43.7	13
Perambalur	22.4	-48
Puducherry	37.1	22
Pudukottai	35.2	13
Ramanathapuram	8.5	-42
Salem	17.3	-66
Sivaganga	5.9	-72
Thanjavur	17.4	-44
Theni	0.3	-98
Tirunelveli	0.5	-95
Tiruvallur	109.7	260
Tiruvannamalai	61.0	25
Tiruvarur	22.4	-15
Toothukudi	0.0	-100
Trichy	19.7	-51
Vellore	81.4	68
Villupuram	37.2	-16
Virudhunagar	3.5	-85
Andhra Pradesh		
Coastal Andhra Pradesh		

East Godavari	12.2	-70
Guntur	24.3	-23
Krishna	9.6	-74
Nellore	36.1	26
Prakasam	8.3	-71
Sirkakulam	38.4	-30
Visakhapatnam	20.8	-56
Vizianagram	81.0	43
West Godavari	8.3	-79
Telangana		
Adilabad	20.1	-48
Hyderabad	16.6	-60
Karimnagar	39.4	2
Khammam	17.0	-52
Mehabubnagar	9.9	-72
Medak	19.4	-59
Nalgonda	15.4	-56
Nizamabad	28.5	-22
Rangareddy	40.6	-4
Warangal	24.7	-32
Rayalaseema		
Anantapur	12.7	-71
Chittoor	49.0	25
Cuddapah	30.2	-21
Kurnool	11.7	-69

 (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

Weather Forecast (Valid upto 1430 hours of 25th September, 2011)



Major Feature of Weather Forecast upto 1430 hours IST of 25th September, 2011

- Widespread rain/thundershowers would occur over Orissa and Jharkhand and fairly widespread over Bihar, West Bengal & Sikkim, Chhattisgarh and northeastern states. Rainfall activity would decrease over Orissa, Jharkhand and West Bengal & Sikkim after 48 hours.
- Scattered rain/thundershowers would occur along west coast and over east Uttar Pradesh. However, rainfall activity would increase over east Uttar Pradesh after 24 hours.
- Isolated rain/thundershowers would occur over remaining parts of the country outside Punjab, Haryana, west Rajasthan and Saurashtra & Kutch where weather would remain mainly dry.

Weather Warning

- Scattered heavy to very heavy rainfall would occur over north Orissa and isolated heavy over south Orissa, Jharkhand, north Chhattisgarh, Bihar and Gangetic West Bengal during next 48 hours.

Weather Outlook up to 1430 hours IST of 27th September, 2011

- Fairly widespread rain/thundershowers would occur over parts of east India and adjoining east Uttar Pradesh and scattered over northeastern states.
- Weather would continue to remain mainly dry over many parts of northwest India.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Many 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 the period.
- **Advisory**
 - As fairly widespread rain / thundershowers would occur over the states of this region during the period, farmers are advised to postpone irrigation, intercultural operation and application of fertilizer and plant protection measures to the crops.
 - In Assam, farmers are advised to continue sowing of pulses like green gram and black gram, pigeon pea, sowing of brinjal (early varieties), cauliflower (early varieties), cabbage, knoll khol, tomato, radish, country bean, Dolichos bean etc. 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 complete transplanting of *Sali* rice.
 - Farmers in Sub Tropical Hill Zone of Arunachal Pradesh are advised to harvest matured maize cobs and WRC crops (rice-IR-8 cultivar) after current spells of rain and dry properly before storing.
 - Farmers in Arunachal Pradesh are advised to conserve rain water. Farmers are also advised to start land preparation for *rabi* crops, prepare nursery bed for vegetables and planting of citrus fruits.
 - Farmers in Mid Tropical Hill Zone in Nagaland are advised to start land preparation and sowing for *rabi* crops like rapeseed, mustard, pea etc.
 - Farmers in Mid-tropical plain zone of Tripura are advised to prepare nursery for sowing of early cauliflower, other cole crops, turmeric, radish and brinjal (early).
 - Farmers of Sub tropical Plain Zone of Manipur are advised to prepare land for French bean, broad bean and pea and continue to prepare bed for raising nursery for tomato, onion, cabbage, cauliflower etc. Start harvesting of mature soybean and groundnut crop after current spells of rain.
 - In Kolasib region of Mizoram, in view of likely occurrence of rainfall, cover the expose rhizome by earthing up and apply remaining 1/3rd nitrogen and ½ potassium for smooth growth and better rhizome yield. Continue to prepare nursery bed for cole crops and tomato.
 - Farmers in Ri-Bhoi, East Khasi and West Khasi districts in Meghalaya are advised to start land preparation and sowing of *rabi* maize and winter vegetables.
 - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
 - In Central Bramhaputra Valley Zone in Assam, there is chance of attack of stem borer and caseworm in *sali* rice; farmers are advised to spray Chloropyrifos (20%) @ 2 ml / litre of water to control the attack.
 - 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 crops and spray Quinolphos @ 2 teaspoonful / 5 litres of water to control the attack.
 - In upper Bramhaputra Valley Zone in Assam, there is chance of attack of leaf folder or rice hispa at seedling and tillering stages of rice; farmers are advised to monitor the crops and spray Chloropyrifos 20 EC or Monocrotophos 40 EC @ 1.5 ml per liter of water against rice hispa and Nuvacron 5 ml per litre of water against leaf folder.
 - In Sub Tropical Plain Zone of Manipur, there is chance of occurrence of diseases like Bacterial Leaf Blight (BLB), sheath blight, stem rot etc. and pests like leaf folder, stem borer, gall midge and brown plant hoper on rice; farmers are advised to monitor and spray 250 ppm of Agrimycin 100 against BLB, Validamycin @ 2 ml / litre of water for sheath blight, Thiophanate methyl 75 WP @ 1 g / litre of water against stem rot and Cartap @ 600 ml / litre of water against leaf folder; spray Monocrotophos 36 WSC @ 1.3 litres or Chloropyrifos 20 EC @ 1.3 litres in 500-700 litres of

water per hectare against stem borer and gall midge, spray Imidachlorpid @ 7 ml / 15 litres of water and Lamda Cyhalocin @ 15 ml / 15 litres of water against Brown plant hopper.

- In Kolasib region of Mizoram, due to prevailing weather conditions, there is chance of infestation of pests like gundhi bug, stem borer, leaf hopper and plant hopper and diseases like blast in rice; farmers are advised to monitor the crops and spray Malathion dust 5% @ 8 kg / acre or Malathion 50 EC @ 2 ml / litre (350 ml / acre) against gundhi bug, Nuvacron / Monocil 36 SL @ 1020 WG in 400 litres of water per ha against stem borer, leaf hopper and plant hopper, Benlate or Mancozeb @ 0.25% against blast disease. Due to high cloud cover and high humidity there is incidence of attack of Gummosis disease on Khasi Mandarin; farmers are advised to scrap affected bark, clean and paint with Bordeaux pasting (1:1.5:10). There is chance of attack of pod bug and anthracnose on Fench bean, rice bean, urd and mung; farmers are advised to spray the crops with Phosphamidon @ 0.5 ml / litre of water against pod bug and carbendazim @ 0.01% against anthracnose. In cucurbits, due to prevailing rain, infestation of fruit fly is more; use light trap and poison baits during night containing 200 g gur + 20 ml Malathion in 20 litres of water as coarse droplets on lower surface of leaf.
- As there is chance of attack of leaf folder and rice hispa in rice in Jaintia, West and East Garo hill districts of Meghalaya; farmers are advised to spray Chloropyriphos 20 EC @ 1.5 ml per liter of water in tillering stage of rice. There is chance of incidence of shoot borer in ginger and turmeric in West Garo, East Garo and Ri-Bhoi districts; spray Rogor @ 0.05%.
- In Mild Tropical Plain Zone of Tripura, due to the prevailing humid weather, there is chance of attack of gandhi bug, rice stem borer, leaf hopper and plant hopper and disease like blast in *aman* rice; farmers are advised to spray Malathion 35 EC @ 1.5 g per liter of water or Cartap Hydrochloride (Dollar) @ 1.5 g per liter of water against gandhi bug and Mancozeb @ 0.25% against blast. There is attack of leaf spot and leaf blotch in ginger and Turmeric; to control the attack spray Carbendazim (1 g / litre of water) or Mancozeb (2.5 g / litre) + 1 ml Sandovit.
- 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, pig and goat in Upper, Lower and Central Bramhaputra Valley Zone in Assam.
- Farmers in Manipur are advised to deworm the cattle, sheep, goat etc. It is also advised to deworm and vaccinate pigs against Swine Fever virus and Foot and Mouth disease (FMD).
- In Tripura, due to prevailing high moisture, there is chance of ammonia fumes which irritate the respiratory tract and eyes in poultry. Poultry farmers are advised to provide good ventilation.
- Due to continuous rainfall, there are chances of contamination of feed with fungus and bacteria; hence, farmers are requested to boil the feeds before giving to pigs to kill harmful insects or parasites.

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

- **Realised Rainfall:** Most of the districts of the States of this region received rainfall during last week.
- **Rainfall Forecast:** Widespread rain / thundershowers would occur over Orissa and Jharkhand and fairly widespread over Bihar, West Bengal and Sikkim. Rainfall activity would decrease over Orissa, Jharkhand and West Bengal and Sikkim after 48 hours. Scattered heavy to very heavy rainfall would occur over north Orissa and isolated heavy rainfall over south Orissa, Jharkhand, Bihar and Gangetic West Bengal during next 48 hours.
- **Advisories:**
 - Flash flood in four districts of coastal areas of Orissa due to heavy rain occurred during earlier weeks caused submergence of rice fields during last week. Release of excess water from Mahanadi

is also likely to cause damage of the crops in 11 districts of the state. In view of above and also likely occurrence of widespread rain over Orissa along with scattered heavy to very heavy rainfall over north Orissa and isolated heavy rainfall over south Orissa during next 48 hours, farmers are advised to arrange for drainage facilities, wherever possible, to prevent the further crop damage.

- Due to recent floods in few districts, the non-paddy crops in some areas are completely damaged due to submergence of flood water for more than three days. The sowing of non-paddy crops in uplands and up medium lands could not be completed due to excess water in the lands, which remained fallow due to drought occurred during August. The harvesting of jute could not be made, even at the harvesting stage. In some areas the harvested jute is in dirty water, which may lead to deterioration of jute quality. Lodging of crops also occurred.
- In the flood affected districts of Orissa, where the crops were partially affected, the following measures may be undertaken-
 - Arrange for draining out excess water from both the paddy and non-paddy crops.
 - Undertake hoeing and weeding of non-paddy crops like maize, cotton, pulses, sesame etc, followed by top dressing after receding of rain water.
 - Keep the harvested jute standing in bundles and undertake retting after the water gets cleared of turbidity.
 - Make the lodged paddy crops upright.
 - Spray water to the paddy leaves to remove mud.
 - In case poorly drained land, the urea may be applied as mud balls prepared by mixing with wet soil.
- Now it is optimum time for sowing of sesame, green gram and black gram in the fallow uplands of Orissa. Farmers are also advised to sow arhar, niger, horsegram and brinjal after the soil attains optimum moisture condition
- In view of likely occurrence of widespread / fairly widespread rain / thundershowers over the remaining States of the region, farmers are advised to postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. In view of isolated heavy rainfall over Jharkhand, Bihar and Gangetic West Bengal during next 48 hours, farmers are advised to arrange for adequate drainage to remove excess water from the field.
- Farmers in South Bihar Alluvial Zone are advised to undertake propping in standing sugarcane crop for better stand in the field.
- Farmers in South Eastern Plateau Zone of Jharkhand are advised to undertake cultivation of green pea in fallow medium land for the utilization of reserved moisture. Rotting of tubers of Turmeric, Ginger and Elephant foot yam are noticed. To save the crops, arrange to drain out excess water.
- Farmers in Central, Western and North Eastern Plateau Zone of Jharkhand are advised to start sowing of toria, niger, bell pepper, green pea, tomato, cabbage, cauliflower, potato etc.
- Farmers in Coastal saline Zone of West Bengal are advised to start seed bed preparation of short duration varieties of tomato and cauliflower as soon as possible after current spells of rain.
- Farmers in Terai Zone of West Bengal are advised to start seedbed preparation for gladiolus, withania and marigold within the next week.
- Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
- Heavy rainfall in Khurda district of East and South Eastern Coastal Plane Zone of Orissa may favour the infestation of swarming caterpillar in rice; apply Chloropyriphos dust in the bunds of the affected fields and spray 2 ml Chloropyriphos per litre of water in the afternoon. The heavy rainfall is likely to favour the infestation of leaf folder and case worm in rice; spray 2 ml Chloropyriphos per litre of water to control leaf folder and 2 ml Endosulfan or Ryzophos per litre of water to control case worm. The current humid weather is favorable for red and black hairy caterpillar in pulses; apply 10 kg Chloropyriphos 1.5% in the morning to control it. The current humid weather may favour the infestation of bacterial wilt in brinjal, chilli etc., to control wilt, spray 1 g Streptocyclin in 10 litres of water.

- In Nayagarh district cut worm was found in rice in flood affected areas. The dry weather followed by cold weather will aggravate the pest surveillance. Apply Chloropyrifos around the bunds of the affected fields to prevent the entry of the pest to the unaffected field. Spray 400 ml Chloropyrifos or 200 ml DDVO in 200 litres of water per acre in the afternoon hour.
- In Keonjhar, the North Central Plateau Zone of Orissa, maize crop has been infested by stem borer; apply 1 g Furadan in the leaf whorl or spray 2 ml Chloropyrifos or 1.5 ml Phosphamidon in 1 litre water.
- Under prevailing weather condition, there is chance of attack of Brown Plant Hopper (BPH) in *kharif* rice in New Alluvial Zone of West Bengal. If the number of insect reaches more than 15 per plant, apply 0.75 ml Nuvan or Vapona per litre of water or dust Quinolphos 1.5% or Carbaril 4% at lower portion of the stem.
- Attack of stem borer in brinjal has been reported in North West Alluvial Plain Zone of Bihar; apply Sevin 50 % wettable powder @ 2.5 g per litre of water in the affected crop.
- Due to prevailing weather conditions in South Eastern Plateau Zone of Jharkhand, there is a chance of attack of brown spot, false smut, blast and leaf eating insects in rice; spray Samadhan (Hexaconazole) @ 1 ml per liter of water or Saaf @ 2 g per liter of water by mixing Teepol @ 0.5 ml per liter of water against brown spot, Tilt @ 1 ml per liter of water against false smut, Bavistin @ 1 g or Beam (tricyclazole) @ 6 g per 10 liters of water against blast, Quinolphos 25 EC or Chlorpyrifos 20 EC @ 0.6 liter per acre against leaf eating insects at flowering to milk stage.
- Prevailing rainy weather is conducive for the occurrence of pests like hairy caterpillar in pulses in South Eastern Plateau Zone of Jharkhand; at early stage of caterpillar apply Dichlorvos @ 0.5 ml per liter of water.
- Present weather condition may favour occurrence of anthracnose disease in cucurbitaceous crops in South Eastern Plateau Zone of Jharkhand; blitox 50 @ 3 g per liter of water may be used as prophylactic spray. Weather is also conducive for the attack of diseases like leaf blight in tomato, chilli and capsicum; spray blitox 50 or copper oxychloride @ 3 g per liter of water.
- In some pockets of Western Plateau Zone of Jharkhand, late sown mung and urd are attacked by hairy caterpillar, spray quinolphos @ 2 ml per litre of water.
- Apply plant protection measures to the crops after current spells of rain.
- Stages of major crops are mentioned in Annexure I.

Animal Husbandry

- In North Eastern Plateau Zone of Orissa, 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. 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. Keep the animal shed clean. Produce and use Azolla as animal feed. Feed the milch animals @ 1 kg feed in two litres of water mixed in 50 g mineral salt.
- High moisture content may accelerate the growth of fungus (*Aspergillus Spp.*) in the poultry feed in Western Undulating zone of Orissa. Hence, all feed concentrate meant for poultry should be dried to 12% moisture. In cattle, to prevent the outbreak of foot and mouth disease, FMD Vaccine should be administered to the adult cattle @ 5 ml S / C.
- Farmers in North East Bihar are advised to administer wormicide to all cattle before end of rainy season.

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

- **Realised Rainfall:** Many of the districts of the states of this region received rainfall during last week.
- **Rainfall Forecast:** Scattered rain/thundershowers would occur over east Uttar Pradesh. However, rainfall activity would increase over east Uttar Pradesh after 24 hours. Isolated rain/thundershowers would occur over remaining parts of the region outside Punjab, Haryana, west Rajasthan where weather would remain mainly dry.
- **Advisory:**
 - As many districts of the States in the region received rainfall during the last week, postpone irrigation to the standing crops. Provide adequate drainage facilities in East UP as isolated heavy rainfall during next 48 hours.
 - As weather is favourable farmers in Delhi are advised to undertake sowing of early pea, carrot, sarson saag, radish, spinach, coriander, turnip and gladiolus. Field preparation should be started for early mustard. Transplant tomato, chilli cauliflower and cabbage on raised bed if seedlings are ready. Spray of Pendimethylene @ 1.0 Litre (a.i) /ha in 600 liter water before transplanting may be done. Chrysanthemum and marigold should be transplanted in raised bed.
 - Farmers in Punjab and Haryana are advised to undertake sowing of early maturing sugarcane, toria, radish, carrot, turnip and fruit plants like lemon, guava and ber utilizing available soil moisture. Prepare the land for the sowing of berseem and maize as fodder. Drain out excess water from the fields of summer pulses which can be damage to fruit bearing branches. Farmers are advised to harvest early sown bajra crop utilizing dry weather likely to prevail.
 - Farmers of Himachal Pradesh are advised to make arrangement for immediate harvesting of apple, ragmash, beans, vegetables, potato. Nursery beds preparation and subsequently sowing of seeds of cabbage, cauliflower and broccoli etc. may be done. Direct sowing of carrot, raddish and Palak can also be done during this period. Light earthling up followed by light irrigation is also advised in ginger and turmeric. Farmers of the sub-montane and low hill area are advised to complete sowing of toria and berseem and take up sowing of potato.
 - Farmers in Jammu & Kashmir are advised to undertake harvesting of matured rice, matured pods of moong, early sown maize, bajra, oilseeds, sowing of toria intercropped with gobi sarson, berseem, winter vegetables viz. garlic, methi, spinach, radish, carrot, turnip, planting of litchi, cole crops. They are also advised to harvest tomatoes, capsicum, chilli and brinjal at regular interval in cold arid zone (Leh). In fallow lands, conservation of soil moisture in situ condition for the sowing of *rabi* crops is advised. Make arrangements for proper drainage of water from the orchards.
 - Farmers in Bhabar and Tarai Zone of Uttarakhand are advised to undertake sowing of vegetable pea at high hills, toria, planting of papaya. Continue sowing of early vegetable pea, tomato and also in this week temperature conditions are expected to be congenial for sowing of toria and garlic under optimum soil moisture conditions.
 - Farmers in Uttarakhand and Uttar Pradesh advised to undertake propping for long and healthy crop plants.
 - Farmers in Uttar Pradesh are advised to undertake sowing of brinjal, chilli, lady's finger and lobia during this week.
 - Farmers in Rajasthan are advised to undertake field preparation for sowing of Ajwain, taramira, rainfed taramira, toria, pea, mustard, picking of matured fruits of tomato, brinjal, chilli, maize and picking of pods of green gram, moth beans, cowpea, moong beans, pulses, bajra, jowar. They are also advised to undertake seed bed preparation for raising nursery of vegetables viz. chilli, brinjal, palak, pea, cabbage, coriander and tomato for *rabi* season. Farmers are advised to start field preparation for sowing of wheat and barley and procure improved varieties of mustard and potato tubers of improved varieties.
 - In southeastern humid plain zone of Rajasthan (Kota), there are chances of bacterial blight, stem borer and leaf folder in rice, farmers are advised to spray solution of 100 p.p.m. Streptocyclin to control Bacterial Blight and spray solution of Monocrotophos 36 S.L. @ 100 m.l. per ha. to control stem borer and leaf folder.

- Present weather condition is highly favorable for infection of blast disease in rice in Delhi. Also there may be attack of brown plant hopper, gundhi Bug in rice field. Farmers are advised to monitor the crop for above pest & disease and take proper plant protection measures.
- Due to high relative humidity in Delhi, there may be incidence of downy mildew on vegetables. Spray Dithane m-45 @ 2 gram/litre water when sky is clear.
- As heavy rainfall was recorded in the Ludhiana region in Punjab, sheath blight has been observed and to save the crop from sheath blight, keep the bunds of the fields clean by removing grass as clear weather is expected in coming days.
- Due to high humidity there is possibility of attack of jassid and sundi in cotton crop in Haryana. Farmers are advised to monitor the crop and take proper plant protection measures.
- There is possibility of bacterial blight in the clusterbean crop in Haryana. Farmers are advised to spray the crop with 400ml Blitox and 30g of straptocyclin in 200 litres of water per acre.
- Stages of major crops are mentioned in Annexure I.
- **Animal Husbandry**
 - In Punjab, During hot and humid climate may lead to conditions of ring worm & other problems in animals so farmers are advised to keep the animals clean and dry also protect wounds from flies to avoid maggots' infestation.

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

- **Realised Rainfall:** All the districts in Coastal Karnataka, Bangalore Rural and Urban, Chickballapur, Chickmagalur, Kodagu and Shimoga in South Interior Karnataka, many districts in Tamil Nadu, most of the districts in Kerala except Palakkad and Thiruvananthapuram, Nellore, Srikakulam, and Vizianagram in Coastal Andhra Pradesh, Karimnagar and Rangareddy in Telangana and Chittoor and Cuddapah in Rayalseema received good rainfall. No significant rainfall occurred in North Interior Karnataka and the remaining parts of the region.
- **Rainfall Forecast:** Scattered rain/thundershowers would occur over coastal Karnataka and Kerala during next three days. Isolated rain/thundershowers would occur over the remaining parts of the region.
- **Advisories:**
 - Poor rainfall conditions was observed in Interior Karnataka and Andhra Pradesh. Here many of the kharif crops are at grain/pod development stage. However, no significant damage has been reported in this region. Farmers are advised to monitor the crop and arrange for supplementary irrigation depending upon residual soil moisture.
 - As there was sufficient rainfall in Coastal Karnataka, Bangalore Rural and Urban, Chickballapur, Chickmagalur, Kodagu and Shimoga in South Interior Karnataka, many districts in Tamil Nadu, most of the districts in Kerala except Thiruvananthapuram, Nellore, Srikakulam, and Vizianagram in Coastal Andhra Pradesh, Karimnagar and Rangareddy in Telangana and Chittoor and Cuddapah in Rayalseema received good rainfall, postpone irrigation to the crops. Apply irrigation to the crops in the remaining districts where there was no significant rainfall.
 - Farmers in the North Dry Zone of Karnataka are advised to start land preparation for sowing *rabi* crops like sorghum, safflower and continue sowing of sunflower, since light to moderate amount of rainfall is expected at many places in the district. They are also advised to take up repeated intercultivation in early sown crops to conserve soil moisture and control of weeds and harvest pearl millet (Bajra) after five days, since there is possibility of rainfall during the coming five days.
 - Farmers in the Hill Zone of Karnataka are advised to take up sowing of *rabi* crops in areas where sufficient amount of rainfall is received.
 - Farmers in the North East Dry Zone of Karnataka are advised to avoid water stagnation, since rainfall is forecasted in the coming days. They are also advised to harvest green gram and black gram

wherever it is possible, prepare land for sowings of *rabi* crops like safflower, rabi jowar and inter cultivation is to be done in kharif crops like maize ,cotton, spreading groundnut ,sunflower etc.

- Since light rainfall is forecasted in the Cauvery Delta Zone of Tamil Nadu for the next five days, farmers are advised to arrange for harvest should be planned accordingly.
- Farmers in the High Altitude Hilly Zone of Tamil Nadu are advised to complete sowing / planting of vegetable and fruit crops before onset of NE monsoon.
- Farmers in Central Zone of Kerala are advised to continue land preparation for early *mundakan* and continue manuring in coconut, ginger, turmeric and vegetables.
- Farmers of High Altitude Zone of Kerala are advised to apply fertilizers in coconut, arecanut, pepper and cardmom plantations.
- Incidence of Bacterial leaf blight in paddy is severe in some areas of Problem Areas Zone of Kerala. For the dry sown area, crop is at harvesting stage. Hence dewatering is to be done to enhance harvesting with combined harvester.
- In the northern zone of Kerala attack of Gundhi bug attack is seen in late sown paddy fields of Eastern hill tracts. Apply Azadiractin 3000ppm stock after diluting in water @ 3ml/L. To have a better control add and stir one to two ml. of Malathion 50EC per litre of the diluted Azadiractin solution before applying.
- In the scarce rainfall region of Rayalseema of Andhra Pradesh, leaf minor was noticed in groundnut. To control Leaf minor spray Chlorpyrifos @2.0 ml and Nuvan @1.0 ml in lit of water.
- Phytopathra blight was noticed in pigeon pea and fruit borer was noticed in bhendi in North East Transition Zone of Karnataka. Farmers are advised to rough out the affected plants and spray M-45 @ 2g/litre of water to control phytopathra blight and Quinlophos 2 ml per litre of water to control fruit borer.
- *Due to congenial weather condition in the southern dry zone of Karnataka, tomato crop is severely affected by leaf spot and leaf rot disease. Spray mancozeb @ 2 gm/ lts of water or chlorothalonil @ 2 gm/ lts of water or propineb @ 2gm/lts of water to control leaf spot and leaf rot disease. Due to congenial weather condition paddy crop is affected by stem borer, leaf roller and sucking insects. To control these pests spray chlorophyriphos or monocrotophos or ekalux @ 2.00ml per ltr of water in morning hours.200 to 250 ltrs of spraying mixture is required per acre.*
- Undertake plant protection measures after spells of rain in Kerala and Coastal Karnataka.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised rainfall:** All the districts of Konkan, Vidarbha and most of the districts of Marathwada (except Osmanabad) and Satara and Ahmednagar districts of Madhya Maharashtra received significant rain during last week. Valsad and Surat districts in Gujarat region and most of the districts in Saurashtra and Kutch received significant rain during last week.
- **Rainfall forecast:** Scattered rain / thundershowers over Konkan and Goa and isolated rain / thundershowers over Madhya Maharashtra, Marathwada, Vidarbha and Gujarat region likely during the period. Weather would remain mainly dry over Saurashtra and Kutch.
- **Advisory:**
 - Taking the advantage of relatively dry weather, farmers of Madhya Maharashtra, Marathwada and Vidarbha are advised to undertake harvesting of already matured green gram and black gram and start harvesting of soyabean.
 - Apply 2% Urea or DAP at flowering stage on soyabean in East Vidarbha as there is less possibility of rain.
 - Under prevailing weather, farmers of Madhya Maharashtra and West Vidarbha are advised to apply 1 goni of urea and half goni of potash per acre on *vapsa* condition in cotton.
 - Taking the benefit of prevailing weather, farmers of Madhya Maharashtra and Marathwada are advised to undertake sowing of *rabi* jowar with the help of optimum moisture in the field.

Farmers are also advised to complete preparatory tillage and undertake the sowing of safflower after harvesting of *kharif* crops.

- Farmers in Madhya Maharashtra are advised to undertake sowing of rainfed gram.
- Farmers in Bhal and Coastal zone of Gujarat are advised for harvesting of matured fruits of vegetables. In view of less possibility of rain, apply fertilizers and insecticides in cotton crop field.
- Taking the advantage of likely dry condition, farmers in Middle Gujarat Zone are advised to harvest *kharif* bajra and matured pods of green gram. If yellowing of leaves is observed in vegetables, spray mixture of 40 g Ferrous Sulphate + 20 Zinc Sulphate + 10 g boric acid in 10 litres of lime water.
- Sowing of late *kharif* or semi *rabi* crops may be carried out in South Gujarat Heavy Rainfall Zone.
- Spraying of 100 g Ferrous Sulphate and 10 g Citric acid in 10 liters of water is advised for yellowing in groundnut crop in South Saurashtra Zone of Gujarat.
- As relatively dry weather is persisting, farmers in North Saurashtra Zone of Gujarat and North Gujarat Zone are advised to apply 40 kg N / ha as top dressing in cotton.
- If the crop is under physiological maturity in North Gujarat Zone, harvesting of sorghum, maize, green gram and cowpea may be carried out under likely dry weather.
- Suitable varieties of the crops for sowing are mentioned in Annexure II.
- Due to humid weather there may be attack of white fly, thrips and aphids on cotton in Western Maharashtra Scarcity Zone; spray Acitamidiprid 20 SC @ 3 g or Carbosulfan 25 SC @ 20 ml in 10 litres of water.
- In low-lying water logged areas, there may be attack of brown plant hopper in rice in Konkan region of Maharashtra; spray 50% Malathion @ 10 ml or Monocrotophos @ 15 ml per 10 liters of water. There may also be incidence of blue beetle and rice earhead bug; spray Monocrotophos 36 WSC @ 14 ml or Carbaryl 50 WP @ 20 g or Cypermethrin 25 EC @ 2.4 ml per 10 litres of water or dust 2% Methyl Parathion dust @ 20 kg / ha.
- Due to rise in maximum temperature there may be infestation of leaf scald in rice in Western Ghat region of Maharashtra; spray Bavistin @ 10 g per 10 litres of water.
- Due to high humidity there is chance of attack of blight in banana in Madhya Maharashtra; spray Diathane M-45 @ 30 g or Carbendazim @ 10 g per 10 litres of water.
- Increase in day temperature is favourable for attack of sap sucking pests like aphids and thrips on tomato in Pune Division; spray Imidacloprid @ 4 ml per 10 litres of water.
- Due to cloudy weather in South Gujarat Zone, there are chances of incidence of sucking pests in cotton; farmers are advised to spray Imidacloprid @ 4 ml (200 SL) per 10 liters of water.
- Due to forecast of cloudy weather with high humidity, there may be possibility of attack of sucking pests in green gram and cowpea in South Gujarat Heavy rainfall Zone; farmers are advised to spray Diamethoate 30% or Acephate @ 15 g per 10 liters of water.
- Stages of major crops are mentioned in Annexure I.

Animal Husbandry

- For control of external parasites like ticks, spraying of cattle shed by using 1 to 1.5 ml neon per litre of water is advised. For control of fly and Mosquito in cattle shed, spray Malathian dust and clean the shed frequently in Gujarat.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Anuppur, Chhattapur, Mandla, Panna, Seoni, Singrauli and Sidhi districts in East Madhya Pradesh and Bhind, Bhopal, Burhanpur, Harda, Khandwa, Morena, Raisen, Sheopur Kalani and Vidisha districts in West Madhya Pradesh and all the districts in Chattisgarh except Kawardha received rainfall.
- **Rainfall Forecast:** Rainfall is likely at many places in Chhattisgarh during next three days. Isolated rainfall is likely in the remaining region. There are also chances of isolated heavy rainfall over north Chhattisgarh during next 48 hours.

- **Advisory:**
 - As fairly widespread rain occurred over Anuppur, Chhattapur, Mandla, Panna, Seoni, Singrauli and Sidhi districts in East Madhya Pradesh and Bhind, Bhopal, Burhanpur, Harda, Khandwa, Morena, Raisen, Sheopur Kalani and Vidisha districts in West Madhya Pradesh and all the districts in Chattisgarh except Kawardha during last week, postpone irrigation to the crops. Apply irrigation in the remaining districts where there was no rainfall occurred during last week.
 - Farmers in Kymore Plateau and Satpura Hill Zones in Madhya Pradesh are advised to provide drainage channels in oilseeds and legumes crops field according to the slope to drain out excess rainy water. Also transplant cauliflower in main fields.
 - Farmers in Central Narmada Valley Zone are advised to prepare cabbage and cauliflower nursery. Also farmers in Vindhya Plateau Zone are advised to prepare nursery for onion.
 - Farmers in Malwa Plateau Zone of Madhya Pradesh are advised for transplanting of brinjal, chilly tomato, etc.
 - Farmers in Jhabua Hill Zone are advised to sow toria, kusum and unirrigated mustard crop. Also farmers in Bundelkhand Zone of Madhya Pradesh are advised for sowing of toria, onion, potato and garlic.
 - Farmers in Gird Zone are advised for transplanting of fruit plants like mango, guava, anola, citrus, chickoo, Pomegranate etc. Also transplant the medium duration varieties of cauliflower in the field.
 - Farmers in Chattisgarh Plain Zone are advised for sowing of nursery of early varieties of cauliflower, tomato, brinjal, chilli etc and prepare land for sowing of niger and horsegram. Also in North Hill Zone of Chattisgarh, farmers are advised for sowing of Ramtil and toria and prepare nursery for tomato, cabbage, pea, chilly and cauliflower.
 - Farmers in Bastar Plateau Zone are advised for sowing of niger, Kulthi (horegram) and toria after field preparation by ploughing in the fields in Chattisgarh in the marhan and tikra farming situation (upland situations).
 - Weather is congenial for green hoper and gallfly in paddy crop in Bundelkhand Zone of Madhya Pradesh, spray Quinolphos 20 E.C.@ 2.0 ml/litre of water.
 - Due to continuous saturation and water logging in Malwa Plateau Zone of Madhya Pradesh, there is a possibility of color rot and foliar diseases of soybean such as alternaria, blight etc. spray Mancozabe / Carbendazime or some other recommended fungicide.
 - Weather is congenial for sucking pests on cotton in Nimar Valley Zone of Madhya Pradesh, spray Metasistox or Dimethoate.
 - Weather is congenial for girdle beetle in soybean in Central Namada Valley Zone of Madhya Pradesh, spray Trizophos 0.75 lit/ha or Quinolphos 0.75lit/ha.
 - Undertake plant protection measures after spells of rain in Chhattisgarh
 - Stages of major crops are mentioned in Annexure I.
 - **Animal Husbandry & Poultry**
 - In Bundelkhand Zone of Madhya Pradesh, present weather condition is suitable for breeding period of buffalo. Therefore farmers are advised to incorporate minerals salts and vitamins in their feed.
- In Gird Zone of Madhya Pradesh, the Cattles may be infected by foot and mouth diseases. The vaccination of cattles is most essential in order to control such type of dises infaction. For keeping the cattle healthy, green fodder with wheat bhusa feeding may be given to animals for batter digestion. provide balanced and nutrient rich feed having protein, carbohydrate, fat vitamins and antibiotics

Annexure I

Major Crops

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

- Sugarcane (vegetative), *sali* rice (transplanting / tillering), *olitorius* and *capsularis* jute (retting / fiber extraction), maize (vegetative), sesame (vegetative / flowering / pod formation), groundnut (vegetative / flowering / pegging), arhar, radish, knol khol and brinjal (early variety), sesamum, Dolichos bean, country bean (sowing / early vegetative / vegetative), tea (plucking), jute (for seed production) (early vegetative), early cauliflower and cabbage (nursery sowing / seedling / transplanting), winter vegetables (nursery sowing), ginger / turmeric (vegetative), black gram / green gram (sowing / vegetative), and khasi mandarin (vegetative / flowering) in Assam.
- Rice (harvesting), tuber crops (vegetative), soyabean and groundnut (pod formation / seed filling), cabbage, cauliflower, knolkhol etc. (nursery preparation), ginger and turmeric (rhizome formation) and maize (cob harvesting) in Arunachal Pradesh.
- Soyabean (maturity), groundnut (maturity), *kharif* rice (flowering / grain filling), ginger and turmeric (rhizome formation), tomato (nursery raising), early cauliflower and cabbage (nursery sowing / vegetative), onion (nursery preparation), brinjal (flowering / fruiting), French bean, broad bean, pea (sowing) in Manipur.
- *Ahu* rice (flowering / grain filling), arhar (maturity), *sali* rice (milk), maize (cob formation), *rabi* maize (sowing), pea, mustard, garlic and lettuce (sowing), ginger and turmeric (early sown) (maturity / harvesting), ginger and turmeric (late sown) (vegetative), *toria* (vegetative), groundnut (vegetative / flowering / pegging), onion (nursery preparation), potato (vegetative), *Khasi* mandarin (flowering / fruiting) and banana (vegetative) in Meghalaya.
- Rice (panicle initiation / booting / milk), groundnut (pegging / pod formation), soyabean (flowering / pod formation), okra (harvesting), ginger and turmeric (rhizome formation / maturity), *khasi* mandarin (vegetative / fruiting), French Bean, rice bean, urd and moong bean (pod formation / maturity), banana (vegetative / fruiting / maturity), cucurbits (flowering / fruiting), cole crops and tomato (nursery preparation) in Mizoram.
- Soyabean (flowering / pod formation), groundnut (vegetative / flowering / pegging), green gram and black gram (sowing / vegetative), finger millet (flowering), okra (flowering / fruiting), lowland rice (panicle initiation), upland rice (maturity / harvesting), banana (fruiting), colocasia (flowering), turmeric (vegetative), cabbage (nursery sowing / transplanting), cowpea (vegetative), mandarin (planting) and papaya (transplanting) in Nagaland.
- *Aus* or *kharif* rice (grain formation / maturity), *aman* rice (panicle / flowering / milk), groundnut (flowering / pegging), upland / *jhum* rice (milk), cucurbits and other vegetables (flowering / fruiting), maize (tasselling / silking / cob formation), ginger and turmeric (vegetative / rhizome formation), cole crops (nursery preparation), radish, brinjal (early) (sowing) and sesame (vegetative / flowering / pod formation) in Tripura.

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

- Sugarcane (vegetative), rice (booting / panicle initiation), *kharif* maize (tasselling), *kharif* arhar, sesame, sorghum, jowar, lobia for green fodder, mishrikand (vegetative), onion, radish (sowing), cauliflower (sowing), fruit trees (transplanting) and sweet potato (planting) in Bihar.
- Rice (flowering / milk), finger millet (flowering), maize (silking / grain formation / grain filling), pigeon pea (active vegetative), pulses (urd bean, moong bean) (flowering), groundnut (flowering / pegging), turmeric and ginger (rhizome formation), elephant foot yam (tuber elongation), potato (land preparation / sowing), sweet potato (stem elongation), mung, urd (maturity), *toria*, green pea (sowing), cauliflower, cabbage, chilli, tomato (transplanting), niger (sowing), papaya (transplanting) in Jharkhand.

- Arhar (sowing / early vegetative), maize (early vegetative / vegetative), papaya, marigold, tuberose (planting), cowpea (sowing / early vegetative), *kharif* vegetables (vegetative / flowering / fruiting), sugarcane (vegetative), *kharif* rice (tillering / panicle initiation / flowering / grain formation), groundnut (vegetative / flowering / pegging / pod formation), ragi (vegetative), turmeric and ginger (planting / early vegetative), yam (sowing), sesamum, green gram, black gram, niger, other pulses (sowing / early vegetative), mango, banana, lemon, cashew nut and marigold (planting) in Orissa.
- *Aman* rice (Panicle / booting stage), tomato, cauliflower (nursery preparation), *aus* rice (grain formation / maturity), *kharif* maize (tasseling / silking / cob formation Stage), mango, coconut, guava, banana (planting) and *kharif* vegetables (vegetative / flowering / fruiting / harvesting), winter vegetables (nursery preparation) in West Bengal.
- Large cardamom (capsule formation / transplanting of suckers from nursery / grain maturity), *kharif* vegetables (harvesting), orange (fruiting.), ginger (late harvesting), rice (flag leaf initiation / flowering), maize (harvesting), seed potato (maturity / harvesting), orange (fruiting) in Sikkim.

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

- Rice(vegetative), brinjal, tomato, chilli, cauliflower, cabbage, radish, spinach, coriander, onion (vegetative), cucurbits crops (flowering/fruiting), lentil (pod formation), maize, hybrid cluster bean, baby corn, Pigeon pea (sowing/ vegetative), green gram and black gram(flowering / fruiting), cotton (sowing), Sugarcane(sowing), guar, bajra(flowering/grain filling), Soyabean(flower initiation) 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 (sowing / emergence), cucurbits (vegetative / flowering/maturity), onion (seed bed preparation), capsicum, chilli, brinjal, raddish, carrot, turnip, cauliflower, cabbage, broccoli (vegetative / fruiting), early sown maize (initiation of tassel emergence / grain development), early sown maize, bajra (grain formation / maturity / harvesting), maize (grain filling and development), *kharif* pulses, mash (flowering / pod development / maturity), moong (pod formation/ maturity / harvesting), rice (flowering / milking / grain filling / maturity / harvesting), *Kharif* oilseed (groundnut, sunflower, summer brassica etc.) (flowering / seed development / maturity, groundnut – pegging initiation stage), *Rabi* oilseeds i.e. toria, gobi sarson (sowing / emergence), citrus, guava, apple (fruiting) in Jammu & Kashmir.
- Chilli, capsicum, cauliflower, broccolli (transplanting), tomato (vegetative/maturity/harvesting) and lahi (flowering / fruiting), sugarcane (planting), Early planted rice (maturity / harvesting), late planted rice (panicle initiation / milking), litchi, loquat, peach, citrus (flowering / fruiting), mango (early varieties) (flowering), maize (cob formation/cob maturity), soyabean (flowering / pod formation), foxtail millet, okra, bottle gourd, bitter gourd, ginger, turmeric, (sowing / planting), toria, pea (field preparation / sowing), papaya (planting), sorghum, pigeon pea, early vegetable pea, urd and pearl millets(sowing) in Uttarakhand.
- Rice (tillering), winter sugarcane (vegetative growth / formative), summer sugarcane (initial growth / formative stage), cucurbits like gourd, bitter 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 (flowering/fruiting/maturity/harvesting), groundnut, jowar, bajra, til, moong, urd, moong, lobia (early vegetative), arhar, toria (sowing /early vegetative), tomato, brinjal, cabbage, garlic, (sowing), toria (nursery sowing) in Uttar Pradesh.

- Rice (Irrigated area, Basmati) (tillering / maximum tillering), rice (panicle initiation / heading / grain filling), Spring sugarcane (sprouting), berseem (vegetative), vegetables (sowing/fruitletting), sugarcane(grand growth), greengram, blackgram (pod formation / grain filling), sesamum (flowering/pod formation/picking), cotton (boll opening), okra (sowing/vegetative), maize (grain filling), pearl millet (grain filling) (heading) in Punjab.
- Sugarcane (spring season) (planting/emergence/early vegetative), barseem (vegetative), pulses, moong, mash, pigeon pea (vegetative), rice (tillering / vegetative growth) in Haryana.
- Rice (tillering/vegetative), narma cotton, desi cotton (flowering / boll formation in Sriganganagar), sweet potato (sowing), pearl millet, sorghum (vegetative / maturity / harvesting), moong, cowpea, urd (maturity / pod picking), early sown maize (harvesting), maize, soybean, chilli and cluster bean (vegetative) in Rajasthan.

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

- *Kuruvai* rice (maturity), *Samba* rice (nursery), cotton (flowering), vegetables (nursery / transplanting/ fruiting), sugarcane (vegetative/ grand growth/maturity), groundnut (pod development / maturity stage), maize (sowing/vegetative/flowering), sorghum (vegetative), black gram (flowering/ harvest), pulses (sowing/vegetative/flowering) in Tamil Nadu.
- Sugarcane (ratooning/vegetative), cotton (boll development), hybrid jowar, maize (grain development), ragi, sunflower, groundnut, red gram, early planted paddy crop (grain formation), late planting paddy (tillering stage), pigeon pea (vegetative) and horticultural crops (vegetative) in Karnataka.
- Maize (tasselling / cob initiation), jowar, cotton (square to flowering stage), sugarcane and pulse crops like green gram (maturity), red gram (vegetative), rice (nursery / tillering), groundnut (Early sown-late pod development stage./Late sown crop - pod development stage) in Andhra Pradesh.
- *Virippu* rice (harvesting), black pepper (berry maturing/harvesting), ginger (vegetative), turmeric and vegetable crops (harvesting), *Mundakan* rice (transplanting) in Kerala.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- Sugarcane (new *adsali* - sprouting / old *adsali* - grand growth / elongation), sugarcane (pre-seasonal) (vegetative), sugarcane (*suru*) (vegetative), *Kharif* rice (flowering / grain formation in early maturing varieties, ear head emergence / flowering in medium maturing varieties and tillering in late maturing variety in Konkan, Kolhapur, Pune and Nashik Divisions and tillering in East Vidarbha), jowar (panicle initiation / flowering), soyabean (pod maturity), groundnut (pod development) cotton (floral bud initiation / flowering), red gram (branching) and green gram (pod maturity / harvesting).
- *Kharif* bajra (grain formation / harvesting), vegetables (flowering / fruiting / harvesting), sugarcane (vegetative), groundnut (flowering / pegging / pod formation), *kharif* pulses (pod development / maturity / harvesting), maize (tasseling / silking / cob formation / maturity), cotton (vegetative / flowering / boll formation), rice (tillering / panicle initiation / flowering) in Gujarat.

CENTRAL INDIA[M.P., CHHATTISGARH]

- Sugarcane (vegetative), vegetables (flowering and fruiting), moong, urad, maize, soybean, sesame, groundnut, jowar groundnut, pigeon pea (maturity), onion, brinjal, tomato and chilli etc. (vegetative), rice (flowering / grain formation) in Madhya Pradesh.
- Rice (tillering), sugarcane (planting), maize (flowering), groundnut, arhar, green gram and sesame (vegetative), ginger, turmeric, papaya, mango and guava (vegetative) in Chhattisgarh.

Annexure II

List of Varieties

Delhi

Pea: Pusa Pragati.

Carrot: Pusa Rudhira and Pusa Kesar.

Early mustard: Pusa Sarson-25, Pusa Sarson-26, Pusa Agrni, Pusa Taraka, Pusa Mahak

Sarson Saag: Pusa Saag-1;

Radish: Pusa Chetki, Versa Kee Rani;

Spinach: All Green; Coriander- Pant Haritama, Hybrids;

Turnip: Pusa Swati, Local Red variety.

Himachal Pradesh

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

Brinjal : PPL, PPC & PPR

Carrot: . Nantes and Pusa Yamdagini

Turnip : Purple Top White Globe

Chillies : NP-46A, Pusa jawala

Bajra: WCC-75, ICMS-7703 and Hybrid M.H.B-110,

Cabbage: GA, POI

Fodder berseem : mascavi, pusa giant, BL-1

Toria: RSPT-1, RSPT-2, RSPR-3

Gobi Sarson : GSS-1

Winter Vegetables : **Potato :** K. Badshah, K. Sinduri, K. Chipsona & K. Sona, **radish :** P. Reshmi,

carrot: Pusa Kesar, P. Yamdagani, **Turnip :** PTWG, **garlic :** local, yamuna safed agrifound parvati,

Methi: pusa early bunching and kasuri methi and **spinach :** all green during these days.

Punjab

Early varieties of sugarcane: CoJ 85, CoJ 83, and CoJ 64

Toria : PBT 37/ TL 15

Oil seeds: PBT 37/ TL 15

Desi varieties of radish: Punjab Pasand and Punjab Safed,

Turnip: L-1 and 4-white

Carrot : PC 34)

Haryana

Baisakhi Mung: K851 and Type 44 and Muskan

Pigeon pea: UPAS 120, T-21.

Uttarkhand:

Pea: VL Ageti Mater-7, Vivel Mater-10, Pant Subjee Mater-3, Azad Mater-3 and Arke

Garlic : VL-Garlic or DARL-52

Toria : Pant Toria 2002-25, Pant Toria-30, Pant Toria-303, Type -9 etc

Tomato : Pant T-3, Pusa Gaurav, Pusa Bahar, Pusa Hybrid-2 etc

Uttar Pradesh:

Toria: Pitambri kanti type-9(black). Type-36(yellow), PT-303, PT30, Bawani, T9, PT303

Rajasthan

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

Sweet potato: Pusa Safed, Pusa Lal, Pusa Sunhari & L-20

Taramira : T-27, I.T.S.A.

Toria: T-9, Sangam

Pea : Arkil, Hara bona, VL-3, Jawahar Matar-4, Matar Ageti-6 (improved varieties of early pea)

Mustard: Improved varieties

1. Early sown (Irrigated) - EJ17, Pusa Mahak and kanti.
2. Normal sown (irrigated) - Maya, Rohini, Pusa Jai kisan, Varuna, RGN13, RGN73, NRCDR 2, NRCHB 506(hybrid).
3. Normal sown (rainfed) -Arawali,RGN48, Geeta and PBR97
4. Saline sodic soils - CS52, CS54, CS56, Narendra Rai 1
- 5.Taramira - Karan Tara, Narendra Tara
- 6.Yellow Sarson - NRCYS-05-02, YSH401

Potato : 1. Early sown- Kufri-Ashok and Chandramukhi for early sowing.

2. Mid sowing- Kufri-Anand, Chipsona-1, 2, Jyoti and Pukhraj.

Ajwain : Pratap ajwain – 1

Madhya Pradesh-

Onion-Udaipur 102, Pusa white, Nasik Red and Nasik Roja

Chattisgarh-

Niger crop-JNC-1, JNC-6, JNC-9, GA-10, Ootakmund, KGN-2,

Horsegram (Kuthi) crop-AK-231, AK-42, Bastar Kuthi, Birsa Kuthi, VLG-9

Maharashtra

Rabi sorghum: Maldandi 35-1, Selection-3, Phule Vasudha, Phule Revati, Phule Yashodha and Mauli. Select Mauli variety for medium soil whereas Phule Revati, Phule Vasudha for black soil.

Safflower: Bhima, Phule Kusuma.

Gram: Vijay.

Karnataka

Sunflower : Modern, KBSH-41,42&44

Cowpea : C-152, PKB-4, KM-5

Horse gram : KBH-1,PHG-9

Tamil Nadu

Late samba: ADT 38, ADT 46, ADT 49, improved white ponni, IR 20, ASD 19, Paiyur1, Trichy 1, Trichy 3 and Co 50

Late Thaladi: ADT 39 ADT 42, and ASD 16

Assam

Early cauliflower:

Mid season varieties: Improved Japanese, Pusa Synthetic, Pusa Snowball.

Early maturing cabbage varieties: Golden Acre, Pride of India, Pusa Mukta.

Others: Early Kunwari, Pusa Katki and Pusa Deepali.

Cabbage: Golden Acre, Pride of India, Pusa Mukta (Sel-8).

Tomato: Punjab Suhara, Avinash, Pusa Ruby.

Green gram: T-44, Kopergaon, K-851, ML-56, ML-13.

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, Japanese white, Bombay Red.

Brinjal:

Long varieties: Cluster, JC-1, Kuchia, Pusa Kranti, Pusa Purple Long, Longai.

Round varieties: Pusa Purple Round, Pusa Vairab, JC-2, BWR-12.

Knolkhol: White Vienna.

Sesamum: SP-1181 (Madhabi), Gauri, Binayak, ST 1683, Punjab Tall No.1.

Dolichos Bean: Pusa Early Profile and SD-18.

Manipur

French bean: Pant Anupam, Anupam, Tangkhul Hawaii (local).

Pea: Arkel, Azad.

Cabbage: Rare Ball.

Cauliflower: White Flash.

Onion: Nasik Red.

Tripura

Brinjal : Pusa Kranti, Pusa Purple Long.

Cauliflower: CFL- 4048, Pusa Early Synthetic, Kamaya, Suhasihi.

Cabbage: BC- 76, Pusa Drum Head, Pusa Synthetic.

Broccoli: Everest, Ayeshwaria.

Mizoram

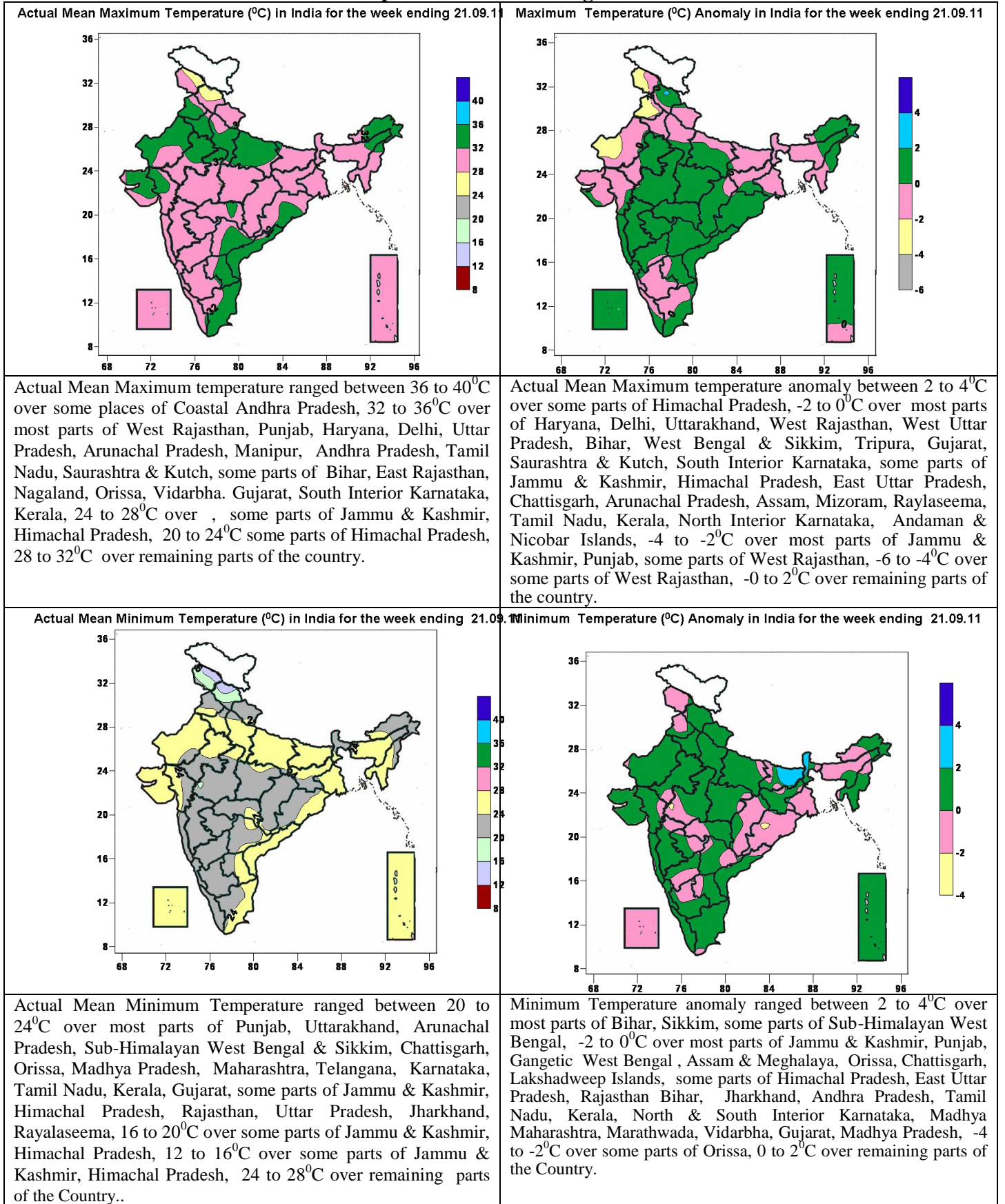
Tomato: Avinash -2, Pusa Divya, Arvind, Rita.

Cabbage: Golden Acre, Ryozeeki, Harnil.

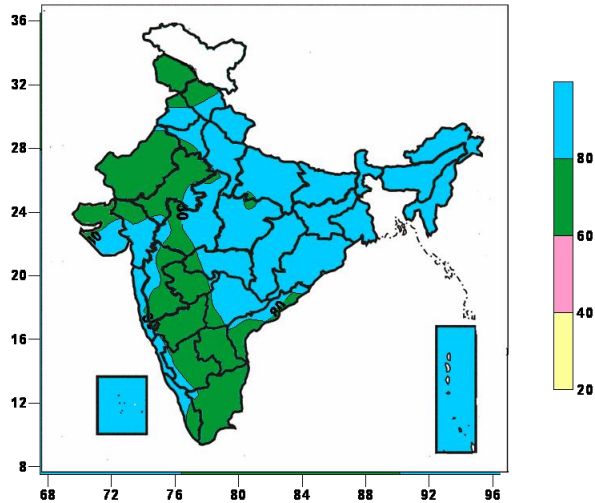
Broccoli: Pushpa, Pusa Broccoli, Aishwarya and Fiesta.

Cauliflower: Pusa Early Synthetic, Pusha Shubhra, Pant Gobhi - 2 and

Annexure III Contour maps for the week ending 21.09.2011

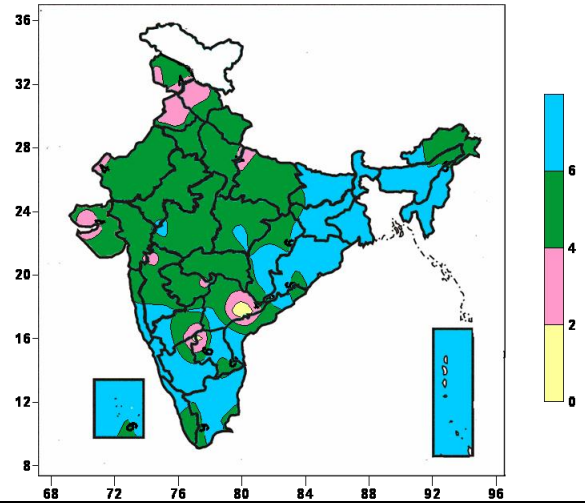


Relative Humidity (%) over India for the week ending 21.09.11



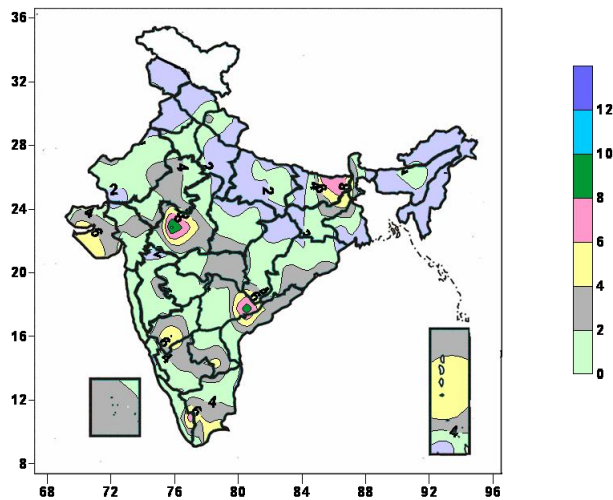
Relative humidity between 60 to 80% over most parts of Jammu & Kashmir, Himachal Pradesh, Rajasthan, Coastal Andhra Pradesh, Raylaseema, Tamil Nadu, South & north Interior Karnataka, Madhya Maharashtra, Marathwada, some parts of Punjab, Haryana, Delhi, East Uttar Pradesh, Vidarbha, Madhya Pradesh, Kerala, Gujarat, Saurashtra & Kutch, 80% and above over remaining parts of the country.

Cloud amount (okta) over India for the week ending 21.09.11



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

Wind speed (knots) over India for the week ending 21.09.11



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