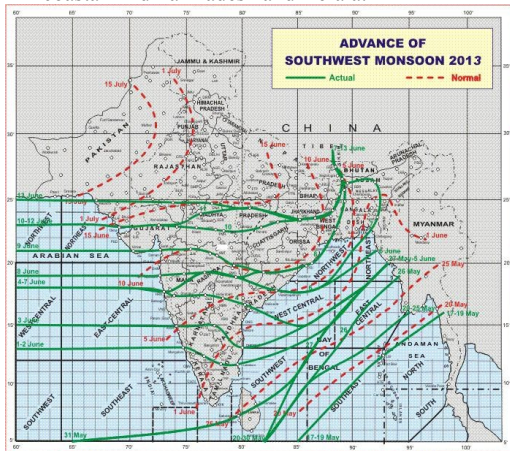


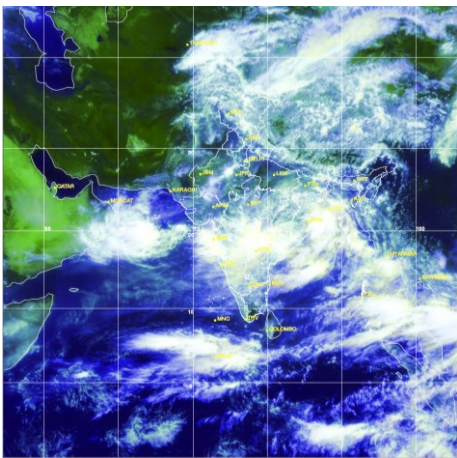


## Monsoon Watch

- The Northern Limit of Monsoon (NLM) continues to pass through Lat. 25.0°N / Long. 60.0°E, Lat. 25.0° N/ Long. 65.0°E, Udaipur, Guna, Satna, Ranchi, Berhampore, Jalpaiguri and Gangtok.
- Condition are favourable for further advance of southwest monsoon into some more parts of Rajasthan; remaining parts of Madhya Pradesh, Jharkhand and West Bengal & Sikkim and some parts of Bihar and east Uttar Pradesh during next 2 days.
- Yesterday, southwest monsoon was vigorous over Odisha and Chhattisgarh and active over Andaman & Nicobar Islands, Gangetic West Bengal, Vidarbha, coastal Andhra Pradesh and Kerala.



Progress of Southwest Monsoon on 14<sup>th</sup> June, 2013



Satellite image 0600 UTC dated 14<sup>th</sup> June, 2013

- **Gujarat:** Undertake land preparation and nursery sowing of rice and sowing of bajra, maize, groundnut, cotton, pigeon pea and green gram.
- **Bihar:** Nursery sowing of *kharif* rice, complete sowing of direct seeded rice, sowing of *kharif* maize and vegetables.
- **Jharkhand:** Undertake land preparation and nursery sowing of rice and land preparation and sowing of soybean, maize, urad, arhar and *kharif* vegetables viz. bhindi, bean, French bean, tomato, cauliflower, cabbage etc.
- **Madhya Pradesh:** Undertake land preparation and nursery sowing of rice and sowing of soybean, and pulses in south M.P. and land preparation for sowing of *kharif* crops in rest part of M.P.
- **Chattisgarh:** Postpone nursery sowing of rice and sowing of soybean, maize, jowar and groundnut as heavy to very heavy rainfall is expected during next 48 hours.
- **Jammu & Kashmir (Sub Tropical Zone):** Undertake land preparation and sowing of maize, sowing of direct seeded rice and transplanting of brinjal, chilli and cauliflower. In Intermediate Zone, sowing of maize, bajra and nursery raising of rice.
- **Himachal Pradesh :** Nursery sowing of rice and vegetables.
- **Uttarakhand:** Undertake transplanting of rice, sowing of soybean and French bean.
- **Uttar Pradesh:** Undertake land preparation and sowing of maize, jowar, groundnut arhar, moong and urad and nursery sowing of rice.
- **Rajasthan:** In East Rajasthan, farmers are advised land preparation and sowing of *kharif* crops utilizing recent rainfall. In West Rajasthan land preparation for sowing of *kharif* crops

## Salient Advisories for the *kharif* Crops

Based on the realized and expected rainfall, following salient advisories for the crops have been prepared.

- **Arunachal Pradesh:** Undertake transplanting of WRC (Wetland Rice Cultivation) rice.
- **Meghalaya:** Continue nursery sowing of *sali* rice.
- **Mizoram:** Continue sowing of maize, groundnut and nursery sowing of *jhum* rice.
- **Manipur:** Continue sowing of cucurbitaceous vegetables, maize, and groundnut and nursery sowing of rice.
- **Tripura:** Continue nursery sowing of *aman* rice
- **West Bengal:** Continue nursery sowing of *aman* rice
- **Odisha:** Postpone nursery sowing of rice and sowing of maize and sowing of direct seeded rice, arhar, groundnut, cotton and pulses as to very heavy to heavy rainfall is expected in next 48 hours. Also provide drainage for already sown *kharif* rice nursery.
- **Kerala:** Postpone transplanting of *virippu* rice and sowing of direct seeded rice, planting of banana, and sowing/ transplanting of vegetables as heavy rainfall is expected during next 48 hours. Also provide drainage for already planted banana and vegetable fields.
- **Coastal Andhra Pradesh:** Continue land preparation and nursery sowing of rice and sowing of bajra and groundnut.
- **Raylaseema:** Undertake land preparation and sowing of groundnut.
- **Telangana:** Postpone sowing of maize, sorghum, groundnut, cotton and castor as heavy rainfall is expected during next 48 hours.
- **Coastal Karnataka:** Postpone nursery sowing *kharif* rice as heavy rainfall is expected during next 48 hours.
- **North Interior Karnataka:** Undertake sowing of black gram, green gram, red gram, groundnut and sorghum.
- **South Interior Karnataka:** Undertake sowing of black gram, green gram, maize, red gram, groundnut and sesamum.
- **Tamil Nadu:** Undertake transplanting of *kuruvai* rice and nursery sowing of rice for SRI cultivation in Cauvery Delta Region.
- **Maharashtra:** As there was widespread rain in Konkan and widespread rainfall with isolated heavy to very heavy rainfall is expected during next 48 hours, farmers in the region are advised to postpone nursery sowing of *kharif* rice and finger millet. Also drain out excess water from already sown *kharif* rice nursery.
- Undertake sowing of *kharif* jowar, groundnut, soybean, cotton in Madhya Maharashtra. In Marathwada, postpone sowing of *kharif* jowar, soybean, cotton, red gram, green gram and black gram as heavy rainfall is expected during next 48 hours.
- In Vidarbha, postpone sowing of jowar, soybean, cotton, red gram, sunflower as heavy to very heavy rainfall is expected during next 48 hours.



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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

### Significant realized rainfall during last week

Significant rainfall received in all the districts of Konkan & Goa, Coastal Karnataka, Kerala and Telengana; Most of the districts of Uttarakhand, Saurashtra & Kutch, Madhya Maharashtra, Marathwada, Vidarbha, Sub-Himalayan West Bengal, Coastal Andhra Pradesh; Many districts of Assam, Meghalaya, Mizoram, Tripura, Himachal Pradesh, Madhya Pradesh and Chattisgarh; Few districts of Nagaland, Uttar Pradesh, Bihar, Jharkhand, Odisha, Gangetic West Bengal, East Rajasthan, Gujarat and North Interior Karnataka; One or two places of Punjab, Haryana, Jammu & Kashmir, South Interior Karnataka, Tamil Nadu.

### Distribution of rainfall of the country during week ending on 12.06.2013

State/Districts	Actual (mm)	% dep.
<b>Arunachal Pradesh</b>		
Anjaw	**	**
Changlang	10.7	-93
Dibang Valley	1.0	-99
East Kameng	40.6	-43
East Siang	46.0	-72
Kurung Kumey	**	**
Lohit	10.6	-89
Lower Dibang Valley	11.0	-89
Lower Subansari	2.4	-97
Papumpara	10.0	-93
Tawang	18.0	-88
Tirap	31.4	-74
Upper Siang	81.7	-65
Upper Subansari	52.4	17
West Kameng	57.9	-63
West Siang	32.9	-67
<b>Assam</b>		
Baksa	35.1	-78
Barpeta	44.2	-73
Bongaigaon	25.6	-82
Cachar	38.0	-73
Chirang	18.6	-87
Darrang	1.0	-99
Dhemaji	9.0	-92
Dhubri	84.9	-33
Dibrugarh	40.4	-51
Goalpara	185.2	60
Golghat	1.8	-97
Hailakandi	16.4	-87
Jorhat	21.5	-70
Kamrup(Rural)	10.8	-87
Kamrup(Metro)	14.4	-82
Karbi Anglong	11.5	-78
Karimganj	48.7	-69
Kokrajhar	39.8	-76
Lakhimpur	51.8	-56
Morigaon	88.6	46
N.C.Hills	25.4	-75

Nowgong	48.9	-28
Nalbari	29.4	-81
Sonitpur	12.2	-87
Sibsagar	32.1	-44
Tinsukia	75.8	-16
Udalgiri	121.7	34
<b>Meghalaya</b>		
East Garo Hills	0.5	-99
East Khasi Hills	244.0	-31
Jaintia Hills	149.0	-35
Ribhoi	66.3	2
South Garo Hills	3.5	-97
West Garo Hills	176.8	41
West Khasi Hills	8.0	-93
<b>Mizoram</b>		
Aizwal	117.5	11
Champhai	64.0	-21
Chhimituipui	**	**
Kolasib	5.0	-95
Lawngtlai	65.0	-35
Lunglei	3.0	-96
Mamit	120.0	14
Saiha	44.0	-50
Serchhip	66.0	-27
<b>Nagaland</b>		
Dimapur	65.5	-28
Kephire	13.0	-84
Kohima	133.6	59
Longleng	**	**
Mokokchung	6.0	-97
Mon	**	**
Paren	0.0	-100
Phek	49.0	-42
Tuensang	**	**
Wokha	0.0	-100
Zunheboto	108.0	35
<b>Tripura</b>		
Dhalai	17.5	-87
North tripura	84.1	-35
South tripura	27.1	-77

West tripura	30.0	-96
<b>Himachal Pradesh</b>		
Bilaspur	11.2	-25
Chamba	46.4	155
Hamirpur	21.3	14
Kangra	87.8	372
Kinnaur	0.0	-100
Kullu	35.1	110
Lahaul and Spiti	9.4	-12
Mandi	112.1	361
Shimla	21.0	-2
Sirmaur	27.5	35
Solan	40.9	86
Una	30.7	162
<b>Punjab</b>		
Amritsar	21.1	252
Barnala	0.0	-100
Bhatinda	3.0	-53
Faridkot	30.0	552
Fatehgarh Saheb	33.0	633
Ferozpur	2.3	-58
Gurdaspur	23.7	259
Hoshiarpur	0.5	-96
Jalandhar	4.7	-36
Kapurthala	2.8	-52
Ludhiana	2.7	-66
Mansa	0.0	-100
Moga	6.0	-5
Muktesar	6.0	11
Nawashahar	0.6	-95
Patiala	2.4	-74
Ropar	10.2	-11
Sangrur	0.0	-100
Mohali	35.0	161
TarnTaran	14.2	306
<b>Haryana</b>		
Ambala	16.0	0
Bhiwani	3.7	-61
Chandigarh	30.6	104
Faridabad	6.5	183
Fatehabad	0.0	-100

Gurgaon	0.0	-100
Hissar	0.0	-100
Jhajar	0.0	-100
Jind	1.0	-90
Katihah	0.0	-100
Karnal	28.8	239
Kurukshetra	1.7	-85
Mahendragarh	15.0	43
Mewat	0.0	-100
Palwal	0.0	-100
Panchkkula	8.2	-48
Panipat	4.8	-24
Rewari	0.0	-100
Rohtak	0.0	-100
Sirsa	0.0	-100
Sonepat	0.0	-100
Yamunanagar	11.7	-46
Delhi	0.8	-90
<b>Jammu &amp; Kashmir</b>		
Anantnag	6.1	-59
Badgam	1.8	-77
Bandipore	**	**
Baramula	10.3	-32
Doda	19.2	51
Ganderwal	2.0	-75
Jammu	9.9	57
Kargil	0.0	-100
Kathua	30.0	295
Kistwar	**	**
Kulgam	2.9	-80
Kupwara	1.0	-91
Ladakh(Leh)	0.0	-100
Poonch	**	**
Pulwama	0.0	-100
Rajouri	31.7	547
Ramban	7.0	-45
Reasi	12.1	-7
Samba	21.1	234
Shopian	2.0	-76
Srinagar	1.2	-85
Udhampur	11.1	-15
<b>East Madhya Pradesh</b>		
Anuppur	51.7	104
Balaghat	33.3	49
Chhatarpur	27.9	166
Chindwara	20.7	-9
Damoh	43.2	241
Dindori	97	337
Jabalpur	77.6	341
Katni	23	100

Mandla	41.7	144
Narsingpur	41.8	257
Panna	0	-100
Rewa	5.4	-68
Sagar	56.1	267
Satna	31.2	191
Seoni	53	182
Shahdol	83	515
Sidhi	15.8	-32
Singrauli	30.7	16
Tikamgarh	20	6
Umaria	92.1	22
<b>West Madhya Pradesh</b>		
Alirajpur	20.6	9
Asoknagar	71.0	104 5
Badwani	0.0	-100
Betul	57.4	214
Bhind	7.6	22
Bhopal	29.4	175
Burhanpur	10.5	-51
Datia	20.9	248
Dewas	34.0	90
Dhar	38.2	118
Guna	72.7	549
Gwalior	75.1	972
Harda	5.9	-47
Hosangabad	66.5	340
Indore	95.7	409
Jhabua	0.0	-100
Khandwa	7.3	-58
Khargone	18.7	-13
Mandsaur	22.8	230
Morena	13.5	214
Neemuch	50.7	705
Raisen	51.6	176
Rajgarh	56.4	276
Ratlam	28.9	201
Sehore	50.9	180
Shajapur	100.3	677
Sheopur Kalani	16.0	122
Shivpuri	38.3	390
Ujjain	38.0	133
Vidisha	40.4	185
<b>Chattisgarh</b>		
Bastar	64.3	123
Bijapur	161.0	697
Bilaspur	57.1	204
Dantewara	92.0	360
Dhamtari	55.5	212
Durg	92.7	275

Janjgir	31.2	56
Jashpurnagar	5.5	-86
Kanker	15.2	-13
Korba	22.6	3
Koriya	1.8	-88
Kawardha	12.8	-27
Mahasumund	61.7	223
Narayanpur	116.8	283
Raigarh	24.4	-7
Raipur	74.2	225
Rajandgaon	62.9	245
Surguja	40.0	52
<b>East Uttar Pradesh</b>		
Allahabad	8.9	-30
Ambedkar Nagar	62.0	187
Azamgarh	0.0	-100
Bahraich	36.0	57
Ballia	0.0	-100
Balrampur	51.2	206
Banda	25.1	111
Barabanki	34.4	65
Basti	20.1	4
Chandauli	0.0	-100
Deoria	0.5	-98
Faizabad	48.9	179
Farrukhabad	5.4	2
Fatehpur	5.5	-54
Gazipur	2.5	-81
Gonda	13.3	-42
Gorakhpur	3.4	-89
Hardoi	30.2	215
Jaunpur	2.0	-86
Kannauj	18.0	329
Kanpur City	2.8	-47
Kanpur Dehat	0.0	-100
Kaushambi	0.0	-100
Kheri	125.1	545
Kushi nagar	0.0	-100
Lucknow	48.2	350
Maharajanj	0.0	-100
Mau	2.0	-90
Mirzapur	2.5	-77
Pratapgarh	10.3	-17
RaiBareilly	8.8	-12
Sahuji Maharajnar	30.0	126
Sant Kabirnar	0.0	-100
Sant Ravidas Nagar	0.0	-100
Shrawasti	8.0	-65

Sidharthnagar	0.0	-100
Sitapur	56.3	286
Sonbhadra	18.2	8
Sultanpur	8.1	-41
Unnao	33.8	317
Varanasi	0.3	-98
<b>West Uttar Pradesh</b>		
Agra	0.4	-94
Aligarh	4.1	-25
Auraiya	4.0	-45
Badaun	34.7	489
Baghpat	6.3	117
Bareilly	56.7	361
Bijnor	57.7	389
Bulandsahar	0.0	-100
Etah	3.7	-4
Etawah	11.0	13
Firozabad	20.6	379
GBNagar	0.0	-100
Ghaziabad	2.5	-38
Hamirpur	2.7	-56
Jalaun	11.0	104
Jhansi	8.3	17
Jotirba Phule Nagar	3.0	-59
Kanshiramnagar	11.5	229
Lalitpur	40.5	282
Mahamaya Nagar	0.0	-100
Mahoba	18.8	230
Mainpuri	14.0	211
Mathura	0.0	-100
Meerut	0.4	-94
Moradabad	125.2	909
Muzaffarnagar	23.1	240
Pilibhit	54.0	244
Rampur	7.9	-64
Saharanpur	29.3	249
Shahjahanpur	51.1	455
<b>Uttarakhand</b>		
Almora	16.7	-36
Bageshwar	61.5	137
Chamoli	52.7	185
Champawat	70.5	99
Dehradun	77.0	236
Garhwal Pauri	55.1	242
Garhwal Tehri	26.0	4
Haridwar	39.7	132
Nainital	70.4	139
Pithoragarh	65.5	13
Rudraprayag	112.6	213

Udham Sing Nagar	48.5	139
Uttarkashi	59.7	113
<b>Bihar</b>		
Araria	95.1	89
Arwal	17.8	3
Aurangabad	24.5	23
Banka	8.4	-63
Begusarai	0.0	-100
Bhabua	**	**
Bhagalpur	0.2	-99
Bhojpur	**	**
Buxar	**	**
Darbhanga	**	**
East Champaran	0.0	-100
Gaya	12.6	-35
Gopalganj	0.0	-100
Jahanabad	0.0	-100
Jamui	0.0	-100
Kathihar	38.6	4
Khagadia	1.6	-94
Kishanganj	172.0	221
Lakhisarai	4.0	-87
Madhepura	67.7	55
Madhubani	103.0	142
Monghyar	5.3	-82
Muzaffarpur	2.8	-88
Nalanda	0.0	-100
Nawada	0.0	-100
Patna	0.0	-100
Purnea	100.4	136
Rohtas	2.1	-84
Saharsha	114.8	132
Samstipur	2.3	-84
Saran	0.0	-100
Sheikpura	3.0	-85
Sheohar	0.0	-100
Sitamarhi	8.6	-77
Siwan	0.0	-100
Supaul	65.1	24
Vaishali	0.0	-100
West Champaran	0.0	-100
<b>Jharkhand</b>		
Bokaro	72.8	123
Chatra	13.4	-38
Deoghar	60.3	107
Dhanbad	44.2	30
Dumka	28.5	-19
East Singbhum	17.4	-57
Garhwa	7.5	-51

Giridih	21.5	-37
Godda	18.8	-41
Gumla	105.1	166
Hazaribagh	5.0	-85
Jamtara	24.3	-16
Khunti	**	**
Kodernna	27.4	-2
Latehar	173.2	656
Lohardagga	88.2	227
Pakur	44.0	-10
Palamau	7.2	-63
Ramgarh	19.8	-45
Ranchi	50.4	39
Sahebganj	2.8	-94
Saraikeela	23.2	-45
Simdega	53.7	66
West Singbhum	40.0	-3
<b>East Rajasthan</b>		
Ajmer	37.1	672
Alwar	9.6	52
Banswara	5.4	-47
Baran	23.7	137
Bharatpur	2.7	-47
Bhilwara	13.0	-63
Bundi	16.1	104
Chittorgarh	31.9	337
Dausa	0.5	-94
Dholpur	14.3	116
Dungarpur	12.0	71
Jaipur	33.6	342
Jhalawar	29.0	179
Jhunjhunu	1.6	-85
Karauli	21.1	265
Kota	31.5	267
Pratapgarh	41.4	211
Rajsamand	32.4	310
Sawai Madhopur	31.3	360
Sikar	4.2	-54
Sirohi	6.9	-14
Tonk	48.1	688
Udaipur	11.0	46
<b>West Rajasthan</b>		
Barmer	6.5	184
Bikaner	10.3	106
Churu	5.1	-33
Hanumangarh	6.6	23
Jaisalmer	1.9	43
Jalore	0.7	-81
Jodhpur	10.1	216
Nagaur	11.8	174

Pali	15.0	219
Sri Ganganagar	1.6	-64
<b>Gujarat Region</b>		
Ahmedabad	32.9	142
Anand	47.9	203
Banaskantha	0.0	-100
Baroda	15.5	-15
Broach	33.3	90
DNH	**	**
Dahod	2.8	-80
Daman	**	**
Dangs	56.6	89
Gandhinagar	5.3	-9
Kheda	18.6	32
Mehsana	0.8	-86
Narmada	62.8	209
Navsari	179.7	607
Panchmahal	7.3	-40
Patan	0.0	-100
Sabarkantha	1.5	-77
Surat	158.4	821
Tapi	58.4	97
Valsad	190.5	593
<b>S K &amp; Diu region</b>		
Amreli	62.8	333
Bhavnagar	61.0	213
Diu	30.7	253
Jamnagar	88.4	655
Junagarh	179.7	668
Kutch	14.0	81
Porbandar	297.8	1518
Rajkot	121.3	1113
Surendranagar	12.5	24
<b>Maharashtra</b>		
<b>Konkan &amp; Goa</b>		
Goa	347.2	87
Mumbai	291.3	284
Raigad	259.4	196
Ratnagiri	443.0	243
Sindhudurg	386.5	113
Thane	267.1	421
<b>Madhya Maharashtra</b>		
Ahmednagar	35.2	35
Dhule	73.8	239
Jalgaon	23.4	13
Kolhapur	122.8	147
Nandurbar	45.8	98
Nasik	54.8	89
Pune	52.1	66

Sangli	49.5	82
Satara	53.3	78
Solapur	26.4	-1
<b>Marathwada</b>		
Aurangabad	39.3	31
Beed	25.7	-18
Hingoli	38.9	48
Jalna	43.9	50
Latur	45.1	64
Nanded	57.0	117
Usmanabad	43.1	41
Parbhani	43.7	55
<b>Vidarbha</b>		
Akola	74.0	258
Amraoti	50.4	161
Bhandara	34.2	58
Buldhana	31.6	48
Chandrapur	54.4	178
Gadchiroli	53.2	124
Gondia	9.2	-55
Nagpur	39.9	91
Wardha	41.9	80
Washim	95.2	321
Yeotmal	53.0	123
<b>Orissa</b>		
Angul	27.8	-19
Balasore	14.2	-74
Bargarh	40.3	66
Bhadrak	30.7	-28
Bolangir	40.2	83
Boudh	88.3	215
Cuttack	62.1	89
Deogarh	10.7	-67
Dhenkanal	35.3	-5
Gajapati	36.6	6
Ganjam	25.0	-10
Jagatsingpur	10.1	-74
Jajpur	32.5	-31
Jharsuguda	44.9	22
Kalahandi	34.9	72
Kandhamal	49.3	76
Kendrapara	52.0	46
Keonjhar	60.8	38
Khurda	16.3	-29
Koraput	65.7	131
Malkangiri	77.8	189
Mayurbhanj	26.8	-56
Nawapara	32.4	98
Nawarangpur	116.2	233
Nayagarh	27.7	-13

Puri	49.2	121
Rayagada	43.8	65
Sambalpur	33.8	5
Sonepur	20.7	1
Sundargarh	49.9	57
<b>West Bengal</b>		
<b>GWB</b>		
Bankura	37.9	-11
Birbhum	32.4	-17
Burdwan	65.9	71
East Midnapore	11.9	-79
Hooghly	32.2	-41
Howrah	47.0	-4
Kolkata	28.2	-56
Murshidabad	11.8	-81
Nadia	7.5	-84
24 Pargana (N)	69.2	7
Purulia	15.9	-64
24 Pargana (S)	64.6	-19
West Midnapore	9.8	-80
<b>SHWB</b>		
Cooch Behar	117.2	-3
Darjeeling	110.3	-3
East Sikkim	45.5	-47
Jalpaiguri	132.6	8
Malda	8.5	-77
North Dinajpur	10.0	-79
North Sikkim	61.0	-44
South Dinajpur	25.2	-55
South Sikkim	56.4	-34
West Sikkim	53.0	-51
<b>Karnataka</b>		
<b>Coastal Karnataka</b>		
Dakshin Kannada	318.4	63
Udupi	423.7	83
Uttar Kannada	245.5	69
<b>N I Karnataka</b>		
Bagalkote	25.6	33
Belgaum	44.7	93
Bidar	53.3	79
Bijapur	34.0	36
Dharwad	24.0	4
Gadag	39.8	87
Gulbarga	31.6	50
Haveri	19.3	-13
Koppal	6.5	-66
Raichur	20.8	22
Yadgir	12.2	-46
<b>S I Karnataka</b>		
Bangalore Rural	8.3	-60

Bangalore Urban	2.3	-89
Bellary	23.0	34
Chamarajnagar	3.3	-74
Chichballapur	5.9	-64
Chickmagalur	70.2	4
Chitradurga	7.5	-41
Davangere	20.4	12
Hassan	18.5	-19
Kodagu	110.9	14
Kolar	19.1	16
Mandya	6.7	-42
Mysore	20.1	26
Ramnagara	5.6	-73
Shimoga	102.4	61
Tumkur	6.4	-58
<b>Kerala</b>		
Alappuzha	244.0	74
Kannur	245.0	74
Ernakulam	157.0	7
Idukki	313.0	139
Kasaragod	375.0	159
Kollam	177.0	42
Kottayam	237.0	66
Kozhikode	287.0	77
Malappuram	180.0	33
Palakkad	108.0	12
Pathanamthitta	77.0	-78
Thiruvananthapuram	133.0	22
Thrissur	232.0	62
Wyanad	87.0	-51
<b>Tamil Nadu</b>		

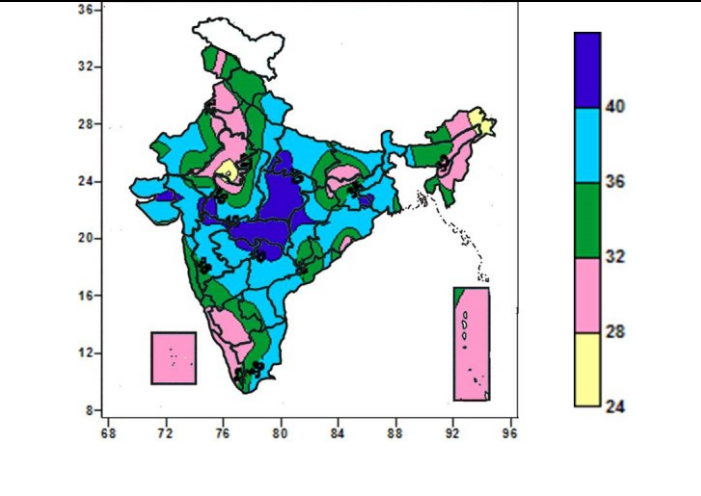
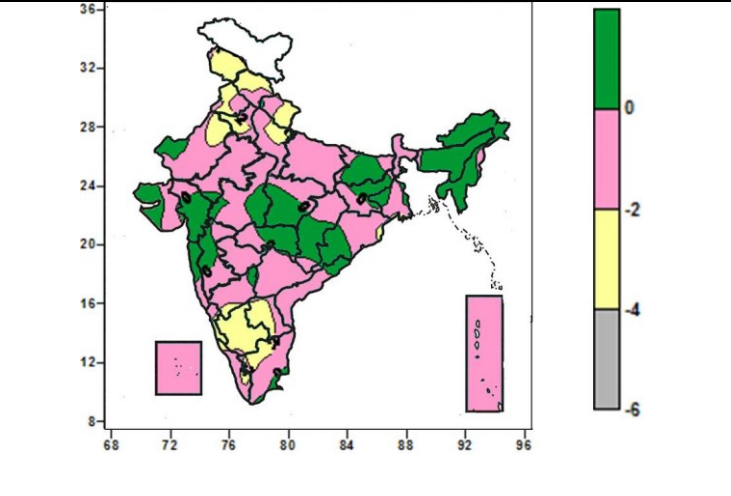
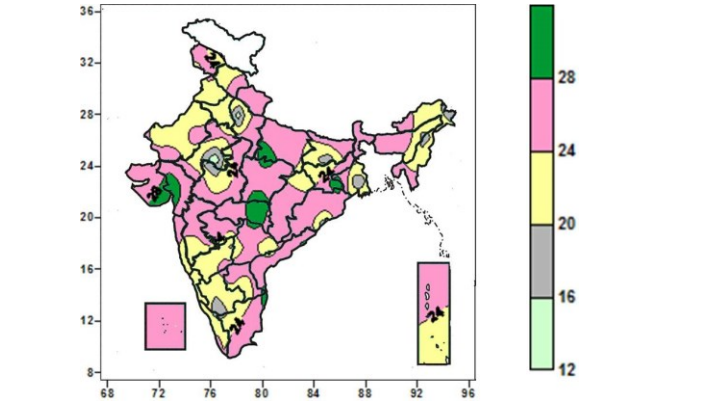
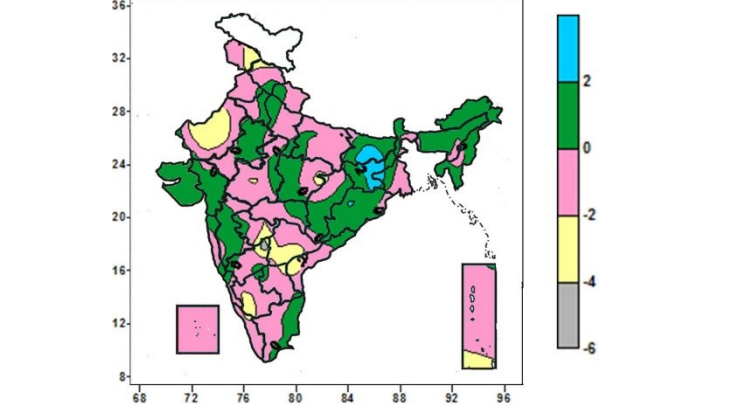
Ariyalur	1.3	-91
Chennai	17.6	74
Coimbatore	33.3	429
Cuddalore	20.8	61
Dharmapuri	0.1	-99
Dindigul	2.4	-76
Erode	4.0	-50
Kanchipuram	30.2	107
Kanyakumari	54.4	-4
Karikal	76.6	518
Karur	0.3	-95
Krishnagiri	1.7	-89
Madurai	4.3	-62
Nagapattinam	10.7	10
Namakkal	12.9	16
Nilgiris	38.5	25
Perambalur	12.0	18
Puducherry	17.2	65
Pudukottai	14.6	35
Ramanathapuram	0.0	-99
Salem	11.8	-23
Sivaganga	9.1	10
Thanjavur	12.3	13
Theni	7.0	58
Tirunelveli	18.8	79
Tirupur	0.0	-100
Tiruvallur	32.6	188
Tiruvannamalai	18.6	25
Tiruvarur	28.0	246
Toothukudi	0.2	-86
Trichy	2.3	-74

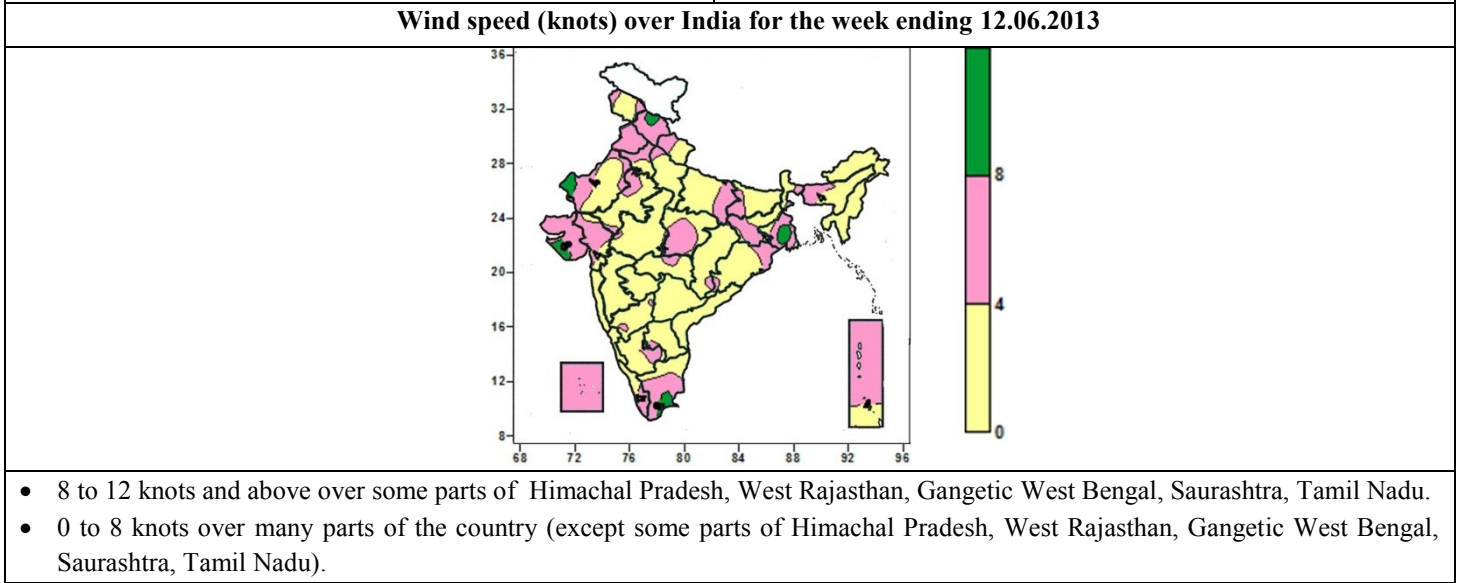
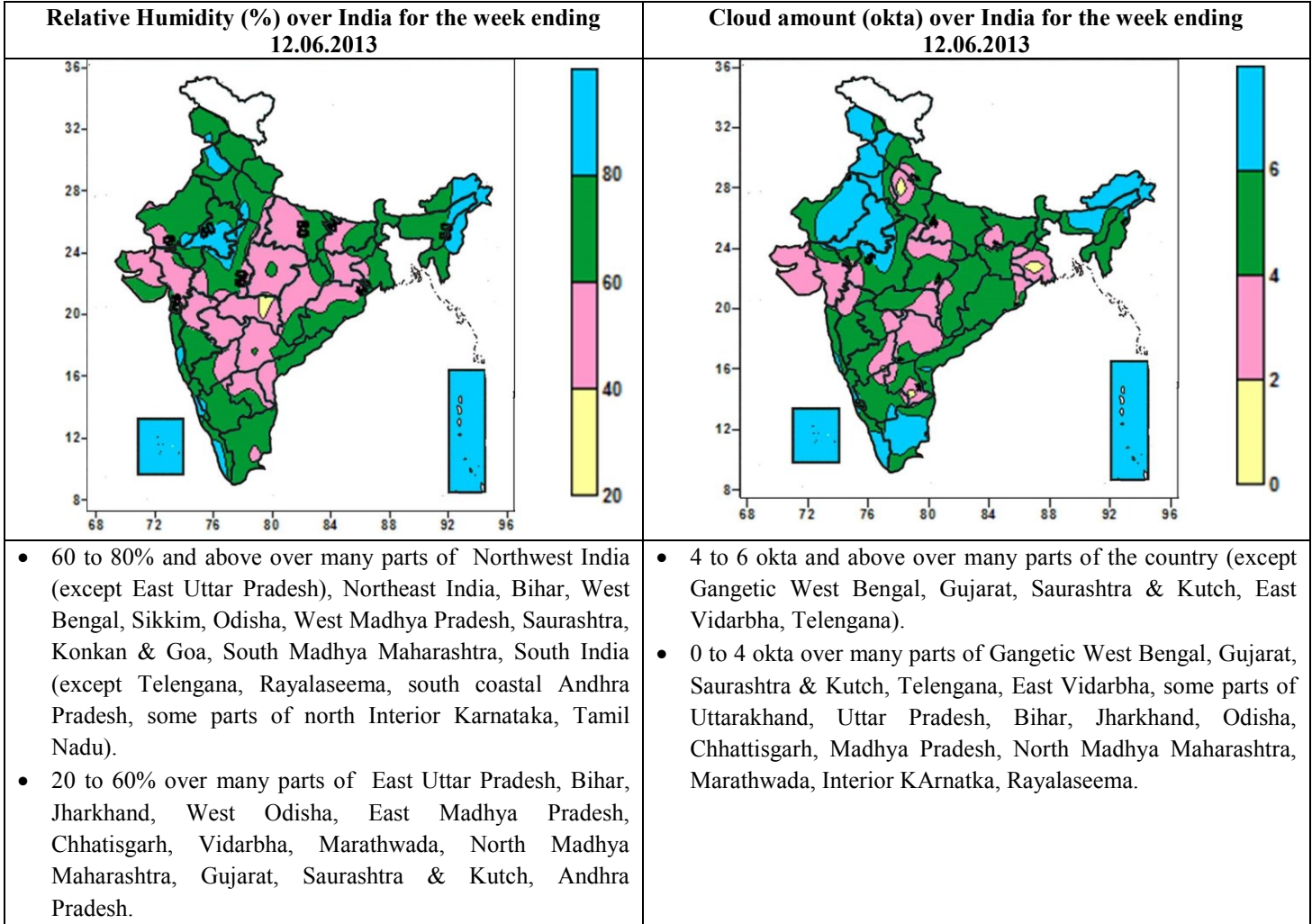
Vellore	30.1	92
Villupuram	19.7	77
Virudhunagar	0.6	-86
<b>Andhra Pradesh</b>		
<b>Coastal Andhra Pradesh</b>		
East Godavari	24.3	20
Guntur	57.6	215
Krishna	81.7	321
Nellore	21.4	114
Prakasam	35.0	133
Sirkakulam	55.6	134
Visakhapatnam	42.9	75
Vizianagram	76.3	192
West Godavari	35.2	62
<b>Telangana</b>		
Adilabad	81.8	247
Hyderabad	84.4	349
Karimnagar	71.6	214
Khammam	42.2	87
Mehabubnagar	36.3	92
Medak	61.1	186
Nalgonda	52.9	170
Nizamabad	81.7	191
Rangareddy	40.0	97
Warangal	62.8	163
<b>Rayalaseema</b>		
Anantapur	8.4	-43
Chittoor	23.9	43
Cuddapah	28.3	65
Kurnool	20.2	1

**Legends**

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

## Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 12.06.2013

Actual Mean Maximum Temperature (°C) in India for the week ending 12.06.2013	Mean Maximum Temperature (°C) Anomaly in India for the week ending 12.06.2013
	
<ul style="list-style-type: none"> <li>• 36 to 40<sup>0</sup>C and above over many parts of Uttarakhand, Uttar Pradesh, West Rajasthan, North Bihar, East Jharkhand, West Bengal, Sikkim, Odisha, Gujarat, Saurashtra &amp; Kutch, Madhya Pradesh, Chattisgarh, Maharashtra (except Konkan &amp; Goa), Andhra Pradesh, North Interior Karnataka, Coastal Tamil Nadu.</li> <li>• 28 to 36<sup>0</sup>C over many parts of Jammu &amp; Kashmir, Himachal Pradesh, Punjab, Haryana, Delhi, East Rajasthan, Northeast India, South Bihar, West Jharkhand, Konkan &amp; Goa, Coastal &amp; South Interior Karnataka, Kerala, Interior Tamil Nadu, Lakshdweep, Andman &amp; Nicobar Islands.</li> <li>• 24 to 28<sup>0</sup>C over some parts of Arunachal Pradesh, East Rajasthan.</li> </ul>	<ul style="list-style-type: none"> <li>• -2 to 2<sup>0</sup>C and above over many parts of the country (except Jammu &amp; Kashmir, North Himachal Pradesh, East Uttarkhnad, West Punjab, Haryana, South Coastal Karnataka, South Interior Karnataka, Rayalaseema).</li> <li>• -4 to -2<sup>0</sup>C over many parts of Jammu &amp; Kashmir, North Himachal Pradesh, East Uttarkhnad, West Punjab, Haryana, South Coastal Karnataka, South Interior Karnataka, Rayalaseema, some parts of West Uttar Pradesh, West Rajasthan, North Interior Karnataka, Kerala, Tamil Nadu.</li> </ul>
Actual Mean Minimum Temperature (°C) in India for the week ending 12.06.2013	Mean Minimum Temperature (°C) Anomaly in India for the week ending 12.06.2013
	
<ul style="list-style-type: none"> <li>• 24 to 32<sup>0</sup>C and above over many parts of the country (except West Himachal Pradesh, Punjab, Haryana, Delhi, Rajasthan, Bihar, Jharkhand, Arunachal Pradesh, Assam, Nagaland, Manipur, South Konkan &amp; Goa, South Madhya Maharashtra, Karnataka, Kerala, Andaman &amp; Nicobar Islands).</li> <li>• 16 to 24<sup>0</sup>C over many parts of West Himachal Pradesh, West Himachal Pradesh, Punjab, Haryana, Delhi, Rajasthan, Bihar, Jharkhand, Arunachal Pradesh, Assam, Nagaland, Manipur, South Konkan &amp; Goa, South Madhya Maharashtra, Karnataka, Kerala, Andaman &amp; Nicobar Islands.</li> </ul>	<ul style="list-style-type: none"> <li>• 0 to 4<sup>0</sup>C and above over many parts of East Rajasthan, Northeast India, East India, Chhattisgarh, Gujarat, Saurashtra &amp; Kutch, Konkan &amp; Goa, Madhya Maharashtra, Coastal Tamil Nadu.</li> <li>• -4 to 0<sup>0</sup>C over many parts of Northwest India (except East Rajasthan), Madhya Pradesh, Marathwada, Vidarbha, South Peninsular region (except coastal Tamil Nadu)</li> </ul>





# Weather Forecast

## Weather Forecast for next 3 days (upto 0830 hours IST of 17<sup>th</sup> June, 2013)

- Rain/thundershowers would occur at most places over west coast, Lakshadweep and Andaman & Nicobar Islands.
- Rain/thundershowers would occur at most places over Vidarbha, Odisha, Chhattisgarh and north Andhra Pradesh during next 24 hours and decrease thereafter.
- Rain/thundershowers would occur at many places over Jharkhand, Gangetic West Bengal, Madhya Pradesh, Madhya Maharashtra and Marathawada.
- Rain/thundershowers would occur at a few places over western Himalayan region, Punjab, Haryana, Uttar Pradesh and Rajasthan.
- Rain/thundershowers would occur at a few places over Gujarat, north interior Karnataka, Bihar, Sub-Himalayan West Bengal & Sikkim and northeastern states.
- Rain/thundershowers would occur at one or two places over south interior Karnataka, south Andhra Pradesh and Tamilnadu.

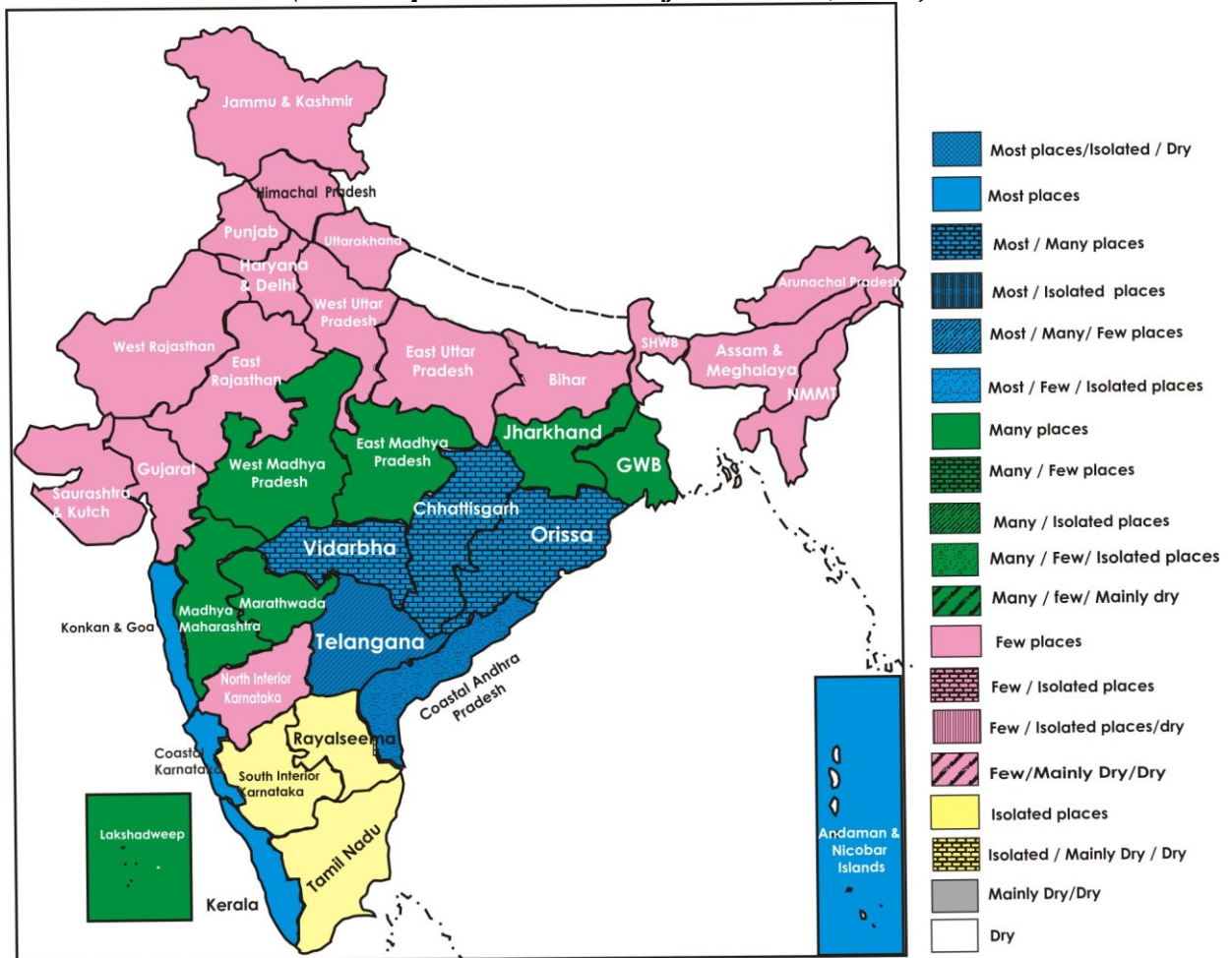
## Weather Warning during next 3 days

- Heavy to very heavy rainfall would occur at one or two places over Odisha, Chhattisgarh and Vidarbha during next 48 hours.
- Heavy rainfall would occur at one or two places over Telangana, Marathawada, Konkan & Goa, coastal Karnataka, Kerala and Andaman & Nicobar Islands during next 48 hours.

## Weather Outlook for subsequent 4 days from 17<sup>th</sup> June to 21<sup>st</sup> June, 2013

- Rain/thundershowers would occur at many places over western Himalayan region.
- Rain/thundershowers would occur at many places over west coast, interior Maharashtra, Gujarat, Rajasthan, Punjab and Haryana.
- Rain/thundershowers would occur at a few places over rest northwest & central, east and northeast India.
- Subdued rainfall activity over rest south peninsular India.

**Weather Forecast Map**  
(Valid upto 0830 hours of 17<sup>th</sup> June, 2013)



## Zonewise Agromet Advisories

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

- **Realised Rainfall:** Significant rainfall occurred in most of the districts in Himachal Pradesh, Uttarakhand; Faridkot, Fatehgarh Sahib, Mohali districts in Punjab, Chandigarh district of Haryana, Kathua, Rajouri district in Jammu & Kashmir; Ajmer, Chittorgarh, Jaipur, Kota, Pratapgarh, Rajasmand, Sawai Madhopur, Tonk districts in East Rajasthan; Ambedkarnagar, Balrampur, Bahraich, Barabanki, Faizabad, Hardoi, Kheri, Lucknow, Sitapur, Sahuji Maharajnagar Unnao districts in East Uttar Pradesh; Badaun, Bareilly, Bijnor, Lalitpur, Moraadabad, Pilibhit, Shahjahanpur districts in West Uttar Pradesh. Weather remained mainly dry over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over western Himalayan region, Punjab, Haryana, Uttar Pradesh and Rajasthan.
- **Weather Outlook:** Rain/thundershowers would occur at many places over western Himalayan region. Rain/thundershowers would occur at many places over Rajasthan, Punjab and Haryana and at a few places over rest northwest India.
- **Advisory:**
  - In Sub Tropical Zone of Jammu & Kashmir, farmers are advised to undertake sowing of maize, sowing of direct seeded rice and transplanting of brinjal, chilli and cauliflower.
  - Farmers in Intermediate Zone of Jammu & Kashmir are advised to undertake sowing of maize, bajra and nursery raising of rice crop. Also in Cold Arid Zone of Jammu & Kashmir, farmers are advised to continue transplanting of cruciferous crops and onion (middle belts), tomato, capsicum and chilli in the lower belts.
  - In Sub-Humid Zone of Himachal Pradesh, farmers are advised to undertake nursery sowing of rice and vegetables.
  - In Bhabar and Tarai Zone of Uttarakhand, farmers are advised to undertake transplanting of rice and sowing of soybean and French bean. Also, in Sub-Humid and Sub-Tropic Zone of Uttarakhand, farmers are advised to dig pits for planting of new orchards and nursery of late variety of rice crop.
  - In Central Plain Zone of Uttar Pradesh, farmers are advised to undertake land preparation and sowing of maize, jowar, groundnut and nursery sowing of rice. Also, in Western Plain Zone of Uttar Pradesh, farmers are advised to start sowing of arhar, moong and urad and for green fodder jowar, bajra and undertake nursery sowing of basmati rice.
  - Farmers in Delhi are advised to undertake nursery sowing of rice. Also prepare nursery for early cauliflower and brinjal. Sowing of pigeon pea, baby corn (HM-4) and sweet corn can be done during this week. Undertake field preparation for sowing of guar, bajara, maize, cluster bean, spinach, amaranthus and lady's finger.
  - Farmers in Western and Central Plain Zone in Punjab are advised to start transplanting of rice.
  - Farmers in Eastern Zone in Haryana are advised to undertake transplanting of rice in the main field.
  - In East Rajasthan, farmers are advised land preparation and sowing of kharif crops utilizing recent rainfall and in West Rajasthan land preparation for sowing of kharif crops.
  - Stages of major crops are mentioned in Annexure I.
  - Varieties are mentioned in Annexure II
- **Animal Husbandry**
  - In Intermediate Zone of Jammu & Kashmir, it is advised to provide clean drinking water to the animals. Vaccination against FMD and Hemorrhagic septicemia in cows, buffaloes, sheeps and goats should be done. Do not vaccinate pregnant animals. Keep litter dry using sodium bentonite to avoid coccidiosis problems.

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

- **Realised Rainfall:** Significant rainfall occurred in all districts of Chhattisgarh except Jashpurnagar, Kanker, Korba, Koriya and Raigarh, in all districts of East Madhya Pradesh except Chhatarpur, Chindwara, Katni, Panna, Rewa, Sidhi and Tikamgarh, in all districts of west Madhya Pradesh except Alirajpur, Badwani, Bhind, Bhopal, Burhanpur, Datia, Harda, Jhabua, Khandwa, Khargaon, Mandsaur, Morena, Raigarh, Sheopur and Katani.
- **Weather forecast:** Rain/thundershowers would occur at most places over Chhattisgarh during next 48 hours and decrease thereafter. Rain/thundershowers would occur at a few places over Madhya Pradesh during next 48 hours and increase thereafter.
- **Weather Warning:** Heavy to very heavy rainfall would occur at one or two places over Chhattisgarh during next 48 hours.
- **Advisories:**

- In Chhattisgarh, postpone nursery sowing of rice and sowing of soybean, maize, jowar and groundnut as heavy to very heavy rainfall is expected during next 48 hours. Also farmers are advised to make proper drainage arrangement to avoid water lodging in the fields of onion, sugarcane and vegetables. They are also advised to give mechanical support to fruit plants like papaya etc.
- As there is widespread rain in Kymore Plateau and Satpura Hills Zone, Gird Zone, Bundelkhand Zone and Vindhya Plateau Zone of Madhya Pradesh, farmers are advised to prepare rice nursery, field preparation for direct sowing of rice, maize, jowar, soybean and vegetables.
- Farmers in Bundelkhand Zone of Madhya Pradesh are advised that present weather condition is ideal for grafting and pruning in fruit trees like jamun, anola, guava and mango. Farmers are also advised to start nursery sowing of *kharif* onion.
- In Jhabua Hill Zone of Madhya Pradesh, farmers are advised to prepare rice nursery, onion nursery and sowing of soybean. Also undertake planting of ginger and turmeric.
- In North Hills Zone of Chhattisgarh, farmers are advised to prepare nursery for rice, vegetables and seasonal flowers. Also undertake land preparation and sowing of arhar and soybean.
- Stages of major crops are mentioned in Annexure I.
- Varieties are mentioned in Annexure II
- **ANIMAL HUSBANDRY & POULTRY**
  - Dairy farmers in Bundelkhand Zone of Madhya Pradesh are advised to give vaccination to animals to protect them from FMD.

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

- **Realised Rainfall:** Significant rainfall occurred in all districts of Sikkim and in most of the districts Sub Himalayan West Bengal (except North Dinajpur, South Dinajpur and Malda), Gangetic West Bengal (except East Midnapore, West Midnapore, Kolkata, Murshidabad, Nadia and Purulia), Jharkhand (except Chatra, Dumka, Garhwa, Giridih, Godda, East Singhbhum, Hazaribagh, Jamtara, Koderma, Palamau, Ramgarh, Sahebganj and Saraikela), Odisha (except Angul, Balasore, Deogarh, Ganjam, Jagatsingpur, Khurda, Mayurbhanj, Nayagarh and Sonepur) and also in Araria, Kathihar, Kishanganj, Madhepura, Madhubani, Purnea, Saharsa and Supaul districts of Bihar.
- **Weather Forecast:** Rain / thundershowers would occur at most places over Odisha during next 24 hours and decrease thereafter. Rain / thundershowers would occur at many places over Jharkhand and Gangetic West Bengal during the period. Rain / thundershowers would occur at a few places over Bihar and Sub-Himalayan West Bengal & Sikkim during the period.
- **Weather Warning:** Heavy to very heavy rainfall would occur at one or two places over Odisha during next 48 hours.
- **Weather Outlook:** Rain / thundershowers would occur at a few places over the States of the region.
- **Advisories:**
  - As there was good rainfall during last couple of weeks in most of the districts of West Bengal, Jharkhand and Sikkim, farmers are advised to postpone irrigation to the crops in these States.
  - As rain is likely to occur at most places during next 24 hours along with heavy to very heavy rainfall at one or two places in Odisha during next 48 hours, farmers are advised to postpone irrigation, sowing, intercultural operation and also application of fertilizers and plant protection measures to the crops. Farmers are also advised to arrange for adequate drainage to avoid stagnation of water in crop fields.
  - In view of likely occurrence of rain at many places in Jharkhand and Gangetic West Bengal, farmers are advised to postpone irrigation, intercultural operation and also application of fertilizers and plant protection measures to the crops.
  - Taking the advantage of recent monsoon rain, farmers in North West Alluvial Plain Zone of Bihar are advised to complete direct sowing of long duration rice varieties. Farmers are also advised to undertake land preparation and nursery sowing of long duration varieties of rice, and also intercropping of lobia and rice bean.
  - In South Bihar Alluvial Zone and North East Alluvial Plain Zone of Bihar, farmers are advised to undertake nursery sowing of rice, sowing of maize and small millets, vegetable crops like bottle gourd, sponge gourd, bitter gourd, ridge gourd, cucumber, cowpea and okra and *kharif* fodder like jowar, maize, dinanath, kalai, cowpea.
  - Farmers in Terai Zone, New Alluvial Zone, Laterite and Red Soil Zone of West Bengal are advised for nursery sowing of *aman* rice utilizing recent monsoon rain.
  - Farmers are advised to undertake sowing of pigeon-pea in New Alluvial Zone and sowing of wet seeded rice in Coastal Saline Zone of West Bengal.

- Farmers in Jharkhand are advised to undertake land preparation and nursery sowing of rice and also sowing of soybean, maize, urad, arhar and *kharif* vegetables viz. bhindi, bean, French bean, tomato, cauliflower, cabbage etc. and planting of ginger and turmeric.
- Stages of major crops are mentioned in Annexure I.
- Varieties are mentioned in Annexure II
- **Animal Husbandry**
  - Farmers in North West Alluvial Plain Zone of Bihar are advised to carry out vaccination of cattles against the black quarter, anthrax and other diseases during this season.

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

- **Realised Rainfall:** Significant rainfall occurred in Barpeta, Baksa, Cachar, Dhubri, Goalpara, Kokrajhar, Dibrugarh, Sibsagar, Tinsukia, Karimganj, Udalguri, Morigaon, Nagaon and Lakhimpur districts of Assam, East Kameng, East Siang, Tirap, Upper Siang, Upper Subansiri, West Kameng and West Siang districts of Arunachal Pradesh, East Khasi Hills, Jaintia Hills, Ri-Bhoi and West Garo Hills districts of Meghalaya, Aizwal, Champhai, Lawngtlai, Serchhip, Mamit and Saiha districts of Mizoram, Dimapur, Kohima, Phek and Zunheboto districts of Nagaland and North Tripura and West Tripura districts of Tripura.
- **Weather Forecast:** Rain / thundershowers would occur at a few places over the States of the region during the period.
- Rain / thundershowers would occur at a few places over the States of the region.
- **Advisories:**
  - Taking the advantage of recent monsoon rain, farmers in Assam are advised to continue nursery sowing of *sali* rice. Select long duration rice varieties for lowland areas and medium duration rice varieties for medium lowland areas. Farmers in Hill Zone, Lower Brahmaputra Valley Zone and Central Brahmaputra Valley Zone of Assam are advised to continue land preparation and sowing of arhar.
  - Farmers in Sub-Tropical Hill Zone of Arunachal Pradesh are advised to continue transplanting of WRC rice and mature seedlings of tomato and brinjal.
  - Farmers in Sub Tropical Plain Zone of Manipur are advised to continue seed bed preparation and sowing for *kharif* rice and continue land preparation for transplanting. Also continue sowing of black gram, cowpea, okra and nursery raising of early cauliflower in the upland area. Re-sowing of cowpea, okra may be followed in those fields in which young plants had been affected due to rain.
  - Farmers in Mild Tropical Hill Zone of Mizoram are advised to continue nursery sowing of rice for low land. Also continue sowing of cucurbits, French bean, ginger and turmeric utilizing recent monsoon rain.
  - Farmers in Temperate Sub Alpine Zone of Meghalaya are advised to continue nursery sowing of *sali* rice. Transplant rice in the main field when seedlings are 25-30 days old.
  - Farmers in Mild Tropical Plain Zone of Tripura are advised to continue nursery sowing of *aman* rice. Farmers are also advised to undertake land preparation and sowing of groundnut in upland and maize in medium upland.
  - The prevalent weather in Mild Tropical Hill Zone of Nagaland is favourable for the development of stem borer in *kharif* maize. Farmers are advised to monitor the crop and apply appropriate plant protection measures on a non-rainy day.
  - Stages of major crops are mentioned in Annexure I.
  - Varieties are mentioned in Annexure II
- **Animal Husbandry**
  - Farmers in the states of the region are advised to deworm and carry out immunizations against FMD, HS and BQ in cattle & buffaloes and swine fever in pigs during this period. Also, vaccinate against Ranikhet disease in one week old chicks and against Gamboro disease in two weeks old chicks.
  - In Mild Tropical Plain Zone of Tripura, damp litter and high moisture due to heavy rain may lead to *Coccidiosis* in chicken; so avoid dampness in the shed. Piglets are susceptible for swine fever due to change in weather and feed. The disease may be controlled by Furazolidone, streptomycin etc.

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

- **Realised Rainfall:** Most of the districts in Maharashtra State (except Jalgaon and Solapur districts in Madhya Maharashtra, Beed district in Marathwada and Gondia district in East Viadarbha) received significant rainfall during last week. Significant rainfall occurred in Ahmedabad, Anand, Broach, Dangs, Narmada, Navsari, Surat, Tapi, Valsad, Amreli, Bhavnagar, Diu, Jamnagar, Junagarh, Porbandar and Rajkot districts of Gujarat.
- **Weather Forecast:** Rain / thundershowers would occur at most places over Konkan and Goa during the period. Rain / thundershowers would occur at most places over Vidarbha during next 24 hours and decrease

thereafter. Rain/thundershowers would occur at many places over Madhya Maharashtra and Marathwada and at a few places over Gujarat during the period.

- **Warning :** Heavy to very heavy rainfall would occur at one or two places over Vidarbha and heavy rainfall would occur at one or two places over Konkan & Goa during next 48 hours.
- **Weather Outlook:** Rain / thundershowers would occur at many places over the States of the region.
- **Advisories:**
  - As rain is likely to occur at most places in Konkan and Goa and Vidarbha along with isolated heavy to very heavy rainfall during next 24 hours, farmers in these regions are advised to postpone irrigation, intercultural operation and application of fertilizers and plant protection measures. Farmers are also advised to postpone nursery sowing of *kharif* rice and finger millet in Konkan and Goa and sowing of jowar, soybean, cotton, red gram, sunflower in Vidarbha and nursery sowing of rice in Gondia, Bhandara, Gadchiroli and Chandrapur districts in East Vidarbha. Farmers are also advised to arrange adequate drainage to avoid stagnation of water in the crop fields.
  - As most of the districts in Madhya Maharashtra and Marathwada received significant rainfall during last week and rain is also expected at many places during the period, farmers are advised to complete the preparatory tillage and start the sowing of *kharif* jowar, bajra, groundnut, soybean and cotton in Madhya Maharashtra and *kharif* jowar, soybean, cotton, red gram, green gram and black gram in Marathwada. In view of likely rainfall at many places, farmers are advised to postpone irrigation, intercultural operation and application of fertilizers and plant protection measures.
  - Farmers in Gujarat State are advised to postpone irrigation as rain is likely to occur over this region during coming days.
  - Farmers in most parts Gujarat State (Banaskantha, Baroda, Dahod, Gandhinagar, Mehsana, Panchmahal, Patan and Sabarkantha districts) are advised to undertake land preparation and nursery sowing of rice and sowing of groundnut, cotton, bajra, maize, pigeon pea and green gram.
  - Cloudy and humid weather is favourable for attack of aphids and jassids on early sown irrigated cotton in Western Maharashtra Scarcity Zone; spray Confidor @ 5 ml or Profenofos @ 20 ml per 10 litre of water after current spells of rain.
  - Due to high temperature and humidity, there are chances of attack of thrips and white fly in brinjal, tomato and okra in South Gujarat Heavy Rainfall Zone; farmers are advised to spray the crops with neem oil @ 0.5% or Methyl –O – Dematone @ 0.2 on a non-rainy day.
  - Stages of the crops are mentioned in Annexure I.
- **Animal Husbandry**
  - Farmers in Gujarat are advised to vaccinate animals by HF vaccination against FMD and BQ to avoid disease outbreak during monsoon season.

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

- **Realised Rainfall:** Significant rainfall occurred in all the districts of Kerala; most of the districts of Coastal Karnataka, Belgaum, Bidar, Bijapur, Gadag, Gulbarga in North Interior Karnataka, Chickmagalur, Kodagu and Shimoga in South Interior Karnataka, Coimbatore, Kancheepuram, Kanyakumari, Karaikal, Nilgiris, Thiruvallur and Vellore in Tamil Nadu, most of the districts in Telangana and Coastal Andhra Pradesh except East Godavari and Nellore.
- **Rainfall Forecast:** Rain/thundershowers would occur at most places over Kerala and Coastal Karnataka. Rain/thundershowers would occur at most places over north Andhra Pradesh during next 24 hours and decrease thereafter, at a few places over North interior Karnataka and at one or two places over south interior Karnataka, south Andhra Pradesh and Tamilnadu.
- **Weather Warning:** Heavy rainfall would occur at one or two places over Telangana coastal Karnataka and Kerala during next 48 hours.
- **Weather Outlook:** Subdued rainfall activity over rest of south peninsular India.
- **Advisories:**
  - Heavy rainfall would occur at one or two places over Telangana, coastal Karnataka and Kerala during next 48 hours, farmers are advised to arrange drainage to banana and vegetables.
  - Farmers in Southern Zone and Northern Zone of Kerala are advised to undertake transplanting of *virippu* rice and sowing of direct seeded *virippu* rice after the current spells of rain.
  - Farmers in the Southern Zone of Kerala are advised planting of banana, intercropping in coconut gardens after the current spells of rain.
  - Farmers in the Coastal Zone of Karnataka are advised to continue field preparation and nursery sowing of *kharif* rice after the current spells of rain.
  - Farmers in the Hill Zone of Karnataka are advised to undertake sowing of cotton.

- Farmers in Eastern Dry Zone of Karnataka are advised to prepare field and undertake sowing of red gram and ragi utilizing the realized rainfall.
- Farmers in the North Transition Zone of Karnataka are advised to undertake sowing of maize, sorghum, green gram, soybean, groundnut, chilli and cotton.
- Farmers in Southern Transition Zone of Karnataka are advised to undertake sowing of green gram, maize, Bt. cotton, red gram, sesamum and groundnut (bunch type).
- Farmers in the Cauvery Delta Zone of Tamil Nadu are advised to undertake transplanting of *kuruvai* rice and nursery sowing of rice for SRI cultivation.
- Farmers in the Western Zone of Tamil Nadu are advised to undertake propping eight months old sugarcane and five months old banana crops to avoid lodging due to strong winds.
- Farmers in the North Coastal Zone of Andhra Pradesh are advised to undertake sowing of and of bajra and planting of sugarcane.
- Farmers in the Krishna Godavari Zone of Andhra Pradesh are advised to take up sowing of cotton and pulses.
- Farmers in the Scarce Rainfall Zone of Andhra Pradesh are advised to undertake land preparation and sowing of groundnut, pigeon pea cotton, castor, maize and jowar.
- Farmers in the Southern Telangana Zone of Andhra Pradesh are advised to undertake land preparation and sowing of *khari*f crops like cotton, jowar, maize, castor, groundnut, pigeon pea, green gram etc. after current spells of rain.
- Prevailing hot and humid conditions are favourable for sucking pest incidence in Bt. cotton in Scarce Rainfall Zone of Andhra Pradesh. Farmers are advised to spray Monocrotophos + water @ 1:4 or Imidacloprid 200 SL + water @ 1:20 after 20, 40 and 60 DAS for controlling sucking pest.
- Stages of major crops are mentioned in Annexure I.
- Varieties are mentioned in Annexure II
- **Animal Husbandry:**
  - Farmers in the Problem Area Zone of Kerala are advised to vaccinate the animals against haemorrhagic septicaemia since there is possibility of outbreak of the disease in milch animals during monsoon.
  - Farmers in the Scarce Rainfall Zone of Andhra Pradesh are advised to undertake vaccination of animals against FMD, Brucellosis, Haemorrhagic Septicaemia, Anthrax and small ruminants against PPR and Sheep and Goat Pox.

## Annexure I Stages of Major Crops

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

- Pome and stone fruits (peach, pear, plum almonds, apricot and apple) (fruiting / harvesting), onion (bulb formation / harvesting), *Capsicum*, tomato, brinjal, chilli (nursery raising / transplanting), cucurbits, French bean, okra (direct sowing), rice, maize, soybean, mash (nursery sowing), peas (flowering/pod formation), fodder maize + legume (sowing), cauliflower (sowing), maize (sowing) in Himachal Pradesh.
- Chilli, brinjal, bitter gourd, spinach and tomato (fruiting / harvesting), French bean, cluster bean, summer radish, (fruiting), lady's finger (vegetative and fruiting stage), guar, maize, bajra, cluster bean as fodder crop (vegetative stage), Early cauliflower (nursery preparation), pigeon pea and cotton (sowing), rice (nursery / field preparation) in Delhi.
- Vegetables (flowering / fruiting), rice (nursery raising / transplanting), maize (sowing), sunflower (early vegetative / vegetative), garlic, cucurbits, okra (early vegetative/vegetative), radish, spinach (sowing/transplanting), carrot, turnip (sowing/transplanting), onion, cole crops (nursery sowing / transplanting), oat, berseem (vegetative), fruit crops (nursery / planting), brinjal, chilli (nursery sowing/transplanting), *kharif* pulses (field preparation/ sowing) in Jammu & Kashmir.
- Rice (nursery sowing), onion, garlic (harvesting), ginger (vegetative), autumn sugarcane (vegetative), oat (tillering / ear head emergence), moong, urad (flowering / pod formation), okra (active vegetative / flowering), sugarcane, cucurbits (planting / seedling), French bean (sowing), maize, finger millets, urad, moong, soybean (sowing) in Uttarakhand.
- *Kharif* Maize, jowar (land preparation / sowing), rice (nursery sowing), groundnut, arhar, moong and urad (sowing), tomato, brinjal and cucurbits (fruiting / harvesting), moong, urad (flowering/pod formation), summer vegetables (flowering / fruiting), spring sugarcane (vegetative) in Uttar Pradesh.
- New sugarcane (tillering), cotton (germination), cucurbits (nursery sowing), rice (nursery raising / transplanting) in Punjab.
- New sugarcane (tillering), cotton (sowing / germination), rice (nursery raising/transplanting) in Haryana.
- Rice (nursery preparation), Irrigated groundnut (field preparation / sowing), irrigated cotton (field preparation / sowing), Chilli, Shimla Mirch (nursery sowing), *Zaid* crops (moong, groundnut, fodder crops) (early vegetative), sugarcane (harvesting), new sugarcane (planting / early vegetative), vegetables (tinda, pumpkin, cucumber, coriander, bhindi, ridge gourd) (active vegetative / flowering) in Rajasthan.

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

- *Kharif* rice, onion (nursery sowing), maize, jowar, arhar, soybean (sowing), Ladies finger (fruiting / harvesting), sugarcane (elongation / grand growth), vegetables (sowing) in Madhya Pradesh.
- Sugarcane (planting/early vegetative), *kharif* rice (nursery sowing), maize, jowar, arhar, soybean (sowing), ginger, turmeric, papaya (vegetative), onion (vegetative), vegetable crops (sowing) in Chhattisgarh.

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

- Sunflower (head maturity), sugarcane (early vegetative / tillering), summer vegetables (fruiting / harvesting), moong, urad (harvesting), yam (vegetative), *kharif* rice, maize (nursery sowing / sowing) in Bihar.
- *Kharif* rice (nursery sowing), soybean, maize, urad, arhar (sowing), onion (vegetative), ginger and turmeric (planting), *kharif* vegetables *viz.* bhindi, bean, French bean, tomato, cauliflower, cabbage etc. (sowing) in Jharkhand.
- Jute (active vegetative), turmeric, ginger, yam (planting / early vegetative), sugarcane (tillering), banana (vegetative), cowpea (pod maturity / harvesting), tomato (fruiting / harvesting), summer vegetables (fruiting / harvesting), sunflower (head formation), rice (direct sowing / nursery sowing), arhar, maize, cotton and *kharif* vegetables (land preparation / sowing), turmeric, ginger (planting) in Odisha.
- *Aus* rice (tillering), *aman* rice (nursery sowing), ginger, turmeric (planting), summer vegetables (fruiting / harvesting), jute (early vegetative / vegetative), tomato (fruiting / harvesting), brinjal, bitter gourd, pointed gourd, ladies finger (fruiting / harvesting), sunflower (head formation), chilli (fruiting / harvesting), mango (fruiting / harvesting), litchi (fruiting / harvesting) in West Bengal.
- Ginger (vegetative), large cardamom (secondary flowering), summer vegetables (fruiting / harvesting) in Sikkim.

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

- Sugarcane (active vegetative / elongation), *ahu* rice (grain filling / maturity), *sali* rice (nursery raising / sowing), maize (tasselling / cob formation), jute (active vegetative), arhar (sowing), *kharif* vegetables (sowing), ginger, turmeric (planting / early vegetative), banana (fruiting / maturity / harvesting) and papaya (planting) in Assam.
- *Jhum* rice (vegetative), WRC rice (nursery raising / transplanting), maize (silking / tasseling / cob formation), soybean (vegetative), green gram, black gram (vegetative), French bean (pod formation / harvesting), okra (fruiting / harvesting) and cucurbits (fruiting / harvesting), banana (vegetative / fruiting / maturity), tomato, brinjal (nursery preparation / transplanting) in Arunachal Pradesh.
- *Pre-kharif* rice (flowering / grain formation), *kharif* rice (nursery sowing), maize (cob formation), groundnut and soybean (sowing / early vegetative), turmeric, ginger (vegetative), black gram (sowing), cauliflower (nursery raising), cowpea, okra (sowing), chilli, French bean (fruiting / harvesting) in Manipur.
- *Kharif* maize (active vegetative), *ahu* rice (vegetative), *sali* rice (nursery sowing), jute (vegetative), black gram, green gram (vegetative), cucurbits (fruiting / harvesting), tomato (transplanting / vegetative), brinjal (vegetative), potato (vegetative / tuber formation), turmeric, ginger (planting) in Meghalaya.
- Maize (sowing), *jhum* rice (nursery sowing), banana (vegetative / fruiting / harvesting), cucurbits, French bean (sowing), ginger and turmeric (planting) in Mizoram.
- *Kharif* maize (sowing / early vegetative), upland rice (active tillering), lowland rice (transplanting), cucurbits (fruiting / harvesting), chilli, okra, brinjal (flowering / fruiting) and ginger (vegetative) in Nagaland.
- *Jhum* rice (tillering), *aman* rice (nursery preparation), groundnut (sowing), maize (sowing), summer green gram and black gram (harvesting), cucurbits (fruiting / harvesting), summer maize, summer sesamum (harvesting) in Tripura.

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

- Sugarcane (new *adsali*) and sugarcane (new pre seasonal) (tillering / elongation), new *suru* sugarcane (tillering), *kharif* rice (nursery sowing / germination in Konkan, Kolhapur region, Nasik (ghat), Pune (west) and sowing in East Vidarbha), jowar, soybean and groundnut (sowing / germination in Kolhapur division and land preparation and sowing in Madhya Maharashtra, Marathwada and Vidarbha), cotton (land preparation and sowing in Madhya Maharashtra and Marathwada), green gram and black gram (sowing in Marathwada) in Maharashtra.
- *Kharif* rice (nursery sowing), pearl millet (sowing), groundnut, cotton and pulses (sowing), mango (fruit maturity / harvesting), summer vegetables (fruiting / harvesting), sugarcane (elongation / grand growth) in Gujarat.

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

- Maize (sowing), groundnut, pigeon pea, cotton, castor, jowar (sowing), sugarcane (active tillering) and vegetables (flowering/fruiting) in Andhra Pradesh.
- Black gram (vegetative/flowering), green gram (vegetative), rice (nursery sowing/ transplanting), summer cotton (boll formation), sugarcane (grand growth), pearl millet (harvest), maize (vegetative/grain filling), sorghum (vegetative/flowering), *kharif* groundnut, sorghum, maize, pulses and minor millet (sowing) and summer vegetables (flowering/fruiting) in Tamil Nadu.
- *Viruppu* rice (sowing/transplanting), arecanut (flowering/nut formation), sugarcane (tillering), rainfed banana (planting), rubber (tapping/planting), vegetables (sowing/ transplanting), pepper, ginger and cardamom (vegetative) in Kerala.
- Sugarcane (grand growth), arecanut (nut formation/maturity), *kharif* groundnut, sorghum, maize, green gram, red gram, black gram, bajra, sesame, sunflower, navane, soybean, cotton, and cowpea (sowing), rice (nursery sowing), vegetable crops (nursery) in Karnataka.



## Annexure II List of Varieties

### Odisha

**Ginger:** Suprava, Suruchi, Surabhi.

**Turmeric:** Roma, Surama, Rang, Rashm.

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

**Yam:**

Local Yam: Shreekirti, Shreerupa, Hatikhoj, Shreeshilpi.

Small yam: Shreelata, Shreekala.

White Yam: Shreesubhra, Shreepriya, Shreedhanya.

**Rice:**

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

Medium- MTU- 1001, MTU-1010, Konark, Gajapati, Surendra, Lalat.

Late- CR-1009, CR-1018, Swarna (MTU-7029), Indravati, Mahanadi, Puja, Ramachandi, Kanchana, Sarala, Lunishree and

Fine-CR-1014, BPT-5204.

**Arhar:**

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

Medium duration- Asha, Visakha.

### West Bengal

**Arum:** BCC-17, BCC-33, BCC-02, BCC-01, BCC09.

**Pigeon pea:** Sweta, Chumi.

### Jharkhand

**Maize:** Birsa Makka -1, Birsa Makka-2, Suwan-1 etc.

**Ginger:** Vardhaman, Nadia etc.

**Turmeric:** Rajendra Sona.

### Bihar

**Rice:** Rajshree, Rajendra Sweta, Rajendra Mansuri, Swarna, Satyam, Kishori.

**Maize:** Deok, Shaktiman 1, Shaktiman 2, Sunkar Makka 3 and Ganga 11.

### Assam

**Ginger:** Nadia, Karkai, Maran, Jorhat, Chaina.

**Turmeric:** Shillong Type, CL-24, PTS-38, PCT-13, VK-145.

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

**Sali rice:**

**Long duration high yielding varieties:** Ranjit, Bahadur, Peoli, Moniram, Pankaj, Kushal.

**Medium to short duration rice varieties:** Satya, Basundhara, Mahsuri, Luit, Pioli, Moniram.

**Flood tolerant varieties:** Jalashri, Jalkuwari (for chronically low lying flood affected areas).

**Arhar:** T-21.

### Manipur

**Cowpea:** Pusa Barsati, Pusa Do-fasli, Long Green.

### Tripura

**Aman rice:** Gomati, Ranjeet, Swarna, Samba Masuri.

**Groundnut:** TAG 24, TG 37A, ICGS 76.

**Maize:** DMH- 849, 117, HQPM 1, BQPM 9.

### Delhi

**Rice:**

**Hybrid varieties:** Pant hybrid Dhan1, Narendra hybrid dhan 1, P R H 10.

**High yielding varieties:** Pusa 44, Pant Dhan 4, Pant Dhan 10, Pusa 834, Pusa basmati 1,

**Pusa improved basmati:** Pusa sugandha 5, Pusa sughanda 4 (Pusa 1121), Ranvir basmati and Taravadi basmati.

**Pigeon pea:** Pusa 2001, Pusa 992, Paras, Manak.

### Jammu & Kashmir

**Maize :** GS-2, Mansar, Trikuta, C-5 and C-8

**Rice :** direct seeded rice - IET 1410, China-1039, K-39, Ratna, PC-19, Jaya, RR-8585(Ajay) (Subtropical Zone), China-1039, Samwal, K-39, K-84, K-343 & Giza-14 (in Intermediate lower zone)

**Brinjal :** PPL, PPC & PPR

**Chillies :** NP-46A, Pusa jawala.

### Punjab

**Rice:** PR-121, PR-122, PR-118, PR-116, PR-114, PR-111, PR-113, PR-115 in Western Plain Zone.

### **Rajasthan**

**Rice:** P.R.106, B.K.190, Mahi Sugandha Basmati

**Groundnut:** G.G.-2, J.-38, Pratap Mungphali-1, Pratap Mungphali-2, R.S.-1, R.G.-141, M.13, T.G.37-A, H.N.G.10, H.N.G.69, Mallika

**Bikaneri Nerma:** RST-9 and Hybrid-4

**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

### **Himachal Pradesh**

**Rice:** Pant Dhan-10, Govind, Pant Dhan-12, Ratna, UPR-71-12, Pant Sankar Dhan-1, Narendra Sankar Dhan-2.

**Finger millet** as VL- Mandua-124 and VL-149 and short duration (95 to

100 days) varieties like VL- Mandua-204, Pant Mandua-3, PES-176, PES-110, VLMandua-146.

### **Uttarakhand**

**Chote Dhan:** VL-163, VL-221, Pant dhan-6, Pant Dhan-11, VL-62, VL-81

**Scented rice :** Pant Sugandh-15, Tarawadi Basmati, Pusa Basmati-1, Type-3, Basmati-370

**Maize:** Hima-129, Navin, Sartaj, VL16

**Urad:** Pant Urad-19, Pant urad-30

**Soybean:** Brag, PK-262, VL Soya-2, VL Soya 21, VL Soya-47 etc.

**French bean :** VL Rajma-63, Rice Saket-4, Govind, Narendra-80, Pusa 2-21

### **Uttar Pradesh**

**Jowar:** Mauta-1, Mauta-2, Varsha, C.S.B.-15 and C.S.H.-5, C.S.H-9, C.S.H.-14, C.S.H.-16.

**Late sown varieties of rice:** Sambha Masoori, Swarna sub-1, Jal-Lahari, Jal-Priya

**Medium Late sown varieties of rice:** Narendra- 359, Malviya-36, Pant Dhan-4, 10 Narendra Dhan-3112 , Narendra Dhan-2064,

**Early sown varieties of rice:** Manhar Pant Dhan- 12, I.R- 50, Narendra- 118, Narendra Dhan- 2026.

**Arhar:** Paras, U.P.A.S-120, Pusa- 992

**Groundnut-** Moongfali-1, 13, Girnar-2, Ta-64, Kaushal guchedar, Chandra, Ta- 28

**Til-** Haryana Til-1, Punjab Til-2

**Moong-** Pusa Baishakhi

**Urad-** T-9

### **Madhya Pradesh**

**Rice:**

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

b. Late: Mahsuri, Safari-17, Syamla, Swarna

**Maize:**

a. Medium: navjot, Arun, H-216, Jm-13, Sartaj, Daccan 107

b. Late: Ganga-11, Prabhat, Trisulta, Daccan 103, Daccan 105

**Jowar:** JJ-741, JJ-938, JJ-1022, JJ-1041 and CSV-15

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

**Soybean:** JS-95-60, JS-93-95, JS-97-52, JS-80-21, JS-335, NRC-37

**Onion:** Nashik 53, Agrifound dark red, Pusa kalyani

### **Kerala**

**Rice:** Uma, Jyothi , Prathyasa **Bananas:** Robusta, Poovan, Njalipoovan, Palayankodan

**Tamil Nadu:**

**Rice :** ADT 36, ADT 43, ADT 45 and ADT 47

**Minor Millet:** Samai, Thenai

### **Karnataka**

**Red gram:** TTB-7, BRG-1, BRG-2 (For Eastern Dry Zone )  
TS-3R (For North Dry Zone)

**Maize:** DMH-2 and Arjun

**Groundnut:**

Bunch type of varieties – GPBD-4, JL-24 and TMV-2 (Use 125 kg seeds/ha (i.e 50 kg seeds per acre)

Spreading type of varieties – DSG-1 and JSP-39 (Use 75 kg seeds per hectare (i.e 30 kg seeds per acre)

**Soybean:** JS-335 (Use 75 kg seeds/ha

**Cotton:** DHH-11, NCH-145, NHH-44, DHB-105 and Sahana.

**Red gram:** TTB-7, BRG-1, BRG-2

### **Andhra Pradesh**

**Mung bean-** LGG 407, Lgg 460, LGG 450, PDM 54, MGG 295, WGG 37, Pusa 105, MGG 348.

**Urad bean -** LBG 752, Lbg 20, PU 31, T9, LBG 623

**Redgram –** LRG 30, LRG 41, LRG 38, ICPL 332, ICPL 8719, ICP 8863, ICPL 85063, MRG 66,

**PRG 158, PRG 100**

**Soybean –** S 335, PK 1029, JS 93-05, Bheema, Basara.

## **Maharashtra**

**Kharif Rice:** PKV HMT, PKV Khamang, PKV Makarand, PKV Ganesh, Sindewahi 2001 for East Vidarbha.

**Rice:** Karjat 4, 184, Ratnagiri 24, Purna and mid late varieties like Phule Samruddhi, Indrayani and Pusa Basmati.

### ***Kharif jowar***

**Hybrid:** CSH 5, CSH 9, CSH 13, CSH 14, CSH 16, CSH 17, CSH 18 and CSH 2.

**Improved:** SPV 462, CSV 13, CSV 15, CSV 17, PKV 801 for Pune region and CSH 14, CSH 16, CSH 25 for Marathwada.

### ***Kharif bajra***

**Hybrid:** Shraddha (RHRBH 8609), Saburi (RHRBH 8924), Phule Shanti (RHRBH 9808).

**Improved:** CTP 8203, ICMV – 155 for Pune region and GHB 558, Shraddha, Saburi and Pratibha for Marathwada.

**Kharif groundnut:** SD 11, Phule Pragati, Phule Vyas, Phule Unap, TPG 41 and TG 26.

**Red Gram:** ICPL 87, Vipula, BSMR-853, BSMR-736, AKT 8811, Amol for Madhya Maharashtra and ICPL-87119 (Asha) and C-11 for Central Vidarbha.

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

**Soyabean:** JS-335 and Phule Kalyani (DS-228) for North Madhya Maharashtra and MAUS 71, JS-335 for Marathwada.

### ***Kharif Cotton***

**Improved:** AKA-5, AKA-7 and AKA-8.

**American improved variety:** AKH-081, PKV-Rajat and AKH-8828 for Central Vidarbha Zone.

## **Gujarat**

**Rice:** GR-11, Jaya, IR – 22, Gurjari and Dandi.

**Pearl millet:** GHB-528, GHB-577, GHB-316 and GHB-183.

**Pigeon pea:** GT-1, GT-100, GT-101, T-15-15, BDN-2, IPCL-87, Pusa Ageti and GTH-1.

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

**Black gram:** T-9 and GU-1.

**Groundnut:** GAUG-10, GG-11, 12, 13.