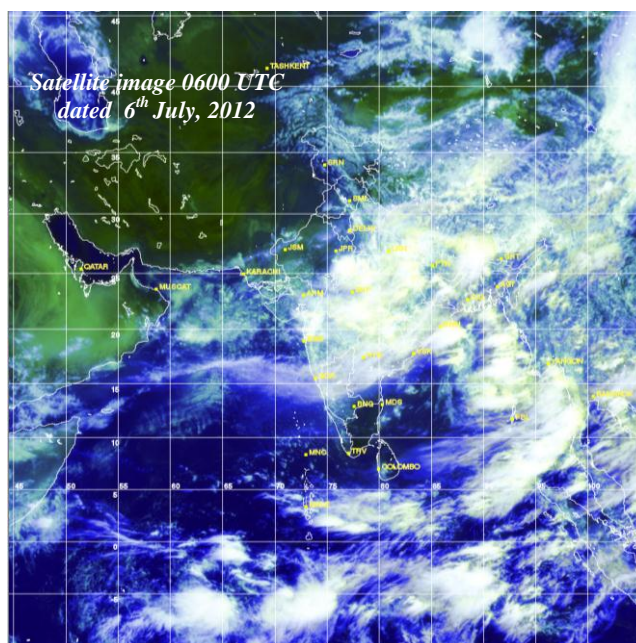
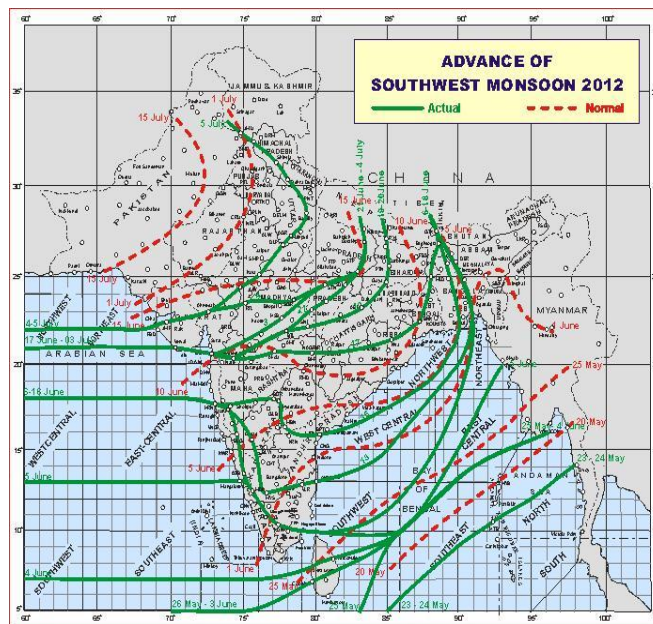


National Agromet Advisory Bulletin

Thursday, 5th July, 2012
(For the period 5th to 9th July, 2012)



The Northern Limit of Monsoon (NLM) passes through Lat 22.0°N/ Long. 60.0° E, Lat 22.0°N/ Long. 65.0°E, 22.0°N/ Long. 68.0°E, Jamnagar, Ahmadabad, Kota, Dholpur, Bareilly, Dehradun, Shimla and Jammu.



Issued by
National Agrometeorological Advisory Service Centre
Agricultural Meteorology Division
India Meteorological Department, Shivajinagar, Pune.

The bulletin is also displayed in the website (<http://www.imdagrimet.gov.in>) of the Division

Executive Summary

Southwest Monsoon has further advanced into some more parts of Gujarat region, remaining parts of Madhya Pradesh and East Uttar Pradesh, most parts of Uttarakhand and Himachal Pradesh, entire Jammu & Kashmir and some parts of East Rajasthan and West Uttar Pradesh.

During last week, good rainfall occurred over many districts in Assam, Arunachal Pradesh, Maharashtra, Orissa, Sub-Himalayan West Bengal, Coastal Karnataka, Kerala and some districts in West Madhya Pradesh, Jharkhand, Uttarakhand, Gujarat, Interior Karnataka, Tamil Nadu and Coastal Andhra Pradesh.

Rainfall is likely to occur at most places over Kerala, Coastal Karnataka, Konkan, Madhya Maharashtra, Marathwada, Vidarbha, Interior Karnataka, Madhya Pradesh, Chhattisgarh, Orissa, North Eastern States, East Rajasthan, Gujarat region, Uttar Pradesh, Bihar, Jharkhand and West Bengal & Sikkim, Uttarakhand and Himachal Pradesh. Farmers are advised to postpone irrigation, intercultural operation and application of fertilizers and plant protection measures in these States. Heavy rainfall would occur at one or two places over East Rajasthan, Konkan, Gujarat region, Madhya Pradesh, Jammu & Kashmir, Himachal Pradesh, Sub Himalayan West Bengal & Sikkim, Assam & Meghalaya and Arunachal Pradesh during next 48 hours and over East Uttar Pradesh, Jharkhand and Bihar during next 24 hours. In view of occurrence of heavy rainfall, arrange for adequate drainage in crop fields in these regions to avoid stagnation of water.

Agromet advisories for various States of different regions of the country are as follows:

Southern region

- **Kerala:** Continue sowing of direct seeded rice and nursery sowing / transplanting of *Virippu* rice. Also continue new plantation of coconut seedlings.
- **Karnataka:** Continue nursery sowing / transplanting of rice in Coastal Karnataka and sowing of green gram, black gram, jowar and soybean in North Interior Karnataka. Undertake sowing of ginger, turmeric and drill sown rice in Uttar Kannada district. Take up sowing of cotton, nursery sowing of rice, sowing of hybrid jowar, maize, ragi, sugarcane, sunflower, groundnut, red gram and horticultural crops in South Interior Karnataka. Due to deficient rainfall in many districts of Interior Karnataka during last week, apply supplementary irrigation to early sown *kharif* crops in Interior Karnataka.
- **Tamil Nadu:** Undertake nursery preparation and transplanting of *Kuruvai* rice.
- **Andhra Pradesh:** Continue nursery sowing of rice in Chittoor, Cuddapah and Nellore districts. Start sowing of *kharif* crops like cotton, jowar, maize, ragi, castor, groundnut and pulses in coastal Andhra Pradesh, Telengana and undertake sowing of groundnut and castor in Rayalaseema.

Northeastern region

- **Assam:** Continue sowing of *sali* rice. Farmers in the areas where flood water has receded, are advised to raise community nursery for late planting with old seedlings or to sow traditional varieties of *sali* rice.
- **Arunachal Pradesh:** Undertake sowing / transplanting of *Jhum* and WRC rice, sowing of soybean, black gram and green gram.
- **Manipur:** Undertake sowing / transplanting of *kharif* rice, sowing of soybean and groundnut.
- **Mizoram:** Continue sowing of groundnut and soybean and nursery preparation of rice.
- **Meghalaya:** Undertake sowing and transplanting of *sali* rice in low and medium altitude areas.
- **Nagaland:** Continue nursery sowing of rice.
- **Tripura:** Continue nursery sowing of *aman* rice.

Western region

- **Maharashtra:** Nursery sowing of rice and *nagli* has been completed in Konkan region and Sub Montane zone. Undertake direct sowing of *kharif* rice and sowing of *kharif* groundnut, soybean, red gram, green gram and black gram in Kolhapur district of Madhya Maharashtra. In remaining districts of Madhya Maharashtra and the districts of North Marathwada, farmers are advised to undertake land preparation and sowing of jowar, groundnut and red gram utilizing recent rainfall. Farmers of south Marathwada region are advised to undertake sowing of *kharif* soybean, red gram and cotton. Continue

sowing of *kharif* soyabean, redgram and cotton in Vidarbha region and undertake nursery sowing of *kharif* rice in East Vidarbha.

- **Gujarat:** Farmers are advised to undertake land preparation and sowing of black gram, green gram, cowpea, cotton and maize in South Gujarat, sowing of bajra and groundnut in North Gujarat, sowing of bajra, maize, groundnut, cotton and pulses in middle Gujarat and wait for further rain for sowing in North Gujarat.

Eastern region

- **West Bengal:** Undertake nursery sowing of *aman* rice with the help of realized rainfall.
- **Sikkim:** Continue nursery sowing of rice.
- **Orissa:** Farmers are advised for direct seeding of rice, sowing of maize, cotton, arhar, ragi, groundnut and pulses and nursery sowing of *kharif* rice. Also undertake planting of fruit seedlings and *kharif* vegetables.
- **Bihar:** Rainfall is insufficient for transplanting of rice. Farmers are advised to continue sowing of arhar, maize and local varieties of millets.
- **Jharkhand:** Start nursery sowing of rice and sowing of maize, urad, arhar, pigeon pea and *kharif* vegetables *viz.* bhindi, French bean, tomato, cauliflower, cabbage etc.

Central region

- **Madhya Pradesh:** Start sowing of *kharif* crops *viz.* rice, soybean, maize, jowar, arhar and pulses in most parts of East Madhya Pradesh. Poor germination of already sown soybean is reported. Undertake land preparation for sowing of *kharif* crops *viz.* soybean, til, cotton and maize in West Madhya Pradesh.
- **Chhattisgarh:** Start nursery sowing of rice and sowing of soybean, maize, jowar, groundnut and urad.

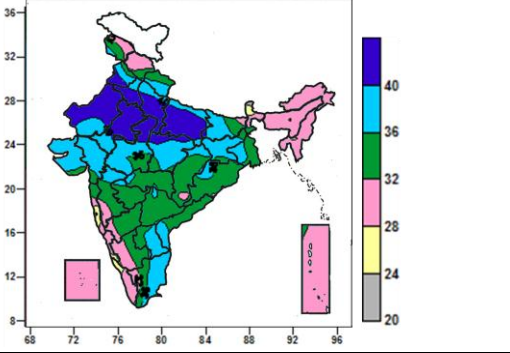
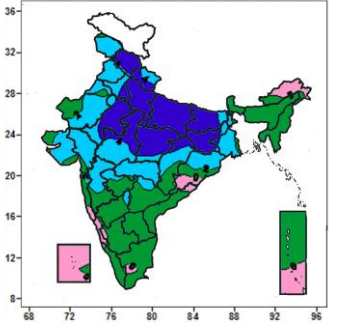
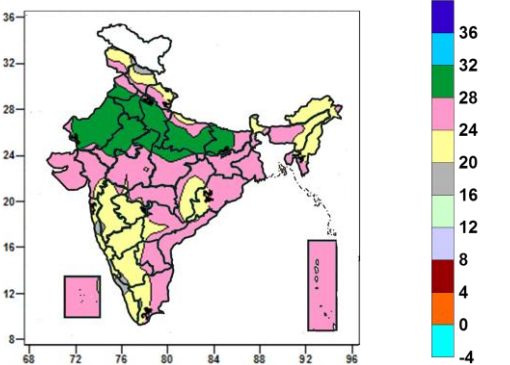
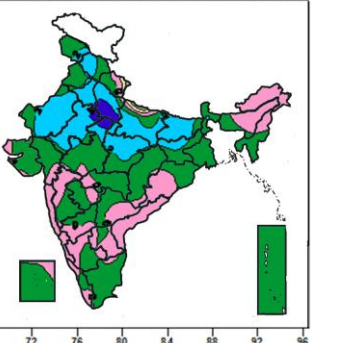
Northwestern region

- **Uttarakhand:** Start nursery sowing / direct sowing of rice, sowing of sugarcane, finger millet, urad, moong, soybean and pulses in Uttarakhand. Start transplanting of rice in irrigated conditions.
- **Himachal Pradesh:** Start nursery sowing of rice / direct sowing of rice, sowing of maize, soybean and cowpea as an intercrop with maize.
- **Jammu & Kashmir:** Start nursery sowing / direct sowing of rice, *kharif* pulses *viz.* moong, *kharif* maize, groundnut, bajra and til. Start transplanting of rice.
- **Uttar Pradesh:** Start nursery sowing of rice, sowing of maize, urd, moong, pigeon pea, groundnut and til in East Uttar Pradesh. Wait for sufficient rainfall for sowing of *kharif* crops in West Uttar Pradesh.

Farmers are advised to undertake land preparation and sowing of following *kharif* crops as soon as the monsoon arrives:

- Sowing of *kharif* rice, pulses, bajra, maize and vegetables in Delhi.
- Sowing of Desi and American cotton and nursery sowing for *kharif* rice and also sowing of maize, bajra in Punjab and Haryana.
- Nursery sowing of rice, sowing of bajra, jowar, guar, mung bean, moth bean and cowpea in East Rajasthan, sowing of bajra, pulses, bean, moth bean and guar in West Rajasthan.

Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 04.07.2012

<p style="text-align: center; font-size: small;">Actual Mean Maximum Temperature (°C) in India for the week ending 04.07.20122</p> 	<p style="text-align: center; font-size: small;">Maximum Temperature (°C) Anomaly in India for the week ending 04.07.20122</p> 
<p>Actual Mean Maximum temperature ranged 40°C and above over most parts of Northwest India (except Jammu & Kashmir, Himachal Pradesh, Uttarakhand), some parts of North Madhya Pradesh, 36 to 40°C and above over most parts of Bihar, Jharkhand, South Madhya Pradesh, Gujarat, Saurashtra & Kutch, Tamil Nadu, some parts Northwest India (Except Himachal Pradesh), Gangetic West Bengal, Orissa, Chhattisgarh, Maharashtra except Konkan & Goa, Andhra Pradesh and 24 to 36°C over remaining parts of the country.</p>	<p>Actual Mean Maximum temperature anomaly ranged between 4°C and above over most parts of Himachal Pradesh, Uttarakhand, Haryana, Delhi, Uttar Pradesh, East Rajasthan, Bihar, Jharkhand, Madhya Pradesh, some parts of Gangetic West Bengal, Orissa, Chhattisgarh, 2 to 4°C over most parts of Jammu & Kashmir, Punjab, West Rajasthan, Gangetic West Bengal, Gujarat, Saurashtra & Kutch, Vidarbha, some parts of Uttarakhand, Haryana, East Rajasthan, Bihar, Jharkhand, Orissa, Chhattisgarh, South Madhya Pradesh, Madhya Maharashtra, Marathwada, Telengan, North Interior Karnataka, below 2°C over rest of the country.</p>
<p style="text-align: center; font-size: small;">Actual Mean Minimum Temperature (°C) in India for the week ending 04.07.20122</p> 	<p style="text-align: center; font-size: small;">Minimum Temperature (°C) Anomaly in India for the week ending 04.07.20122</p> 
<p>Actual Mean Minimum Temperature ranged between 28 to 32°C over most parts of Northwest India (except Jammu & Kashmir, Himachal Pradesh, Uttarakhand), Bihar, some parts of North Madhya Pradesh and between 16 to 28°C over remaining parts of the country.</p>	<p>Minimum Temperature anomaly ranged 4°C and above over some parts of West Uttar Pradesh, East Rajasthan, West Madhya Pradesh, 2 to 4°C and above over many parts of Himachal Pradesh, Haryana, Delhi, Uttar Pradesh, Rajasthan, Bihar, some parts of Jammu & Kashmir, Madhya Pradesh, Jharkhand, -4 to 2°C over remaining parts of the country.</p>

Distribution of rainfall of the country during week ending on 04.07.2012

State/Districts	Actual (mm)	% Dep.
Arunachal Pradesh		
Anjaw	**	**
Changlang	17.4	-83
East Kameng	34.0	-66
East Siang	29.7	-64
Kurung Kumey	101.1	-54
Lohit	**	**
Lower Dibang Valley	117.9	-14
Lower Subansiri	**	**
Papumpara	41.0	-9
Tawang	213.5	11
Tirap	54.0	-70
Upper Dibang Valley	115.0	-40
Upper Siang	117.2	-28
Upper Subansiri	20.0	-72
West Kameng	67.4	-63
West Siang	45.5	-67
Assam		
Baksa	69.7	-63
Barpeta	28.5	-85
Bongaigaon	26.1	-87
Cachar	39.6	-67
Chirang	30.2	-85
Darrang	65.0	-21
Dhemaji	118.0	-24
Dhubri	87.6	-26
Dibrugarh	85.1	-26
East Garo Hills	50.0	-45
East Khasi Hills	58.0	-84
Goalpara	45.8	-69
Golghat	37.4	-42
Hailakandi	23.5	-75
Jaintia Hills	31.0	-90
Jorhat	155.1	81
Kamrup(Metro)	125.7	58
Kamrup	23.3	-71
Karbi Analog	43.1	-5
Karimganj	47.8	-69
Kokrajhar	60.3	-75
Lakhimpur	75.5	-51
Morigaon	8.8	-90
N.C.Hills	**	**
Nowgong	61.1	-1
Nalbari	117.8	14
Ribhoi	34.1	-68
Sonitpur	106.7	8
Sibsagar	78.9	-11
South Garo Hills	65.0	-45
Tinsukia	55.9	-49
Udalgiri	**	**
West Garo Hills	124.0	5
West Khasi Hills	47.0	-85
Himachal Pradesh		
Bilaspur	9.4	-83
Chamba	2.9	-93
Hamirpur	20.9	-73
Kangra	37.7	-52
Kinnaur	0.2	-98
Kullu	4.5	-87
Lahaul and Spiti	0.0	-100
Mandi	36.6	-44
Shimla	5.8	-87
Sirmaur	44.5	-48
Solan	13.2	-80
Una	13.3	-72
Jammu & Kashmir		







Anantnag	2.3	-86
Badgam	1.5	-83
Bandipore	**	**
Baramula	5.6	-65
Doda	1.2	-93
Ganderwal	0.0	-100
Jammu	1.0	-97
Kargil	0.0	-100
Kathua	1.1	-97
Kistwar	**	**
Kulgam	0.0	-100
Kupwara	3.3	-71
Ladakh(Leh)	2.0	25
Poonch	0.0	-100
Pulwama	0.0	-100
Rajouri	12.1	-48
Ramban	4.0	-76
Reasi	34.1	-43
Samba	6.6	-80
Shopian	0.0	-100
Srinagar	0.0	-100
Udhampur	8.5	-86
West Madhya Pradesh		
Alirajpur	48.0	18
Asoknagar	3.8	-94
Badwani	62.1	83
Betul	11.8	-77
Bhind	0.0	-100
Bhopal	57.1	-9
Burhanpur	33.4	-26
Datia	3.6	-91
Dewas	50.8	-6
Dhar	28.1	-32
Guna	19.6	-69
Gwalior	0.0	-100
Harda	60.8	23
Hosangabad	45.9	-36
Indore	53.7	19
Jhabua	47.7	20
Khandwa	24.0	-49
Khargone	35.0	-21
Mandsaur	5.7	-86
Morena	0.0	-100
Neemuch	6.9	-85
Raisen	24.5	-61
Rajgarh	22.1	-52
Ratlam	40.4	-12
Sehore	46.5	-8
Shajapur	20.8	-49
Sheopur Kalani	0.0	-100
Shivpuri	0.0	-100
Ujjain	42.8	-1
Vidisha	20.0	-65
Chattisgarh		
Bastar	72.9	-1
Bijapur	35.4	-52
Bilaspur	11.0	-86
Dantewara	93.1	48
Dhamtari	35.7	-53
Durg	20.6	-74
Janjgir	43.1	-50
Jashpurnagar	23.5	-75
Kanker	64.4	-23
Korba	21.3	-77
Koriya	13.7	-83
Kawardha	90.0	61
Mahasumund	69.7	9
Narayanpur	23.6	-67

Raigarh	43.7	-40
Raipur	28.3	-64
Rajandgaon	34.9	-49
Surguja	14.3	-81
Uttarakhand		
Almora	2.0	-95
Bageshwar	104.4	160
Chamoli	31.1	-35
Champawat	24.5	-69
Dehradun	101.9	-2
Garhwal Pauri	17.9	-74
Garhwal Tehri	24.5	-59
Haridwar	9.5	-81
Nainital	79.2	-40
Pithorgarh	69.9	-40
Rudraprayag	102.6	15
Udham Sing Nagar	13.4	-79
Uttarkashi	86.9	50
Jharkhand		
Bokaro	0.5	-99
Chatra	0.0	-100
Deoghar	1.6	-98
Dhanbad	15.1	-80
Dumka	10.0	-88
East Singbhum	22.7	-71
Garhwa	0.0	-100
Giridih	28.1	-62
Godda	5.0	-92
Gumla	43.3	-51
Hazaribagh	0.2	-99
Jamtara	38.5	-51
Koderna	0.0	-100
Latehar	0.0	-100
Lohardagga	0.0	-100
Pakur	1.7	-98
Palamau	0.2	-99
Ramgarh	0.0	-100
Ranchi	1.4	-98
Sahebganj	**	**
Saraikela	1.7	-98
Simdega	143.4	67
West Singbhum	6.7	-90
Gujarat Region		
Ahmedabad	27.6	-36
Anand	41.9	-21
Banaskantha	0.1	-99
Baroda	38.3	-37
Broach	27.6	-51
Dahod	20.8	-58
Dangs	31.7	-73
Gandhinagar	17.1	-65
Kheda	18.8	-67
Mehsana	5.1	-89
Narmada	53.7	-21
Navsari	36.1	-77
Panchmahal	24.5	-52
Patan	2.6	-93
Sabarkantha	13.7	-69
Surat	20.9	-80
Tapi	18.7	-82
Valsad	34.2	-80
Saurashtra, Kutch & Diu region		
Amreli	24.8	-43
Bhavnagar	46.2	18
Jamnagar	8.0	-83
Junagarh	22.5	-77
Kutch	0.1	-99
Porbandar	18.3	-73

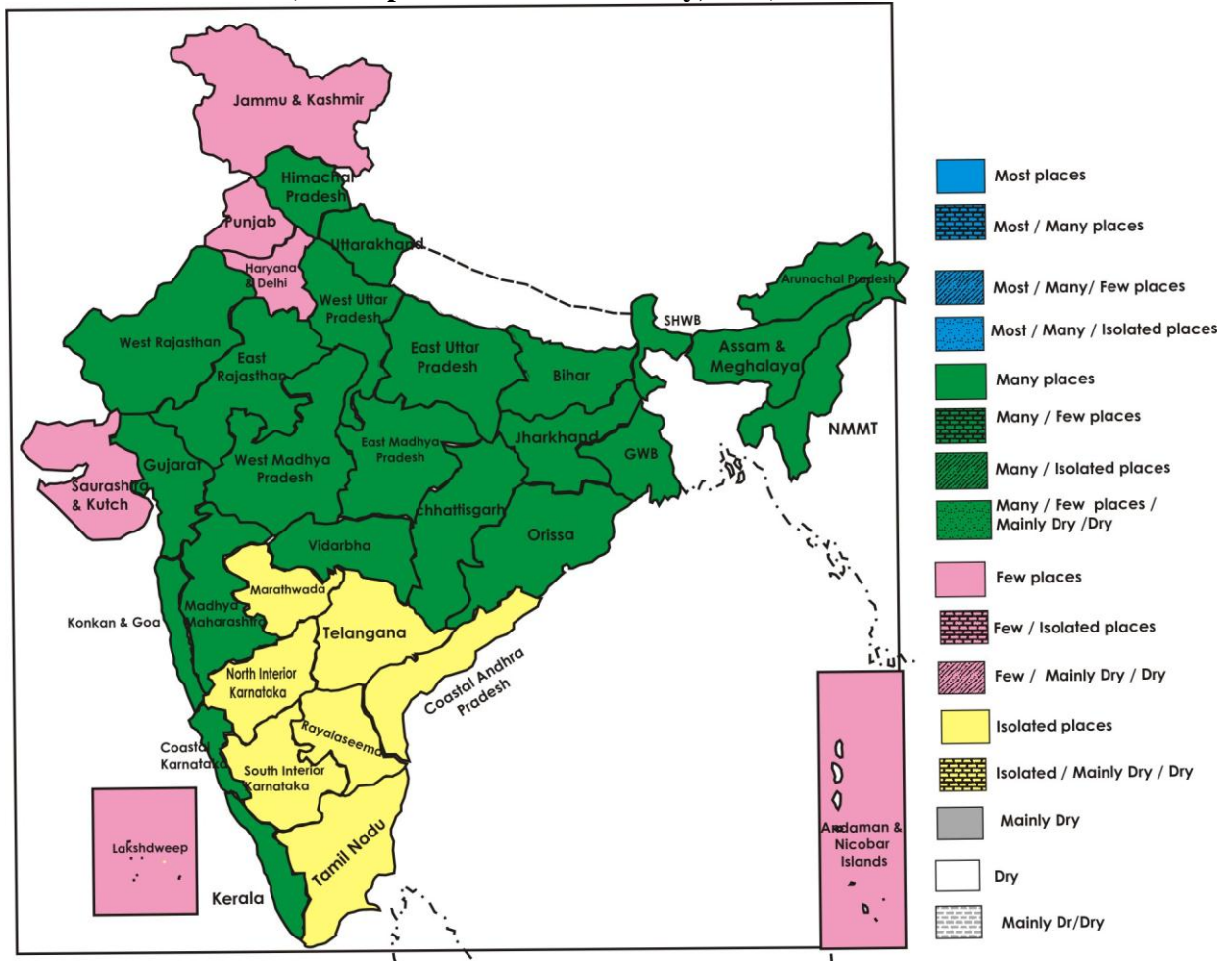
Rajkot	31.6	-28
Surendranagar	22.7	-34
Maharashtra		
Konkan & Goa		
Goa	427.7	51
Mumbai	181.8	-12
Raigad	256.0	-14
Ratnagiri	484.3	55
Sindhudurg	461.9	69
Thane	93.0	-56
Madhya Maharashtra		
Ahmednagar	62.2	161
Dhule	63.7	68
Jalgaon	31.3	-26
Kolhapur	130.5	-22
Nandurbar	72.2	33
Nasik	57.7	0
Pune	21.8	-67
Sangli	25.7	-18
Satara	61.0	9
Solapur	41.7	124
Marathwada		
Aurangabad	59.8	89
Beed	60.3	120
Hingoli	37.5	-35
Jalna	42.6	27
Latur	73.2	80
Nanded	32.2	-33
Usmanabad	60.0	113
Parbhani	47.1	8
Vidarbha		
Akola	31.4	-25
Amraoti	41.9	-10
Bhandara	34.2	-55
Buldhana	24.8	-39
Chandrapur	28.2	-65
Gadchiroli	38.1	-58
Gondia	22.4	-74
Nagpur	51.1	-14
Wardha	43.5	-12
Washim	50.2	-10
Yeotmal	26.2	-52
Orissa		
Angul	65.6	28
Balasore	44.4	-32
Bargarh	68.2	-10
Bhadrak	50.0	-9
Bolangir	66.0	-17
Boudh	63.5	2
Cuttack	60.6	-9
Deogarh	42.6	-50
Dhenkanal	32.2	-50
Gajapati	49.1	25
Ganjam	80.1	96
Jagatsingpur	37.9	-12
Jajpur	40.6	-28
Jharsuguda	102.5	53
Kalahandi	92.6	15
Kandhamal	72.4	16
Kendrapara	41.2	-36

Keonjhar	29.7	-47
Khurda	74.1	41
Koraput	48.8	-35
Malkangiri	69.0	-3
Mayurbhanj	36.2	-48
Nawapara	234.5	233
Nawarangpur	79.7	-5
Nayagarh	96.9	104
Puri	42.8	-15
Rayagada	50.9	6
Sambalpur	96.2	13
Sonepur	56.5	-37
Sundargarh	48.1	-34
West Bengal		
GWB		
Bankura	17.3	-77
Birbhum	16.1	-78
Burdwan	13.0	-80
East Midnapore	19.1	-73
Hooghly	14.1	-81
Howrah	8.3	-90
Kolkata	23.1	-70
Murshidabad	1.7	-98
Nadia	10.0	-86
24 Pargana (N)	29.1	-62
Purulia	45.1	-37
24 Pargana (S)	33.7	-70
West Midnapore	18.1	-76
SHWB		
Cooch Behar	81.8	-59
Darjeeling	68.7	-57
East Sikkim	51.1	-52
Jalpaiguri	76.1	-68
Malda	19.4	-74
North Dinajpur	20.3	-73
North Sikkim	81.3	-40
South Dinajpur	7.0	-91
South Sikkim	34.1	-68
West Sikkim	68.0	-50
Karnataka		
Coastal Karnataka		
Dakshin Kannada	321.4	4
Udupi	375.8	17
Uttar Kannada	265.3	5
North Interior Karnataka		
Bagalkote	9.6	-14
Belgaum	20.9	-59
Bidar	37.6	7
Bijapur	9.1	-43
Dharwad	23.5	-34
Gadag	4.2	-71
Gulbarga	38.5	21
Haveri	14.5	-66
Koppal	3.0	-68
Raichur	16.3	1
Yadgir	32.1	37
South Interior Karnataka		
Bangalore Rural	0.2	-98
Bangalore Urban	0.3	-97
Bellary	4.1	-66

Chamarajnaragar	6.2	-53
Chichballapur	10.4	-8
Chickmagalur	103.5	-40
Chitradurga	5.6	-35
Davangere	11.6	-42
Hassan	21.6	-55
Kodagu	141.4	-42
Kolar	2.1	-76
Mandya	5.4	-2
Mysore	14.6	-35
Ramnagara	5.1	-39
Shimoga	126.0	-19
Tumkur	5.4	-39
Kerala		
Alappuzha	127.0	-13
Kannur	229.9	-22
Ernakulam	164.6	-11
Idukki	171.8	-19
Kasaragod	296.5	6
Kollam	72.3	-31
Kottayam	138.9	-15
Kozhikode	258.2	-1
Malappuram	133.3	-39
Palakkad	111.5	-30
Pathanamthitta	100.1	-31
Thiruvananthapuram	52.5	-27
Thrissur	138.8	-33
Wyanad	132.6	-57
Andhra Pradesh		
Coastal Andhra Pradesh		
East Godavari	46.7	1
Guntur	15.1	-48
Krishna	9.6	-80
Nellore	19.9	25
Prakasam	6.0	-65
Sirkakulam	70.6	59
Visakhapatnam	46.1	31
Vizianagram	52.9	22
West Godavari	13.5	-73
Telangana		
Adilabad	14.9	-76
Hyderabad	4.6	-85
Karimnagar	20.7	-62
Khammam	35.4	-28
Mehabubnagar	12.8	-55
Medak	25.7	-39
Nalgonda	5.3	-81
Nizamabad	16.3	-72
Rangareddy	12.6	-64
Warangal	12.5	-76
Rayalaseema		
Anantapur	1.6	-80
Chittoor	24.3	95
Cuddapah	4.1	-66
Kurnool	15.6	-9

	(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

Weather Forecast
(Valid upto 0830 hours of 8th July, 2012)



Major Feature of Weather Forecast up to 0830 hours IST of 8th July, 2012

- Rain/thundershowers would occur at many places along west coast and over Madhya Maharashtra, interior Karnataka, Madhya Pradesh, Vidarbha, Chhattisgarh, Orissa and northeastern states.
- Rain/thundershowers would occur at many places over east Rajasthan, Gujarat region, Uttar Pradesh, Bihar, Jharkhand and West Bengal & Sikkim.
- Rain/thundershowers would also occur at many places over Himachal Pradesh and Uttarakhand and at a few places over Jammu & Kashmir, Punjab, Haryana, Delhi, west Rajasthan, Lakshadweep and Andaman & Nicobar Islands.
- Rain/thundershowers would occur at one or two places over rest parts of the country.

Weather Warning

- Heavy rainfall would occur at one or two places over east Rajasthan, Konkan, Gujarat region, Madhya Pradesh, Jammu & Kashmir, Himachal Pradesh, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Arunachal Pradesh during next 48 hours and over east Uttar Pradesh, Jharkhand and Bihar during next 24 hours.

Weather Outlook for subsequent 4 days up to 0830 hours IST of 12th July, 2012

- Rain/thundershowers would occur at many places over west coast, east & central India, northeastern states and Uttar Pradesh.
- Rain/thundershowers would also occur at many places over western Himalayan region and at a few places over Punjab and Haryana.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Significant rainfall occurred in most of the districts of the States of the region during last week.
- **Rainfall Forecast:** Rain / thundershowers would occur at many places over the states of the region.
- **Warning:** Heavy rainfall would occur at one or two places over Assam & Meghalaya and Arunachal Pradesh during next 48 hours.

Advisories:

- Due to heavy rainfall during last week, there is report of occurrence of flood in Assam which affected standing crops of jute and *ahu* rice in Barpeta, Dhemaji, Jorhat, Golaghat, Tinsukia, Dibrugarh, Sivsagar, Nagaon, Morigaon, Lakhimpur, Kokrajhar, Dhubri, Nalbari, Bongaigaon, Chirang, Baksa, Sonitpur, Udalguri, Goalpara, Cachar, Kamrup and Karimganj districts. *Ahu* rice, sugarcane, seedlings of *sali* rice and fisheries and livestock have been affected due to flood in Karimganj, Cachar and Hailakandi districts. *Sali* rice seedlings, *ahu* rice, sugarcane, maize, jute, vegetables, turmeric and ginger were affected in Karbi Anglong and North Cachar Hills districts. Farmers are advised to remove the excess water from the fields immediately, wherever possible.
 - Farmers in the areas where flood water has been receded, are advised to raise community nursery for late planting with old seedlings of the varieties like Profulla and Gitesh (if more than 50% area damaged) or nursery raising of the photo insensitive short duration variety like Luit for replanting (in case of total damage). Farmers may also sow traditional varieties (Sonamukhi, ManoharSali, Bordha, AndruSali, Solpona) of *sali* rice, which can be transplanted late up to the end of August.
 - As significant rainfall also occurred over remaining States of the region during last week and rainfall is likely to occur at many places over the region during the period, farmers are advised to postpone irrigation, intercultural operation and application of pesticides and fertilizers to the standing crops. In view of occurrence of heavy rainfall at one or two places over Assam & Meghalaya and Arunachal Pradesh during next 48 hours, farmers are also advised to arrange for adequate drainage facilities to avoid stagnation of water in the fields.
 - Farmers in Sub Tropical Hill Zone of Arunachal Pradesh are advised to continue transplanting of rice and sowing of black gram and green gram, soybean utilizing realized monsoon rainfall.
 - Farmers in Mild Tropical Hill Zone of Mizoram are advised to continue nursery preparation of rice and sowing of pigeon pea, soybean etc. utilizing realized monsoon rainfall. Undertake land preparation and sowing of groundnut.
 - Farmers in Temperate Sub Alpine Zone of Meghalaya are advised to continue transplanting of *sali* rice in low and medium altitude areas. Continue sowing of *sali* rice and soybean in high altitude region utilizing realized monsoon rainfall. The farmers, who could not be able to sow the seeds of early varieties of *sali* rice, can make arrangement to raise the seedlings by adopting 'Mat nursery' technique. Seedlings of such nursery become suitable for transplanting earlier and transplanting becomes easier using Drum Seeder etc. Otherwise, farmers can use late varieties for cultivation.
 - As maize is at flowering stage and very susceptible to water logging, farmers in Mild Tropical Hill Zone of Nagaland are advised to arrange for adequate drainage to avoid water logging in the field. Undertake land preparation and sowing of groundnut, soybean, black gram and green gram and nursery bed preparation of lowland rice.
 - Farmers of Sub tropical Plain Zone of Manipur are advised to continue sowing of *kharif* rice and complete sowing of soybean and groundnut.
 - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
 - Due to congenial weather conditions, there is chance of attack of blast disease in *ahu* rice in Upper Bramhaputra Valley Zone of Assam; farmers are advised to monitor *ahu* rice and spray Bavistin @ 1 g per litre of water, if infestation is noticed above ETL.
 - As pesticide application is not feasible in rainy weather, farmers in the Central Bramhaputra Valley Zone of Assam are advised arrangement of Bamboo perch as an effective measure to control the hairy caterpillar and semi-looper in jute through predatory birds on jute.
 - Due to prevailing weather conditions, there is chance of attack of stem borer in upland rice in Mild Tropical Plain Zone of Tripura; farmers are advised to monitor the crop and spray Rogor or Monocrotophos @ 2 ml per litre of water, if infestation is noticed above ETL.
 - Apply plant protection measures in these States after current spells of rain.
 - Stages of major crops are mentioned in Annexure I.
- **Animal Husbandry**
 - In Central Bramhaputra Valley Zone and North Bank Plain Zone of Assam, farmers are advised to vaccinate cattle and buffaloes against FMD, HS and BQ, pigs against swine fever. Vaccinate poultry against Ranikhet and Gamboro disease.

- Farmers in Manipur are advised to deworm cattle and buffalo against *Fasciola spp.*, poultry against Ranikhet and Coccidiosis disease and pigs against swine fever. Deworm goat against Fascioliasis.
- In Mild Tropical Hill Zone of Mizoram, due to congenial weather, there is chance of infection of gastrointestinal parasite in poultry and pig. Farmers are advised to maintain proper sanitary conditions of poultry sheds.
- In Mild Tropical Hill Zone of Nagaland, farmers are advised to vaccinate pigs against swine fever.
- **Pisciculture**
 - Farmers of Upper Brahmaputra Valley Zone of Assam are advised to release spawn in their fisheries. Clean up the pond well before releasing spawn. Cow dung at the rate of 500 g per sq m. may be added at least 15 days ahead of releasing fingerlings into the ponds.
 - Farmers of Barak Valley Zone of Assam are advised to release spawn in their fisheries. Necessary precautionary measures should be adopted so that embankments of the ponds are not submerged during flood.
 - Farmers of Lower Brahmaputra Valley Zone of Assam are advised to make arrangement of net in flood affected area so that fishes can't come out from the pond to the outer water and at the same time disease-infected fishes can't enter to the pond.
 - Farmers in Manipur and Mizoram are advised to keep pond free from unwanted vegetation and insects. During heavy shower, water should not drain directly into the pond. It should be passed through a bed of sand before draining.

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

- **Realised Rainfall:** Significant rainfall occurred in all the districts in Orissa (except in Keonjhar), Gumla, Jamtara and Simdega districts of Jharkhand, Kishanganj and West Champaran districts of Bihar, Purulia and South 24 Parganas districts of Gangetic West Bengal and most of the districts in Sub Himalayan West Bengal (except Malda, North and South Dinajpur) and Sikkim.
- **Rainfall Forecast:** Rain / thundershowers would occur at many places over the States of the region during the period.
- **Warning:** Heavy rainfall would occur at one or two places over Sub-Himalayan West Bengal & Sikkim during next 48 hours and over Jharkhand and Bihar during next 24 hours.
- **Advisories:**
 - As rain / thundershowers would occur at many places over the States of the region during the period, farmers are advised to postpone irrigation, intercultural operation and application of plant protection measures and fertilizers. In view of heavy rainfall at one or two places over Sub-Himalayan West Bengal & Sikkim during next 48 hours and over Jharkhand and Bihar during next 24 hours, farmers are advised to arrange for adequate drainage to avoid water stagnation in the crop fields.
 - Farmers of Western Undulating Zone of Orissa are advised to undertake sowing of direct seeded rice, wet nursery sowing of rice, sowing of maize, cotton and arhar.
 - Farmers of North Eastern Ghat Zone of Orissa are advised to undertake nursery sowing of rice, planting of turmeric, sowing of cotton, maize, ragi and arhar.
 - The farmers of East and South Eastern Coastal Plain Zone of Orissa are advised to undertake sowing of sesame, maize, arhar, ragi, cotton, groundnut etc.
 - The farmers of North Central Plateau Zone of Orissa are advised for sowing of groundnut, ragi, arhar, maize, green gram, black gram and sesame in upland areas.
 - Farmers of North Eastern Plateau Zone of Orissa are advised to undertake direct sowing of short and medium duration rice in the rainfed areas.
 - Farmers in North West Alluvial Zone of Bihar are advised to undertake nursery sowing of rice, sowing of arhar in upland, *kharif* maize, bhindi, brinjal and also sowing of sorghum, bajra and maize as fodder crops in view of realised rainfall and likely occurrence of fairly widespread rainfall. Intercropping of meth, lobia and rice bean with these crops will enhance the quality of the fodder.
 - As there is chance of fairly widespread rainfall, farmers in North Bihar are advised to start the transplanting of rice in low and medium land areas.
 - Farmers in South Bihar Alluvial Zone are advised to undertake nursery sowing of *kharif* rice and sowing of *kharif* arhar, til, sunflower, groundnut, castor and *kharif* fodder crops like jowar, bajra, meth, maize, kalai, boda and dinanath grass.
 - In Central and North Eastern Plateau Zone of Jharkhand, farmers are advised to complete sowing of upland rice and undertake short duration varieties of arhar, groundnut, rice, urad, turmeric, jowar, soybean and okra for inter cropping.

- Due to late onset of monsoon in Western Plateau Zone of Jharkhand, farmers are advised to select short duration varieties of different crops and undertake sowing of different *kharif* crops like rice, urad, groundnut, arhar, maize and rainy season vegetables like bhindi, bean, French bean, tomato, cauliflower, cabbage etc.
 - Farmers in Coastal saline zone of West Bengal are advised to undertake land preparation for planting of coconut, mango and guava and advised for sowing of wet seeded rice.
 - Farmers in New Alluvial Zone and Red Laterite Zone of West Bengal are advised to undertake nursery sowing of *aman* rice and land preparation and planting of Banana in New Alluvial Zone of West Bengal.
 - Farmers in Old Alluvial Zone of West Bengal are advised to undertake land preparation and transplanting of *Aman* rice and harvesting of early sown jute.
 - Farmers in Terai Zone of West Bengal are advised to undertake preparation of seedbed for early cauliflower and use white polythine shed in the seedbed to protect from heavy rain and also harvesting of already matured jute crop.
 - Farmers in Hill Zone of West Bengal are advised for seed bed preparation of rice, planting of ginger and sowing of chirota.
 - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
 - To control top Shoot borer infestation in sugarcane in Western Undulating Zone of Orissa, spray the crop with Monocrotophos @ 1000 ml / ha and repeat it after 15 days.
 - Powdery mildew disease may appear in the cucurbit vegetables in North West Alluvial Plain Zone of Bihar. Where, incidence is observed, application of Sulfex @ 2 g per litre of water is advised in the affected crops.
 - Under the present weather situation, sucking pests like jassids in okra and mites in chilli may occur in Hill Zone of West Bengal. To control, spray either with Monocrotophos @ 1.5 ml / litre or Imidacloprid @ 1 ml / 7.5 litre of water.
 - Under prevailing weather situation, collar rot, fruit rot may be seen in yam, pointed gourd, ridge gourd and brinjal in New Alluvial, Old Alluvial Zone and Terai Zone of West Bengal. To control collar rot, apply Carbendazim @ 1 g and Thiram @ 2 g together per litre of water. To control fruit rot, spray Metalaxyl 8% and Mancozeb 64% @ 1.5 g or Ridomyl MZ @ 2.5 g / litre of water.
 - Stages of major crops are mentioned in Annexure I.
- Pisciculture**
- The farmers of North Eastern Plateau Zone of Orissa are advised to apply Mahua Oil cake @ 1 ton / acre in new water bodies to kill the predator fishes where the pisciculture activities are to be taken.

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

- **Realised Rainfall:** No significant rainfall occurred in the region except Bagheswar, Chamoli, Dehradun, Nainital, Pithorgh and Uttarkashi districts in Uttarakhand and Kangra, Mandi and Sirmaur districts in Himachal Pradesh and Reasi district in Jammu & Kashmir.
- **Rainfall Forecast:** Rain/thundershowers would occur at many places over East Rajasthan, Gujarat region, Uttar Pradesh, Himachal Pradesh, Uttarakhand and at a few places over Jammu & Kashmir, Punjab, Haryana, Delhi and West Rajasthan.
- **Advisory:**
 - Farmers in Himachal Pradesh, Jammu & Kashmir, East Uttar Pradesh and Uttarakhand are advised to prepare field and sowing of *kharif* crops utilizing the realized monsoon rainfall. Farmers in Punjab, Haryana, Delhi and Rajasthan are advised to arrange seed, fertilizer and pesticides to take up sowing of *kharif* crops as the conditions are favourable for advance of monsoon during next two to three days.
 - As there was no significant rainfall occurred in the region except Bagheswar, Chamoli, Dehradun, Nainital, Pithorgh and Uttarkashi districts in Uttarakhand and Kangra, Mandi and Sirmaur districts in Himachal Pradesh and Reasi district in Jammu & Kashmir, farmers are advised to apply irrigation to the standing crops. Farmers in the above mentioned districts are advised to postpone irrigation to the crops.
 - Farmers in East Rajasthan are advised to prepare field for sowing of *kharif* crops like pearl millet, sorghum, cow pea, castor, irrigated groundnut, maize, cluster bean, jowar, soybean, moong, til, urd, arhar, moth (matki) etc. and sowing may be done after sufficient rainfall. Farmers are also advised to complete sowing of groundnut in irrigated conditions as early as possible. Undertake field preparation for sowing of rice nursery and sowing can be done upto 3rd week of July in irrigated conditions. In Flood Prone Eastern Plain Zone (Bharatpur) of Rajasthan, farmers are advised to raise nursery for monsoon season marigold using 700 g seed at 6 cm spacing and 2cm depth. Undertake pruning operation in ber. Pruning is necessary because as flower develop in axils of new shoots only.

- Farmers in West Rajasthan are advised to arrange farm inputs in advance so that timely sowing of these crops can be done at the onset of monsoon. Continue sowing of cucurbits like bitter gourd, water melon, pumpkin, cucumber, round gourd, ridged gourd and bottle gourd etc. in irrigated conditions.
- In Sub Tropical Zone of Jammu and Kashmir, farmers are advised to complete transplanting of early varieties of brinjal, chilli and cauliflower crop. Farmers are advised to continue sowing of direct seeded rice crop and start transplanting of rice in main field. Maintain water for transplanting the seedling at 3-5 cm deep and transplant 2-3 seedling / hill at proper spacing. Start sowing of *kharif* pulses viz. moong, *kharif* groundnut, bajra, til due to advance of monsoon in the State. Continue sowing of maize crop in irrigated condition.
- In Cold Arid Zone of Jammu & Kashmir, farmers are advised to harvest turnips, knolkhol, lettuce, Chinese cabbage, broccoli, summer squash and radish.
- In Intermediate zone of Jammu & Kashmir, farmers are advised to continue nursery sowing of bhindi, pumpkin, bittergourd, bottlegourd and sponge gourd. It is also advised to sow radish, carrot, turnip, spinach, beans, methi, knol-khol and cabbage and to continue transplanting of brinjal, knolkhol, chillies, cabbage, cauliflower in Intermediate Higher Zone. Farmers are advised to transplant seedlings of rice at 4-6 leaf stage and sowing of maize.
- In Valley Temperate zone of Jammu & Kashmir, farmers are advised to undertake weeding followed by top dressing in rice, maize and *kharif* pulses on a non rainy day. Harvest onion and also *rabi* vegetable crops and collect the seeds for next season.
- Farmers in East Uttar Pradesh are advised to irrigate standing crops (viz. sugarcane, vegetables etc). If irrigation facility is not there then advised to mulch the crops to conserve moisture. Due to advance of monsoon in East Uttar Pradesh, farmers are advised to prepare field and undertake sowing of *kharif* crops like urad, moong, pigeon pea, groundnut and til. Continue sowing of vegetables like okra, cucumber, pumpkin, tomato, cabbage, chilly. Also start land preparation and nursery sowing of rice and onion. Apply top dressing of fertilizers and weeding, hoeing may be done in sugarcane, vegetables in East Uttar Pradesh after current spells of rain.
- Farmers in West Uttar Pradesh are advised to arrange inputs like seed, fertilizer and fertilizer to take up sowing of *kharif* crops on onset of monsoon. In irrigated conditions, medium and long duration varieties may be transplanted. Before transplanting mix 25kg/ha zinc sulphate in the field. Prepare field and arrange inputs for sowing of jowar, moong and urd sowing on onset of monsoon. Sowing of groundnut may be taken upto 15th July in Central and Western Plain Zone of Uttar Pradesh.
- In High Hill Temperate Dry Zone of Himachal Pradesh, farmers may continue sowing of peas, potato, vegetables only in valley (cauliflower / cabbage / lettuce), capsicum / tomato planting in polyhouse and also advised to irrigate daily or at least in alternate day.
- In Himachal Pradesh, farmers are advised for sowing of rice nursery and maize due to advance of monsoon in the State. Direct sowing of rice and maize, soybean and cowpea as an intercropping with maize may be completed. Farmers are advised to go for nursery sowing of capsicum, cauliflower, red capsicum, cucumber, summers quash as late sown vegetables. Cucurbits wines are drying due to wilt disease. Cucurbit beetle helps in spread of the disease, control beetle by spraying carbaryl (sevin) 2g per litres of water at the interval of 15 days. Attack of cut worm is seen in the fields where bhindi crop has been planted. For control drench fields with chloropyrophos@1ml per litres of water.
- In Uttarakhand, farmers are advised to undertake sowing of direct seeded rice. In rice nursery, maintain shallow water level for proper seedling establishment and undertake transplanting. Do bunding all around the field in order to store rainwater in the field. Due to advance of monsoon, farmers are advised to start sowing of soybean with improved varieties. Also advised to prepare field and undertake sowing of sorghum, millets, groundnut, pigeon pea, urad, moong, soyabean, rajma, okra, finger millets and arhar. Also, advised to continue sowing of maize and ginger in Hill Zone of Uttarakhand.
- As hot and dry weather conditions are prevailing in Delhi, farmers are advised to give irrigation to vegetable crops in morning or evening hours. Transplant paddy seedling in prepared field where irrigation facility is available and farmers without irrigation facilities are advised to wait for few days to transplant paddy seedling. Use FYM which enhances the water retention of the soil and use optimum fertilizer to minimize the water requirement. Prepare nursery for early cauliflower, brinjal and field for sowing of guar, bajra, maize, cluster bean, spinach, amaranthus and ladyfinger. Undertake sowing of cucurbits crops in raised bed. Undertake earthing up, weeding and hoeing in sugarcane field to conserve the soil water for long time. Sowing of baby corn (HM-4) and sweet corn may be done in this week.
- Farmers in Punjab and Haryana are advised to continue transplanting of rice where irrigation facility is available. Apply light irrigation in rice nursery as per requirement. Undertake sowing of moong, mash, arhar, guar, bajra and okra. Transplant early varieties of cauliflower. Undertake sowing of *kharif* fodders at regular intervals for continuous supply of sufficient green fodder. Apply light irrigation to vegetable and fruit plants and give fertilizers as per requirement. The newly planted young and tender plants should be protected from hot weather

by giving white-washing or wrapping over the exposed trunk portions. Apply light irrigation to vegetable and fruit plants and give fertilizers as per requirement.

- In Cold Arid Zone (Leh) of Jammu & Kashmir, farmers are advised to apply Chloropyriphos 20 EC dressing @ 2 ml/litre of water in vegetables fields where cutworm damage is reported.
- Stages of major crops are mentioned in Annexure I.
- **Animal Husbandry**
 - In Sub humid sub tropic of Uttarakhand, it is advised to vaccinate the animals for various diseases as they are more prone to diseases in this weather. For the control of cough use piperazine citrate @50-30 ml/animal.
 - In Sub-Tropical Zone of Jammu & Kashmir, farmers are advised to go for vaccinate the animal against foot and mouth diseases. In Valley Temperate Zone of Jammu & Kashmir, it is advised to provide cool and fresh drinking water to the livestock as there is increase in the day temperature, ventilation within the shed should be improved. Low energy diets should be provided to animals. As weather is conducive for ticks and mites attack on animals in Intermediate Zone (Rajouri) of Jammu & Kashmir, it is advised to spray Butox @ 2.0 ml per litres of water.
 - In Himachal Pradesh, it is high time for vaccination of animals against FMD as animals are shifting from plain to higher reaches. Weather is conducive for ticks and mites attack on animals for control spray Butox @ 2.0 ml per litres of water. Sprinkle water on animals to reduce the heat stress and ensure proper drinking water. Feed pregnant and lactating cows and buffaloes with balance feed including mineral mixture. Put uromin bricks for licking to animals for 5 minutes in morning and evening.
 - In Flood Prone Eastern Plain Zone (Bharatpur) of Rajasthan, there are chances of fruit fly attack in cucurbits. Farmers are advised to spray Melathion 50 EC@15 ml /10 litre water during morning hour or evening hours at 15 days interval. Prepare insect trap by mixing 10 ml Melathion 50 EC in 1 litre solution. Keep several traps at random places.
- **Horticulture :**
 - In Himachal Praesh, litchi fruit borer is appearing for control spray cypermethrin 10Ec@ 1 ml per litre of water at 15 days interval. Also, there are chances of attack appearing of peach leaf curl disease in peach and pear fruit plant where fruit bearing has started, for control spray Nuvan 1 ml +3 g Blitox per litres of water. In higher elevation areas, stone fruits basins should be kept weed free to reduce the water requirement of plants. Apply irrigation to crops.
- **Apiculture :**
 - In Sub Tropical (Chatha) and Intermediate (Pahalgam) Zone of Jammu & Kashmir, it is advised to provide clean water during these days due to increase in temperature. Keep bee colonies in shade or cover with wet gunny bags. Provide ventilation by placing a small stock in between brood chamber. Kill wasps with a wooden flapper and also by dusting or spraying with insecticides. Keep hives on stands to avoid ant attack.
 - In Sub humid sub tropic of Uttarakhand, to control mango mall formation cut and destroy the affected parts away from the orchard. Spray NAA 200 ppm 90ml/200 litres of water for better flower and fruiting.

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

- **Realised Rainfall:** Most of the districts in Kerala and Coastal Karnataka, Bidar, Gulbarga and Yadgir in North Interior Karnataka, Chickmagalur, Kodagu and Shimoga districts in South Interior Karnataka, East Godavari, Sirkakulam, Vizianagram and Vishakapatnam districts in Coastal Andhra Pradesh, Khammam in Telangana and Kancheepuram, Kanyakumari and Nilgiris districts in Tamil Nadu received sufficient rainfall. No significant rainfall occurred over the remaining parts of the region.
- **Rainfall Forecast:** Rain/thundershowers would occur at many places over Coastal Karnataka and Kerala. Rain/thundershowers would occur at isolated places over rest of the region.
- **Advisories:**
 - As all the states in this region received good rainfall during last week, agromet advisories for these states are as follows:
 - Kerala: Continue sowing of direct seeded rice and also continue new plantation of coconut seedlings
 - Karnataka: Continue nursery sowing / transplanting of rice in Coastal Karnataka and sowing of green gram, black gram, jowar and soyabean in North Interior Karnataka. Undertake sowing of ginger, turmeric and drill sown paddy in Uttar Kannada district. Take up sowing of cotton, nursery sowing of rice, sowing of hybrid jowar, maize, ragi, sugarcane, sunflower, groundnut, red gram and horticultural crops in South Interior Karnataka. In Interior Karnataka, give life saving irrigation to early sown crops.
 - Tamil Nadu: Continue transplanting of Kuruvai rice.
 - Andhra Pradesh: Continue nursery sowing of rice in Chittoor, Cuddapah and Nellore districts. Continue sowing of kharif crops like cotton, jowar, maize, ragi, castor, groundnut and pulses in coastal Andhra

Pradesh, Telangana and undertake sowing of groundnut and castor in Rayalaseema.(Detailed Contingency plan for Andhra Pradesh given in Annexure-III).

- Farmers in the Coastal Zone of Karnataka are advised to undertake land preparation for transplanting paddy seedlings, drain out excess of water from main paddy field and undertake planting of cashew, mango, papaya and coconut and transplanting of fodder grass like Napier grass, Para grass, Lucern and CO-4 grass.
- Farmers in the Eastern Dry Zone of Karnataka are advised to go for normal package of practices except long duration varieties of red gram, take up only medium duration varieties of red gram, follow mulching, inter cultivation of already sown crops and go in for protective irrigation if required for sown crops, wherever water facilities are available and normal sowing window is up to the end of July.
- Farmers in the North East Dry Zone of Karnataka are advised to avoid sowing of only green gram, black gram and cowpea crops, avoid early sowing varieties of groundnut and continue intercropping of Redgram +greengram (2:4 or 1:2), Bajra+redgram (2:1) , Sorghum+redgram (3:1), Castor+Redgram.
- As there was sufficient rainfall last week, farmers in the Central Dry Zone of Karnataka are advised to continue sowing of paddy and maize.
- Farmers in the South Zone of Tamil Nadu are advised to stop giving irrigation to irrigated cotton crop at ripening and maturity stage for hastening boll bursting and undertake sowing of irrigated maize crop.
- Farmers in the North Coastal Zone of Andhra Pradesh are advised to undertake sowing of kharif crops like maize, green gram, black gram and red gram and land preparation for rainfed sugarcane.
- Farmers in the Krishna Godavari Zone of Andhra Pradesh are advised to go for sowing of medium duration varieties because the kharif season is slightly delayed (varieties mentioned in Annexure-II,).
- Farmers in the Southern Telangana Zone of Andhra Pradesh are advised to take up sowing of rainfed crops like cotton, jowar, maize, groundnut, pigeon pea, green gram, etc. and raise rice nursery of medium duration varieties, by taking advantage of recent rains.
- Farmers in the Northern Telangana Zone of Andhra Pradesh are also advised to sow the seeds of rainfed crops only after receipt of 60-75 mm rainfall and dig the trenches for the new orchard crops.
- Farmers in the Southern Zone of Andhra Pradesh are advised to undertake sowing of groundnut, paddy and red gram with receipt of sufficient amount of rainfall.
- Farmers in the Problem Area Zone of Kerala are advised to undertake sowing of wet seeded paddy, since moderate rainfall is forecasted and acidity is manageable. Farmers are also advised to apply fertilizer for dry seeded paddy and undertake weed management.
- Farmers in the South Zone of Tamil Nadu are advised to take appropriate measures to control termite attack by life irrigation, since roots of trees like mango, sapota, guava, tamarind, malai vembu and casuarinas are having chance of termite attack, due to low rainfall and high wind speed.
- Farmers in the Scarce Rainfall Zone of Andhra Pradesh are advised to undertake plant protection measures to prevent the pea nut stem necrosis virus in groundnut and Phytophthora blight and Alternaria leaf spot in castor.
- Incidence of shoot and fruit borer in brinjal, chaenophora blight in chillies and damping off in vegetable nurseries is noticed in the Southern Telangana Zone of Andhra Pradesh. Prevailing weather conditions are favourable for the incidence of red hairy caterpillar in already sown rainfed crops. Farmers are advised to undertake plant protection measures and provide adequate drainage in vegetable nurseries.
- Incidence of early shoot borer in sugarcane, mites and shoot and fruit borer in brinjal, thrips, mites and chaenophora blight in chillies is noticed in the Northern Telangana Zone of Andhra Pradesh. Farmers are advised to undertake plant protection measures.
- **Animal Husbandry**
 - Low impact of SW monsoon over Tamil Nadu, prevailing cloudiness and elevated wind speed will carry away the powdered feed particles. Hence, farmers in the North Western Zone of Tamil Nadu are advised to cover the sides of high platform sheds and include high density feed ingredients like oily fish, rice polish and molasses at low levels (2-3 %) in the feed.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Most of the districts in Maharashtra received significant rain during last week except Pune and Sangli in Madhya Maharashtra and Buldhana and Yeotmal in West Vidarbha. Anand, Baroda, Navsari, Valsad, Dangs, Narmada districts in Gujarat region and Bhavnagar, Rajkot districts in Saurashtra and Kutch region received significant rain during last week.
- **Rainfall Forecast:** Rain / thundershowers would occur at many places over Konkan and Goa, Vidarbha, Madhya Maharashtra and Marathawada as well as Gujarat region and at a few places over Saurashtra and Kutch during the period.
- **Warning:** Heavy rainfall would occur at one or two places over Konkan and Gujarat region during next 48 hours.

- **Advisories:**

- As Rain / thundershowers would occur at many places over Konkan and Goa, Vidarbha, Madhya Maharashtra and Marathwada as well as Gujarat region, farmers are advised to postpone irrigation, intercultural operation and application of plant protection measures and fertilizers after current spells of rain.
- As there was significant rain over Konkan region of Maharashtra, farmers are advised to undertake transplanting of 20 to 22 days old rice seedlings of mid late and late varieties by adopting four way planting (Chatursutri) method. There was heavy rain in some places and isolated heavy rain is also expected during next 48 hours, farmers are advised to make arrangement of adequate drainage to remove excess water from rice nursery, mango orchards and already sown groundnut and vegetable field.
- Farmers in Nashik district are advised to start transplanting of rice and finger millet seedlings.
- As most of the districts in Marathwada received significant rain during last 3-4 days, farmers are advised to undertake sowing of *kharif* soybean, red gram, green gram and cotton.
- Farmers in East Vidarbha region are advised to complete nursery sowing of *kharif* rice. Farmers in Vidarbha region are also advised to continue sowing of *kharif* soybean, red gram and cotton using recent monsoon showers.
- As fairly widespread rain is expected during next 2-3 days, farmers in Kolhapur district are advised to complete drill sowing of *kharif* rice and continue sowing of *kharif* groundnut, soybean, red gram, green gram. As there was subdued rain in Sangli district, farmers are advised to apply irrigation to early sown crops as per requirement.
- As there was rain during last few days in Dhule, Nandurbar and Ahmednagar districts and fairly wide spread rain is also expected during next three days, farmers are advised to undertake sowing of *kharif* jowar, soybean, cotton and red gram with the help of recent monsoon showers. As Solapur district also received significant rain during last week and fairly wide rain is also expected during next three days, farmers are advised to start sowing of *kharif* soybean, groundnut and red gram.
- In view of occurrence of rain during last few days and likely occurrence of fairly widespread rain during next three days, farmers in Pune district are advised to undertake sowing of *kharif* bajra and groundnut.
- Farmers in Madhya Maharashtra and Marathwada are advised to undertake preparatory tillage for planting of *adsali* sugarcane and field may be kept ready for planting during 15th July to 15th August.
- Farmers in Middle Gujarat Zone are advised to prepare nursery for vegetables and prepare the soil and undertake sowing of tobacco and castor.
- As Bhal and Coastal Zone of Gujarat received sufficient rain, farmers are advised to carry out sowing of *kharif* crops and prepare nursery for *kharif* vegetables. Prepare pits for horticultural crops.
- Farmers in North West Zone of Gujarat are advised to make crop planning and arrange farm inputs for sowing of *kharif* crops after receiving sufficient rain.
- Farmers in South Saurashtra Zone of Gujarat are advised to undertake sowing of *kharif* crops like groundnut and cotton utilizing recent monsoon rainfall.
- Farmers in North Saurashtra Zone of Gujarat are advised to prepare land and undertake sowing of *kharif* cotton, bajra, groundnut, sesame, pulses and pigeon pea etc. utilizing recent monsoon rain. For new cultivation of horticulture crops dig out pits of proper size.
- Taking advantage of significant rain in South Gujarat Heavy Rainfall Zone, carry out sowing of *kharif* crops like *kharif* rice and also pulses like green gram, black gram, pigeon pea and cow pea. Undertake plantation of fruit crops.
- In North Gujarat Zone, farmers are advised to procure farm inputs for *kharif* crops and wait for sufficient rainfall to undertake sowing operation. Take green gram, pigeon pea, guar as an intercrop to get higher income.
- In view of recent monsoon rain as well as likely occurrence of fairly widespread rain, farmers in South Gujarat Zone are advised to start sowing of cotton and pulses.
- As there is possibility of heavy rainfall at one or two places over Gujarat region during next 48 hours, farmers are advised to arrange for adequate drainage facilities to avoid water stagnation in crop fields.
- Varieties of *kharif* crops are mentioned in Annexure II.
- Due to subdued rainfall there may be wilting in irrigated cotton in North Madhya Maharashtra; farmers are advised to uproot and destroy the infested plants.
- Decrease in temperature, high cloud cover and humidity for the coming days are conducive for the incidence of cigatoga leaf spot in banana crop. Spray Carbendazim at 1 g / liter of water for its control.
- There may be chances of pest / disease infestation in standing vegetables due to increase in relative humidity in Bhal and Coastal Zone. Take appropriate precautions against them.
- Apply plant protection measures after current spells of rain.
- Stages of major crops are mentioned in Annexure-I.

- **Animal Husbandry:**

- Vaccinate the animals in Bhal and Coastal Zone and in South Gujarat Heavy Rainfall Zone of Gujarat State for different diseases. Spray phenyl in the animal shed to avoid flies, mosquitoes etc.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Significant rainfall received in Dindori district of East Madhya Pradesh and Alirajpur, Badwani, Bhopal, Burhanpur, Dewas, Dhar, Harda, Hosangabad, Indore, Jhabua, Khandwa, Khargaon, Raisen, Raigarh, Ratlam, Sehore, Shajapur, Ujjain, Vidisha districts of West Madhya Pradesh and Bastar, Bijapur, Dantewara, Dhamtari, Janjgir, Kanker, Kawardha, Mahasumund, Raigarh and Rajnandangaon districts of Chhattisgarh.
- **Rainfall Forecast:** Rain/thundershowers would occur at many places over Madhya Pradesh and Chhattisgarh.
- **Warning:** Heavy rain is likely at one or two places in Madhya Pradesh during next 48 hours.
- **Advisories:**
 - Farmers are advised to start sowing of *kharif* crops viz. rice, soybean, maize, jowar, arhar and pulses in most parts of East Madhya Pradesh due to advance of monsoon. Undertake land preparation for sowing of *kharif* crops viz. soybean, til, cotton and maize in West Madhya Pradesh.
 - Farmers in Kymore Plateau and Satpura Hills region of Madhya Pradesh are advised to prepare field for direct sowing of rice and raise nursery for paddy in irrigated conditions. Farmers are advised for sowing of *kharif* crops where rainfall of at least 4 inches has been received. Nursery sowing of tomato, brinjal, onion, chilli, and cauliflower is also advised.
 - Farmers in Gird Zone of Madhya Pradesh are advised to prepare nursery for *kharif* onion and sow when there is sufficient moisture up to 8-10cm depth. They are also advised to give irrigation during evening to urad, moong, chilli, okhra, and tomato crops as per requirement.
 - Farmers in Jhabua Hills of Madhya Pradesh are advised to prepare nursery for transplanted paddy, *kharif* onion, tomato and chilli. They are also advised to do plantation of *kharif* chilli, capsicum, tomato, papaya etc. if irrigation facility is available.
 - Farmers in Central Narmada Valley Zone of Madhya Pradesh are advised to wait for sowing *kharif* crops, particularly rice. They are advised to wait for at least 4-6 inch rainfall for the sowing of rice crop. Sow tomato, brinjal, onion, chilli, and cauliflower seeds for nursery preparation. Irrigate turmeric and ginger plants as per the recommendations during this time as rainfall is less than normal. They are also advised to raise nursery for paddy in irrigated conditions.
 - Farmers in Nimar Valley of Madhya Pradesh are advised to prepare nursery for vegetables i.e. onion, brinjal, chilli, tomato and cauliflower etc.
 - Farmers in Bundelkhand Zone of Madhya Pradesh, who do not plough their fields, are advised to plough their field for sowing of *kharif* crops. As there is possibility of rainfall during next five days; farmers are advised to sow vegetable crops like cucurbit, brinjal, chilly etc. and do not spray in the vegetable crops for next 3-4 days.
 - Farmers in Satpura Plateau of Madhya Pradesh are advised to do field operations like weeding, intercultural, earthing, plant protection and irrigation in sugarcane crop. They are also advised to prepare nursery of vegetable crops like brinjal, tomato, cauliflower and onion etc.
 - Farmers in Malwa Plateau of Madhya Pradesh are advised to sow *kharif* crops like soybean, maize, cotton and sorghum.
 - Farmers in North Hill zone of Chhattisgarh are advised to prepare field and undertake sowing of maize upto 15th July utilizing the realized rainfall during last week. Farmers are advised to undertake sowing of arhar, maize, groundnut, jowar, ginger, turmeric and arbi. Farmers are advised to prepare the nursery for sowing of rice with irrigation facilities.
 - Farmers in Bastar plateau zone in Chhattisgarh are advised to prepare field and undertake sowing of *kharif* vegetables like bottlegourd, bittergourd, okra and short duration beans, cabbage, cauliflower utilising the realised rainfall during last week.
 - In Chhattisgarh plains zone, heavy to medium rainfall was recorded at many places during the week. In view of that, farmers are advised to prepare the fields and undertake sowing of *kharif* crops is advised undertake soybean, pigeon pea and other pulses in heavy soils (*Bharri khet*) and sowing of groundnut, black gram and green gram etc. in upland fields of light soils.
 - Weather conditions are favourable for proper germination of maize, soybean, groundnut, sesame, pigeon pea, urd, kodo millet in uplands. Hence, farmers are advised to prepare the fields well pulverized and sowing of the above crops by the end of this month.
 - Weather conditions are suitable for sowing of *kharif* vegetables. Farmers are advised for sowing of seeds of tomato, brinjal, chilli etc. in about 6" raised nursery beds in Chhattisgarh plain zone.
- **Animal Husbandry & Poultry**
 - Farmers in Central Narmada Valley Zone and Satpura Plateau regions are advised to vaccinate cattle against Foot and Mouth Disease.
 - Farmers in Kymore Plateau and Satpura Hills region of Madhya Pradesh are advised to vaccinate cattle against Anthrax disease, and arrange medicine against worm's infection during rainy season.

Annexure I

Major Crops

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

- Sugarcane (vegetative), *ahu* rice (transplanted) (flowering / grain filling / maturity), *sali* rice (nursery preparation / sowing / seedling / transplanting), *olitorius* jute (vegetative), *capsularis* jute (vegetative / harvesting), cucurbits (vegetative / flowering / fruiting), ginger / turmeric (early vegetative / vegetative), arhar (sowing / early vegetative), *kharif* sesame (sowing), groundnut (sowing) in Assam.
- *Jhum* and WRC rice (transplanting / early tillering), okra, cucurbitaceous vegetables (fruiting / harvesting), soybean (sowing / early vegetative) and green gram and black gram (sowing / early vegetative) in Arunachal Pradesh.
- *Kharif* rice (sowing), soybean, groundnut (sowing / early vegetative), *kharif* maize (early vegetative / vegetative), cucurbits, chilli and okra (fruiting / harvesting), brinjal (sowing / transplanting) in Manipur.
- *Sali* rice (nursery sowing / transplanting), *ahu* rice (tillering / panicle initiation), soybean (sowing / vegetative), turmeric, ginger (vegetative / rhizome formation), jute (vegetative / branching), banana (planting) and vegetables like bottle gourd, ash gourd (fruiting / maturity), cauliflower, cabbage etc. (head formation / maturity) in Meghalaya.
- Rice (nursery preparation), soybean, pigeon pea (sowing / vegetative), groundnut (sowing), *khasi* mandarin (flowering / fruiting), *kharif* maize (vegetative / tasseling / silking), French Bean, rice bean, moong (vegetative / flowering), okra (vegetative), *kharif* cucurbits (vegetative) and ginger / turmeric (planting) in Mizoram.
- *Jhum* rice (flowering / grain formation), lowland rice (nursery preparation), maize (vegetative / flowering), brinjal, chilli (vegetative / flowering) and banana (fruiting / harvesting), okra (flowering / fruiting), groundnut, soybean, black gram, green gram (sowing) in Nagaland.
- *Aus* rice (tillering), upland *kharif* rice (tillering), *aman* rice (nursery preparation), groundnut (sowing), arhar (vegetative), maize (tasseling / silking), cucurbits (flowering / fruiting), okra (flowering / fruiting), summer vegetables like ridge gourd, bitter gourd, sweet gourd etc. (flowering / fruiting) in Tripura.

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

- Sugarcane (vegetative), fodder crops like sorghum, bajra, maize, meth, kalai, boda and dinanath grass (sowing), *kharif* rice (nursery sowing), *kharif* maize, *kharif* arhar, til, sunflower, groundnut, castor (sowing), bhindi, brinjal (sowing) in Bihar.
- Turmeric and ginger (planting), upland rice (sowing), maize, arhar, groundnut, rice, urad, jowar and soybean (sowing), *kharif* vegetables like okra, beans, French bean, tomato, cauliflower, cabbage etc. (sowing) in Jharkhand.
- Sugarcane (grand growth), banana (vegetative), jute (vegetative), maize, groundnut, arhar, ragi, cotton, direct seeded rice, pulses, sunflower (sowing), transplanted *kharif* rice (nursery sowing), ginger and turmeric (planting), onion (nursery sowing), *kharif* vegetables like okra, French bean, tomato, cauliflower, cabbage etc. (sowing) and fruit crops (planting) in Orissa.
- *Aus* rice (tillering), *aman* rice (nursery sowing), jute (vegetative), Guava, mango, litchi (harvesting), cauliflower (seedling), Marigold (seedling), okra and cucurbits (sowing) in West Bengal.
- Ginger (germination / early vegetative), orange (transplanting), large cardamom (vegetative / primary flowering / secondary flowering), vegetables (vegetative), rice (transplanting) in Sikkim.

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

- Vegetables (bhindi, cucurbits), peas (sowing / germination), potato (planting / sprouting), mirch, brinjal (nursery sowing/ transplanting), cucurbits viz. cucumber, summer squash, khira, bitter gourd, bottle gourd (nursery sowing/transplanting), tur, Shimla mirch, and tomato (transplanting / seedling), apple and other temperate fruits (vegetative), radish, arbi, amaranthus, turmeric, maize, dhaincha, chari, bajra, barley, red and white clover, bell pepper, garlic, ginger, coriander, knolkhol, cabbage, cauliflower, lettuce (sowing / planting / germination), soybean (sowing), rice (nursery sowing) in Himachal Pradesh.
- Rice (Nursery sowing), late onion (vegetative), chilli, tomato, brinjal, spinach, tomato and cucurbits (vegetative and fruiting), French bean, cluster bean, summer radish, summer green gram (vegetative and fruiting), ladies finger (fruiting / maturity / harvesting), guar, maize, bajra, cluster bean as fodder crops (sowing), pigeon pea, cotton (sowing) in Delhi.
- Chilli, capsicum, cauliflower, broccolli (vegetative), sugarcane (planting), papaya (planting), sunflower (germination), Chaittee dhan, maize, lobia, sunhemp, cowpea, jowar for green fodder (vegetative), garlic, cucurbits, okra(seedling), French bean, maize (seedling), rice (Nursery sowing / direct sowing / early transplanting), summer fodder (maize + cowpea + jowar) (vegetative), maize (sowing / emergence / vegetative),

turnip, cruciferous crop (viz. cabbage, cauliflower, knolkhol, kale, broccoli), radish, carrot, beet root, coriander and fenugreek (sowing), leafy vegetables like celery, Parsley and Leek, solanaceous crops viz. tomato, onion, brinjal and chilli, capsicum (nursery sowing/transplanting), turnips, knolkhol, lettuce, kale, chinese cabbage, broccoli, summer squash and radish (harvesting in Leh), Horticultural crops (various stages) viz. [peach, plum & mango (flowering/fruited), ber, orange & guava (fruiting)], *kharif* pulses, radish, carrot, turnip, spinach, beans, methi and cabbage(sowing), brinjal, Knolkhol, chillies, cabbage, cauliflower (transplanting) in Jammu & Kashmir.

- Rice(transplanting), finger millets (sowing), groundnut, sorghum, millets, pigeon pea, urad, moong, soyabean, rajma, arhar, maize and ginger (land preparation/sowing) in Uttarakhand.
- Rice (land preparation / nursery sowing), sugarcane (vegetative growth), sunflower, fodder maize, lobia, (sowing / germination), Sanai, Dhaincha (sowing / early vegetative), summer sugarcane (tillering), cotton, soyabean and urd (sowing), sunflower, jowar, bajra, maize, arhar, (sowing), vegetables [cucumber, pumpkin, tomato, brinjal, cabbage, lady's finger, chilly](sowing) in Uttar Pradesh.
- Rice (Nursery sowing / transplanting), spring sugarcane (sprouting / tillering), radish (sowing), carrot, turnip, cauliflower (transplanting / vegetative), tomato, sunflower (sowing), cotton (sowing / early vegetative), okra, chilli, brinjal (sowing / transplanting) in Punjab.
- Rice (Nursery sowing / transplanting), Sugarcane (spring season) (early vegetative), barseem (vegetative / last cut), fodder ((maize + cowpeas) (vegetative)), moong, mash, pigeon pea (vegetative), cauliflower, cabbage, carrot, potato (transplanting), radish, cotton (sowing), turnip (sowing) in Haryana.
- Cauliflower, cabbage, onion (transplanting / germination), sugarcane (new planting), cotton (Desi kapas, B.T. kapas, Narma kapas, American Cotton) (land preparation / sowing), pearl millet, jowar and bajra mixed with guar, Sudan grass, oats, maize, sorghum etc. for green fodder (vegetative), mirch, simla mirch, guar, vegetable (tinda, water melon, pumpkin, cucumber, coriander, bhendi, ridge gourd) (sowing), *kharif* onion (nursery planting), *kharif* groundnut, rice (land preparation/sowing) other *kharif* crops viz. pearl millet, sorghum, maize, green gram, cowpea (field preparation / sowing) in Rajasthan.

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

- Sugarcane (early vegetative), paddy (nursery sowing/ transplanting), maize (sowing), arecanut (flowering/maturity/ new transplanting),vegetables (transplanting), coconut (flowering/maturity), turmeric, ginger, green gram, black gram, tur, cowpea, bajra, sorghum (sowing) horticultural crops (fruiting) in Karnataka.
- Sugarcane (April planting) (formative), rainfed sugarcane (planting), sesame, mesta and banana (vegetative), vegetables (fruiting), paddy (nursery sowing), maize (sowing/vegetative), castor (sowing), *kharif* groundnut (sowing), ragi (sowing) and early sown groundnut (vegetative) in Andhra Pradesh.
- Pepper (flowering/new planting), ginger (planting/vegetative), rubber (tapping), irrigated banana (harvesting/ planting), cardamom (nursery/planting), sugarcane (grand growth), vegetables (nursery sowing/planting/seedling), *virippu* paddy (transplanting), cashew, coconut (new planting) in Kerala.
- Kuruvai rice (transplanting), rainfed groundnut (sowing), paddy (tillering), cotton (vegetative/flowering/maturity), irrigated maize (sowing),vegetables (flowering/fruited/harvest) in Tamil Nadu.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- Sugarcane new *adsali* (active tillering / elongation), sugarcane new pre-seasonal (active tillering), sugarcane new *suru* (early vegetative in Madhya Maharashtra and Marathwada), *kharif* rice (seedling in Konkan, Kolhapur, Nashik, Pune division and germination / early seedlings in East Vidarbha), cotton (sowing / germination in Marathwada and Vidarbha), soybean (sowing / germination in Kolhapur division and sowing in Marathwada and Vidarbha), groundnut (sowing / germination in Kolhapur division and sowing in other divisions) in Maharashtra.
- Cotton (sowing / germination / seedling), groundnut (sowing / germination), *kharif* rice (nursery sowing / seedling), pulses (sowing), sugarcane (vegetative / elongation), vegetables (nursery sowing / seedling), green gram, black gram (sowing) in Gujarat.

CENTRAL INDIA [M.P., CHHATTISGARH]

- Rice (nursery sowing), maize, jowar, Arhar and soyabean (sowing) summer vegetables (fruiting), *kharif* vegetables i.e. tomato, brinjal, chilli etc (nursery sowing), fodder crops (sowing), onion (nursery sowing) in Madhya Pradesh.
- Sugarcane (planting/vegetative), groundnut (pod filling), sesame (late vegetative), ginger, turmeric, papaya, mango and guava (vegetative), onion (planting), vegetables (land preparation / sowing / vegetative), millet (sowing), tapioca, ginger, colocasia, discorea, elephant foot yam (planting) in Chhattisgarh.

Annexure II
List of Varieties

Assam

Sali rice: Ranjit, Bahadur, Peoli, Moniram, Pankaj, Kushal, Masuri, Monohar (**for typical lowland rice area**), Satya and Basundhara (**for medium lowland area**).

Pigeon pea : T-21.

kharif sesame : Gauri, Madhabi, ST 1683, Punjab Til No.1

Meghalaya

Soyabean: Clark-63, Bragg, Hill, Punjab-1, Hardee, Lee

Banana: Cheni Champa, MalBhog, Jahaji, Kaskol, Kaitkhun , Cavaendish.

Sali rice : RCPL-1-412, Bhalum, Shah Sarang

Mizoram

Rice : Buhsakei, Bhusanghar, Biahzin, Khairawal, Wonder Rice, IR 64, Ranjeet, PHB-71, IR 50, RCM-9

Manipur

Soybean : JS 335.

Groundnut : ICGS-76.

Tripura

Aman rice :Swarna Masuri, Naveen, Puja, Krishnahamsa.

Okra: Utkal Gourav, Arka Anamika, Varsha Uphar, Parvani Kranti and all available hybrid varieties.

Ginger: Suprava, Suruchi and Suravi.

Kharif rice:

Early maturing varieties: Parijat, Khandagiri, Vandana, Jogesh, Siddant.

Medium maturing varieties: Pratikshya, Manaswini, Tapaswini MAS, Konark, Surendra, Lalata, Kharavela, Naveen, Surendra, MTU-1001, MTU1010, Abhisek.

Late maturing varieties: CR-1009, CR-1018, Ranidhan, Mrinalini, Swarna, RGL-2837, Ketakijoha, Moti, Padmini, Kanchana, Mahanadi, Jagabandhu.

For flash flood areas: Swarna Sub-1, Barsadhan.

Hybrid varieties: CRHR-32, Ajay, Rajalaxmi, BS6444G, JKRH-401, ARIZE 6444G, JKRH-3333.

Maize: Navjot, Shakti, Decan-107.

Arhar:

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

Medium duration: Asha, Visakha.

Fruit Crops:

Mango: Banganpalli, Totapuri, Subarnarekha, Nilam, Langrah, Dasher, Amrapalli.

Banana: Kabuli, Robusta, Patakapura, Champa, Gaja bantala, Batisha bantala.

Guava: Allahabad Safed, Lucknow -49, Banarasi Seedless.

Papaya: Kurg Honeydew, Coimbatore-1 & 2, Pusa Delicious, Pusa Majesty.

Coconut: Eastcoast Tall, Westcoast Tall, Andaman, Lakhsadeep, Java, Fiji.

Pine apple: Que, Queen, Simachalan and Maricius.

Cashew nut: Vengrulla 1.4, BPP-4.

Jackfruit: Kadua, Khajra and Singapor.

Cotton: MCU-5 and Sabita.

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

Green gram: PDM-11 & 54, K-851, Blackgram-PU-19 & 30.

Groundnut: TMV-2, TAG 24, Smruti, Devi.

West Bengal

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

Coconut: Eastcoastal, Hazari.

Mango: Himsagar, Bombai, Langra, Mallica etc.

Guava: Safeda, L-49.

Banana: Mortoman, Chapa, Kathali, Singapuri.

Jharkhand

Ginger: Vardhaman, Nadia.

Turmeric: Rajendra, Sonia.

Okra: Pusa A-4, Prabhani Kranti, Arka Anamika, Versha Uphar & Hybrid varieties like Sonal and Sarika.

Maize: Birsa Makka-1, Birsa Makka-1, Sawan-1 (Hybrid), HQPM (Hybrid).

Arhar: Birsa Arhar-1, Narendra Arhar-1, Bahar, ICPH-2671.

Upland rice: Vandana, Birsa Vikas Dhan -109 & Birsa Vikas Dhan -110.

Medium land rice: Anjali, Sahbhagi, Naveen, Lalat, Birsamati, Sugandha, BR-10, Pro-Agro 6444, IR-36, IR-64 etc.

Low land rice: Swarna (MTU-7029), Rajshree, Sambha Mahsuri (BPT-5204), Birsa Dhan- 202, Birsamati, Pro-Agro 6444.

Bihar

Kharif Rice: Rajshree, Rajendra Sweta, Rajendra Mansuri, Swarna Sub -1, MTU1001, MTU1010, Satyam, Kishori, BPT-5204, MTU7029, Hybrid, Sita, Sahbhagi Dhan.

Kharif maize: Suwan, Deoki, Shaktiman 1, Shaktiman 2, Sunkar makka 3, Ganga 11, Rajendra Mahsuri, DHM-117.

Arhar: Bahar, Pusa 9, Narendra Arhar 1.

Himachal Pradesh :

Brinjal: Arka Nidhi, PPC

Shimla mirch: California wonder

Agetibhindi: P-8, Prabhnikranti, Arkaanamika,

Frenchbean: Contender

Pepper : Surjmukhi,

Rajmash: Triloki, Jwala, baspa Kailash

Raddish: japani white and early mino white,

Turnip: PTWG-1.

Cabbage: Himsona Cabbage Varun, Bahar, Bajrang, Green challenge.

Knolkhol : White Bina,

Cauliflower: Pride of India, Shweta, Madhuri, Himrani.

Peas: Angoori, PS1100/Azad1.

Cucumber : Kiyani seedless/243, Matgaura, Maliniseeded

Tomato : Naveen2000plus, Avtar, Solan hybrid 1 and 2,

Red capsicum : Natasha, Tanvi

Yellow capsicum : California wonder, bharat, solan sankar 1, Indira, Orivelle

Summer squash : Pusa Alankar Jacuni types.

Sarson : KBS3

Bhindi: P-8, Prabhini kranti, Arka anamika.

Soybean : Shivalik, Lee, Bragg and harit Soya.

Cowpeas : Himachal Lobia-1.

Jammu & Kashmir

Vegetable crops

Radish (var. Pusachetki, Japanese white & Pusareshmi), **carrot** (var. Pusakesar), **turnip** (var PTWG), **garlic** (var. local, large segmented), **spinach** (prickly seeded) and **methi** (P.E.B.K methi), **Cauliflower** (var. PusaDipali), **knoll khol** (White Vienna), **Broccoli** (Early green),

Bottle gourd (Pusa Summer Prolific Long, Punjab Komal, Punjab Round, Pusa Summer Prolific Round), **Sponge gourd** (Pusa Chikni, Pusa Supriya), **Ridge gourd** (Pusa Nasadar, Swaran Manjari, Pant Tori-I), **Bitter gourd** (Pusa Domousmi, Pusa Vishesh, Coimbatore Long, Pusa Hybrid- Kalyanpur Baramasi), **Cucumber** (Japanese Long, Straight Eight Poinsette), **Pumpkin** (Arka Suryamukhi, Arka Chandan), ginger (Local), **Knolkhol** (W. Vienna).

Brinjal : PPL, PPC, PPPR, **Chillies :** NP-46A, Pusa jawala

Beans : Contender, Pusa Parvati, Arka Komal

Field crops

Maize (unirrigated) : Super Composite (Mansar), C-6, Vijay, Him-123, Local Tall, [GS-2, Vijay, Mansar, C-5 and C-8 in mid to high altitude area (intermediate region)).

Rice (Irrigated): IET-1410, K-39, Ratna, PC-19, Jaya RR-8585, Basmati 370 and Ranbir Basmati, Hybrid: KRH-2, PHB-71, direct seeded rice crop (var. Jaya, RR-8585, PC-19, IET-1410 & Ratna)

Bhindi : Varsha Uphar, Pusa A-4 and Prabhani Kranti), **Pumpkin** (Arka Suryamukhi and Arka Chandan), **Bittergourd** (Pusa Domousami & Pusa Vishesh), **Bottlegourd** (Pusa Summer Prolific Long, Pusa Summer Prolific Round), **Spongegourd** (Pusa Chikni and Pusa Supriya)

Radish (var. Japanese white), Carrot (var. Nantes), Turnip (var. Purple Top White Globe), Spinach (var. All green), Beans (var. Contender, Pusa Parvati and Arka komal), Methi (var. Pusa Early Bunching and Kasuri methi). Knolkhol (White Vienna and Purple Vienna) and Cabbage (Golden Acre and Pride of India). Brinjal (Pusa Purple Long, Pusa Purple Cluster), Cauliflower (Pusa Snowball, Pusa Snowball K-I)

Rice (var. IET – 1410, K-39, Ratna, China-1039, PC-19, Basmati, Jaya and RR-8585)

Intermediate higher zone (K-39, K-448, Giza-14, K-78 and K-332), K-84, K-39.

Punjab & Haryana

Punjab : Paddy : PR 118, PR 116, PR 114, PR 113, PR 111, PR 115.

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

Onion: Agri Found Dark Red, N 53

Okra: Pusa Sawani , Punjab Padmini , Punjab 7 or 8.

Groundnut: SG 99 or M 522/SG 84

Radish: Pusa, chetki , Punjab Ageti

Maize: PMH 1, Prabhat , sweet corn , PMH 2, JH 3459, Kesri and Pearl Pop Corn.

Delhi

Paddy

Hybrid varieties: - K. R. H 2, PHB 71, Pant hybrid Dhan1, Narendra hybrid dhan 1, P R H 10, High yielding varieties- Pusa 44, Pant Dhan-4, Pant Dhan-10, Narendra Dhan-359, Pusa-834, Pusa basmati-1, Pusa improved basmati, Pusa sugandha-5, Pusa sugandha-4 (Pusa 1121), Ranvir basmati and Taravadi basmati.

Green gram: Pusa-9531, Pusa Visal, Pusa Vaisakhi, PDM-11, SML-32, Pusa Ratna, Samrat

Black gram : Pant Urd 19, Pant Urd 30, Pant Urd 35, PDU1.

Maize: African Tall

Cluster bean: Pusa Komal, Pusa Sukomal.

Radish: Pusa Chetki and R.R.W.T

Pigeon pea: Pusa-2001, Pusa-991 and Pusa-992.

Cotton: H-777, H-974, H-1098

Baby corn: HN-4

Uttarakhand

Rice : Saket-4, Govind, Narendra-80, Pant Dhan-6 & also the Scented Rice varieties like Pant Sugandh Dhan-15, Taravadi Basmati, Pusa Basmati-1, Pusa Basmati-1401, Type-3, Basmati-370 etc, VL-Dhan -154, Vivek Dhan -62, Vivek Dhan-65, VL Dhan-81, Vivek Dhan-82 or VL-Dhan-85, VL-163, 221, Vivek Dhan-154, Pusa-44, Jaya, Serju-52, NDR-359, Pant Dhan-4, PR-113, PR-114, Pant Dhan-18, Pant Dhan-19, Pant Sankar Dhan-1, Pant Sankar Dhan-3, Narendra Sankar Dhan-2 etc. in nursery.

Millets : long duration (105 to 110) VL- Mandua-124 and VL-149, short duration (95 to 100 days) varieties like VL- Mandua-204, Pant Mandua-3, PES-176, PES-110, VL- Mandua-146.

Groundnut: G-201, Kausal, JL-24.

Maize: Him-129, Navin, Sartaj, VL makka 16.

Urd: Pant urd-19, 30, 35,

Moong: Pant moong-2, 4, Narendra moong-1

Okra : VL Bhindi-1.

Sorghum grain : CSV-10, 13, 15, 16, 17 and 19. The main hybrid varieties of sorghum are CSH-09, 10, 13, 18 and 19.

Finger millets(Ragi): PRM-1, PRM-2, VL-149.

Soybean: RS-1, PS-1092. Pant Soybean-1024, Pant Soybean-1042, Pant Soybean-1092, PK-262, PK-472, PK-416, PS-564, Soybean-1347 etc.

Uttar Pradesh

Sugarcane : KS-8436, KS-88230, KS-95255

Sunflower : K.P.S.H. 1, Divyamukhi, Jwalamukhi

Moong : Type-44, Pant Moong-1,2, Narendra Moong-1, PDM-11, MUM-2, Malviya Jagruti, Samrat, Pusa Vaishakhi K. , K-851, JM-721 etc.

Urad : Azad Urd-1,2, Bhokhar-1,2, Type-9, Uttara etc. JT-9, Pant U-19, Narendra ; Pant U-35

Arhar : U.P.A.S.-120 and T 21.

Rajasthan

Kharif paddy : P.R.106, B.K.190, Mahi Sugandha (Basmati), Ratna, B.K.79, Jaya Basmati 370, Tarauri, Basmati, P.H.B.-71, Improved Pusa Basmati, Pusa Sugandha-4, 5.

Kharif onion : N-53 & Agrifound dark red

Kharif groundnut : RG-382, R.S.-1, M-13, RG-141, TG 37-A & Girnar-2, J – 38, TG – 37 – A, Pratap mungphali – 1, Pratap mungphali – 2, etc. are improved varieties

Guar : R.G.S- 936, R.G.S- 986, R.G.S- 1002, R.G.S- 1017, H.G- 365, H.G 563, H.G 2 & 20. R.G.C. 1066 (Lathi), R.G.S. 112(Surya Gwar)A, R.G.C.-936A, R.G.C.-1002A, R.G.C.-1003A, R.G.C.-1017A, R.G.C.-1031_(Gwar Kanti)A, R.G.C.-1038(Gwar Karan)A, R.G.C.-1055(Gwar Uday)A, R.G.C.-1066(Gwar Lathi)

Pearl millet: Composite: Raj-171, **Hybrid:** RHB-121, HHB-67 (Improved), RHB-173, RHB-177

Sorghum: CSV-15 (105-110 days), CSV-23 (110-115 days), Pratap Chari-1080 (105-120 days)

Maize: Mahi Kanchan (75-80 days) & Pratap Makka-5 (85-95 days), RMG-62, RMG-268. RMG-492 & RMG-344, SML-668 are improved varieties of green gram. FS-68, RC-19 and RC-101 are improved varieties of cowpea.

Him – 129, Aravali Makka, PEHM-1, PEHM- 2, Pratap Makka-1, Pratap Makka-3, etc.

Improved varieties of bottle guard are Pusa Naveen, Arka Bahar for pumpkin - Pusa Vishwas, Arka Chandan, Pusa Alankar, Arka Suryamukhi for bitter guard - Arka Harit Pusa Vishesh, Priya and for round gourd- Arka tinda, Bikaneri green, Punjab-48.

Bajra : Raj 171, H.H.B. 67 High yielding varieties : R.H.B.-177, H.H.B. 67-2, I.C.T.P.-8203, R.H.B.-121, R.H.B.-173, R.H.B.-154, G.H.B.-538, H.H.B.-67 (improved).

Til : R.T. 46

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

Improved varieties : RMG-62, RMG-268. RMG-492 & RMG-344, SML-668

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

Moth bean: R.M.O.-40

Karnataka

Pigeon pea: Medium duration varieties like WRP-1, TS -3 R, and Maruti (for wilt prone areas) **Short Duration** : ICPL-87(Pragati), Selection-31(Zone 2 irrigated areas), GCS-11-39 (Zone-2)

Bajra: WCC-75, MH-179, ICTP-8203(@5Kg/Ha)

Groundnut: R-8808, R-9251, S-220(Spreading type)

Cotton: DCH-32, DHH-11, NHH-44 and Bt Cotton etc.

Castor: 48-1, GCH-4

Lowland paddy: Intan, Abhilash, I.R.-57773 or basmathi variety like I.E.T 13549. Upland paddy: Amrut or Prasanna

Gujarat:

Hybrid cotton: G. Cot. 4, 6, 8, 10.

Cotton: Digvijay, Sanjay (CJ-73), Gujarat Cotton-10, Gujarat Cotton-11.

Rice: GR-101, 102, 103, 104, Masuri, Narmada, IR – 28.

GR-3, 4, 6, 7 and 12 (early maturing varieties).

GR-11, Jaya, IR – 22, Gurjari, Dandi (mid late maturing varieties).

Maize: Gujarat Maize-4, Ganga Safed-2, Farm Sameri, Ganga-11.

Groundnut: GG 2, GG-5, TG-26, TPG-41, TAG 37 for bunch and GG-20 for semi spreading type.

Sesamum: GT-2 or GT-3.

Bajra: GHB-558, 577, 538, 719, 732, 744, 528, 316, 183.

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

Black gram: T-9, GU-1.

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

Pigeon pea: GT-1, GT-100, GT-101, T-15-15, BDN-2, IPCL_87-Pusa Ageti, GTH-1.

Tobacco: Anand 119, Anand 2, GT 5, GT 9, GTH 1 and ABT 10.

Castor: GCH -6, GC -3, GAUCH -1.

Maharashtra:

Jowar:

Hybrid variety: CSH-5, CSH-9, 13, 14, 16, 17, 18, 21, 23 and SPH 1567.

Improved variety: SPV-462, CSV-13, 15, 17, 20, 23 and PVK-801.

Bajra:

Hybrid variety: Shraddha, Saburi, Phule Shanti.

Improved variety: ICTP 8203, ICMV – 155.

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

Sunflower: EC-68414, SS-56 and Bhanu for Madhya Maharashtra and LSF-8 and LS-11 for Marathwada.

Soyabean: JS-335, Phule Kalyani (DS-228), PK 1029, MACS 450 for Madhya Maharashtra and MASU-47, JS-335 and MAUS-71 for Marathwada.

Rice: PKVHMT, PKV Khamang, Sindewahi 2001, Sindewahi-5, Sindewahi-75 for nursery swing in East Vidarbha and Ambika, Prabhavati (Parbhani-1), Sugandha, Parbhani Avishkar for drill sowing in Marathwada.

Black gram: BDU-1, TAU-1 for Marathwada.

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

Kharif Cotton: AKA-5, AKA-7, AKA-8, American improved variety – AKH-081, PKV-Rajat, AKH- 8828 for Central Vidarbha Zone.

Madhya Pradesh

Paddy: 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

Chattisgarh

Millet: High Yielding : PR 202, HR 374, VR 708, RAU 08, GPU 45, VC 149 and for kodo millet GPUK-3, RVK-155 and for Kutki JK08.

Maize: Proagro-4640, 4212, Pusa Hybrid -42, MH-10, MH-11, Navjyot, HM-9.

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

Soybean: JS 335, Indira Soya-09, JS 93-05.

Kerala

Ginger: Wayanad local, Rio-De Janero, Varada, Mahima

Turmeric: Suguna, Sobha, Suvarna, Kanthi, Sona

Tamil Nadu

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

Annexure III

Contingency plan for Andhra Pradesh

Rice

- Take up puddling operations only after receiving cumulative rainfall of 200-250 mm.
- Avoid cultivation of rice crop under bore wells
- There are many new rice establishment techniques available for rice cultivation. If sufficient rainfall inflows are received in to tanks and reservoirs due to improved rainfall situation even by August 15th farmers still can go for nursery sowings with short duration varieties and establish the rice crop using Mechanized System of Rice Intensification (MSRI) method or direct seeding with sprouted seed under puddled conditions using drum seeder or by way of broad casting.

Nursery management

a) Already Sown nurseries

- Do not apply any fertilizers to avoid excess growth till sufficient rains are received for puddling
- In case of severe yellowing apply minimum dose of Urea (1 kg /5 cents)
- In view of the dry weather conditions incidence of thrips may occur, to control spray Fipronyl @ 2ml /l .
- Observe the nursery regularly for brown spot incidence and spray carbendazim @ 1g/l if noticed

b) New nurseries

- Do not go for sowings of long duration varieties.
- Framers need not be panicked with the current situation as they can take up nursery sowings with medium duration varieties up to July 15th and with short duration varieties up to July 31
- Raise dry nurseries on receipt of soaking rain or irrigated dry nurseries wherever irrigation facilities are available and keep ready in anticipation of improved rainfall situation.
- Spray pendimethalin 6 ml/l as pre emergence to control weeds in dry and irrigated dry nurseries

Cotton

- Take up sowing with suitable cotton hybrids wherever sufficient rainfall is received (60-70 mm cumulative)
- Sowings should be completed by 20th July in Telangana and by 31st July in Rayalaseema
- In case of delayed sowings , increase the plant population by adopting closer spacing (90 x 60 cm / 90 x 45 cm)
- Raise 10% of the seedling in polythene bags for gap filling to maintain the optimum plant population
- Wherever sowings have been completed, gap filling must be invariably taken up to maintain the optimum plant population.

Groundnut

- Keep the seed and fertilizers ready for taking up sowing of groundnut in Rayalaseema after receiving cumulative rainfall of 40-50 mm duly treating the seed with Tebuconazole 2% DS (Raxil) @ 1 g per kg of seed.
- Single super phosphate should be applied instead of DAP to provide sulphur and calcium for the crop
- Follow inter cropping of groundnut+ redgram at 7:1 / 11:1 ratio

Maize

- Take up sowings of maize/ Maize + redgram 2: 1 ratio by 15th July in Telangana region after receiving cumulative rainfall of 60-70 mm

- To control stem borer incidence spray monocrotophos 1.6 ml/l or Carboryl 2g/l of water
- In case of late sowings after July 15th, go for short duration varieties.

Soybean and Redgram

- Complete sowings of Soybean by July 15th in Telangana region
- Redgram as a sole crop can be taken up till July 31st

Bajra

- Sowings of Bajra crop can be taken up till July 31st

Vegetables and fruits

- After receiving soaking rains
 - Go for sowings of Okra, cluster bean and Dolichos bean (bush type) if soil moisture is adequate
 - Transplanting of brinjal aged seedlings (up to 45 days) can be taken up.
 - Tomato transplanting can also be taken up if nursery is available, but avoid planting aged nurseries in tomato
- Fertilization should be taken up in mango after removal of dead wood and pruning criss cross branches to get new flush
- For guava orchards selective pruning should be taken up to rejuvenate the old orchards and fertilization should be taken up afterwards.

Annexure IV

Contour maps for Relative Humidity, Cloud Amount and Wind speed for the week ending on 04.07.2012

