

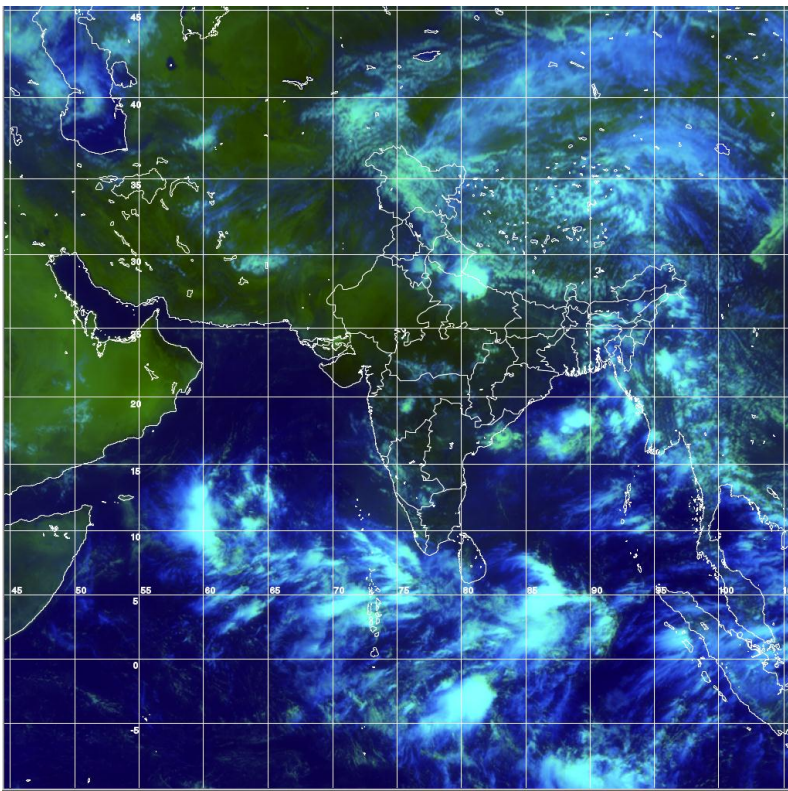


National Agromet Advisory Bulletin

Thursday, 26th May, 2011

(For the period 26th to 30th May, 2011)

Satellite image 0600 UTC Dated
27th May, 2011



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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

Executive Summary

Conditions are favourable for setting in of southwest monsoon over south Andaman sea during next 48 hours.

As fairly wide spread rain is likely to occur in northeastern States, Sub Himalayan West Bengal and Sikkim, Gangetic West Bengal, Jammu & Kashmir, South Interior Karnataka, Coastal Karnataka and Kerala, farmers are advised to postpone irrigation, intercultural operation and application of fertilizers and plant protection measures to the crops in these States. Undertake nursery sowing for *virippu* rice in Kerala, nursery preparation of *aus* rice in West Bengal and sowing of rice in Tripura as fairly wide spread is expected during next three days.

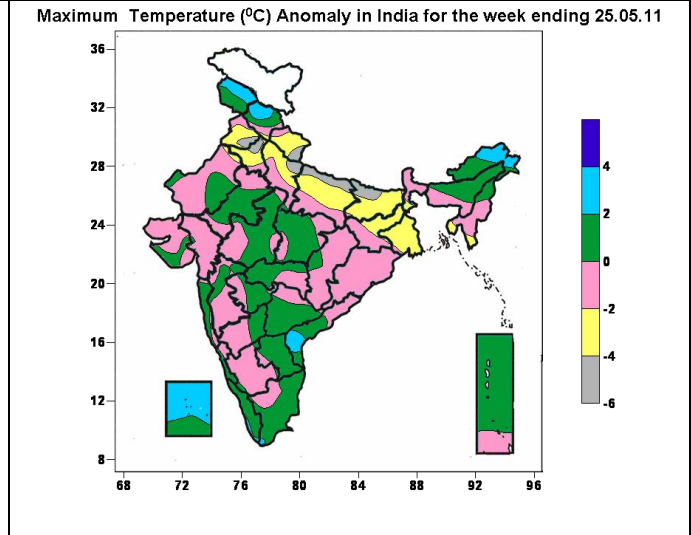
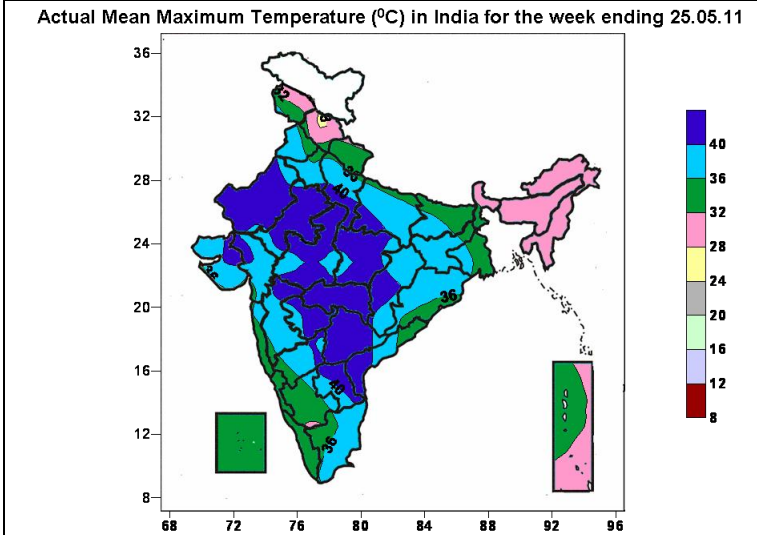
Postpone irrigation in Bihar and Orissa as there was rainfall in most of the districts during last week. Farmers are advised to provide support to the standing crops to avoid lodging and store the harvested crops at safer places in view of likely occurrence of severe thunder squalls at some places over Gangetic West Bengal during next 48 hours.

Due to dry weather conditions, vegetables crops, fruit and flower crops in Rajasthan face moisture stress conditions. Farmers are advised to apply mulching and provide light and frequent irrigation to the crops.

Farmers are advised to undertake sowing of French bean, cucurbitaceous crops like cucumber, pumpkin, bottle guard, better guard, pea, potato, rajmash and transplanting of tomato, cabbage, cauliflower, chilli, capsicum and brinjal in Himachal Pradesh, sowing of rice in the nursery, pigeon pea, cotton, baby corn in Jammu & Kashmir, sowing of turmeric and ginger in Chhattisgarh, planting of banana in Kerala and sowing of Bt cotton in Maharashtra.

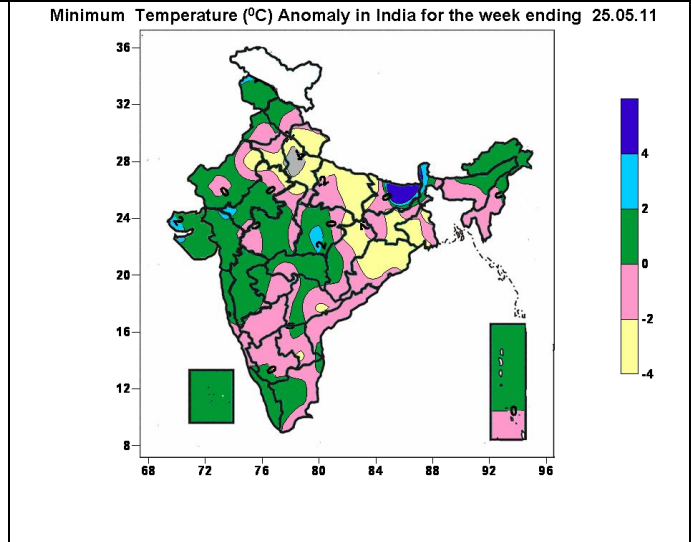
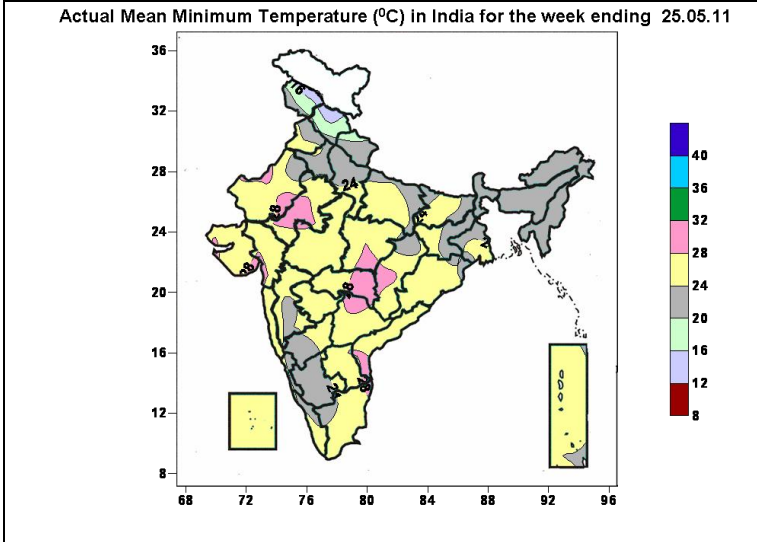
Due to high temperature conditions, there are incidences of leaf curl and mosaic in chillies in Rajasthan, blast in rice in Tamil Nadu, white fly and mites in vegetables in Andhra Pradesh, wilt in tomato in Karnataka, leaf rust in coffee in Kerala and fruit and shoot borer in brinjal in Orissa. Farmers are advised to undertake appropriate plant protection measures to control the pests and diseases.

Contour maps (Maximum, Minimum temp. and anomalies) for the week ending 25.05.2011



Actual Mean Maximum temperature ranged above 40°C over most parts of Rajasthan, Madhya Pradesh, Marathwada, Vidarbha, Andhra Pradesh, some parts of Haryana, Uttar Pradesh, Chattisgarh, Madhya Maharashtra North & South Interior Karnataka, 32 to 36°C over most parts of Uttarakhand, Bihar, Gangetic West Bengal, Kerala, Coastal & South Interior Karnataka, Konkan & Goa, Lakshadweep Islands, some parts of Punjab, Haryana, Uttar Pradesh, Bihar, Jharkhand, Sub-Himalayan West Bengal, Orissa, Costal Andhra Pradesh, Tamil Nadu, North Interior Karnataka, Madhya Maharashtra, Gujarat, Andaman & Nicobar Islands, 28 to 32°C over most parts of Himachal Pradesh, Sikkim, Northeast India, some parts of Jammu & Kashmir, Sub-Himalayan West Bengal, South Interior Karnataka, Andaman & Nicobar Islands, 24 to 28°C over some parts of Himachal Pradesh, 36°C to 38°C over remaining parts of the country.

Actual Mean Maximum temperature anomaly between 2 to 4°C over most parts of Lakshadweep Islands, some parts of Jammu & Kashmir, Himachal Pradesh, Arunachal Pradesh, Coastal Andhra Pradesh, -2 to 0°C over most parts of West Rajasthan, Sub_Himalayan West Bengal & Sikkim, Manipur, Mizoram, Orissa, Chattisgarh, Karnataka, Madhya Maharashtra, Gujarat, Saurashtra & Kutch, some parts of Himachal Pradesh, Uttarakhand, Uttar Pradesh, Assam & Meghalaya, Jharkhand, Tripura, Gangetic West Bengal, Andhra Pradesh, Tamil Nadu, Marathwada, Konkan, Vidarbha, Madhya Pradesh, -4 to -2°C over most parts of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, Gangetic West Bengal, some parts of Punjab, Haryana, Delhi, West Rajasthan, Mizoram, Tripura, 0 to 2°C over remaining parts of the country.



Actual Mean Minimum Temperature ranged between 28°C and above over most parts of Rajasthan, East Madhya Pradesh, some parts of Haryana, East Uttar Pradesh, Bihar, Jharkhand, Chattisgarh, Vidarbha, Telengana, Rayalaseema, West Madhya Pradesh, 20 to 24°C over most parts of Uttarakhand, Sub-Himalayan West Bengal, North East India, Coastal & South Interior Karnataka, some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, North Interior Karnataka, Kerala, Tamil Nadu, Madhya Maharashtra, Andaman & Nicobar Islands, 16 to

Minimum Temperature anomaly ranged between 4°C and above over some parts of East Madhya Pradesh, 2 to 4°C over most parts of Rajasthan, East Madhya Pradesh, some parts of Punjab, Haryana, East Uttar Pradesh, Bihar, Jharkhand, Arunachal Pradesh, Assam, Chhattisgarh, -2 to 0°C over most parts of West Bengal & Sikkim, Orissa, Chattisgarh, Andhra Pradesh, Karnataka, Vidarbha, Lakshadweep, some parts of East Jammu & Kashmir, East Uttar Pradesh, East Rajasthan, Bihar,

20⁰C over most parts Jammu & Kashmir, Himachal Pradesh, Sikkim, 12 to 16⁰C over some parts of Jammu & Kashmir, Himachal Pradesh, 24 to 28⁰C over remaining parts of the Country.

Jharkhand, Madhya Maharashtra, Marathwada, Madhya Pradesh, Gujarat, Tamil Nadu, 0 to 2 ⁰C over remaining parts of the Country.

Distribution of rainfall (% departure from normal) for the districts of Arunachal Pradesh, Assam, Punjab, Haryana, Uttarakhand, East Uttar Pradesh, Bihar, Orissa, West Bengal, Tamil Nadu, Coastal Andhra Pradesh and South Interior Karnataka during last week.

State/Districts	Actual	25.05.11
Arunachal Pradesh		
Changlang	37.5	-46
East Kameng	6.9	-83
East Siang	173.5	137
Lohit	55.3	-19
Lower Subansiri	27.2	-44
Papumpara	65.5	43
Tawang	18.6	-75
Tirap	15.0	-78
Upper Siang	90.8	3
Upper Subansiri	47.4	5
West Kameng	88.5	17
West Siang	13.5	-66
Assam		
Barpeta	101.7	26
Bongaigaon	89.8	-8
Cachar	229.7	209
Darrang	**	**
Dhubri	115.7	30
Dibrugarh	43.2	-23
East Garo Hills	183.0	237
East Khasi Hills	253.0	76
Goalpara	126.6	55
Golghat	104.4	157
Hailakandi	120.0	49
Jaintia Hills	**	**
Jorhat	73.6	28
Kamrup	56.4	2
Karbi Analog	11.6	-68
Karimganj	89.2	-33
Kokrajhar	112.3	8
Lakhimpur	93.9	16
Morigaon	98.4	167
N.C.Hills	140.2	137
Nowgong	46.1	50
Nalbari	70.4	-2
Sonitpur	59.9	8
Sibsagar	45.5	9
Tinsukia	90.6	55
Punjab		
Amritsar	0.0	-100
Bhatinda	6.0	106
Faridkot	0.0	-100
Fatehgarh Sahib	35.0	846
Ferozpur	8.0	220
Gurdaspur	2.8	-15
Hoshiarpur	4.7	11
Jalandhar	1.6	-64

Kapurthala	0.0	-100
Ludhiana	13.0	216
Moga	3.3	33
Muktesar	0.0	-100
Nawashahar	72.5	1971
Patiala	2.9	-36
Ropar	6.0	67
Sangrur	1.0	-79
Haryana		
Ambala	24.2	304
Bhiwani	11.3	303
Chandigarh	8.9	-2
Faridabad	0.0	-100
Fatehabad	8.2	257
Gurgaon	7.7	92
Hissar	21.9	682
Jhajar	2.5	67
Jind	9.9	243
Katihah	3.8	70
Karnal	13.8	305
Kurukshetra	8.6	330
Mahendragarh	12.5	131
Panchkkula	9.2	33
Panipat	4.5	114
Rewari	28.8	1052
Rohtak	5.3	121
Sirsa	13.7	290
Sonepat	18.4	494
Yamunanagar	25.3	251
New Delhi	22.2	290
East Uttar Pradesh		
Allahabad	10.2	827
Ambedkar Nagar	6.0	94
Azamgarh	29.4	1735
Bahraich	34.4	616
Ballia	8.1	285
Balrampur	25.9	205
Banda	35.6	2443
Barabanki	12.3	414
Basti	13.2	140
Deoria	17.0	179
Faizabad	5.2	247
Farrukhabad	5.5	162
Fatehpur	1.5	12
Gazipur	0.0	-100
Gonda	23.0	557
Gorakhpur	43.4	689
Hardoi	7.0	178
Jaunpur	0.0	-100
Kanpur City	1.8	20
Kanpur Dehat	10.0	426
Kheri	25.2	312

Kushi nagar	12.5	60
Lucknow	0.8	-67
Maharajganj	14.5	24
Mau	8.0	220
Mirzapur	0.0	-100
Pratapgarh	25.6	1061
RaiBareilly	0.0	-100
Sant Ravidas Nagar	0.0	-100
Shrawasti	10.8	125
Sidharthnagar	32.0	272
Sitapur	8.8	267
Sonbhadra	4.8	127
Sultanpur	1.1	-62
Unnao	0.0	-100
Varanasi	5.3	556
West Uttar Pradesh		
Agra	6.2	113
Aligarh	11.1	271
Auraiya	13.5	487
Badaun	18.8	547
Baghpat	61.2	1649
Bareilly	9.3	159
Bijnor	20.4	386
Bulandsahar	9.3	201
Etah	4.5	88
Etawah	0.0	-100
Firozabad	2.1	-32
Ghaziabad	2.5	-22
Hamirpur	19.5	873
Jalaun	5.4	182
Jhansi	25.1	2408
Jotirba Phule Nagar	22.5	733
Lalitpur	7.0	678
Mahamaya Nagar	10.6	293
Mainpuri	0.0	-100
Mathura	4.0	82
Meerut	24.2	462
Moradabad	12.2	282
Muzzaffarnagar	33.2	906
Pilibhit	12.0	216
Rampur	8.4	61
Saharanpur	31.3	683
Shahjahanpur	9.7	289
UttaraKhand		
Almora	4.5	-52
Chamoli	31.4	138
Champawat	21.0	102
Dehradun	9.6	43
Garhwal Pauri	13.2	61
Garhwal Tehri	8.6	-41

Haridwar	18.3	531
Nainital	18.9	65
Pithorgarh	10.1	-36
Rudraprayag	14.7	-28
Udham Sing Nagar	18.3	161
Uttarkashi	22.5	27
Bihar		
Araria	60.8	85
Aurangabad	5.8	174
Begusarai	48.0	485
Bhabua	**	**
Bhagalpur	14.4	3
Bhojpur	**	**
Buxar	18.9	800
Darbhangha	53.7	313
East Champan	33.0	237
Gaya	2.8	0
Gopalganj	29.1	322
Jahanabad	18.0	329
Jamui	23.3	133
Kathihar	53.1	187
Khagadia	25.3	251
Kishanganj	48.4	17
Madhepura	18.2	0
Madhubani	90.2	514
Monghyar	42.8	293
Muzaffarpur	36.7	196
Nalanda	37.4	568
Patna	38.5	542
Purnea	88.7	298
Rohtas	23.4	444
Saharsha	47.8	285
Samstipur	60.6	397
Saran	62.3	844
Sitamarhi	**	**
Siwan	**	**
Supaul	48.3	290
Vaishali	35.4	421
West Champan	37.2	142
Orissa		
Angul	57.4	408
Balasore	75.4	234
Bargarh	16.7	390
Bhadrak	56.5	207
Bolangir	15.9	160
Boudh	36.1	201
Cuttack	69.5	460
Deogarh	15.7	142
Dhenkanal	80.4	538
Gajapati	43.8	119
Ganjam	60.4	331
Jagatsingpur	68.1	262
Jajpur	59.4	271
Jharsuguda	4.4	-23

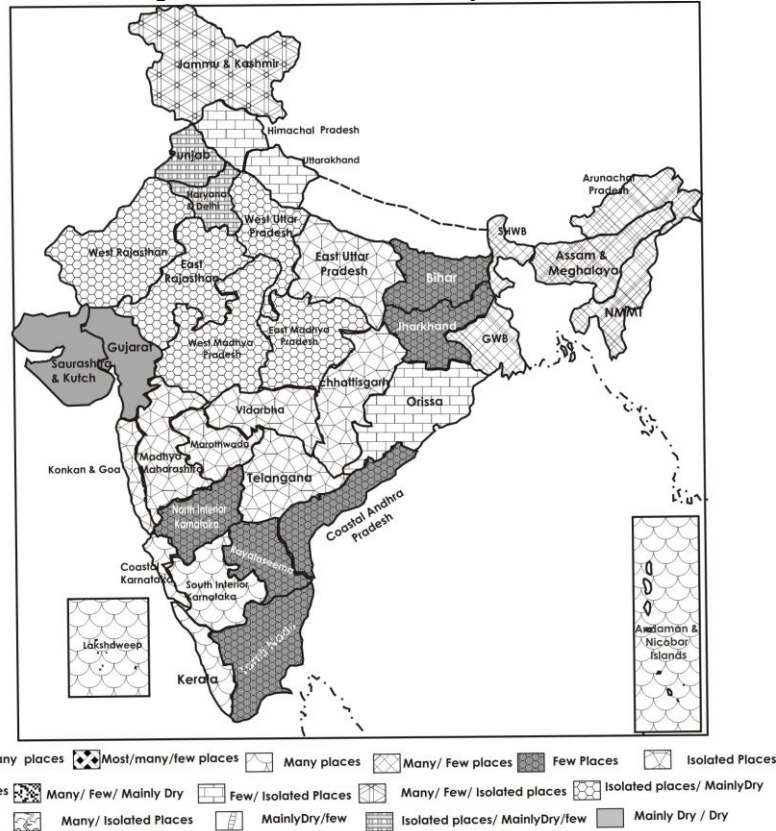
Kalahandi	14.2	129
Kandhamal	48.6	305
Kendrapara	95.7	491
Keonjhar	45.0	160
Khurda	91.8	546
Koraput	9.0	-45
Malkangiri	0.0	-100
Mayurbhanj	59.3	134
Nawapara	4.0	-9
Nawarangpur	9.3	-75
Nayagarh	62.1	389
Puri	101.6	1273
Rayagada	40.1	188
Sambalpur	29.0	346
Sonepur	14.2	95
Sundargarh	21.4	146
West Bengal		
GWB		
Bankura	65.4	436
Birbhum	45.4	193
Burdwan	47.2	143
Hooghly	57.0	103
Howrah	50.7	49
East Midnapore	27.2	11
Murshidabad	57.1	164
Nadia	23.2	-13
24 Pargana (N)	60.0	111
Purulia	34.1	173
24 Pargana (S)	28.6	20
West Midnapore	6.9	-69
SHWB		
Coochbehar	98.4	11
Darjeeling	86.1	33
Jalpaiguri	106.0	40
Malda	60.9	146
Dinajpur (N)	71.2	123
Dinajpur (S)	75.4	91
North Sikkim	83.1	-1
South Sikkim	30.7	-45
Karnataka		
South Interior Karnataka		
Bangalore Rural	13.8	-38
Bangalore Urban	39.4	55
Bellary	0.0	-100
Chamarajnar	51.8	52
Chickmagalur	7.4	-75
Chitradurga	4.5	-73
Davangere	0.0	-100
Hassan	24.4	4
Kodagu	1.5	-96
Kolar	33.9	74
Mandya	52.1	85
Mysore	42.1	27

Shimoga	0.0	-100
Tumkur	14.1	-26
Tamil Nadu		
Chennai	10.0	-28
Coimbatore	5.4	-69
Cuddalore	14.9	60
Dharmapuri	46.7	97
Dindigul	10.3	-48
Erode	24.2	29
Kanchipuram	22.0	107
Kanyakumari	28.8	-12
Karur	8.2	-32
Krishnagiri	25.5	3
Madurai	24.3	71
Nagapattinam	17.9	87
Namakkal	19.9	-5
Nilgiris	9.9	-68
Perambalur	3.0	-81
Puducherry	4.2	-29
Pudukottai	19.1	66
Ramanathapuram	5.9	-19
Salem	7.4	-66
Sivaganga	22.9	96
Thanjavur	6.3	-50
Theni	2.9	-79
Tirunelveli	1.7	-75
Tiruvallur	24.3	77
Tiruvannamalai	1.0	-94
Tiruvarur	7.1	-40
Toothukudi	1.1	-68
Trichy	2.8	-79
Vellore	11.5	-43
Villupuram	0.0	-100
Virudhunagar	1.0	-92
Andhra Pradesh		
Coastal Andhra Pradesh		
East Godavari	22.3	25
Guntur	1.0	-94
Krishna	2.1	-85
Nellore	11.1	-20
Prakasam	0.3	-98
Sirkakulam	52.0	277
Visakhapatnam	52.2	196
Vizianagram	43.1	112
West Godavari	1.6	-87

LEGEND

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

Weather Forecast (Valid upto 1430 hours of 29th May, 2011)



Major Feature of Weather Forecast upto 1430 hours IST of 29th May, 2011

- Scattered rain/thundershowers would occur over scattered over northeastern states and West Bengal & Sikkim during next 24 hrs and increase thereafter.
- Scattered rain/thundershowers would occur over rest east India and isolated over central India and west Maharashtra.
- Scattered rain/thundershowers would occur over western Himalayan region and isolated over plains of northwest India during next 48 hours and decrease thereafter.
- Fairly widespread rain/thundershowers would occur over Andaman & Nicobar Islands, Lakshadweep, south & coastal Karnataka and Kerala and scattered over rest peninsular India outside Telangana where it would be isolated. Intensity of rainfall would increase over Lakshadweep, south & coastal Karnataka and Kerala during next 3 days.

Weather Warning

- Severe thundersqualls at some places would occur over Gangetic West Bengal during next 48 hours.
- Isolated thundersqualls would occur over Himachal Pradesh, Uttarakhand, Punjab, Haryana, Delhi, Rajasthan, Uttar Pradesh, Bihar, Jharkhand and Orissa during next 48 hours.

Weather Outlook up to 1430 hours IST of 31st May, 2011

- Widespread rain/thundershowers would occur over extreme south peninsula and Andaman & Nicobar Islands.
- Fairly widespread rain/thundershowers would occur over northeastern states and adjoining east India.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Most of the districts of Bihar, Jharkhand, West Bengal and Sikkim received rain during last week. Most of the districts of Jharkhand received no significant rain during last week.
- **Rainfall Forecast:** Scattered rain / thundershowers would occur over West Bengal & Sikkim during next 24 hrs and increase thereafter. Scattered rain / thundershowers would occur over rest of the States of east India during the period. Severe thunder squalls at some places would occur over Gangetic West Bengal during next 48 hours. Isolated thunder squalls would occur over Bihar, Jharkhand and Orissa during next 48 hours.
- **Advisories:**
 - As scattered rain / thundershowers would occur over West Bengal & Sikkim during next 24 hrs and increase thereafter, farmers are advised to postpone irrigation, intercultural operation and plant protection measures to the standing crops. In view of likely occurrence of severe thunder squalls at some places over Gangetic West Bengal and isolated thunder squall in Bihar, Jharkhand and Orissa during next 48 hours, farmers are advised to provide support to the standing crops to avoid lodging and store the harvested crops at safer places.
 - As there was sufficient rain during last week in Bihar and Orissa and scattered rain is expected to occur, farmers are advised to postpone irrigation to the standing crops in these States. As there was no significant rain in Jharkhand during last week, farmers are advised to apply irrigation to the standing crops in these States.
 - In Orissa, the weather is optimum for planting of ginger, turmeric, papaya, marigold etc. and sowing of jute, vegetables like *okra*, bitter gourd, cluster bean, cow pea and ridge gourd and also sowing of mixed green fodder like fodder maize and cow pea. Also undertake harvesting of matured summer rice, groundnut and pulses.
 - Farmers in West Bengal are advised to undertake field preparation and sowing of jute, planting of ginger, turmeric and arum and nursery sowing of *aus* rice.
 - Farmers are advised to plant ginger, turmeric, elephant foot yam and sow the seeds of green manure crops like Dhaincha, Sanai in South Eastern Plateau Zone and Western Plateau Zone of Jharkhand and to sow maize, jowar and lobia for green fodder in Bihar.
 - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
 - Farmers of “Aila” affected areas of Coastal Saline Zone of West Bengal are advised to sow Dhaincha (seed rate 25 kg / ha), sun hemp (seed rate 60 kg / ha) or cowpea utilizing the soil moisture for green manuring purpose to increase the soil fertility.
 - Harvest by uprooting the matured plants of green gram in Coastal Saline Zone of West Bengal and transfer them to protected place for proper drying as soon as possible to avoid damage by predicted Thunderstorm.
 - There is possibility of attack of caterpillar in mango plants in Coastal Saline Zone of West Bengal causing damage by cutting leaves; spray carbaryl @ 2 g / litre of water or cartap hydrochloride @ 1 g / litre of water during afternoon hours.
 - Under prevailing weather situation, there is chance of the attack of weevil in jute in New Alluvial Zone of West Bengal; apply 2 ml Endosulphan per litre of water.
 - Due to high humidity and temperature, attack of stem rot in pointed-gourd may be prevalent in New Alluvial Zone of West Bengal. To control the attack of stem rot, apply Bavistin or Benlate (1 g per litre of water).
 - In pumpkin, ridge-gourd, pointed gourd and cucumber, there is a chance of attack of red pumpkin beetle under present weather condition in New Alluvial Zone of West Bengal. To control the pest apply Dimecron or Rogor (1 ml per litre of water).
 - Due to increase of temperature in New Alluvial Zone of West Bengal, mite attack may be seen in many flowers. Apply 1 ml Monocrotophos per litre of water and after seven days, 2 ml Kelthane per litre of water to control the attack.
 - Under this weather condition neck blast in rice may be found in Terai Zone of West Bengal; spray Bavistin @ 1 g per litre of water. Infestation of yellow vein mosaic in okra may also be observed

and the vector population and disease incidence may be reduced by application of 4 to 5 foliar sprays of either Dimethoate (0.05%) or Metasystox (0.02%) or Monocrotophos (0.05%) followed by 1 or 2 sprays of mineral oil (2%).

- In this weather condition post emergence damping off can be found in the jute field in Terai Zone of West Bengal; spray Carbendazim 12% + Mancozeb 64% (Saaf) @ 2 g / litre of water. In this weather condition cut worm may also be a problem. To manage cut worm wet the soil with chlorpyrifos @ 3 ml / litre of water at morning.
- Fruit and shoot borer in brinjal has been found in Khurda, Ganjam and Nayagarh districts of Orissa. To control it install Pheromone traps and spray 4 g Sevin WP or 2 ml Malathion in 1 litre water alternatively. Drying of fruits and stems of brinjal has also been found; spray 2 g Saaf or Sixer or Companion in 1 litre water.
- The leaves as well as plants of cucurbitaceous crops along with Bean, French bean, Brinjal, Bhindi etc. are drying primarily due to mites in Western Plateau Zone of Jharkhand. To control the mites, spray Dycofol @ 3 ml per litre of water or Omites / Maijister @ 2 ml per litre of water at the initial stage of attack at the interval of 1 week.
- In South Eastern Plateau Zone of Jharkhand, there is incidence of gundhi bug under prevailing weather condition. Apply 4% Endosulfun or 1.5% Quinalphos or Monocrotophos to control the insect. There is also chance of increase in egg laying of caseworm, hispa and brown plant hopper in rice due to increase in temperature. Farmers are advised to apply Prophenfos @ 1 ml or Endosulphan @ 1.5 ml or Monocrotophos @ 1 ml per litre of water. Incident on fruit borer has also been noticed in summer vegetables in this region; spray Heliokill, Heliside or Kug Fu @ 2 mm or Trizofos or Prophenfas @ 1 ml per litre of water.
- Apply plant protection measures in West Bengal & Sikkim after current spells of rain and on a non-rainy day in Orissa and Bihar.
- Stages of major crops are mentioned in Annexure I.
- **Animal Husbandry**
 - Due to occasional shower for last few days in Coastal Saline Zone of West Bengal there is a chance of fungal attack in poultry birds. To prevent it poultry litter should be rearranged by mixing lime in the litter. RD vaccine should be given immediately to the chicks which are 7 days old.
 - In case of dried ponds, renovation and ploughing should be done and dhaincha seeds @ 1-2 kg / bigha may be sown. In case of ponds filled with water, lime should be applied @ 40 kg / bigha / 3 ft depth. In nursery ponds, stocking of fish seeds @ 2-3 lakhs / bigha / 3ft depth may be done in Old Alluvial Zone of West Bengal.

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

- **Realised Rainfall:** Most of the districts of Arunachal Pradesh and Assam received rain during last week.
- **Rainfall Forecast:** Scattered rain / thundershowers would occur over the states of this region during next 24 hrs and increase thereafter.
- **Advisory:**
 - As scattered rain / thundershowers would occur over the states of this region during next 24 hrs and fairly widespread thereafter, farmers are advised to postpone irrigation, intercultural operation and application of fertilizer and plant protection measures to the crops.
 - In Assam, sowing of jute, summer vegetables and maize and planting of ginger, turmeric and papaya may be carried out. Farmers are also advised to undertake land preparation and collect seeds of suitable varieties for sowing for nursery sowing of *sali* rice.
 - Farmers are advised to sow *kharif* rice or *aus* rice and cucurbitaceous vegetables in Tripura.
 - Farmers in Manipur are advised to undertake planting of ginger and turmeric and sowing of cucurbitaceous vegetables.
 - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
 - In Arunachal Pradesh the portion of roots of the plants like French bean, black gram, green gram, tomato, chilli and *okra*, exposed due to heavy rains, should be earthened up.

- Farmers in Barak Valley Zone of Assam are advised not to harvest their *boro* rice in this week as there is a chance of heavy rain during this period which may cause post harvest loss. Farmers of this region are also advised to stop the second top dressing of N fertilizers to *ahu* rice during this period to avoid loss.
- Farmers in Barak Valley Zone of Assam are advised to harvest the matured fruits of ridge gourd, cucumber, ash gourd, sweet gourd etc. and also hand picking of the matured pods of green gram.
- In Mild Tropical Hill Zone of Mizoram, due to increased temperature and high relative humidity with occasional rainfall as well as stage of crops, conditions are favourable for the infestation of fruit fly in cucurbits; farmers are advised to cover developing fruits with paper after anthesis and pollination and collect and destroy affected fruits by dipping in hot water for managing the pest.
- In Mild Tropical Hill Zone of Mizoram, due to high relative humidity along with occasional rainfall, infestation of aphids is severe. Farmers are advised to spray Bordeaux mixture (1:1:100) in Khasi Mandarin.
- In Mild Tropical Hill Zone of Mizoram, due to high humidity with occasional rainfall, chance of incidence of pseudo stem weevil is more in banana. Farmers are advised to remove unwanted suckers, dried and infected leaves, sheath and petioles.
- As there are chances of occurrence of yellow vein mosaic virus (YVMV) in bhindi in Tripura, farmers are advised to apply Rogor @ 2 ml per liter of water to manage the attack.
- Apply plant protection measures after current spells of rain.
- Stages of major crops are mentioned in Annexure I.

Animal Husbandry:

- In Tripura and Mizoram, due to the weather change, some viral / bacterial diseases may outbreak in Poultry birds and cattle. Vaccination like FMD, Black Quarter and Hemorrhagic septicemia (HS) in cattle and Ranikhet in poultry may be undertaken. Keep sanitary conditions in poultry sheds and also keep the equipment clean. Provide balanced feed and fresh clean water to the cattle.
- In Nagaland, all the livestock owners are advised to carry out the deworming and vaccination programmes against infectious diseases, particularly “Foot and Mouth disease”, as the monsoon season is approaching.

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

- **Realised Rainfall:** Most of the districts of Haryana, Uttar Pradesh and Uttarakhand and few districts of Punjab, Himachal Pradesh received rainfall during last week.
- **Rainfall Forecast:** Fairly widespread rain/thundershowers is likely to occur over Jammu & Kashmir during next 24 hours and scattered rainfall is likely over plains of northwest India during next 48 hours and decrease thereafter with Isolated thundersqualls over Himachal Pradesh, Uttarakhand, Punjab, Haryana, Delhi, Rajasthan, Uttar Pradesh, during next 48 hours.
- **Advisory:**
 - As there was rainfall in most of the districts of Haryana, Uttar Pradesh and Uttarakhand during last week and rainfall is likely in Jammu & Kashmir during next 24 hours, postpone irrigation to the crops. There was no significant rainfall during last week in the remaining States and there are chances for no significant rainfall during next three days, farmers are advised to apply irrigation to standing crops.
 - As high temperature is prevailing in Rajasthan, to meet excess evaporative demand farmers are advised to apply light and frequent irrigation in summer crops, vegetables, horticultural plants and cover the tree sapling with thatching material to protect against high temperature. Farmers are advised to continue sowing of recommended varieties of cotton, nursery sowing of rice and undertake digging of onion.
 - Taking advantage of present weather conditions farmers in Delhi are advised to start preparation of nursery for sowing of rice.

- Present weather conditions are highly conducive for nursery sowing and field preparation for early cauliflower in Delhi. Taking advantage of weather farmers in Delhi are advised to undertake sowing of late varieties of cotton during this week.
- In view of forecasted dry and clear weather farmers in Delhi are advised to maintain optimum moisture level in cucurbitaceous crops by light and frequent irrigation. Light irrigation is also advised in chilli, brinjal, bitter gourd, spinach and tomato crop.
- In the Mid hill Sub-Tropical Sub-Humid Zone of Himachal Pradesh, farmers are advised to undertake sowing of French bean, cucurbitaceous crops like cucumber, pumpkin, bottle guard, better guard and transplanting of tomato, chilli, capsicum and brinjal. In high hills temperate dry zone sowing of pea, potato in Tod, Chandra and Miyad valley and sowing of rajmash, transplanting of cabbage, cauliflower and tomato may be done.
- Farmers in Punjab are advised to complete the sowing of rice nursery. Farmers in Haryana are advised to complete the sowing of cotton with certified seed.
- Farmers in Uttar Pradesh are advised to prepare the field for nursery sowing of rice, marking and digging of pits for plantation of new garden of all fruits viz. mango, guava, ber, Aonla, litchi, papaya and grapes. They are also advised to provide mulching for moong and urid crop to avoid excess evaporation and continue picking of matured pods of moong.
- Farmers in Bhabar and Tarai Zone of Uttarakhand are advised to prepare the field for nursery sowing of rice and finger millet.
- Weather is congenial for attack of fruit borer in litchi crop in Himachal Pradesh farmer are advised to spray cypermethrin 10EC@ i/ml per litre of water at 15 days interval.
- In Ajmer district of Rajasthan, Blight disease may attack tomato, brinjal & chilli crops due to continuous cloudy weather. Farmers are advised to spray Mancozeb @ 2 gm or copper oxychloride @ 3 gm or Ridomil MZ-2 gm per litre water.
- In Dausa district of Rajasthan, chilli crop is affected by leaf curl & mosaic disease. To check the spread of disease uproot & burn affected plants & spray Dimethoate 30EC @ 1.0 ml per litre water.
- **Stages of major crops are mentioned in Annexure I.**
- **Animal Husbandry**
 - In Rajasthan, farmers are advised to adopt adequate measures to protect animals from heat stroke. Keep them in cool & shade area and give them cold water for drinking. Do not bath them in midday.
 - In Haryana farmers are advised to protect animals from heat and provide balanced diet to animals.

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

- **Realised Rainfall:** Bangalore Urban, Chamarajnaragar, Mandya, Kolar and Mysore in South Interior Karnataka, Dharmapuri in Tamil Nadu, Srikakulam, Vishakapatnam and Vizianagram in Coastal Andhra Pradesh received good rainfall. No significant rainfall occurred in remaining parts of the region.
- **Rainfall Forecast:** Fairly widespread rain/thundershowers would occur over South & Coastal Karnataka and Kerala and isolated over rest peninsular India during next 48 hrs and increase thereafter. Conditions are favourable for setting in of southwest monsoon over south Andaman.
- **Advisories:**
 - Conditions are favourable for setting in of southwest monsoon over south Andaman sea during next 48 hours. Undertake nursery sowing for *virippu* rice in Kerala as there are chances for fairly wide spread rains during next three days.
 - As fairly wide spread rain is likely to occur in South Interior Karnataka, Coastal Karnataka and Kerala, farmers are advised to postpone irrigation, intercultural operation and application of

fertilizers and plant protection measures to the crops in these States. Apply irrigation in the remaining states, as there was no sufficient rainfall.

- Farmers in Scarce Rainfall Zone of Rayalaseema are advised to take up summer ploughing and arrange inputs for sowing of kharif groundnut, taking advantage of recently received and expected rains.
- Farmers in Eastern dry zone of Karnataka are advised not to provide irrigation and pesticide spray for horticultural crops, to take up fallow-ploughing, land preparation, channel preparation for good drainage system and staking for newly planted crops.
- Farmers in North Transition Zone of Karnataka are advised to take up ploughing in the areas where rainfall received and it should be taken up across the slope as it improves infiltration and conservation of rain water but also avoids soil erosion and further it checks the weeds.
- Farmers in High Altitude Zone of Kerala are advised to harvest the matured crops as early as possible, as there is possibility of light rains during this week.
- Fusarium wilt disease is noticed in tomato crop in Southern dry zone of Karnataka. To control spray carbendazim @ 1gm/ lt. of water.
- Rice blast incidence is observed in the paddy field in North Eastern Zone of Tamil Nadu. Farmers are advised to spray Propiconazole (Tilt) 2ml in one liter of water and drain the excess water in the field to improve the soil plant water relationship.
- Farmers in High Altitude Zone of Kerala are advised to undertake precautionary measures to control sigatoka leaf spot disease, leaf rust disease, azhukal and rhizome rot, since they may become severe due to increase in relative humidity
- High humidity and temperature may favour the incidence of Sigatoka disease in bananas in the Southern Zone of Kerala .To control cut and remove all the badly affected leaves in a plot in a single day and apply propiconazol 1ml / litre of water and copper oxy chloride 4 ml/ litre of water alternately at two weeks interval. Leaf rot is observed to be severe in coconut in certain parts of the district. Remove the rotten portions from the spear and two adjacent leaves. Pour 300ml of fungicidal solution (Hexaconazole 5EC-2ml or Mancozeb 3g in 300ml of water) at the base of the spear.
- **Animal Husbandry**
- Vaccinate before onset of monsoon the animals (cow, buffalow, bullock) against for Foot and mouth disease (FMD vaccination), BC vaccination against Black Quarter and also vaccinate cow, buffalow and bullock against Haemorrhagic Septcaemia. Vaccinate (ET vaccine) sheep and goats against Enterotoxemia before onset of monsoon

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised rainfall:** Mainly dry weather prevailed over the States of the region during the period.
- **Rainfall forecast:** Dry weather may prevail over Gujarat and isolated rain may occur over Maharashtra during the period.
- **Advisory:**
 - As weather was dry during last few weeks and dry weather is likely or isolated rain will occur during next few days over the States of the region, farmers are advised to apply irrigation to the standing crops.
 - As there is less possibility of rainfall, farmers in Konkan are advised to complete the harvesting of already matured summer rice and groundnut. After harvesting of summer rice and groundnut, plough the field and undertake the preparatory tillage for *kharif* season.
 - Farmers of other parts of Maharashtra are advised to continue harvesting of already matured summer bajra, groundnut, sunflower and maize under prevailing favourable weather. After harvesting of summer crop, plough the field and undertake the preparatory tillage for *kharif* season with the help of pre monsoon showers.

- As prevailing weather is favourable, farmers in Western Maharashtra are advised to undertake sowing of BT cotton at 90X90 or 120X60 cm distance after ascertaining optimum soil moisture in the field. Apply last dose of fertilizer to *suru* sugarcane followed by earthing up.
- Farmers in Maharashtra are advised to protect the newly grafted and newly planted fruit crops from sun burn by erecting temporary shade. For effective utilization of available water, drip irrigation system should be adopted for the fruit crops during summer.
- Taking the advantage of dry weather, farmers in Gujarat are advised to harvest summer crops and undertake deep ploughing in harvested fields and prepare land for *kharif* crops.
- As dry weather likely to prevail, farmers in Gujarat state are advised to apply third dose of nitrogen @ 87 kg / ha to sugarcane at evening time assuring that sufficient moisture is available in the soil.
- As weather is dry for last few weeks and dry weather is also likely to prevail during the week, farmers in North Saurashtra Zone of Gujarat are advised to irrigate the groundnut at an evening time.
- In view of likely high temperature, irrigate the floricultural crops during morning hours to meet evaporative demands in North Gujarat Zone.
- Weather is favourable for incidence of mealy bugs and fruit borer in mango in South Konkan; spray Dimethoate @ 10 ml and Quinolphos @ 10 ml respectively per 10 litres of water. Do not spray insecticides 20-25 days before maturity of fruits.
- Due to increasing temperature and cloudy weather there may be incidence of downy and powdery mildew in bitter gourd, bottle gourd and ridge gourd in Western Maharashtra Scarcity Zone. Farmers are advised to monitor the crop and take proper plant protection measures.
- Due to high temperature there may be increase in the infestation of white fly, aphids, jassids and red mites in ladies finger in Western Maharashtra scarcity zone; spray Imidachloprid @ 4 ml or Methyl Dimeton @ 10 ml in 10 liters water.
- Due to rain and cloudy weather there may be incidence of fruit fly in mango in Konkan; install fruit fly traps @ 4 traps per ha. Collect and destroy infested fruits.
- Prevailing weather is favourable for incidence of early shoot borer in sugarcane in Central Maharashtra Plateau Zone; spray 20% Chloropyriphos @ 20 ml in 10 liters water.
- Under prevailing weather there is possibility of infestation of sucking pests in vegetables in North Gujarat Zone. Farmers are advised to spray 0.1% solution of Dimethoate 35 EC to manage the pests.
- **Animal Husbandry:**
 - Due to high temperature forecast in South Gujarat Heavy Rainfall Zone, keep animals under shade during daytime and provide clean and cold drinking water. If possible put curtains on west side of cattle shed and sprinkle water during noon time. Vaccinate animals against FMD and BQ to avoid disease outbreak during ensuing monsoon season. Due to high temperature forecast during the period, avoid transportation of poultry birds during noon time.
 - In Maharashtra, spray Neon insecticide 1 to 1.5 ml per liter of water to control ecto parasites in animal house. The drinking water should be made available at least four times a day to the livestock and if possible, the animals should be kept under tree shade. Livestock should be washed by using cold water. Livestock should be vaccinated against foot and mouth disease.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** No significant rainfall occurred in the region.
- **Rainfall Forecast:** Isolated rain/thundershowers would occur over the region.
- **Advisory:**
 - During past two days medium rainfall is received in Budelkhand Zone of Madhya Pradesh, farmers are advised to do summer ploughing of the bare fields. Summer plough is very beneficial because it destroys the seeds of weeds, spores of diseases and eggs of insect and also modifies the physical properties of soils. Also by taking the advantage of soil moisture recharge through recent rainfall, farmers are advised complete the digging of pit for transplanting of new fruit trees.

- Farmers in Jhabua Hill Zone in Madhya Pradesh are advised to sow radish and prepare nursery of papaya, *kharif* onion and cauliflower.
- Evaporations rates are presently higher due to higher temperature in Chattisgarh Plain Zone of Chattisgarh and it is being recorded around 10 mm/day, which has increased the water requirements of summer crops like vegetables and green gram. Hence, it is advised to reduce the interval between two irrigations and irrigate the crops as per requirement for proper water management in these crops. Farmers, who have drip irrigation system, are also advised to regulate the discharge rate of the system for proper water management.
- Presently due to hot and dry winds Chattisgarh Plain Zone of Chattisgarh banana and papaya fruits are damaged because of sun scorching. Hence, the farmers are advised to cover the fruits by using leaves or Jute bags to protect the fruits from sun scorching. It is also advised to provide wind breaks in west/north-west direction.
- Weather is congenial for sucking pests in Gird and Nimar Valley Zone of Madhya Pradesh, farmers are advised to spray Metasystox or Dymethoate 1 ml per litre of water.
- Weather is congenial for fungal infections in fruit crops in Malwa Plateau Zone of Madhya Pradesh, spray copper Oxychloride @3g/l in acid lime orchards.
- Weather is congenial for sucking pest in okra, chilli, bhindi and fruit and shoot borer in brinjal in Jhabua Hill and Nimar Valley Zone of Madhya Pradesh, spray Thiomithaxam 0.3 gm/l for sucking pests and Trizophos @ 2ml/l for fruit and shoot borer.
- Weather is congenial for leaf curl disease in tomato and chilly crops in Gird Zone of Madhya Pradesh, farmers are advised to spray Methyl Dematon 25 E.C. @ 2.0 ml. or Emidachloprid @ 0.5 ml. per litre of water.
- Weather is congenial for sucking pest in moong and Urad in Madhya Pradesh, spray Methyl Dematon 2 percent or Quinolphos 1.5 percent 20 to 25 Kg per Hectre.
- Weather is congenial for red pumpkin beetle and fruit fly in cucurbit crops in Bundelkhand and Vindhya Plateau Zone of Madhya Pradesh, farmers are advised to spray Trizophos 40 E.C. @ 2.0 ml per litre of water or Malathion 50 E.C. @ 1.0 ml per litre of water.
- Stages of major crops are mentioned in Annexure I.
- **Animal Husbandry & Poultry**
- PPR in small ruminants be carried out in hot humid areas of Malwa Plateau Zone of Madhya Pradesh. Provide the animal's clean water, balance and nutrients rich food. etc. vaccination in Goats and other cattle's. Provide neat, clean, dry and well shaded place for animals. Insure vaccination to protect animals from infections/diseases like Black Quarter and FMD etc. Provide the animal's clean water and balance and nutrients rich food.
- There is possibility of Medium Cloud conditions in Gird Zone of Madhya Pradesh during next 5 days, cattle should keep air and cool place, provide balanced and nutrient rich feed having protein, carbohydrate, fat vitamins and antibiotics.
- Due to hot and humid weather conditions in Budelkhand Zone of Madhya Pradesh, food intake by hen is decreased. To supplements the food, mix vitamins and energy food material in their feed as well as calcium content. Mix 0.25 percent salt solution in their drinking water also.

Annexure I Major Crops

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

- Maize (cob formation / maturity / harvesting), chillies, tomato (fruiting / harvesting), palak, carrot, radish etc. (harvesting), barseem, lucerne, oat (vegetative), sugarcane (early vegetative / vegetative), *boro* rice (grain maturity / harvesting), green gram and black gram (pod formation) and summer vegetables like bhindi, bitter gourd, sponge gourd, pumpkin, cucumber etc. (sowing / early vegetative / vegetative / flowering / fruiting), maize, Jowar, lobia for green fodder (sowing) in Bihar.
- Chilli and brinjal (transplanting / early vegetative / vegetative / flowering / fruiting), summer rice (grain maturity / harvesting), summer vegetables (vegetative / flowering / fruiting), green gram (flowering / pod formation), sugarcane (early vegetative / vegetative), mango and litchi (fruiting), papaya (transplanting), turmeric, ginger, elephant foot yam (sowing) in Jharkhand.
- *Boro* rice (grain formation / maturity), black gram, green gram (flowering / pod formation), sunflower (seed formation), sesame (early pod maturity / maturity), groundnut (pod maturity), mango, papaya, summer marigold, tuberose (planting), cow pea (sowing / early vegetative), summer vegetables (vegetative / flowering / fruiting), *kharif* vegetables (sowing) and sugarcane (sprouting / vegetative / tillering), jute (sowing) turmeric and ginger (planting), yam (sowing) in Orissa.
- *Boro* rice (grain maturity / harvesting), mango (fruiting), sunflower (flowering / seed formation), green gram (branching / flowering / pod formation/ harvesting), groundnut (pod maturity / harvesting), sesame (early pod maturity / maturity / harvesting) and *aus* rice, maize, jute, dhaincha, cowpea (sowing), turmeric, ginger, aurum (planting), vegetables like ladies finger, *kakrol*, *amaranthus*, spinach, various leafy vegetables, brinjal, bitter gourd (sowing / vegetative / flowering / fruiting), chilli (flowering / fruiting) in West Bengal.
- Large cardamom (vegetative lag phase / primary flowering / secondary flowering), *rabi* potato (maturity / harvesting), *kharif* vegetables (transplanting / vegetative), orange (flowering / transplanting of Seedlings from nursery), maize (early vegetative / vegetative / late vegetative / tasseling / silking / cob formation), ginger (planting / germination) in Sikkim.

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

- Sugarcane (cane development / active vegetative), *boro* rice (maturity / harvesting), *bau* rice (sowing / early vegetative / tillering), normal *ahu* rice (transplanting / early vegetative / tillering), early *ahu* rice (panicle initiation / flowering), summer green gram and black gram (flowering / pod formation), jute (sowing / seedling / early vegetative / vegetative), summer vegetables (vegetative / flowering / fruiting), summer sesame (pod maturity / harvesting), maize (tasseling / silking / cob maturity), bhindi (sowing) in Assam.
- Rice (nursery preparation / transplanting / vegetative), French bean (germination / early vegetative / vegetative/ flowering / fruiting), okra (sowing / germination / early vegetative / vegetative / flowering / fruiting), maize (sowing / germination / early vegetative / vegetative) and ginger / turmeric (planting), summer vegetables, millet (sowing / germination / vegetative) in Arunachal Pradesh.
- *Rabi* maize (tasseling / silking / grain formation / maturity), rice (tillering / panicle initiation), soyabean, groundnut (sowing), onion (bulb formation / maturity / harvesting), *kharif* rice and black gram (land preparation), ginger and turmeric (planting) in Manipur.
- Groundnut, soyabean, okra and other summer crops (sowing), ginger and turmeric (planting), Khasi mandarin (fruit bearing), banana (vegetative / fruiting / maturity), summer maize (cob formation / harvesting), onion (bulb formation), beans (pod formation / harvesting) and summer vegetables (vegetative / flowering / fruiting) in Mizoram.
- *Aus* or pre *kharif* rice (sowing), sesame (early pod maturity / maturity / harvesting), summer vegetables (vegetative / flowering / fruiting) and *boro* rice (maturity / harvesting) in Tripura.

- *Boro* rice (maturity / harvesting), *ahu* rice (nursery sowing / seedling / transplanting / tillering), summer maize (tasseling / silking / cob formation) and summer vegetables (sowing / vegetative / flowering / fruiting) in Meghalaya.
- Maize, summer crops (vegetative / flowering), rice (vegetative), okra (vegetative), tomato (planting) and banana (fruiting) in Nagaland.

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

- Tomato, chilli (transplanting), brinjal & cucurbits crops (flowering/fruiting), lentil (pod formation), maize, hybrid cluster bean, baby corn, Pigeon pea (sowing/ vegetative), green gram and black gram, cotton (sowing), Sugarcane(sowing) in Delhi.
- Potato (tuber formation/harvesting), vegetables (flowering / fruiting / harvesting), garlic (planting), pea, potato (sowing), cucurbits (transplanting), Khira, summer squash, bitter gourd, tur, brinjal, Shimla mirch, pepper and tomato (nursery sowing), Apple (flowering to fruit setting), pomegranate (flowering) in Himachal Pradesh.
- Berseem (vegetative), oats (flowering), lentil (harvesting), field pea (pod formation), vegetable crops like tomato, chilli, brinjal, cucurbits (vegetative / flowering), onion (vegetative), cauliflower, cabbage, carrot (fruiting/harvesting), onion, tomato, brinjal and chilli (transplanting), summer pulses, cowpea, okra (vegetative) maize, jowar (sowing), rice (nursery sowing), Summer moong (sowing/vegetative) in Jammu & Kashmir.
- Potato (7000-800-ft a.s.l.) (sowing), moong, urd (flowering / pod formation), barley (tillering), garlic, seasonal vegetables (vegetative / flowering/ harvesting), onion (vegetative), pea (harvesting), chilli, tomato (sowing) and lahi (flowering / fruiting), sugarcane (planting), rice (nursery sowing), mango (flowering / fruiting), foxtail millet, maize, okra, bottle gourd, bitter gourd, ginger, turmeric (sowing) in Uttarakhand.
- Spring sugarcane (sprouting), berseem (vegetative), African sarson (pod formation/maturity), radish (vegetative), ghobi sarson (vegetative), oilseeds (raya, taramira) (maturity/harvesting), papaya, onion (harvesting), vegetables, sugarcane (sowing/ germination), summer pulses, cotton, okra, radish (sowing), rice (nurery soing) in Punjab.
- Sugarcane (spring season) (planting/emergence/early vegetative), barseem (vegetative), summer pulses, moong, mash, pigeon pea (sowing) in Haryana.
- Winter sugarcane (vegetative), summer sugarcane (planting), winter vegetables like carrot, garlic, onion tomato, brinjal (vegetative / flowering / fruiting), cabbage, cauliflower (fruiting / maturity / harvesting) and moong, urd, black gram, baby corn/ maize / fodder maize, vegetables (sowing / early vegetative) in Uttar Pradesh.
- Rice (nursery sowing), winter sugarcane (initial growth), lentil (maturity), ajwain, fenugreek and isabgol (vegetative), potato (tuberization / maturity), cabbage, cauliflower (late vegetative / head formation) and tomato (flowering/ fruiting), fodder jowar & bajra (sowing), cotton (sowing), in Rajasthan.

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

- Rice (harvesting/ nursery sowing/ transplanting), rice fallow cotton (flowering), rice fallow pulses (harvesting), maize (harvesting), sorghum (harvesting), groundnut (harvesting), cotton (flowering), vegetables (vegetative/ fruiting), sugarcane (vegetative/ grand growth phase) in Tamil Nadu.
- Sugarcane (ratooning/vegetative), cotton (picking), safflower (maturity), rice (harvesting), mango (harvesting) in Karnataka.
- Rice (harvesting), red gram (maturity), sunflower (seed development), groundnut (pod development / maturity) in Andhra Pradesh.
- Rice (harvesting), arecanut (planting/maturity), ginger (planting/vegetative), coconut (planting/seed nut collection), pepper (harvesting/new planting) in Kerala.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- Sugarcane (*adsali*) (active tillering), sugarcane (pre-seasonal) (vegetative), sugarcane (*suru*) (early vegetative), summer rice (maturity / harvesting), groundnut (pod maturity / harvesting), sunflower, maize and bajra (grain maturity / harvesting) in Maharashtra.
- Summer bajra (grain filling), brinjal and tomato (fruiting / harvesting), green gram (pod maturity / harvesting), sugarcane (vegetative), summer groundnut (pod maturity), summer pulses (seed development / maturity) in Gujarat.

CENTRAL INDIA [M.P., CHHATTISGARH]

- Pigeon pea (maturity/harvesting), sugarcane (vegetative), cotton (boll formation), maize (maturity), onion (transplanting), gram / linseed (fruiting / harvesting), okra (sowing) in Madhya Pradesh.
- Pigeon pea (pod development/maturity), wheat (grain maturity/ harvesting), rice (seedling / tillering), sunflower (sowing), sugarcane (sowing), linseed (flowering), maize, green gram and sesame (sowing), ginger and turmeric (sowing), groundnut and sunflower (pod/grain filling stage) in Chhattisgarh.

Annexure II List of Varieties

Orissa

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

Cow pea: Bush type – PusaPhalguni, PusaKomal; runner type – American Long and Banarasi Long; other improved varieties like Russian Giant, EC-4316, NP-3, C-152, UPC-286, UPC-5286 and IGFI-450.

Jute: JRO-524 (Naveen).

Okra: Improved high yielding varieties like UtkalGourav, ArkaAnamika, Uphar, ParvaniKranti and hybrid varieties like Varsa, Vijay, Vishal, Tara, Adhunik, Atyadhunik, and Supriy.

Bitter gourd: PusaDomousumi, Coimbatore long green, and ArkaHarit.

Ridge gourd: PusaNajdar, Jaypur long, and any local variety.

Cluster bean: PusaNaubahar.

Ginger: Suprava, Suruchi, Surabhi.

Turmeric: Roma, Surama, Rang, Rashmi etc.

Fodder maize: African Tall.

Fodder Cowpea: EC-4216.

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

Rice: Extra early – Kaling-3; Early – Khandagiri, Bandana, Pathara, Parijat, Annada; Medium – MTU-1001, MTU-1010, Konark, Gajapati, Surendra, Lalat; Late – CR-1009, CR-1018, Swarna (MTU-7029), Indravati, Mahanadi, Puja, Ramachandi, Kanchana, Sarala, Lunishree; Fine – CR-1014, BPT-5204.

Yam: Shreekirti, Shreerupa, Hatikhoj, Shreeshilpi; small yam – Shreelata, Shreekala.

White yam: Shreesubhra, Shreepriya, Shreedhanya.

West Bengal

Jute : Chaitali, Basudev, Naveen, Sonali, SobujSona.

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

Jharkhand

Turmeric: Rajendra Sonia.

Ginger: Burdwan and Nadia.

Elephant foot yam: Gajendra.

Maize: Birsa-1, Birsa Vikas-1, Suhan-1.

Assam

Jute: Tarun, JRC 321 (Sonali), UPC 94 (Reshma), JRC 321, JRC 7447, UPC 94, JRO 524, JRO 7835, JRO 632, JRC 212, JRC 7447 etc.

Maize : Kisan, Ganga.

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

Bhindi: Parvani Kranti, Arka Anamica.

Sali rice: Ranjit, Bahadur, Satyaranjan, Mahsuri, Peoli, Moniram, Pankaj, Kushal.

Tripura

Ridge gourd: Pusa Nasdar, Satputia.

Cucumber: Japanese long, Straight 8.

Delhi

Hybrid cluster bean: Pusa Komal, Pusa Sukamol

Baby corn: HM-4.

Sugarcane: Karan-1, Karan-2, Co-64, and Co-1496.

Late varieties of Cotton: H-777, H-974, H-1098.

Pigeonpea - Pusa 2001, Pusa991, Pusa992, Paras manak, UPAS 120.

Himachal Pradesh

Cauliflower: Sweta, Madhuri

Cabbage: Golden Acre, Varun

Tomato: 7711, Him sona, Him 1

Capsicum: California wonder

Cucumber: Kiyani

Summer squash: hybrid green

Lettuce: Iceberg

Brinjal : Arka Nidhi, PPC

Ageti bhindi : P-8, Prabhini kranti, Arka anamika

Frenchbean : Contender

Pepper : Surjmukhi

Broccoli: Palam Samridhi

Jammu & Kashmir

Rice : var. IET-1410, K-39, Ratna, PC-19, Jaya RR-8585, Basmati 370 and Ranbir Basmati) in tropical area under irrigated condition.

Brinjal : PPL, PPC & PPR

Chillies : NP-46A, Pusa jawala

Mash: Mash Pant, U-19, T-9

Moong: PDM-54, PS-16, PS-17, ML-131

Baby corn : HM-4

Pigeonpea : Pusa-992, Pusa-9 and Pusa-20020.

Punjab

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

Okra : Punjab 7 / Punjab 8

Radish : Punjab Ageti, Pusa Chetk

Haryana

Baisakhi Mung: K851 and Type 44 and Muskan

Pigeon pea: UPAS 120, T-21.

Uttar Pradesh

Moong: Yellow Mosaic resistant variety PDM-139A, Pant Moong-2A, Narendra Moong-1A, Malaviya Jagruti, H.U.M-2, Moong JAnpriya, Malaviya Jyoti, Malaviya Janchetana.

For intercropping : **Moong :** Pant Moong-1 / 2

Urd : Pant Urd-12 / 35

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

Uttarakhand :

Rice : VL-Dhan-206, Majdera-7 etc. (un-irrigated), late varieties like VL-Dhan-154, Vivek Dhan -62, Vivek Dhan-65, VL Dhan-81, Vivek Dhan-82 or VL-Dhan-85.

Finger millets : VL-Mandua-124 and VL-149. Pusa-44, Jaya, NDR-359, Sarju-52, PR-113, PR-114, Pant Dhan-18 or Pant Dhan-19.

Short duration (i.e. 95 to 100 days): VL- Mandua-204, Pant Mandua-3, PES-176, PES-110, VL-Mandua-146

Maize : Ganga-2, Ganga-7, African Tall etc.

Lobia : Russian Joint, EC-4216, UPC-5286 etc.

Okra : VL Bhindi-1

Rajasthan

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

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

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

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

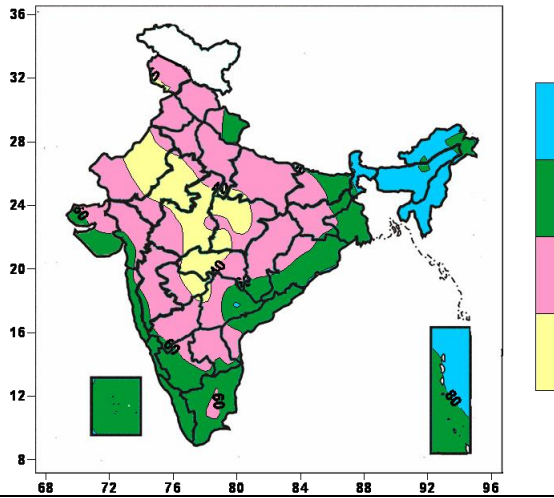
Rice : P.R. 106, B.K. 190, Mahi Sugandha (Basmati)

Papaya : improved varieties Honey dew, Coorg Honey dew, Pusa delicious, Pusa Nanaha and CO-2.

Annexure III

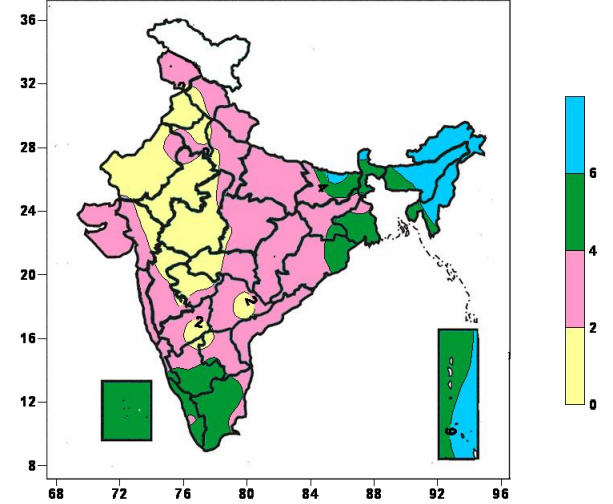
Contour maps (Relative humidity, Cloud amount and Wind Speed) for the week ending 25.05.2011

Relative Humidity (%) over India for the week ending 25.05.11



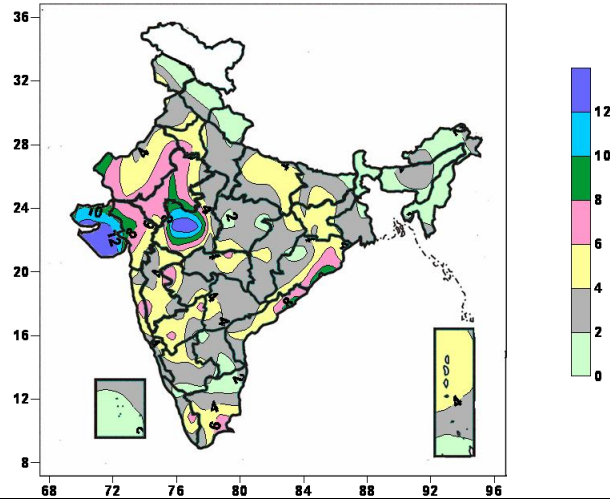
Relative humidity between 80% and above over most parts of Sub-Himalayan West Bengal & Sikkim, North East India, some parts of Andaman & Nicobar Islands, 60 to 80% over most parts of Uttarakhand, Bihar, Gangetic West Bengal, Coastal Orissa, Coastal Andhra Pradesh, Tamil Nadu, Kerala, Coastal & South Interior Karnataka, Konkan& Goa, Lakshadweep, Andaman & Nicobar Islands, some parts of Jharkhand, , Chattisgarh, Telengana, Raylaseema, North Interior Karnataka, Madhya Maharashtra, Saurashtra & Kutch, Gujarat, 20 to 40% over most parts of Rajasthan, Madhya Pradesh, Vidarbha, some parts of East Uttar Pradesh, Telengana, Marathwada, 40 to 60% over remaining parts of the country.

Cloud amount (okta) over India for the week ending 25.05.11



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

Wind speed (knots) over India for the week ending 25.05.11



Wind speed ranged between 12 knots and above over some parts of Saurashtra& Kutch, West Madhya Pradesh, 10 to 12 knots over some parts of Saurashtra& Kutch, West Madhya Pradesh, 8 to 10 knots over some parts of some parts of Gujarat, Saurashtra& Kutch, West Madhya Pradesh, Rajasthan, 6 to 8 knots over some parts of West Madhya Pradesh, Saurashtra& Kutch, Gujarat, Orissa, Chattisgarh, Coastal Andhra Pradesh, Tamil Nadu, Kerala, Maharashtra, 4 to 6 knots over most parts of Haryana, Delhi, Bihar, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Rajasthan, Uttar Pradesh, Jharkhand, Orissa, Chattisgarh, Madhya Pradesh, Maharashtra, Andhra Pradesh, Tamil Nadu, Kerala, 0 to 2 knots over most parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sub-Himalayan West Bengal & Sikkim, Northeast India, Lakshdweep Island, some parts of Punjab, Uttar Pradesh, Bihar, Jharkhand,Orissa, East Madhya Pradesh, Chhattisgarh, Madhya Maharashtra, Marathwada,Telengana, Raylaseema, North & South Interior Karnataka, Kerala, Andaman & Nicobar Islands, 2 to 4 knots over remaining parts of the country.

