

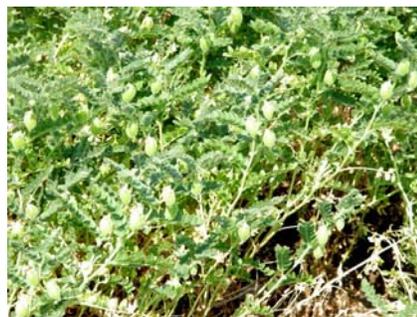
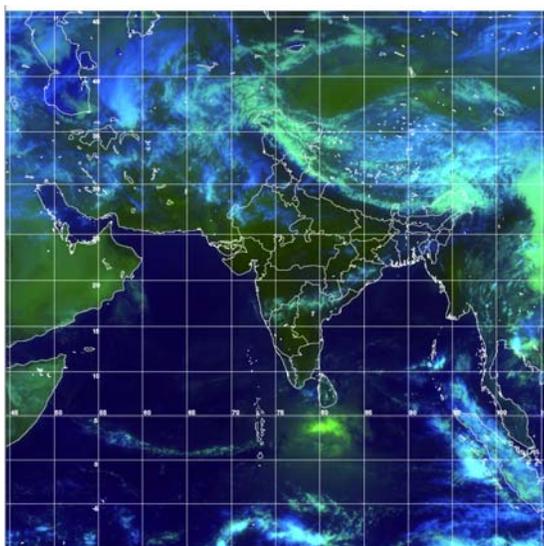


National Agromet Advisory Bulletin

Thursday, 7th April, 2011

(For the period 7th April to 11th April, 2011)

Satellite image 0600 UTC Dated
8th April, 2011



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Agricultural Meteorology Division
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Executive Summary

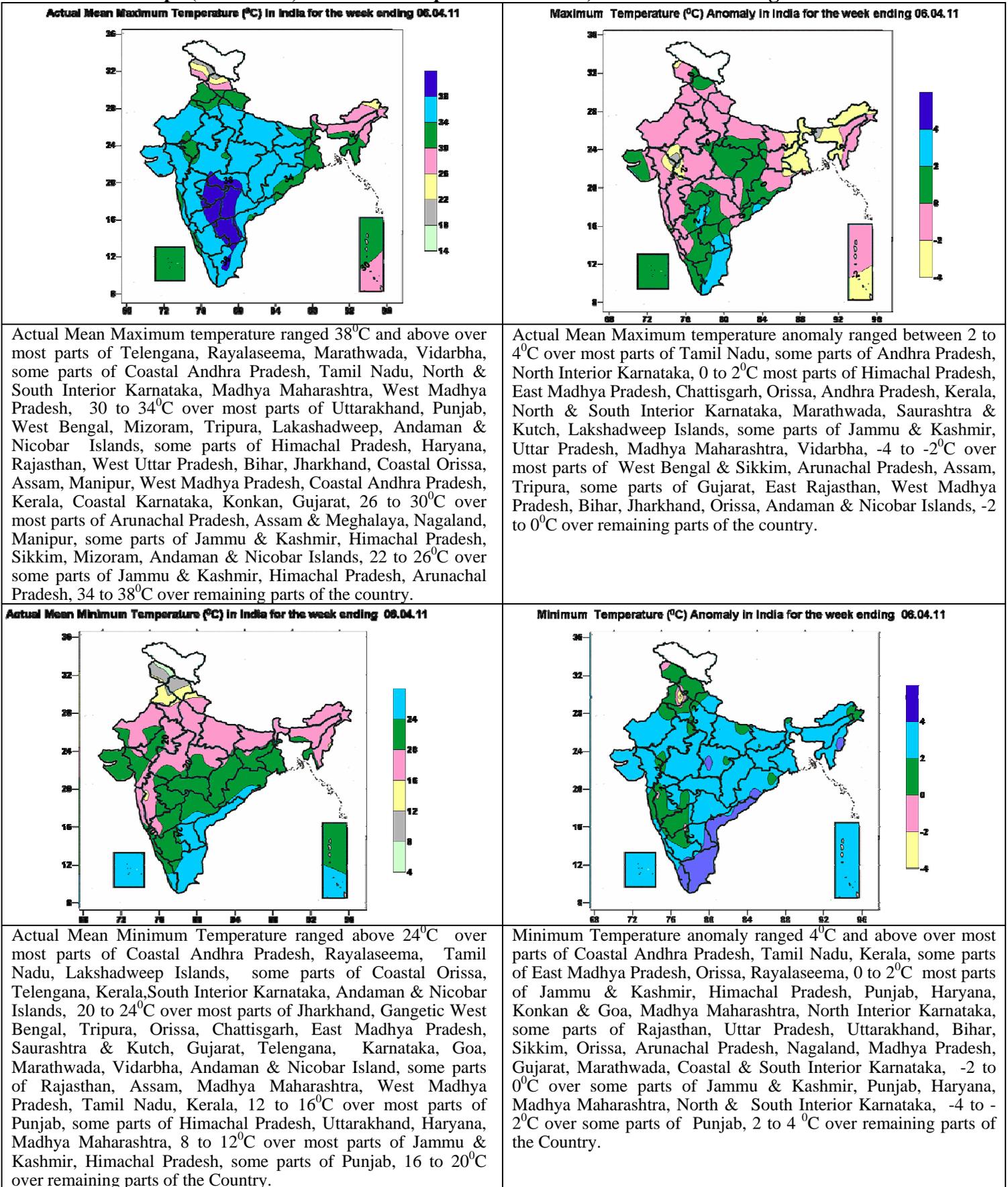
Dry weather conditions prevailed over most parts of the country except some districts of Arunachal Pradesh, Assam, Jammu & Kashmir, Orissa, Sub-Himalayan West Bengal and Gangetic West Bengal during last week. The temperature condition in wheat growing North Western States is normal and beneficial for wheat resulting in better prospect of wheat crop. Farmers are advised to undertake harvesting of early maturing varieties of wheat crop and store it at safer places in Jammu & Kashmir, Rajasthan and West Uttar Pradesh as rain / duststorm / thunderstorm is likely.

Due to prevalence of dry conditions in most of the States of the country, farmers are advised to provide irrigation to the standing summer crops. After the harvesting of *rabi* crops, summer ploughing may be undertaken to conserve the moisture. Summer deep ploughing will also help to expose the pupae and eggs of insect pests and weed seeds. Mulching may also be applied to prevent the loss of soil moisture. To protect the fruit trees from dry condition, windstorm and sun scorching in Punjab, it is advised to whitewash the trunk, provide shelter to young trees and give frequent irrigation. Planting of dhaincha may be done around the litchi nursery to protect young plants of litchi from hot weather conditions. In Himachal Pradesh protect stone fruit plants using anti hail nets.

Farmers are advised to undertake sowing of summer cotton, nursery sowing of tomato and transplanting of brinjal and other vegetables in Karnataka, sowing of sathemung, mash, radish, transplanting of chillies, planting of peach, plum and pear in Punjab, sowing of mung, tur and radish in Haryana, sowing of mung, mash, late varieties of mung in Uttar Pradesh, sowing of tomato, capsicum, brinjal and chillies in Himachal Pradesh, sowing of mung, mash, bhindi, tumeric, carrot, cucurbits, transplanting of tomato, brinjal and chillies in Jammu & Kashmir, sowing of early WRC rice, maize, bhindi, ginger, turmeric, French bean, urd, mung in Arunachal Pradesh, sowing of sesame, normal *ahu* rice, direct seeded *ahu* rice, mung, urd, planting of sugarcane in Assam, sowing of French bean in Manipur, sowing of maize, french bean, rice bean in Mizoram, cucurbits, chilli, french bean, pea and okra in Nagaland, planting of papaya and marigold in Orissa, sowing of green gram, planting of sugarcane and sowing of summer vegetable crops like bhindi, bitter gourd, sponge gourd, pumpkin, cucumber etc. in Bihar, sowing of maize, summer cucurbits like gourd, snake gourd, pumpkin, cucumber etc. in West Bengal.

Due to high temperature conditions, there are incidences of blast and bacterial leaf blight in rice in Orissa, leaf blight in *boro* rice in West Bengal, purple blotch in onion in Mizoram, bacterial leaf blight in rice, leaf webber and diamond black moth in cabbage in Karnataka, mites in sweet orange and jasmine and stem borer and blast in rice in Andhra Pradesh and powdery mildew in mango in Rajasthan. 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 06.04.2011



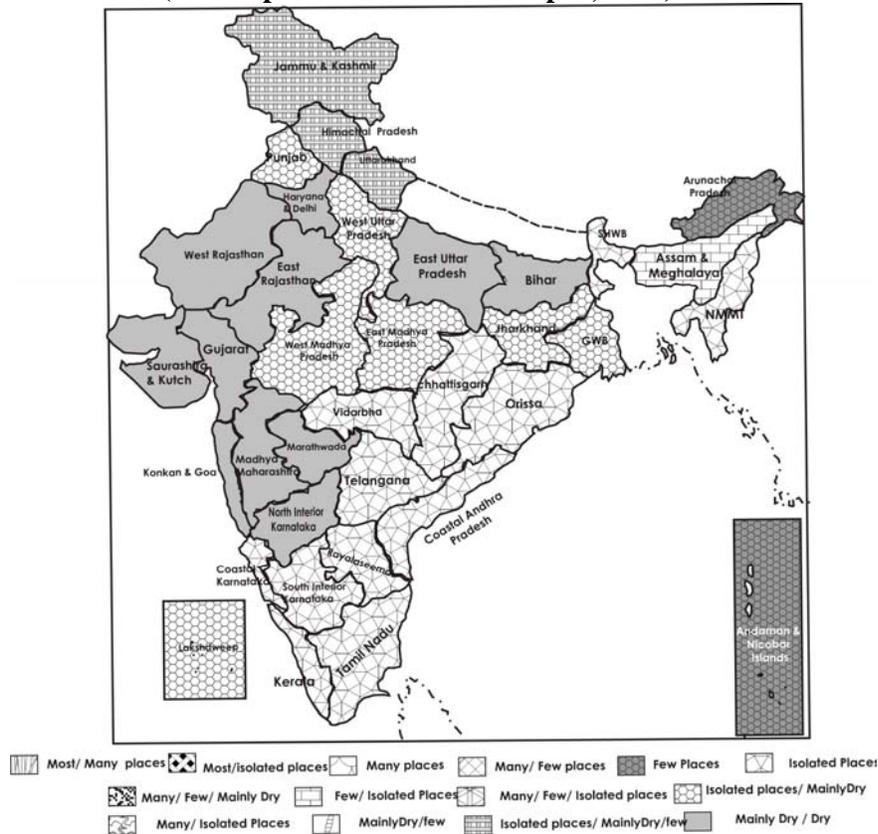
Distribution of rainfall (% departure from normal) for the districts of during last five Weeks

State/Districts	Actual	06.04.11
Arunachal Pradesh		
Changlang	0.0	-100
East Kameng	0.0	-100
East Siang	33.5	40
Lohit	35.4	-21
Lower Subansiri	15.8	-45
Papumpara	48.7	140
Tawang	**	**
Tirap	13.1	-68
Upper Siang	51.7	-27
Upper Subansiri	31.6	39
West Kameng	22.4	17
West Siang	0.0	-100
Assam		
Barpeta	28.4	37
Bongaigaon	10.8	-47
Cachar	35.2	-37
Darrang	**	**
Dhubri	8.0	-44
Dibrugarh	27.4	-7
East Garo Hills	23.4	45
East Khasi Hills	73.7	127
Goalpara	0.0	-100
Golghat	7.8	-65
Hailakandi	13.0	-75
Jaintia Hills	**	**
Jorhat	20.0	-17
Kamrup	0.0	-100
Karbi Analog	1.5	-93
Karimganj	13.0	-75
Kokrajhar	17.4	-28
Lakhimpur	31.6	65
Morigaon	0.0	-100
N.C.Hills	36.3	-52
Nowgong	0.4	-98
Nalbari	28.9	27
Sonitpur	22.7	76
Sibsagar	0.0	-100
Tinsukia	29.4	-6
Jammu & Kashmir		
Anantnag	69.0	131
Badgam	40.0	158
Doda	6.4	-74
Jammu	0.0	-100
Kathua	0.0	-100
Kupwara	54.8	25
Ladakh(Leh)	0.0	-100
Pulwama	25.9	38
Srinagar	24.7	44
Udhampur	0.0	-100

State/Districts	Actual	06.04.11
Bihar		
Araria	9.3	81
Aurangabad	**	**
Begusarai	12.0	532
Bhabua	**	**
Bhagalpur	27.9	1450
Bhojpur	**	**
Buxar	**	**
Darbhanga	22.5	838
East Champaran	2.1	14
Gaya	0.4	-73
Gopalganj	3.1	55
Jahanabad	0.0	-100
Jamui	16.3	758
Kathihar	23.1	788
Khagadia	17.0	8375
Kishanganj	6.4	-12
Madhepura	3.5	14
Madhubani	15.3	595
Monghyar	39.8	3518
Muzaffarpur	28.4	1793
Nalanda	4.8	300
Patna	5.1	240
Purnea	27.9	1115
Rohtas	0.0	-100
Saharsha	29.1	3137
Samstipur	0.2	-67
Saran	19.8	1880
Sitamarhi	**	**
Siwan	6.3	186
Supaul	22.2	2367
Vaishali	**	**
West Champaran	0.0	-100
Jharkhand		
Bokaro	51.8	1819
Chatra	6.9	174
Dhanbad	**	**
East Singbhum	11.3	145
Giridih	3.5	51
Godda	**	**
Gumla	**	**
Hazaribagh	0.2	-94
Koderna	**	**
Lohardagga	**	**
Pakur	**	**
Palamau	0.0	-100
Ranchi	0.0	-100
Sahebganj	**	**
West Singbhum	31.1	522
Orissa		
Angul	6.1	30

State/Districts	Actual	06.04.11
Balasore	27.2	159
Bargarh	6.0	71
Bhadrak	8.4	8
Bolangir	1.0	-85
Boudh	0.0	-100
Cuttack	2.7	-64
Deogarh	0.0	-100
Dhenkanal	0.0	-100
Gajapati	25.4	70
Ganjam	32.8	257
Jagatsingpur	1.6	-86
Jajpur	20.7	184
Jharsuguda	0.0	-100
Kalahandi	38.5	756
Kandhamal	16.2	103
Kendrapara	12.7	451
Keonjhar	31.9	280
Khurda	9.3	9
Koraput	15.0	36
Malkangiri	15.0	134
Mayurbhanj	47.0	291
Nawapara	0.7	-89
Nawarangpur	18.3	126
Nayagarh	5.1	-52
Puri	4.4	46
Rayagada	12.5	-14
Sambalpur	6.7	71
Sonepur	3.7	-22
Sundargarh	19.3	360
West Bengal		
GWB		
Bankura	22.8	274
Birbhum	27.3	536
Burdwan	24.3	342
Hooghly	21.9	313
Howrah	19.2	131
East Midnapore	17.4	216
Murshidabad	31.0	434
Nadia	29.8	389
24 Pargana (N)	20.4	228
Purulia	37.3	384
24 Pargana (S)	17.0	95
West Midnapore	39.1	229
SHWB		
Coochbehar	39.2	100
Darjeeling	23.2	35
Jalpaiguri	36.2	126
Malda	1.9	-41
Dinajpur (N)	**	**
Dinajpur (S)	133.5	2163
North Sikkim	59.3	31
South Sikkim	32.2	8

Weather Forecast (Valid upto 1430 hours of 7th April, 2011)



Major Feature of Weather Forecast (upto 1430 hours IST of 10th April , 2011)

- Isolated rain/snow would occur over Jammu & Kashmir and Himachal Pradesh and scattered over Uttarakhand during next 24 hours.
- Scattered rain/thundershowers would occur over northeastern States during next 24 hours and decrease thereafter.
- Isolated rain/thundershowers would occur over north coastal Andhra Pradesh, Orissa, Bihar, West Bengal & Sikkim, Chhattisgarh, Madhya Pradesh, Interior Maharashtra and Telangana.
- Isolated rain/thundershowers would occur over south peninsular India and Andaman & Nicobar Islands.
- Isolated duststorms/thunderstorms would occur over Rajasthan and west Uttar Pradesh during next 24 hours.
- Maximum temperatures would fall by 2-3°C over Indo Gangetic plains during next 2-3 days.

Weather Warning

- Isolated duststorms/thunderstorms would occur over Rajasthan and west Uttar Pradesh during next 24 hours.
- Isolated thundersquall would occur Vidarbha, Madhya Pradesh and south Chhattisgarh during next 24 hours.

Weather Outlook (upto 1430 hours IST of 12th April, 2011)

- Fairly widespread rain/snow would occur over western Himalayan region and isolated duststorm/thunderstorm over adjoining plains of northwest India.
- Scattered rain/thundershowers would occur over northeastern states, Kerala and coastal Karnataka and isolated over east coast.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Bhagalpur, Darbhanga, Kathihar, Monghyar, Muzaffarpur, Purnea, Saharsha and Supaul districts of Bihar, Bokaro and West Singhum districts of Jharkhand, many districts of West Bengal, Balasore, Gajapati, Ganjam, Kalahandi, Keonjhar and Mayurbhanj of Orissa and all the districts of Sikkim received rain during last week. No significant rain occurred over the remaining districts of the States of the region during last week.
- **Rainfall Forecast:** Mainly dry weather will prevail or isolated rain will occur over the States of the region during the period.
- **Advisories:**
 - As Bhagalpur, Darbhanga, Kathihar, Monghyar, Muzaffarpur, Purnea, Saharsha and Supaul districts of Bihar, Bokaro and West Singhum districts of Jharkhand, many districts of West Bengal, Balasore, Gajapati, Ganjam, Kalahandi, Keonjhar and Mayurbhanj of Orissa and all the districts of Sikkim received rain during last week., postpone irrigation to the standing crops in these districts. As no significant rain occurred over the remaining districts of the States of the region during last week and mainly dry weather will prevail or isolated rain will occur during next three days, farmers are advised to apply irrigation to the summer vegetables and other summer crops like green gram, sesame, ground nut, sunflower etc.
 - Taking the advantage of dry weather, harvest matured crops of tobacco, pulses etc. in Bihar. Apply irrigation during tasseling and silking stage in maize and also to summer vegetables crop. Also undertake intercultural operations and apply fertilizers in standing onion crops before applying irrigation.
 - Due to dry weather, fruit drop is appeared as a common problem in mango in North Eastern Coastal Plain Zone of Orissa. Farmers are advised to spray water by pedal sprayer during forenoon hours to prevent fruit drop.
 - In Orissa, the weather is optimum for planting of papaya, marigold etc. and sowing of sunflower with assured irrigation. Farmers are advised to undertake field preparation and sowing. Increased temperature may lead to moisture stress in standing crops. Apply irrigation to groundnut and sugarcane. Farmers are advised for sowing jute, summer vegetables like *okra*, bitter gourd, cluster bean, cow pea and ridge gourd.
 - Prepare the field and undertake sowing of green gram, planting of sugarcane and sowing of summer vegetable crops like bhindi, bitter gourd, sponge gourd, pumpkin, cucumber etc. in Bihar.
 - Farmers in West Bengal are advised to undertake field preparation and sowing of green gram and sunflower, summer vegetables like *okra*, bitter gourd, cluster bean, cow pea and ridge gourd, jute and also planting of Gladiolus. Adopt seed rate of 3.5 kg per bigha for green gram.
 - Farmers are advised to prepare the field and undertake sowing of summer vegetable crops like long gourd, round gourd, ridge gourd, bitter gourd, sponge gourd, cucumber, water melon and musk melon, *okra*, brinjal and shimla mirch in Jharkhand.
 - As chickpea and field pea is at maturity stage in Jharkhand, harvesting should be done immediately to avoid effect of scorching temperature and faster wind velocity and matured pods should be harvested before they shatter.
 - Prepare the field and undertake sowing of *kharif* maize, summer potato and *kharif* vegetables in Sikkim.
 - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
 - High differential temperature between day and night favours the infestation of blast in Western undulating Zone of Orissa; apply Tricyclazole @ 500 ml or Kasugamycin @ 1000 ml per ha with 500 ml of water.
 - High temperature and humidity is favourable for spread of blast and bacterial leaf blight diseases in rice in West Central Table Land Zone and North Eastern Coastal Plain of Orissa; spray Tricyclazole 75%WP @ 0.5 g / litre of water for blast and 300 g Plantomycin + 400 g Copper oxychloride in 200 litres of water per acre for bacterial leaf blight.

- Increased temperature may favour the egg laying of stem borer in rice in Cuttack, Nayagarh and Jagatsinghpur districts of Orissa; to attract the borer butterflies, place 4 Pheromone traps / acre, collect the adults and destroy them by burying under soil or by burning and spray 2 ml Prophenophos per litre water. Leaf folder has also been found; spray 2 ml Beapvin or Fipronil or Hostathion or 1 ml Trebon in 1 litre water.
- Under the prevailing weather, there is a possibility of attack of the disease leading to leaf rolling in sesame in Coastal Saline Zone of West Bengal; uproot the infected plants and apply Urea (@ 25 Kg / ha) as top dressing. There is also possibility of attack of collar rot disease in beetle vine; apply neem cake at the base of the plant. There is also possibility of the increased attack of Anthracnose leading to black spot in mango; spray 1 ml Carbendazim per litre of water.
- High humidity in Laterite and Red Soil Zone in West Bengal may cause the outburst of leaf blight in *boro* rice; to control this use carbendazim 50 WP and reduce use of nitrogen fertilizer. Hot and humid climate may also cause outbreak of *Helikovapa* in oilseeds; uproot the affected plants or apply a mixture of 5 kg rice powder + 300 g jagary + 300 g Carbaril in water and spray it in the evening time.
- Stages of major crops are mentioned in Annexure I.

Animal Husbandry

- Deworming in cattle, buffalo and goat and vaccination against Black quarter, Sahana may be carried out. PPR vaccine should be provided to the goats. Birds should be provided with lasota preventive vaccine and IBD vaccine in West Central Table Land Zone of Orissa.
- For fish cultivation, lime should be applied @ 40 kg / bhigha in the pond. Occurrence of EUC disease is found in the districts of Old Alluvial Zone of West Bengal. After six days of application of lime, apply $KMnO_4$ (potassium permanganate) @ 150 g / bigha / meter depth of pond water.
- Matured poultry birds get more affected in summer season by sudden increment in temperature rather than colder season in South Eastern Plateau Zone of Jharkhand. Presently, maximum day temperature ranged between 34 and 37 °C causing death of birds due to heat stroke; hence, take proper care to protect the birds from heat.

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

- **Realised Rainfall:** East Siang, Lohit, Papumpara, Upper Siang and Upper Subansiri districts of Arunachal Pradesh and Barpeta, Cachar, Dibrugarh, East Garo Hills, East Khasi Hills, Lakhimpur, N.C.Hills, Nalbari and Tinsukia districts of Assam received rain during last week.
- **Rainfall Forecast:** Rain is likely to occur at a few places over Arunachal Pradesh during the period. Rain is likely to occur at a few places during next 48 hours over Assam and Meghalaya and decrease thereafter. Rain is likely to occur at isolated places over remaining States of the region during the period.
- **Advisory:**
 - As East Siang, Lohit, Papumpara, Upper Siang and Upper Subansiri districts of Arunachal Pradesh and Barpeta, Cachar, Dibrugarh, East Garo Hills, East Khasi Hills, Lakhimpur, N.C.Hills, Nalbari and Tinsukia districts of Assam received rain during last week and rain is also likely to occur at few places during in these States, postpone irrigation to the standing crops. As there was no significant rain in remaining districts of the States of the region, apply irrigation to the crops.
 - In Central Brahmaputra Valley Zone in Assam, sowing of jute, summer vegetables, summer green gram & black gram should be continued in this week.
 - As there is no chance of rainfall, farmers in Mizoram are advised to harvest mature maize crops to avoid any heavy damage from weather phenomenon like hailstorm.
 - In Temperate Sub Alpine Zone in Meghalaya, under severe and continuous foggy condition, sprinkle water on the seedlings of *ahu* rice in the nursery.
 - Farmers are advised to sow lady's finger, bottle gourd, ridge gourd etc. in Ri-Bhoi, West khasi, East Khasi, East Garo and West Garo hill district in Meghalaya and Mild Tropical Hill Zone in Nagaland.

- In Nagaland, support should be given to the banana with the help of bamboo so as to protect the plants from bending or falling down due to heavy wind speed.
- Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
- Due to recent rainfall, incidence of late blight may be observed in potato in Sub Tropical Plain Zone in Manipur; farmers are advised to spray Metalaxyl based fungicide, like Redomil MZ-72 WP @ 2 g / litre alternately with Mencozeb @ 2 g / litre of water at 14 days interval for 2-3 times.
- There is possibility of infestation of purple blotch disease in onion in Mizoram. To control purple blotch disease, spray the crop with 1.3 kg of Indofil M 45 mixed with 400 ml of linseed oil as sticker in 600 liters of water / ha.
- In Temperate Sub Alpine Zone in Meghalaya, as there is a rise in temperature in Ri-Bhoi, East Khasi and South Garo District, there is possibility of late blight in potato, which can be controlled by prophylactic spray of Dithane M-45 (2.5 ml / litre) or Curzate (3 ml / litre).
- Apply plant protection measures on a non-rainy day in Arunachal Pradesh and Assam.
- Stages of major crops are mentioned in Annexure I.

Animal Husbandry:

- In Meghalaya, the farmers are advised to give vaccination to broiler poultry to control Ranikhet disease in Ri-Bhoi, South Garo, East Garo and West Garo districts. Vaccination schedule against FMD, Blue tongue (BT), Brucellosis, Haemorrhagic Septicaemia, Anthrax in large ruminants and PPR and sheep and goat Pox PPR in small ruminants must be carried out in hot humid areas of Ri-Bhoi, South Garo and Jaintia Hills districts.
- In Nagaland, proper monitoring should be done in case of poultry as many losses occurred in poultry breed due to breakout of many diseases and hot weather. Animals with disease conditions that have become chronic and require repeated treatments must be culled from the herd.
- 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 Haemorrhagic 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.

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

- **Realised Rainfall:** Dry weather prevailed over the region except rainfall in some districts of Jammu & Kashmir during last week.
- **Rainfall Forecast:** Rainfall at a few places over Jammu & Kashmir and Himachal Pradesh after 48 hours. Rainfall is likely at a few places over Uttarakhand during next 24 hours and isolated rain or mainly dry weather thereafter. Except that mainly dry weather or isolated rainfall is likely in the region.
- **Advisory:**
 - As there was no significant rainfall in the region and no significant rainfall is likely during next three days, farmers are advised to apply irrigation to standing crop. Farmers are advised to harvest the matured wheat and protect standing crops as isolated duststorms/thunderstorms would occur over Rajasthan and west Uttar Pradesh during next 24 hours.
 - Farmers in Delhi are advised to sow green gram, black gram, sugarcane, maize, baby corn and also direct sowing of cucurbitaceous crop, lady's finger, french bean, cluster bean, summer radish. In present weather condition, early harvesting of matured wheat is advised to avoid shattering of grains.
 - Farmers are advised to undertake sowing of bhindi, frenchbean and nursery sowing of khira, summer squash, bitter gourd, gladiolus, liliium and China aster, glardia, rudevekia, Kochia, African Marigold, French Marigold, Partulaca, Tithinia, Torinia and cleome, red and white clover, fodder maize, fodder maize + legume, moong, mash, nursery sowing of vegetables like cauliflower, cabbage, tomato, capsicum, cucumber, lettuce and broccoli in Himachal Pradesh utilising realised rainfall during last week.
 - Farmers in advised to undertake planting/sowing of mango, guava, loquat, litchi, citrus, okra, cucumber, beans, muskmelon, watermelon, round gourd, bottle gourd, sponge gourd, bitter gourd, tomato, capsicum, chilli, brinjal in Jammu & Kashmir.

- Farmers in Rajasthan are advised to undertake sowing cucurbitaceae vegetables like melon, bottlegourd, ridgegourd, bittergourd, pumpkin and smoothgourd, leafy vegetables like spinach and amaranthus and transplanting of tomato and brinjal and also advised to undertake harvesting of matured mustard, gram, taramira, barley and potato. In Southern Humid Plain Zone (Banswara region) are advised to protect the nursery plants and zaid crops from high temperature. In Irrigated North Western Plain Zone (Sriganganagar region), farmers are advised to undertake sowing of cotton.
- Farmers in Uttarakhand are advised to undertake sowing of foxtail millet, potato (7000 – 8000 feet height areas), nursery sowing of Chiatee Dhan and transplanting of tomato, pumpkin (mid-hills), chilly, brinjal (irrigated hilly areas). Farmers in Bhabar and Terai Zone (Nainital and Udamsingh Nagar districts) are advised to start harvesting of timely sown wheat.
- Farmers in Punjab and Haryana are advised to complete sowing of spring sugarcane and advised to undertake sowing of summer moong, mash and pigeon pea. Farmers in Western Zone are advised to apply need based irrigation, recommended dose of fertilizer and intercultural operation.
- Farmers in Uttar Pradesh are advised to undertake harvesting of matured crops viz. wheat, barley, gram, mustard, arhar etc. and undertake sowing of moong, urd, maize / fodder maize, summer sugarcane with intercropping of moong and urd crops.
- Due to prevailing weather in Mild Hills Sub Humid Zone of Himachal Pradesh, late blight is expected in potato. Farmers are advised to spray Dithane M-45 @ 25 gram in 10litres of water and repeat the spray at 10-15 days interval.
- Farmers in Undulating Plain Zone of Punjab are advised to protect sugarcane crop from termite attack by application of 10 Kg Reagent 0.3 G (Fipronil) or 15 kg Kanodane 1.3 DP mixing in 20 kg wet sand before the sets are covered with soil by planking. Spray 2 litre of Classic 20 EC (Chlorpyrifos) or Lindane/Kanodane 20 EC (gamma BHC) in 400-600 litre of water per acre against attack of early shoot borer.
- In Flood prone eastern plain zone (Bharatpur region) of Rajasthan, there is infestation of powdery mildew disease in mango due to rise in temperature and this leads to flower and fruit drop in mango. Spray Karathane @ 1ml/l water to manage the disease. During the crop maturity of wheat rodent damage is severe in threshing yard. To control rodents prepare poison bait by using 1 part zinc phosphide, 47 part flour and two parts edible oil and keep 6 gram bait on each live entry of rodents.
- In Kanpur region of Uttar Pradesh, present weather is favourable for white fly, sucking pests in late sown tomato crop which is in flowering / fruiting stage. For control spray Metosystox / litre per hectare.
- In Allahabad region of Uttar Pradesh, green hoppers attack is observed in sunflower crop, for control spray phosphomedon 250 ml or Endosulphan 35 EC 1.25 liter in 1000 lit. water per hectare.
- Stages of major crops are mentioned in Annexure I.

Animal Husbandry

- To kill parasites in cattles stomach, give Piprazin Citrate 15-30 ml after every three months or Nilworm powder 1-15 gm or Pencure Bolas tablet ¼ to young calves and for elders give Nilworm 10 gm and Penacure Bolas 1-2 tablet.
- To kill external parasites, 8-10 drops of Butox in per liter water & cleaning the body of cattle by 2-3 lit. of clean water with a clean cloth.

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

- **Realised Rainfall:** No significant rainfall occurred over in most of the districts in all the states.
- **Rainfall Forecast:** No significant rainfall is during next three days in the region.
- **Advisories:**
- As there was no significant rainfall in most of the districts in all the states and no significant rainfall is likely during next three days, farmers are advised to apply irrigation to the standing crops.
- The farmers of Eastern Dry Zone of Karnataka are advised to undertake threshing of the crops as dry weather is likely during next three days.

- Farmers in North Dry Zone of Karnataka are advised to continue the summer ploughing and take up plant protection sprayings in horticultural crops.
- Farmers in North Transition Zone of Karnataka are advised to undertake harvesting of bengal gram, jowar, wheat, sunflower and safflower.
- Farmers of Hill Zone of Karnataka are advised to undertake sowing of cotton under irrigated condition.
- Farmers in Central Dry Zone of Karnataka are advised to take up following plant protection measures, since there are no chances of rainfall and the days will be clear during the week.
- As there is possibilities of light rains in North Western Zone of Tamil Nadu, farmers are advised to prepare the lands for nursery sowing of summer rice.
- Due to the prevailing high temperature, farmers are advised to provide irrigation to encourage fruit development in mango in scarce rainfall zone of Andhra Pradesh.
- Farmers in High Altitude Zone of Kerala are advised to apply irrigation and protect crops against pests and diseases.
- Farmers in Southern Zone of Kerala are advised to provide irrigation to coconut, banana and vegetables as temperature is high and protect them from attack of pests.
- Incidence of bacterial blight is observed in rice in North East Dry Zone of Karnataka. To control spray Streptocyclene(0.5 to 1.0g) +Copper Sulphate(0.5 to 1.0g)/10 lit of water or Agrimiycin-100 (3.0g)+Copper Oxychloride (1.0g)/10 lit of water or Bromopal (3.0g)+ Copper Oxy chloride(1.0g)/10 lit of water. Weather conditions are congenial for mango jassids activity which can be managed by spraying 4.0 gm carbaryl in one litre of water.
- Leaf webber and diamond black moth in cabbage, jassids /leaf hoppers & powdery mildew in mango and leaf spot in sapota is noticed in North Transition Zone of Karnataka. Spray NSKE (4 %) at 10-15 days interval for 3 to 4 times or Quinolphos / Chlorphyriphos (0.05%) @ 2 ml per litre to control leaf webber and diamond black moth, carbaryl (50 W.P.) @ 4 grams /l or Endosulphan (35 EC) @ 2 ml/ l plus wettable sulphur @ 3 grams / carbendazim (50 WP) @ 2 gram per litre to control jassids /leaf hoppers & powdery mildew and 2 g Mancozeb (Dithane M-45) per liter of water to control leaf spot.
- Red Spider Mite is observed in tapioca in North Western Zone of Tamil Nadu. To control the pest, spray 2.5 ml of Omag per litre of water.
- Prevailing dry weather is conducive for the mealy bug incidence in cotton, vegetables, sunflower and pulses, leaf spot incidence in cotton, stem borer incidence in rice and sigatoka leaf spot incidence in banana in Western Zone of Tamil Nadu. Spray Profenophos 2ml/litre to control mealy bug, copper oxychloride 1250 g to control leaf spot, monocrotophos 1000ml/ha to control stem borer and carbendazim 1g/lit of water to control sigatoka leaf spot.
- Spread of mealy bug is noticed due to rise in temperature in Southern Zone of Tamil Nadu .Release Acerophagus papayae or Cryptolaemus montrouzieri @ 100 nos/acre depending upon the rate of infection to control it.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised rainfall:** Mainly dry weather prevailed in the States of the region during the period.
- **Rainfall forecast:** Dry weather is likely to prevail over the States of the region during the period. Isolated thundersquall would occur over Vidarbha during next 24 hours.
- **Advisory:**
 - As dry weather prevailed over the states of the region during last few weeks and dry weather would prevail during the period, farmers are advised to apply light and frequent irrigation to the standing crops.
 - As there is no possibility of rain during the period, apply Nitrogen @ 136 kg, phosphorous @ 85 kg and Potash @ 85 kg / ha to pre-seasonal sugarcane in Madhya Maharashtra.
 - As there is more evaporation of water due to increasing temperature, farmers in South Konkan Coastal Region are advised to irrigate groundnut at an interval of 8-10 days.
 - To increase the production and to improve the quality of mango, farmers in Konkan region are advised to spray 1 % Urea and 1 % Potassium Nitrate at pea stage, marble stage and arecanut size stage taking the advantage of prevailing dry weather.
 - Farmers in Madhya Maharashtra Region are advised to undertake sowing of summer cotton and fodder crops like sorghum, maize and pearl millet during the first fortnight of April.

- As dry condition prevailed during last few weeks and is likely to continue, farmers in Gujarat state are advised to irrigate pearl millet, groundnut, green gram along with other vegetable crops.
- Farmers in North West region of Gujarat are advised to undertake sowing of lady's finger.
- Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure II.
- Due to cloudy weather there may be incidence of blast disease on rice in South Konkan Coastal Region of Maharashtra. For its control spray 10 g Carbendazim or 25 g copper oxychloride per 10 litres of water.
- Weather is congenial for Tikka (leaf spot) disease in groundnut crop in South Konkan Coastal Region of Maharashtra. To control spray Carbendazim @ 10 g per 10 litres of water at 15 days interval.
- Weather is also favourable for incidence of mealy bug and fruit borer in mango in South Konkan Coastal. To control apply Dimethoate @ 10 ml and Quinalphos @ 10 ml per 10 litres of water. Do not spray insecticides 20-25 days before maturity of fruits. Weather is also favourable for incidence of anthracnose on mango in South Konkan Coastal Region. Farmers are advised to spray Carbendazim @ 10 g per 10 litres of water.
- Weather is congenial for incidence of downy mildew on cucumber, watermelon, muskmelon, bottle gourd, snake gourd, bitter gourd etc. in Madhya Maharashtra Region. Farmers are advised to spray Metalaxyl MZ 61 @ 25 g or Phosetil 20 g + Mancozeb @ 20 g per 10 litres of water keeping 10 days difference.
- There may be incidence of early shoot borer in sugarcane crop due to prevailing weather conditions in Western Maharashtra Region; spray Endosulphan 35 EC @ 15 ml in 10 liters of water.
- Weather is favourable for attack of leaf rolling caterpillar in groundnut in Western Maharashtra region; spray Phosphamidon @ 2.5 ml or Cypermethrin @ 4 ml or Quinalphos @ 20 ml in 10 liters of water.
- Due to prevailing weather conditions there may be virus infestation on chilli in Western Maharashtra Region; spray Methyl Dimeton @ 20 ml + water soluble Sulphur @ 20 g + 10 liters of water at the interval of 10 days.
- Weather conditions are favourable for incidence of mango hopper in North Saurashtra Zone; spray Imidachloprid 17.8 SL @ 2.5 ml / 10 litres of water to control mango hopper. Also there may be dropping of unripe fruits in mango orchard. Spray NAA @ 2 g or Gibberelic Acid 1 g + 2 kg urea / 100 liter of water.
- Stages of major crops are mentioned in Annexure I.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Weather remained dry during last week in the region.
- **Rainfall Forecast:** Isolated rain and thundershowers over the region.
- **Weather warning:** Isolated thunder squall would occur in Madhya Pradesh and south Chhattisgarh during next 24 hours.
- **Advisory:**
 - As weather conditions are suitable for proper germination of summer maize, green gram, sesame and summer vegetables like brinjal, tomato, chillies and sugarcane, farmers are advised to undertake sowing in Bastar Plateau zone. Mulching should be done in the thalas of fruit plants and PVC method, sprinkler method/ drip method may be followed in vegetables and fruit plants for water conservation.
 - At present the evaporation rate is around 8-10 mm/day in Chattisgarh Plane zone of Chattisgarh, farmers are advised apply irrigation in summer vegetables, rice, groundnut as well as sunflower.
 - Farmers in Satpura Plateau Zone and Nimar Valley Zone of Madhya Pradesh are advised to undertake sowing of summer sugarcane, fodder maize, fodder jowar, fodder bajra and other summer vegetables.
 - As transpiration rate and temperatures are higher in Kymore plateau and Satpura hill zone, provide irrigation frequently in summer crops like moong, urd and sunflower. Sowing of maize, sorghum, jowar, cowpea etc. for summer forage crops may be undertaken.
 - In Gird Zone and Jhabua Hill Zone of Madhya Pradesh, farmers are advised undertake sowing of summer chari (green fodder), summer mung, urd. Undertake harvesting of early sown wheat, gram

and mustard and store it in safer places as isolated thundershowers are likely during next 24 hours in Madhya Pradesh.

- In Vindhya Plateau Zone of Madhya Pradesh, farmers are advised to sow moong and urad and also undertake propping of sugarcane and also apply mulching to summer vegetables.
- Farmers in Northern Hill Zone of Chattisgarh are advised to prepare land for planting of sugarcane and sow moong, urad, fodder crops like maize, jowar, bajra crops etc.
- As weather is congenial for mosaic disease in moong and pod borer in bhindi and tomato in Bundelkhand Zone of Madhya Pradesh, spray Methyl Demeton 25 EC 2 ml per litre of water or Dimethoate 30 EC @ 2 ml per litre of water.
- As weather is congenial for sucking pests in vegetables in Nimar Valley Zone of Madhya Pradesh, spray Metasystox or Dimethoate @ 1 ml per litre of water.
- Due to dry weather, farmers in Gird Zone in Madhya Pradesh advised to keep watch for thrips attack in onion, if found spray Carbaryl @ 2gram/ liter of water. Weather is congenial for leaf curl disease in tomato and chilli in Gird and Bundelkhand Zone of Madhya Pradesh, farmers are advised to spray Methyl dimeton 25 E.C @ 2.0 ml or Imidachloprid @ 0.5 ml per litre of water.
- As weather is congenial for stem borer in sugarcane in Vindhya Plateau Zone of Madhya Pradesh, farmers are advised to spray Phorate @ 10 kg per hectare.
- Infestation of stem borer is observed in trace at few places in Chhattisgarh plain zone. Hence, farmers are advised to monitor the crop and if the damage is above ETL apply granular insecticides like Cartap or Fipronil @ 25 kg/ha in the fields. About 5 cm standing water should be maintained in the fields while applying the granular insecticides and do not allow the water to out of the field at least for 24 hours.
- **Animal Husbandry & Poultry**
- As there is possibility of clear sky conditions during next 5 days, cattle should be kept in dry place, provide balanced and nutrient rich feed having protein, carbohydrate, fat vitamins and antibiotics in Gird Zone of Madhya Pradesh.
- At present, due to increase in day temperature in Bundelkhand Zone of Madhya Pradesh, farmers are advised to allow the buffalos to swim in the water pond and also wash their body with water twice in a day to keep their body temperature cool.

Annexure I Major Crops

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

- Wheat (early maturity maturity), maize (tasseling / silking / cob formation), chillies, tomato (fruiting / harvesting), palak, carrot, radish etc. (harvesting), barseem, lucerne, oat (vegetative), sugarcane (planting), *boro* rice (tillering / panicle initiation / flowering), green gram, maize and black gram (sowing / early vegetative) and summer vegetables like bhindi, bitter gourd, sponge gourd, pumpkin, cucumber etc. (sowing / early vegetative) in Bihar.
- Arhar and green pea (pod maturity / harvesting), wheat (dough / early maturity), onion (bulb enlargement / maturity), tomato (fruiting / harvesting), chilli and brinjal (transplanting / early vegetative), summer rice (tillering / panicle initiation / flowering), summer vegetables (sowing / transplanting / vegetative), summer green gram (sowing / early vegetative), sugarcane (planting), mango and litchi (flowering / fruiting), papaya (transplanting) in Jharkhand.
- Arhar (pod maturity / harvesting), wheat (dough / maturity / harvesting), sugarcane (harvesting), *boro* rice (tillering / panicle initiation / flowering), maize (sowing / vegetative), black gram, green gram, garlic, sunflower (sowing / early vegetative / vegetative), sesame (early vegetative / vegetative), groundnut (vegetative / flowering), mango, papaya, summer marigold, tuberose (planting), summer cow pea (sowing / early vegetative), summer vegetables (sowing / early vegetative / vegetative) and sugarcane (sprouting / vegetative / tillering), summer pulses, colocasia (land preparation / sowing / planting), jute (sowing) in Orissa.
- *Boro* rice (tillering / panicle initiation / flowering), wheat (early maturity / maturity), arhar (pod maturity / harvesting), mango (flowering / fruiting), sunflower (sowing / early vegetative / bud initiation / flowering), green gram (vegetative), groundnut (vegetative / flowering), sesame (early vegetative / vegetative) and *aus* rice, maize, ginger, jute, summer vegetables like ladies finger, *Kakrol*, amaranthus, spinach, various leafy vegetables, brinjal, chili, bitter gourd (sowing / early vegetative) in West Bengal.
- Large cardamom (vegetative lag phase), orange (end harvesting), wheat (flowering / milk / dough / harvesting), *rabi* potato (tuberization / early maturity), ginger (harvesting), *rabi* vegetables (flowering / fruiting / harvesting), mustard (seed maturity / harvesting), seed potato, maize (sowing / germination / early vegetative), summer potato (sowing / germination), *kharif* vegetable (sowing / nursery sowing) in Sikkim.

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

- Sugarcane (planting / cane development), *boro* rice (tillering / panicle initiation), *bau* rice (sowing), normal *ahu* rice (nursery raising / transplanting), wheat (grain formation / early maturity), early *ahu* rice (tillering / panicle initiation), jute (sowing / seedling), summer vegetables (sowing / vegetative), summer sesame (early vegetative) and maize (tasseling / silking) in Assam.
- Rice (nursery preparation), French bean (sowing), *okra* (sowing), maize (sowing / vegetative) and ginger / turmeric (sowing) in Arunachal Pradesh.
- *Rabi* maize (flowering), field pea (pod formation / maturity), onion (bulb formation), cauliflower and cabbage (head formation / harvesting) and potato (tuber maturity / harvesting) in Manipur.
- *Khasi* mandarin (new flush / blooming stage), banana (vegetative / fruiting / maturity), maize (harvesting), *kharif* maize (sowing), onion (bulb formation), beans (sowing), tomato, chilli and capsicum (harvesting), cole crops (head formation / harvesting) and summer vegetables (early vegetative / vegetative) in Mizoram.
- *Aus* or pre *kharif* rice (sowing), summer vegetables (early vegetative / vegetative) and *boro* rice (tillering / panicle initiation) in Tripura.
- *Boro* rice (tillering / panicle initiation), *ahu* rice (nursery sowing / seedling / transplanting / early tillering), rapeseed and mustard (pod maturity / harvesting), *rabi* maize (vegetative), wheat (grain formation / early maturity), winter potato (tuber maturity), winter potato at high altitude (harvesting) and summer vegetables (sowing / vegetative) in Meghalaya.

- Maize, summer crops (sowing / early vegetative), *okra* (sowing), potato (tuber maturity) and banana (fruiting) in Nagaland.

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

- Wheat (maturity/harvesting), mustard (pod maturity / harvesting), pea and gram (pod maturity/harvesting), broccoli, cauliflower, cabbage and onion (early vegetative / vegetative), tomato, chilli (transplanting), brinjal & cucurbits crops (sowing/germination), lentil (pod formation), maize, hybrid cluster bean, baby corn (sowing), green gram and black gram (sowing), Sugarcane(sowing) in Delhi.
- Wheat (dough stage), 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) in Himachal Pradesh.
- Gram (maturity), berseem (vegetative), oats (flowering), wheat, barley (flowering / ear head formation), very late sown wheat (flag leaf stage), lentil (maturity/harvesting), field pea (pod formation), toria (harvesting), mustard (pod maturity/harvesting), vegetable crops like tomato, chilli, brinjal, cucurbits (vegetative / flowering), onion (vegetative), cauliflower, cabbage, carrot (fruiting/harvesting), onion and tomato(sowing/transplanting), summer pulses, vegetables(brinjal, chilly)(sowing) in Jammu & Kashmir.
- Wheat (maturity / harvesting), potato (maturity / harvesting), toria (maturity / harvesting), mustard (maturity), chickpea (flowering / pod formation), barley (tillering), garlic, seasonal vegetables (vegetative / flowering/harvesting), onion (vegetative), pea (harvesting), chilli, tomato (sowing / transplanting) and lahi (flowering / fruiting), sugarcane(planting), rice (nursery sowing), mango (flowering), foxtail millet (sowing), in Uttarakhand.
- Spring sugarcane (germination), berseem (vegetative), wheat (grain maturity/harvesting), barley (heading), lentil, gram (maturity/harvesting), African sarson (pod formation/maturity), radish (vegetative), ghobi sarson (vegetative), oilseeds (raya, taramira) (pod formation/ maturity), papaya, onion (transplanting), vegetables, sugarcane (sowing/ germination), summer pulses(sowing) in Punjab.
- Sugarcane (spring season) (planting/emergence/early vegetative), wheat (flag leaf/grain development), berseem (vegetative), gram (pod maturity/harvesting), rapeseed and mustard (harvesting), summer pulses, moong, mash, pigeon pea (sowing) in Haryana.
- Wheat (grain formation/ maturity), barley, oats (tillering/flowering), toria (pod maturity), arhar (flowering / pod formation / grain formation), mustard, sarson (pod maturity / harvesting), field pea, chick pea, lentil, linseed (flowering/maturity / harvesting), winter sugarcane (vegetative), summer sugarcane (planting), winter vegetables like carrot, garlic, onion (vegetative), tomato, brinjal (flowering / fruiting), cabbage, cauliflower (fruiting / maturity / harvesting) and moong, urd, black gram, maize / fodder maize, vegetables (sowing) in Uttar Pradesh.
- Winter sugarcane (initial growth), wheat (maturity / harvesting), oats, barley (maturity/harvesting), taramira, mustard (maturity / harvesting), gram (pod maturity / harvesting), lentil (flowering/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 (flowering/maturity), rice fallow cotton(vegetative), rice fallow pulses(maturity), pulses (pod maturity), rice fallow black gram (flowering), maize (harvesting), sorghum (harvesting), groundnut (harvesting), cotton (vegetative/ boll formation/ boll maturity), vegetables (vegetative/fruiting), sugarcane (vegetative/ grand growth phase) in Tamil Nadu.

- Sugarcane (ratooning/vegetative), groundnut (flowering/pegging), pigeon pea (harvesting), bitter melon (fruiting / harvesting), cotton (boll development/ picking), sunflower (maturity), safflower (flowering), rice(tillering), bengal gram (harvesting), rabi jowar (harvesting), mango (fruiting/maturity), summer green gram (maturity) and blackgram(maturity) in Karnataka.
- Bengal gram (maturity), rice (panicle initiation/ flowering/ grain formation/ maturity), red gram (maturity), sunflower (seed development), groundnut (pod development / maturity) in Andhra Pradesh.
- Vegetables (harvesting), rice(panicle initiation/flowering /grain filling/ harvesting), arecanut (flowering/ maturity), ginger (planting), coconut (seed nut collection), pepper(harvesting) in Kerala.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- Wheat (harvesting), sugarcane-*Adsali* (active tillering), Sugarcane-pre seasonal (growth), sugarcane-*Suru* (growth), summer rice (flowering in Konkan and tillering in East Vidarbha), groundnut (pod formation in Konkan & vegetative / flowering / pegging in other divisions), sunflower (vegetative / floral bud initiation), summer maize (vegetative), bajra (vegetative / flag leaf initiation / flowering) in Maharashtra.
- Summer bajra (booting), brinjal and tomato (fruiting / harvesting), Pearl millet (tillering), green gram (flowering), late sown wheat (harvesting), sugarcane (sprouting / early vegetative), and summer groundnut (flowering / pegging) in Gujarat.

CENTRAL INDIA [M.P., CHHATTISGARH]

- Wheat (grain maturity/ harvesting), mustard (harvesting), chickpea (pod formation/maturity), pigeon pea (maturity/harvesting), sugarcane (planting / 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), rice (seedling/tillering), sunflower (sowing), sugarcane (sowing), linseed (flowering), maize, green gram and sesame(sowing) in Chhattisgarh.

Annexure II List of Varieties

Bihar

Bhindi: Parvani Kranti, Arka Abhay, Arka Anamika, KS 312 and hybrid varieties such as Bhawani, Krishna, Lam Hybrid, Hybrid 6, Hybrid 8, Indranil.

Green gram: Pusa Baishakhi, T-9.

Summer moong: Pusa Vishal, Samrat, Sona, PS 16, SML 668.

Urd: Type 9.

Orissa

Summer maize: Dhabal and Navjot and Hybrid varieties like Ganga, Deccan 105, Kargil 900-M, PRO 345, Kargil 633.

Summer Sunflower: High yielding variety like Modern and hybrid varieties like PAC 36, KBSH, MSFH-8 and MSFH 17.

Green gram: PDM 11, PDM-54, Pusa Baisakhi, SML-668, PDM-54, HUM 2, Durga and Samrat.

Black gram: Sarala, T-9, B-3-8-8, Pant-U-19, Pant-U-30.

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

Summer cow pea: Bush type – Pusa Phalguni, Pusa Komal; 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: Utkal Gourav, Arka Anamika, Varsha Uphar, Parvani kranti and all available hybrid varieties.

Bitter gourd: Pusa Domousumi, Coimbatore long green, and Arka Harit.

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

Cluster bean: Pusa Naubahar.

Cow pea: Arka, Garima, Utkal Manika, Selection-2-6-3 and Pusa Kamal.

West Bengal

Sunflower: Morden, Surya (90-95 days duration), Pack 36 (hybrid variety, 104 days duration), KBSH (90-95 days duration).

Green gram: Sonali (B-1), Panna (B-105), Pusa Baishakhi etc.

Jute: Chaitali, Basudev, Naveen, Sonali, Sobuj Sona.

Jharkhand

Green gram: Pusa Vishal, SML-668 and PDM-11.

Sugarcane: High yielding variety – BO147 (red rot resistant and high sugar content-10.7%).

Bhindi: High yielding varieties – Pusa A-4, Parvani Kranti, Arka Anamika etc. and hybrid varieties – Sonal and Sharita.

Assam

Direct seeded early *ahu* rice: Banglami, Puthichapali, Nilajee, Hasakumra, Dimru, Maibi, Jaya and IR-50.

Early *ahu* rice: Lachit, Chilarai, Gopinath, Luit, Kapilee, Dichang, Dikhow, Kalong, IR-36, TTB 14-1 and Krishna.

Bau rice: Maguri, Panikekua, Amona, Negheri.

Normal *ahu* rice: Dimru, Maibi, Jaya, IR-50, Gobind, IR-36, Lachit, Chilarai.

Green gram: T44, AAU 34, AAU 39, Pratap, SG1.

Black gram: T 9, Pant U 19, JU 78 etc.

Cucumber: Chinese Green, Pusa Sanyog, Poinsette.

Bitter Gourd: Long Green, Extra Long, Pussa Do Mausmi.

Ridge Gourd: Pusa Nasdar, AAUJ-2, AAUC-3.

Okra: Pusa Sawani, Arka Anamika, Parbhani Kranti.

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.

Sugar cane: Co1008, Co 997, Co 740, Co 961.

Meghalaya

Lady's Finger: Paravin Kranti, Akra Anamika.

Mizoram

Lady's Finger: Pusa Sawani, Pusa Makhmali, Punjab Padmini, Arka Anamika, Arka Abha.

Tripura

Ridge gourd: Pusa Nasdar, Satputia.

Cucumber: Japanese long, Straight 8

Delhi

Green gram – Pusa Visal, Pusa Vaisakhi, Pusa 9531, Pant moong 1, Pant moong 5, PDM-11, SML-32

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

Maize – African Tall.

Hybrid cluster bean: Pusa Komal, Pusa Sukamol

Baby corn: HM-4.

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

Himachal Pradesh

Cauliflower: Sweta, Madhuri

Cabbage: Golden Acre

Tomato: 7711, Him sona, Him 1

Capsicum: California wonder

Cucumber: Kiyon

Summer squash: hybrid green

Lettuce: Iceberg

Brinjal : Arka Nidhi, PPC

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

Frenchbean : Contender

Jammu & Kashmir

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

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

Punjab

Summer moong: SML-668.

Summer mash: Sathi mash, i.e. Mash 1008 or Mash-414 or Mash-218.

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 :

Chiatee Dhan : VL-Dhan-206, 207, 208, Pant Majdera-7, Madeera : P.R.J.-1, V.L. Madeera-29 / 172,

Rajasthan

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

Maharashtra

Fodder sorghum: Phule Ruchira, Phule Amruta or M-35-1 (Maldandi).

Fodder pearl millet: Giant Bajra.

Fodder Maize: African Tall.

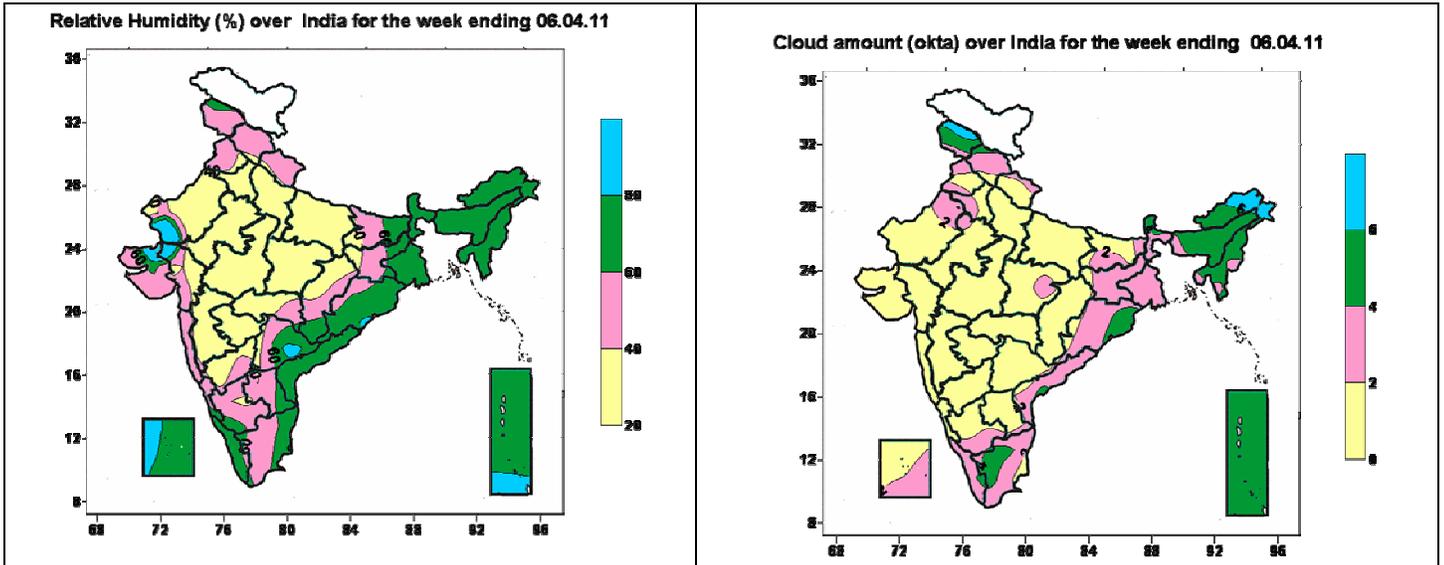
Cotton:Phule- 492,N.H.H-44 (Nanded - 44).

Madhya Pradesh

Sugarcane: Jawahar-86-141, Jawaharlal-86572, Co- Jawaharlal-86600, Co-86032

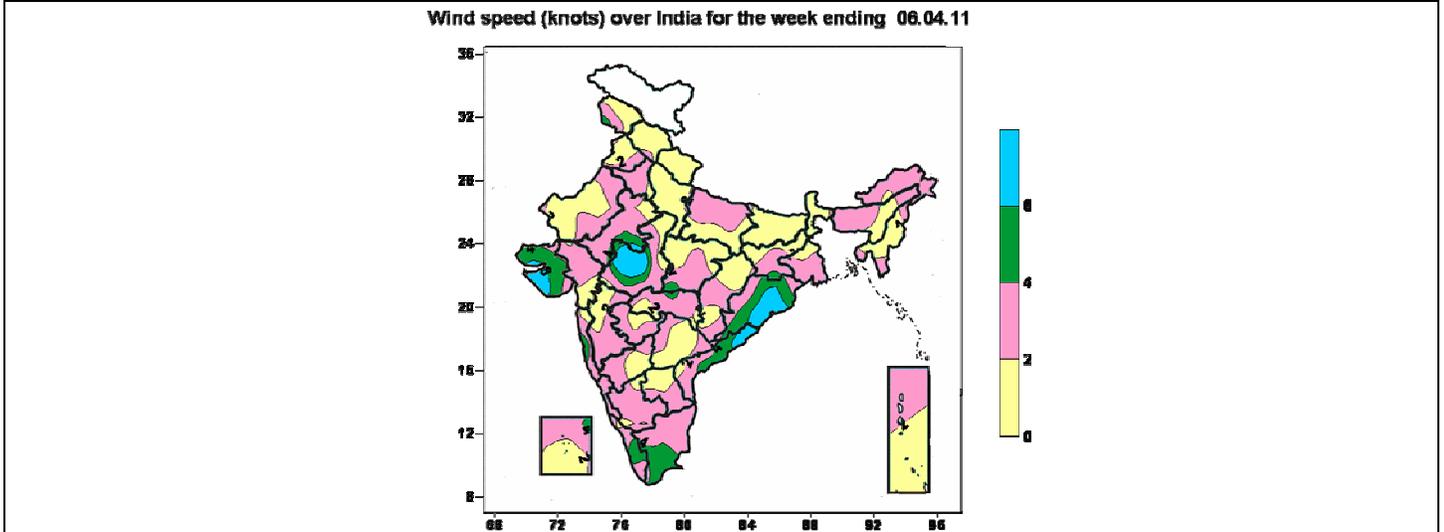
Annexure III

Contour maps (Relative humidity, Cloud amount and Wind Speed) for the week ending 06.04.2011



Relative humidity 80% and above over some parts of West Rajasthan, Saurashtra, Telengana, Orissa, Lakshadweep, Andaman & Nicobar Islands, 60 to 80% most parts of, West Bengal & Sikkim, Northeast India, Orissa, Coastal Andhra Pradesh, Telengana, Kerala, Lakshadweep, Andaman & Nicobar Islands some parts of Bihar, Jharkhand, Chattisgarh, Rayalaseema, Tamil Nadu, Coastal & South Interior Karnataka, West Rajasthan, Saurashtra, 20 to 40% over most parts of Rajasthan, Haryana, Delhi, Uttar Pradesh, Madhya Pradesh, Madhya Maharashtra, Marathwada, Vidarbha, North Interior Karnataka, some parts of Uttarakhand, Punjab, Bihar, Jharkhand, Chattisgarh, Telengana, south Interior Karnataka, Gujarat, 40 to 60% over remaining parts of the country.

Cloud amount 6 okta and above over some parts of Jammu & Kashmir, Arunachal Pradesh, 4 to 6 okta over most parts of Sikkim, Northeast India, some parts of Jammu & Kashmir, Himachal Pradesh, Sub-Himalayan West Bengal, Orissa, Coastal Andhra Pradesh, Tamil Nadu, Kerala, 2 to 4 okta over most parts of Himachal Pradesh, Jharkhand, West Bengal, Orissa, Coastal Andhra Pradesh, Tamil Nadu, Kerala, some parts of Jammu & Kashmir, Uttarakhand, Punjab, Haryana, Rajasthan, Bihar, Assam, Manipur, Mizoram, Tripura, Rayalaseema, South Interior Karnataka, East Madhya Pradesh, Lakshadweep Islands, 0 to 2 okta over remaining parts of the country.



Wind speed ranged between 6 knots and above over some parts of Saurashtra & Kutch, West Madhya Pradesh, Orissa, Coastal Andhra Pradesh, 4 to 6 knots over most parts of Saurashtra & Kutch, some parts of Jammu & Kashmir, Orissa, Coastal Andhra Pradesh, Madhya Pradesh, Tamil Nadu, Kerala, 0 to 2 knots over most parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, West Rajasthan, West Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Manipur, Mizoram, Telengana, Andaman & Nicobar Islands, some parts of Haryana, East Rajasthan, East Uttar Pradesh, Jharkhand, Gangetic West Bengal, Arunachal Pradesh, Assam & Meghalaya, Tripura, Chattisgarh, Rayalaseema, Karnataka, Maharashtra, Gujarat, Madhya Pradesh, Lakshadweep Islands, 2 to 4 knots over remaining parts of the country.

