

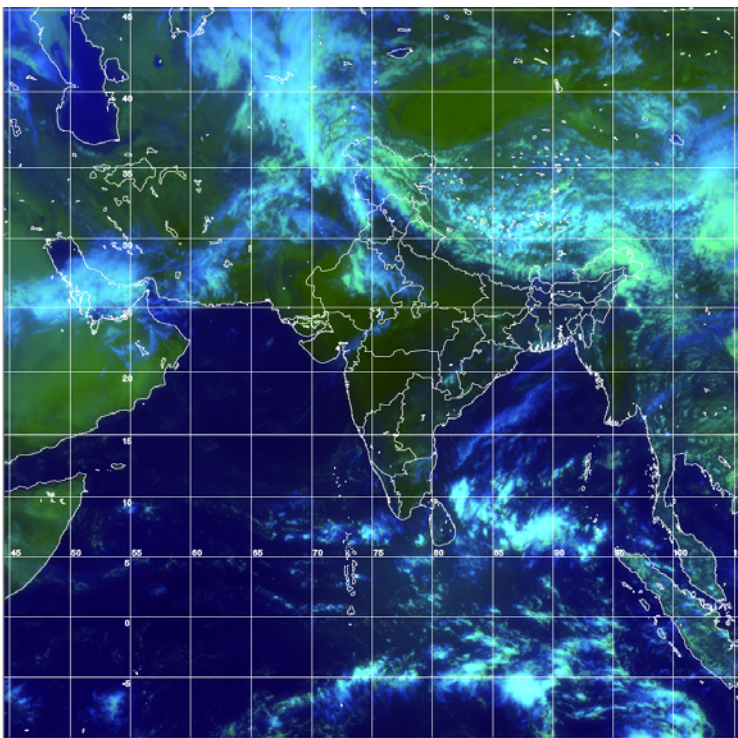


National Agromet Advisory Bulletin

Wednesday, 13th April, 2011

(For the period 13th to 17th April, 2011)

Satellite image 0600 UTC Dated
15th April, 2011



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National Agrometeorological Advisory Service Centre
Agricultural Meteorology Division
India Meteorological Department
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The bulletin is also displayed in the website (<http://www.imdagrimet.gov.in>) of the Division

Executive Summary

Dry weather conditions prevailed over most parts of the country except some districts of Jammu & Kashmir during last week. The temperature condition in wheat growing North Western States is near normal and beneficial for wheat resulting in better prospects of wheat crop. Farmers are advised to undertake harvesting of wheat crop and store it at safer places in plains of northwest India as isolated dust storms / thundershowers would occur on 15th and 16th April and isolated thundersquall in Bihar, Chhattisgarh, Jharkhand, Orissa and West Bengal and Sikkim during next 48 hours.

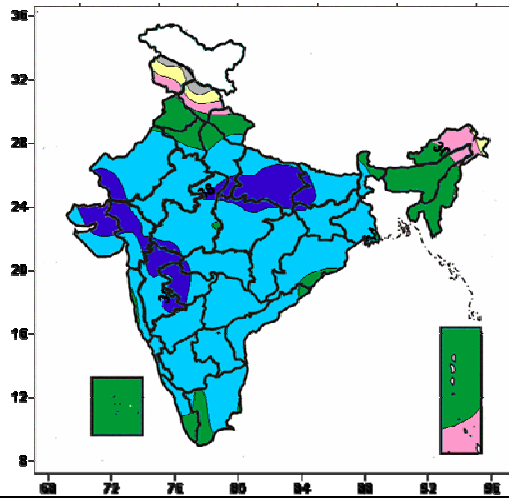
As fairly widespread rainfall would occur over North Eastern States during next 48 hours and decrease thereafter, postpone irrigation, intercultural operation and application of fertilizer and plant protection measures to the standing crops in these States. Due to prevalence of dry conditions in most of the remaining States of the country, farmers are advised to provide irrigation to the standing summer crops.

Farmers are advised to undertake sowing of summer cotton, transplanting of tomato, chillies, summer rice in Karnataka, sowing of direct seeded rice in Kerala, planting of coconut, arecanut, ginger, turmeric in Tamil Nadu, sowing of summer pulses like mung, urd and nursery sowing of tomato, brinjal and chillies in Madhya Pradesh, sowing of maize, beans, bottle gourd, bitter gourd, cucumber and pumpkin, bhindi, planting of potato, transplanting of tomato, chillies, brinjal, pear, peach, plum and grapevine, mango, guava, litchi, citrus in Jammu & Kashmir, sowing of cucurbits in Manipur, sowing of ladies finger, bottle gourd, pumpkin, ridge gourd, cucumber, bitter gourd and snake gourd in Meghalaya, sowing / planting of jute, elephant foot yam, ginger and turmeric in West Bengal and sowing of summer pulses in Bihar and Jharkhand.

Due to high temperature conditions, there are incidences of stem borer and blast in Andhra Pradesh, leaf spot in banana in Karnataka, leaf folder and stem borer in rice in Kerala, sucking pests in cotton in Tamil Nadu, blast and bacterial leaf blight in rice in Orissa and West Bengal and powdery mildew in mango in Rajasthan. Farmers are advised to undertake appropriate plant protection measures to control the pests and diseases.

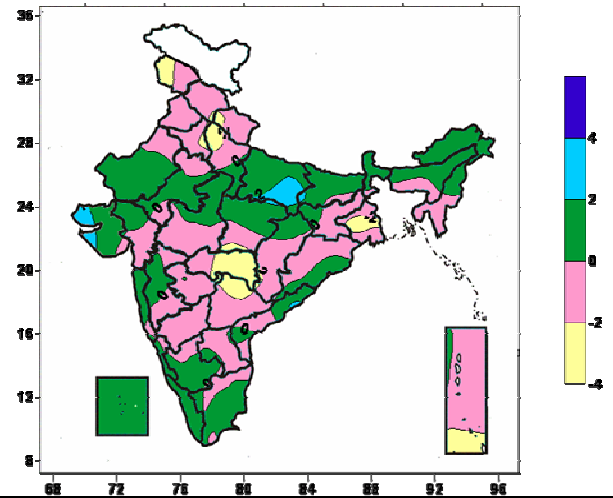
Contour maps (Maximum, Minimum temp. and anomalies) for the week ending 13.04.2011

Actual Mean Maximum Temperature ($^{\circ}\text{C}$) in India for the week ending 13.04.11



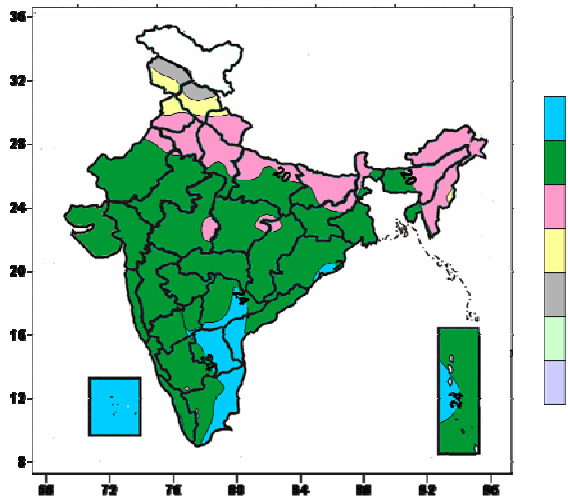
Actual Mean Maximum temperature ranged 38°C and above over most parts of East Uttar Pradesh, Saurashtra, Gujarat, Marathwada, some parts of West Uttar Pradesh, West Rajasthan, Bihar, Jharkhand, Madhya Pradesh, Madhya Maharashtra, Vidarbha, 30 to 34°C over most parts of Uttarakhand, Punjab, Haryana, Delhi, Sikkim, Northeast India except Arunachal Pradesh, Lakshadweep, Andaman & Nicobar Islands, some parts of Himachal Pradesh, West Rajasthan, West Uttar Pradesh, Sub-Himalayan West Bengal, Arunachal Pradesh, Coastal Orissa, Coastal Andhra Pradesh, Tamil Nadu, Kerala, 26 to 30°C over some parts of Jammu & Kashmir, Himachal Pradesh, Arunachal Pradesh, Assam & Meghalaya, Andaman & Nicobar Islands, 22 to 26°C over some parts of Jammu & Kashmir, Himachal Pradesh, Arunachal Pradesh, 18 to 22°C over some parts of Jammu & Kashmir, Himachal Pradesh, 34 to 38°C over remaining parts of the country.

Maximum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 13.04.11



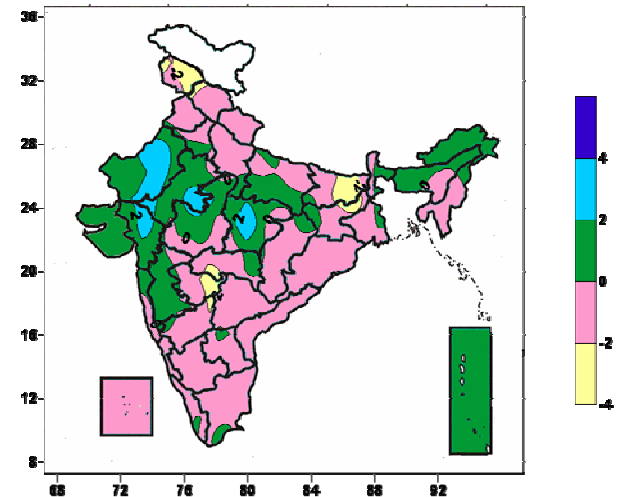
Actual Mean Maximum temperature anomaly ranged between 2 to 4°C over some parts of East Uttar Pradesh, Bihar, East Madhya Pradesh, Saurashtra & Kutch, 0 to 2°C most parts of East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Rajasthan, Gujarat, Saurashtra & Kutch, Madhya Pradesh, Konkan, Tamil Nadu, Kerala, Coastal & South Interior Karnataka, Lakshadweep Islands, some parts of West Uttar Pradesh, Jharkhand, Manipur, Coastal Orissa, Coastal Andhra Pradesh, Rayalaseema, Madhya Maharashtra, -4 to -2°C over some parts of Jammu & Kashmir, Uttarakhand, Haryana, West Uttar Pradesh, Gangetic West Bengal, East Madhya Pradesh, Vidarbha, Telengana, Andaman & Nicobar Islands, -2 to 0°C over remaining parts of the country.

Actual Mean Minimum Temperature ($^{\circ}\text{C}$) in India for the week ending 13.04.11



Actual Mean Minimum Temperature ranged above 24°C over most parts of, Rayalaseema, Lakshadweep Islands, some parts of Coastal Orissa Coastal Andhra Pradesh, Telengana, Tamil Nadu, Andaman & Nicobar Islands, 16 to 20°C over most parts of Punjab, Haryana, Delhi, Uttarakhand, West Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, North East India, some parts of Himachal Pradesh, East Uttar Pradesh, Jharkhand, Madhya Pradesh, Chhattisgarh, 12 to 16°C over some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, 8 to 12°C over some parts of Jammu & Kashmir, Himachal Pradesh, 20 to 24°C over remaining parts of the Country.

Minimum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 13.04.11









Minimum Temperature anomaly ranged between 2 to 4°C over some parts of Rajasthan, Gujarat, Madhya Pradesh, 0 to 2°C most parts of East Uttar Pradesh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Rajasthan, Madhya Pradesh, Gujarat, Saurashtra & Kutch, Gujarat, Andaman & Nicobar Islands, some parts of Haryana, West Uttar Pradesh, West Bengal, Bihar, Jharkhand, Chhattisgarh, Vidarbha, Marathwada, Konkan, North Interior Karnataka, Rayalaseema, Kerala, Tamil Nadu, -4 to -2°C over some parts of Jammu & Kashmir, Himachal Pradesh, Bihar, Jharkhand, Vidarbha, Marathwada, North Interior Karnataka, -2 to 0°C over remaining parts of the Country.

**Distribution of rainfall (% departure from normal) for the districts of Jammu & Kashmir,
Karnataka and Kerala during last Weeks**

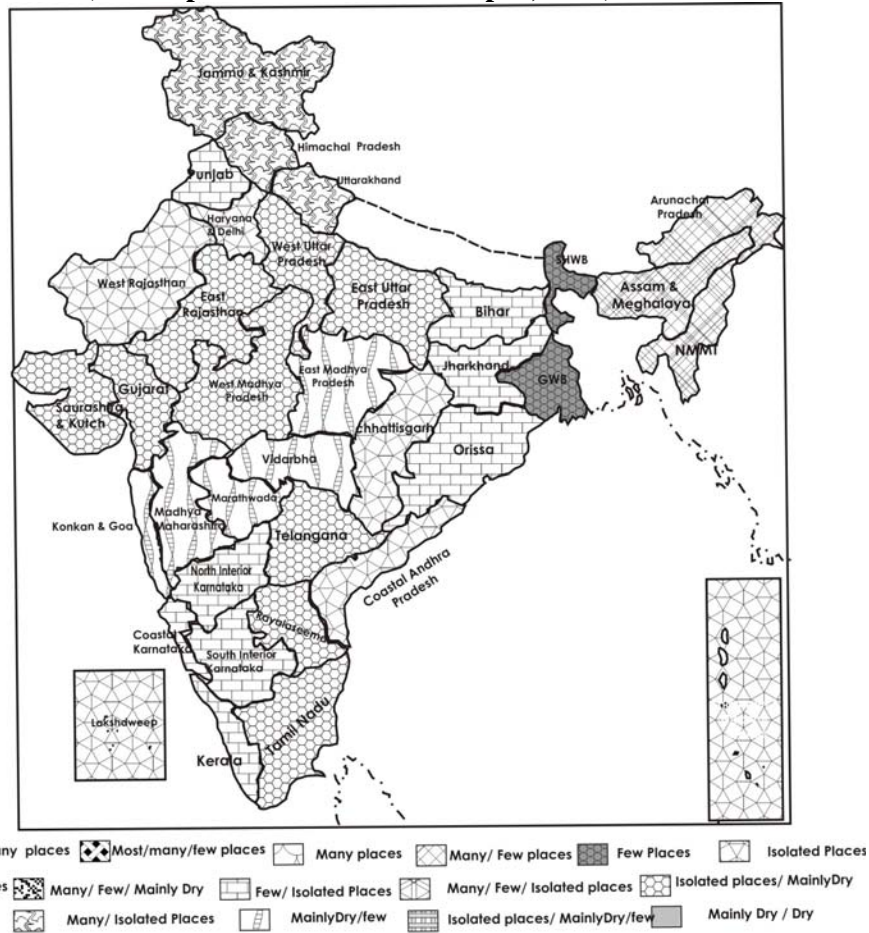
| State/Districts | Actual (mm) | 13.04.11 (% Dep.) |
|---------------------------------|----------------|----------------------|
| Jammu & Kashmir | | |
| Anantnag | 71.3 | 183 |
| Badgam | 18.7 | 21 |
| Doda | 67.4 | 151 |
| Jammu | 8.2 | -5 |
| Kathua | 7.4 | -14 |
| Kupwara | 46.7 | 62 |
| Ladakh(Leh) | 0.0 | -100 |
| Pulwama | 34.2 | 80 |
| Srinagar | 30.8 | 64 |
| Udhampur | 17.2 | -7 |
| Karnataka | | |
| Coastal Karnataka | | |
| Dakshin Kannada | 9.4 | 30 |
| Udupi | 17.5 | 237 |
| Uttar Kannada | 21.9 | 410 |
| South Interior Karnataka | | |
| Bangalore Rural | 1.4 | -80 |
| Bangalore Urban | 0.0 | -100 |
| Bellary | 3.7 | -18 |
| Chamarajnaragar | 0.4 | -97 |
| Chickmagalur | 22.5 | 107 |
| Chitradurga | 0.1 | -97 |

| State/Districts | Actual (mm) | 13.04.11 (% Dep.) |
|--------------------|----------------|----------------------|
| Davangere | 6.2 | 2 |
| Hassan | 20.7 | 118 |
| Kodagu | 13.9 | -28 |
| Kolar | 0.0 | -100 |
| Mandya | 10.3 | 23 |
| Mysore | 1.5 | -88 |
| Shimoga | 21.5 | 252 |
| Tumkur | 11.6 | 97 |
| Kerala | | |
| Alappuzha | 17.4 | -45 |
| Kannur | 0.7 | -94 |
| Ernakulam | 40.8 | 61 |
| Idukki | 21.4 | -28 |
| Kasaragod | 0.0 | -100 |
| Kollam | 16.5 | -48 |
| Kottayam | 7.8 | -78 |
| Kozhikode | 0.0 | -100 |
| Malappuram | 3.5 | -84 |
| Palakkad | 0.0 | -100 |
| Pathanamthitta | 25.6 | -28 |
| Thiruvananthapuram | 28.9 | 8 |
| Thrissur | 0.0 | -100 |
| Wyanad | 13.4 | -28 |

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 16th April, 2011)



Major Feature of Weather Forecast upto 1430 hours IST of 16th April, 2011

- Isolated rain/snowfall would occur over Uttarakhand during next 48 hours and increase thereafter.
- Scattered rain/snowfall would occur over Jammu & Kashmir and Himachal Pradesh on 15th and fairly widespread thereafter.
- Scattered rain/thundershowers would occur over Bihar, West Bengal & Sikkim, northeastern states, Chhattisgarh, Jharkhand and Orissa and isolated over Uttar Pradesh, east Madhya Pradesh and Vidarbha during next 24 hours and increase over northeastern states thereafter.
- Isolated rain/thundershowers would occur over south peninsular India, Lakshadweep and Andaman & Nicobar Islands.
- Isolated duststorms/thundershowers would occur over plains of northwest India on 15th and 16th.

Weather Warning

- Isolated thundersqualls would occur over Bihar, Chhattisgarh, Jharkhand, Orissa and West Bengal & Sikkim during next 48 hours.

Weather Outlook up to 1430 hours IST of 18th April, 2011

- Scattered rain/thundershowers would occur over northeastern states.
- Scattered rain/thundershowers would occur over south Maharashtra, coastal Karnataka, Kerala south Orissa and north coastal Andhra Pradesh.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** No significant rain occurred over the region during last week.
- **Rainfall Forecast:** Scattered rain will occur over the States of the region during next 48 hours. In West Bengal rain may also occur after 48 hours.
- **Advisories:**
 - As no significant rain occurred over the region during last week and no significant 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 crop 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.
 - As there is flower shedding in standing crops which results in poor yield in coastal saline zone of West Bengal due to dry weather and increasing wind speed, farmers are advised to protect the crops by wind breaks.
 - 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 summer pulses in Bihar and Jharkhand.
 - Farmers in West Bengal are advised to undertake field preparation and sowing of jute, elephant foot yam, ginger and turmeric.
 - 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 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 blast and bacterial leaf blight in rice in Orissa and West Bengal, 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:** Tirap and Upper Siang districts of Arunachal Pradesh and Dibrugarh and East Khasi Hills districts of Assam received rain during last week.
- **Rainfall Forecast:** Scattered rain / thundershowers would occur over the States of this region during next 24 hours and increase thereafter.
- **Advisory:**
 - As scattered rain / thundershowers would occur over the States of this region during next 24 hours and increase thereafter, postpone irrigation, intercultural operation and application of fertilizer and plant protection measures to the standing crops.
 - In Assam, sowing of jute, summer vegetables, summer green gram & black gram, nursery sowing and transplanting of *ahu* rice and planting of sugarcane may be continued in this week after current spells of rain.
 - 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 after current spells of rain.
 - Farmers in Manipur are advised to undertake sowing of ginger, turmeric and cucurbitaceous vegetables.
 - 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.
 - Soil and air temperatures are favourable for the attack of stem borer in *boro* rice. If eggs of the pests are noticed, apply Darsban or Monocrotophos @ 2 teaspoon full per 5 litres of water.
 - 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 after current spells of rain.

- 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, Himachal Pradesh and Uttarakhand after 48 hours. Except that mainly dry weather or isolated rainfall is likely in the region.
- **Advisory:**
 - Farmers are advised to undertake harvesting of wheat crop and store it at safer places in plains of northwest India as isolated duststorms/thundershowers would occur on 15th and 16th.
 - As there was no significant rainfall in most of the States in the region and no significant rainfall is likely during next three days, farmers are advised to apply irrigation to standing crop.
 - 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 sowing of maize, beans, bottle gourd, bittergourd, cucumber and pumpkin, bhindi, planting of potato, transplanting of tomato, chillies, brinjal, cabbage, knol-khol, pear, peach, plum and grapevine mango, guava, litchi, citrus in Jammu & Kashmir.
 - Farmers in Rajasthan are advised to undertake sowing cucurbitaceaes 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 10 litres 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 in the states.
- **Rainfall Forecast:** No significant rainfall is during next three days in the region.
- **Advisories:**
 - As there was no significant rainfall in all the states and no significant rainfall is likely during next three days, farmers are advised to apply irrigation to the standing crops.
 - Due to high wind speed conditions prevailing in Coastal Zone of Karnataka, farmers are advised to provide mechanical support to the crops at harvesting stage. Arrange for proper storage facilities for the harvested produce. As there are chances for light rainfall in Northern Transition Zone, farmers are advised to withhold picking / harvesting of cotton, sunflower and jowar.
 - Farmers in Hill Zone of Karnataka are advised to undertake harvesting of sunflower, transplanting of tomato, brinjal and chill and sowing of cotton with irrigation facilities. Farmers in South Transition Zone of Karnataka are advised to undertake transplanting of summer rice.
 - Farmers in Problem Area Zone are advised to undertake harvesting of rice and vegetable crops. Start land preparation for dry / wet seeding of rice.
 - Farmers in Cauvery Delta Zone of Tamil Nadu are advised to undertake harvesting of rice fallow pulses. Farmers are advised to undertake planting of potato in High Altitude Zone and coconut, arecanut, ginger and turmeric in High Rainfall Zone.
 - After the harvest of crops, farmers are advised to undertake deep summer ploughing for moisture conservation and eradication and insect eggs and pupae and soil-borne pathogen.
 - Due to dry weather conditions prevailing in Southern Telangana Zone, there are chances of incidences of sheath blight in rice, early shoot borer in sugarcane, fruit and shoot borer in vegetable crops and bunchy top and rhizome rot in banana. Incidences of attack of stem borer, WBPH/BPH, mites and blast are

reported in rice. Farmers are advised to monitor the crops for the pests and diseases and undertake plant protection measures.

- Due to dry weather conditions, there are incidences of attack of leaf spot in banana in Hill Zone of Karnataka, leaf folder and stem borer in rice in Central Zone in Kerala and sucking pests in cotton in Northwestern and Cauvery Delta Zones of Tamil Nadu. Farmers are advised to monitor the crops for the pests and diseases and undertake plant protection measures.
- **Animal Husbandry:**
- As temperature conditions increase during these days, farmers are advised to keep the animals / birds under proper shelter, and provide cool drinking water.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised rainfall:** Mainly dry weather prevailed in the States of the region during the period.
- **Rainfall forecast:** Scattered rainfall /mainly dry weather would prevail over Maharashtra and isolated /mainly dry weather will prevail over Gujarat region.
- **Advisory:**
 - As there was rain over some parts of Madhya Maharashtra, Marathwada and Vidarbha during last 2-3 days and scattered rain / mainly dry weather is likely during next 2-3 hours, farmers are advised to apply irrigation to standing crops, if required.
 - Untimely rain may damage matured late sown wheat, farmers are advised to complete the harvesting of the already matured crop.
 - 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.
 - As dry condition prevailed during last few weeks and is likely to continue, farmers in Gujarat state are advised to irrigate summer bajra, groundnut, green gram along with other vegetable crops.
 - As temperature is increasing, farmers in North Gujarat Zone are advised to spray 0.1% FeSO₄ @ 100 gram with 10 gram citric acid solution to prevent chlorosis in groundnut crop.
 - Farmers in Gujarat state are advised to cover papaya fruits using gunny bags and provide support to heavy fruiting plants as there may be increase in temperature during next week.
 - As dry weather will prevail, farmers in middle Gujarat region are advised to give top dressing dose of fertilizer with 15 kg (33 kg Urea) recommended for summer pearl millet in presence of optimum soil moisture at 45 days after sowing.
 - Due to cloudy weather there may be incidence of blast disease on rice in South Konkan Coastal Region of Maharashtra. spray 10 g Carbendazim or 25 g copper oxychloride per 10 litres of water.
 - Weather is favourable for incidence of rust and blight disease in summer groundnut in sub montane zone, spray Diathane M-45 @ 2 g/liter of water.
 - There may be incidence of shoot borer in sugarcane in South Madhya Maharashtra, spray Endosulfan 35 EC @ 15 ml in 10 liter of water. Also due to cloudy weather there may be infestation of fruit borer, thrips, white fly, leaf eating caterpillar on tomato crop. For control of sap sucking pest, farmers are advised to spray Imidachloprid @4ml or dimethoate @10ml or Methyl dimeton @ 10 ml per 10 litre of water at an interval of 15 days. For control of fruit borer spray Endosulphan @15 ml or Deltamethrin @ 5ml or Neemark 4% per 10 litre of water at an interval of 15 days.
 - Weather is favourable for attack of leaf rolling caterpillar in groundnut in Madhya Maharashtra region, spray Phosphamidon @ 2.5 ml or Cypermethrin @ 4 ml or Quinolphos @ 20 ml in 10 liters of water.
 - 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.
 - Weather is congenial for infestation of jassids on okra crop in Middle Gujarat region. Spray Dimethoate @ 10 ml or Phosphamidon @ 3 ml in 10 litre of water.
 - Stages of major crops are mentioned in Annexure I.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** No significant rainfall occurred in the states.
- **Rainfall Forecast:** Either dry weather or isolated rain is likely over Madhya Pradesh. Scattered rainfall is likely during next 48 hours in Chhattisgarh. Isolated thunder squall would occur in 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.
 - Due to prevailing dry weather conditions, evaporation rate is increasing in Chattisgarh Plane zone of Chattisgarh, farmers are advised apply irrigation in summer vegetables, rice, groundnut as well as sunflower.
 - 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.
 - Farmers in Satpura Plateau Zone and Nimar Valley Zone of Madhya Pradesh are advised to undertake planting / sowing of summer sugarcane, fodder maize, fodder jowar, fodder bajra and other summer vegetables.
 - In Vindhya Plateau Zone of Madhya Pradesh, farmers are advised to sow moong and urad and nursery sowing of tomato, brinjal and chilli. Undertake propping of sugarcane and also apply mulching.
 - 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.
- **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 (maturity / harvesting), 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 (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 (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 (dough / harvesting), *rabi* potato (tuberization / early maturity), ginger (harvesting), *rabi* seed potato, maize (sowing / germination / early vegetative), summer potato (sowing / germination) in Sikkim.

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

- Sugarcane (planting / cane development), *boro* rice (panicle initiation / flowering / grain formation), *bau* rice (sowing), normal *ahu* rice (nursery raising / transplanting), wheat (grain maturity), early *ahu* rice (tillering / panicle initiation), jute (sowing / seedling / early vegetative), summer vegetables (sowing / vegetative / flowering / fruiting), summer sesame (early vegetative / vegetative / flowering) 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 / flowering) and *boro* rice (panicle initiation / flowering / grain formation) in Tripura.
- *Boro* rice (panicle initiation / flowering), *ahu* rice (nursery sowing / seedling / transplanting / early tillering), *rabi* maize (vegetative), wheat (grain maturity), winter potato (tuber maturity), winter

potato at high altitude (harvesting) and summer vegetables (sowing / vegetative / flowering) 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 (maturity), rice fallow cotton (vegetative / flowering), rice fallow pulses (harvesting), maize (harvesting), sorghum (harvesting), groundnut (harvesting), cotton (vegetative/ boll formation/ boll maturity), vegetables (vegetative/fruited), sugarcane (vegetative/ grand growth phase) in Tamil Nadu.
- Sugarcane (ratooning/vegetative), groundnut (pod maturity), pigeon pea (harvesting), bitter melon (fruiting / harvesting), cotton (boll development/ picking), sunflower (maturity), safflower (flowering), rice (tillering), *rabi* jowar (harvesting), mango (fruiting/maturity), summer green gram (harvesting) and blackgram (harvesting) in Karnataka.
- Bengal gram (maturity), rice (grain formation/ maturity), red gram (maturity), sunflower (seed development), groundnut (pod development / maturity) in Andhra Pradesh.
- Vegetables (harvesting), rice (maturity / harvesting), arecanut (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* (sprouting / early growth), summer paddy(panicle initiation / flowering / grain formation in Konkan and tillering in East Vidarbha), groundnut(pegging / pod development in Konkan & flowering/pegging in other divisions), sunflower (vegetative growth / floral bud initiation), maize(vegetative growth / tasseling & silking), bajra(flowering / grain formation), in Maharashtra.
- Summer bajra (booting), brinjal and tomato (fruiting / harvesting), green gram (flowering/pod formation), 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 *ahu* rice: Banglami, Puthichapali, Nilajee, Hasakumra, Dimru, Maibi, Jaya and IR-50.

***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: Kiyan

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

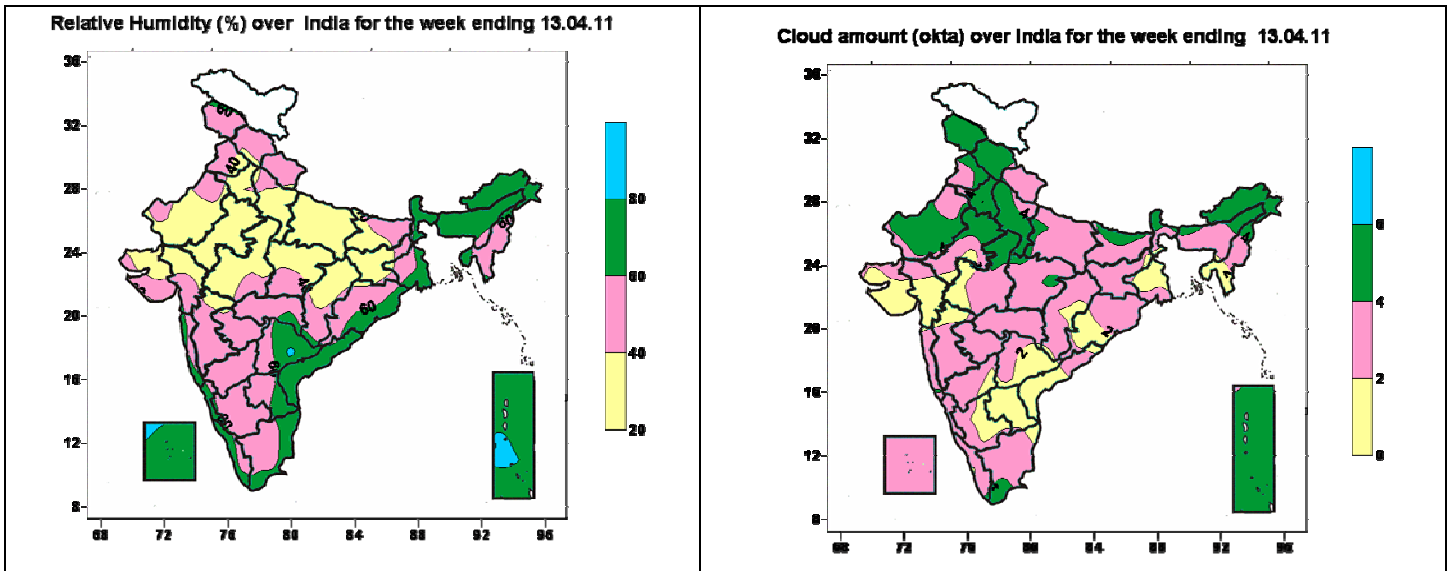
Cotton : improved varieties : RG-8, RG-18, hybrid varieties : Raj D.H.-9

Madhya Pradesh

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

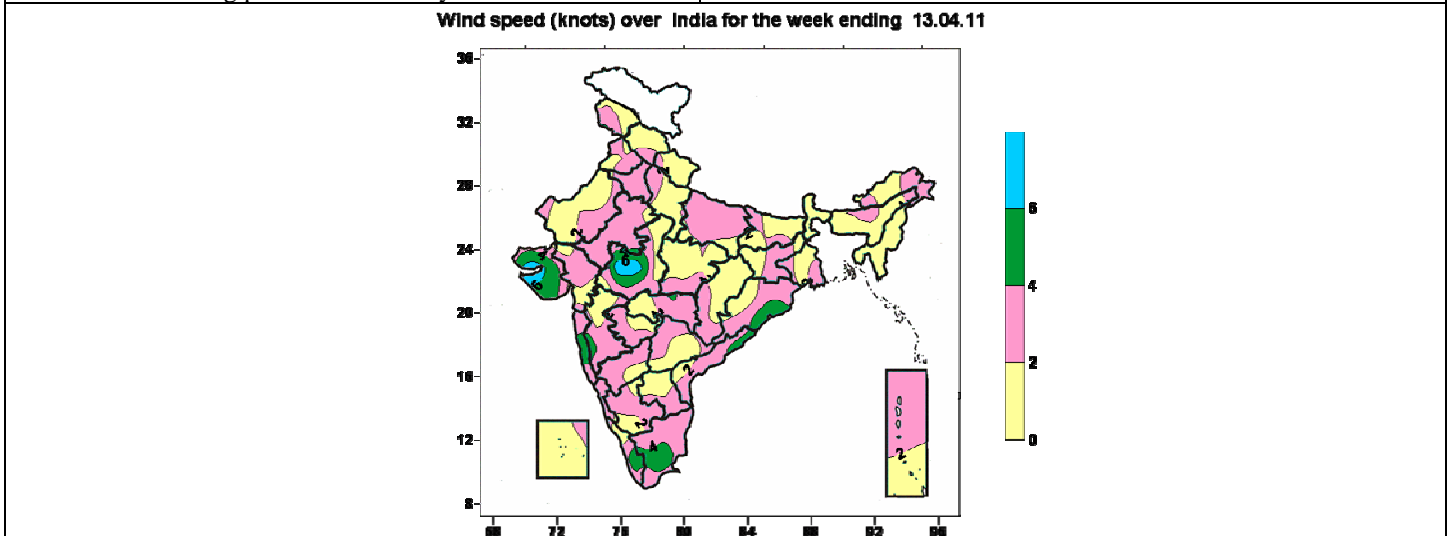
Annexure III

Contour maps (Relative humidity, Cloud amount and Wind Speed) for the week ending 13.04.2011



Relative humidity 80% and above over some parts of Telengana, Lakshadweep, Andaman & Nicobar Islands, 60 to 80% most parts of Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh, Tripura, Coastal Orissa, Coastal Andhra Pradesh, Telengana, Kerala, Coastal Tamil Nadu, Coastal Karnataka, Konkan & Goa, Lakshdweep, Andaman & Nicobar Islands, some parts of Gangetic West Bengal, Chattisgarh, Vidarbha, Rayalaseema, 20 to 40% over most parts of Haryana, Delhi, Uttar Pradesh, Rajasthan, Bihar Jharkhand, Madhya Pradesh, Chhattisgarh, North Gujarat, Saurashtra, some parts of Himachal Pradesh, Punjab, Uttarakhand, Orissa, Madhya Maharashtra, 40 to 60% over remaining parts of the country.

Cloud amount 4 to 6 okta over most parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Delhi, Rajasthan, West Uttar Pradesh, Sikkim, Arunachal Pradesh, Andaman & Nicobar Islands, some parts of East Uttar Pradesh, Bihar, Assam & Meghalaya, Nagaland, Madhya Pradesh, Tamil Nadu, 0 to 2 okta over most parts of Gangetic West Bengal, Mizoram, Tripura, Gujarat, Saurashtra & Kutch, Andhra Pradesh, some parts of East Rajasthan, Jharkhand, Orissa, Chhattisgarh, West Madhya Pradesh, Madhya Maharashtra, North & South Interior Karnataka, 2 to 4 okta over remaining parts of the country.



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