

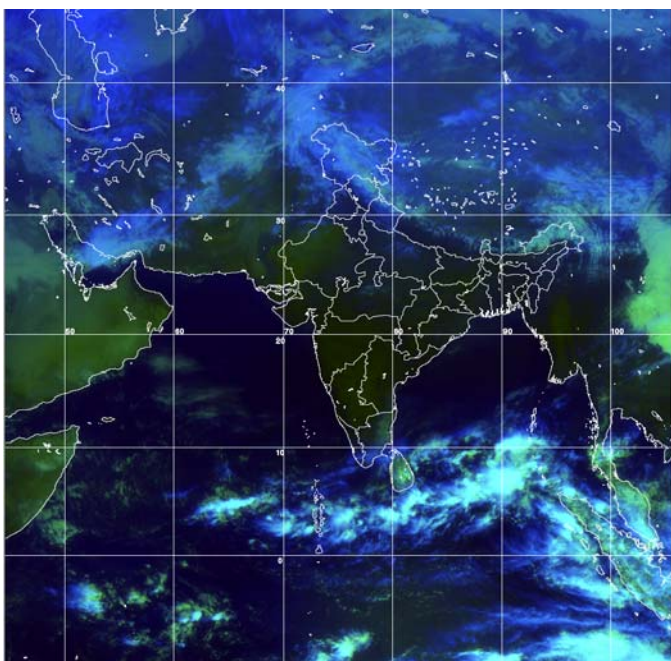


# National Agromet Advisory Bulletin

Thursday, 27<sup>th</sup> January, 2011

(For the period 27<sup>th</sup> to 31<sup>st</sup> January, 2011)

Satellite image 0600 UTC Dated  
28<sup>th</sup> January, 2011



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## Executive Summary

Mainly dry weather prevailed over the country during last week. Minimum temperatures have been observed between 5-10°C over most parts of northwest India and 11-15°C over central, east and northeastern States and above 16°C over remaining parts of the country. They are above normal by 2-3°C over parts of east India and extreme south peninsula and near normal over rest of the country.

In Faridkot division of Punjab, due to low temperature conditions standing *rabi* crops suffer from cold injury; farmers are advised to apply frequent and light irrigation to protect the crops. In Gurdaspur and Hoshiarpur divisions, light irrigation may be applied by sprinklers in vegetables particularly in brinjal, tomato, chillies and early sown cucurbits to protect against cold injury.

Scattered rain / snow would occur over Jammu & Kashmir and isolated over Himachal Pradesh and Uttrakhand on 28<sup>th</sup> January and increase thereafter. Farmers in these states are advised to monitor the crops and arrange for smoke around the field to manage low temperature effect on crops.

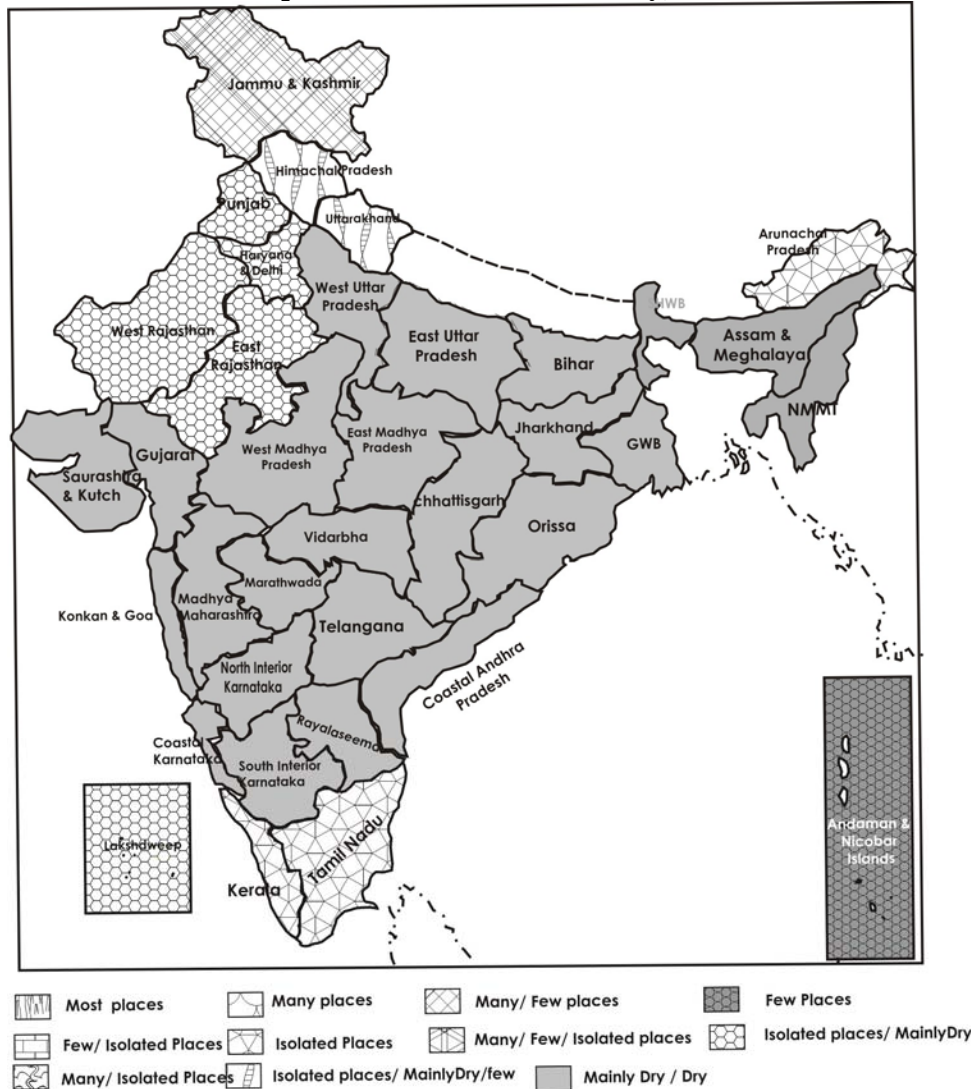
As dry weather is likely to prevail over remaining parts of the country, farmers are advised to complete intercultural operations utilizing the favourable weather conditions. Harvesting of crops may be undertaken during the next three days.

Tomato may be adversely affected due to low temperature in Meghalaya. Apply irrigation to the crops or arrange for smoke around the field to save the crops. Early harvesting may also be useful for saving the crop.

Weather condition is favourable for sowing of summer groundnut in North Saurashtra region of Gujarat, potato in mid hills and lower regions in Himachal Pradesh, cucurbitaceous, leafy and summer vegetable crops in Chattisgarh Plain Zone, sunflower and groundnut in Karnataka and rice fallow pulses like black gram and green gram in Tamil Nadu. Farmers are advised to undertake land preparation and sowing of the crop.

Due to congenial weather conditions there are incidences of bacterial leaf blight and bacterial leaf streak in rice in Cauvery Delta Zone and gall midge infestation in rice in North Western Zone in Tamil Nadu, aphids in oilseed crops in Orissa, Bihar, Jharkhand and Chhattisgarh Plain Zone in Chhattisgarh and *Heliothis* in red gram in South Saurashtra Zone in Gujarat. Farmers are advised to adopt appropriate plant protection measures to avoid severe crop damage.

## Weather Forecast (Valid upto 1430 hours of 30<sup>th</sup> January, 2011)



### Major Feature of Weather Forecast (upto 1430 hours IST of 30<sup>th</sup> January, 2011)

- Scattered rain/snow would occur over Jammu & Kashmir and isolated over Himachal Pradesh and Uttarakhand on 28<sup>th</sup> and increase thereafter.
- Isolated rain/thundershowers would occur over parts of plains of northwest India from 29<sup>th</sup> onwards.
- Fairly widespread rain/thundershowers would occur over Andaman & Nicobar Islands and isolated over Arunachal Pradesh and extreme south Peninsular India.
- No significant change in minimum temperatures over northwest and adjoining central India during next 24 hours and rise by 2 - 3°C thereafter.
- Mainly dry weather would prevail over plains of west and central India.

### Weather Outlook (upto 1430 hours IST of 1<sup>st</sup> February, 2011)

- Isolated rain/snow would occur over western Himalayan region and isolated rain/thundershowers over northeastern States.
- Fog condition may occur over parts of plains of northwest India.

## Zonewise Agromet Advisories

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

- **Realised Rainfall:** Weather remained mainly dry during the week in the States of the region.
- **Rainfall Forecast:** Dry or mainly dry weather is likely to prevail during the period over the States of the region.
- **Major Crops:**
  - Tobacco (harvesting), radish (sowing / vegetative), gram (pod formation), mustard and sarson (pod formation), wheat (tillering), maize (vegetative / tasseling / silking), potato (vegetative / tuber initiation / tuber formation), vegetables like cauliflower, cabbage (vegetative / head formation), chillies, tomato (vegetative / flowering / fruiting / harvesting), palak, carrot, radish etc. (vegetative), knoll khol, turnip, beet, garlic, onion etc. (vegetative), barseem, lucerne, oat (vegetative), coriander, fenugreek (vegetative), summer vegetables like bhindi, bitter gourd, sponge gourd, pumpkin, cucumber etc. (sowing) in Bihar.
  - Arhar and green pea (pod formation), wheat (tillering), potato (tuber formation / early maturity), *toria*, mustard (pod formation), lentil, gram (pod formation), onion (vegetative), tomato (vegetative / flowering / fruiting), cabbage and cauliflower (vegetative / head formation), chilli and brinjal (transplanting / early vegetative), summer rice (transplanting), summer vegetables (sowing) in Jharkhand.
  - Cotton (maturity / picking), *rabi* rice (transplanting), maize (sowing / vegetative), groundnut (sowing), sunflower (sowing), *rabi* vegetables (vegetative / flowering / fruiting / harvesting), *rabi* oilseeds like groundnut, mustard and sunflower (pod formation), arhar (pod formation), wheat (tillering), potato (tuber initiation / tuber formation), *rabi* pulses like lentil, field pea and chickpea (pod formation), sugarcane (harvesting), garlic (sowing) in Orissa.
  - *Boro* rice (transplanting), wheat (tillering / ear initiation), arhar (pod formation), mustard (pod development), potato (tuber initiation / tuber formation), lentil, pea, Bengal gram (pod formation), *rabi* vegetables like cabbage and cauliflower (vegetative / head formation) in West Bengal.
  - Large cardamom (vegetative lag phase), orange (end harvesting), wheat (tillering / active tillering / flowering), *rabi* potato (tuberization), ginger (harvesting), *rabi* vegetables (vegetative / flowering / fruiting / harvesting) mustard (siliqua formation / seed formation / seed maturity) in Sikkim.
- **Advisories:**
  - As there was no significant rainfall during last week in the region and no significant rainfall is likely during next three days, farmers are advised to apply irrigation at tillering stage of wheat and light and frequent irrigation to potato.
  - In Orissa, if the rice seedlings are already ready, transplanting may be undertaken. The weather is also optimum for nursery raising and sowing of ragi and also land preparation and sowing of summer groundnut and sunflower.
  - Weather is congenial for transplanting of onion seedlings in prepared field in North West Alluvial Plain Zone and South Bihar Alluvial Zone in Bihar. Prepare the field for sowing of summer vegetables crop like bhindi, bitter gourd, sponge gourd, pumpkin, cucumber etc. and start transplanting the seedlings of *boro* rice in main field. Also prepare land for spring season sugarcane and summer vegetable in North East Alluvial Zone of Bihar.
  - Farmers in West Bengal are advised to undertake field preparation for sowing of groundnut and sunflower.
  - Farmers are advised to undertake the transplanting of *boro* rice in Jharkhand and New Alluvial Zone of West Bengal as the cold wave is no longer continued. Due to late night and morning low temperature, apply water in the field at night and draining the water in the next morning to protect seedlings from being yellowish.
  - Suitable varieties of the crops for sowing or transplanting are mentioned in Annexure I.
  - In the prevailing weather condition aphid infestation may be high in mustard crop in New Alluvial zone of West Bengal. Spray 1.5 ml Metasystox per litre of water to control the insect.
  - Apply irrigation during ear initiation of late sown wheat in New Alluvial zone of West Bengal. Weather is congenial for the attack of rust and blight diseases in wheat crop; spray Mancozeb @ 2.5 to 3 g per litre of water and collect the infected seeds and burn them. Under present weather situation, attack of downy mildew may occur in onion; apply 2 g Mancozeb or 2 g Ridomil per litre of water. Due to forecasted weather condition, attack of downy mildew may be prevalent in pointed gourd; apply 2 g Crilexyl or Ridomil per litre of water during late afternoon.

- Aphid infestation is likely to increase during next few days in Bihar; spray Metacystox @ 2 ml per liter of water to control aphids in last sown oilseed crops.
- Due to favourable weather, insect attack and powdery mildew disease may appear in field pea and aphids in mustard in South Eastern Plateau Zone and pod borer in lentil, gram and pea in Western Plateau Zone of Jharkhand; spray Karathen @ 1 ml or sulfex @ 3 ml per litre of water in field pea, Methyl Demitone or Rogor (Dimethoate) @ 1 ml per liter mixed with teepol @ 5 ml per litre in mustard and Monocrotophos @ 1 ml per litre of water in lentil, gram and pea to manage the infestation.
- Due to foggy weather, incidence of aphids is observed in mustard in Orissa; spray Imidacloprid @ 0.5 ml per litre or Metasyatox @ 2 ml per litre of water for controlling aphids.
- Animal Science
  - Calf and kids are susceptible to respiratory infection mostly pneumonia and poultry birds are prone to respiratory infection and CRD (Chronic Respiratory Diseases) during this period; provide warm and comfortable housing to animals in North Eastern Coastal Plain Zone of Orissa.
  - During the prevailing weather condition, cattles may suffer from FMD or Chapka disease in Western Plateau Zone of Jharkhand. Farmers are advised to wash the mouth and tongue of the infected animals with Baking soda. Tongue may be wetted with Boro glycerine, wash the wounds of the feet regularly with water (boiled water with neem leaves).

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

- **Realised Rainfall:** No significant rainfall occurred during last week in most of the districts of the States of the region.
- **Rainfall Forecast:** Mainly dry weather will prevail or isolated rain will occur over the States of the region during the period.
- **Major Crops:**
  - *Rabi* vegetables (flowering / fruiting / harvesting), cole crops like cauliflower and cabbage (vegetative / head formation), sugarcane (cane development), potato (tuber initiation / tuber formation), rapeseed & mustard (pod formation / seed formation), *boro* rice (seedling / transplanting) and wheat (tillering) in Assam.
  - *Rabi* vegetables like cauliflower, cabbage (head formation / maturity), tomato (flowering / fruiting), pea (pod formation / maturity), maize and potato (vegetative), mustard (flowering / siliqua formation) and orange (maturity) in Arunachal Pradesh.
  - *Toria*, lentil (pod formation), *rabi* vegetables (vegetative / flowering / fruiting) and *boro* rice (transplanting) in Tripura.
  - *Boro* rice (seedling / transplanting), *rabi* vegetables (vegetative / flowering / fruiting / harvesting), rapeseed and mustard (flowering / pod filling stage), *rabi* maize (vegetative), *rabi* maize at medium and low altitudes (harvesting), wheat (tillering), winter potato (vegetative / tuber initiation / tuber formation), winter potato at high altitude (harvesting) in Meghalaya.
  - Mustard / rapeseed (vegetative / flowering / pod formation), field pea (vegetative / flowering), onion (vegetative), cauliflower and cabbage (vegetative / head formation) and potato (vegetative / tuber initiation) in Manipur.
  - Khasi Mandarin (vegetative), banana (vegetative), onion (vegetative), pea (vegetative / flowering / pod formation), beans (flowering / pod formation / harvesting), carrot and radish (vegetative / harvesting), tomato, chilli and capsicum (late transplanting / vegetative / flowering / fruit setting), cole crops (vegetative / head formation), ginger, turmeric (harvesting) and maize (cob formation / maturity) in Mizoram.
  - Potato (tuber initiation / tuber formation), pea (flowering / pod formation / maturity), mustard (flowering / pod formation), *toria* (pod formation / maturity), and papaya (fruiting) in Nagaland.
- **Advisory:**
  - As there was no significant rainfall in the region during last couple of weeks and no significant rain is likely to occur, farmers are advised to apply irrigation to the standing crops. Undertake intercultural operations, application of fertilizers and pesticides taking the advantage of dry weather conditions prevailing during these days.
  - Apply irrigation to rapeseed and mustard, *rabi* pulses, *rabi* vegetables and at tillering stage of wheat in Assam. Weeding and top dressing of urea in wheat should precede irrigation. Farmers are also advised to apply light and frequent irrigation to potato.

- Farmers in Assam, Tripura and Manipur are advised to undertake transplanting of *boro* rice wherever seedlings are ready.
- Tomato may be adversely affected due to frost in Meghalaya. Apply irrigation to the crops or arrange for smoking around the field to save the crops. Early harvesting may also be useful for saving the crop.
- Taking the advantage of prevailing dry condition, weeding, top dressing and earthing up may be done in *rabi* maize in Ri-bhoi, East Khasi and South Garo District.
- Due to reduced moisture, condition is favourable for cracking in banana in Mizoram. The cracking may be minimized by proper mulching and nutrient management especially application of boron. As maize crops are also critical to moisture and nutrients, ensure the irrigation and nutrient management for high yield and to attain full length of cob with good quality grains.
- As per forecasted high wind speed, farmers in Mizoram are advised to support banana plant against high wind with two bamboos in the way of 'X' shape.
- In tomato in Mizoram due to reduction of soil moisture, availability of calcium may be affected which leads to flower drops and rotting of fruits. Farmers are advised to ensure weekly irrigation for optimum fruit setting.
- With the residual soil moisture, transplanting of tomato may be undertaken in Manipur. Arrange for smoke around the field in the evening, if there is occurrence of frost in upland condition.
- As the weather is favourable for bacterial and viral diseases in brinjal and tomato in Lower Brahmaputra Valley Zone of Assam, remove the plants affected by bacterial wilt and drench root zone of unaffected plants with mixture of 1g Hing + 5 g Turmeric in 10 litres of water.
- Attack of cut worm and aphids in *toria* is still persisting in different places of Nagaon and Marigaon districts in Assam. Farmers are advised to apply Dimethoate 30 EC or Chloropyrifos 20 EC @ 1 ml per litre of water during afternoon hours to control aphids.
- Incidence of late blight is noticed in winter potato in Meghalaya. To control late blight in potato, spraying of Indofil-M-45 @ 2 - 3 g / litre of water or Ridomil-Z-78 @ 2 - 3 g / litre of water may be done at the interval of 15-20 days.
- Leaf folder may appear in pea in Ri-bhoi or East Khasi hill districts of Meghalaya due to favourable weather condition. If it appears, Malathion 56 EC may be sprayed @ 2 ml / litre of water.
- Present weather conditions are favourable for incidence of leaf miner in Khasi Mandarin in both nursery and main fields in Mizoram. Spray crop with imidacloprid @ 0.05%.
- Prevailing weather is favourable for infestation of powdery mildew in pea in Mizoram; spray Karathane @ 250-300 ml / ha or Suflex @ 1-1.5 kg / ha in 800 litres of water to control.
- Fluctuation of temperature from low to high with foggy weather at morning and evening and low night temperatures are the most favourable for the incidence of late blight in tomato and chilli crops in Mizoram. Farmers are advised to spray Mancozeb @ 1 g per litre of water at 10-15 days intervals when disease appears.
- Past weather and forecasted weather as well as stage of crop are favourable for the chances of incidence of fruit borer in tomato in Mizoram. Properly control the pests like diamond back moth, aphids and thrips using 5 % neem extract or spraying Endosulphan (35%) @ 12 ml or Dimethoate (30%) @ 10 ml in 10 litres of water.
- Monitor the mustard crop in Nagaland against incidence of white rust as the weather conditions are favourable for its incidence. Apply appropriate plant protection measures on appearance of the disease.
- **Animal Husbandry:**
- In present weather conditions provide proper lighting to keep chicks warm and also provide lukewarm water fortified with Vitamin B complex in Arunachal Pradesh. Warm clean drinking water should also be ensured to the cattle round the clock and water troughs/feeders should be regularly cleaned. Avoid dampness in the shed and put animals in the sunshine during the morning hours.
- Present cold weather condition is favourable for the chances of pneumonia in newly born calves in Mizoram. Therefore, special care should be taken to avoid cold weather. Also keep the animals in dry place and change the bedding material when it gets wet.



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

- **Realised Rainfall:** No significant rain is occurred in the States of the region.
- **Rainfall Forecast:** Rain is likely at isolated / few places in Uttarakhand, Himachal Pradesh and at a few / many places in Jammu and Kashmir after 24 hours. Either dry / mainly dry weather will prevail or isolated rain will occur in remaining States of the region.
- **Major Crops:**
  - Wheat (tillering), mustard, pea and gram (flowering / pod formation), broccoli, cauliflower, cabbage and onion (vegetative) and lentil (vegetative / pod formation) in Delhi.
  - Wheat (tillering), potato (vegetative / tuber formation), vegetables (vegetative / flowering / fruiting), garlic (planting) in Himachal Pradesh.
  - Gram (late vegetative / flowering), berseem / oats (vegetative), wheat, barley (tillering), toria (pod formation / maturity / harvesting), mustard (late vegetative / flowering), vegetable crops like tomato, chilli, brinjal, cucurbits (vegetative / flowering), onion (vegetative) in Jammu & Kashmir.
  - Sugarcane (maturity / harvesting), wheat (tillering / ear head emergence stage / grand growth), potato (tuber initiation), toria (maturity / harvesting), mustard (flowering / pod formation), barley (tillering), lentil, gram, garlic, seasonal vegetables (vegetative / flowering), onion (vegetative), pea (flowering / pod formation in hill zone), chilli, tomato (sowing / transplanting), lahi (flowering / fruiting) in Uttarakhand.
  - Sugarcane (tillering / grand growth / maturity), barseem (vegetative), wheat (tillering / elongation), barley (heading), lentil, gram, raya, African sarson (vegetative / late vegetative / branching), radish (vegetative), ghobi sarson (vegetative), oilseeds (flowering), *toria* (harvesting), papaya, onion (transplanting) in Punjab.
  - Sugarcane (harvesting), wheat (tillering), berseem (vegetative), gram, rapeseed, mustard (pod formation / seed development) in Haryana.
  - Wheat (tillering), barley, oats (vegetative / tillering), bajra (flowering / milk), *toria* (flowering / pod formation), mustard, sarson (flowering / pod formation), potato (vegetative / tuber formation), field pea, chick pea, lentil, linseed (late vegetative / flowering), winter sugarcane (vegetative), sugarcane (maturity / harvesting), winter vegetables like carrot, garlic, onion (vegetative), cabbage, cauliflower, pea etc. (vegetative / flowering / fruiting) in Uttar Pradesh.
  - Sugarcane (grand growth / maturity / harvesting), winter sugarcane (initial growth), wheat (tillering), oats, barley (tillering), taramira, mustard (flowering / pod formation), gram (pre-flowering / flowering), lentil (vegetative / flowering), ajwain, fenugreek and isabgol (vegetative), potato (tuberization), cabbage, cauliflower (late vegetative / head formation), tomato, berry (flowering/ fruiting) in Rajasthan.
- **Advisory:**
  - In Faridkot division of Punjab, due to low temperature conditions standing *rabi* crops suffer from cold injury; farmers are advised to apply frequent and light irrigation to protect the crops. In Gurdaspur and Hoshiarpur divisions, light irrigation should be given by sprinklers in vegetables particularly in brinjal, tomato, chillies and early sown cucurbits to protect against winter injury.
  - Scattered rain / snow would occur over Jammu & Kashmir and isolated over Himachal Pradesh and Uttarakhand on 28<sup>th</sup> January and increase thereafter. Farmers in these states are advised to monitor the crops and arrange for smoke around the field to manage low temperature effect on crops.
  - In Central Plain Zone of Uttar Pradesh, due to cold weather flower drops are reported in mustard, field pea and pigeon pea wherever these crops are at flowering stage. Give frequent and timely irrigation to the vegetable crops like tomato, pea, chilli, brinjal etc. to protect from cold / frost injury. Farmers in Bundelkhand zone of Uttar Pradesh are advised to start sowing of vegetables like ladies finger, cucurbits, cucumber etc. which are sown as *Zaid* crop.
  - Farmers in Himachal Pradesh are advised to undertake sowing / planting of potato, nursery sowing of mirch and bringal in mid hills and lower regions.
  - Farmers in Delhi are advised to apply irrigation and undertake intercultural operations for vegetables, chili, tomato and brinjal crop in poly house.
  - Taking the advantage of dry weather farmers in Bhabar and Terai Zone in Uttarakhand are advised to complete harvesting operations of matured *toria*, mustard, potato and sugarcane during this week. Land preparation for sowing of sunflower, tomato, capsicum etc. may also be undertaken. Farmers in Hill Zone are also advised to prepare land for sowing of potato, tomato and cauliflower.

- Weather conditions is favourable for late blight in Tomato of Bhabar and Terai Zone in Uttarakhand hence, farmers are advised to spray Indophil M-45 @2 g per liter of water and stop irrigation and also incidence of Aphid insects is possible in mustard crop, if the population of these insects is 8 insects per plant then spray 250 ml of Metasystox dissolved in 250 liter water per acre crop area during afternoon when honey bean have returned back.
- In mid hills sub-humid zone of Himachal Pradesh the downy mildew is expected in cruciferous vegetables, farmers are advised to spray redomil M-Z @ 25 g per litres of water at 15 days interval.
- There is possibility of white rust and *Alternaria* blight in mustard and blight incidence in potato in Eastern Zone of Haryana, Jammu & Kashmir, Rajasthan and U.P. In alternaria blight and white rust diseases on rapeseed and mustard in Jind, Gurgaon and Faridabad districts of Haryana, Delhi, farmers are advised to spray Dithane-M 45 or Endofil-M 45 or Mencozeb @ 600 gm in 250-300 litre water per acre and repeat after 15 days if required.
- The climatic conditions are favourable for the incidence of yellow rust in wheat in Gurdaspur & Hoshiarpur districts of Punjab State. Farmers are advised to monitor the symptoms of the disease (yellowish pustules in lines on upper side of the leaves). Spray Tilt 25 EC (Propiconazole) @ 200 ml in 200 liters of water / acre.
- Aphids attack in mustard crop in Banswara of Rajasthan is reported and may spread in Bharatpur and Jaipur division of Rajasthan; farmers are advised to spray Malathion 50 EC @ 1.25 l/ha or Dimethoate 30 EC @ 1 l/ha.
- There is also possibility of pod borer in gram so application of methyl parathion 2% @ 25 kg per ha should be done. Where water facility is available spray of Endosulphan 35 EC @1.25 litre or monochrotophos 36 SL @ 1 litre should be done. In pea spray of Endosulphan 35 EC @1.5ml or Melathion 50 EC @ 1 ml per litre of water should be done for the control of pod borer.
- In view of rise in temperature garlic & onion crop is likely to be affected by thrips insect attack. This insect suck the sap of leaves and causes white blotching on leaves. To control this insect farmers in Ajmer and Jaipur div. of Rajasthan are advised to spray Methyl dematon 25 EC or Melathion 50 EC @ 1.0 ml per litre water.
- Weather is congenial for saw fly or flea beetle in mustard crop under such situations in Jammu division. Farmers are advised to spray the crop with Malathion 50EC @ 0.05%.
- In Rajouri district of Jammu division, rogue out loose smut effected plants. For flag smut, rogue out plants showing black spores or bleached spots on leaves. This is also the right time for organizing a rat control campaign.

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

- **Realised Rainfall:** Mainly dry weather prevailed during last week in the States of the region.
- **Rainfall Forecast:** Dry or mainly dry weather is likely to prevail during the next three days over the States of the region except Tamil Nadu and Kerala where rainfall is likely to occur at isolated places.
- **Major Crops:**
  - Coconut, pepper and arecanut (harvesting), vegetables (vegetative), *puncha* rice (vegetative / tillering) in Kerala.
  - Rice (grain development / harvesting), maize (flowering to maturity), pulses (pod initiation / pod development), groundnut (vegetative), cotton (maturity), sugarcane (vegetative), maize (cob development) in Tamil Nadu.
  - Bengal gram (pod development to maturity), rice (tillering), red gram (pod formation), mustard (flowering / siliqua development), sunflower (flowering / seed development stage), groundnut crop (pegging / pod developmental) in Andhra Pradesh.
  - Sugarcane (planting), cotton (square to boll formation), Bengal gram (pod filling), jowar (milking), safflower (flowering), rice (harvesting), sunflower (harvesting), vegetables (flowering / fruiting), summer maize (sowing), mango (flowering) in Karnataka.
- **Advisories:**
  - As there was no significant rainfall in most of the region, farmers are advised to apply irrigation to the standing crops.
  - In Southern Transition Zone of Karnataka, farmers are advised for sowing of summer maize and advised to apply zinc sulphate @ 10 kg / ha before sowing.



- In Hill Zone of Karnataka, farmers are advised to undertake land preparation for sowing of sunflower and groundnut.
- In central dry zone of Karnataka, after harvest of rice where there is no residual moisture in the field, farmers can undertake deep ploughing so that the soil pathogens will die and in turn it will help to reduce pest incidence for the next rice crop.
- As the minimum temperature is low in central dry zone of Karnataka, arecanut may be adversely affected. To avoid the adverse effect, it is advised to apply irrigation. Before irrigation, 100 g urea and 100 g DAP may be applied to each tree.
- To avoid frost injury in tea in High Altitude Hilly Zone in Tamil Nadu, sprinkler irrigation for a short period of time in the early morning is recommended.
- Due to no rains for the coming four days, farmers of Eastern Dry Zone of Karnataka are advised to take up the threshing of late sown crops. Under protective irrigated condition go for sowing of rabi crops.
- In *Samba* rice field of Cauvery Delta Zone of Tamil Nadu, it is the right time to sow rice fallow pulses. Black gram varieties like ADT-3 and ADT-4 and green gram variety like ADT-3 are suitable under rice fallow condition. In paddy fields where there is no residue moisture, farmers can take up deep ploughing so that the soil pathogens will die and in turn it will help to reduce pest incidence for the next paddy crop.
- Present high humid conditions in Scarce Rainfall Zone of Rayalaseema were congenial for the incidence of late leaf spot and rust in groundnut crop. Control measures are not advised since the incidence is below economic threshold level. Dry weather prevailing since last month were favourable for the incidence of sucking pests especially thrips. To control, spray acephate @ 1.5g or acetamiprid @0.2 g per litre of water
- Corinospora leaf spot may appear due to change in weather conditions in Krishna Godavari Zone and it can be managed by spray with 3 g rams of copper oxychloride or 2.5 grams of mencozeb per liter of water with uniform crop coverage. Due to coincidence of flowering with fog, possibility of smut disease on rice, it can be managed by the spraying with 1 ml propiconozol or 1 gm of corbondonzim 2.5gm of coperoxi chloride in 1 liter of water.
- In Scarce Rainfall Zone of Rayalaseema of Andhra Pradesh, present weather conditions are favourable for the incidence of hoppers and powdery mildew and sucking pests in fruits; farmers are advised to undertake appropriate plant protection measures to protect their crops.
- Due to occurrence of fog during flowering stage of rice in Krishna Godavari Zone of Andhra Pradesh, there is possibility of smut disease on rice; spray 1 ml Propiconozol or 1 g of Carbendazim or 2.5 g of Copper oxychloride in 1 liter of water.
- Bacterial leaf blight and bacterial leaf streak are being noticed in rice in Tamil Nadu Cauvery Delta Zone due to prevailing cool weather condition. To control this, streptomycin sulphate + tetracycline compound at 120 g and copper oxychloride (500 g / ac) or copper hydroxide (500 g / ac) in 200 litres of water can be applied.
- In rice plant, gall midge infestation is seen in North Western Zone in Tamil Nadu. spray Dichlorvas @ 2 ml per litre of water to manage the infestation.
- Out break of pests and disease are noticed in districts of Problem Area Zone in Kerala in crops like rice and vegetables and under present weather conditions infestation may increase further. Farmers are advised to adopt appropriate plant protection measures to avoid severe crop damage.
- Since temperature coupled with intermittent rainfall favours the development of leaf spot in arecanut in Hill Zone of Karnataka,, farmers are suggested to go for spray with blitex (2.5/lt) with strptocycline (0.6gm/lt). Since forecast of wind speed is increasing there is a possibility of falling of banana plants. Therefore farmers are advised to go for staking for plants.
- Due to higher humidity, low night temperature in Coastal Zone of Karnataka, weather condition is congenial for infestation of T- mosquito bug on flowering stage; farmers are advised to spray Lambda cahyalothrin @ 0.6 ml / litre of water. Spray at evening hours helps in managing the pest successfully.

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

- **Realised rainfall:** Weather remained dry in the States of the region during last week.
- **Rainfall forecast:** Dry weather is likely to prevail over the States of the region during the period.
- **Major Crops:**
  - Summer rice (seedling / transplanting/ early tillering in Konkan and East Vidarbha), Jowar (grain filling), *rabi* gram (flowering / pod development), safflower (flowering / seed formation), maize (silking and tasseling / cob initiation), sunflower (flowering / head formation), irrigated wheat (tillering / ear

emergence / milk), sugarcane (*Adsali*) (active tillering), sugarcane-pre seasonal (early vegetative), summer groundnut (sowing / germination in South Konkan & sowing in other Divisions) in Maharashtra.

- Mustard (flowering / pod development), pigeon pea (flowering / pod development / early maturity), gram (branching / flowering / pod development), potato (vegetative / tuber formation), brinjal and tomato (vegetative / flowering / fruiting / harvesting), *rabi* fennel (flowering), cumin (vegetative / grain formation), early sown wheat and timely sown wheat (tillering / heading/ Flag leaf initiation), late sown wheat (tillering), isabgol (tillering / grain formation), sugarcane (sprouting / early vegetative) in Gujarat.

- **Advisory:**

- As dry weather prevailed over the States of the region during last few weeks and dry weather would prevail during next few days, farmers are advised to apply protective irrigation to the standing crops.
- Farmers in Madhya Maharashtra are advised to complete preparatory tillage and undertake sowing of summer groundnut and sunflower.
- Farmers in Madhya Maharashtra and Marathwada are advised to undertake preparatory tillage and planting of *suru* sugarcane.
- Farmers in Pune division are advised to undertake sowing of fodder maize, jowar and bajra. Prevailing weather is also favourable for planting of watermelon & musk melon.
- Farmers in Gujarat state are advised to irrigate wheat, cumin, gram, mustard, pigeon pea etc. Also undertake intercultural and weeding operations before applying irrigation.
- Farmers in North Saurashtra region of Gujarat are advised to undertake sowing of summer groundnut.
- The suitable varieties of different crops are mentioned in Annexure I.
- Taking the advantage of favourable weather, farmers in Gujarat state are advised to undertake the picking of vegetable crops.
- Due to increase in temperature there may be incidence of mango hopper in Konkan region of Maharashtra. Farmers are advised to spray Methyl Dimeton 25 EC @ 12 ml or Thiomethoxion 25% granular @ 1 g / 10 liters of water on whole tree.
- Weather is favourable for incidence of *Helicoverpa* on gram in Pune region of Maharashtra. For control use 5 to 6 pheromone traps or (HANPV) Nuclear Polyhydrosis Virus. For that purpose take 500 caterpillar crash in 500 litres of water per ha and spray solution.
- Weather is favourable for incidence of thrips in onion in Pune division. Farmers are advised to spray Endosulfan @ 2 ml, Aciphate @ 2 g or Desis @ 0.5 ml per litre of water. There may also be infestation of basal rot disease on onion crop. For control apply 1% Bordeaux mixture near disease affected bulbs and also destroy disease affected bulb.
- Due to prevailing high temperature conditions, there is outbreak of powdery mildew disease in cumin in Banaskantha, Mehsana and Patan districts in north Gujarat region. Farmers are advised to spray soluble Sulphar (50%) @ 40 kg / ha or Soluble Sulphar (80%) @ 25 kg / ha or Dinocap (48%) @ 5 ml in 10 liters of water after evaporation of dew. Also weather is favourable for incidence of sucking pests in mustard and other *rabi* crops. Farmers are advised to apply Phosphamidon @ 3 ml or Dimethoate @ 10 ml or Monocrotophos @ 10 ml adding in 10 litters of water. Otherwise dust the Methyle parathion 2% or Quinalphos 1.5% powder @ 25 kg / ha during morning when wind velocity is less.
- Weather conditions are congenial for outbreak of powdery mildew in field pea in south Gujarat region. Farmers are advised to spray wettable sulphur @ 0.25% or Dinocap @ 0.05%, when weather remains clear. Also there may be incidence of sigatoka diseases in banana due to low temperature; farmers are advised to apply Carbendezim (100 g / 100 ml of water) @ 100-200 ml around the stem.
- Infestation of pod fly crossed ETL in North Sourashtra Zone of Gujarat state. Farmers are advised to spray Endosulphan 35 EC @ 20 ml / 10 litres of water Solution.

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

- **Realised Rainfall:** Weather remained dry during last week in the States of this region.
- **Rainfall Forecast:** Dry weather is likely to prevail over the region.
- **Major Crops:**
  - Wheat (tillering), mustard (seed formation), chickpea (flowering / pod formation), pigeon pea (pod formation), sugarcane (planting), cotton (boll formation) in Madhya Pradesh.
  - Pigeon pea (pod development) and wheat (crown root initiation) in Chattisgarh.

- **Advisory:**

- Taking the advantage of dry weather, farmers are advised to undertake intercultural operations in the early sown crops to keep the fields weed free and apply irrigation to the standing crops
- Farmers in Bastar Plateau Zone in Chattisgarh are advised to prepare nursery for late sown *rabi* vegetables and farmers in Chattisgarh Plain Zone are advised to sow cucurbitaceous and leafy vegetables and preparation of land for the summer vegetables.
- Farmers in Jhabua, Nimar and Central Narmada Valley and Gird Zone in Madhya Pradesh are advised to continue sowing of cucurbitaceous vegetables, watermelon and muskmelon.
- Weather is congenial for sucking pest in vegetables and Heliothis in gram in Jhabua Hill and Gird Zone in Madhya Pradesh; spray Thiomithaxam 0.3 g / litre of water for sucking pest in vegetables and papaya and use pheromone traps (8 traps / acre) and birds appercher for heliothis.
- Due to partly cloudy sky and increase in minimum temperature in Budelkhand Zone in Madhya Pradesh, farmers are advised to monitor the chickpea crop against attack of pod borer and if noticed, spray Endosulfan or Quinalphos @ 2 ml per litre of water.
- Weather is congenial for early blight in potato, leaf curl and *Alternaria* blight in tomato, leaf minor and pod borer in pea in Budelkhand Zone in Madhya Pradesh; farmers are advised to spray Mencozeb @ 2.5 ml per liter of water to control early blight and Imidacloprid @ 0.5 ml per liter of water for leaf curl, Mencozeb @ 2.5 ml per liter of water for *Alternaria* blight and Melathion 50 E.C. @ 1.0 ml per litre of water for leaf minor and pod borer.

**Animal Husbandry & Poultry**

- The minimum temperature will be around 10°C in Budelkhand Zone of Madhya Pradesh; farmers are advised not to leave the goat in open sky conditions and also do the vaccination against P.P.R to goats.
- As humid weather condition is prevailing, keep cattles in dry and clean place. Create neem leaves smoke in night to save them from mosquitoes and bees.

**Annexure I**  
**List of Varieties**

**Jharkhand**

**Summer rice:** IR 36, 64, Naveen, Lallat, Taichung Native and short duration (80-85 days) variety like Parijat.

**Maharashtra**

**Summer Groundnut:** TPG-41, TG-26, TAG-24, SB-11 and ICGS-11.

**Suru Sugarcane:** CO-86032, COM-0265 (Phule 265) and CO-94012.

**Summer sunflower:** KBSH-1, KBSH-44 or Bhanu and MSFH-17.

**Watermelon :** Sugar-baby, Arka Manik and Arka –Jyoti.

**Musk melon.:** Pusa Sarbati, Hara Bhanu, Punjab Sunhari, Durgapura Madhu.

**Fodder maize:** African tall, Ganga safed, Vijay, Ganga-5.

**Fodder Jowar :** Ruchira, Maldandi 35-1, Phule Amruta.

**Fodder bajra:** Giant.

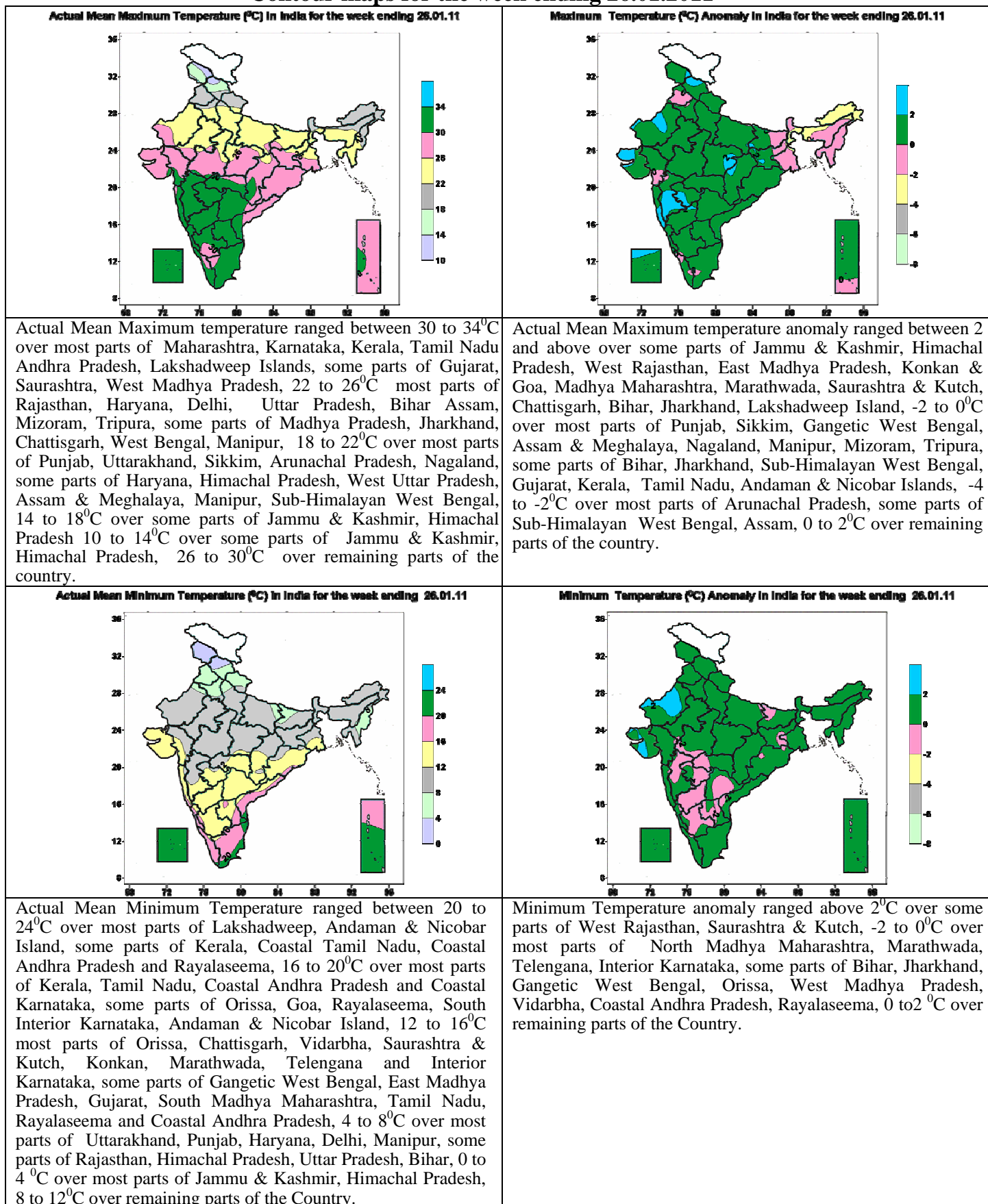
**Gujarat**

**Chilli:** GVC-101, GVC-111, GVC- 121, AVNPC-131.

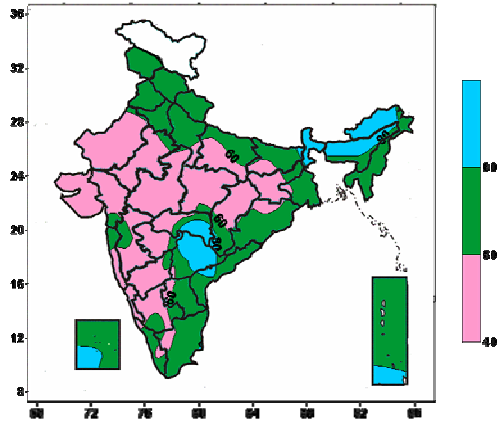
**Summer Groundnut:** GG.2, GG.6, TG.37A, TGP.41.

## Annexure II

### Contour maps for the week ending 26.01.2011

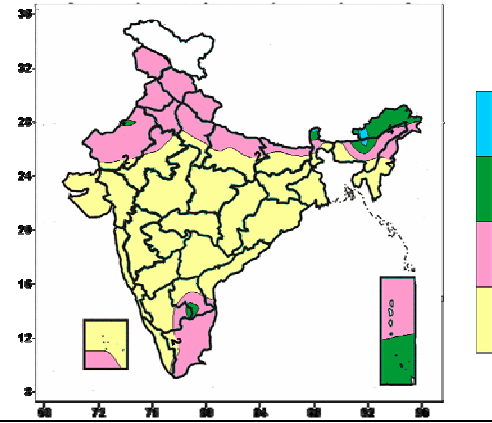


**Relative Humidity (%) over India for the week ending 28.01.11**



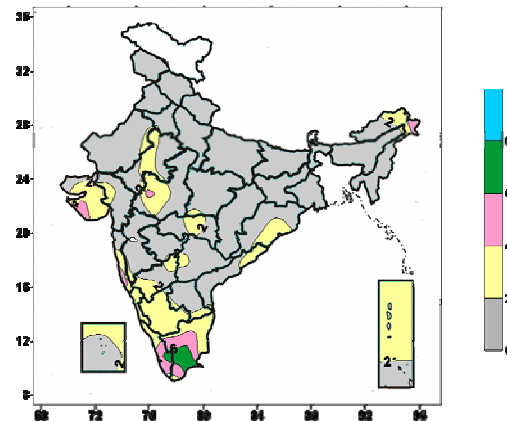
Relative humidity between 80% and above over most parts of, Sub-Himalayan West Bengal, Sikkim, Arunachal Pradesh, Assam & Meghalaya, Telangana, some parts of Bihar, Vidarbha, Coastal Andhra Pradesh, Lakshadweep, Andaman & Nicobar Islands, 40 to 60% most parts of Rajasthan, Gujarat, Saurashtra & Kutch, Maharashtra Madhya Pradesh, Chhattisgarh, Jharkhand, Karnataka, some parts of Uttar Pradesh, Bihar, Orissa, Raylaseema, Telengana, Tamil Nadu, Kerala, 60 to 80% over remaining parts of the country.

**Cloud amount (okta) over India for the week ending 28.01.11**



Cloud amount 6 okta and above over some parts of Arunachal Pradesh, Assam, 4 to 6 okta over most parts of Arunachal Pradesh, Sikkim, Andaman & Nicobar Island, some parts of Sub-Himalyan West Bengal, Assam, Rayalaseema, 2 to 4 okta over most parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Delhi, West Rajasthan, Tamil Nadu, some parts of Uttar Pradesh, Bihar, Coastal Andhra Pradesh, Rayalaseema, Sub-Himalyan West Bengal, Assam, Manipur, Mizoram, Tripura, Lakshadweep, Andaman & Nicobar Islands, 0 to 2 okta over remaining parts of the country.

**Wind speed (knots) over India for the week ending 28.01.11**



Wind speed ranged between 4 to 6 knots over most parts of Kerala, some parts of Arunachal Pradesh, Konkan & Goa, Saurashtra & Kutch, West Madhya Pradesh, Tamil Nadu, some parts of East Rajasthan, West Madhya Pradesh, 2 to 4 knots over most parts of Saurashtra & Kutch, Coastal & south Interior Karnataka, Andaman & Nicobar Islands, some parts of Rajasthan, Madhya Pradesh, Arunachal Pradesh, Orissa, Andhra Pradesh, North Interior Karnataka, Maharashtra, Gujarat, Lakshadweep, 0 to 2 knots over remaining parts of the country.