



**Summary of Agromet Advisory Services for different States of the country**  
**Issued by**  
**Agricultural Meteorology Division, India Meteorological**  
**Department, Pune, India**

**Thursday, 28<sup>th</sup> December, 2006**

(For the period 28<sup>th</sup> December, 2006 to 1<sup>st</sup> January, 2007)

The extended version of the bulletin is also available at <http://imdagramet.org>

**North West India (Haryana, Punjab, Rajasthan, Uttar Pradesh, Delhi, Himachal Pradesh, Jammu & Kashmir and Uttaranchal)**

**Punjab**

Rainfall occurred at a few places in the state on 26<sup>th</sup> and 27<sup>th</sup> December.

Mainly dry weather is likely over the State. Fall in night temperature by 1-2<sup>0</sup>C in the plains during next 2 days.

**Warning:** Ground frost is likely at a few places.

**Advisories**

- There was no significant rainfall in the State during last week and mainly dry weather is likely over the State for the next three days. Under the circumstances, apply irrigation in **sugarcane, rabi oilseeds, gram, lentil and wheat.**
- Continue sowing of late **wheat** variety PBW 373 and **sunflower.**
- Make necessary arrangements to protect the **rabi oilseed, gram, lentil, wheat and vegetable** crops from cold / frost injury. Apply light irrigation and arrange for smoke around the field to prevent frost injury.
- Apply top dressed nitrogen to early sown **wheat** crop.
- Harvesting of early maturing varieties of **toria** may be completed and mid varieties may be continued.

**Haryana**

Rainfall occurred at isolated places on 26<sup>th</sup> December and at many places on 27<sup>th</sup> December.

Mainly dry weather is likely over the State. Fall in night temperature by 1-2<sup>0</sup>C in the plains during next 2 days.

**Warning:** Ground frost is likely at isolated places.

**Advisories**

- As mainly dry weather is likely over the State for the next three days, apply irrigation to **sugarcane, gram, lentil and wheat.**
- Complete sowing of **gram and lentil.** Continue sowing of late varieties of **wheat** i.e. Sonalika, WH- 291, 396, PBW 373,138 and RAJ-3765 and **sunflower.**
- Incidence of **shoot borer, top borer, gurdaspur borer, pyrilla, termite and red rot** is reported in **sugarcane.** To control **pyrilla** spray 600-800 ml malathion in 800 litre of water per acre.
- Make necessary arrangements to protect the **rabi oilseed, gram, lentil, wheat and vegetable** crops from cold / frost injury. Apply light irrigation and arrange for smoke around the field to prevent frost injury.

**Rajasthan**

Light rainfall occurred at isolated places in **Jodhpur, Bikaner and Jaipur** divisions and Weather remained mainly dry in **Ajmer, Kota and Udaipur** divisions.

Mainly dry weather is likely over the State. Fall in night temperature by 1-2°C is likely over the State during next 1-2 days.

**Warning:** Cold wave conditions likely to prevail in some parts of Jaipur, Bikaner and Jodhpur divisions accompanied with ground frost at an isolated places in Bikaner and Jaipur divisions during next 48 hours.

#### Advisories

- Apply irrigation and arrange for smoke near the field in north Rajasthan to safeguard the crops from cold injury.
- Wipe out water droplets on the leaves by pulling rope from the two sides of field. This will prevent formation of ice crystals during night.
- This is proper time for sowing late varieties of barley and wheat. Continue land preparation and sowing. Undertake seed treatment before sowing.
- Apply pre-sowing irrigation before sowing of wheat. Select varieties from GW-173, 190, PBW-343, HD-2329, Raj-1482, 3077, 3765 etc. for sowing.

### Uttar Pradesh

Weather was dry in all divisions of the State on 25<sup>th</sup> and 26<sup>th</sup> December. Light rain / thundershower occurred at isolated places in Bareilly and Jhansi divisions and weather was mainly dry in remaining divisions of the State on 27<sup>th</sup> December.

Weather will be mainly dry over the State. Fall in night temperature by 1-2°C in West Uttar Pradesh and by 2-3°C in East Uttar Pradesh during next 2 days.

#### Advisories

- There was no significant rainfall during last week and mainly dry weather is likely over the State for the next three days. Under the circumstances, apply irrigation to bring the soil moisture to its field capacity in rabi oilseed, pulses and winter vegetable crops.
- Continue weeding and hoeing along with top dressing of nitrogen in winter vegetables, and rabi oilseeds, wheat and pulses.
- Harvesting of sugarcane may be continued.
- Make necessary arrangements to protect the wheat and barley crops from cold injury. Apply light irrigation and arrange for smoke around the field.

### Himachal Pradesh

The precipitation occurred at isolated places.

Mainly dry weather is likely over the region. Fall in night temperature by 1-2°C in the plains during next 2 days.

#### Advisories

- As there was no significant rain during last two weeks in the State and weather will be mainly dry for next three days, apply irrigation to vegetable crops, gram, rapeseed and mustard and early sown wheat and barley wherever crops are at vegetative stage.
- Complete land preparation and nursery sowing and transplanting of cauliflower and cabbage in low and mid hills, sowing of radish, turnip and carrot and also complete sowing of wheat and barley in rainfed areas.
- Select varieties from HPW-42 and HS-295 for late sowing of wheat, and Vimal (HBL-113) Dolma; Sonu (HBL-87); Gopi (HBL-316); Harit HBL-276 for barley.
- As there is chance of occurrence of frost, farmers are advised to arrange for smoking around the field to save the crops from frost.

## Uttaranchal

Very light rain was recorded at a few places on 27<sup>th</sup> December. Weather remained mainly dry during rest of the week. Sky remained mainly clear to mainly cloudy (on 26<sup>th</sup> December) during the period.

Mainly dry weather is likely over the State. Fall in night temperature by 1-2<sup>0</sup>C in the plains during next 2 days.

### Advisories

- There was no significant rainfall during last week and mainly dry weather is likely over the State for the next three days. Under the circumstances, apply required irrigation to **potato** and **wheat** crops.
- Apply light irrigation and arrange for smoke around the field to prevent frost injury in **potato** and **wheat**.
- Continue harvesting of matured crops of **toria**, **sugarcane** and **pea**.

## Jammu & Kashmir

Light to moderate rain / snow occurred at many places on 27<sup>th</sup> December and at isolated places on 25<sup>th</sup> & 26<sup>th</sup> December over J & K state.

Mainly dry weather is likely to occur over the region. Fall in night temperature by 1-2<sup>0</sup>C in the plains during next 2 days.

### Advisories

- Apply irrigation and arrange for smoke near the field in Jammu division to safeguard the crops from cold/frost injury.
- Wipe out water droplets on the leaves by pulling rope from the two sides of field. This will prevent formation of ice crystals during night time.
- Continue sowing of late varieties of **wheat**. Before sowing, undertake ploughing followed by planking to conserve moisture.
- Weather conditions are favourable for the attack of **aphids** in **cole vegetable** crops. Monitor the crop and if the pests population crosses ETL, spray the crop with Endosulphan @ 2 ml / litre of water.
- Rouge out virus effected crops of **brinjal**, **tomato**, **cauliflower** and **cabbage** in Jammu division.
- This is proper time for late sowing of Pusa Himani variety of **radish** and **spinach** (all green prickly seed). Start land preparation and sowing of radish and spinach.

## Delhi

Very light rain occurred on 27<sup>th</sup> December at many places. Weather remained dry on rest of the days.

Mainly dry weather is likely over the region. Fall in night temperature by 1-2<sup>0</sup>C in the plains during next 2 days.

### Advisories

- As there was no significant rainfall during last few weeks and mainly dry weather is likely over the State for next three days, apply irrigation to **early sown vegetable crops** and also to **barley**, **gram**, **mustard** and **wheat** to bring the soil moisture to its field capacity.
- Prepare land and perform sowing of Pusa Himani variety of **raddish** and Nanteez variety of **carrot**. Treat the seeds with Captan or Thairam or Dithane M- 45 @ 2 g / kg seeds.
- Apply first split dose of N @ 25 – 30 kg / ha at crown root initiation stage (20 – 25 days after sowing) and second split dose of N @ 25 – 30 kg / ha at tillering stage (40 – 45 days after sowing) of **wheat**.

## Southern Region (AP, Tamilnadu, Karnataka and Kerala)

### Kerala

Weather was dry over the State during the period.

Mainly dry weather is likely over the State.

#### Advisories

- There was no significant rainfall in the state during last few weeks and dry weather is likely to prevail for the next three days. Under the circumstances, apply irrigation to **plantation crops** and **mundakan rice** to bring the soil moisture to its field capacity.
- Attack of **mahali** disease is reported in **arecanut**. Spray 1% Bordeaux mixture on fruit bunches and crown to control **mahali** disease.
- Attack of **rice bug** is reported in **rice**. Spray Malathion @ 2 ml/litre of water to control **rice bug**.
- Attack of **Leaf eating caterpillar, rhinoceros beetle, mite, red palm weevil** insects is reported in **coconut**. Fill the leaf axils with 25 gm Sevidol 8G and fine sand 200 gm for controlling **red palm weevil** and **rhinoceros beetle**. Spray Dichlorovos @ 1ml per lit of water or use Mercaptothion followed by release of pupal and larval parasites available from bio-control lab, 21 days after spraying to control **leaf eating caterpillar**. Spray garlic-neem emulsion to control **mite**.
- Attack of **pseudo stem weevil** is reported in **banana**. Spray Quinalphos @ 0.05% or Chlorphyriphos @ 0.03% or Carbaryl @ 0.2% to control **pseudo stem weevil**. Spraying / drenching may be done on all leaf axils, rhizome, surrounding soil and all around the entire pseudostem. Repeat the treatment after 3 weeks if infestation persists.

### Tamilnadu

Mainly dry weather prevailed on 25<sup>th</sup>, 26<sup>th</sup> and 27<sup>th</sup> December.

Mainly dry weather is likely over the State.

#### Advisories

- Mainly dry weather is likely to prevail over the State for the next three days. Under the circumstances, apply irrigation to the standing crops to bring the soil moisture to its field capacity.
- Monitor **groundnut** for **red hairy caterpillar** and **leaf miner**. If the pests population cross ETL, spray Monocrotophos @ 625 ml/ha to control **red hairy caterpillar**. Dust 4% Carbaryl or spray Methyl demeton @ 0.02% to control leaf miner.
- Undertake intercultural operations, application of fertilizers and pesticides in **cotton, groundnut** and **sunflower**.

### Karnataka

Mainly dry weather is likely over the State.

#### Advisories

- There was no rainfall during last week and dry weather is likely to prevail for the next three days. Under the circumstances, apply irrigation to early sown **rabi** crops like **jowar, sunflower, wheat** and **maize** to bring the soil moisture to its field capacity.
- Undertake intercultural operations in **rabi** crops to keep the field weed free.
- Monitor **ratoon sugarcane** for **wooly aphids** and if the pest population crosses ETL, release *Dipha* sp, adopt wider spacing, inter-cropping with soyabean and pulses of short duration as plant protection measures against **wooly aphids** in **Mysore, Mandya** and **Hassan** districts.

## Andhra Pradesh

Mainly dry weather is likely to prevail over the State.

### Advisories

- There was no significant rainfall during last few weeks over the state and dry weather is likely to prevail over the State for the next three days. Under the circumstances, apply irrigation to *rabi* crops like **gram**, **maize**, **red gram** and **groundnut** to bring the soil moisture to its field capacity.
- Continue land preparation and nursery sowing of *rabi rice*.
- Incidences of *Spodoptera exigua* has been reported in **gram** in **Kurnool**, **Kadappa** and **Anantpur** districts. Spray Thiodecarb @ 1gm or Acephate @ 1gm or Chlorpyrifos @ 3ml per liter of water to control the pest.

## Eastern Region (Assam, Arunachal Pradesh, Bihar, Jharkhand, Sikkim, West Bengal)

### Assam

Weather was mainly dry on 25<sup>th</sup> & 26<sup>th</sup> and light rain occurred at isolated places over the state.

Isolated rain / thundershower is likely over the State during next 24 hours.

### Advisories

- As there was no significant rain in all the districts during last two weeks and isolated rain / thundershower is likely over the State, apply irrigation to **wheat**, **rapeseed** and **mustard**, **potato**, **pea**, **lentil** and early sown **vegetables**.
- Mild incidence of **Pod** and **apion borer** in **arhar**, **aphids** and **saw fly** in **mustard** and **late blight** in **tomato** is reported in a few localities.
- Monitor **aphids** and **saw fly** in **mustard** and if crosses economic threshold level, spray Rogor or malathion @ 2ml per litre of water.
- Monitor late blight of **tomato** and if crosses economic threshold level, spray Indofil M-45, alternatively Indofil Z-78 @ 25 gm in 10 litres of water.
- Continue land preparation and sowing of **winter vegetables** and **transplanting of rice**.
- Maintain 2 – 3 cm water in the **rice** field after 2 -3 days of transplanting.

### Arunachal Pradesh

Isolated rain/thundershower is likely over the State during next 24 hours.

### Advisories

- There was no rainfall in the State during last week and isolated rain / thundershowers is likely during next 24 hours. Under these conditions, apply irrigation to the standing crops to bring the soil moisture to its field capacity.
- Sowing of **wheat** may be completed.
- First top dressing in early sown **potato** (33 Kg Urea/ha.) followed by earthing up and spraying with 1.25 kg Dithane M-45 in 500 litre water may be continued.

### Bihar

Weather was dry.

Mainly dry weather is likely over the State. Fall in night temperature by 2-3<sup>o</sup>C during next 48 hours.

## Advisories

- There was no significant rainfall during last week and mainly dry weather is likely over the State for next three days. Under the circumstances, apply required irrigation to bring the soil moisture to field capacity in **vegetables, maize, pulses, oilseeds and wheat**.
- Continue transplanting of winter **vegetables**.
- Continue field preparation and sowing of late sown **wheat**.
- Preparation of nursery bed for sowing of **boro rice** may be undertaken.

## Jharkhand

Weather remained mainly dry.

Mainly dry weather is likely over the State.

## Advisories

- There was no rainfall during last week and mainly dry weather is likely over the State for next three days. Under the circumstances, apply required irrigation to bring the soil moisture to field capacity in **vegetables, maize** and early sown **potato, pulses, oilseed and wheat** crops.
- Continue field preparation, sowing / transplanting of **onion, tomato, cabbage, cauliflower, brinjal, chilli, potato, garlic, pea** and early **summer vegetables**. To maintain optimum temperature in nursery beds, cover them with straw.
- Monitor the crop for attack of **pod borer** in **Arhar** and to control the borer spray Monocrotophos (1ml / litre of water).

## Sikkim

Sky remained generally cloudy during the period. Very light rain occurred at a few places on 25<sup>th</sup> December over East Sikkim. No rain occurred on the rest day over East Sikkim during the period. Rainfall was scanty during the period.

Mainly dry weather is likely over the State.

## Advisories

- There was no significant rainfall during last few weeks and dry weather is likely to prevail over the State for the next three days. Under the circumstances, apply irrigation to **vegetables, mustard and wheat** to bring the soil moisture to its field capacity.
- Undertake intercultural operations in **wheat, rabi vegetables and mustard** to keep the field weed free. Weeding must be done on monthly basis in mustard to remove *Satyanshi* weeds.
- Undertake weeding, application of fertilizers and pesticides in orchards particularly for **orange**.

## West Bengal

During the said period weather was mainly dry through out the State.

Weather will be mainly dry over the State.

## Advisories

- As there was no significant rainfall in all the districts of the State during last few weeks and mainly dry weather is likely over the State for next three days, apply irrigation to **sugarcane, rapeseed and mustard, gram and lentil, wheat and potato** crops.
- Apply first split dose of nitrogenous fertilizer (25 – 30 kg N / ha) at 20 – 25 days after sowing at crown root

initiation stage and second split dose of nitrogenous fertilizer (25 – 30 kg N / ha) at 40 – 45 days after sowing at tillering stage of **wheat**.

- Monitor blight disease in **wheat** and in the event of occurrence of this disease, apply Mancozeb @ 2.5 g per liter of water and spray 2 times at an interval of 7 days.
- Land should be prepared and nursery sowing of **boro rice** may be carried out.
- Select varieties from CR-126-42-1, Khitish, IE-2233, PNR 381, IR-36, Lalat, Annada, Aditya, Tulsi etc. for short duration and Shasyasri, Prakash, Kunti, Ajaya, Pratap, Suraksha etc. for medium duration **boro rice**.

## Central Region (Gujarat, Chhattisgarh, Maharashtra, MP & Orissa)

### Gujarat

Weather remained dry during the period.

Mainly dry weather is likely over the State.

#### Advisories

- As there was no significant rain in the State during last few weeks and weather will be mainly dry over the State for next three days, apply irrigation to **pre-monsoon irrigated cotton, Kharif cotton, castor, mustard and wheat** to bring the soil moisture to field capacity.
- For monitoring & management of boll worms & heliothis of **cotton** hang 5 pheromance traps in one ha. Change the lures at an interval of 15 days. Destroy trapped moths every day. If boll worm population crosses economic threshold level, release parasite tricogamma @ 1.5 lakhs / ha and 5 to 6 times as per requirement depending upon infestation found in the field.
- There is mild chance of attack of aphids, mustard saw fly and jassids in **mustard**. If aphid population exceeds economic threshold level, spray pesticides phosphamidon @ 4 ml or dimethoate @ 10 ml or monocrotophos @ 12.5 ml in 10 liter water as per requirement. Second spray 10 to 15 days after first spray if required or dust the methyl parathion 2% powder or quinalphos 1.5 % @ 25 kg / ha.
- Prepare land and complete late sowing of **wheat** crop. Select varieties from Lok-1, Gw-173 (150 kg seeds / ha) for late sowing of irrigated wheat. Apply basal fertilizer dose 60 kg Nitrogen, 60 kg phosphorus / ha at the time of sowing.
- Apply first split dose of N @ 25 – 30 kg / ha at crown root initiation stage (20 – 25 days after sowing) of **wheat**.

### Chhattisgarh

Weather remained dry in the State during the period.

Mainly dry weather is likely over the State. Fall in night temperature by 1-2°C is likely over the region.

#### Advisories

- As there was no significant rainfall in all the districts during last week and mainly dry weather is likely over the State for next three days, apply irrigation to **sugarcane, vegetables, gram, mustard, potato, linseed, safflower and wheat** and also to early sown **sunflower** wherever crops are at vegetative stage.
- Continue preparation of land and sowing of **sunflower** and planting of new crop of **sugarcane**.
- Select varieties from CO-62175, C.O.L.K.-8001 etc. for planting of **sugarcane**.
- Apply first split dose of N @ 25 – 30 kg / ha at crown root initiation stage (20 – 25 days after sowing) and second split dose of N @ 25 – 30 kg / ha at tillering stage (40 – 45 days after sowing) of **wheat**.

## Maharashtra

Mainly dry weather prevailed all over the State.

Mainly dry weather is likely over the State. Fall in night temperature by 1-2<sup>0</sup>C over Vidarbha during next 2 days.

### Advisories

- As there was no significant rain during last few weeks in the State and mainly dry weather is likely over the State for next three days, apply irrigation to *kharif* cotton and Cotton (irrigated) crops and also to *rabi* jowar, safflower, *rabi* maize, sunflower, potato, onion, gram, sugarcane (Pre-seasonal) and wheat.
- Inter culture operation may be done 2 to 3 times in non-irrigated Jowar to preserve moisture in the field.
- Second dose of 60 kg Nitrogen / ha may be applied to wheat at 21 – 25 days after sowing after weeding.
- Second split dose of 30 kg N / ha may be applied to *Rabi* sunflower.
- Second dose of 50 kg Nitrogen / ha may be applied to potato before irrigation.
- Mild incidence of White Woolly Aphids in Aurangabad, Latur, Kohlapur and Pune and Pyrilla, White fly and Mealy bug in Nashik in sugarcane, Aphids and Jassids in Nagpur and also *Lalya* disease in Amravati and Boll worm in Latur, Amravati and Nashik division in cotton and leaf roller in Nagpur, pod borer in pune, Nashik, Amravati and Latur division in tur, Aphids and Leaf cater pillar in Nashik division and Sugary disease in Latur, Kolhapur and Pune division in *rabi* jowar, Pod borer in Pune, Latur, Amravati and Nashik division in gram and Hairy cater pillar in Aurangabad division in sunflower is reported.
- Monitor aphids and jassids population in cotton and if crosses economic threshold level, spray methyl dimeton 25EC @ 320 ml or dimethoate 30EC @ 500 ml / ha in 500 liter water.
- Monitor Boll worm in cotton and if exceeds economic threshold level, spray 36 % Monocrotophos WSC or 35 % Endosulphan WSC @ 850 ml / ha in 500 liter water.
- Monitor pod borer population in tur and if crosses economic threshold level, spray 5% Neem extract or 20 to 25 ml Fenvalerate / ha in 100 liter water.
- Monitor infested plant by Sugary disease, aphids in *rabi* jowar & if exceeds economic threshold level, spray 5% Neem extract or Diamethoate 500 ml or Methyl Dimeton 400 ml or Monocrotophos 300 ml / ha in 500 liter water.
- Monitor Pod borer in gram and if exceeds economic threshold level, spray 5 % Neem extract or spray 35 EC Endosulphon @ 1000 ml or 25 EC Quinolphos @ 1000 ml / ha in 500 liters water.
- Monitor Hairy cater pillar in Sunflower and if exceeds economic threshold level, spray 5% Neem extract or spray 35% Endosulphon @ 1000 ml or 25 % Quinolphos @ 1000 ml / ha in 500 liters water or dust 10% Carbaril powder or 1.5% Quinolphos powder @ 25 kg / ha.

## Madhya Pradesh

Dry weather prevailed over the State.

Mainly dry weather is likely over the State. Fall in night temperature by 1-2<sup>0</sup>C is likely over the State.

### Advisories

- There was no significant rainfall in all the districts during last few weeks and mainly dry weather is likely to prevail for the next three days over the State. Under the circumstances, apply irrigation to early sown *rabi* crops like wheat, gram and mustard to bring the soil moisture to its field capacity.
- Undertake intercultural operations like weeding in early sown *rabi* crops like gram, mustard, wheat, masoor, linseed etc. to keep the field weed free.
- Monitor gram for leaf eating caterpillar. If the pest population crosses ETL, spray Monocrotophos @ 750 ml/ha.



## Orissa

Weather was dry over the State during the above period.

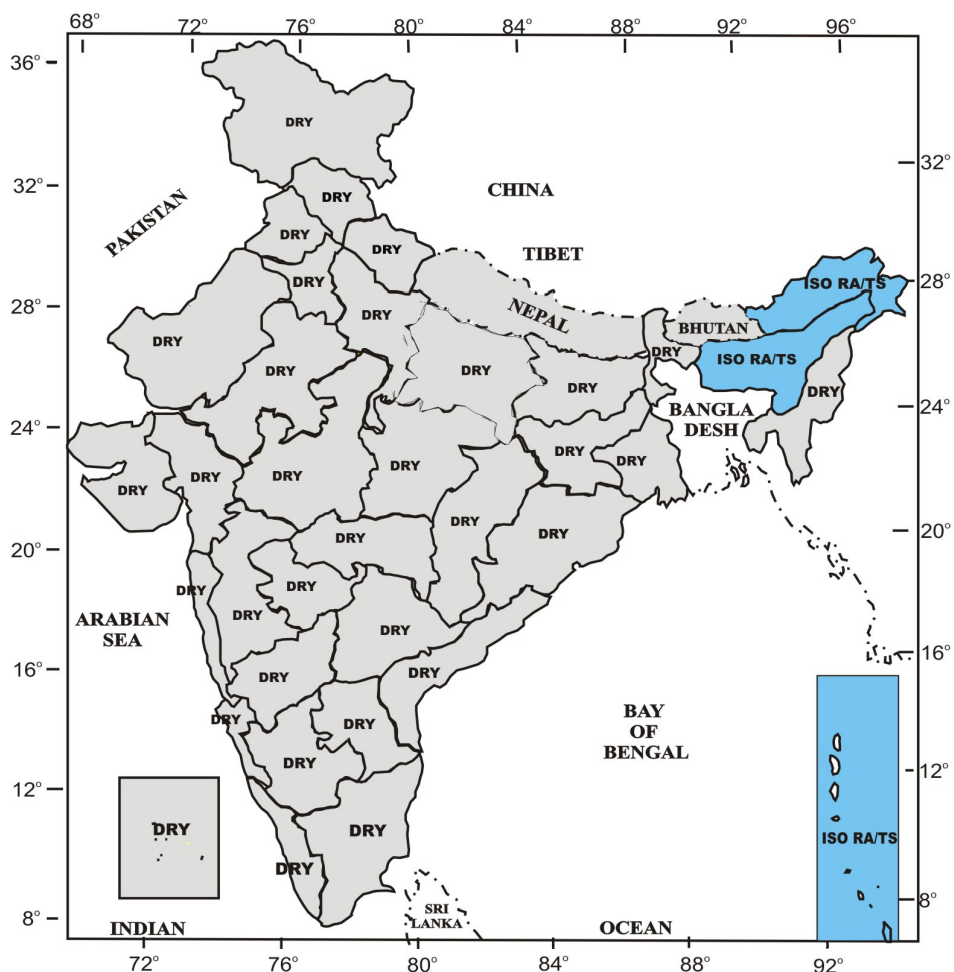
Mainly dry weather is likely over the State.

### Advisories

- There was no rainfall in all the districts during last few weeks and mainly dry weather is likely over the State for next 3 days. Under the circumstances, apply irrigation to **mustard, vegetables, groundnut and sugarcane** to bring the soil moisture to field capacity.
- Monitor the crop for **saw fly in mustard** and spray Endosulfan @ 2 ml. / litre of water to control the pest if it crosses ETL.
- Monitor **brinjal for Epilachna beetle** and if it crosses ETL, spray Carboryl @ 4 g / litre of water.
- Continue harvesting matured **vegetables, sugarcane and pulse crops**.

## Forecast Map

Valid upto 31<sup>st</sup> December



ISO - Isolated, TS - Thunder shower/storm, SN - Snow, RA - Rain, DRY - No rain, SC - Scattered, MOD-Moderate, SQ - Squall, HA- Hail. DS - Dust Storm, FW - Fairly Widespread  
\* - With heavy Rain warning, # fog condition

## *Salient weather features for the week ending 27/12/06*

### **METEOROLOGICAL ANALYSIS**

- A western disturbance affected Western Himalayan region during 21-22<sup>nd</sup> and moved away eastwards thereafter.
- Another western disturbance affected Western Himalayan region during 25-26<sup>th</sup> and moved away eastwards affecting northeastern States on 27<sup>th</sup>. In association with this disturbance an induced cyclonic circulation formed over West Rajasthan and neighbourhood extending upto 2.1 Km above sea level on 25<sup>th</sup>. It persisted over the same area on 26<sup>th</sup> and became less marked on 27<sup>th</sup>.
- A weak easterly wave affected extreme south peninsula during 21-24<sup>th</sup>.

### **RAINFALL**

Under the influence of the above systems:

- Scattered snowfall activity was experienced over Jammu & Kashmir on 21<sup>st</sup> & 22<sup>nd</sup> and mainly dry weather prevailed thereafter till 25<sup>th</sup>. Scattered snowfall activity was again experienced over Jammu & Kashmir during 26-27<sup>th</sup>. Light to moderate rain/snowfall activity was also experienced over Himachal Pradesh and Uttaranchal during 26-27<sup>th</sup>. Rain/thundershower occurred at a few places over Punjab, Haryana, Chandigarh & Delhi and at isolated places over Rajasthan, West Uttar Pradesh and northwest Madhya Pradesh on 27<sup>th</sup>.
- Isolated rainfall activity occurred over Arunachal Pradesh and Assam & Meghalaya on 27<sup>th</sup>.
- Scattered/isolated rain/thundershower occurred over Tamil Nadu & Pondicherry, south Coastal Andhra Pradesh and Rayalaseema during 21-24<sup>th</sup>.
- Mainly dry weather prevailed over the remaining parts of the country during the week.

### **FOG**

- Fog conditions prevailed over some parts of Indo-Gangetic plains during 21-24<sup>th</sup> and on 27<sup>th</sup>.

### **MINIMUM TEMPERATURES**

- The minimum temperatures were above normal by 2-5 °C over plains of northwest India during 21-23<sup>rd</sup>. Then the temperatures decreased to become below normal by 1-3 °C on 24<sup>th</sup>. There was increasing trend afterwards with temperatures becoming normal on 25<sup>th</sup> & 26<sup>th</sup> and above normal by 2-3 °C on 27<sup>th</sup>.
- They were above normal by 2-3 °C over eastern India during 21-23<sup>rd</sup>. Decreasing afterwards, they were normal during 24-25<sup>th</sup> and below normal by 2-3 °C on 26<sup>th</sup>. The temperatures increased again and became normal on 27<sup>th</sup>.
- The minimum temperatures were normal over peninsula and above normal by 2-5 °C over northeastern States during the week.
- The minimum temperatures were normal over central India during first two days of the week. While they were normal over Chhattisgarh and Vidarbha, they were above normal by 2-4 °C over Madhya Pradesh during the remaining days of the week.
- The night temperatures were above normal by 2-5 °C over Gujarat and Rajasthan during 21-25<sup>th</sup> & on 27<sup>th</sup>. They were above normal by 6-8 °C over West Rajasthan and by 4-5 °C over East Rajasthan and Gujarat on 26<sup>th</sup>. They were above normal by 2-5 °C over north Maharashtra during 24-25<sup>th</sup>. The minimum temperatures were normal on most days of the week over the remaining parts of west India during the week.

### **RAINFALL DURING THE WEEK ENDING ON 20<sup>TH</sup> DECEMBER, 2006**

Rainfall was excess/normal in 2, deficient/scanty in 13 and no rain in 21 out of 36 meteorological sub-divisions (Actual: 1.8 mm, Normal: 4.1 mm and Departure: -55%).

### **CUMULATIVE SEASONAL RAINFALL (1<sup>ST</sup> OCTOBER TO 20<sup>TH</sup> DECEMBER, 2006)**

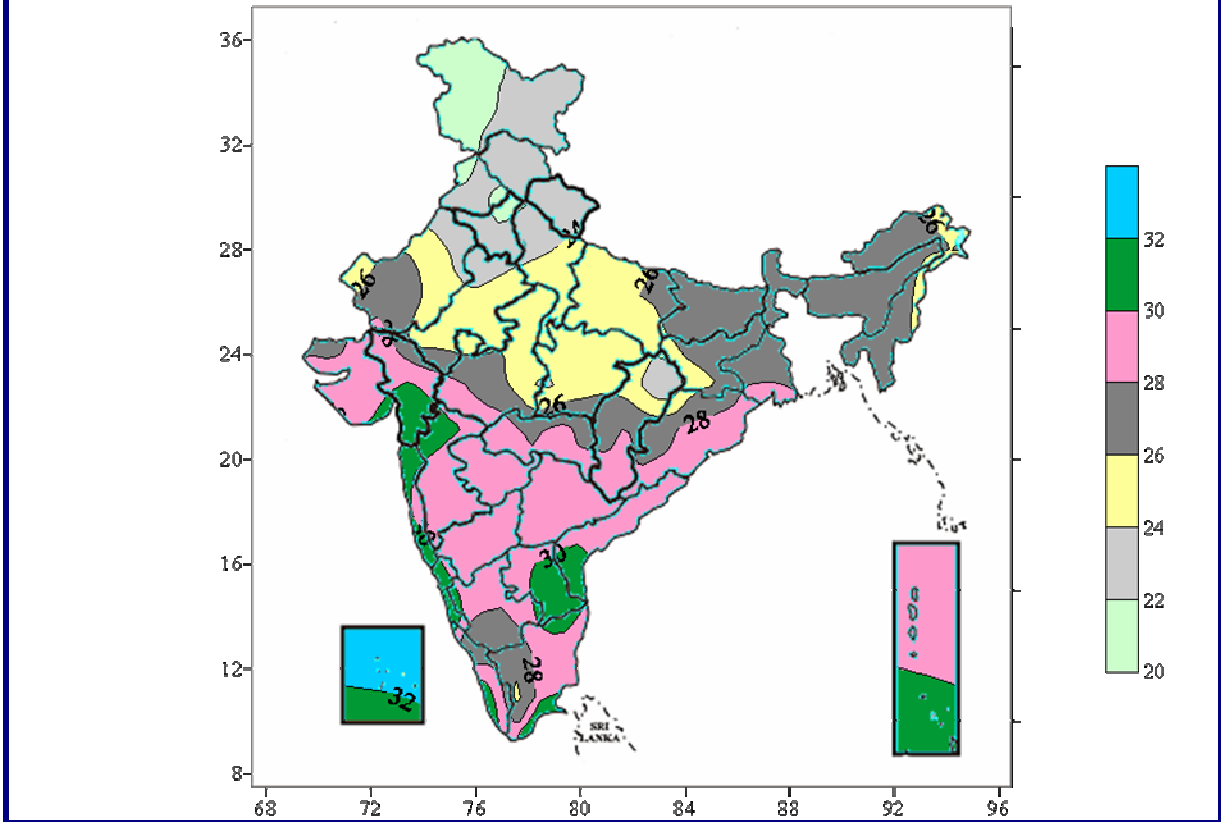
Rainfall was excess/normal in 10 and deficient/scanty in 26 out of 36 meteorological sub-divisions. (Actual: 99.8 mm, Normal: 123.2 mm and Departure: -19%).

### **OUTLOOK FOR THE WEEK ENDING ON 27<sup>TH</sup> DECEMBER, 2006.**

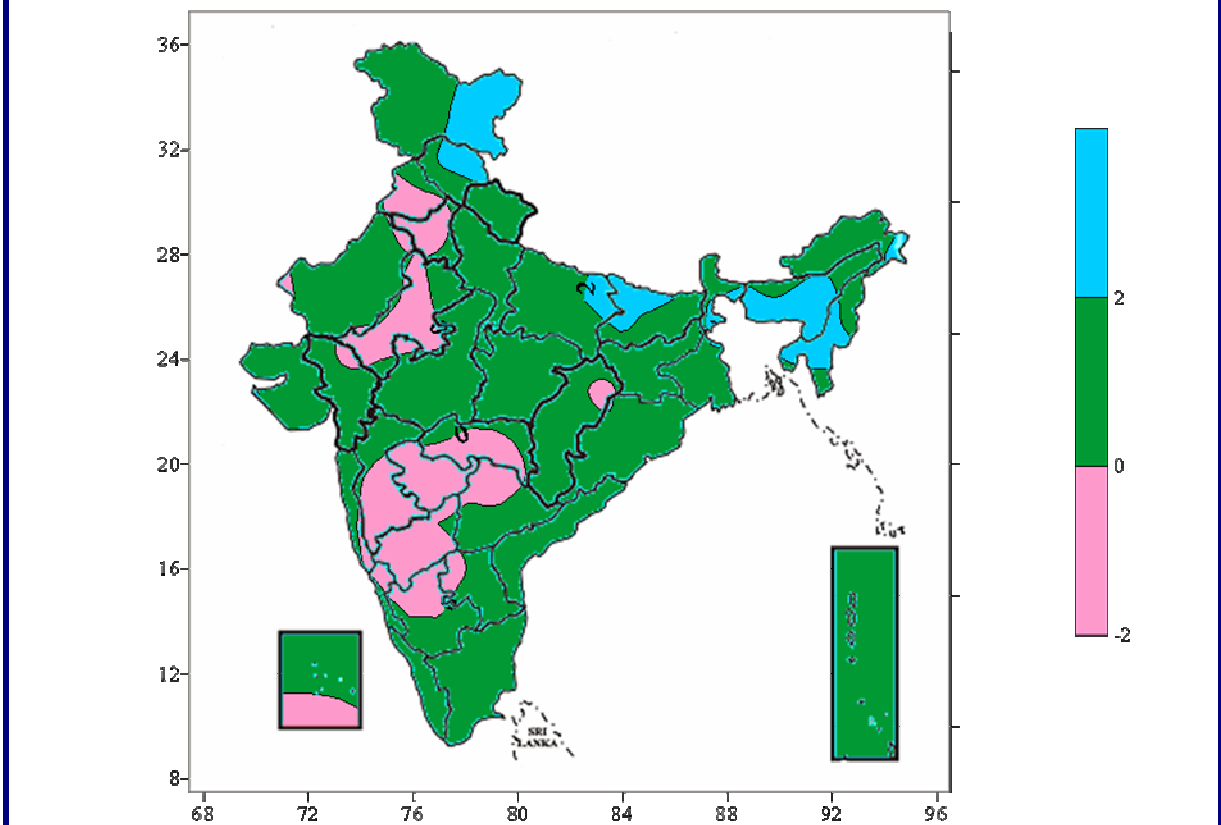
- A fresh western disturbance is likely to affect Western Himalayan region from 31<sup>st</sup> December.

- Rise in night temperature over plains of northwest India for 2-3 days commencing from 30<sup>th</sup> December.

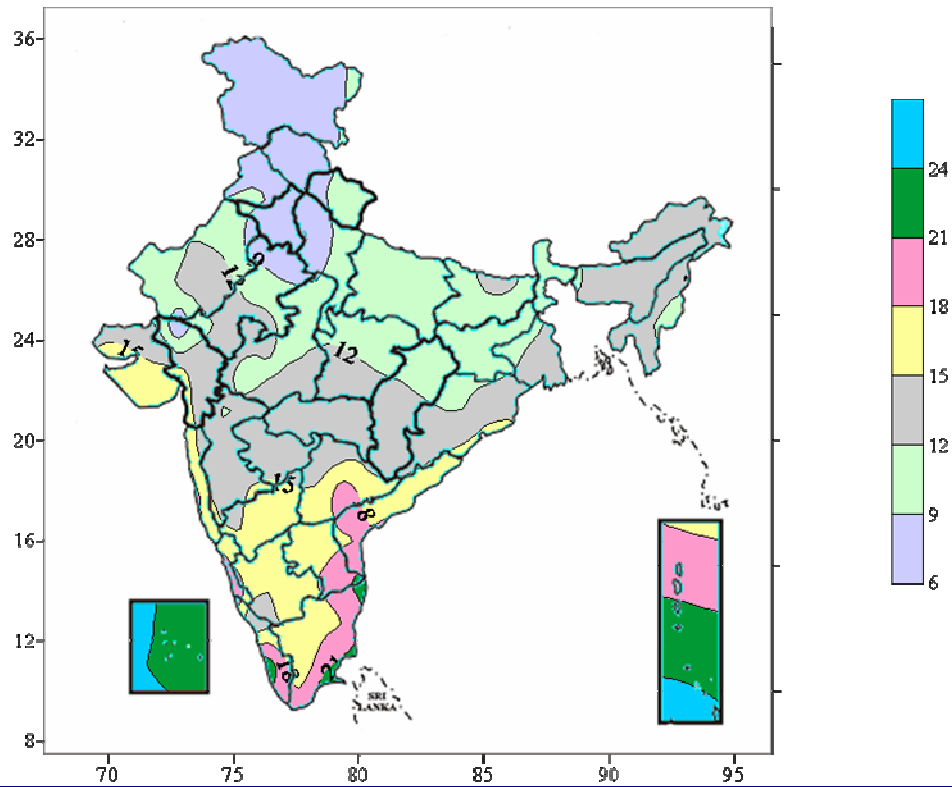
**Actual mean maximum Temperature (°C) in India for the week ending 27.12.06**



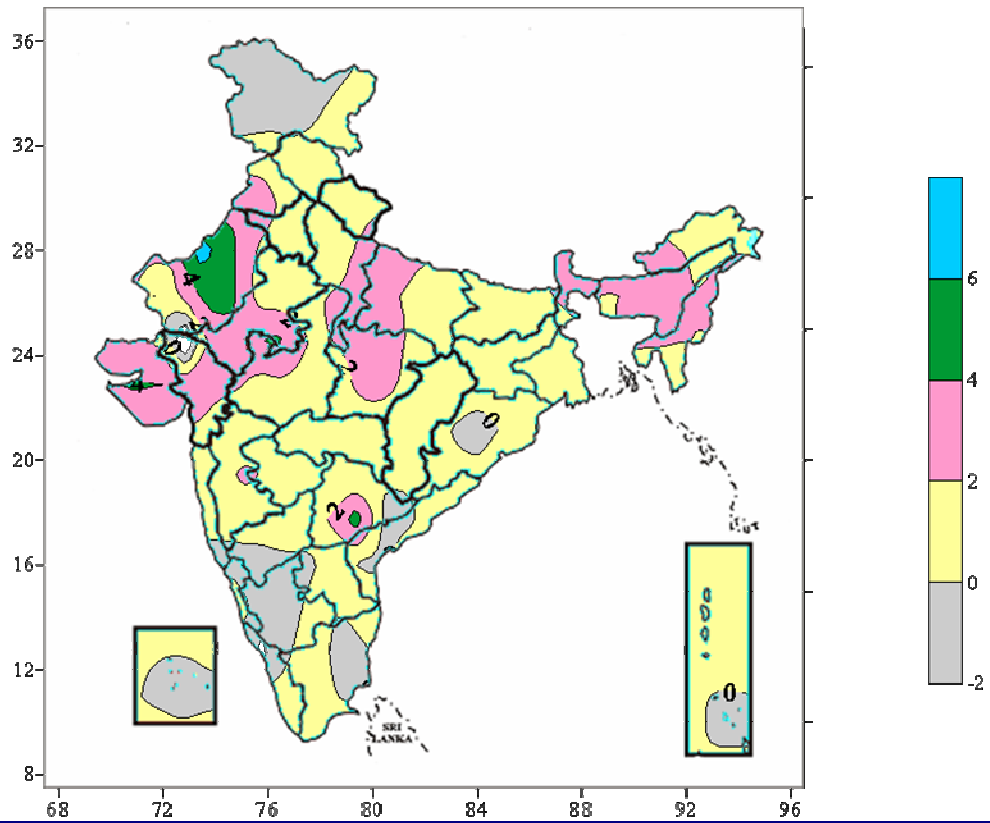
**Maximum Temperature (°C) Anomaly in India for the week ending 27.12.06**



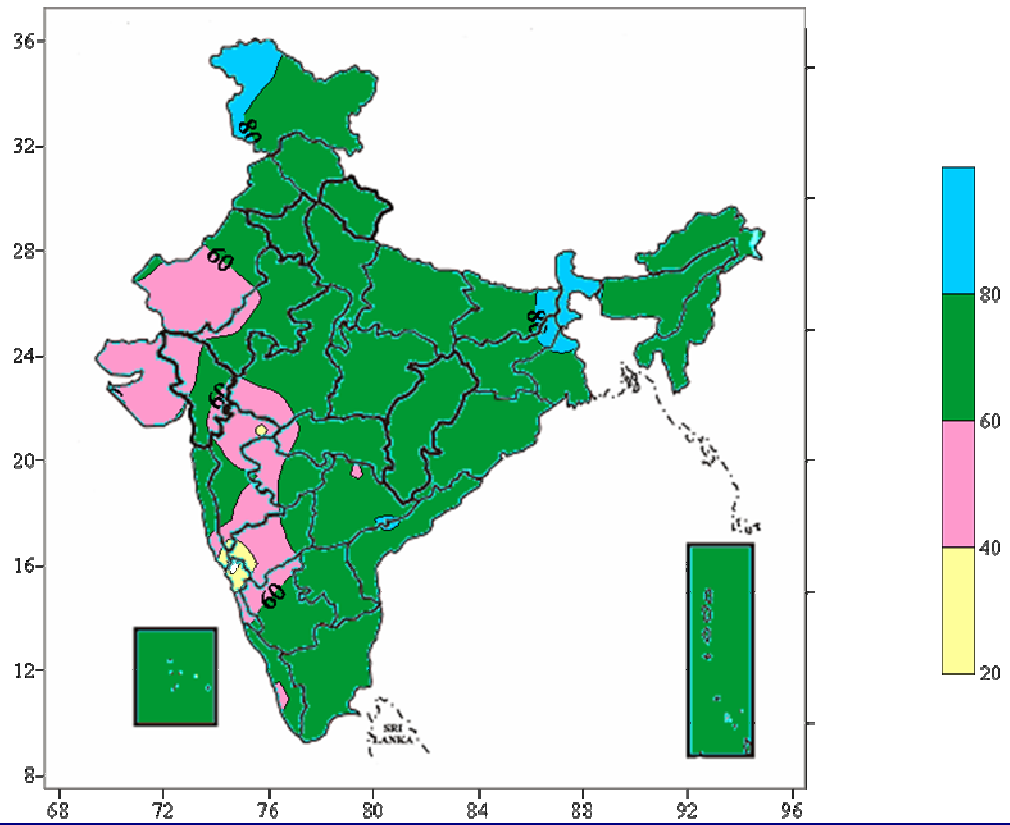
**Actual mean Minimum Temperature ( $^{\circ}\text{C}$ ) In India for the week ending 27.12.06**



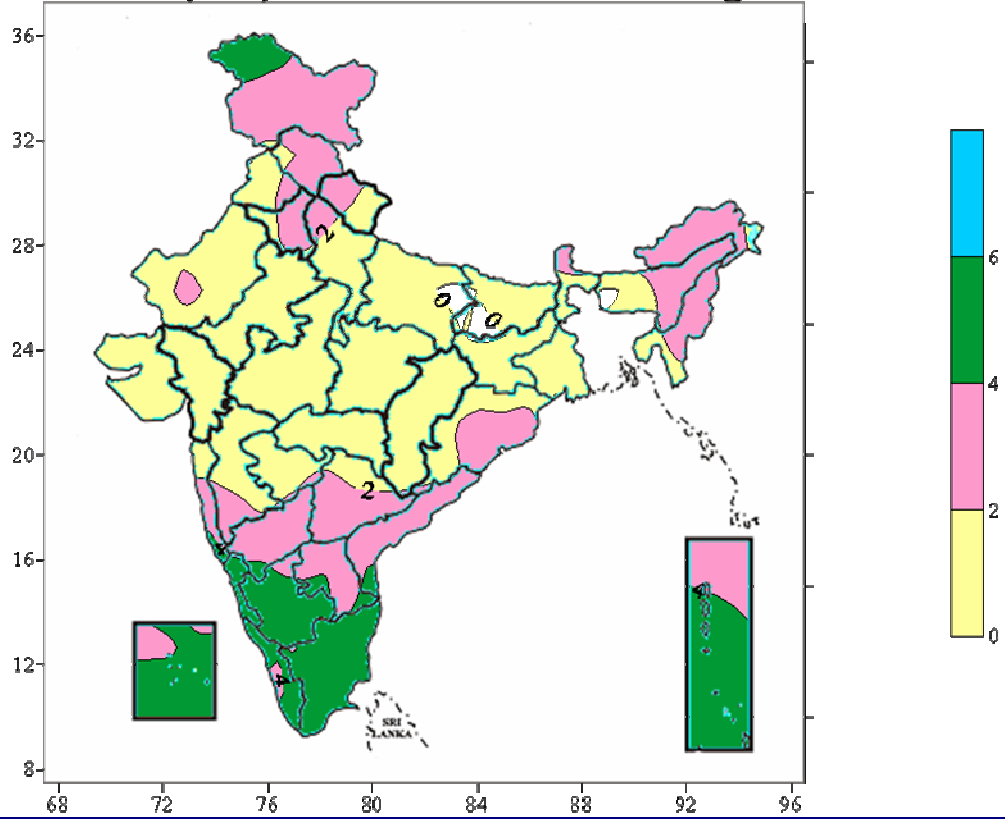
**Minimum Temperature ( $^{\circ}\text{C}$ ) Anomaly in India for the week ending 27.12.06**



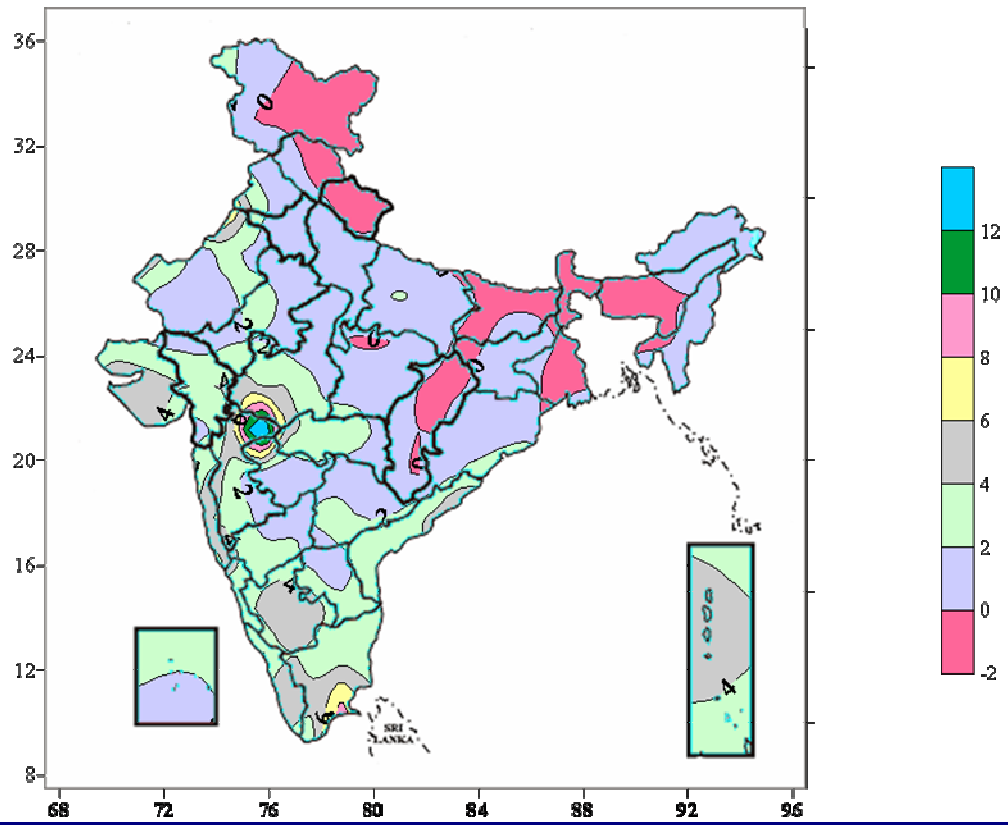
**Relative humidity (%) over India for the week ending 27.12.06**



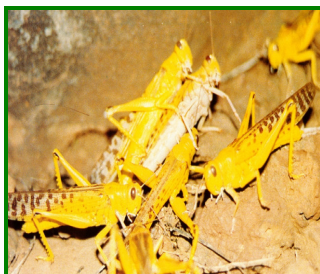
**Cloud amount (okta) over India for the week ending 27.12.06**



Wind speed (knots) over India for the week ending 27.12.06



# Desert Locust Forecasting



Rainfall (mm)							
Station Name	21.12.06	22.12.06	23.12.06	24.12..06	25.12.06	26.12.06	27.12.06
Amritsar	NIL						
Barmer							
Sriganganagar							
Jaisalmer							
Kota							
Deesa							
Churu							

Temperature (degree celcius)							
Station Name	21.12.06	22.12.06	23.12.06	24.12..06	25.12.06	26.12.06	27.12.06
Amritsar	12.0	12.5	-	-	13.5	14.5	11.0
Barmer	19.0	18.0	-	18.0	20.0	20.0	16.0
Sriganganagar	17.0	-	13.0	15.0	15.5	17.0	14.5
Jaisalmer	19.5	17.0	16.5	19.5	21.0	19.0	15.0
Kota	18.5	19.0	19.0	17.5	17.5	19.0	-
Deesa	21.5	22.0	22.0	21.5	24.5	23.0	22.0
Churu	-	-	-	-	-	-	-

Wind														
Station Name	21.12.06		22.12.06		23.12.06		24.12..06		25.12.06		26.12.06		27.12.06	
	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.
Amritsar	12	SSE	05	N	-	-	-	-	-	-	-	-	09	WNW
Barmer	07	WSW	-	-	-	-	-	-	-	-	13	SW	-	-
Sriganga nagar	04	NNE	-	-	-	-	-	-	-	-	14	WSW	-	-
Jaisalmer	04	WSW	-	-	-	-	-	-	-	-	-	-	10	N
Kota	04	S	05	NE	-	-	-	-	-	-	14	W	-	-
Deesa	04	SE	04	SSE	-	-	-	-	-	-	13	SSW	09	NW
Churu	09	WSW	09	N	-	-	-	-	-	-	20	SW	-	-

There is no chance of locust infestation in Rajasthan and the adjoining areas during this week.

## CROP – STATE – STAGE

### Delhi

<b>Toria</b>	<b>Vegetables (Brinjal, Chilly, Cauliflower and cabbage, raddish, carrot, and turnip)</b>	<b>Early sown vegetable crops</b>	<b>Wheat</b>	<b>Gram</b>
Flowering/Pod formation	Sowing/ Transplanting	Vegetative/ flowering/ fruiting/ harvesting	Germination / crown root initiation / tillering	Vegetative
<b>Barley</b>	<b>Mustard</b>			
Vegetative	Vegetative / flowering			

### Haryana

<b>Horticultural crop</b>	<b>Sugarcane</b>	<b>Gram /Lentil</b>	<b>Rabi oilseeds</b>	<b>Wheat</b>
Vegetative	Vegetative	Seedling / early vegetative	Vegetative	Sowing / early vegetative / tillering
<b>Toria</b>	<b>Sunflower</b>			
Maturity / harvesting	Sowing			

### Himachal Pradesh

<b>Wheat</b>	<b>Gram</b>	<b>Summer vegetables (Cauliflower, Cabbage in low and mid hills)</b>	<b>Vegetables (Tomato, brinjal, ladies finger)</b>	<b>Barley</b>
Land preparation / Late sowing	Vegetative	Nursery sowing /Transplanting	Vegetative/flowering / fruiting / harvesting	Land preparation/ Late sowing
<b>Early sown Wheat</b>	<b>Rape seeds and Mustard</b>	<b>Early sown Barley</b>	<b>Radish, Turnip, Carrot</b>	
Germination / Early vegetative / Crown root initiation / tillering	Vegetative	Germination / Early vegetative / vegetative	Sowing	

### Jammu & Kashmir

<b>Vegetable crops</b>	<b>Toria / Brown Sarson</b>	<b>Mustard</b>	<b>Gram</b>	<b>Wheat</b>
Early vegetative /vegetative	Flowering	Siliqua formation	Flowering	Late sowing
<b>Early sown Wheat</b>	<b>Lentil</b>	<b>Pea / Lentil</b>		
Early vegetative / vegetative	Vegetative	Flowering		

### Punjab

<b>Sugarcane</b>	<b>Rabi oilseeds</b>	<b>Gram/Lentil</b>	<b>Horticultural crop</b>	<b>Wheat</b>
Vegetative	Vegetative	Vegetative	Vegetative	Sowing / early vegetative / tillering
<b>Toria</b>	<b>Sunflower</b>			
Maturity / harvesting	Sowing			

### Rajasthan

<b>Mustard</b>	<b>Wheat</b>	<b>Early sown Wheat</b>	<b>Gram</b>	<b>Barley</b>
Vegetative	Late sowing	Early vegetative / vegetative	Vegetative	Late sowing
<b>Early sown Barley</b>	<b>Cumin</b>			
Early vegetative / vegetative	Vegetative			

### Uttar Pradesh

<b>Wheat / Barley</b>	<b>Rabi pulses</b>	<b>Sugarcane</b>	<b>Early sown Wheat/Barley</b>	<b>Winter Vegetables</b>
Sowing	Vegetative / flowering	Harvesting	Seedling / early vegetative	Vegetative
<b>Mango</b>	<b>Rabi Oilseeds( Rai and Mustard)</b>	<b>Kharif Vegetables</b>	<b>Toria</b>	
Active growth / matured tree	Vegetative / flowering	Harvesting	Seed formation	

### Uttaranchal

<b>Pea</b>	<b>Mango/Litchi</b>	<b>Wheat</b>	<b>Sugarcane</b>	<b>Toria</b>
Pod maturity / Harvesting	Active growth	Tillering	Maturity / harvesting	Pod maturity



<b>Potato</b>				
Tuber growth				

**Assam**

<b>Early sown Vegetables</b>	<b>Sugarcane</b>	<b>Wheat</b>	<b>Vegetables</b>	<b>Balck gram and Green gram</b>
Vegetative	Cane maturity / harvesting	Crown root initiation / tillering	Land preparation / sowing	Pod maturity
<b>Pea, Lentil and Potato</b>	<b>Arhar</b>	<b>Rape seed and Mustard</b>	<b>Boro Rice</b>	<b>Early transplanted Boro Rice</b>
Vegetative	Maturity	Flowering / pod formation	Transplanting	Early vegetative

**Arunachal Pradesh**

<b>Mustard</b>	<b>Ginger</b>	<b>Potato</b>	<b>Wheat</b>	<b>Winter vegetables</b>
Early vegetative	Vegetative	Early vegetative	Crown root initiation	Vegetative

**Bihar**

<b>Fruits and Vegetables</b>	<b>Winter vegetables</b>	<b>Wheat</b>	<b>Early sown Wheat</b>	<b>Rabi Maize</b>
Early Vegetative	Sowing / transplanting	Sowing	Germination to early vegetative	Vegetative / Flowering
<b>Early sown fruits and Vegetables</b>	<b>Boro Rice</b>	<b>Potato</b>	<b>Rabi Oil seeds (Torla, Sarson, Linseed)</b>	<b>Rabi Pulses (Lentil, Gram, Pea)</b>
Vegetative	Field preparation / nursery sowing	Early vegetative	Vegetative	Vegetative / flowering

**Jharkhand**

<b>Rice</b>	<b>Rabi Maize</b>	<b>Wheat</b>	<b>Potato</b>
Harvesting	Early vegetative / Vegetative	Seedling / early vegetative	Vegetative
<b>Rabi vegetables (Tomato, Cabbage, Cauliflower, Brinjal, Chilli)</b>	<b>Early planted vegetables</b>	<b>Rabi pulses and oilseeds (Gram, masoor, lentil, linseed, oat, mustard and kusum)</b>	<b>Rabi pulses and oilseeds (Arhar)</b>
( Sowing / transplanting - Onion, Pea )	Vegetative	Early vegetative	Flowering / pod formation

**Sikkim**

<b>Orange</b>	<b>Mustard</b>	<b>Rabi vegetables</b>	<b>Wheat</b>
---	Vegetative	Vegetative	Vegetative

**West Bengal**

<b>Boro rice</b>	<b>Sugarcane</b>	<b>Wheat</b>	<b>Rapeseed and Mustard</b>
Field preparation / nursery sowing	Cane development	Crown root initiation / tillering	Vegetative / flowering
<b>Gram/ Lentil</b>	<b>Potato</b>		
Vegetative	Vegetative		

**Chattisgarh**

<b>Gram / Mustard</b>	<b>Vegetables (Tomato, chilli, brinjal)</b>	<b>Sugarcane</b>	<b>Wheat</b>	<b>Linseed, Safflower,</b>
Vegetative / branching	Vegetative	Cane development	Germination / early vegetative / crown root initiation / tillering	Early vegetative / vegetative
<b>Sunflower</b>	<b>Early Sown Sunflower</b>	<b>Potato</b>	<b>New crops Sugarcane</b>	
Field preparation / sowing	Germination / early vegetative / vegetative	Vegetative	Planting	

**Gujarat**

<b>Mustard</b>	<b>Wheat</b>	<b>Pre-monsoon irrigated Cotton</b>	<b>Castor</b>	<b>Sugarcane</b>
Vegetative / flowering / pod formation	Land preparation / sowing	Boll formation / picking	Flowering / Pod formation	Maturity / Harvesting
<b>Kharif Cotton</b>	<b>Early Sown Wheat</b>	<b>Summer Rice</b>		
Square / boll formation	Germination / early vegetative / crown root initiation / tillering	Preparation of rice nursery		

**Maharashtra**

<b>Rabi Jowar (Madhya Maharashtra, Marathwada &amp;</b>	<b>Tur (Madhya Maharashtra, Marathwada &amp;</b>	<b>Irrigated Cotton</b>	<b>Sugarcane (Seasonal) (Madhya Maharashtra,</b>	<b>Rabi Sunflower (Madhya Maharashtra, Marathwada &amp;</b>
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<b>Vidarbha)</b>	<b>Vidarbha)</b>		<b>Marthwada and Vidarbha)</b>	<b>Vidarbha)</b>
Flag leaf initiation / flowering / grain formation(early crops)	Pod maturity / harvesting	Boll formation / boll maturity / picking	cane maturity / harvesting	Floral bud formation / flowering
<b>Potato (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Kharif cotton (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Potato (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Kharif rice (Konkan)</b>	<b>Kharif rice (Vidarbha)</b>
Early vegetative / early tuberization	Boll formation / boll maturity / picking	Early tuberization / earthing up / tuber formation(early crops)	(late varieties) Harvesting	Grain maturity / harvesting
<b>Gram (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Wheat (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Onion (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Early sown Gram (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Early sown Wheat (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>
Flowering / pod formation	Seedling / crown root initiation / tillering	Vegetative / bulb formation	Pod formation	Germination/seedling/ crown root initiation/tillering
<b>Safflower (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Maize (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Sugarcane Preseasonal (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	<b>Early sown Sugarcane Preseasonal (Madhya Maharashtra, Marathwada &amp; Vidarbha)</b>	
Flowering / head formation	Tasseling / Silking	Sprouting / early vegetative	Sprouting/early vegetative	

#### Madhya Pradesh

<b>Wheat</b>	<b>Mustard</b>	<b>Gram</b>	<b>Masoor</b>	<b>Linseed</b>
Flowering	Flowering	Flowering	Flowering	Flowering
<b>Irrigated Wheat</b>				
Early vegetative				

#### Orissa

<b>Vegetables</b>	<b>Dalua Rice</b>	<b>Mustard</b>	<b>Pulses</b>	<b>Early sown pulses</b>
Flowering / Fruiting / Harvesting	Nursery preparation / sowing	Vegetative / Flowering	Vegetative / flowering (Biri / Mung / Kulthi)	Pod maturity
<b>Sugarcane</b>	<b>Rabi Groundnut</b>			
Maturity / harvesting	Vegetative / flowering			

#### Andhra Pradesh

<b>Rabi Groundnut</b>	<b>Rabi Maize</b>	<b>Gram</b>	<b>Rabi red gram</b>	<b>Rabi rice</b>
Vegetative	Vegetative	Vegetative	Vegetative	Raising nursery / transplanting

#### Karnataka

<b>Sugarcane (Ratoon crop)</b>	<b>Rabi Wheat</b>	<b>Rabi jowar, wheat and maize</b>		
Nursery raising	Vegetative	Flowering		

#### Kerala

<b>Rubber</b>	<b>Mundakan rice</b>	<b>Pepper</b>		
Tapping	Grain development	Harvesting		

#### Tamil Nadu

<b>Rice (Samba)</b>	<b>Millets</b>	<b>Cotton</b>	<b>Early &amp; mid sugarcane</b>	<b>Oilseeds (Groundnut,)</b>
Vegetative	Vegetative	Vegetative	Harvesting	Vegetative
<b>Sunflower</b>	<b>Pulses (Blach gram and Green gram)</b>			
Vegetative	Vegetative			

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