

*Summary* of Agromet Advisory Services for different States of the country Issued by

Agricultural Meteorology Division, India Meteorological

Department, Pune, India

# Thursday, 10<sup>th</sup> January, 2008

(For the period 10<sup>th</sup> to 14<sup>th</sup> January, 2007) The extended version of the bulletin is also available at <u>http://imdagrimet.org</u>

## Agromet Advisory

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

## Punjab

- Rainfall occurred at most places on 9<sup>th</sup> January and at isolated places during rest days. Widespread rainfall realized in the State in past 48 hrs.
- Mainly dry weather is likely over the State. Fall in temperature and fog conditions likely over plains.

## Advisories

- As rain occurred over the State during last week and mainly dry weather is likely for the next three days, apply light and frequent irrigation to sugarcane, *rabi* oilseeds, pulses, early sown wheat and Horticultural crops to protect the crops from cold injury.
- Monitor the sugarcane crop for shoot borer infestation & if exceeds economic threshold level, for effective control spray Endosulfan 50 EC @ 600 ml in 600 liter of water/acre.
- Late blight of potato has been observed in pockets. If required, spray Ridomil MZ or Curzate@700 g per acre. in 250 -350 liter of water.
- Sowing of sunflower varieties i.e. H-88, DK 3890, 302 may be undertaken, taking advantage of realized rain.

## Haryana

- Rainfall occurred at a few places on 9<sup>th</sup> January and at isolated places on 8<sup>th</sup> January. Weather remained dry on 7<sup>th</sup> January. Widespread Rainfall realized in the state in past 48 hrs.
- Mainly dry weather is likely over the State. Fall in temperature and fog conditions likely over the plains.

## Advisories

- As there was no significant rainfall during last week and dry weather condition is likely to continue over the State for next three days, apply light and frequent irrigation to sugarcane, *rabi* oilseeds, pulses, timely sown wheat and Horticultural crops to protect the crops from cold injury.
- Monitor the sugarcane crop for shoot borer infestation & if exceeds economic threshold level, for effective control, spray 600 ml Endosulfan 50 EC in 600 liter of water/acre.
- Sowing of sunflower varieties i.e. H-88, DK 3890, 302 may be undertaken, taking advantage of realized rain.

## Rajasthan

- Rain/ thundershower occurred at isolated places in Bikaner division on 9<sup>th</sup> January and weather remained mainly dry in all divisions of the State.
- Mainly dry weather is likely over the State. Fall in temperature and fog conditions likely over State.

- Apply irrigation and arrange for smoking in *rabi* crops *viz.*, wheat, potato, mustard, barley, taramira and gram to prevent the crops from cold injury due to fall in temperature.
- Undertake intercultural operations in gram, mustard and tarmira to keep the field weed free.
- Monitor gram for pod borer and undertake plant protection measures if the pest population crosses ETL.

## **Uttar Pradesh**

- Weather was mainly dry in the State.
- Mainly dry weather is likely over the State. Fall in temperature and fog conditions likely over plains of west U.P.

## Advisories

- As there was no significant rainfall in the State during last week and mainly dry weather is likely over the State, apply irrigation to wheat, vegetable, pulses, rai, and mustard in East U.P. Apply light and frequent irrigation to protect the crops from cold injury in west U.P.
- Prepare the field and undertake transplanting of onion.
- Spray the solution of Dimethoate 1.5 ml/litre of water to control stemborer in turmeric.
- Harvest the matured toria, sugarcane, winter vegetables and potato.

## **Himachal Pradesh**

- Weather was mainly dry.
- Rain/snow is likely at a few places over the State during next 24 hours and decrease thereafter.

## Advisories

- As there was rain during last week and rain/snow is likely at a few places over the State during next 24 hours and decrease thereafter, apply light and frequent irrigation to vegetables and toria and wheat, barley, gram and rapeseed and mustard crops to prevent the crops from cold injury.
- Apply second dose of CAN @ 13 kg per Bigha or Urea @ 6.5 Kg per Bigha to cauliflower and cabbage.
- There is mild chance of attack of leaf spot disease in cabbage and cauliflower. If attack crosses economic threshold level, spray Dithane M 45 to control the disease.
- Continue sowing of spinach, raddish and carrot in low and mid hills.
- Prepare land and complete sowing of sarson within this month.
- Continue sowing of Autumn varieties of potato.
- Provide mulch to apple in the basins for soil moisture conservation and protection against winter injury. Continue pruning.

## Uttarakhand

- Very light rain was recorded at a few places on 7<sup>th</sup> January and light rain at a few places on 9<sup>th</sup> January, while mainly dry weather prevailed during rest of the week Sky remained mainly clear to overcast during the week.
- Rain/snow is likely at a few places over the State during next 24 hours and decrease thereafter.

- Due to decrease in minimum temperature, farmers are advised to apply light and frequent irrigation and arrange for smoking in the field and orchards to prevent the young crops from cold injury.
- As there was no rainfall in the State during last week and mainly dry weather is likely over the State, apply irrigation to potato and wheat.
- Monitor mango for mealy bug. Undertake deep plough around the tree trunk and wrap 25 cm.wide, 400 gauge polythene around the trunk to prevent mealy bugs attack.

- Undertake intercultural operations in orchards to keep the field weed free.
- Undertake harvesting of matured crops of sugarcane, pea and toria.

## Jammu & Kashmir

- Light to moderate rain/snow occurred at many places on 7<sup>th</sup> January. Moderate to rather heavy rain/snow again occurred at many places on 9<sup>th</sup> January. Light rain/snow occurred at few Places on 8<sup>th</sup> January over J&K divisions.
- Rain/snow is likely at a few places over the State during next 24 hours and decrease thereafter.

## Advisories

- Due to decrease in minimum temperature, farmers are advised to apply light and frequent irrigation and arrange for smoking in the field to prevent the crops from cold injury.
- Apply light irrigation to vegetables, pulses, wheat and oilseed crops as there was no significant rainfall in the State during last week and rainfall is likely at a few places over the State.
- Monitor tomato, brinjal, cabbage and cauliflower for virus infection. Rough out virus affected plants and destroy completely.
- Farmers are advised to go for late sowing of radish (varities: Pusa Himani) and spinach (all green prickly seed) should be done without any delay.
- Apply first dose of urea in wheat (20-25 days crop) in Jammu division.
- Continue harvesting matured toria in Jammu division.

## Delhi

• Mainly dry weather is likely over the State. Fall in temperature and fog conditions likely over the State.

## Advisories

- As there was no rainfall in the State during last few weeks and mainly dry weather is likely over the State for the next three days, apply light and frequent irrigation to vegetables, mustard, gram, barley and wheat to prevent the crops from cold injury.
- Prepare land and sow Nanteez variety of carrot and Pusa Himani variety of raddish.
- Transplant onion seedlings. Prepare land for transplanting of brinjal and tomato.
- To control Wild Oats and *Phalaris minor* in early sown wheat crop Apply Isoprotoran 75% W.P. @ 1 kg/ha and 2,4-D. Amien Salt 58% E.C. @ 750-1000 ml/ha for controlling broad leaved weeds after 28-35 days. Apply half of the remaining dose of nitrogenous fertilizer at 21 25 days after sowing of wheat.

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

## Kerala

- Dry weather prevailed over the State during this period.
- Mainly dry weather is likely over the State.

- As there was no significant rainfall during last week and dry weather is likely to prevail for the next three days, apply irrigation to plantation crops viz., coconut, arecanut, rubber and banana.
- Attack of rhinoceros beetle, red palm weevil, mite and leaf rot is reported in coconut. Fill the leaf axils with Sevidol 8G @ 25 gm mixed with 200 gm fine sand to control rhinoceros beetle. In the leaf rot affected plants, remove the rotten parts from the spear and the two adjacent leaves and pour 300 ml fungicidal solution at the base of the spear which can be prepared by mixing Hexaconazole @ 5 EC 2 ml or Mancozeb @ 3 gm in 300 ml of water. Prophylactic spraying with 2% neem oil + garlic emulsion may be done in the crown and bunches, 2<sup>nd</sup> to 7<sup>th</sup>

bunches from top avoiding unpollinated inflorescence to control mite. Use pheromone trap to monitor and control red palm weevil.

- Attack of pseudo stem weevil, banana rhizome weevil and bunchy top disease is reported in banana. Adopt strict field sanitation. If the attack is severe spray Quinalphos @ 0.05%. Spraying / drenching may be done on the leaf axils, rhizome, surrounding soil and all around the entire pseudo stem. Apply 12.5 gm. Phorate 10G or 10 gm. Carbofuran 3G per plant in leaf axil or 25 gm Phorate or 20 gm. Carbofuran per pit in soil, 70 days and again 165 days after planting to control bunchy top disease.
- Continue harvesting of pepper on bright sunny days.
- Continue nursery sowing, intercultural operations and application of fertilizers.
- Harvest the matured *mundakan* rice crops in bright sunny days. Nursery raising and land preparation may be started for *puncha* rice crop in areas where *mundakan* crop is harvested. Sowing of sesamum, pulses and vegetable crops may be undertaken if *puncha* rice nursery is not raised.

#### Tamilnadu

- Mainly dry weather prevailed over the State on 7<sup>th</sup> January and dry weather prevailed over the State on 8<sup>th</sup> and 9<sup>th</sup> January.
- Mainly dry weather is likely over the State.

#### Advisories

- As there was no rainfall in most of the districts except in Chennai, Cuddalore, Nagappattinam, Thiruvarur and Pondicherry during last week and mainly dry weather is likely to prevail over the State for the next three days, apply irrigation to sugarcane and early sown maize, groundnut, black gram, green gram and pulses. Postpone irrigation in the above districts as there was excess rainfall during last week.
- Monitor rice for bacterial leaf blight (BLB) and blast in the current samba and thaladi rice crops. To control the diseases spray Carbendazim @ 100g or Ediphenphos @ 200 ml or Tricyclozole @ 200g by mixing with 200litre of water using the hand sprayer.
- Monitor maize for stem borer and aphids and if the pest population crosses ETL, spray Carbaryl 50% WP @ 400 g/acre to control the pest.
- Monitor sugarcane for shoot borer and if the pest population crosses ETL, undertake spraying of Endosulfan 35 EC or Monocrotophos 40 EC @ 1.5 litres/ha. Release parasite @ 1 cc per time for stem borers after 15 days of spraying. Release parasite @ 1 cc per time for the control of stem borers.
- Continue picking of matured cotton bolls on bright sunny days. Picking may be done at early morning hours to maintain quality of kapas.
- Undertake intercultural operations to keep the field weed free.

#### Karnataka

- Dry weather prevailed over the State on all days.
- Mainly dry weather is likely over the State.

- As there was no significant rainfall over the state during last week and dry weather is likely to prevail for the next three days, apply irrigation to sugarcane, *rabi* jowar, maize, cotton and sunflower.
- Undertake intercultural operations in sugarcane to keep the field weed free and propping to prevent the crop from lodging.
- Monitor *rabi* sunflower for powdery mildew and undertake spraying of Wettable Sulphur @ 3 g/litre of water, if required.
- Spray NAA @ 40 ppm to enhance boll setting in cotton.

## Andhra Pradesh

- Weather remained dry over the State during the week.
- Mainly dry weather is likely over the State.

### Advisories

- As there was no significant rainfall during last week and dry weather is likely over the State for the next three days, apply irrigation to red gram, groundnut, black gram and chillies.
- Continue picking cotton. Picking may be undertaken in the morning hours to maintain the quality of kapas.
- Prevailing weather conditions are congenial for incidence of blast in rice. Monitor the crop and spray Tricyclazole @ 0.6 g per litre of water as soon as the disease symptoms are noticed. To prevent the incidence of paddy stem borer in nursery apply Carbofuran @ 160 g per cent of nursery.
- Monitor red gram for *Maruca* pod borer and if the pest population crosses ETL, spray Dichlorvas @ 1 ml + Lamda Cyhalothrin @ 2 ml or Dichlorvas 1 ml + Chlorpyriphos @ 2.5 ml per litre of water.
- Monitor black gram for yellow vein mosaic and to control the vector to prevent further spread of the disease, spray Monocrotophos @ 1.6 ml/litre of water or Dimethoate @ 2 ml/litre of water.

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

#### Assam

- Dry weather prevailed over the State during the period. Mainly clear sky during the period.
- Mainly dry weather is likely over the State.

#### Advisories

- As there was no rain in the State during last week and mainly dry weather is likely over the State for next three days, apply irrigation to arhar, winter vegetables, other *rabi* crops and wheat.
- Continue harvesting of matured crops of sugarcane. Red rot infested sugarcane may be harvested early and the field should be newly planted. Ratooning of infested plant should be discarded.
- Prepare land for winter vegetables such as spinach, reddish & corrinder etc. and seeds of hybrid varieties of tomato, brinjal, capsicum, cauliflower and cabbage etc. may be collected from reputed sources and should be sown in the seed bed for raising seedling for planting in the main fields.
- Incidence of aphids and saw fly was noticed in mustard and rapeseed in few localities.
- Monitor mustard and rapeseed for aphids and saw fly and if the population exceeds economic threshold level, apply rogor or Malathion @ 2 ml / litre of water to control the disease.
- Start transplanting of *boro* rice seedlings in the main field.

#### **Arunachal Pradesh**

- Sky remained mainly clear over the State during the period. Mainly dry weather prevailed over the state during the period.
- Isolated rain/thundershowers are likely over the State from tomorrow onwards.

#### Advisories

• As there was no rainfall in the State during last week and only isolated rain/thundershowers are likely over Arunachal Pradesh from tomorrow onwards, apply irrigation to vegetables, wheat, potato, pea, *rabi* maize and mustard.

- Harvest the matured crops of ginger and wet seeded rice.
- Apply first top dressing (33 kg Urea/ha) in potato and do earthing up.
- Undertake weeding and hoeing in pea, wheat, mustard and *rabi* maize to keep the field weed free.

## Bihar

- Weather was mainly dry.
- Mainly dry weather is likely over the State.

## Advisories

- As there was no significant rainfall in most of the districts during last few weeks and mainly dry weather is likely over the State, apply irrigation to arhar, wheat, gram, fodder maize and sugarcane.
- Complete field preparation and sowing of late sown wheat.
- Heavy infestation of lucerne caterpillar is reported in early sown lentil. Spray Nuvan @ 500ml/ha or Monocrotophos @ 1 litre/ha. to control the pest.

## Jharkhand

- Weather remained mainly dry.
- Mainly dry weather is likely over the State.

## Advisories

- Apply irrigation to vegetables, wheat and gram as there was no significant rainfall during last few weeks and mainly dry weather is likely over the State for the next three days.
- To protect potato crop from aphid, spray Mancozeb (2.5 gm/litre water) or Ridomil (1.5 gm/litre water).
- Hoeing and weeding, top dressing with 55kg Urea per hectare and irrigation may be done in wheat, if the crop has crossed the age of 25 days.

## Sikkim

- There was no rainfall during the week.
- Isolated rain/thundershowers are likely over the State from tomorrow.

## Advisories

- As there was no rainfall during last week and rain/thundershowers is likely to occur at isolated places over the State for the next three days, apply irrigation to *rabi* vegetable crops like cabbage, cauliflower, carrot and beet root and early sown wheat and mustard.
- Complete harvesting of orange. Plug the holes made by trunk borer.
- Undertake intercultural operations and application of fertilizers in mustard, wheat, *rabi* vegetable crops like cabbage, cauliflower, carrot and beet root. Keep mustard fields free from Satyanashi weed and wheat fields free from Hirankhuri weed.
- Undertake nursery sowing of large cardamom. In early sown crop, Chirkey and Foorkey infected plants may be destroyed by uprooting/burial at regular intervals. Regular inspection may be carried out to observe caterpillar/ shoot borer incidence, if any and may be hand picked and destroyed mechanically.

## West Bengal

- Weather was mainly dry during the period from 7<sup>th</sup> to 9<sup>th</sup> January over Gangetic West Bengal and Sub Himalayan West Bengal.
- Isolated rain/thundershowers are likely over Sub-Himalayan West Bengal from tomorrow. Mainly dry weather is likely over Gangetic West Bengal.

## Advisories

• As there was no rainfall in the State during last week and isolated rain/thundershowers are likely over Sub-Himalayan West Bengal from tomorrow and mainly dry weather is likely over

Gangetic West Bengal, apply irrigation to sugarcane, arhar and *rabi* crops like mustard, rapeseed, wheat, gram, lentil, potato, *rabi* arhar and sunflower.

- Apply half of remaining dose of N at 21 25 days after sowing of wheat.
- Keep vigil against late blight disease of potato. Uproot and burn the affected plants. Apply water soluble Mancozeb @ 2.5 g / litre of water in the remaining healthy plants.
- Keep vigil against red rot disease of sugarcane. Uproot and burn the diseased plants to prevent further spread of the disease.
- Low lying typical areas on common irrigation are to be selected for *boro* rice. Flat seedbed of size 125 cm breadth and 10m in length with 30cm gap between two seedbeds should be prepared and six such seedbeds should be prepared for transplanting one bigha of land. Pregerminated seeds are to be sown @ 650-1000 g per bed. Seed requirement for one bigha is roughly 6 Kg. Fertilizer should be applied @ 18 Kg Urea, 27 Kg SSP & 6 Kg MOP per bigha.
- Brown rust disease may appear in wheat. Spray Carboxyl or Oxycarboxyl @ 1gm / litre of water at 7-10 days intervals for 2-3 times if brown coloured rust is observed on the surface of the leaves.
- Generally, Zinc deficiency symptom may appear in some districts of South Bengal & most of the dist. of North Bengal under standing wheat Crop. So apply Zinc Sulphate @ 25Kg / ha after every 3 years interval. Also to check Boron deficiency, spray Borax / Sohaga @ 5gm / litre of water in the standing crops.

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

## Gujarat

• Mainly dry weather is likely over the State.

## Advisories

- As there was no rain during last few weeks over the State and mainly dry weather is likely to prevail over the State for next three days, apply irrigation to *kharif* cotton, castor, mustard and wheat.
- Stop irrigation 10 15 days before harvesting of sugarcane. Start harvesting the crop when brix reading of sugarcane will be 19 or more.
- Monitor for pest and diseses in cotton. If damage exceeds economic threshold level, for control of sucking pests like aphids, jassids, thrips & *Heliothis* release Chrysoperla eggs or first in star larvae at the rate of 10000/ha twice at the interval of 15 days. For monitoring and management the boll worms and Heliothis hang 5 pheromanc trap in /ha. Change the lures at an interval of 15 days. Destroy trapped moths every day. For control of boll worms release parasite Tricogamma 1.5 lakhs/ha 5 to 6 time as per requirement depending upon infestation in the field. For control of whitefly spray Neem oil 4 liter /ha as per requirement. For control of top shoot borer spray Endosulphan 35 % EC% @ 2 liter/ha or Quinalphos 25% EC @ 2 liter/ha.

## Chhattisgarh

- Weather was mainly dry in all divisions of the State.
- Mainly dry weather is likely over the State. Fall in temperature likely over the State.

- As there was no rainfall during last week in the State and mainly dry weather is likely over the State for next three days, apply light and frequent irrigation to sugarcane, toria, vegetables, rapeseed and mustard and early sown wheat, potato and other *rabi* crops to protect the crops from cold injury.
- Prepare land for sowing of wheat. Treat the seeds with thirum @ 3 g or bavistin @ 2 g / kg of seeds. Select varieties from Kanchan, Sujata, Amar, GW-273 and Bilasa for sowing.

- Prepare land for sowing of other *rabi* crops. Treat the seeds with thirum @ 3 g or bavistin @ 2 g / kg of seeds. Seeds of pulse crops may be treated with rhizobium culture.
- Prepare land for plating of potato. Select varieties from kufri badsha, Kufri Jyoti, Kufri Bahar etc. Before planting treat the seeds by dipping them for 30 minutes in solution of thyrum @ 3 g or bavistin @ 2 g / litre of water.
- Due to partly cloudy sky conditions vegetable crops are likely to be affected by aphids and powdery mildew. Monitor the crop for the pest and disease and undertake plant protection measures.

### Maharashtra

- Mainly dry weather prevailed over the State.
- Mainly dry weather is likely over the State.

### Advisories

- As there was no significant rain in the State during last week **and mainly dry weather is likely to occur over the State**, apply irrigation to sugarcane (Pre-seasonal), sugarcane (*suru*), *kharif* tur, *rabi* jowar, safflower, potato, gram, onion, wheat and maize. Apply light and frequent irrigation in Vidarbha region to protect the crops from cold injury.
- Apply 50 kg Nitrogen/ha to black soil, 40 kg/ha to medium & 25 kg Nitrogen/ha to low fertile soil after 25 to 30 days from sowing of *rabi* jowar.
- Second dose of 50 kg Nitrogen / ha may be applied to potato as top dressing after weeding.
- Second dose of 50 kg Nitrogen / ha may be applied after 30 days from planting of onion & irrigation may be given immediately.
- Apply second dose of 60 kg Nitrogen / ha at 30 days after sowing of wheat.
- Mild incidence of white woolly aphids in Ahmednagar and Pune districts in Sugarcane (preseasonal) & sugarcane (*Suru*), pod borer in Nasik, Pune, Aurangabad division in *kharif tur*, shoot fly in Aurangabad division in *rabi* jowar and aphids in Latur & Kolhapur division in safflower is reported.
- Monitor the Sugarcane (pre-seasonal) & sugarcane (*Suru*) for White Woolly Aphids & if exceeds economic threshold level, for effective control spray 500 ml Endosulphan 35%+ Metasystox 1000 ml & 500 ml Sticker or 500 gm detergent powder / ha in 500 liters of water. For the biological control of White Woolly Aphids, release 25000 larvae of *Chrysoperla carnea* or *Dipha aphidivora* / ha as predator after 15 days from the above dose.
- Monitor the crop for pod borer in tur & if exceeds economic threshold level, first spray 5% neem extract or 20 25 ml fenvalerate in 100 litres of water.
- Monitor the crop for shoot fly in *rabi* jowar & if exceeds economic threshold level, spray 5% neem seed extract or 30% Dimethoate 10 ml + 10 ml sticker per 10 liter of water or Nuvacron 36WSC 300ml/ha in 500 litres of water or release 10000-15000 larvae of Chrysoperla carnea/ha.
- For the biological control of aphids in safflower, release 10000-15000 larvae of Chrysoperla carnea or apply 5% neem extract.
- For the protection of blossom and to control the infestation of downy mildew / hoppers in mango, apply mixture of 300 mesh sulphur and 1.5% quinolphos powder in the ratio of 1:1 or spray 50% carbaryl powder @ 20 g plus 80% water soluble sulphur @ 25 gm. 2-3 sprayings may be done at 15 days interval.

## Madhya Pradesh

- Dry weather prevailed over the State.
- Mainly dry weather is likely over the State. Fall in temperature likely over State.

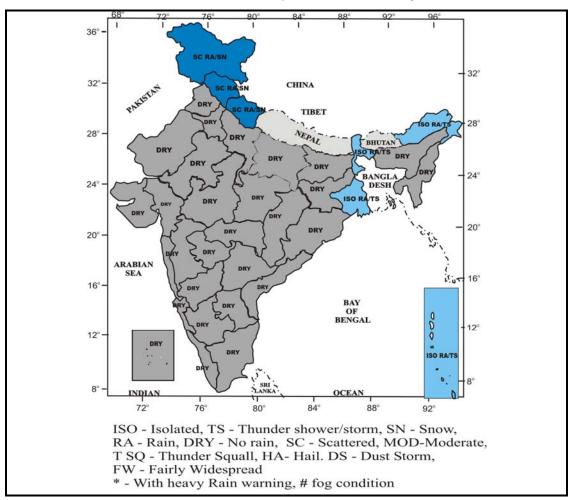
- As there was no significant rainfall during last week in the State and mainly dry weather is likely over the State for next three days, apply irrigation to sugarcane, linseed, lentil, gram, ustard and wheat. This will also prevent the crop from fall in temperature.
- Undertake intercultural operation in sugarcane and other *rabi* crops to keep the field weed free.
- Undertake weeding in wheat. Spray 2,4-D for broad leaved weeds and Isoproturan for monocot weeds. Broadcast urea @ 50 kg/ha as top dressing.
- Monitor gram for leaf eating caterpillar and if the pest population crosses ETL, spray Endosulphan @ 1.5 litre/ha.
- Monitor linseed, mustard and masoor for mahu insect and apply Methyl Parathion 2% dust @ 25 kg/ha.

#### Orissa

- Weather has been dry over the State during the above period.
- Mainly dry weather is likely to prevail over the State.

- As there was no rainfall over the State during last few weeks and mainly dry weather is likely to prevail over the State for the next three days, apply irrigation to vegetables, sugarcane *rabi* oilseed and pulse crops.
- Complete nursery sowing of *Dalua* rice. Use varieties like Khandagiri, Parijat, and Lalat etc. Start main field preparation and transplanting of *dalua* rice. Use 6kg N, 12kg P, and 12 kg K per acre at the time of transplanting in short duration paddy.
- To control leaf eating caterpillar in groundnut spray Endosulfan @ 2ml per ltr of water and to control tikka disease spray copper oxychloride @ 2.5 gm/litre of water.

Forecast Valid upto 13<sup>th</sup> January, 2008



## Salient weather features for the week ending 09/01/08

#### METEOROLOGICAL ANALYSIS

- Last week's western disturbance as an upper air system over Jammu & Kashmir and neighbourhood moved away eastwards on 3<sup>rd</sup> January.
- A fresh western disturbance as an upper air system lay over north Pakistan and adjoining Jammu & Kashmir on 3<sup>rd</sup> January, over Jammu & Kashmir and neighbourhood on 4<sup>th</sup> January and moved away eastwards thereafter.
- Another western disturbance as an upper air system lay over north Pakistan and neighbourhood during 6-8<sup>th</sup> January and over north Pakistan and adjoining Jammu & Kashmir on 9<sup>th</sup> January.
- An upper air cyclonic circulation in lower tropospheric levels lay over Saurashtra & Kutch and neighbourhood on 5<sup>th</sup> January, over southwest Rajasthan and neighbourhood during 6-8<sup>th</sup> January and became less marked thereafter.
- A cyclonic circulation at lower levels lay over southwest Bay of Bengal off Tamil Nadu coast on 3<sup>rd</sup> January, over Comorin area and neighbourhood on 4<sup>th</sup> January and over southeast Arabian Sea off Kerala coast on 5<sup>th</sup> January and moved away westwards on 6<sup>th</sup> January.
- Last week's upper air cyclonic circulation extending upto 0.9 Km above mean sea level over north Konkan and neighbourhood lay over north Madhya Maharashtra and neighbourhood on 3<sup>rd</sup> January and became less marked thereafter.

### RAINFALL

Under the influence of the above systems:

- Fairly widespread rain/snowfall occurred over Jammu & Kashmir and Himachal Pradesh during 6th to 9th with isolated heavy falls on 9th. Isolated to scattered rain/snowfall occurred over Uttarakhand on 7th and 9th.
- Isolated to scattered rain/thundershowers occurred over Punjab, Haryana and Rajasthan on 8th and 9th.

- Scattered to fairly widespread rain/thundershowers occurred over Tamil Nadu during 4-6th with isolated heavy to very heavy falls on 5th. Isolated rain/thundershowers occurred over Rayalaseema and South Interior Karnataka on 5th.
- Isolated rain/thundershowers occurred over Andaman & Nicobar Islands and Lakshadweep on a few days of the week.
- Isolated rain/thundershowers occurred over West Madhya Pradesh on 3rd.
- Mainly dry weather prevailed over remaining parts of the country during the week.

#### MINIMUM TEMPERATURE COLD WAVE CONDITION

- Cold wave conditions prevailed over some parts of Haryana, Punjab, and north Rajasthan during first 3 days of the week. The minimum temperatures were also below normal by 2-4°C over remaining parts in the plains of the northwest India and Rajasthan. The minimum temperatures increased thereafter and became above normal by 2-5°C over northwest India during remaining days of the week. They were above normal by 6-12°C over some parts of Rajasthan for a few days.
- The minimum temperatures were normal during first 3 days and above normal by 2-5°C during the remaining days over Central India and Gujarat.
- They were below normal by 2-4°C over East Uttar Pradesh, Orissa, Jharkhand, Andhra Pradesh and interior Karnataka on a few days of the week.
- They were near normal over remaining parts of the country during the week.

RAINFALL DURING THE WEEK (FOR THE WEEK ENDING ON 9<sup>™</sup> JANUARY, 2008) Rainfall was excess/normal in 7; deficient/scanty in 10 and no rain in 19 out of 36 meteorological subdivisions (Actual: 4.8 mm, Normal: 4.5 mm and Departure: 6 %).

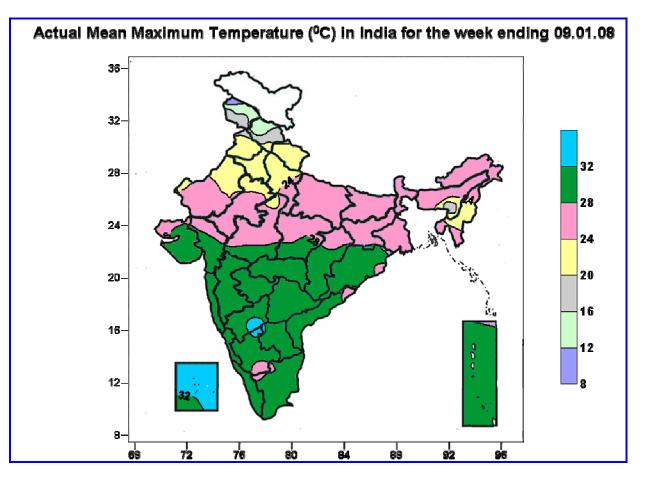
## CUMULATIVE SEASONAL RAINFALL (1<sup>ST</sup> JANUARY TO 9<sup>TH</sup> JANUARY, 2007)

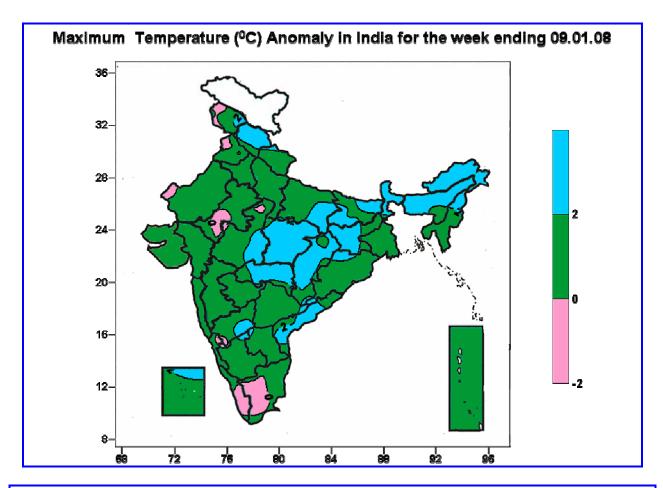
Rainfall was excess/normal in 6; deficient/scanty in 11 and no rain in 19 out of 36 meteorological subdivisions. (Actual: 4.8 mm, Normal: 5.6 mm and Departure: -14%).

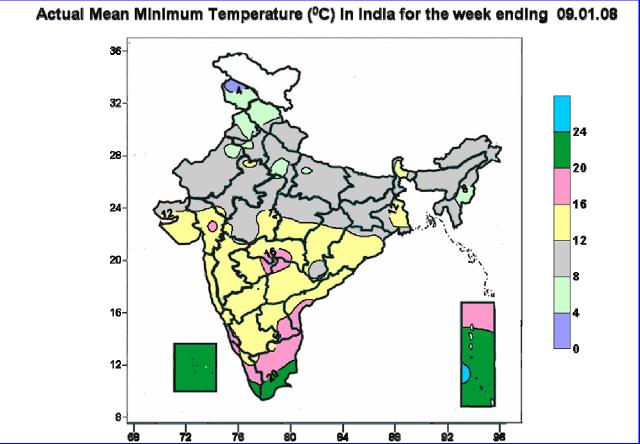
#### OUTLOOK FOR THE WEEK ENDING ON 16<sup>TH</sup> JANUARY, 2008.

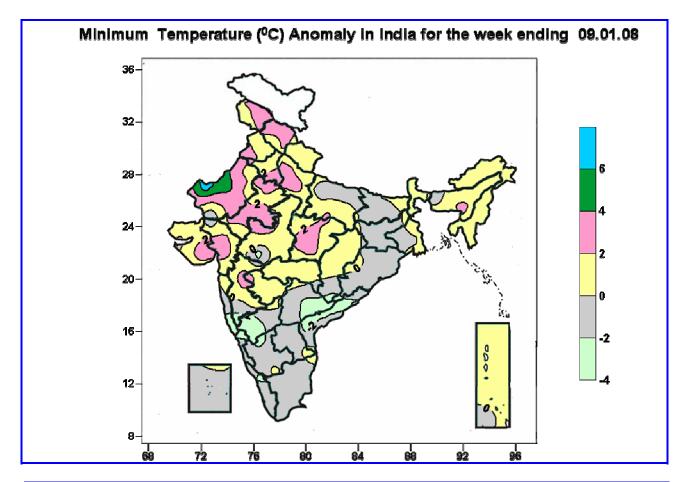
- Isolated to scattered precipitation activity is likely over western Himalayan region during first half of the week.
- Fall in night temperature over Indo-Gangetic plains. Fog conditions are also likely over some parts of these regions.

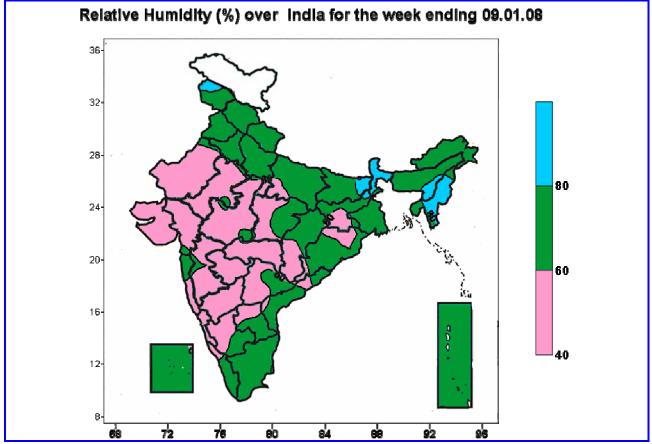
## Contour maps for the week ending 9<sup>th</sup> January, 2008

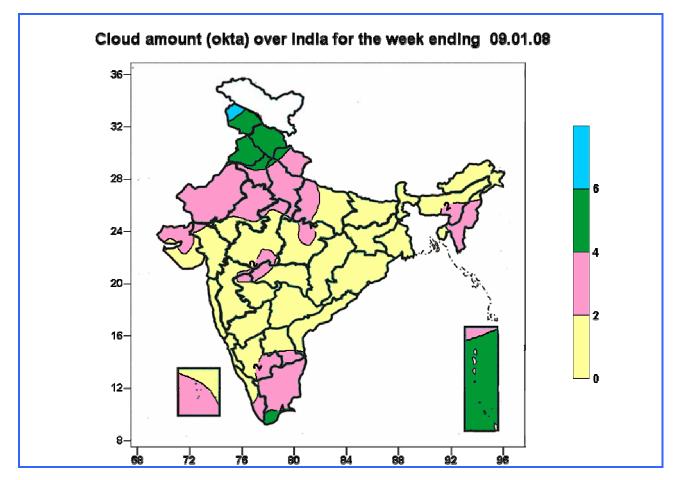


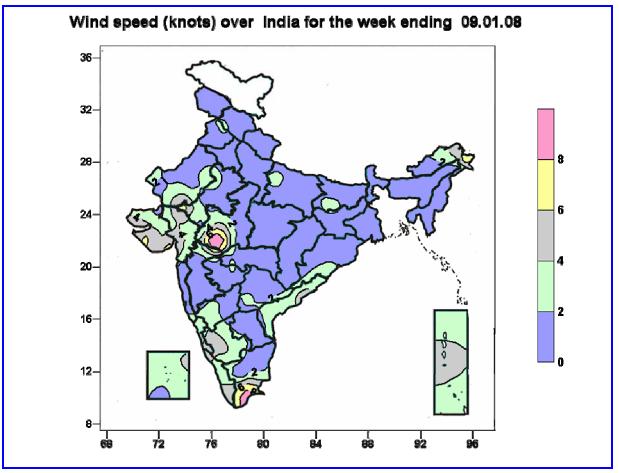












Desert Locust Forecasting	
and the second	

Rainfall (mm)								
Station Name	03.01.08	04.01.08	05.01.08	06.01.08	07.01.08	08.01.08	09.01.08	
Amritsar	00.0	00.0	00.0	00.2	00.2	00.0	11.7	
Barmer	00.0	00.0	00.0	00.0	00.0	00.0	00.0	
Sriganganagar	00.0	00.0	00.0	00.4	00.0	00.2	09.4	
Jaisalmer	00.0	00.0	00.0	00.0	00.0	00.0	05.5	
Kota	00.0	00.0	00.0	00.0	00.0	00.0	00.0	
Deesa	00.0	00.0	0.00	00.0	0.00	0.00	0.00	
Churu	00.0	00.0	00.0	00.0	00.0	00.0	00.0	

Temperature (degree Celcius)								
Station Name	03.01.08	04.01.08	05.01.08	06.01.08	07.01.08	08.01.08	09.01.08	
Amritsar	08.5	11.0	07.5	16.5	10.5	11.0	13.0	
Barmer	16.0	17.0	18.5	19.5	20.0	21.0	19.5	
Sriganganagar	10.5	-	12.0	16.5	15.5	15.0	17.0	
Jaisalmer	14.5	15.5	-	16.5	17.0	14.5	18.0	
Kota	14.5	15.0	16.0	18.0	20.0	-	23.0	
Deesa	18.0	16.5	18.5	-	22.5	21.5	20.5	
Churu	-	-	-	-	-	-	-	

	Wind													
	03.0	1.08	04.0	)1.08	05.0	1.08	06.0	1.08	07.0	1.08	08.0	1.08	09.	01.08
Station Name	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.
Amritsar	NNE	04	NW	06	-	-	-	-	NW	02	ESE	03	SSE	02
Barmer	NNE	08	-	-	-	-	-	-	SSW	21	SSW	16	W	11
Sriganga nagar	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jaisalmer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kota	NE	10	S	07			-	-	SSE	23	SSW	09	SSW	15
Deesa	-	-	-	-	-	-	-	-	S	18	S	21	SSW	12
Churu	Ν	12	NNE	06	-	-	-	-	SE	04	SSW	15	SSW	15

Under the prevailing weather conditions, there is no chance of locust infestation in Rajasthan and the adjoining areas during this week.

## CROP-STATE-STAGE

		Delhi		
Vegetables	Mustard	Wheat	Early sown wheat	Berseem
Vegetative	Flowering	Sowing	crown root initiation/ tillering	Vegetative
Gram	Barley			
Vegetative	Vegetative			
		Haryana		
Sugarcane / Autumn sugarcane	Horticultural crops	Cotton	Wheat	Rabi Pulses
Vegetative	Vegetative	Picking	Germination / crown root initiation	Vegetative
Rabi oilseeds	Toria			
Vegetative	Flowering / fruiting			

		Himachal Pradesh		
Vegetables (Ladies finger/ Cabbage, Cauliflower)	Potato	Barley	Toria	Wheat
Vegetative/ head formation Ladies finger Flowering/Fruiting	Sowing	Germination / early vegetative	Vegetative	germination / early vegetative / crown root initiation
Gram	Oilseeds	Early sown rapeseed and mustard		
Germination / early vegetative	Land preparation & sowing (Toria – vegetative)	Germination / early vegetative		
		Jammu & Kashmir		
Vegetable crops	Rice	Pulses Brown Sarson, Mustard		Toria
vegetative	Harvesting- Jammu div.	vegetative	Flowering	Harvesting (Jammu div.)
Wheat	Barley, Oat			
tillering	Vegetative			
		Punjab		
Sugarcane	Horticultural crop	Rabi Oilseeds	Cotton	Rabi pulses
Vegetative	Vegetative	Vegetative	Picking	Vegetative
Autumn sugarcane	Wheat	Irrigated toria	6	
Early vegetative	Crown root initiation / vegetative	Flowering / fruiting		
	vegetative	Rajasthan		
Wheat & barley	Gram	Early sown mustard, taramira	Potato	Early sown potato
Tillering	Flowering	Flowering / pod formation	Planting	Early vegetative
		Uttar Pradesh		
~				
Sugarcane	Vegetables	Rabi pulses	Rai, mustard	Toria
Cane maturity	Flowering / fruiting / maturity	Flowering	Flowering / pod formation	Pod maturity / harvesting
Mango	Wheat			
Vegetative	Early vegetative			
		Uttarakhand		
Mango/Litchi	Pea / Toria	Sugarcane	Potato	Wheat
Vegetative	Maturity	Maturity	Tuber growth / maturity	Tillering
		Accom	maturity	
g		Assam	D '	
Sugarcane	Arhar Dod formation (moturity	Horticultural plants	Boro rice	
Harvesting Mustard, rapeseed,	Pod formation / maturity	Planting	Transplanting	Early sown Winter
pea lentil etc.	Potato	Wheat	Winter vegetables	vegetables
flowering / pod formation	Vegetative / tuber formation	Crown root initiation / tillering	Land preparation & transplanting	Early vegetative / vegetative
		Arunachal Pradesh		
WRC Rice	Ginger	Millet	Jhum Paddy	Potato
Late Harvesting	Harvesting	Harvesting	Harvesting	vegetative
Rabi Vegetables	Wheat / Mustard	rabi maize	Pea	
Vegetative / harvesting	Vegetative	Vegetative	Flowering	
		Bihar		
Vegetables & fruit crops	Maize fodder	Arhar	Early sown <i>Rabi</i> pulses	Wheat
vegetative	vegetative	Vegetative	Vegetative / flowering	Early vegetative
Sugarcane	Rabi oilseeds (rai, linseed)	Gram	Potato	
Vegetative	Flowering / pod formation	sowing	Vegetative / tuber formation	

		Jharkha	and				
Pea, gram, potato	Litchi / Ma	ango		oles (Tomato, al, Bhendi)	Wheat		
vegetative	Vegetative (			egetative	Early vegetative		
	<b>X</b> 7 ( <b>1 1</b>	Sikkii	n				
Orange	Vegetables (Cauliflower, Cabbage, Carrot, Beat, tomato)	Large Cardamom		Wheat	Mustard		
End Harvesting	Flowering	Nursery sowing Early sown crops – Early vegetative/ vegetative		Vegetative / tillering	Flowering		
		West Be	ngal				
Sugarcane	Arhar	Must Rapeseed len	l / gram /	Potato	Sunflower		
Cane development	Pod development / maturity (Rabi arhar- vegetative)	Late Veg flowe	·	Vegetative / tuber formation	early vegetative / vegetative		
Boro rice	Wheat						
Nursery sowing	Crown root initiation /						
,	tillering	<b>Ch</b> - 44*	o nh				
Sugarcane	Rapeseed, mustard	Chattisg To	arn oria	Tomato, Brinjal,	Wheat		
	F			Chilli			
Vegetative (autumn – Sprouting / early vegetative)	Branching	vegetative / flowering		Vegetative / flowering	Land preparation & sowing		
Rabi crops	Early sown rabi crops	Potato		Early sown potato	Early sown Wheat		
Land preparation &	Germination / early		paration &	Sprouting / early	germination / crown		
sowing	vegetative / vegetative	planting		vegetative	root initiation		
		Gujar	at	Ι			
Sugarcane	Kharif Cotton	Ca	stor	Mustard	Wheat		
Cane maturity/harvesting	Boll formation/ boll maturity / picking	Spike formation / pod formation		Flowering / pod formation	Crown root initiation / tillering		
		Maharas	htra				
Sugarcane Preseasonal (Madhya Maharashtra, Marathwada & Vidarbha)	Sugarcane (Suru) (Madhya Mahrashtra, Marthwada and Vidarbha)	(Ma Mahai Marath Vida	afflower dhya rashtra, wada & rbha)	Rabi Jowar (Madhya Maharashtra, Marathwada & Vidarbha)	Kharif Tur (Madhya Maharashtra, Marathwada & Vidarbha)		
Elongation / cane development	Active growth / elongation		ng / head nation	Vegetative / ear head emergence	Pod formation / grain filling / grain maturity		
Potato (Madhya Maharashtra, Marathwada & Vidarbha)	Rabi onion (Madhya Maharashtra, Marathwada)	Maize (Konkan, Madhya Maharashtra, Marathwada & Vidarbha)		Gram (Madhya Maharashtra, Marathwada & Vidarbha)	Mango		
Vegetative	Early vegetative	Vegetative		Branching / flowering / pod formation	Flowering		
Wheat (North Konkan, Madhya Maharashtra, Marathwada & Vidarbha)							
early vegetative / crown root initiation / early tillering		Madh: P	no doch				
	D-1: . /1 ·	Madhya P	radesh				
Sugarcane	Rabi crops (linseed, lentil, gram, mustard)	W	heat				
Grand growth	Pod / capsule formation Gram – flowering	vege	tative				

		Orissa		
Kharif vegetables	Sugarcane	Dalua rice	Arhar	Mung and urd
Vegetative / fruiting	Maturity / harvesting	Nursery sowing	Pod formation / maturity	Vegetative / flowering
Oilseeds				
Vegetative / flowering				
	1	Andhra Pradesh		1
Rice	Kharif Cotton	Rabi red gram / chillies		
Raising nursery / Transplanting	Picking	Vegetative		
		Karnataka		
Sugarcane (Ratoon crop)	Annual sugarcane	Rabi Jowar/Maize/Cott on/ Sunflower		
Grand growth	Sprouting / early vegetative / tillering	Maize, jowar - Grain formation And Sunflower, cotton – flowering		
		Kerala		
Rubber	Mundakkan Rice	Pepper	Puncha rice	
New planting	Harvesting	harvesting	Raising nursery / transplanting	
		Tamil Nadu		
Rice (Samba)	Sugarcane (Early, Mid season)	Special season sugarcane	Groundnut/Black gram/Green gram/Red gram	Early sown Groundnut/Black gram/Green gram/Red gram
Vegetative / tillering	Cane development / maturity	Grand growth	Vegetative	vegetative
Jowar/Bajra/Samai	Early sown jowar / bajra / samai	Cotton	Maize	Coriander
Vegetative	Early vegetative / vegetative	Picking	Grain development	vegetative

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