

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

# Agricultural Meteorology Division, India Meteorological Department, Pune, India

## Thursday, 21st December, 2006

(For the period 21<sup>st</sup> December to 25<sup>th</sup> December, 2006)
The extended version of the bulletin is also available at <a href="http://imdagrimet.org">http://imdagrimet.org</a>

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

#### **Punjab**

Weather remained mainly dry in the State during the period.

Isolated rain / thundershowers are also likely over the State during next 24 hours and mainly dry weather thereafter. Fall in night temperatures by 2-3<sup>o</sup>C over the State from 22<sup>nd</sup> December onwards.

#### **Advisories**

- There was no rainfall in the State during last week and isolated rain / thundershowers are also likely over the State during next 24 hours and mainly dry weather thereafter. Under the circumstances, apply irrigation to sugarcane, gram, lentil and wheat.
- Continue sowing of late wheat variety PBW 373.
- Undertake necessary weeding and intercultural operation to control weeds in *rabi* oilseeds, gram and lentil.
- 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.

#### Haryana

Weather remained mainly dry in the State during the period.

Isolated rain / thundershowers are also likely over the North Haryana during next 24 hours and mainly dry weather thereafter. Mainly dry weather likely in South Haryana. Fall in night temperatures by 2-3<sup>o</sup>C over the State from 22<sup>nd</sup> December onwards.

- There was no significant rainfall during last week and isolated rain / thundershowers are also likely over the North Haryana during next 24 hours and mainly dry weather thereafter. Under the circumstances, apply irrigation to sugarcane, gram, lentil and wheat.
- There was no significant rainfall during last week and mainly dry weather is likely over South Haryana for the next three days. Under the circumstances, 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 600-800ml 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

Weather remained dry in the State. Night average temperature was generally normal in all the divisions of the State.

Mainly dry weather is likely over the State.

Warning: Cold wave conditions may occur at few places in North Rajasthan 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 time.
- 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.
- Undertake intercultural operations in early sown mustard, cumin, maize and gram to keep the field weed free. Top dress urea in mustard crop before light irrigation.

#### **Uttar Pradesh**

Weather was mainly dry in all divisions of U.P. from 18<sup>th</sup> to 20<sup>th</sup> December.

Weather will be mainly dry over the State. Fall in night temperatures by 2-3 <sup>o</sup>C likely over the West U.P from 22<sup>nd</sup> December onwards.

#### 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 circumstance, 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 and pulses.
- Sowing of rabi wheat, late varieties of gram and barley crops may be completed.
- 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.

Isolated rain / snowfall is likely to occur over the State during next 24 hours and weather will be mainly dry thereafter.

- As there was no significant rain during last week in the State and isolated rain / snowfall is likely to occur over the State during next 24 hours and weather will be mainly dry thereafter, 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 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

Weather remained mainly dry during the period. Sky remained mainly clear to mainly cloudy.

Rain / snowfall is likely to occur at a few places over the State during next 24 hours and weather will be mainly dry thereafter. Fall in night temperatures by 2-3<sup>o</sup>C over the plains from 22<sup>nd</sup> December onwards.

#### **Advisories**

- There was no significant rainfall during last week and rain / snowfall is likely to occur at a few places during next 24 hours and weather will be mainly dry thereafter over the State. Under the circumstances, apply required irrigation to mango, potato and wheat crops.
- Carry out inter cultural operation, application of fertilizer and plant protection measures to mango, wheat and potato crops on a non rainy day.
- 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 on bright sunny days.

#### Jammu & Kashmir

Weather remained mainly dry over J & K State.

Rain / snowfall activity is likely at a few places over Jammu & Kashmir during next 24 hours and mainly dry weather thereafter.

#### 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.
- Rouge out virus effected crops of brinjal, tomato, cauliflower and cabbage in Jammu division.

#### Delhi

Weather remained dry.

Mainly dry weather is likely over the Sate. Fall in night temperatures by 2-3<sup>o</sup>C over the State from 22<sup>nd</sup> onwards.

#### **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 wheat and also to barley, gram, mustard and toria 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.
- Prepare land and continue late sowing of wheat.
- Select varieties from HD-2285, Raj-3077 or 3765, UP 2338 and PBW-226 or 373 etc. for late sown wheat.

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

#### Kerala

Mainly dry / dry weather prevailed over the State during the period.

Rain / thundershowers are likely to occur at a few places over the State.

#### **Advisories**

- There was no significant rainfall in the State during last few weeks and rain / thundershowers are likely to occur at few places for the next three days. Under the circumstance, apply irrigation to plantation crops and mundakan rice depending upon the rainfall situation.
- Attack of *mahali* disease is reported in arecanut. Spray 1% Bordeaux mixture on fruit bunches and crown on a non rainy day to control *mahali* disease.
- Attack of pseudostem weevil and bunchy top is reported in banana. Eradicate bunchy top affected plants to prevent further spread of the disease. Spray Quinalphos @ 0.05% or Chloropyriphos @ 0.03% or Carbaryl @ 0.2% on a non rainy day to control pseudo stem weevil. Spraying / drenching may be done on all leaf axils, rhizome, surrounding soil and all around the entire pseudo stem. Repeat the treatment after 3 weeks if infestation persists.
- 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 on a non rainy day for controlling red palm weevil and rhinoceros beetle. Spray Dichlorovos @ 1 ml per lit of water or use Mercaptothion followed by release of pupal and larval parasites available from bio-control lab, 21 days after spraying on a non rainy day to control leaf eating caterpillar. Spray garlic-neem emulsion on a non rainy day to control mite.
- Attack of rice bug is reported on rice. Spray Malathion @ 2 ml/litre on a non rainy day to control bug.

#### Tamilnadu

Mainly dry weather prevailed over the State on 20<sup>th</sup> December and dry weather prevailed on 18<sup>th</sup> and 19<sup>th</sup> December.

Rain / thundershowers are likely at a few places over the State.

#### Advisories

- There was no significant rainfall in the State and rain / thundershower is likely to occur at few places in Tamil Nadu. Under the circumstance, apply irrigation to the standing crops to bring the soil moisture to its field capacity.
- Weather conditions are favourable for the outbreak of pests and diseases, particularly for BPH and blast.
   Monitor the crop and undertake plant protection measures.
- Monitor groundnut for red hairy caterpillar and leaf miner. If the pest population crosses ETL, spray Monocrotophos @ 625 ml / ha to control red hairy caterpillar. Dust 4% Carbaryl or spray Methyl demeton @ 0.02% to control leaf miner.
- Continue land preparation and sowing of cotton, pulses and sunflower.

#### Karnataka

Dry weather prevailed over the State on all days.

Isolated rain / thundershowers are likely at South Interior Karnataka. Mainly dry weather is likely over the rest region.

- There was no rainfall during last week and rain / thundershower is likely to occur only at South Interior Karnatka and dry weather is likely to prevail in rest of the region for the next three days. Under the conditions, apply irrigation to early sown *rabi* crops like jowar, wheat and maize to bring the soil moisture to its field capacity.
- 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**

Dry weather prevailed over the State.

Isolated rain / thundershower is likely over South Coastal Andhra Pradesh and Rayalaseema. Mainly dry weather is likely to prevail over Telangana.

#### **Advisories**

- There was no significant rainfall during last few weeks over the State and rain / thundershowers likely to occur at isolated places over South Coastal Andhra Pradesh and Rayalaseema for the next three days. Under the circumstances, apply irrigation to *rabi* crops like gram, maize and groundnut to bring the soil moisture to its field capacity.
- Incidences of *Spodoptera exigua* has been reported in gram in Kurnool, Kadappa and Anantpur districts. Spray Thiodecarb @ 1 gm or Acephate @ 1 gm or Chloropyriphos @ 3 ml per liter of water to control the pest.

#### Eastern Region (Assam, Bihar, Sikkim, West Bengal)

#### Assam

Weather was mainly dry during the period over the State.

Mainly dry weather is likely over the Sate during next 24 hours and isolated rain/thundershowers thereafter.

#### **Advisories**

- As there was no significant rain in all the districts during last week and mainly dry weather is likely over the Sate during next 24 hours and isolated rain / thundershowers thereafter, apply irrigation to wheat, rapeseed and mustard, potato, pea, lentil and early sown vegetables.
- Mild incidence of Pod and apion borer in arhar, aphids, jassids, flea beetle and leaf spot in black gram and green gram, aphids and saw fly in mustard and late blight in tomato is reported.
- 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.

#### **West Bengal**

Weather was mainly dry over the State.

Weather will be mainly dry over the State.

- As there was no significant rainfall in all the districts of the State during last week 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 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.

#### Bihar

Weather was mainly dry.

Mainly dry weather is likely over the State.

#### **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 and pea.
- Sowing of wheat may be continued.
- Monitor the crop for attack of pod borer in Arhar and to control the borer spray Endosulfan or Chlorpyriphos 20 E.C (2ml/ litre of water).

#### **Sikkim**

Sky remained partly cloudy during the period. No rain occurred during the period over East Sikkim.

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 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*.

#### **Arunachal Pradesh**

Isolated rain / thundershowers are likely over the State during next 24 hours and mainly dry weather thereafter.

- There was no rainfall in the State during last week and mainly dry weather is likely during next 24 hours and isolated rain / thundershowers thereafter. 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 spray with 1.25 Kg. Dithane M-45 in 500 Lit. water may be continued.

#### 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.
- If population of sucking pests like Aphids, Jassids, Thrips & Heliothis crosses economic threshold level in cotton, release chrysoperla eggs or first instar larvae @ 10000 / ha twice at the interval of 15 days.
- 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 continue 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.

#### **Chhattisgarh**

Weather remained dry in the State during the period.

Mainly dry weather is likely over the State. Fall in night temperatures over the State from 22<sup>nd</sup> onwards.

#### **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 and gram, mustard, potato and also to early sown linseed, safflower and wheat wherever crops are at vegetative stage.
- Continue preparation of land and sowing of linseed, safflower and wheat and planting of new crop of sugarcane.
- Select varieties from Kanchan, Bilasa, G.W.-273, Lok-1, Sujata, Ratna etc. for sowing of wheat and CO-62175, C.O.L.K.-8001 etc. for planting of sugarcane.

#### Maharashtra

Mainly dry weather prevailed all over the State.

Mainly dry weather will prevail all over the State. Fall in night temperatures over Vidarbha from 22<sup>nd</sup> onwards.

- As there was no significant rain during last week in the State and mainly dry weather is likely over the State for next three days, apply irrigation to *kharif* cotton, tur and cotton (irrigated) crops and also to *rabi* jowar, safflower, *rabi* maize, sunflower, potato, onion, gram, sugarcane (Pre-seasonal) and wheat.
- Second split dose of 50 kg Nitrogen / ha may be applied to *rabi* jowar after 30 to 35 days from sowing.
- 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, Rice hispa & Midge fly in Nagpur division in Kharif rice, Aphids and Jassids in Vidarbha, Boll worm in Latur, Nashik and Amravati div. in irrigated cotton and Aphids and Jassids in Aurangabad and Vidarbha division in kharif cotton and leaf roller in Nagpur, pod borer in pune, Aurangabad, Amravati and Latur division in tur, Aphids and Leaf cater pillar in Nashik division and Sugary disease in Latur and Pune division in rabi jowar, Pod borer in Latur and Nashik division in gram and downy mildew in Grapes in Nasik, Pune, Solapur, Sangli and some other districts 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 leaf roller population in tur and if crosses economic threshold level, spray 1000 ml endosulphon / 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.
- For the control of downy mildew on Grapes, spray 0.2 to 0.4 % Bordeaux mixture @ 250 gm in 100 liter water at 10 days interval. For powdery mildew alternate spraying of Tridimefon @ 100 ml or water soluble Sulpher @ 200 gm in 100 liter may be done at 10 days interval.

#### **Madhya Pradesh**

Dry weather prevailed over the State. Night temperatures were normal over the State.

Mainly dry weather is likely over the State. Fall in night temperatures over the State from 22<sup>nd</sup> December onwards.

#### **Advisories**

- There was no significant rainfall in all the districts during the 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.

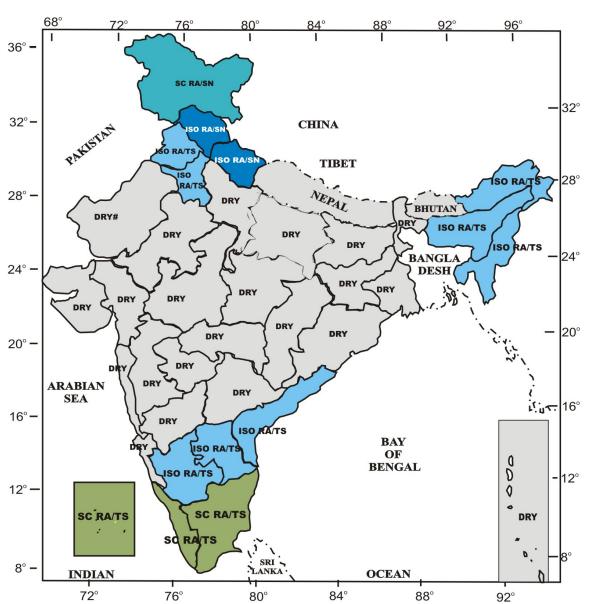
#### **Advisories**

• 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 required irrigation to mustard, vegetables, groundnut and

sugarcane to bring the soil moisture to field capacity.

- Also continue inter cultural operation, application of fertilizer and plant protection measures in early sown *rabi* crops.
- Weather conditions are favourable for the incidences of saw fly in mustard. Monitor the crop 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 of matured vegetables, sugarcane and pulse crops.

## Forecast Map Valid upto 24th 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 20/12/06

#### **METEOROLOGICAL ANALYSIS**

- A western disturbance affected Western Himalayan region on 14<sup>th</sup> December and moved away eastwards thereafter.
- A cyclonic circulation at lower tropospheric levels lay over Bangladesh and neighbourhood during 17-18<sup>th</sup> December and over Nagaland, Manipur, Mizoram and Tripura and neighbourhood on 19<sup>th</sup> December.
- A weak easterly wave affected Nicobar Islands, Tamil Nadu & Pondicherry and Lakshadweep during the week.

#### **RAINFALL**

- Scattered rain / thundershower occurred over Nicobar Islands during 14-15<sup>th</sup> December and 17<sup>th</sup> December and over Lakshadweep Islands on 14<sup>th</sup> December. Isolated rain / thundershower also occurred over Tamil Nadu & Pondicherry on 14<sup>th</sup> December.
- Isolated rain / thundershower occurred over northeastern States during 18<sup>th</sup> and 19<sup>th</sup> December.
- Mainly dry weather prevailed over the remaining parts of the country during the week.

#### **MINIMUM TEMPERATURES**

- The minimum temperatures were above normal by 2-3 °C over Rajasthan, on 14<sup>th</sup> December. This above normal night temperature conditions extended to Gujarat and adjoining Madhya Pradesh during 15-16<sup>th</sup> December. They were above normal by 2-3°C over above regions and adjoining plains of northwest India on 17<sup>th</sup> December. Subsequently, they were above normal by 2-3°C only over Gujarat and Rajasthan on 18<sup>th</sup> December and became normal afterwards over most parts of west & northwest India.
- They were below normal by 1-2 °C over east India on 14<sup>th</sup> and 15<sup>th</sup> December and over many parts of east India excluding West Bengal on 16<sup>th</sup> December.
- The minimum temperatures were above normal by 2-3 °C over north peninsula on 14<sup>th</sup> December. They were below normal by 1-2 °C over some parts of Peninsula on 15<sup>th</sup> December and 16<sup>th</sup> December and by 2-3°C over many parts of peninsula during 17-20<sup>th</sup> December.
- The night temperatures were above normal by 2-4°C over many parts of northeastern States and West Bengal & Sikkim during 17-20<sup>th</sup> December.

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

Rainfall was excess/normal in 2 and deficient/scanty in 5 and no rain in 29 out of 36 meteorological sub-divisions (Actual: 0.1 mm, Normal: 3.7 mm and Departure: -96%).

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

Rainfall was excess/normal in 11 and deficient/scanty in 25 out of 36 meteorological subdivisions. (Actual: 98.3 mm, Normal: 119.1 mm and Departure: -17%).

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

- A fresh western disturbance is likely to affect Western Himalayan region during second half of the week.
- Rise in night temperature by 2-3°C over plains of northwest India and Gangetic plains during middle of the week and fall towards the end of the week.
- Subdued rainfall activity over south peninsula during second half of the week.

## **Desert Locust Forecasting**



Rainfall (mm)									
Station Name	14.12.06	15.12.06	16.12.06	17.1206	18.12.06	19.12.06	20.12.06		
Amritsar									
Barmer									
Sriganganagar	NIL								
Jaisalmer				1,12					
Kota									
Deesa									
Churu	]								

Temperature (degree celcius)									
Station Name	14.12.06	15.12.06	16.12.06	17.1206	18.12.06	19.12.06	20.12.06		
Amritsar	11.5	-	13.0	12.5	-	12.5	-		
Barmer	16.0	17.0	19.0	19.0	18.5	18.0	18.5		
Sriganganagar	14.5	15.5	16.5	16.5	16.5	15.5	16.5		
Jaisalmer	17.0	17.0	17.5	-	18.0	20.0	21.0		
Kota	17.5	18.5	19.0	20.5	19.5	19.0	18.5		
Deesa	20.0	21.5	22.0	22.0	22.0	21.5	22.0		
Churu	-	-	-	-	-	-	-		

Wind														
Station	14.1	2.06	15.1	2.06	16.1	2.06	<b>17.</b> 12	206	18.1	2.06	19.1	2.06	20.	12.06
Name	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.	Speed	Dir.
Amritsar	05	N	05	W	-	-	-	-	-	-	-	-	-	-
Barmer	09	NNW	-	-	-	-	-	-	08	W	07	W	09	SW
Sriganga nagar	08	NW	17	WNW	-	-	-	-	12	N	05	WNW	03	NE
Jaisalmer	09	NE	07	WSW	-	-	-	-	09	W	12	WSW	11	SW
Kota	05	NE	07	NW	-	-	-	-	11	WNW	03	W	04	NW
Deesa	06	NE	12	W	-	-	-	-	05	NW	07	SSW	06	WSW
Churu	13	NNE	15	WNW	-	-	-	-	13	NW	09	NNW	04	S

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

### **CROP - STATE - STAGE**

Delhi

Early sown Wheat  Barly sown Wheat  Germination/Early vegetative/Crown root initiation/tillering  Vegetative Crown Toot initiation/tillering  Vegetative Crown Toot initiation/tillering  Vegetative Crown Toot initiation/tillering  Jammu & Kashmir  Vegetable crops  Toria Mustard Gram/Field Pea Wheat  Flowering/Siliqua formation			Delhi		
Sowing   Sowing   Transplanting   Fair   Sowing   Vegetative   Veget		Chilly, Cauliflower and cabbage, raddish,	crops	Wheat	Gram
Barley Mustard Vegetative Vegetative Farly sown Wheat Vegetative Vegetative Farly sown Wheat Wheat  Barley Mustard Vegetative Vegetative Farly sown Wheat  Farly vegetative Vegetative Farly sown Wheat  Wheat  Gram /Lentil Rabi oilseeds Sowing / carly vegetative vegetative vegetative vegetative vegetative sowing  Early sown Wheat  Gram Summer vegetables (Cauilfiower, Cabbage in low and mid hills)  Nursery sowing /Iransplanting / fronting / harvesting / Late sowing / Rapis sown Wheat  Early sown Wheat  Germination/Early vegetative vegeta				Late Sowing	Vegetative
Note			fruiting/ harvesting	_	Vegetative
Haryana	Barley	Mustard		Early sown Wheat	
Early vegetative	Vegetative	Vegetative			
Early vegetative					
Wheat   Gram   Califorer, Cabbage (Califorer, Cabbage in low and mid hills)   Mustard   Mustard   Germination/Early vegetative/Crown root initiation/tillering   Vegetative	Horticultural crop	Sugarcane		Rabi oilseeds	
Summer vegetables   Vegetables   Cauliflower, Cabbage in low and mid hills	Early vegetative	Vegetative	vegetative	Early vegetative	
Wheat   Gram   (Cauliflower, Cabbage in low and mid hills)   Laidies finger)				**	
Early sown Wheat  Serination/Early vegetative/Crown root initiation/illering  Early sown Wheat  Germination/Early vegetative/Crown root initiation/illering  Vegetative Vegetative  Vegetative Vegetative  Vegetative Vegetative  Vegetative Vegetative  Sowing  Formation  Wheat  Formation	Wheat	Gram	(Cauliflower, Cabbage	(Tomato, brinjal,	Barley
Germination/Early vegetative/Crown root initiation/tillering    Vegetable crops	Land preparation/Late sowing	Vegetative			
Vegetative/Crown root initiation/tillering         Vegetative vegetative vegetative vegetative vegetative vegetative vegetative vegetative         Jammu & Kashmir           Vegetable crops         Toria         Mustard         Gram/ Field Pea         Wheat           Brown sarson         Early sown Wheat         Lentil         Pea         Pea           Vegetative         Vegetative         Vegetative         Vegetative           Sugarcane         Rabi oilseeds         Gram/Lentil         Horticultural crop         Wheat           Vegetative         Punjab         Sowing / early vegetative         Sowing / early vegetative           Vegetative         Early vegetative         Sowing / early vegetative         Sowing / early vegetative           Vegetative         Early sowing         Barley         Late sowing         Late sowi	Early sown Wheat	_	Early sown Barley		
Vegetable crops   Toria   Mustard   Gram/ Field Pea   Wheat   Early vegetative/vegetative   Vegetative   Flowering/Siliqua   formation   Vegetative   Sowing	vegetative/Crown root	Vegetative		Sowing	
Early vegetative veg					
vegetative/vegetative         Vegetative         formation         Vegetative         Sowing           Brown sarson         Early sown Wheat         Lentil         Pea           Vegetative         Vegetative         Vegetative           Punjab           Sugarcane         Rabi oilseeds         Gram/Lentil         Horticultural crop         Wheat           Negetative         Vegetative         Early vegetative         Sowing / early vegetative           Vegetative         Wheat         Gram         Barley           Early sown Barley         Late sowing         Early sown Wheat         Early sown Wheat           Early vegetative/vegetative         Land preparation/sowing         Early sown Wheat         Early sown Wheat           Wheat/Barley         Rabi pulses         Sugarcane         Wheat/Barley         Winter Vegetables           Wheat/Barley         Rabi Oilseeds (Rai and Mustard)         Kharif Vegetables         Toria         Vegetative           Wegetative / flowering         Harvesting         Flowering / Seed formation           Uttaranchal           Pea         Mango/Litchi         Wheat         Sugarcane         Toria           Active growth		Toria		Gram/ Field Pea	Wheat
Vegetative   Vegetative   Vegetative   Vegetative   Vegetative	vegetative/vegetative		formation	_	Sowing
Vegetative   Sowing / early vegetative   V	Brown sarson	· ·	Lentil	Pea	
Sugarcane   Rabi oilseeds   Gram/Lentil   Horticultural crop   Wheat	Vegetative			Vegetative	
Vegetative   Early vegetative   Vegetative   Early vegetative   Vegetative					****
Rajasthan   Wheat   Gram   Barley	Sugarcane	Rabi oilseeds	Gram/Lentil	Horticultural crop	
Mustard   Early   Late sowing   Early   vegetative/vegetative   Cumin   Early sown Wheat   Early   vegetative/vegetative   Uttar Pradesh      Wheat/Barley   Rabi pulses   Sugarcane   Early sown   Wheat/Barley   Vegetative   Wheat/Barley   Sowing   Vegetative   Harvesting   Seedling   Vegetative	Vegetative	Early vegetative		Early vegetative	•
Early vegetative/vegetative  Early sown Barley Early vegetative/vegetative  Early vegetative/vegetative  Early vegetative/vegetative  Early vegetative/vegetative  Uttar Pradesh  Rabi pulses Sowing Vegetative  Harvesting Seedling Vegetative  Rabi Oilseeds( Rai and Mustard)  Active growth / matured tree  Vegetative / flowering Pea Mango/Litchi Pod Active growth Active growth  Pod Maturity/Harvestring Potato  Tuber growth  Assam  Early sown Wheat  Early sown Winter Vegetables  Winter Vegetables  Winter Vegetables  Flowering / Seedling Flowering / Seed formation  Uttaranchal Wheat Sugarcane Flowering / Seed formation  Vegetative / flowering Initiation/tillering  Maturity/Harvestring  Assam  Early sown Vegetables  Sugarcane Wheat Vegetables  Balck gram and Green gram  Vegetative  Pod maturity/  Crown root Land preparation / Pod maturity  Pod maturity/  Crown root Land preparation /  Pod maturity/  Pod maturity/  Pod maturity/  Pod maturity/  Pod maturity/  Crown root Land preparation /  Pod maturity/  Pod maturity  Pod maturity/		M4J		C	D1
Early sown Barley Early yegetative/vegetative  Early yegetative/vegetative  Early yegetative/vegetative  Early yegetative/vegetative  Uttar Pradesh  Rabi pulses Sowing Vegetative  Babi Oilseeds (Rai and Mustard)  Active growth / matured tree  Wheat/Barley  Vegetative / flowering  Pea Mango/Litchi Pod Maturity/Harvestring Potato  Tuber growth  Active growth  Massam  Early sown Wheat  Early sown Winter Vegetables  Winter Vegetables  Winter Vegetables  Winter Vegetables  Flowering / Seed formation  Uttaranchal  Pea Mango/Litchi Wheat Sugarcane Flowering / Seed formation  Crown root initiation/tillering  Maturity/harvesting  Active growth  Assam  Vegetables  Sugarcane  Balck gram and Green gram  Vegetative  Crown root Land preparation /  Pod maturity/  Pod maturity/  Cane maturity /  Crown root Land preparation /  Pod maturity  Pod maturity/  Pod maturity/  Pod maturity/  Pod maturity/  Pod maturity/  Crown root Land preparation /  Pod maturity/  Pod maturity/			wneat		Barley
Early vegetative/vegetative    Comparison				vegetative/vegetative	Late sowing
Vegetative/vegetative   Land preparation/sowing   Vegetative/vegetative			Cumin		
Rabi pulses   Sugarcane   Early sown   Wheat/Barley   Sowing   Vegetative   Harvesting   Seedling   Vegetative			* *	2	
Wheat/Barley Sowing Vegetative Harvesting Seedling Vegetative Rabi Oilseeds (Rai and Mustard)  Active growth / matured tree  Vegetative / flowering Pea Mango/Litchi Pod Active growth  Active growth Active growth  Active gr			Uttar Pradesh		
Mango   Rabi Oilseeds( Rai and Mustard)   Kharif Vegetables   Toria		_	_	Wheat/Barley	0
Mango and Mustard) Kharif Vegetables Toria  Active growth / matured tree Vegetative / flowering Harvesting Flowering / Seed formation  Uttaranchal  Pea Mango/Litchi Wheat Sugarcane Pod maturity/Harvestring Active growth initiation/tillering formation/Maturity  Potato Assam  Early sown Vegetables Sugarcane Wheat Vegetables  Cane maturity / Crown root Land preparation / Pod maturity  Pod maturity / Pod maturity  Pod maturity / Pod maturity	Sowing		Harvesting	Seedling	vegetative
tree Vegetative / Howering Harvesting formation  Uttaranchal  Pea Mango/Litchi Wheat Sugarcane Toria Pod Active growth Crown root initiation/tillering Maturity/harvesting formation/Maturity  Potato Tuber growth  Assam  Early sown Vegetables Sugarcane Wheat Vegetables Balck gram and Green gram  Vegetative Cane maturity / Crown root Land preparation / Pod maturity  Pod maturity	Mango		Kharif Vegetables	Toria	
Pea     Mango/Litchi     Wheat     Sugarcane     Toria       Pod maturity/Harvestring     Active growth     Crown root initiation/tillering     Maturity/harvesting formation/Maturity       Potato     Tuber growth       Early sown Vegetables     Sugarcane     Wheat     Vegetables     Balck gram and Green gram       Vegetative     Cane maturity /     Crown root     Land preparation /     Pod maturity	Active growth / matured tree	Vegetative / flowering		_	
Pod maturity/Harvestring Pod formation/Maturity  Potato Tuber growth  Early sown Vegetables  Sugarcane Vegetables  Crown root initiation/tillering  Maturity/harvesting Pod formation/Maturity  Assam  Vegetables  Sugarcane  Cane maturity / Crown root  Land preparation / Pod maturity  Pod maturity		T		1	
Maturity/harvesting formation/Maturity  Potato Tuber growth  Assam  Early sown Vegetables Sugarcane Vegetables Cane maturity/ Crown root Crown root Maturity/harvesting formation/Maturity  Maturity/harvesting formation/Maturity  Formation/Maturity  Land preparation /  Pod maturity  Prod maturity		Mango/Litchi		Sugarcane	
Potato Tuber growth  Sugarcane  Wheat Vegetables  Cane maturity  Crown root  Crown root  Land preparation /  Pod maturity  Potation/Maturity  Formation/Maturity  Formation/Maturity  Formation/Maturity  Land preparation /  Pod maturity  Pod maturity		Active growth		Maturity/harvesting	
Tuber growth  Assam  Early sown Vegetables  Sugarcane  Wheat  Vegetables  Balck gram and Green gram  Cane maturity / Crown root  Land preparation / Pod maturity			initiation/tillering	, ,	tormation/Maturity
Assam  Early sown Vegetables Sugarcane Wheat Vegetables Balck gram and Green gram  Vegetative Cane maturity Crown root Land preparation / Pod maturity					
Early sown Vegetables Sugarcane Wheat Vegetables Balck gram and Green gram  Vegetative Cane maturity Crown root Land preparation / Pod maturity  Pod maturity	Tuber growth		<u> </u>		
Vegetables Sugarcane Wheat Vegetables Green gram  Cane maturity   Crown root Land preparation   Pod maturity			Assam		nı,
	Early sown Vegetables			_	
	Vegetative				Pod maturity

	Arhar	Rape seed a	and Mustard	Boro Rice		Pea, Lentil and Potato	
	Maturity	Vegetative	e/flowering	Transplanting		Early vegetative/vegetative	
		Arunachal Pradesh				vegetative/vegetative	
Mustard	Ginger		Potato			Winter vegetables	
Early vegetative	Vegetative	Early vo Bihar	egetative	Crown root initia	ation	Vegetative	
Fruits and Vegetables	Winter vegetables		heat	Early sown Wh	neat	Rabi Maize	
Early Vegetative	Sowing / transplanting	g Sov	wing	Germination to early vegetative		Vegetative / Flowering	
Early sown fruits and Vegetables Boro Rice		Po	tato	Rabi Oil seeds (Toria, Sarson, Linseed)		Rabi Pulses (Lentil, Gram, Pea)	
Vegetative	Field preparation / nursery sowing		egetative	Vegetative		Vegetative / flowering	
		Jharkha	ınd		ı		
Rice	Rabi	Maize		ly sown Wheat		Potato	
Harvesting	Early vegetati	ve / Vegetative	Seedling, e	ration, sowing / arly vegetative		Early vegetative	
Rabi vegetables (Toma Cabbage, Cauliflower Brinjal, Chilli)		ed vegetables	(Gram, m linseed, oat	es and oilseeds nasoor, lentil, t, mustard and usum)	Rabi	pulses and oilseeds (Arhar)	
( Sowing / transplanting Onion, Pea )	g - Vege	etative		vegetative		Flowering / pod formation	
Owanga	Mustard	Sikkin	n egetables		Γ	Wheat	
Orange						Early	
	Vegetative	Vege	etative			vegetative/vegetative	
		West Ber	ngal	I			
Boro rice	Sugarcane		Wheat			Rape seed and Mustatrd	
Field preparation / nursery sowing	Cane development	root initati	Early vegetative/crown root initation/tillering			Vegetative	
Gram/ Lentil			tato arly				
Vegetative			e/vegetative				
		Chattisg					
Gram	Vegetables (Tomato, chilli, brinjal)	Suga	nrcane	Wheat		Linseed, Safflower,	
Early vegetative/branching	Vegetative		velopment	Land preparation and Sowing		Field preparation/sowing	
Mustard	Early Sown Linseed, Safflower,	Po	tato	Early sown Wheat		New crops Sugarcane	
Early vegetative/branching	Early vegetative/vegetative		Early vegetative		arly wn	Planting	
		Gujar	of .	initiation/tiller	ıng		
Mustard	Wheat	Pre-monso	at on irrigated tton	rigated Castor		Sugarcane	
Vegetative / flowering	Land preparation / sowing		tion / picking	Flowering / Pod formation		Maturity / Harvesting	
Kharif Cotton	Early Sown Wheat	Summe	er Rice				
Square / boll formation	Germination / early vegetative / crown roo initiation		ion of rice esery				
	•	Maharas	htra				
Rabi Jowar (Madhya	Tur (Madhya		gated	Sugarcane (Seasonal) (Madhy Mahrashtra, Marthwada and Vidarbha)		<i>Rabi</i> Sunflower (Madhya Maharashtra,	
Maharashtra, Marathwada & Vidarbha)	Maharashtra, Marathwada & Vidarbha)	Со	tton		*	Marathwada & Vidarbha)	

Potato (Madhya Maharashtra, Marathwada & Vidarbha)	Kharif cotton (Madhya Maharashtra, Marathwada & Vidarbha)	Potato (Madhya Maharashtra Marathwada & Vidarbha)	Kharif rice (Konkan)	Kharif rice (Vidarbha)
Early vegetative / early tuberization	Boll formation / boll maturity / picking	Early vegetative/early tuberization	(late varieties) Harvesting	Grain maturity / harvesting
Gram (Madhya Maharashtra, Marathwada & Vidarbha)	Wheat (Madhya Maharashtra, Marathwada & Vidarbha)	Onion (Madhya Maharashtra Marathwada & Vidarbha)	Early sown Gram (Madhya Maharashtra, Marathwada & Vidarbha)	Early sown Wheat (Madhya Maharashtra, Marathwada & Vidarbha)
Branching / Flowering / pod formation (in early sown crops)	Germination / seedling / crown root initiation / tillering	Early vegetative / vegetative (Early sown crops-bulb formation)	Pod formation	Germination/seedling/ crown root initiation/tillering
Safflower (Madhya Maharashtra, Marathwada & Vidarbha)	Maize (Madhya Maharashtra, Marathwada & Vidarbha)	Sugarcane Preseasona (Madhya Maharashtra Marathwada & Vidarbha)		
Vegetative / flowering	Knee high / Tasseling / Silking	Sprouting / early vegetative	Sprouting/early vegetative	
		Madhya Pradesh	T	
Wheat	Mustard	Gram	Masoor	Linseed
Vegetative	Vegetative	Vegetative	Vegetative	Vegetative
Irrigated Wheat				
Early vegetative				
		Orissa		T
Vegetables	Dalua Rice	Mustard	Pulses	Early sown pulses
Flowering/Fruiting/Har vesting	Nursery preparation/sowing	Vegetative/Flowering	Vegetative (Biri / Mung / Kulthi)	Pod maturity
Sugarcane	Rabi Groundnut			
Maturity	Vegetative/flowering			
		Andhra Pradesh	T	
Rabi Groundnut		Gram		Rabi Maize
Vegetative		Vegetative Karnataka		Vegetative
	Sugarcane (Ratoon	Early sownRabi		
	crop & new crop)	jowar, wheat and		
	End Harvesting	maize Vegetative		
	End Hai vesting	Kerala		
Rubber	Mundakan rice	Pepper		
Tapping	Grain formation	Harvesting		
11 0		Tamil Nadu		
Rice (Samba)	Millets	Cotton	Early & mid sugarcane	Oilseeds (Groundnut,)
Vegetative	Vegetative	Vegetative	Harvesting	Vegetative
			<u> </u>	<u>~</u>
	Sunflower	Pulses (Blach gram and Green gram)		